City of Sutherlin
Regular Council Meeting
Monday, November 13, 2017
Civic Auditorium – 7:00 p.m.
AGENDA

Mayor Todd McKnight
Council President Luzier
Councilors Boggs, Riggs, Stone, Tomlinson, and Vincent

1. **CALL TO ORDER / FLAG SALUTE**

2. **ROLL CALL**

3. **INTRODUCTION OF MEDIA**

4. **PUBLIC COMMENT**
   [The purpose of citizen comment is to allow citizens to present information regarding agenda items only. A time limit of three minutes per citizen shall apply.]

5. **PRESENTATIONS**
   a. Audit Report
   b. Ford's Pond Parks Master Plan
   c. Central Avenue and Downtown Improvements
   d. Sutherlin School District

6. **CONSENT AGENDA**
   a. October 9, 2017 Minutes – Regular Meeting

7. **COUNCIL BUSINESS**
   a. Fire Station Concrete & Asphalt Paving Projects
   b. Resolution 2017.15 – 2016 Multi-Jurisdictional Natural Hazards Mitigation Plan

8. **COUNCIL COMMENTS**

9. **PUBLIC COMMENT**
   [The purpose of citizen comment is to allow citizens to present information regarding items off the agenda. A time limit of three minutes per citizen shall apply.]

10. **ADJOURN**

Members of the audience who wish to address the Council will be invited to do so. Speakers must use the microphone stating their name and address prior to addressing the Council.

If you have a disability that requires special materials, service, or assistance, please call 541.459.2856 at least 48 hours prior to the meeting to arrange for accommodations

Call to Order
&
Flag Salute

ROLL CALL

Introduction Of Media

PUBLIC COMMENT

Agenda Items only

Presentations and/or Proclamations

126 E. Central Avenue
Sutherlin, OR 97479
541-459-2856
Fax: 541-459-9363
www.cityofsutherlin.com

City of Sutherlin

STAFF REPORT					
Re: 2017 Audit				Meeting Date:	11/13/17
Purpose:	Action Item ☐	Workshop ☐	Report Only ☒	Discussion ☐	Update ☐
Submitted By: Dan Wilson, Finance Director				City Manager Review	☒
Attachments:	2017 Communication to the Governing Body and 2017 Financial Report				

WHAT IS BEING ASKED OF COUNCIL?

No action is being asked of council at this time. This report is to update the council as to the final status of the annual audit for the 2017 fiscal year. The Council will be presented the audit by Kenny Allen, CPA who is the lead auditor on the city audit team for Pauly, Rogers and Co., P.C. Bound copies of the audit will be disbursed at the meeting.

EXPLANATION

Staff has reviewed the final Financial Report for the year ended June 30, 2017 and is pleased to report that the city earned an unqualified opinion on the City's financial statements which is commonly referred to as a "clean" audit; meaning that the auditor's have issued an opinion that is with no reservations. Some highlights of the audit are:

From the Communication to the Governing Body letter

- Audit opinion letter – an unqualified opinion on the City's financial statements has been issued. This means we have given a "clean" opinion with no reservations. (p. 2)
- State minimum standards for audits – We found no exceptions or issues requiring comment. (p. 2)
- Qualitative Aspects of Accounting Practices – The disclosures in the financial statements are neutral, consistent, and clear. (P. 2)
- Difficulties Encountered in Performing the Audit – We encountered no significant difficulties in dealing with management in performing and completing our audit. (P. 2)
- Corrected and Uncorrected Misstatements – There were no uncorrected misstatements noted during the audit. (P. 2)
- Disagreements with Management – We are pleased to report that no such disagreements arose during the course of our audit. (P. 2)
- Supplementary Information within Documents Containing Audited Financial Statements – the information is appropriate and complete in relation to our audit of the financial statements. (P. 3)

- Other Information in Documents Containing Audited Financial Statements – Our results noted no material inconsistencies or misstatements of facts. (P. 3)
- The financial affairs have been professionally conducted. The accounting records were in good condition... (P. 4)

From the Financial Report

- Note 2. DEPOSITS AND INVESTMENTS – Custodial Credit Risk – Investments – None of the City's investments have custodial credit risk. (P. 19)
- Note 6. DEFINED BENEFIT PENSION PLAN – This note provides a large amount of new information which was first introduced in fiscal year (2014-15) and should be reviewed. (P.22-28)
- Risk Management – Settled claims resulting from these risks have not exceeded commercial insurance coverage in any of the past three fiscal years. (P. 29)

From the Independent Auditors' Report Required by Oregon State Requirements

- In connection with our testing nothing came to our attention that caused us to believe the City of Sutherlin was not in substantial compliance with certain provisions of laws, regulations, contracts, and grants, including the provisions of Oregon Revised Statutes as specified in Oregon Administrative Rules 162-10-000 through 162-10-320 of the Minimum Standards for Audits of Oregon Municipal Corporations. (P. 66)

Subsequent Actions Taken by Staff Pertaining to the 2017 Audit

- Filed the report with the Oregon Department of Revenue, Division of Audits and has paid the filing fee.
- Filed the report on the Municipal Securities Rulemaking Board's (MSRB) web portal as part of our ongoing disclosure requirements with previously issued debt.
- Filed the report with Rural Development and DEQ as part of the annual reporting requirements for previously issued debt held by these entities.

OPTIONS

N/A

SUGGESTED MOTION(S)

N/A

PAULY, ROGERS AND CO., P.C.
12700 SW 72nd Ave. ♦ Tigard, OR 97223
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October 20, 2017

To the City Council
City of Sutherlin

We have audited the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the City of Sutherlin for the year ended June 30, 2017. Professional standards require that we provide you with the information about our responsibilities under generally accepted auditing standards, as well as certain information related to the planned scope and timing of our audit. Professional standards also require that we communicate to you the following information related to our audit.

Purpose of the Audit

Our audit was conducted using sampling, inquiries and analytical procedures to opine on the fair presentation of the financial statements and compliance with:

- generally accepted accounting principles and auditing standards
- the Oregon Municipal Audit Law and the related administrative rules

Our Responsibility under U.S. Generally Accepted Auditing Standards

As stated in our engagement letter, our responsibility, as described by professional standards, is to express opinions about whether the financial statements prepared by management with your oversight are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles. Our audit of the financial statements does not relieve you or management of your responsibilities.

In planning and performing our audit, we considered internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinions on the financial statements and not to provide assurance on the internal control over financial reporting.

Our responsibility for the supplementary information accompanying the financial statements, as described by professional standards, is to evaluate the presentation of the supplementary information in relation to the financial statements as a whole and to report on whether the supplementary information is fairly stated, in all material respects, in relation to the financial statements as a whole.

Planned Scope and Timing of the Audit

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; therefore, our audit involved judgment about the number of transactions examined and the areas to be tested.

Our audit included obtaining an understanding of the entity and its environment, including internal control, sufficient to assess the risks of material misstatement of the financial statements and to design the nature, timing, and extent of further audit procedures. Material misstatements may result from (1) errors, (2) fraudulent financial reporting, (3) misappropriation of assets, or (4) violations of laws or governmental regulations that are attributable to the entity or to acts by management or employees acting on behalf of the entity. We also communicated any internal control related matters that are required to be communicated under professional standards.

Results of Audit

1. Audit opinion letter - an unmodified opinion on the City's financial statements has been issued. This means we have given a "clean" opinion with no reservations.

2. State minimum standards for audits - We found no exceptions or issues requiring comment.

3. Management letter – No separate management letter was issued.

Significant Audit Findings

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used are described in the notes to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during 2017, except for the implementation of GASB Statement No. 77, Tax Abatements. We noted no transactions entered into by the governmental unit during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were Management's estimate of Accounts Receivable, the Net Pension Asset, and Capital Asset Depreciation, which are based on estimated collectability of receivables and useful lives of assets. We evaluated the key factors and assumptions used to develop these estimates in determining that they are reasonable in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The disclosures in the financial statements are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements or determined that their effects are immaterial. In addition, none of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to the financial statements taken as a whole. There were no uncorrected misstatements noted during the audit.

Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the City's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the City's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Supplementary Information within Documents Containing Audited Financial Statements

With respect to the supplementary information accompanying the financial statements, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

Other Information in Documents Containing Audited Financial Statements

With respect to the other information accompanying the financial statements, we read the information to identify if any material inconsistencies or misstatement of facts existed with the audited financial statements. Our results noted no material inconsistencies or misstatement of facts.

Other Matters – Future Accounting and Auditing Issues

In order to keep you aware of new auditing standards issued by the American Institute of Certified Public Accounts and accounting statements issued by the Governmental Accounting Standards Board (GASB), we have prepared the following summary of the more significant upcoming issues:

IMPLICIT RATE SUBSIDY FOR OPEBs

In Oregon, an implicit rate subsidy is required for almost all entities, due to the fact that Oregon law requires that any retiree be allowed to buy-back into their former employer's health insurance plan. In the past, relatively small employers participating in a large, pooled health plan were sometimes exempt from having to account for an implicit rate subsidy due to a "community-rating" exception. In general, this exception applied when the claims experience of an individual employer would have virtually no impact on the premium being charged to that employer. The accounting standards that apply to OPEBs refer to the Actuarial Standards of Practice (ASOPs) in determining whether a community-rated situation applied. However, the newly revised ASOP 6 virtually eliminated the concept of the community-rating exception. As a result, agencies participating in community-rated plans that had previously been exempt from reporting liabilities due to an implicit rate subsidy may now be required to do so. We recommend that Management contact an actuary to determine if an actuarial study is required.

The financial affairs have been professionally conducted. The accounting records were in good condition and we commend the staff for their assistance and support during the audit.

This information is intended solely for the use of the City Council and management of the City of Sutherlin and is not intended to be and should not be used by anyone other than these specified parties.

[redacted]

Kenneth Allen, CPA
Municipal Auditor
PAULY, ROGERS AND CO., P.C.

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

FINANCIAL REPORT

FOR THE YEAR ENDED JUNE 30, 2017

12700 SW 72nd Ave.
Tigard, OR 97223

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

FINANCIAL REPORT

WITH
INDEPENDENT AUDITORS' REPORT

FOR THE YEAR ENDED JUNE 30, 2017

****

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

Mayor & City Council

June 30, 2017

Name	POSITION	TERM EXPIRES
Todd McKnight	Mayor	December 31, 2018
Wayne Luzier	Council President	December 31, 2018
Forrest Stone	City Councilor	December 31, 2020
Dennis Riggs	City Councilor	December 31, 2018
Tom Boggs	City Councilor	December 31, 2018
Seth Vincent	City Councilor	December 31, 2020
Travis Tomlinson	City Councilor	December 31, 2020

All council members will receive mail at the following address:

City of Sutherlin
126 East Central Ave.
Sutherlin, Oregon 97479

ADMINISTRATION

Jerry Gilliam, City Manager
Dan Wilson, Finance Director

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

T A B L E O F C O N T E N T S

	PAGE NUMBER
INDEPENDENT AUDITORS' REPORT	1
REQUIRED SUPPLEMENTARY INFORMATION:	
Management's Discussion and Analysis	a-n
FINANCIAL STATEMENTS AND SCHEDULES:	
BASIC FINANCIAL STATEMENTS:	
Statement of Net Position	2
Statement of Activities	3
Balance Sheet - Governmental Funds	4
Reconciliation of Balance Sheet of Governmental Funds to the Statement of Net Position	5
Statement of Revenues, Expenditures and Changes in Fund Balance - Governmental Funds	6
Reconciliation of Statement of Revenues, Expenditures and Changes in Fund Balance – Governmental Funds – To Statement of Activities	7
Statement of Proprietary Net Position	8
Statement of Revenues, Expenses and Changes in Net Position – Proprietary Funds	9
Statement of Cash Flows - All Proprietary Funds	10
Statement of Fiduciary Assets	11
Notes to Basic Financial Statements	12
REQUIRED SUPPLEMENTARY INFORMATION:	
Schedule of Proportionate Share of the Net Pension Liability and Contributions	31
Schedule of Revenues, Expenditures and Changes in Fund Balance - Actual and Budget:	
Governmental Funds:	
General Fund	32
Street Construction Fund	33
SUPPLEMENTARY INFORMATION:	
Enterprise Funds:	
Water Fund	34
Wastewater Fund	35
Water Construction Fund	36
Wastewater Construction Fund	37
Combining Balance Sheet – Nonmajor Governmental Funds	38
Combining Statement of Revenues, Expenditures and Changes in Fund Balance – Nonmajor Governmental Funds	39

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

T A B L E O F C O N T E N T S (CONTINUED)

	PAGE NUMBER
Schedule of Revenues, Expenditures and Changes in Fund Balance - Actual and Budget:	
Street / Storm Drainage Fund	40
Street System Development Charges Fund	41
Tourism – Motel Tax Fund	42
Library Board Fund	43
Mainstreet Program Fund	44
Dial-A-Ride Fund	45
Street Maintenance Reserve Fund	46
Central Avenue Reserve Fund	47
Library GO Bond Fund	48
Parks Construction Fund	49
Bicycle Footpath Fund	50
Police Reserve Fund	51
Fire Reserve Fund	52
Public Works Operations Reserve Fund	53
Parks / Facilities Reserve Fund	54
Combining Statement of Net Position – Nonmajor Enterprise Funds	55
Combining Statement of Revenues, Expenditures and Changes in Net Position– Nonmajor Enterprise Funds	56
Combining Statement of Cash Flows – Nonmajor Enterprise Funds	57
Schedule of Revenues, Expenditures and Changes in Fund Balance - Actual and Budget – Nonmajor Enterprise Funds	
Water Reserve Fund	58
Public Works Wastewater Reserve Fund	59
Knolls Estate Step Surcharge Fund	60
Water Debt Service Fund	61
Wastewater Debt Service Fund	62
Schedule of Revenues, Expenditures and Changes in Fund Balance - Actual and Budget – Internal Service Fund	
Public Works Operations Fund	63
Combining Statement of Changes in Assets and Liabilities – Agency Funds	64
Schedule of Property Tax Transactions and Balances of Taxes Uncollected	65
INDEPENDENT AUDITORS' REPORT REQUIRED BY OREGON STATE REGULATIONS	66

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October 20, 2017

To the City Council
City of Sutherlin
Sutherlin, Oregon

INDEPENDENT AUDITORS' REPORT

Report on the Financial Statements

We have audited the financial statements of the governmental activities, business-type activities, each major fund, and the aggregate remaining fund information of the City of Sutherlin as of and for the year ended June 30, 2017, and the related notes to the financial statements which collectively comprise the basic financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion the basic financial statements referred to above present fairly, in all material respects, the financial position of the governmental activities, business-type activities, each major fund, and the aggregate remaining fund information of the City of Sutherlin at June 30, 2017 and the results of its operations and cash flows for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Emphasis of Matter

The City adopted the provisions of GASB Statement No. 77, *Tax Abaatements*, for the year ended June 30, 2017. Our opinion is not modified with respect to this matter.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and the required supplementary information, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the Management's Discussion and Analysis, as listed in the table of contents, in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

The budgetary comparison schedules presented as Required Supplementary Information, as listed in the table of contents, have been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America, and in our opinion are fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the basic financial statements. The supplementary and other information, as listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements. The supplementary information, as listed in the table of contents, is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information, as listed in the table of contents, is fairly stated in all material respects in relation to the financial statements as a whole.

The listing of Council members containing their term expiration dates, located before the table of contents, is presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financials statements, and accordingly, we do not express an opinion or provide any assurance on it.

Reports on Other Legal and Regulatory Requirements

In accordance with Minimum Standards for Audits of Oregon Municipal Corporations, we have issued our report dated October 20, 2017 on our consideration of compliance with certain provisions of laws and regulations, including the provisions of Oregon Revised Statutes as specified in Oregon Administrative Rules. The purpose of that report is to describe the scope of our testing of compliance and the results of that testing and not to provide an opinion on compliance.

[redacted]

Kenneth Allen, CPA
Municipal Auditor
PAULY, ROGERS AND CO., P.C.

CITY OF SUTHERLIN
Management's Discussion and Analysis
For the Year Ended June 30, 2017

The management of the City of Sutherlin, Oregon presents this narrative overview and analysis to facilitate both a short and a long-term analysis of the financial activities of the City for the fiscal year ended June 30, 2017. This Management's Discussion and Analysis (MD&A) is based on currently known facts, decisions, and conditions that existed as of the date of the independent auditor's report.

Financial Highlights

- The City's total assets increased $2,686,785 from $40,835,103 to $43,521,888, or 6.6%. Capital assets, net of depreciation and related debt decreased $3.84 million, or (15.6%). Additionally, cash and investments increased by $3,430,948 from $4,708,654 to $8,139,602, or 72.9%. The large increase in cash and investments is largely due to the receipt of funds, $2.15M, from the Oregon Department of Transportation for street improvements which will occur next fiscal year.

- The City's total liabilities increased $4,182,533 from $12,323,309 to $16,505,842. This is largely due to the increase in net pension liability of $1,739,914 on the governmental portion of the Statement of Net Position as well as an increase to the loan from Oregon DEQ for improvements on the Wastewater Treatment plant, $1,989,507.

- The total net position of the City (assets minus liabilities) decreased $93,626 from $28,469,427 to $28,375,801, or (0.3%). Unrestricted net position ended the year at $5,705,356, an increase of $3,697,520, or 184.2%.

- The City's governmental funds reported combined ending fund balances of $6,395,725, an increase of $3,628,193, or 131.1%. $1,708,257 is unassigned and available for spending at the government's discretion. This is an increase of $143,700, or 9.2%, over last year.

- The General Fund's unassigned ending fund balance is $1,708,257. This represents 37.8% of total General Fund expenditures for the year. Last year was at 39.6%.

Overview of the Financial Statements

The City's basic financial statements comprise three components:

1. Government-wide financial statements,
2. Fund financial statements, and

3. Notes to the basic financial statements.

Government-wide financial statements. The government-wide financial statements are designed to provide readers with a broad overview of the City's finances, in a manner similar to private-sector business.

The Statement of Net Position presents information on all of the City's assets and liabilities, with the difference between the two reported as net position. Over time, increases or decreases in the net position may serve as a useful indicator of whether the financial position of the City is improving or deteriorating.

The Statement of Activities presents information showing how the City's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, revenues and expenses are reported in this statement for some items that will result in cash flows in a future fiscal period. Examples of such items include earned (assessed/levied), but uncollected property taxes, and earned, but unused compensated absences.

Both of the government-wide financial statements distinguish functions of the City that are principally supported by taxes and intergovernmental revenues (governmental activities) from other functions that are intended to recover all or a significant portion of their costs through user fees and charges (business-type activities).

The governmental activities of the City include the following:

- General Government
- Public Safety
- Highways and Streets
- Culture and Recreation
- Tourism

The Business-type activities of the City include the following:

- Wastewater
- Water

The government-wide financial statements can be found on pages 2 through 3-A in the basic financial statements section.

Fund financial statements. A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The City uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. All of the funds of the City can be divided into three categories: governmental funds, proprietary funds and fiduciary funds.

Governmental funds. Governmental funds are used to account for activities where the emphasis is placed on available financial resources, rather than upon net income

determination. Therefore, unlike the government-wide financial statements, governmental fund financial statements focus on the acquisition and use of current spendable resources, as well as on balances of spendable resources available at the end of the fiscal year. Such information may be useful in evaluating a government's near-term requirements.

Because the focus of governmental funds is narrower than that of the government-wide financial statements, it is useful to compare the information presented for governmental funds with similar information presented for governmental activities in the government-wide financial statements. By doing so, readers may better understand the long-term impact of the government's near-term financial decisions. Both the governmental fund Balance Sheet and the governmental fund Statement of Revenues, Expenditures, and Changes in Fund Balances provide a reconciliation to facilitate this comparison between governmental funds and governmental activities. These reconciliations can be found on pages four through seven in the basic financial statements.

The City maintains 17 individual governmental funds. Information is presented separately in the Governmental Fund Balance Sheet and in the Governmental Fund Statement of Revenues, Expenditures, and Changes in Fund Balances for those funds that are considered significant (major) to the City taken as a whole. These financial statements report two major funds: General and Street Construction. Data for the other 15 governmental funds are aggregated into a single column in the fund financials.

Summary fund data by fund-type for these non-major governmental funds is provided in the form of combining statements on pages 38 through 39-A. Individual fund data for each of these non-major governmental funds is provided as supplementary information in the form of schedules of revenues, expenditures and changes in fund balance on pages 40 through 54.

In order to provide prudent and responsible control over city expenditures and revenues, the City adopts an annual budget for all governmental funds. To demonstrate compliance with the budget, budgetary comparison statements have been provided for the General Fund and the other major funds as required supplementary information on pages 32 and 33. Budgetary comparisons for all other governmental funds have been provided as other supplementary information on pages 40 through 54.

The governmental fund financial statements can be found on pages 4 through 7 in the basic financial statements.

Proprietary funds. Proprietary funds are used to account for activities where the emphasis is placed on net income determination. The City maintains two types of proprietary funds; namely, enterprise funds and internal service funds.

Enterprise funds are used to report the same functions presented as business-type activities in the governmental-wide financial statements. The City uses enterprise funds to account for its water utility and wastewater utility operations. The enterprise funds are

reported separately in the proprietary fund financial statements in the basic financial statements and can be found on pages 8 through 10-A.

Internal service funds act like a rental agency of personnel, equipment and materials to support the activities of other funds. Internal service funds are supported by direct charges to other funds and do not accrue a cash balance. The City uses an internal service fund to support the city building/facilities, streets/drainage, water, and wastewater activities. The internal service fund is reported separately in the proprietary fund financial statements in the basic financial statements and can be found on pages 8 through 10-A.

In order to provide prudent and responsible control over City expenditures and revenues, the City adopts an annual budget for all proprietary funds. To demonstrate compliance with the budget, budgetary comparison statements have been provided for the enterprise and internal service funds as other supplementary information on pages 34 through 37 and 58 through 63.

Fiduciary funds. Fiduciary funds of the City are agency funds which hold assets on behalf of others. The City maintains one agency fund: Municipal Court.

Since the fund is held in trust for other parties the City does not budget these funds. The funds are however audited and corresponding information on their activities can be found on pages 11 and 64.

Notes to the basic financial statements. The notes provide additional information that is essential for a full understanding of the data provided in the government-wide and fund financial statements. They are an integral part of the financial statements and should be read in conjunction with them. The notes can be found on pages 12 through 30.

Other supplementary information. The combining statements and schedules referred to earlier follow the notes in this report.

Government-wide Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of a government's financial position. In the case of the City, assets exceeded liabilities by $28,375,801 at the close of the most recent fiscal year.

The largest portion of the City's net position, 73.3% reflects its investment in capital assets (e.g., land and right of way, buildings, improvements, equipment, and infrastructure, net of accumulated depreciation), less any related debt used to acquire those assets that are still outstanding. The City uses these capital assets to provide services to citizens. Consequently, these assets are not available for future spending. Although the City's investment in its capital assets is reported net of related debt, it

should be noted that the resources needed to repay this debt must be provided from other sources since the capital assets themselves cannot be used to liquidate these liabilities.

City of Sutherlin's Net Position

	Governmental Activities		Business-Type Activities		Totals	
	2016	2017	2016	2017	2016	2017
Assets						
Current assets	$ 2,106,194	$ 6,082,450	$ 3,907,932	$ 3,756,670	$ 6,014,126	$ 9,839,120
Noncurrent Assets	9,746,673	7,024,471	25,074,304	26,658,297	34,820,977	33,682,768
Total assets	11,852,867	13,106,921	28,982,236	30,414,967	40,835,103	43,521,888
Deferred Outflows of Resources	283,083	1,518,754	-	-	283,083	1,518,754
Liabilities						
Current liabilities	316,572	647,988	609,092	628,091	925,664	1,276,079
Other liabilities	1,580,449	3,785,363	9,817,196	11,444,400	11,397,645	15,229,763
Total liabilities	1,897,021	4,433,351	10,426,288	12,072,491	12,323,309	16,505,842
Deferred Inflows of Resources	325,450	158,999	-	-	325,450	158,999
Net Position						
Invested in capital assets, net of related debt	9,746,673	5,950,884	14,898,375	14,851,594	24,645,048	20,802,478
Restricted	364,168	660,308	1,452,375	1,207,659	1,816,543	1,867,967
Unrestricted	(197,362)	3,422,133	2,205,198	2,283,223	2,007,836	5,705,356
Total Net Position	$ 9,913,479	$ 10,033,325	$ 18,555,948	$ 18,342,476	$ 28,469,427	$ 28,375,801

An additional portion of the City's assets, 6.6% represents resources that are subject to external restrictions on how they may be used. The remaining balance of the unrestricted net position $5,705,356 may be used to meet the government's ongoing obligations to citizens and creditors.

Although the City's current asset position increased by $3,824,994 the total noncurrent assets decreased by ($1,138,209). The increase in current assets was due to funds received from ODOT as mentioned above. The decrease in Noncurrent Assets is due to the addition of capital assets not keeping up with depreciation on existing assets.

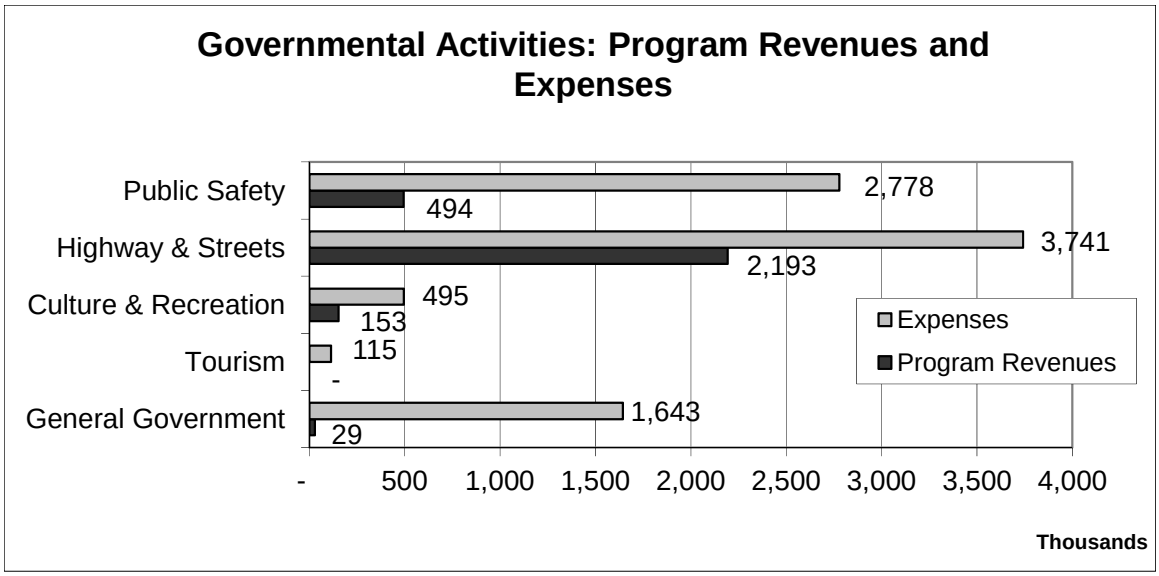
It should be noted that there are two new line items, introduced last fiscal year, in the chart above; deferred outflows of resources and deferred inflows of resources. The deferred outflows of resources are comprised of pension related deferrals. The deferred inflows of resources are comprised of deferred pension assets. For additional information regarding the City's defined benefit pension plan, see note 6 in the Notes to Basic Financial Statements.

City of Sutherlin's Change in Net Position						
	Governmental		Business-Type		Totals	
Revenues:	2016	2017	2016	2017	2016	2017
Program						
Fines, fees, and charges for services	$ 384,413	$ 415,861	$ 3,797,992	$ 4,187,618	$ 4,182,405	$ 4,603,479
Operating grants and contributions	98,944	2,453,438	-	-	98,944	2,453,438
Capital grants and contributions	-	-	-	-	-	-
General						
Property Taxes	2,716,165	2,776,747	-	-	2,716,165	2,776,747
Franchise fees	423,377	443,213	-	-	423,377	443,213
Intergovernmental	814,565	1,589,003	-	-	814,565	1,589,003
Interest	14,937	56,999	19,835	19,672	34,772	76,671
Miscellaneous	229,004	323,027	-	-	229,004	323,027
Gain (loss) On Disposal	-	5,750	-	-	-	5,750
Total revenues	4,681,405	8,064,038	3,817,827	4,207,290	8,499,232	12,271,328
Expenses:						
General government	2,628,415	1,643,491	-	-	2,628,415	1,643,491
Public safety	2,228,804	2,778,110	-	-	2,228,804	2,778,110
Highway and streets	3,743,013	3,741,038	-	-	3,743,013	3,741,038
Culture and recreation	478,782	495,181	-	-	478,782	495,181
Tourism	99,343	114,628	-	-	99,343	114,628
Interest on long-term debt	24,750	19,422	-	-	24,750	19,422
Wastewater	-	-	1,657,245	1,868,276	1,657,245	1,868,276
Water	-	-	1,611,128	1,704,808	1,611,128	1,704,808
Ambulance	-	-	-	-	-	-
Total expenses	9,203,107	8,791,870	3,268,373	3,573,084	12,471,480	12,364,954
Increase (decrease) in Net Position before transfers	(4,521,702)	(727,832)	549,454	634,206	(3,972,248)	(93,626)
Transfers	755,783	847,678	(755,783)	(847,678)	-	-
Change in Net Position	(3,765,919)	119,846	(206,329)	(213,472)	(3,972,248)	(93,626)
Net Position July 1	13,679,398	9,913,479	18,762,277	18,555,948	32,441,675	28,469,427
Prior Period Adjustment	-	-	-	-	-	-
Net Position June 30	$ 9,913,479	$ 10,033,325	$ 18,555,948	$ 18,342,476	$ 28,469,427	$ 28,375,801

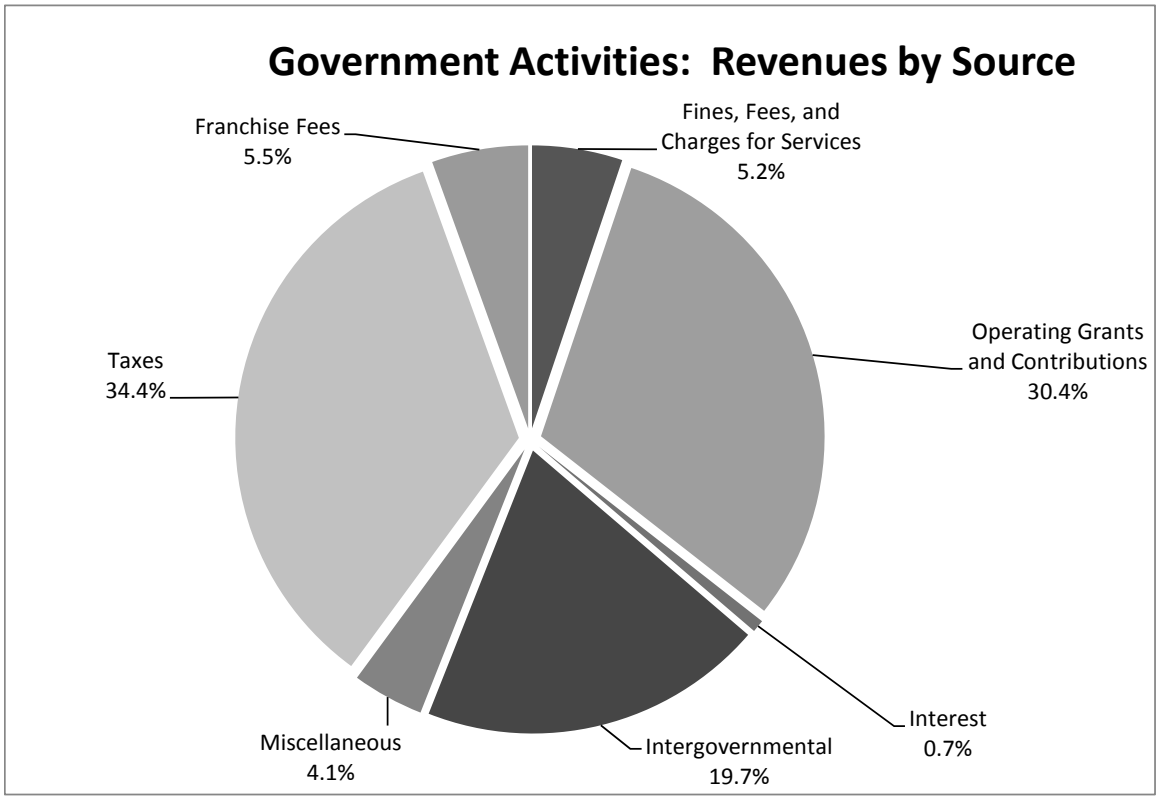
Expenses above include the indirect expenses as allocated in the Statement of Activities on page 3 and 3-A of the basic financial statements.

Governmental activities. Governmental-type activities increased the City's total net position by $119,846. Total depreciation attributed to the governmental activities (primarily street infrastructure) was $3.70 million as detailed on page 20 of the notes to basic financial statements.

The next chart compares program revenues and expenses for the individual governmental activities for the fiscal year. As the chart reflects, all governmental activities relied on general revenues to support their functions.

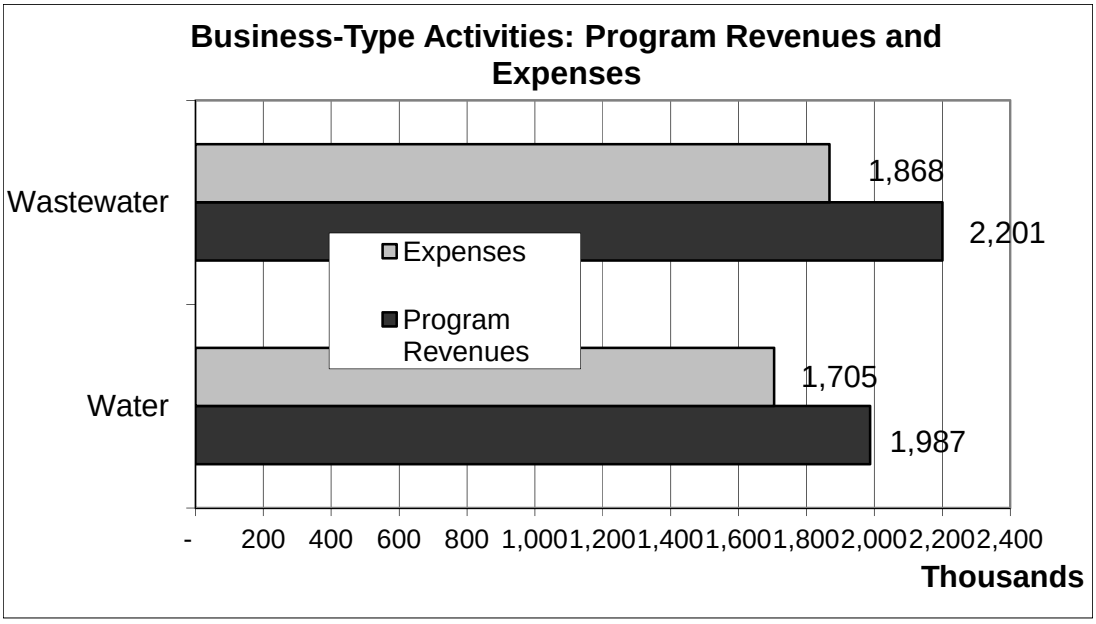


The next chart shows the percent of the total for each source of revenue supporting governmental activities.

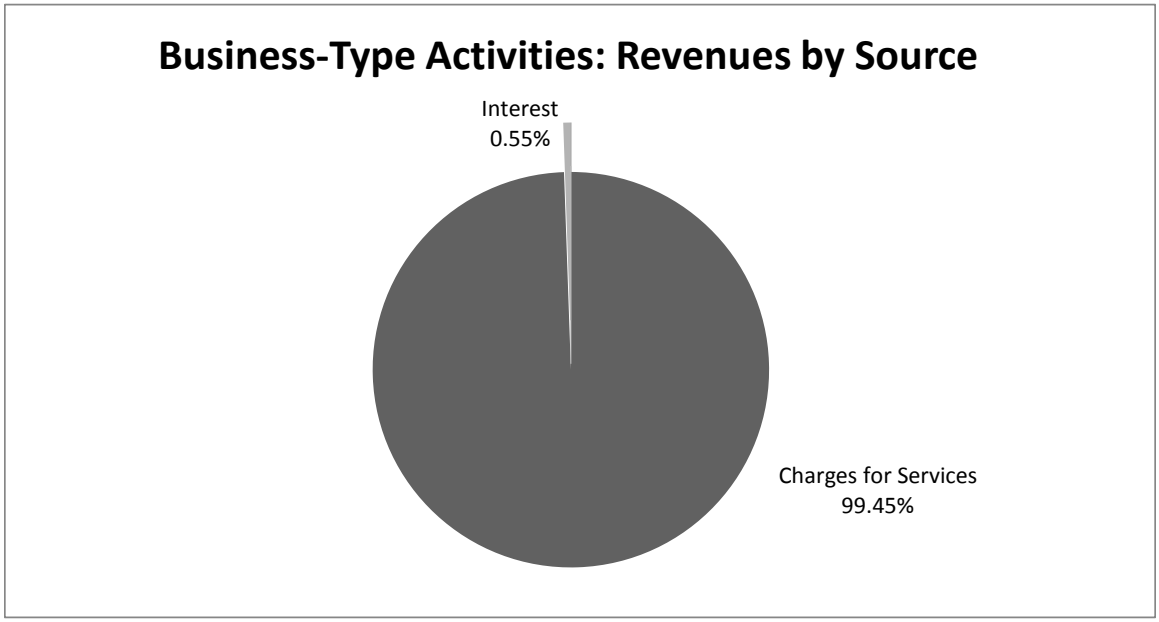


Business-type activities. Business-type activities decreased the City's net position by ($213,472). Total depreciation attributed to the business-type funds was $1.15 million as detailed on page 20 of the notes to basic financial statements.

The following chart compares program revenues to expenses by individual business-type activity for the current year. These business-type activities recover more costs through program revenues than governmental activities. As the chart shows, annual revenues for both the Wastewater and Water enterprises exceeded expenses.



The following chart shows that nearly 100% of revenues for business-type activities, for the year, were generated by charges for services.



Capital assets. The City's investment in capital assets for its governmental and business-type activities amounted to $33.68 million (net of accumulated depreciation) or a decrease of $1.14 million when compared to last year. This investment in capital assets

includes land, right-of-way (included with land), construction in progress, infrastructure (water distribution lines, wastewater collection lines, pump stations, reservoirs, etc.), water rights (development of), buildings and plant (includes the water treatment plants and the wastewater treatment plant), and vehicles and equipment.

City of Sutherlin's Capital Assets, Net of Accumulated Depreciation

	Governmental Activities		Business-Type Activities		Totals	
	2016	2017	2016	2017	2016	2017
Land	$ 1,116,919	$ 1,116,919	$ 3,281,776	$ 3,281,776	$ 4,398,695	$ 4,398,695
Construction in progress	113,320	524,619	506,346	2,691,978	619,666	3,216,597
Water Rights	-	-	629,901	629,901	629,901	629,901
Infrastructure	6,506,263	3,202,486	20,336,351	19,768,178	26,842,614	22,970,664
Buildings and plant	1,758,341	1,660,454	228,005	216,268	1,986,346	1,876,722
Vehicles and equipment	251,830	519,993	91,925	70,196	343,755	590,189
	$ 9,746,673	$ 7,024,471	$ 25,074,304	$ 26,658,297	$ 34,820,977	$ 33,682,768

Major capital asset events during the fiscal year included the following:

- Final design of Wastewater Treatment Plant Upgrade
- Upgrades to the Wastewater Treatment Plant (In Progress at Year End)
- Completion of North Comstock Water Line Improvement
- Central Avenue Improvement Project Engineering
- Central Park Playground and Splash pad improvements (In Progress at Year End)
- New Public Safety Equipment including SCBAs
- New Public Safety Vehicles (2)
- Various Building Improvement Projects
- Various pavement slurry seal projects

Additional information on the City's capital assets can be found in note three to the basic financial statements (page 20).

Long-term obligations. At the end of the fiscal year, the City had total long-term obligations totaling $12,880,290. Outstanding long-term obligations include: $5,910,321 to be serviced by water user rates and connection fees, $5,285,587 to be serviced by wastewater user rates and connection fees (all backed by the full faith and credit of the City), and $610,795 in notes payable to be serviced by water and wastewater revenues. The remaining $1,073,587 in long-term obligations, or 8.3% of the total long-term obligations, is to be paid by existing general government revenue sources.

City of Sutherlin's Long-Term Obligations							
		Governmental Activities		Business-Type Activities		Total	
		2016	2017	2016	2017	2016	2017
General obligation bonds	$	430,000	390,000	-	-	430,000	390,000
Revenue bonds		-	-	6,094,400	5,910,321	6,094,400	5,910,321
Refunding bonds		-	-	535,000	465,000	535,000	465,000
Note payables		-	505,000	3,546,529	5,431,382	3,546,529	5,936,382
Capital leases		-	-	-	-	-	-
Accumulated compensated absences		179,188	178,587	-	-	179,188	178,587
	$	609,188	1,073,587	10,175,929	11,806,703	10,785,117	12,880,290

The City's total long-term debt obligation increased by $2,095,173 over last fiscal year's ending balance. The increase is largely due to receipt of interim loan proceeds from DEQ for the wastewater treatment plan upgrade. In addition, the City secured financing in the amount of $505,000 from Oregon Transportation Infrastructure Bank for the Central Avenue Improvement Project. Accumulated compensated absences netted a decrease of ($601).

ORS 223.295 limits the amount of general obligation assessment bonded debt which a city may have outstanding at any one time to three percent (3.00%) of the Real Market Value of the City. The City had only the refunding bonds and the Library GO bond as outstanding bonded debt at June 30, 2017. The City's outstanding obligations subject to bonded debt limitations was $465,000 or 2.4% of debt capacity.

City of Sutherlin's Remaining Debt Capacity		
Real Market Value (fiscal year 2016-2017 Douglas County)	$	655,843,879
Debt capacity (3.00% of RMV)		19,675,316
Outstanding Obligations	-	465,000
Remaining Debt Capacity	$	19,210,316

Additional information on the City's long-term obligations can be found in note 5 to the basic financial statements (see pages 21 and 22).

Fund-based Financial Analysis

As previously discussed, the City uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements.

Governmental funds: The focus of the City's governmental funds is to provide information on near-term inflows, outflows, and balances of spendable resources. Such information is useful in assessing the City's financing requirements. In particular, unreserved fund balance may serve as a useful measure of a government's net resources available for spending at the end of the fiscal year.

As of the end of the fiscal year, the City's governmental funds reported combined ending fund balances of $6,395,725, an increase of $3,628,193 in comparison with the prior year. Approximately 26.7% of this total amount, $1,708,257, constitutes unassigned fund balance, which is available for spending at the government's discretion. The remainder of fund balance has some level of restrictions placed upon them, as follows:

- *Nonspendable fund balance* (amounts that are not in a spendable form or are required to be maintained intact) was $6,559

- *Restricted fund balance* (amounts constrained to specific purposes by their providers such as grantors, bondholders, and higher levels of government, through constitutional provisions, or by enabling legislation) was $660,308

- *Committed fund balance* (amounts constrained to specific purposes by a government itself, using its highest level of decision-making authority; to be reported as committed, amounts cannot be used for any other purpose unless the government takes the same highest-level action to remove or change the constraint) was $1,878,075

- *Assigned fund balance* (amounts a government *intends* to use for a specific purpose) was $2,142,526

The General Fund is the chief operating fund of the City. At the end of the current fiscal year, unassigned fund balance of the General Fund was $1,708,257. As a measure of the General Fund's liquidity, it may be useful to compare unassigned fund balance to total fund expenditures. Unassigned fund balance represents 37.8% of total General Fund expenditures.

The General Fund's overall fund balance increased by $434,273 due to increased revenues and cost management.

The fund balance of the Street Construction fund increased by $1,590,604 during the fiscal year. As previously mentioned, funds in the amount of $2.15 million were received from ODOT for street improvements which have yet to be completed.

Finally, the fund balance for all other governmental funds increased $1,603,316. This increase is also related to the ODOT funds received as noted above.

Proprietary funds: The City's proprietary funds provide the same type of information found in the government-wide financial statements, but in more detail.

Unrestricted net position and its percent to total net position of each proprietary fund are as follows:

• Water	329,441	4.5%
• Wastewater	317,235	3.9%
• Water Construction Fund	0	0.0%
• Wastewater Construction Fund	0	0.0%
• Other Non-Major Funds	477,614	37.6%

Restrictions on net position exist in the above funds totaling $415,141 all due to capital projects restrictions in the Water and Wastewater Construction Funds.

Restrictions on net position exist in the Other Non-Major Enterprise Funds totaling $792,518; debt service restrictions total $229,001 and capital projects restrictions total $563,517. These restrictions generally limit the use of monies in the funds to related activities.

Total business-type net position decreased $235,929 during the fiscal year.

Other factors concerning the finances of proprietary funds can be found in the previous discussion of the City's business-type activities.

General Fund Budgetary Highlights

The difference between the original general fund budget and the final amended budget was neutral. Adjustments to the General Fund were as follows:

Revenues:

- Intergovernmental increased by $5,838 due to receipt of a Police grant

Expenditures:

- Planning increased $44,000 due to reorganization of employee duties
- Contingency decreased $44,000 to accommodate this increase
- Police increased by $5,838 to expend the grant funds above

There were variations between the final amended budget and the actual year-end amounts in the General Fund; actual expenditures were $302,130 (6.8%) less than the adjusted budget. This was largely due to cost management in the Fire and Police Departments. Revenues were greater than the adjusted budget by $100,807 2.7%. This was due to greater amounts received than anticipated for Franchise Fees, Fines and Forfeitures, and Miscellaneous Revenues. Actual transfers in were the same as the final amended budget.

During the year, prior to transfers in and out, actual expenditures exceeded actual revenues by $296,403. Net transfers in and out of the General Fund amounted to $352,700. The net effect of revenues, expenditures, and transfers was a $56,297 increase in fund balance.

Economic Factors and Next Year's Budgets and Rates

During the preparation of the budget for the ensuing fiscal year, the long-term impacts of the local economy were examined in conjunction with business decisions made by the City. The following are the major assumptions used in developing the FY 2017-2018 budget:

- Last fiscal year the increase in property tax revenue was 1.7% and real market value increased 4.1%. The city chose to increase budgeted tax revenue for the 2017-2018 fiscal year by 2.0% based on recent historical trends.

- Cost of Living Adjustment (COLA) is calculated to be 2.0% for all sworn police officers, fire department employees, and those who supervise them and 3.0% for all other represented and non-represented employees.

- Water rates will be increased by 2.5% as of August 1, 2017 for the annual CPI adjustment. Wastewater rates were completely revised during fiscal year 2014-15 in order to provide equity among the rate classes. The new rates were effective December 1, 2015 and will then increase every July 1 for the following five years thereafter. The rate of increase/decrease will vary depending on the rate class. The overall projected increase for the year equates to 14.1% over last year's budgeted amount. These increases are needed to support the future debt service for the wastewater treatment plant upgrade.

- While hopeful for the future we expect the local economy will continue to see limited growth.

- Interest rates on investments will average during the fiscal year to 1.0%.

Requests for Information

This financial report is designed to provide a general overview of the City's finances for those with an interest in the government's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Dan Wilson,
Finance Director
City of Sutherlin
126 E. Central Ave.
Sutherlin, OR 97479

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

BASIC FINANCIAL STATEMENTS

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

STATEMENT OF NET POSITION
June 30, 2017

	PRIMARY GOVERNMENT		
	GOVERNMENTAL	BUSINESS TYPE	TOTAL
ASSETS			
Cash and Investments	$ 6,317,861	$ 1,821,741	$ 8,139,602
Receivables	1,014,603	647,368	1,661,971
Prepaids	6,559	30,988	37,547
Interfund Loans	(97,640)	97,640	-
Internal Balances	(1,158,933)	1,158,933	-
Total Current Assets	6,082,450	3,756,670	9,839,120
Noncurrent Assets:			
Capital Assets, net	7,024,471	26,658,297	33,682,768
Total Assets	13,106,921	30,414,967	43,521,888
DEFERRED OUTFLOWS OF RESOURCES			
Pension Related Deferrals	1,518,754	-	1,518,754
LIABILITIES			
Accounts Payable	421,282	146,475	567,757
Accrued Expenses	8,119	-	8,119
Customer Deposits	-	68,717	68,717
Accrued Interest Payable	-	50,596	50,596
Long-term Debt:			
Proportionate Share of Net Pension Liability	2,930,363	-	2,930,363
Due Within One Year	218,587	362,303	580,890
Due In More Than One Year	855,000	11,444,400	12,299,400
Total Liabilities	4,433,351	12,072,491	16,505,842
DEFERRED INFLOWS OF RESOURCES			
Deferred Pension Asset	158,999	-	158,999
NET POSITION:			
Net Investment in Capital Assets	5,950,884	14,851,594	20,802,478
Restricted for:			
Bond Covenants	-	195,724	
Debt Service	22,190	33,277	55,467
Capital Projects	638,118	978,658	1,616,776
Unrestricted	3,422,133	2,283,223	5,705,356
Total Net Position	$ 10,033,325	$ 18,342,476	$ 28,375,801

The accompanying notes are an integral part of the basic financial statements.

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

STATEMENT OF ACTIVITIES
For the Year Ended June 30, 2017

		Program Revenues		
Functions/Programs	Expenses	Charges For Services	Operating Grants and Contributions	Capital Grants and Contributions
Governmental Activities				
General Government	$ 1,643,491	$ 23,576	$ 5,288	$ -
Public Safety & Fire	2,778,110	332,220	162,058	-
Highways and Streets	3,741,038	43,098	2,150,000	-
Culture and Recreation	495,181	16,967	136,092	-
Tourism	114,628	-	-	-
Interest on Long-term Debt	19,422	-	-	-
Total Governmental Activities	8,791,870	415,861	2,453,438	-
Business-Type Activities				
Wastewater	1,868,276	2,200,535	-	-
Water	1,704,808	1,987,083	-	-
Total Business Activities	3,573,084	4,187,618	-	-
Total Primary Government	$ 12,364,954	$ 4,603,479	$ 2,453,438	$ -

General Revenues:
Property Taxes
Franchise Taxes
Intergovernmental
Miscellaneous
Interest
Gain/(Loss) On Disposal
Transfers

Total General Revenues and Transfers

Change in Net Position

Beginning Net Position

Ending Net Position

The accompanying notes are an integral part of the basic financial statements.

Net Revenues (Expenses) and Changes in Net Position		
Governmental Activities	Business-Type Activities	Total
$ (1,614,627)	$ -	$ (1,614,627)
(2,283,832)	-	(2,283,832)
(1,547,940)	-	(1,547,940)
(342,122)	-	(342,122)
(114,628)	-	(114,628)
(19,422)	-	(19,422)
(5,922,571)	-	(5,922,571)
-	332,259	332,259
-	282,275	282,275
-	614,534	614,534
(5,922,571)	614,534	(5,308,037)
2,776,747	-	2,776,747
443,213	-	443,213
1,589,003	-	1,589,003
323,027	-	323,027
56,999	19,672	76,671
5,750	-	5,750
847,678	(847,678)	-
6,042,417	(828,006)	5,214,411
119,846	(213,472)	(93,626)
9,913,479	18,555,948	28,469,427
$ 10,033,325	$ 18,342,476	$ 28,375,801

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

BALANCE SHEET
GOVERNMENTAL FUNDS
June 30, 2017

	GENERAL FUND	STREET CONSTRUCTION FUND	OTHER GOVERNMENTAL FUNDS	TOTAL
ASSETS				
Cash and Cash Equivalents	$ 2,368,132	$ 1,382,108	$ 2,419,092	$ 6,169,332
Accounts Receivable	408,472	500,000	106,130	1,014,602
Prepaids	6,559	-	-	6,559
Total Assets	$ 2,783,163	$ 1,882,108	$ 2,525,222	$ 7,190,493
LIABILITIES AND FUND BALANCES				
LIABILITIES				
Accounts Payable	$ 133,351	$ 195,662	$ 86,300	$ 415,313
Interfund Payable	25,142	-	72,498	97,640
Accrued Expenses	8,119	-	-	8,119
Total Liabilities	166,612	195,662	158,798	521,072
DEFERRED INFLOWS OF RESOURCES				
Unavailable Revenue - Property Taxes	267,765	-	5,931	273,696
Total Liabilities and Deferred Inflows	434,377	195,662	164,729	794,768
Fund Balances:				
Nonspendable	6,559	-	-	6,559
Restricted	-	-	660,308	660,308
Committed	-	1,686,446	191,629	1,878,075
Assigned	633,970	-	1,508,556	2,142,526
Unassigned	1,708,257	-	-	1,708,257
Total Fund Balances	2,348,786	1,686,446	2,360,493	6,395,725
Total Liabilities, Deferred Inflows and Fund Balances	$ 2,783,163	$ 1,882,108	$ 2,525,222	$ 7,190,493

The accompanying notes are an integral part of the basic financial statements.

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

RECONCILIATION OF BALANCE SHEET OF GOVERNMENTAL FUNDS
TO STATEMENT OF NET POSITION
June 30, 2017

Explanation of certain differences between the governmental fund balance sheet and the government-wide statement of net position.		
Fund Balances	$	6,395,725
The cost of capital assets (land, buildings, improvements, machinery and equipment, infrastructure, and construction in progress) is reported as an expenditure in governmental funds. The statement of net position includes those capital assets among the assets of the City as a whole.		
Net Capital Assets		7,024,471
Long-term liabilities applicable to the City's governmental activities are not due and payable in the current period and accordingly are not reported as fund liabilities. All liabilities, both current and long-term, are reported in the statement of net position.		
Long-term Obligations		(1,073,587)
The Net Pension Asset (Liability), and deferred inflows and outflows related to the Net Pension Asset is the difference between the total pension liability and assets set aside to pay benefits earned to past and current employees and beneficiaries		(1,570,608)
The internal service fund is not reported in the governmental funds but is included in the government-wide governmental activities.		
Net Position of internal service fund		(1,016,372)
Other long-term assets are not available to pay for current-period expenditures and therefore are deferred in the funds.		
Unearned/Unavailable Revenue		273,696
Total Net Position	$	10,033,325

The accompanying notes are an integral part of the basic financial statements.

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - GOVERNMENTAL FUNDS
For the Year Ended June 30, 2017

	GENERAL FUND	STREET CONSTRUCTION FUND	OTHER GOVERNMENTAL FUNDS	TOTAL
REVENUES				
Property Taxes	$ 2,715,157	$ -	$ 51,000	$ 2,766,157
Franchise Fees	443,213	-	-	443,213
System Development Charges	-	-	53,098	53,098
Assessments	-	-	194,388	194,388
Grants and Contributions	-	-	138,760	138,760
Licences, Permits and Fees	3,825	-	-	3,825
Fines and Forfeitures	127,254	-	-	127,254
Charges for Services	19,966	-	-	19,966
Intergovernmental	611,010	651,302	2,648,787	3,911,099
Interest	22,070	4,689	30,240	56,999
Miscellaneous	72,782	-	259,728	332,510
Total Revenues	4,015,277	655,991	3,376,001	8,047,269
EXPENDITURES				
Current:				
General Government	1,464,185	-	-	1,464,185
Culture and Recreation	159,796	-	100,740	260,536
Tourism	-	-	103,979	103,979
Highways and Streets	-	-	131,182	131,182
Public Safety and Fire	2,515,667	-	-	2,515,667
Debt Service	217	-	59,806	60,023
Capital Outlay	373,589	265,387	362,278	1,001,254
Total Expenditures	4,513,454	265,387	757,985	5,536,826
Excess of Revenues Over, (Under) Expenditures	(498,177)	390,604	2,618,016	2,510,443
OTHER FINANCING SOURCES, (USES)				
Interfund Loans	-	-	-	-
Loan Proceeds		500,000		500,000
Surplus Property	5,750	-	-	5,750
Transfers In	1,499,700	700,000	220,000	2,419,700
Transfers Out	(573,000)	-	(1,234,700)	(1,807,700)
Total Other Financing Sources, (Uses)	932,450	1,200,000	(1,014,700)	1,117,750
Net Change in Fund Balance	434,273	1,590,604	1,603,316	3,628,193
Beginning Fund Balance	1,914,513	95,842	757,177	2,767,532
Ending Fund Balance	$ 2,348,786	$ 1,686,446	$ 2,360,493	$ 6,395,725

The accompanying notes are an integral part of the basic financial statements.

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

RECONCILIATION OF STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES - GOVERNMENTAL FUNDS - TO STATEMENT OF ACTIVITIES
For the Year Ended June 30, 2017

Explanation of certain differences between the governmental fund statement of revenues, expenditures, and changes in fund balance and the government-wide statement of activities		
Excess of Revenues over Expenditures	$	3,628,193
Governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense. This is the amount by which capital outlays exceeded depreciation in the current period.		
Capital Outlay		972,834
Depreciation Expense		(3,695,036)
The Pension Expense and the changes in deferred inflows and outlfows related to the Net Pension Asset represents the changes in Net Pension Asset (Liability) from year to year due to changes in total pension liability and the fair value of pension plan net position available to pay pension benefits.		(337,792)
Internal service funds are used by management to charge the costs of various function to the individual funds. The net revenue (expense) of the internal service fund is allocated between governmental and business-type activities.		5,456
Under the modified accrual basis of accounting used in the governmental funds. expenditures are not recognized for transactions that are not normally paid with expendable available financial resources. In the statement of activities, however, which is presented on the accrual basis of accounting, expenses and liabilities are reported regardless of when financial resources are available. This adjustment combines the net changes in liability balances.		
Principal payments on long-term obligations/Accrued Vacation		(464,399)
Revenues in the statement of activities that do not provide current financial resources are not reported as revenues in the funds.		
Unearned/Unavailable Revenue		10,590
Change in Net Position	$	119,846

The accompanying notes are an integral part of the basic financial statements.

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

STATEMENT OF PROPRIETARY NET POSITION
June 30, 2017

	WATER FUND	WASTEWATER FUND	WATER CONSTRUCTION FUND
ASSETS			
Current Assets			
Cash and Investments	$ 254,735	$ 187,619	$ 238,980
Accounts Receivable, net	208,269	159,669	-
Interfund Loan	25,142	-	-
Prepaids	-	-	-
Total Current Assets	488,146	347,288	238,980
Noncurrent Assets			
Bond Issue Costs, net	-	-	-
Capital Assets, Net	13,461,583	13,196,714	-
Total Noncurrent Assets	13,461,583	13,196,714	-
Total Assets	$ 13,949,729	$ 13,544,002	$ 238,980
LIABILITIES			
Current Liabilities			
Accounts Payable	$ 39,392	$ 30,053	$ 31,066
Accrued Expenses	-	-	
Bond Premium, net	-	-	-
Customer Deposits	68,717	-	-
Accrued Interest Payable	50,596	-	-
Long Term Debt, Current Position	214,578	147,725	-
Total Current Liabilities	373,283	177,778	31,066
Long-term Liabilities			
Long Term Debt, Net of Current Position	6,306,538	5,137,862	-
Total Long-term Liabilities	6,306,538	5,137,862	-
Total Liabilities	6,679,821	5,315,640	31,066
NET POSITION			
Invested in Capital Assets, Net of Related Debt	6,940,467	7,911,127	-
Restricted for:			
Bond Covenants	-	-	-
Debt Services	-	-	-
Capital Projects	-	-	207,914
Unrestricted	329,441	317,235	-
Total Net Position	7,269,908	8,228,362	207,914
Total Liabilities and Fund Equity	$ 13,949,729	$ 13,544,002	$ 238,980

The accompanying notes are an integral part of the basic financial statement

WASTEWATER CONSTRUCTION FUND	OTHER NONMAJOR FUNDS	TOTAL	INTERNAL SERVICE FUND
$ 252,181	$ 888,226	$ 1,821,741	$ 148,529
-	279,430	647,368	-
-	72,498	97,640	-
-	30,988	30,988	-
252,181	1,271,142	2,597,737	148,529
-	-	-	-
-	-	26,658,297	-
-	-	26,658,297	-
$ 252,181	$ 1,271,142	$ 29,256,034	$ 148,529
$ 44,954	$ 1,010	$ 146,475	$ 2,326
-	-	-	3,643
-	-	-	-
-	-	68,717	-
-	-	50,596	-
-	-	362,303	-
44,954	1,010	628,091	5,969
-	-	11,444,400	-
-	-	11,444,400	-
44,954	1,010	12,072,491	5,969
-	-	14,851,594	-
			-
-	195,724	195,724	
-	33,277	33,277	-
207,227	563,517	978,658	-
-	477,614	1,124,290	142,560
207,227	1,270,132	17,183,543	142,560
$ 252,181	$ 1,271,142	$ 29,256,034	$ 148,529

Net Position Above	17,183,543
Internal Service Activities related to Business Typ	1,158,933
Total Net Position Business Type Activitie	18,342,476

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
PROPRIETARY FUNDS
For the Year Ended June 30, 2017

	WATER FUND	WASTEWATER FUND	WATER CONSTRUCTION FUND
OPERATING REVENUES			
Charges for Services	$ 1,945,056	$ 1,853,085	$ -
Miscellaneous	-	11,774	-
Total Operating Revenues	1,945,056	1,864,859	-
OPERATING EXPENSES			
Personal Service	-	-	-
Materials and Services	356,727	536,628	574,547
Depreciation and Amortization	511,214	638,015	-
Total Operating Expenses	867,941	1,174,643	574,547
Operating Income -Loss	1,077,115	690,216	(574,547)
NONOPERATING REVENUES, (EXPENSES)			
Interest	3,002	2,312	3,107
Debt Proceeds	-	-	-
Interest Expense		-	-
System Development Charges	1,976	-	40,051
Invergovernmental	-	-	-
Miscellaneous		-	-
Total Nonoperating Revenues (Expenses)	4,978	2,312	43,158
Capital Contributions	811,232	307,625	-
Transfers In	-	-	200,000
Transfers Out	(1,568,200)	(1,329,800)	-
Change in Net Position	325,125	(329,647)	(331,389)
Net Position (Deficit), Beginning of Year, Restated	6,944,783	8,558,009	539,303
Net Position (Deficit), end of yea	$ 7,269,908	$ 8,228,362	$ 207,914

The accompanying notes are an integral part of the basic financial statements.

WASTEWATER CONSTRUCTION FUND	OTHER NONMAJOR FUNDS	TOTAL	INTERNAL SERVICE FUND
$ -	$ 24,774	$ 3,822,915	$ -
-	-	11,774	8,895
-	24,774	3,834,689	8,895
-	-	-	1,114,914
2,144,631	22,378	3,634,911	74,262
-	-	1,149,229	-
2,144,631	22,378	4,784,140	1,189,176
(2,144,631)	2,396	(949,451)	(1,180,281)
1,773	7,714	17,908	2,193
1,989,507	-	1,989,507	-
-	(640,054)	(640,054)	-
3,277	-	45,304	-
-	-	-	-
-	-	-	-
1,994,557	(632,340)	1,412,665	2,193
	-	1,118,857	-
100,000	780,000	1,080,000	1,330,000
-	-	(2,898,000)	(124,000)
(50,074)	150,056	(235,929)	27,912
257,301	1,120,076	17,419,472	114,648
$ 207,227	$ 1,270,132	$ 17,183,543	$ 142,560

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
For the Year Ended June 30, 2017

	WATER FUND	WASTEWATER FUND	WATER CONSTRUCTION FUND
Cash Flows from Operating Activities:			
Cash Received from Customers	$ 2,019,834	$ 1,881,971	$ -
Cash Paid to Suppliers	(375,031)	(553,543)	(557,997)
Net Cash Provided (Used) by Operating Activities	1,644,803	1,328,428	(557,997)
Cash Flows from Noncapital Financing Activities:			
Miscellaneous	1,976	-	40,051
Interfund Loans	-	-	-
Transfers	(1,568,200)	(1,329,800)	200,000
Net Cash Provided (Used) by Noncapital Financing Activities	(1,566,224)	(1,329,800)	240,051
Cash Flows from Capital and Related Financing Activities:			
Bond Proceeds	-	-	-
Interfund Loan	33,375	-	-
Payments on debt	-	-	-
Net Cash Provided (Used) by Capital and Related Financing Activities	33,375	-	-
Cash Flows from Investing Activities:			
Purchase of Capital Assets	-	-	
Earnings on Investments	3,002	2,312	3,107
Net Increase (Decrease) in Cash and Cash Equivalents	114,956	940	(314,839)
Cash and Investments at Beginning of Year	139,779	186,679	553,819
Cash and Investments at End of Year	$ 254,735	$ 187,619	$ 238,980
Reconciliation of Operating Income to Net Cash Provided by Operating Activities			
Operating Income, (Loss)	$ 1,077,115	$ 690,216	$ (574,547)
Noncash Items Included in Income:			
Depreciation	511,214	638,015	-
Decrease (Increase) in Accounts Receivable	70,548	17,112	
Increase (Decrease) in Accounts Payable and Accrued Liabilities	(18,304)	(16,915)	16,550
Increase (Decrease) in Customer Deposits	4,230	-	-
Net Cash Provided (Used) by Operating Activities	$ 1,644,803	$ 1,328,428	$ (557,997)

Noncash Transactions:
All of the enterprise funds have their debt and capital assets purchased/paid for them. The funds recognized capital contributions on the Statement of Revenues and Expenses to account for this activity. The Water and Wastewater funds had the following noncash transactions for capital contributions: $811,232 and $307,625, respectively.

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The accompanying notes are an integral part of the basic financial statements.

WASTEWATER CONSTRUCTION FUND	OTHER NONMAJOR FUNDS	TOTAL	INTERNAL SERVICE FUND
$ -	$ 69,037	$ 3,970,842	$ 11,005
(2,114,762)	(22,378)	(3,623,711)	(1,193,570)
(2,114,762)	46,659	347,131	(1,182,565)
3,277	27,502	72,806	-
-	(100,000)	(100,000)	-
100,000	780,000	(1,818,000)	1,206,000
103,277	707,502	(1,845,194)	1,206,000
1,989,507	-	1,989,507	-
-	-	33,375	-
-	(640,054)	(640,054)	-
1,989,507	(640,054)	1,382,828	-
		-	
1,773	7,714	17,908	2,193
(20,205)	121,821	(97,327)	25,628
272,386	766,405	1,919,068	122,901
$ 252,181	$ 888,226	$ 1,821,741	$ 148,529
$ (2,144,631)	$ 2,395	$ (949,452)	$ (1,180,281)
-	-	1,149,229	-
-	44,264	131,924	2,110
29,869	-	11,200	(4,394)
-	-	4,230	-
$ (2,114,762)	$ 46,659	$ 347,131	$ (1,182,565)

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

STATEMENT OF FIDUCIARY ASSETS
FIDUCIARY FUNDS
June 30, 2017

	Agency
ASSETS	
Cash and Cash Equivalents	$ 5,291
Total Assets	$ 5,291
LIABILITIES	
Accounts Payable	$ 13,787
Amounts held in trust	(8,496)
Total Liabilities	$ 5,291

The accompanying notes are an integral part of the basic financial statements.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. ORGANIZATION (REPORTING ENTITY)

The City was incorporated in 1911. Control of the City is vested in its mayor and council members who are elected to office by voters within the City. Administrative functions are delegated to individuals who report to and are responsible to the Mayor and Council. The chief administrative officer is the City Manager.

The accompanying financial statements present all activities, funds, and component units for which the City is considered to be financially accountable. The criteria used in making this determination includes appointment of a voting majority, imposition of will, financial benefit or burden on the primary government, and fiscal dependency on the primary government. Based upon the evaluation of this criteria, the City is a primary government with no includable component units.

B. GOVERNMENT-WIDE AND FUND FINANCIAL STATEMENTS

The government-wide financial statements (i.e., the statement of net position and the statement of activities) report information on all of the nonfiduciary activities of the City. For the most part, the effect of interfund activity has been removed from these statements. *Governmental activities*, which normally are supported by taxes and intergovernmental revenues, are reported separately from *business-type activities*, which rely to a significant extent on fees and charges for support.

The statement of activities demonstrates the degree to which the direct expenses of a given function or segment are offset by program revenues. Direct expenses are those that are clearly identifiable with a specific function or segment. Amounts reported as program revenues include 1) charges to customers or applicants for goods, services, or privileges provided, 2) operating grants and contributions, and 3) capital grants and contributions, including special assessments.

Internally dedicated resources are reported as general revenues rather than as program revenues. Taxes and other items not properly included among program revenues are reported instead as general revenues.

Separate financial statements are provided for governmental funds and proprietary funds even though the latter are excluded from the government-wide financial statements. Major individual governmental funds and major individual enterprise funds are reported as separate columns in the fund financial statements.

C. MEASUREMENT FOCUS, BASIS OF ACCOUNTING & FINANCIAL STATEMENT PRESENTATION

The government-wide financial statements are reported using the economic resources measurement focus and the accrual basis of accounting, as are the proprietary fund financial statements. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Property taxes are recognized as revenues in the year for which they are levied. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met.

The government-wide statements and proprietary funds have applied all Financial Accounting Standards Board (FASB) Statements and Interpretations, Accounting Principles Board Opinions and Accounting Research Bulletins of the Committee on Accounting Procedure issued on or before November 30, 1989, unless those pronouncements conflict with or contradict Governmental Accounting Standards Board (GASB) pronouncements. The City has elected not to follow FASB pronouncements issued after November 30, 1989.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

C. MEASUREMENT FOCUS, BASIS OF ACCOUNTING & FINANCIAL STATEMENT PRESENTATION (CONTINUED)

As a general rule the effect of interfund activity has been eliminated from the government-wide financial statements. Exceptions to this general rule are charges between the functions of the City, the elimination of which would distort the direct costs and program revenues reported for the various functions concerned.

Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues are charges to customers for sales and services. Operating expenses for proprietary funds include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

When both restricted and unrestricted resources are available for use, it is the City's policy to use restricted resources first, then unrestricted resources as they are needed.

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period.

For this purpose, the government considers revenues to be available if they are collected within 60 days of the end of the current fiscal period. Significant revenues, which are susceptible to accrual under the modified accrual basis of accounting, include property taxes and federal and state grants. Other revenue items are considered to be measurable and available when received by the City.

Expenditures generally are recorded when a liability is incurred, as under accrual accounting.

However, debt service expenditures, as well as expenditures related to compensated absences and claims and judgments, are recorded only when payment is due.

The basis of accounting described above is in accordance with accounting principles generally accepted in the United States of America.

The City reports the following major governmental funds:

General - accounts for all financial resources of the City, except those required to be accounted for in another fund. Principal sources of revenue are property taxes, franchise fees, and state shared revenues. Expenditures are primarily for general government operations, highways and streets, public safety, tourism, and culture and recreation.
Street Construction - accounts for the cost of construction of City streets and storm water drainage systems.

The City reports the following major proprietary funds:

Water – accounts for the operation of the water system.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

C. MEASUREMENT FOCUS, BASIS OF ACCOUNTING & FINANCIAL STATEMENT PRESENTATION (CONTINUED)

Wastewater – accounts for the operation of the wastewater treatment plant and collection system.
Water Construction – accounts for the receipt and disbursement of funds for major replacement or additions to the water system infrastructure. The principal sources of revenues are transfers from the Water fund and water system development charges.
Wastewater Construction – accounts for the receipt and disbursement of funds for major replacement or additions to the wastewater system infrastructure. The principal sources of revenues are loan proceeds.

The City also includes the following fund types as other governmental funds and other enterprise funds:

Special revenue – accounts for revenue derived from specific taxes or other revenue sources, which are legally restricted to particular functions or activities. When a special revenue fund is not an operating fund, transfers are made from the special revenue fund to the operating funds authorized to make expenditures.
Debt service – accounts for repayment of principal and interest on its outstanding loan.
Capital projects – accounts for expenditures on major construction projects. The principal sources of revenues are proceeds from donations.
Enterprise – accounts for the operations of predominantly self-supporting activities. Enterprise funds account for services rendered to the public on a user charge basis, and internal service funds account for services provided to other departments or agencies of the government, or to other governments, on a cost reimbursement basis.
Agency – accounts for resources received and held by the CITY in a fiduciary capacity. Disbursements from these funds are made in accordance with applicable legislative enactment.

D. BUDGETS POLICIES AND BUDGETARY CONTROL

Generally, Oregon Local Budget Law requires annual budgets be adopted for all funds except agency funds. The modified accrual basis of accounting is used for all budgets. All annual appropriations lapse at fiscal year end.

The City begins its budgeting process by appointing Budget Committee members in the fall of each year. Budget recommendations are developed by management through early spring, with the Budget Committee meeting and approving the budget document in late spring. Public notices of the budget hearing are generally published in May or June and the hearing is held in June. The City council adopts the budget, makes appropriations, and declares the tax levy no later than June 30. Expenditure appropriations may not be legally over-expended, except in the case of grant receipts and bond sale proceeds which could not be reasonably estimated at the time the budget was adopted.

The resolution authorizing appropriations for each fund sets the level at which expenditures cannot legally exceed appropriations. The City established the levels of budgetary control at the personal services, materials and services, capital outlay, operating contingencies, debt service, and all other requirement levels for all funds.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

D. BUDGETS POLICIES AND BUDGETARY CONTROL (CONTINUED)

Budget amounts shown in the basic financial statements have been revised since the original budget amounts were adopted. The City council must authorize all appropriation transfers and supplementary budgetary appropriations. The City's disbursements did not exceed appropriations.

E. COMPENSATED ABSENCES - SICK LEAVE

The City has a policy which permits full-time employees to accumulate sick leave at the rate of one day per month up to 2,000 hours.

F. USE OF ESTIMATES

The process of preparing financial statements in conformity with accounting principles generally accepted in the United States of America requires the use of estimates and assumptions regarding certain types of assets, liabilities, revenues, and expenses. Such estimates primarily relate to unsettled transactions and events as of the date of the financial statements. Accordingly, upon settlement, actual results may differ from estimated amounts.

G. CASH AND CASH EQUIVALENTS

For purposes of reporting cash flows, cash and cash equivalents include cash on hand, checking, savings and money market accounts, and any highly-liquid debt instruments purchased with a maturity of three months or less.

H. RECEIVABLES

Property taxes are assessed and become a lien on all taxable property as of July 1. Property taxes are levied on November 15. Collection dates are November 15, February 15, and May 15. Discounts are allowed if the amount due is received by November 15 or February 15. Taxes unpaid and outstanding on May 16 are considered delinquent. Property taxes receivable collected within 60 days subsequent to year-end are considered measurable and available, and are recognized as revenues. All other property taxes receivable are offset by deferred revenue because they are not deemed available to finance operations of the current period.

Receivables for federal and state grants and state, county, and local shared revenue are recorded as revenue in all fund types as earned. Receivables of the Proprietary Funds are recorded as revenue in all funds as earned. The allowance for doubtful accounts is established on a historical view of delinquencies.

I. CAPITAL ASSETS

Capital assets purchased or acquired are reported at historical cost or estimated historical cost. Contributed fixed assets are recorded at estimated fair market value at the time received. Public domain (infrastructure) capital assets consisting of roads, bridges, curbs and gutters, streets and sidewalks, drainage systems and lighting systems acquired since July 1, 2003 are recorded at cost. Capital assets are defined by the government as assets with an initial, individual cost of more than $5,000 and an estimated useful life in excess of one year.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

I. CAPITAL ASSETS (CONITNUED)

Major outlays for capital assets and improvements are capitalized as projects are constructed. Interest incurred during the construction phase of capital assets of business-type activities is included as part of the capitalized value of the assets constructed. Net revenue bond interest cost incurred during the construction periods is capitalized when material.

Capital assets are depreciated using the straight line method over the following estimated useful lives.

Assets	10- 50
Buildings	20-40
Improvements other than buildings	4-10
Equipment	20-30
Streets	20-50
Distribution and collection systems	18

J. FUND EQUITY

In March 2009, the GASB issued Statement No. 54, Fund Balance Reporting and Governmental Fund-type Definitions. The objective of this statement is to enhance the usefulness of fund balance information by providing clearer fund balance classifications that can be more consistently applied and by clarifying the existing governmental fund-type definitions. This statement establishes fund balance classifications that comprise a hierarchy based primarily on the extent to which a government is bound to observe constraints imposed on the use of the resources reported in governmental funds. Under this standard, the fund balance classifications of reserved, designated, and unreserved/undesignated were replaced with five new classifications – nonspendable, restricted, committed, assigned, and unassigned.

- *Nonspendable* fund balance represents amounts that are not in a spendable form. The nonspendable fund balance represents prepaid items.
- *Restricted* fund balance represents amounts that are legally restricted by outside parties for a specific purpose (such as debt covenants, grant requirements, donor requirements, or other governments) or are restricted by law (constitutionally or by enabling legislation).
- *Committed* fund balance represents funds formally set aside by the governing body for a particular purpose. The use of committed funds would be approved by resolution.
- *Assigned* fund balance represents amounts that are constrained by the expressed intent to use resources for specific purposes that do not meet the criteria to be classified as restricted or committed. Intent can be stipulated by the governing body or by an official to whom that authority has been given by the governing body. The City Council has granted the City Manager and the Finance Director the authority to classify portions of ending fund balance as Assigned.
- *Unassigned* fund balance is the residual classification of the General Fund. Only the General Fund may report a positive unassigned fund balance. Other governmental funds would report any negative residual fund balance as unassigned.

The Council has approved the following order of spending regarding fund balance categories: Restricted resources are spent first when both restricted and unrestricted (committed, assigned or unassigned) resources are available for expenditures. When unrestricted resources are spent, the order of spending is committed (if applicable), assigned (if applicable) and unassigned.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

J. FUND EQUITY

To preserve a sound financial system and to provide a stable financial base, the Council has adopted the following fund balance policy: The City shall strive to maintain the General Fund undesignated fund balance at 35% or four months of regular general fund operating expenditures. In enterprise funds, the City shall strive to maintain positive retained earnings positions to provide sufficient reserves for emergencies and revenue shortfalls. Specifically, in the Water and Sewer Enterprise Fund, an operating reserve will be established and maintained at 20 percent of the current year's budget appropriation for operation and maintenance, which is defined as the total budget less debt service and capital projects expenditures. The City shall not regularly maintain positive retained earnings in internal service funds. When an internal service fund builds up retained earnings, the City shall transfer it to other operating funds. The City shall maintain sufficient reserves in its debt service funds which shall equal or exceed the reserve fund balances required by bond ordinances.

K. DEFERRED OUFLOWS/INFLOWS OF RESOURCES

In addition to assets, the statement of financial position will sometimes report a separate section for deferred outflow of resources. This separate financial statement element represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense/expenditure) until then. .In addition to liabilities, the statement of financial position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time.

L. RETIREMENT PLANS

Substantially all of the City's employees are participants in the State of Oregon Public Employees Retirement System (PERS). For the purpose of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about fiduciary net position of PERS and additions to/deductions from PERS's fiduciary net position have been determined on the same basis as they are reported by PERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value. GASB Statements 68 and 71 have been implemented as of July 1, 2015.

M. FAIR VALUE INPUTS AND METHODOLOGIES AND HIERARCHY

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Observable inputs are developed based on market data obtained from sources independent of the reporting entity. Unobservable inputs are developed based on the best information available about the assumptions market participants would use in pricing the asset. The classification of securities within the fair value hierarchy is based up on the activity level in the market for the security type and the inputs used to determine their fair value, as follows:

Level 1 – unadjusted price quotations in active markets/exchanges for identical assets or liabilities that each Fund has the ability to access

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Level 2 – other observable inputs (including, but not limited to, quoted prices for similar assets or liabilities in markets that are active, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the assets or liabilities (such as interest rates, yield curves, volatilities, loss severities, credit risks and default rates) or other market–corroborated inputs)
Level 3 – unobservable inputs based on the best information available in the circumstances, to the extent observable inputs are not available (including each Fund's own assumptions used in determining the fair value of investments)

The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Accordingly, the degree of judgment exercised in determining fair value is greatest for instruments categorized in Level 3. The inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the fair value hierarchy classification is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

2. DEPOSITS AND INVESTMENTS

The City maintains a pool of cash and investments that are available for use by all funds. Each fund's portion of this pool is displayed on the financial statements as cash and investments. Interest earned on pooled cash and investments is allocated to participating funds based upon their combined cash and investment balances.

Investments in the Local Government Investment Pool (LGIP) are included in the Oregon Short-Term Fund, which is an external investment pool that is not a 2a-7-like external investment pool, and is not registered with the U.S. Securities and Exchange Commission as an investment company. Fair value of the LGIP is calculated at the same value as the number of pool shares owned. The unit of account is each share held, and the value of the position would be the fair value of the pool's share price multiplied by the number of shares held. Investments in the Short-Term Fund are governed by ORS 294.135, Oregon Investment Council, and portfolio guidelines issued by the Oregon Short-Term Fund Board, which establish diversification percentages and specify the types and maturities of investments. The portfolio guidelines permit securities lending transactions as well as investments in repurchase agreements and reverse repurchase agreements. The fund appears to be in compliance with all portfolio guidelines at June 30, 2017. The LGIP seeks to exchange shares at $1.00 per share; an investment in the LGIP is neither insured nor guaranteed by the FDIC or any other government agency. Although the LGIP seeks to maintain the value of share investments at $1.00 per share, it is possible to lose money by investing in the pool. We intend to measure these investments at book value since it approximates fair value. The pool is comprised of a variety of investments. These investments are characterized as a level 2 fair value measurement in the Oregon Short Term Fund's audited financial report. As of June 30, 2017, the fair value of the position in the LGIP is 100.57% of the value of the pool shares as reported in the Oregon Short Term Fund audited financial statements. Amounts in the State Treasurer's Local Government Investment Pool are not required to be collateralized.

Credit risk: Oregon statutes authorize the City to invest in obligations of the U.S. Treasury and U.S. agencies, bankers' acceptances, repurchase agreements, commercial paper rated A-I by Standard & Poor's Corporation or P-l by Moody's Commercial Paper Record, and the state treasurer's investment pool.

2. DEPOSITS AND INVESTMENTS (CONTINUED)

As of June 30, 2017, the City had the following investments:

		Investment Maturities (in months)		
Investment Type	Fair Value	Less than 3	3-18	More than 18
State Treasurer's Investment Pool	$ 7,785,571	$ 7,785,571	$ -	$ -
Total	$ 7,785,571	$ 7,785,571	$ -	$ -

Interest Rate Risk: The City's policy to manage its exposure to fair-value losses arising from increases in interest rates is to limit investment maturities to 18 months.

Concentration of Credit Risk: The City policy does not allow for an investment in anyone issuer that is in excess of 50 percent of the City's total investments with the exception of the LGIP, Treasury Direct, or the City's banking institution.

Custodial Credit Risk - Investments: This is the risk that, in the event of the failure of a counterparty, the City will not be able to recover the value of its investments that are in the possession of an outside party. None of the City's investments have custodial credit risk. The City's policy does not limit the amount of investments that can be held by counterparties.

Custodial Credit Risk - Deposits: This is the risk that, in the event of a bank failure, the City's deposits may not be returned. The Federal Depository Insurance Corporation (FDIC) provides Insurance for the City's deposits with financial institutions up to $250,000 each for the aggregate of all non-interest bearing accounts and the aggregate of all interest bearing accounts at each institution. Deposits in excess of FDIC coverage with institutions participating in the Oregon Public Funds Collateralization Program. Oregon Revised Statutes and City policy require depository institutions to maintain on deposit, with the collateral pool manager, securities having a value not less than 10% of their quarter-end public fund deposits if they are well capitalized, 25% of their quarter-end public fund deposits if they are adequately capitalized, or 110% of their quarter-end public fund deposits if they are undercapitalized or assigned to pledge 110% by the Office of the State Treasurer. As of June 30, 2017, the total bank balance per the bank statements was $498,832. Of these deposits, $250,000 was covered by federal depository insurance. The remainder, if any, is collateralized the Oregon Public Funds Collateralization Program (PFCP). The City's deposits and investments at June 30, 2017 are as follows:

Deposits with Financial Institutions:	
Petty Cash	$ 500
Demand Deposits	358,822
Investments	7,785,571
Total cash and Investments	$ 8,144,893

3. CAPITAL ASSETS

Changes in Governmental Capital Assets for the year ended June 30, 2017 are as follows:

Governmental Activities	Balance June 30, 2016	Additions	Deletions	Balance June 30, 2017
Land*	$ 1,116,919	$ 20,680	$ (20,680)	$ 1,116,919
Construction in Progress*	113,320	524,619	(113,320)	524,619
Infrastructure	101,256,389	164,908	-	101,421,297
Buildings and Improvements	3,956,047	42,709	-	3,998,756
Vehicles and Equipment	2,235,226	353,918	-	2,589,144
Total Capital Assets	108,677,901	1,106,834	(134,000)	109,650,735
Accumulated Depreciation:				
Infrastructure	94,750,126	3,468,685	-	98,218,811
Buildings and Improvements	2,197,706	140,596	-	2,338,302
Vehicles and Equipment	1,983,396	85,755	-	2,069,151
Total Accumulated Depreciation	98,931,228	3,695,036	-	102,626,264
Total Net Capital Assets	$ 9,746,673			$ 7,024,471

Depreciation expense was charged to functions/programs of the City as follows:

General Government	$ 64,900
Public Safety	74,468
Highways and Streets	3,468,804
Culture and Recreation	86,039
Tourism	825
Total	$ 3,695,036

Changes in Business-Type Capital Assets for the year ended June 30, 2017 are as follows:

	Balances July 1, 2016	Additions	Deletions	Balance June 30, 2017
Capital Assets not being depreciated				
Land	$ 3,281,776		$ -	$ 3,281,776.00
Construction in progress	506,346	2,222,218	(36,586)	2,691,978
Water Rights	629,901		-	629,901
Total capital assets not being depreciated	4,418,023	2,222,218	(36,586)	6,603,655
Capital assets being depreciated				
Infrastructure and plant	50,818,821	537,390	-	51,356,211
Buildings	330,213		-	330,213
Vehicles and equipment	1,096,745	10,200	-	1,106,945
Total capital assets being depreciated	52,245,779	547,590	-	52,793,369
Less accumulated depreciation for:				
Infrastructure and Plant	30,482,470	1,105,563	-	31,588,033
Buildings	102,208	11,737	-	113,945
Vehicles and equipment	1,004,820	31,929		1,036,749
Total	31,589,498	1,149,229	-	32,738,727
Total capital assets being depreciated, net	20,656,281	(601,639)	-	20,054,642
Total capital assets, net	$ 25,074,304	$ 1,620,579	$ (36,586)	$ 26,658,297

4. RECEIVABLES

The City's receivables at June 30, 2017 are shown below:

Property Taxes	$	284,767
Accounts		1,009,266
Utility Accounts		367,938
	$	1,661,971

5. LONG-TERM OBLIGATIONS

A. Transactions for governmental activities for the year ended June 30, 2017 were as follows:

	Balance July 1, 2016	Additions	Deletions	Balance June 30, 2017	Due within One Year
General Obligation Bonds (original amount $800,000, & 3-5% interest	430,000	-	40,000	390,000	40,000
ODOT Note Payable $505k, 1.61%	-	505,000	-	505,000	-
Compensated Absences	179,188	178,587	179,188	178,587	178,587
Total	$ 616,371	$ 683,587	$ 226,371	$ 1,073,587	$ 218,587

Transactions for business-type activities for the year ended June 30, 2017 were as follows:

	Balance July 1, 2016	Additions	Deletions	Balance June 30, 2017	Due within One Year
USDA Rural Development (original amount $450,000, 3.25-5% interest)	$ 492	$ -	$ 492	$ -	$ -
Water Revenue Series 2008 (original amount $2,360,000, 3.75-5%)	1,635,000	-	110,000	1,525,000	115,000
2012 Refunding Bonds (original amount $795,000, 1.85-3.6%)	535,000	-	70,000	465,000	65,000
USDA Revenue Bonds ($4,601,000, 2.375%)	4,458,908	-	73,587	4,385,321	75,335
OECDD (original amount $779,697, 3-4.75%)	634,875	-	24,080	610,795	24,243
IFA Loan, October 2014 (original amount $2,625,000, 2.67%)	2,422,679	-	80,574	2,342,105	82,725
Total	$ 9,686,954	$ -	$ 358,733	$ 9,328,221	$ 362,303

Governmental:

	2005 Bonds		2017 ODOT Note	
Year	Principal	Interest	Principal	Interest
2017-2018	40,000	19,806	-	-
2018-2019	45,000	18,256	-	8,131
2019-2020	45,000	16,656	-	8,131
2020-2021	45,000	14,856	23,373	12,197
2021-2022	50,000	12,000	47,312	7,565
2022-2027	165,000	27,750	248,283	26,101
2027-2031	-	-	186,032	5,817
	390,000	109,324	505,000	67,942

5. LONG-TERM OBLIGATIONS (CONTINUED)

Business-Type

	2012 Refunding Bonds		2009 OECDD Loan	
Year	Principal	Interest	Principal	Interest
2017-2018	65,000	13,527	24,243	28,784
2018-2019	70,000	11,841	24,413	27,814
2019-2020	75,000	9,593	24,601	26,777
2020-2021	70,000	7,345	29,808	25,670
2021-2022	40,000	5,640	30,000	24,478
2022-2027	145,000	10,070	168,849	99,713
2027-2032	-	-	211,662	54,338
2032-2036	-	-	97,219	6,936
	$ 465,000	$ 58,016	$ 610,795	$ 294,510

	2008 Water Revenue Bonds		2013 USDA Revenue Bonds		2014 IFA Loan	
Year	Principal	Interest	Principal	Interest	Principal	Interest
2017-2018	115,000	61,976	75,335	104,151	82,725	62,534
2018-2019	115,000	57,374	77,124	102,362	84,944	60,325
2019-2020	120,000	52,774	78,956	100,530	87,202	58,058
2020-2021	125,000	47,976	80,831	98,655	89,530	55,729
2021-2022	130,000	42,974	82,750	96,736	91,920	53,339
2022-2027	750,000	122,958	444,183	453,247	497,753	228,545
2027-2032	170,000	7,012	499,495	397,935	567,848	158,448
2032-2037	-	-	561,695	335,735	647,814	78,485
2037-2042	-	-	631,640	265,790	192,369	6,530
2042-2047	-	-	710,296	187,134	-	-
2047-2052	-	-	798,745	98,685	-	-
2052-2056	-	-	344,271	12,284	-	-
	$1,525,000	$ 393,044	$ 4,385,321	$ 2,253,244	$ 2,342,105	$ 761,993

The City entered into a loan agreement with Oregon DEQ, the total amount to be received is $18,500,000, at an interest rate of 1.47%. At June 30, 2017 the City has drawn down $2,478,482, all of which is classified as due in more than one year.

6. DEFINED BENEFIT PENSION PLAN

Plan Description – The Oregon Public Employees Retirement System (PERS) consists of a single cost-sharing multiple-employer defined benefit plan. All benefits of the system are established by the legislature pursuant to Oregon Revised Statute (ORS) Chapters 238 and 238A. Oregon PERS produces an independently audited Comprehensive Annual Financial Report which can be found at:
http://www.oregon.gov/pers/Pages/section/financial_reports/financials.aspx
If the link is expired please contact Oregon PERS for this information.

a. **PERS Pension (Chapter 238)**. The ORS Chapter 238 Defined Benefit Plan is closed to new members hired on or after August 29, 2003.

6. DEFINED BENEFIT PENSION PLAN

i. **Pension Benefits**. The PERS retirement allowance is payable monthly for life. It may be selected from 13 retirement benefit options. These options include survivorship benefits and lump-sum refunds. The basic benefit is based on years of service and final average salary. A percentage (2.0 percent for police and fire employees, and 1.67 percent for general service employees) is multiplied by the number of years of service and the final average salary. Benefits may also be calculated under either a formula plus annuity (for members who were contributing before August 21, 1981) or a money match computation if a greater benefits results.

ii. **Death Benefits**. Upon the death of a non-retired member, the beneficiary receives a lump-sum refund of the member's account balance (accumulated contributions and interest). In addition, the beneficiary will receive a lump-sum payment from employer funds equal to the account balance, provided on or more of the following contributions are met:

- member was employed by PERS employer at the time of death,
- member died within 120 days after termination of PERS covered employment,
- member died as a result of injury sustained while employed in a PERS-covered job, or
- member was on an official leave of absence from a PERS-covered job at the time of death.

iii. **Disability Benefits**. A member with 10 or more years of creditable service who becomes disabled from other than duty-connected causes may receive a non-duty disability benefit. A disability resulting from a job-incurred injury or illness qualifies a member (including PERS judge members) for disability benefits regardless of the length of PERS-covered service. Upon qualifying for either a non-duty or duty disability, service time is computed to age 58 (55 for police and fire members) when determining the monthly benefit.

iv. **Benefit Changes After Retirement**. Members may choose to continue participation in a variable equities investment account after retiring and may experience annual benefit fluctuations due to changes in the market value equity investments. Under ORS 238.360 monthly benefits are adjusted annually through cost-of-living changes. The cap on the COLA will vary based on the amount of the annual benefit.

b. **OPSRP Pension Program (OPSRP DB)**. The ORS Chapter 238A Defined Benefit Pension Program provides benefits to members hired on or after August 29, 2003.

i. **Pension Benefits**. This portion of OPSRP provides a life pension funded by employer contributions. Benefits are calculated with the following formula for members who attain normal retirement age:

Police and fire: 1.8 percent is multiplied by the number of years of service and the final average salary. Normal retirement age for police and fire members is age 60 or age 53 with 25 years of retirement credit. To be classified as a police and fire member, the individual must have been employed continuously as a police and fire member for at least five years immediately preceding retirement.

General service: 1.5 percent is multiplied by the number of years of service and the final average salary. Normal retirement age for general service members is age 65, or age 58 with 30 years of retirement credit.

A member of the pension program becomes vested on the earliest of the following dates: the date the member completes 600 hours of service in each of five calendar years, the date the member reaches normal retirement age, and, if the pension program is terminated, the date on which termination becomes effective.

ii. **Death Benefits**. Upon the death of a non-retired member, the spouse or other person who is constitutionally required to be treated in the same manner as the spouse, receives for life 50 percent of the pension that would otherwise have been paid to the deceased member.

6. DEFINED BENEFIT PENSION PLAN

iii. **Disability Benefits**. A member who has accrued 10 or more years of retirement credits before the member becomes disabled or a member who becomes disabled due to job-related injury shall receive a disability benefit of 45 percent of the member's salary determined as of the last full month of employment before the disability occurred.

iv. **Benefit Changes After Retirement**. Under ORS 238A.210 monthly benefits are adjusted annually through cost-of-living changes. The cap on the COLA will vary based on the amount of the annual benefit.

Contributions – PERS funding policy provides for monthly employer contributions at actuarially determined rates. These contributions, expressed as a percentage of covered payroll, are intended to accumulate sufficient assets to pay benefits when due. The funding policy applies to the PERS Defined Benefit Plan and the Other Postemployment Benefit Plans. Employer contribution rates during the period were based on the December 31, 2014 actuarial valuation, which became effective July 1, 2015. The state of Oregon and certain schools, community colleges, and political subdivision have made unfunded actuarial liability payments and their rates have been reduced. Employer contributions for the year ended June 30, 2017 were $168,464, excluding amounts to fund employer specific liabilities. In addition approximately $145,740 in employee contributions were paid or picked up by the City in fiscal 2017. At June 30, 2017, the City reported a net pension liability of $2,930,363 for its proportionate share of the net pension liability. The pension liability was measured as of December 31, 2016, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The City's proportion of the net pension liability was based on a projection of the City's long-term share of contributions to the pension plan relative to the projected contributions of all participating employers, actuarially determined. At December 31, 2014, the City's proportion was .02 percent.

	Deferred Outflow of Resources	Deferred Inflow of Resources
Difference between expected and actual experience	$ 96,949	$ -
Changes in assumptions	624,976	-
Net difference between projected and actual earnings on pension plan investments	578,917	-
Net changes in proportionate share and differences between District contributions	49,448	65,384
and proportionate share of contributions	-	93,615
Subtotal - Amortized Deferrals (below)	1,350,290	158,999
School contributions subsequent to measuring date	168,464	-
Deferred outflow (inflow) of resources	$ 1,518,754	$ 158,999

Amounts reported as deferred outflows or inflow of resources related to pension will be recognized in pension expense as follows:

Year ending June 30,	Amount
2016	$ 207,719
2017	$ 207,719
2018	$ 421,783
2019	$ 313,987
2020	$ 40,083
Thereafter	-
Total	$ 1,191,291

6. DEFINED BENEFIT PENSION PLAN

All assumptions, methods and plan provisions used in these calculations are described in the Oregon PERS system-wide GASB 68 reporting summary dated December 1, 2016. Oregon PERS produces an independently audited CAFR which can be found at: http://www.oregon.gov/pers/docs/financial_reports/2016_cafr.pdf

Actuarial Valuations – The employer contribution rates effective July 1, 2015 through June 30, 2017, were set using the entry age normal actuarial cost method. For the Tier One/Tier Two component of the PERS Defined Benefit Plan, this method produced an employer contribution rate consisting of (1) an amount for normal cost (estimated amount necessary to finance benefits earned by employees during the current service year), (2) an amount for the amortization unfunded actuarial accrued liabilities, which are being amortized over a fixed period with new unfunded actuarial liabilities being amortized over 20 years.

For the OPSRP Pension Program component of the PERS Defined Benefit Plan, this method produced an employer rate consisting of (a) an amount for normal cost (the estimated amount necessar4y to finance benefits earned by the employees during the current service year), (b) an actuarially determined amount for funding a disability benefit component, and (c) an amount for the amortization of unfunded actuarial accrued liabilities, which are being amortized over a fixed period with new unfunded actuarial accrued liabilities being amortized over 16 years.

Actuarial Methods and Assumptions:

Valuation date	December 31, 2014 rolled forward to June 30, 2016 measurement date
Experience Study Report	2014, Published September 2015
Actuarial cost method	Entry Age Normal
Amortization method	Amortized as a level percentage of payroll as layered amortization bases over a closed period; Tier One/Tier Two UAL is amortized over 20 years and OPSRP pension UAL is amortized over 16 years
Asset valuation method	Market value of assets
Inflation rate	2.5 percent (reduced from 2.75 percent)
Investment rate of return	7.5 percent (reduced from 7.75 percent)
Projected salary increase	3.5 percent overall payroll growth; salaries for individuals are assumed to grow at 3.75 percent plus assumed rates of merit/longevity increases based on service (reduced from 3.5 percent)
Cost of Living Adjustment	Blend of 2.0 percent COLA and graded COLA (1.25/0.15 percent) in accordance with *Moro* decision, blend based on service
Mortality	Healthy retirees and beneficiaries: RP-2000 Sex-distinct, generational per Scale AA, with collar adjustments and set-backs as described in the valuation. Active members: Mortality rates are a percentage of healthy retiree rates that vary by group, as described in the valuation. Disabled retirees: Mortality rates are a percentage (65% for males and 90% for females) of the RP-2000 static combined disabled mortality sex-distinct table.

6. DEFINED BENEFIT PENSION PLAN

Actuarial valuations of an ongoing plan involve estimates of value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. Experience studies are performed as of December 31 of even numbered years. The method and assumptions shown are based on the 2014 Experience Study which is reviewed for the four-year period ending December 31, 2014.

Assumed Asset Allocation:

Asset Class/Strategy	Low Range	High Range	OIC Target
Cash	0.0%	3.0%	0.0%
Debt Securities	15.0%	25.0%	20.0%
Public Equity	32.5%	42.5%	37.5%
Private Equity	16.0%	24.0%	20.0%
Real Estate	9.5%	15.5%	12.5%
Alternative Equity	0.0%	10.0%	10.0%
Opportunity Portfolio	0.0%	3.0%	0.0%
Total			100%

Source: June 30, 2014 PERS CAFR; p. 54 – 55)

Long-Term Expected Rate of Return:

To develop an analytical basis for the selection of the long-term expected rate of return assumption, in July 2013 the PERS Board reviewed long-term assumptions developed by both Milliman's capital market assumptions team and the Oregon Investment Council's (OIC) investment advisors. The table below shows Milliman's assumptions for each of the asset classes in which the plan was invested at that time based on the OIC long-term target asset allocation. The OIC's description of each asset class was used to map the target allocation to the asset classes shown below. Each asset class assumption is based on a consistent set of underlying assumptions, and includes adjustment for the inflation assumption. These assumptions are not based on historical returns, but instead are based on a forward-looking capital market economic model.

6. DEFINED BENEFIT PENSION PLAN

Asset Class	Target	Compound Annual Return (Geometric)
Core Fixed Income	7.20%	4.50%
Short-term Bonds	8.00%	3.70%
Intermediate-Term Bonds	3.00%	4.10%
High Yield Bonds	1.80%	6.66%
Large Cap US Equities	11.65%	7.20%
Mid Cap US Equities	3.88%	7.30%
Small Cap US Equities	2.27%	7.45%
Developed Foreign Equities	14.21%	6.90%
Emerging Foreign Equities	5.49%	7.40%
Private Equity	20.00%	8.26%
Opportunity Funds/Absolute Retu	5.00%	6.01%
Real Estate (Property)	13.75%	6.51%
Real Estate (REITS)	2.50%	6.76%
Commodities	7.71%	6.07%
Assumed Inflation		*2.75%*

Source: June 30, 2014 PERS CAFR; p. 54 – 55)

Discount Rate – The discount rate used to measure the total pension liability was 7.5 percent for the Defined Benefit Pension Plan. The projection of cash flows used to determine the discount rate assumed that contributions from the plan members and those of the contributing employers are made at the contractually required rates, as actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments for the Defined Benefit Pension Plan was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the City's proportionate share of the net pension liability to changes in the discount rate – The following presents the City's proportionate share of the net pension liability calculated using the discount rate of 7.55 percent, as well as what the City's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.5 percent) or 1-perentage-point higher (8.5 percent) than the current rate.

	(6.5%)	(7.5%)	(8.5%)
District's proportionate share of the net pension liability	$ 4,731,559	$ 2,930,363	$ 1,424,878

6. DEFINED BENEFIT PENSION PLAN

Changes Subsequent to the Measurement Date

As described above, GASB 67 and GASB 68 require the Total Pension Liability to be determined based on the benefit terms in effect at the Measurement Date. Any changes to benefit terms that occurs after that date are reflected in amounts reported for the subsequent Measurement Date. However, Paragraph 80f of GASB 68 requires employers to briefly describe any changes between the Measurement Date and the employer's reporting date that are expected to have a significant effect on the employer's share of the collective Net Pension Liability, along with an estimate of the resulting change, if available.

At its July 28, 2017 meeting, the PERS Board lowered the assumed rate to 7.2 percent. For member transactions, this rate will take effect January 1, 2018. The current assumed rate is 7.5 percent and has been in effect for member transactions since January 1, 2016.

A deferred compensation plan is available to employees wherein they may execute an individual agreement with the District for amounts earned by them to not be paid until a future date when certain circumstances are met. These circumstances are: termination by reason of death, disability, resignation, or retirement. Payment to the employee will be made over a period not to exceed 15 years. The deferred compensation plan is one which is authorized under IRC Section 457 and has been approved in its specifics by a private ruling from the Internal Revenue Service. The assets of the plan are held by the administrator for the sole benefit of the plan participants and are not considered assets or liabilities of the District.

Individual Account Program - In the 2003 legislative session, the Oregon Legislative Assembly created a successor plan for OPERS. The Oregon Public Service Retirement Plan (OPSRP) is effective for all new employees hired on or after August 29, 2003, and applies to any inactive OPERS members who return to employment following a six month or greater break in service. The new plan consists of the defined benefit pension plans and a defined contribution pension plan (the Individual Account Program or IAP). Beginning January 1, 2004, all OPERS member contributions go into the IAP portion of OPSRP. OPERS' members retain their existing OPERS accounts, but any future member contributions are deposited into the member's IAP, not the member's OPERS account. Those employees who had established an OPERS membership prior to the creation of OPSRP will be members of both the OPERS and OPSRP system as long as they remain in covered employment. Members of OPERS and OPSRP are required to contribute six percent of their salary covered under the plan that is invested in the IAP. The District makes this contribution on behalf of its employees.

7. INTERFUND TRANSFERS

Cash transfers are indicative of funding for capital projects, debt service, subsidies of various city operations, and re-allocations of special revenues. Transfers are netted on the Statement of Activities as required by GASB 34. The following schedule briefly summarizes the City's transfer activity for the year ended June 30, 2017:

7. INTERFUND TRANSFERS (CONTINUED)

Fund	Transfer In	Transfer Out
General Fund	$ 1,499,700	$ 573,000
Street Construction	$ 700,000	$ -
Other Governmental	220,000	1,234,700
Water	-	1,568,200
Wastewater	-	1,329,800
Water Construction	200,000	-
Wastewater Construction	100,000	-
Other Business Type	780,000	-
Internal Service	1,330,000	124,000
Total	$ 4,829,700	$ 4,829,700

Please note that the "Internal Balances" noted on the Statement of Net Position is not an interfund balance, but a representation over time that represents the amount of use the internal service fund allocates to the governmental and business type activities. There is also a capital interfund loan between the Public Works Operations Reserve fund (which combines with General Fund) and the Water fund in the amount of $25,142, which the original amount was $100,000 and has a term of 3 years, with .5% interest, the current balance is $72,498..

8. RISK MANAGEMENT

The City is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The City purchases commercial insurance for such risks of loss. Settled claims resulting from these risks have not exceeded commercial insurance coverage in any of the past three fiscal years.

9. FUND BALANCE CONSTRAINTS

The specific purposes for each of the categories of fund balance as of June 30, 2017 are as follows:

9. FUND BALANCE CONSTRAINTS (CONTINUED)

Fund Balances:	General Fund	Street Construction Fund	Other Governmental Funds	Total
Nonspendable:				
Prepaids	$ 6,559	$ -	$ -	$ 6,559
Restricted:				
Street Storm Drainage Maintenance	-	-	306,702	306,702
System Development Charges	-	-	331,416	331,416
Debt Payments	-	-	22,190	22,190
	-	-	660,308	660,308
Committed to:				
Street Construction	-	1,686,446	-	1,686,446
Tourism	-	-	103,138	103,138
Parks Capital Projects	-	-	60,989	60,989
	-	1,686,446	164,127	1,850,573
Assigned to:				
General City	633,970	-	1,470,867	2,104,837
Library	-	-	190	190
Dial A Ride	-	-	37,499	37,499
Library Capital Projects	-	-		-
	633,970	-	1,508,556	2,142,526
Unassigned:	1,708,257	-	-	1,708,257
Total Fund Balances	$ 2,348,786	$ 1,686,446	$ 2,332,991	$ 6,368,223

10. COMMITMENTS AND CONTINGENCIES

The government is a defendant in various lawsuits. Although the outcome of these lawsuits is not presently determinable, in the opinion of the government's counsel, the resolution of these matters will not have a material adverse cash effect of the financial condition of the government.

11. TAX ABATEMENTS

As of June 30, 2017, the City provides tax abatements through one significant program: Enterprise Zone, ORS 285C.175.

The Oregon Enterprise Zone program is a State of Oregon economic development program established, that allows for property tax exemptions for up to five years. In exchange for receiving property tax exemption, participating firms are required to meet the program requirements set by state statute and the local sponsor.

The Enterprise Zone program allows industrial firms that will be making a substantial new capital investment a waiver of 100% of the amount of real property taxes attributable to the new investment for a 5-year period after completion. Land or existing machinery or equipment is not tax exempt; therefore, there is no loss of current property tax levies to local taxing jurisdiction.
For the fiscal year ended June 30, 2017, the City abated property taxes totaling $166,932 under this program.

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

REQUIRED SUPPLEMENTARY INFORMATION

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

REQUIRED SUPPLEMENTARY INFORMATION
For the Year Ended June 30, 2017

SCHEDULE OF THE PROPORTIONATE SHARE OF THE NET PENSION LIABILITY

Year Ended June 30,	(a) Employer's proportion of the net pension liability (NPL)	(b) Employer's proportionate share of the net pension liability (NPL)	(c) Employer's covered payroll	(b/c) NPL as a percentage of covered payroll	Plan fiduciary net position as a percentage of the total pension liability
2017	0.02 %	$ 2,930,363	$ 2,477,286	118%	80.5 %
2016	0.02	1,190,449	2,268,510	52.48	91.9
2015	0.02	(385,502)	2,224,914	(17.0)	103.6
2014	0.02	867,896	2,156,450	39.0	92.0

The amounts presented for each fiscal year were actuarial determined at 12/31 and rolled forward to the measurement date.

These schedules are presented to illustrate the requirements to show information for 10 years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

SCHEDULE OF CONTRIBUTIONS

	Statutorily required contribution	Contributions in relation to the statutorily required contribution	Contribution deficiency (excess)	Employer's covered payroll	Contributions as a percent of covered payroll
2017	$ 168,464	$ 168,464	$ -	$ 2,649,160	6.4 %
2016	154,896	154,896	-	2,477,286	6.3
2015	153,399	153,399	-	2,268,510	6.9
2014	159,387	159,387	-	2,224,914	7.4

The amounts presented for each fiscal year were actuarial determined at 12/31 and rolled forward to the measurement date.

These schedules are presented to illustrate the requirements to show information for 10 years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

	GENERAL FUND				
	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Propety Taxes	$ 2,750,650	$ 2,750,650		$ 2,715,157	$ (35,493)
Franchise Fees	416,800	416,800		443,213	26,413
Licences, Permits and Fees	9,500	9,500		3,825	(5,675)
Fines and Forfeitures	100,000	100,000		127,254	27,254
Charges for Services	13,500	13,500		19,966	6,466
Intergovernmental	427,150	432,988		443,952	10,964
Interest	5,000	5,000		17,096	12,096
Miscellaneous	14,000	14,000		72,782	58,782
Total Revenues	3,736,600	3,742,438		3,843,245	100,807
EXPENDITURES					
City Manager's Office	137,800	137,800	(1)	133,697	4,103
City Attorney	68,500	68,500	(1)	60,491	8,009
Mayor & Council	4,000	4,000	(1)	1,859	2,141
Non-Departmental	251,700	251,700	(1)	239,536	12,164
City Recorder/HR	195,155	195,155	(1)	191,698	3,457
Municipal Court	169,488	169,488	(1)	160,577	8,911
Finance	380,074	380,074	(1)	367,909	12,165
Planning	269,459	313,459	(1)	308,418	5,041
Police	1,966,076	1,971,914	(1)	1,828,593	143,321
Parks/Facilities	177,143	177,143	(1)	159,796	17,347
Fire	772,545	772,545	(1)	687,074	85,471
Contingency	200,000	156,000	(1)	-	156,000
Total Expenditures	4,591,940	4,597,778		4,139,648	458,130
Excess of Revenues Over, (Under) Expenditures	(855,340)	(855,340)		(296,403)	558,937
OTHER FINANCING SOURCES, (USES)					
Transfers Out	(573,000)	(573,000)	(1)	(573,000)	-
Transfers In	925,700	925,700		925,700	-
Net Change in Fund Balance	(502,640)	(502,640)		56,297	558,937
Beginning Fund Balance	1,649,000	1,649,000		1,658,519	9,519
Ending Fund Balance	$ 1,146,360	$ 1,146,360		$ 1,714,816	$ 568,456
Reconciliation to GAAP Fund Balance:					
Ending Fund Balances					
Bicycle / Footpath Fund				10,077	
Police Reserve				136,022	
Public Works Operations Reserve				76,247	
Public Works Operations Reserve - Interfund Loan				(25,142)	
Fire Reserve Fund				257,833	
Parks Facilities Reserve Fund				178,933	
				$ 2,348,786	

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

STREET CONSTRUCTION FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Intergovernmental	$ 200,000	$ 200,000		$ 651,302	$ 451,302
Interest	600	600		4,689	4,089
Total Revenues	200,600	200,600		655,991	455,391
EXPENDITURES					
Capital Outlay	330,000	950,000	(1)	265,387	684,613
Contingency	53,600	53,600	(1)	-	53,600
Total Expenditures	383,600	1,003,600		265,387	738,213
Excess of Revenues Over, (Under) Expenditures	(183,000)	(803,000)		390,604	1,193,604
OTHER FINANCING SOURCES, (USES)					
Loan Proceeds				500,000	
Transfers Out		-	(1)	-	-
Transfers In	80,000	700,000		700,000	-
Total Other Financing Sources, (Uses)	80,000	700,000		1,200,000	-
Net Change in Fund Balance	(103,000)	(103,000)		1,590,604	1,693,604
Beginning Fund Balance	103,000	103,000		95,842	(7,158)
Ending Fund Balance	$ -	$ -		$ 1,686,446	$ 1,686,446

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SUPPLEMENTARY INFORMATION

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

WATER OPERATIONS FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Charges for Services	$ 1,985,300	$ 1,985,300		$ 2,001,274	$ 15,974
System Development Charges	1,500	1,500		1,976	476
Interest	1,000	1,000		3,002	2,002
Miscellaneous	33,375	33,375		33,375	-
Total Revenues	2,021,175	2,021,175		2,039,627	18,452
EXPENDITURES					
Materials and Services	395,950	395,950	(1)	356,727	39,223
Capital Outlay	10,000	10,000	(1)	-	10,000
Contingecy	145,025	145,025	(1)	-	145,025
Total Expenditures	550,975	550,975		356,727	145,025
Excess of Revenues Over, (Under) Expenditures	1,470,200	1,470,200		1,682,900	212,700
OTHER FINANCING SOURCES, (USES)					
Interfund Loan	-	-			-
Transfers Out	(1,568,200)	(1,568,200)	(1)	(1,568,200)	-
Total Other Financing Sources, (Uses)	(1,568,200)	(1,568,200)		(1,568,200)	-
Net Change in Fund Balance	(98,000)	(98,000)		114,700	212,700
Beginning Fund Balance	98,000	98,000		232,464	134,464
Ending Fund Balance	$ -	$ -		347,164	$ 347,164

Reconciling Items:

Capital Assets, Net	13,461,583
Deferred Revenue	7,731
Accrued Interest	(50,596)
Interfund Loan	25,142
Long-Term Obligations	(6,521,116)
Net Position	$ 7,269,908

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

WASTEWATER OPERATIONS FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Charges for Services	$ 1,758,920	$ 1,758,920		$ 1,888,930	$ 130,010
Interest	1,000	1,000		2,312	1,312
Miscellaneous	-	-		11,774	11,774
Total Revenues	1,759,920	1,759,920		1,903,016	143,096
EXPENDITURES					
Materials and Services	517,850	560,350	(1)	536,628	23,722
Capital Outlay	22,000	22,000	(1)	-	22,000
Contingency	149,270	106,770	(1)	-	106,770
Total Expenditures	689,120	689,120		536,628	152,492
Excess of Revenues over Expenditures	1,070,800	1,070,800		1,366,388	(9,396)
OTHER FINANCING SOURCES, (USES)					
Transfers Out	(1,329,800)	(1,329,800)	(1)	(1,329,800)	-
Net Change in Fund Balance	(259,000)	(259,000)		36,588	143,096
Beginning Fund Balance	259,000	259,000		272,670	13,670
Ending Fund Balance	$ -	$ -		$ 309,258	$ 309,258

Reconciling Items:

Capital Assets, Net	13,196,714
Deferred Revenue	7,977
Long-Term Obligations	(5,285,587)
Net Position	$ 8,228,362

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

WATER CONSTRUCTION FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
System Development Charges	$ 10,000	$ 10,000		$ 40,051	$ 30,051
Interest	1,800	1,800		3,107	1,307
Total Revenues	11,800	11,800		43,158	31,358
EXPENDITURES					
Capital Outlay	601,000	601,000	(1)	574,547	26,453
Contingency	148,400	148,400	(1)	-	148,400
Total Expenditures	749,400	749,400		574,547	174,853
Excess of Revenues Over, (Under) Expenditures	(737,600)	(737,600)		(531,389)	206,211
OTHER FINANCING SOURCES, (USES)					
Transfers In	200,000	200,000		200,000	-
Net Change in Fund Balance	(537,600)	(537,600)		(331,389)	206,211
Beginning Fund Balance	537,600	537,600		539,303	1,703
Ending Fund Balance	$ -	$ -		$ 207,914	$ 207,914

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

WASTEWATER CONSTRUCTION FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
System Development Charges	$ 1,000	$ 1,000		$ 3,277	$ 2,277
Interest	1,500	1,500		1,773	273
Total Revenues	2,500	2,500		5,050	2,550
EXPENDITURES					
Capital Outlay	1,694,000	2,294,000	(1)	2,144,631	149,369
Contingency	520,400	520,400	(1)	-	520,400
Total Expenditures	2,214,400	2,814,400		2,144,631	669,769
Excess of Revenues Over, (Under) Expenditures	(2,211,900)	(2,811,900)		(2,139,581)	672,319
OTHER FINANCING SOURCES, (USES)					
Loan Proceeds	1,693,500	2,293,500		1,989,507	(303,993)
Transfers In	100,000	100,000		100,000	-
Net Change in Fund Balance	(418,400)	(418,400)		(50,074)	368,326
Beginning Fund Balance	418,400	418,400		257,301	(161,099)
Ending Fund Balance	$ -	$ -		$ 207,227	$ 207,227

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

COMBINING BALANCE SHEET -
NONMAJOR GOVERNMENTAL FUNDS
June 30, 2017

	STREET STORM DRAINAGE FUND	STREET SDC FUND	TOURISM MOTEL TAX	LIBRARY BOARD FUND	MAINSTREET PROGRAM FUND
ASSETS					
Cash and Equivalents	$ 284,336	$ 331,416	$ 196,709	$ 190	$ -
Prepaids	-	-	-	-	-
Accounts Receivable	41,286	-	31,140	-	-
Total Assets	$ 325,622	$ 331,416	$ 227,849	$ 190	$ -
LIABILITIES					
Accounts Payable	$ 18,920	$ -	$ 24,711	$	$ -
Interfund Loan	-	-	72,498	-	-
Deferred Revenue	-	-	-	-	-
Total Liabilities	18,920	-	97,209	-	-
FUND BALANCES					
Restricted	306,702	331,416	-	-	-
Committed	-	-	130,640	-	-
Assigned	-	-	-	190	-
Total Fund Balances	306,702	331,416	130,640	190	-
Total Liabilities and Fund Balances	$ 325,622	$ 331,416	$ 227,849	$ 190	$ -

DIAL A RIDE FUND	STREET MAINTENANCE FUND	CENTRAL AVENUE FUND	DEBT SERVICE LIBRARY GO BOND FUND	CAPITAL PROJECTS FUNDS PARKS CONSTRUCTION FUND	TOTAL
$ 12,288	$ 252,563	$ 1,218,304	$ 22,190	$ 101,096	$ 2,419,092
-	-	-	-	-	-
27,773	-	-	5,931	-	106,130
$ 40,061	$ 252,563	$ 1,218,304	$ 28,121	$ 101,096	$ 2,525,222
$ 2,562	$	$	$ -	$ 40,107	$ 86,300
-	-	-	-	-	72,498
-	-	-	5,931	-	5,931
2,562	-	-	5,931	40,107	164,729
-	-	-	22,190	-	660,308
-	-	-	-	60,989	191,629
37,499	252,563	1,218,304	-	-	1,508,556
37,499	252,563	1,218,304	22,190	60,989	2,360,493
$ 40,061	$ 252,563	$ 1,218,304	$ 28,121	$ 101,096	$ 2,525,222

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

COMBINING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE - NONMAJOR GOVERNMENTAL FUNDS
For the Year Ended June 30, 2017

	STREET STORM DRAINAGE FUND	STREET SDC FUND	TOURISM MOTEL TAX	LIBRARY BOARD FUND	MAINSTREET PROGRAM FUND
REVENUES					
Property Taxes	$ -	$ -	$ -	$ -	$ -
System Development Charges	-	43,098	-	-	-
Assessments	-	-	194,388	-	-
Grants and Contributions	-	-	-	-	-
Intergovernmental	473,787	-	-	-	-
Interest	1,365	3,253	2,152	2	18
Miscellaneous	252,760	-	-	-	-
Total Revenues	$ 727,912	$ 46,351	$ 196,540	$ 2	$ 18
EXPENDITURES					
Current					
Materials and Services	-	-	-	-	13,251
Culture and Recreation	-	-	-	-	-
Tourism	-	-	103,979	-	-
Highways and Streets	117,931	-	-	-	-
Capital Outlay	62,430	-	28,174	-	-
Debt Service	-	-	-	-	-
Total Expenditures	180,361	-	132,153	-	13,251
Excess of Revenues Over, (Under) Expenditures	547,551	46,351	64,387	2	(13,233)
OTHER FINANCING SOURCES, (USES)					
Transfers In	-	-		-	-
Transfers Out	(289,200)	-	(232,800)	-	-
Total Other Financing Sources, (Uses)	(289,200)	-	(232,800)	-	-
NET CHANGE IN FUND BALANCES	258,351	46,351	(168,413)	2	(13,233)
BEGINNING FUND BALANCES	48,351	285,065	299,053	188	13,233
ENDING FUND BALANCES	$ 306,702	$ 331,416	$ 130,640	$ 190	$ -

DIAL A RIDE FUND	STREET MAINTENANCE FUND	CENTRAL AVENUE FUND	DEBT SERVICE LIBRARY GO BOND FUND	CAPITAL PROJECTS FUNDS PARKS CONSTRUCTION FUND	TOTAL
$ -	$ -	$ -	$ 51,000	$ -	$ 51,000
-	-	-	-	10,000	53,098
-	-	-	-	-	194,388
138,760	-	-	-	-	138,760
-	250,000	1,900,000	-	25,000	2,648,787
80	2,563	18,304	244	2,259	30,240
6,968	-	-	-	-	259,728
$ 145,808	$ 252,563	$ 1,918,304	$ 51,244	$ 37,259	$ 3,376,001
-	-	-	-	-	13,251
100,740	-	-	-	-	100,740
-	-	-	-	-	103,979
-	-	-	-	-	117,931
27,669	-	-	-	244,005	362,278
-	-	-	59,806	-	59,806
128,409	-	-	59,806	244,005	757,985
17,399	252,563	1,918,304	(8,562)	(206,746)	2,618,016
-	-	-	-	220,000	220,000
(12,700)	-	(700,000)	-	-	(1,234,700)
(12,700)	-	(700,000)	-	220,000	(1,014,700)
4,699	252,563	1,218,304	(8,562)	13,254	1,603,316
32,800	-	-	30,752	47,735	757,177
$ 37,499	$ 252,563	$ 1,218,304	$ 22,190	$ 60,989	$ 2,360,493

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

STREET / STORM DRAINAGE

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Intergovernmental	$ 480,000	$ 480,000		$ 473,787	$ (6,213)
Miscellaneous	135,500	135,500		252,760	117,260
Interest	300	300		1,365	1,065
Total Revenues	615,800	615,800		727,912	112,112
EXPENDITURES					
Materials and Services	171,000	171,000	(1)	117,931	53,069
Capital Outlay	247,000	247,000	(1)	62,430	184,570
Contingency	23,300	23,300	(1)	-	23,300
Total Expenditures	441,300	441,300		180,361	260,939
Excess of Revenues Over, (Under) Expenditures	174,500	174,500		547,551	373,051
OTHER FINANCING SOURCES, (USES)					
Transfers Out	(289,200)	(289,200)	(1)	(289,200)	-
Net Change in Fund Balance	(114,700)	(114,700)		258,351	373,051
Beginning Fund Balance	114,700	114,700		48,351	(66,349)
Ending Fund Balance	$ -	$ -		$ 306,702	$ 306,702

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

STREET SDC SPECIAL REVENUE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
System Development Charges	$ 15,000	$ 15,000		$ 43,098	$ 28,098
Interest	1,300	1,300		3,253	1,953
Total Revenues	16,300	16,300		46,351	30,051
EXPENDITURES					
Contingency	282,700	282,700	(1)	-	282,700
Total Expenditures	282,700	282,700		-	282,700
Net Change in Fund Balance	(266,400)	(266,400)		46,351	312,751
Beginning Fund Balance	266,400	266,400		285,065	18,665
Ending Fund Balance	$ -	$ -		$ 331,416	$ 331,416

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

TOURISM - MOTEL TAX FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Assessments	$ 160,000	$ 160,000		$ 194,388	$ 34,388
Interest	600	600		2,152	1,552
Total Revenues	160,600	160,600		196,540	35,940
EXPENDITURES					
Materials and Services	100,600	139,980	(1)	131,481	8,499
Capital Outlay	5,000	5,000	(1)	-	5,000
Debt Service	-	28,500	(1)	28,174	326
Contingency	199,300	131,420	(1)	-	131,420
Total Expenditures	304,900	304,900		159,655	145,245
Excess of Revenues Over, (Under) Expenditures	(144,300)	(144,300)		36,885	181,185
OTHER FINANCING SOURCES, (USES)					
Transfers Out	(132,800)	(232,800)	(1)	(232,800)	-
Interfund Loan Proceeds	-	100,000		100,000	-
Net Change in Fund Balance	(277,100)	(277,100)		(95,915)	181,185
Beginning Fund Balance	277,100	277,100		299,053	21,953
Ending Fund Balance	$ -	$ -		$ 203,138	$ 203,138

Reconciliation to GAAP:	
Interfund Loan	$ (72,498)
GAAP Net Position	$ 130,640

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

LIBRARY BOARD FUND

	ORIGINAL BUDGET	FINAL BUDGET	ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES				
Interest	$ -	$ -	$ 2	$ 2
Total Revenues	-	-	2	2
Net Change in Fund Balance	-	-	2	2
Beginning Fund Balance	-	-	188	188
Ending Fund Balance	$ -	$ -	$ 190	$ 190

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

MAINSTREET PROGRAM FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Interest	$ -	$ 60		$ 18	$ (42)
Total Revenues	-	60		18	(42)
EXPENDITURES					
Materials and Services	13,200	13,260	(1)	13,251	9
Total Expenditures	13,200	13,260		13,251	9
Net Change in Fund Balance	(13,200)	(13,200)		(13,233)	(33)
Beginning Fund Balance	13,200	13,200		13,233	33
Ending Fund Balance	$ -	$ -		$ -	$ -

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

DIAL-A-RIDE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Grants and Contributions	$ 89,092	$ 119,092		$ 138,760	$ 19,668
Miscellaneous	7,140	7,140		6,968	(172)
Interest	-	-		80	80
Total Revenues	96,232	126,232		145,808	19,576
EXPENDITURES					
Materials and Services	93,150	109,150	(1)	100,740	8,410
Capital Outlay	-	30,000	(1)	27,669	2,331
Contingency	34,082	18,082	(1)	-	18,082
Total Expenditures	127,232	157,232		128,409	28,823
Excess of Revenues Over, (Under) Expenditures	(31,000)	(31,000)		17,399	48,399
OTHER FINANCING SOURCES, (USES)					
Transfers Out	(12,700)	(12,700)	(1)	(12,700)	-
Net Change in Fund Balance	(43,700)	(43,700)		4,699	48,399
Beginning Fund Balance	43,700	43,700		32,800	(10,900)
Ending Fund Balance	$ -	$ -		$ 37,499	$ 37,499

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

STREET MAINTENANCE RESERVE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Intergovernmental	$ -	$ -		$ 250,000	$ 250,000
Interest	1,000	1,000		2,563	1,563
Total Revenues	1,000	1,000		252,563	251,563
EXPENDITURES					
Contingency	251,000	251,000	(1)	-	251,000
Total Expenditures	251,000	251,000		-	251,000
Net Change in Fund Balance	(250,000)	(250,000)		252,563	502,563
Beginning Fund Balance	250,000	250,000		-	(250,000)
Ending Fund Balance	$ -	$ -		$ 252,563	$ 252,563

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

CENTRAL AVENUE RESERVE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Intergovernmental	$ -	$ -		$ 1,900,000	$ 1,900,000
Interest	10,000	10,000		18,304	8,304
Total Revenues	10,000	10,000		1,918,304	1,908,304
EXPENDITURES					
Contingency	1,830,000	1,210,000	(1)	-	1,210,000
Total Expenditures	1,830,000	1,210,000		-	1,210,000
Excess of Revenues Over, (Under) Expenditures	(1,820,000)	(1,200,000)		1,918,304	3,118,304
OTHER FINANCING SOURCES, (USES)					
Transfers Out	(80,000)	(700,000)	(1)	(700,000)	-
Net Change in Fund Balance	(1,900,000)	(1,900,000)		1,218,304	3,118,304
Beginning Fund Balance	1,900,000	1,900,000		-	(1,900,000)
Ending Fund Balance	$ -	$ -		$ 1,218,304	$ 1,218,304

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

LIBRARY GO BOND FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Property Taxes	$ 51,000	$ 51,000		$ 51,000	$ -
Interest	-	-		244	244
Total Revenues	51,000	51,000		51,244	244
EXPENDITURES					
Debt Service	59,810	59,810	(1)	59,806	4
Total Expenditures	59,810	59,810		59,806	4
Net Change in Fund Balance	(8,810)	(8,810)		(8,562)	248
Beginning Fund Balance	40,000	40,000		30,752	(9,248)
Ending Fund Balance	$ 31,190	$ 31,190		$ 22,190	$ (9,000)

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

PARKS CONSTRUCTION FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
System Development Charges	$ 3,000	$ 3,000		$ 10,000	$ 7,000
Intergovernmental	180,000	230,000		25,000	(205,000)
Interest	150	150		2,259	2,109
Total Revenues	183,150	233,150		37,259	(195,891)
EXPENDITURES					
Capital Outlay	120,000	350,000	(1)	244,005	105,995
Contingency	196,150	16,150	(1)	-	16,150
Total Expenditures	316,150	366,150		244,005	122,145
Excess of Revenues Over, (Under) Expenditures	(133,000)	(133,000)		(206,746)	(73,746)
OTHER FINANCING SOURCES, (USES)					
Transfers In	120,000	120,000		220,000	100,000
Net Change in Fund Balance	(13,000)	(13,000)		13,254	26,254
Beginning Fund Balance	13,000	13,000		47,735	34,735
Ending Fund Balance	$ -	$ -		$ 60,989	$ 60,989

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

BICYCLE FOOTPATH FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Intergovernmental	$ 5,000	$ 5,000		$ 5,000	$ -
Interest	25	25		57	32
Total Revenues	5,025	5,025		5,057	32
EXPENDITURES					
Contingency	10,025	10,025	(1)	-	10,025
Total Expenditures	10,025	10,025		-	10,025
Excess of Revenues Over, (Under) Expenditures	(5,000)	(5,000)		5,057	10,057
Beginning Fund Balance	5,000	5,000		5,020	20
Ending Fund Balance	$ -	$ -		$ 10,077	$ 10,077

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

POLICE RESERVE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Interest	$ 300	$ 300		$ 1,425	$ 1,125
Total Revenues	300	300		1,425	1,125
EXPENDITURES					
Capital Outlay	-	50,000	(1)	45,257	4,743
Contingency	179,990	129,990	(1)	-	129,990
Total Expenditures	179,990	179,990		45,257	134,733
Excess of Revenues Over, (Under) Expenditures	(179,690)	(179,690)		(43,832)	135,858
OTHER FINANCING SOURCES, (USES)					
Transfers In	65,000	65,000		65,000	-
Net Change in Fund Balance	(114,690)	(114,690)		21,168	135,858
Beginning Fund Balance	114,690	114,690		114,854	164
Ending Fund Balance	$ -	$ -		$ 136,022	$ 136,022

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

FIRE RESERVE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Intergovernmental	$ -	$ -		$ 162,058	$ 162,058
Interest	75	75		1,351	1,276
Total Revenues	75	75		163,409	163,334
EXPENDITURES					
Capital Outlay	265,000	265,000	(1)	236,486	28,514
Contingency	60,125	60,125	(1)	-	60,125
Total Expenditures	325,125	325,125		236,486	88,639
Excess of Revenues Over, (Under) Expenditures	(325,050)	(325,050)		(73,077)	251,973
OTHER FINANCING SOURCES, (USES)					
Surplus Property Sales		-		5,750	5,750
Transfers In	265,000	265,000		265,000	-
Net Change in Fund Balance	(60,050)	(60,050)		197,673	257,723
Beginning Fund Balance	60,050	60,050		60,160	110
Ending Fund Balance	$ -	$ -		$ 257,833	$ 257,833

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

PUBLIC WORKS OPERATIONS RESERVE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Interest	$ 100	$ 100		$ 635	$ 535
Total Revenues	100	100		635	535
EXPENDITURES					
Debt Service	33,600	33,600	(1)	33,591	9
Capital Outlay	45,000	45,000	(1)	42,722	2,278
Contingency	73,400	73,400	(1)	-	73,400
Total Expenditures	152,000	152,000		76,313	75,687
Excess of Revenues Over, (Under) Expenditures	(151,900)	(151,900)		(75,678)	76,222
OTHER FINANCING SOURCES, (USES)					
Transfers In	124,000	124,000		124,000	-
Net Change in Fund Balance	(27,900)	(27,900)		48,322	76,222
Beginning Fund Balance	27,900	27,900		27,925	25
Ending Fund Balance	$ -	$ -		$ 76,247	$ 76,247

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

PARKS/FACILITIES RESERVE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Interest	$ 500	$ 500		$ 1,506	$ 1,006
Total Revenues	500	500		1,506	1,006
EXPENDITURES					
Capital Outlay	165,000	165,000	(1)	49,124	115,876
Contingency	61,900	61,900	(1)	-	61,900
Total Expenditures	226,900	226,900		49,124	177,776
Excess of Revenues Over, (Under) Expenditures	(226,400)	(226,400)		(47,618)	178,782
OTHER FINANCING SOURCES, (USES)					
Transfers In	120,000	120,000		120,000	-
Net Change in Fund Balance	(106,400)	(106,400)		72,382	178,782
Beginning Fund Balance	106,400	106,400		106,551	151
Ending Fund Balance	$ -	$ -		$ 178,933	$ 178,933

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

COMBINING STATEMENT OF NET POSITION -
NONMAJOR ENTERPRISE FUNDS
June 30, 2017

	WATER RESERVE FUND	WASTEWATER RESERVE FUND	KNOLLS ESTATE STEP SURCHARGE FUND
ASSETS			
Cash and Cash Equivalents	$ 292,836	$ 84,419	$ 28,871
Accounts Receivable	-	-	-
Interfund Loan Receivable	72,498	-	-
Prepaids	-	-	-
Total Assets	$ 365,334	$ 84,419	$ 28,871
LIABILITIES			
Current Liabilities			
Accounts Payable	-		1,010
Total Liabilities	-	-	1,010
NET POSITION			
Restricted for Bond Covenant	$ -	$ -	$ -
Restricted for Debt Service	-	-	-
Restricted for Capital Projects	-	-	-
Unrestricted	365,334	84,419	27,861
Total Net Position	365,334	84,419	27,861
Total Liabilities and Net Position	$ 365,334	$ 84,419	$ 28,871

WATER DEBT SERVICE FUND	WASTEWATER DEBT SERVICE FUND	TOTAL
$ 198,013	$ 284,087	$ 888,226
-	279,430	279,430
-	-	72,498
30,988	-	30,988
$ 229,001	$ 563,517	$ 1,271,142
-	-	1,010
-	-	1,010
$ 195,724	$ -	$ 195,724
33,277	-	33,277
-	563,517	563,517
-	-	477,614
229,001	563,517	1,270,132
$ 229,001	$ 563,517	$ 1,271,142

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

COMBINING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN NET POSITION - NONMAJOR ENTERPRISE FUNDS
For the Year Ended June 30, 2017

	WATER RESERVE FUND	WASTEWATER RESERVE FUND	KNOLLS ESTATE STEP SURCHARGE FUND
OPERATING REVENUES			
Charges for Services	$ -	$ -	$ 15,974
OPERATING EXPENSES			
Materials and Services	10,200	-	12,178
Operating income (loss)	(10,200)	-	3,796
NONOPERATING REVENUES (EXPENSES)			
Interest	3,665	781	267
Interest Expense	-	-	-
Transfers In	-	15,000	-
Intergovernmental	-	-	-
Total Nonoperating Revenues (Expenses)	3,665	15,781	267
Change in Net Position	(6,535)	15,781	4,063
Beginning Net Position	371,869	68,638	23,798
Ending Net Position	$ 365,334	$ 84,419	$ 27,861

WATER DEBT SERVICE FUND	WASTEWATER DEBT SERVICE FUND	TOTAL
$ -	$ 8,800	$ 24,774
-	-	22,378
-	8,800	2,396
1,311	1,690	7,714
(410,020)	(230,034)	(640,054)
425,000	340,000	780,000
-	-	-
16,291	111,656	147,660
16,291	120,456	150,056
212,710	443,061	1,120,076
$ 229,001	$ 563,517	$ 1,270,132

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

COMBINING STATEMENT OF CASH FLOWS
NONMAJOR ENTERPRISE FUNDS
For the Year Ended June 30, 2017

	WATER RESERVE FUND	WASTEWATER RESERVE FUND	KNOLLS ESTATE STEP SURCHARGE FUND
Cash Flows from Operating Activities:			
Cash from Customers	-	-	15,973
Cash paid to Suppliers	(10,200)		(12,178)
Cash flow from Operations	(10,200)	-	3,795
Cash Flows from Investing Activities:			
Earnings on Investments and Other	3,665	781	267
Cash Flows from Noncapital Financing Activities:			
Miscellaneous	27,502		-
Interfund Loans	(100,000)		
Transfers	-	15,000	-
Cash flow from Noncapital Financing	(72,498)	15,000	-
Cash Flows from Capital and Related Financing Activities:			
Payments on long term debt	-	-	-
Net Increase (Decrease) in Cash and Cash Equivalents	(79,033)	15,781	4,062
Cash and Cash Equivalents, Beginning	371,869	68,638	24,809
Cash and Cash Equivalents, Ending	292,836	84,419	28,871
Reconciliation of Operating Income to Net Cash Provided by Operating Activities			
Operating Income, (Loss)	(10,200)	-	3,795
Noncash Items Included in Income:			
(Increase), Decrease in Assets	-	-	-
Net Cash Provided (Used) by Operating Activities	(10,200)	-	3,795

WATER DEBT SERVICE FUND	WASTEWATER DEBT SERVICE FUND	TOTAL
2,199	50,865	69,037
-	-	(22,378)
2,199	50,865	46,659
1,311	1,690	7,714
-	-	27,502
-	-	(100,000)
425,000	340,000	780,000
425,000	340,000	707,502
(410,020)	(230,034)	(640,054)
18,490	162,521	121,821
179,523	121,566	766,405
198,013	284,087	888,226
-	8,800	2,395
2,199	42,065	44,264
2,199	50,865	46,659

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

WATER RESERVE FUND
A NONMAJOR ENTERPRISE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Interest	$ 1,600	$ 1,600		$ 3,665	$ 2,065
Miscellaneous	-	-		27,502	27,502
Total Revenues	1,600	1,600		31,167	29,567
EXPENDITURES					
Capital Outlay	15,000	15,000	(1)	10,200	4,800
Contingency	358,100	258,100	(1)	-	258,100
Total Expenditures	373,100	273,100		10,200	262,900
Excess of Revenues Over, (Under) Expenditures	(371,500)	(271,500)		20,967	292,467
OTHER FINANCING SOURCES, (USES)					
Interfund Loans	-	(100,000)		(100,000)	-
Net Change in Fund Balance	(371,500)	(371,500)		(79,033)	292,467
Beginning Fund Balance	371,500	371,500		371,869	369
Ending Fund Balance	$ -	$ -		$ 292,836	$ 292,836

Reconciliation to GAAP:	
Interfund Loan	$ 72,498
GAAP Net Position	$ 365,334

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

PUBLIC WORKS WASTEWATER RESERVE FUND
A NONMAJOR ENTERPRISE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Interest	$ 300	$ 300		$ 781	$ 481
Total Revenues	300	300		781	481
EXPENDITURES					
Contingency	83,800	83,800	(1)	-	83,800
Total Expenditures	83,800	83,800		-	83,800
Excess of Revenues Over, (Under) Expenditures	(83,500)	(83,500)		781	84,281
OTHER FINANCING SOURCES, (USES)					
Transfers In	15,000	15,000		15,000	-
Net Change in Fund Balance	(68,500)	(68,500)		15,781	84,281
Beginning Fund Balance	68,500	68,500		68,638	138
Ending Fund Balance	$ -	$ -		$ 84,419	$ 84,419

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

KNOLLS ESTATE STEP SURCHARGE FUND
A NONMAJOR ENTERPRISE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Charges for Services	$ 16,000	$ 16,000		$ 15,974	$ (26)
Interest	100	100		267	167
Total Revenues	16,100	16,100		16,241	141
EXPENDITURES					
Materials and Services	15,000	15,000	(1)	12,178	2,822
Contingency	24,900	24,900	(1)	-	24,900
Total Expenditures	39,900	39,900		12,178	27,722
Net Change in Fund Balance	(23,800)	(23,800)		4,063	27,863
Beginning Fund Balance	23,800	23,800		23,798	(2)
Ending Fund Balance	$ -	$ -		$ 27,861	$ 27,861

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

WATER DEBT SERVICE FUND
A NONMAJOR ENTERPRISE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Interest	$ 800	$ 800		$ 1,311	$ 511
Total Revenues	800	800		1,311	511
EXPENDITURES					
Debt Service	410,310	410,310	(1)	410,020	290
Contingency	13,715	13,715	(1)	-	13,715
Total Expenditures	424,025	424,025		410,020	14,005
Excess of Revenues Over, (Under) Expenditures	(423,225)	(423,225)		(408,709)	14,516
OTHER FINANCING SOURCES, (USES)					
Transfers In	425,000	425,000		425,000	-
Net Change in Fund Balance	1,775	1,775		16,291	14,516
Beginning Fund Balance	212,000	212,000		212,710	710
Ending Fund Balance	$ 213,775	$ 213,775		$ 229,001	$ 15,226

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

WASTEWATER DEBT SERVICE FUND
A NONMAJOR ENTERPRISE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Assesments	$ 41,000	$ 41,000		$ 50,865	$ 9,865
Interest	8,865	8,865		1,690	(7,175)
Total Revenues	49,865	49,865		52,555	2,690
EXPENDITURES					
Debt Service	250,045	250,045	(1)	230,034	20,011
Contingency	246,220	246,220	(1)	-	246,220
Total Expenditures	496,265	496,265		230,034	266,231
Excess of Revenues Over, (Under) Expenditures	(446,400)	(446,400)		(177,479)	268,921
OTHER FINANCING SOURCES, (USES)					
Transfers In	340,000	340,000		340,000	-
Net Change in Fund Balance	(106,400)	(106,400)		162,521	268,921
Beginning Fund Balance	106,400	106,400		121,566	15,166
Ending Fund Balance	$ -	$ -		$ 284,087	$ 284,087

Reconciliation to GAAP:	
Deferred Revenue	$ 279,430
GAAP Net Position	$ 563,517

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE
ACTUAL AND BUDGET
For the Year Ended June 30, 2017

PUBLIC WORKS OPERATIONS FUND - INTERNAL SERVICE FUND

	ORIGINAL BUDGET	FINAL BUDGET		ACTUAL	VARIANCE POSITIVE (NEGATIVE)
REVENUES					
Earnings on Investements	$ 100	$ 100		$ 2,193	$ 2,093
Miscellaneous	-	-		8,895	8,895
Total Revenues	100	100		11,088	10,988
EXPENDITURES					
Personnel	$ 1,187,748	$ 1,187,748	(1)	$ 1,114,914	$ 72,834
Materials and Services	80,000	80,000	(1)	74,262	5,738
Contingency	21,352	21,352	(1)	-	21,352
Total Expenditures	1,289,100	1,289,100		1,189,176	99,924
Excess of Revenues Over, (Under) Expenditures	(1,289,000)	(1,289,000)		(1,178,088)	110,912
OTHER FINANCING SOURCES, (USES)					
Transfers Out	(124,000)	(124,000)	(1)	(124,000)	-
Transfers In	1,330,000	1,330,000		1,330,000	-
Net Change in Fund Balance	(83,000)	(83,000)		27,912	110,912
Beginning Fund Balance	83,000	83,000		114,648	31,648
Ending Fund Balance	$ -	$ -		$ 142,560	$ 142,560

(1) Appropriation Level

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

COMBINING STATEMENT OF CHANGES IN ASSETS AND LIABILITIES - AGENCY FUNDS
For the Year Ended June 30, 2017

	Balance at June 30, 2016	Additions	Deductions	Balance at June 30, 2017
Municipal Court				
Assets				
Cash	$ 7,778	$ 5,291	$ 7,778	$ 5,291
Accounts Receivable	-	-	-	-
Total Assets	$ 7,778	$ 5,291	$ 7,778	$ 5,291
Liabilities				
Accounts Payable	$ 8,508	$ 13,787	$ 8,508	$ 13,787
Amounts held in trust	(730)		7,766	(8,496)
Total Liabilities	$ 7,778	$ 13,787	$ 16,274	$ 5,291
Total Agency Funds				
Assets				
Cash	$ 7,778	$ 5,291	$ 7,778	$ 5,291
Accounts Receivable	-	-	-	-
Total Assets	$ 7,778	$ 5,291	$ 7,778	$ 5,291
Liabilities				
Accounts Payable	$ 8,508	$ 13,787	$ 8,508	$ 13,787
Amounts held in trust	(730)	-	7,766	(8,496)
Total Liabilities	$ 7,778	$ 13,787	$ 16,274	$ 5,291

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

SCHEDULE OF PROPERTY TAX TRANSACTIONS AND BALANCES
OF TAXES UNCOLLECTED
For the Year Ended June 30, 2017

TAX YEAR	IMPOSED LEVY OR UNCOL-LECTED AT 7-1-16	DEDUCT DISCOUNTS	ADJUST-MENTS TO ROLLS	INTEREST	CASH COLLEC-TIONS BY COUNTY TREAS-URER	BALANCE UNCOL-LECTED OR UNSEG-REGATED AT 6-30-17
CURRENT:						
2016-2017	$ 2,870,747	$ 72,119	$ (33,250)	$ 1,372	$ 2,653,875	$ 112,875
PRIOR YEARS:						
2015-2016	111,020	(5)	(4,177)	3,274	45,035	65,087
2014-2015	67,050	(7)	(4,720)	3,758	20,115	45,980
2013-2014	45,038	(7)	(6,594)	5,703	19,675	24,479
2012-2013	25,235	(7)	(5,450)	4,586	12,925	11,453
Prior	29,711	(1)	(3,267)	2,380	3,932	24,893
Total Prior	278,054	(27)	(24,208)	19,701	101,682	171,892
Total	$ 3,148,801	$ 72,092	$ (57,458)	$ 21,073	$ 2,755,557	$ 284,767

RECONCILIATION OF REVENUE:	GENERAL FUND
Cash Collections by County Treasurer Above	$ 2,755,557
Accrual of Receivables:	
Other	14,476
June 30, 2016	(14,948)
June 30, 2017	11,072
Total Revenue	$ 2,766,157

CITY OF SUTHERLIN
DOUGLAS COUNTY, OREGON

INDEPENDENT AUDITORS' REPORT REQUIRED BY OREGON STATE REGULATIONS

PAULY, ROGERS AND CO., P.C.
12700 SW 72nd Ave. ♦ Tigard, OR 97223
(503) 620-2632 ♦ (503) 684-7523 FAX
www.paulyrogersandcocpas.com

October 20, 2017

Independent Auditors' Report Required by Oregon State Requirements

We have audited the basic financial statements of the City of Sutherlin as of and for the year ended June 30, 2017, and have issued our report thereon dated October 20, 2017. We conducted our audit in accordance with auditing standards generally accepted in the United States of America..

Compliance

As part of obtaining reasonable assurance about whether the financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grants, including the provisions of Oregon Revised Statues as specified in Oregon Administrative Rules 162-10-000 through 162-10-320 of the Minimum Standards for Audits of Oregon Municipal Corporations, noncompliance with which could have a direct and material effect on the determination of financial statements amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion.

We performed procedures to the extent we considered necessary to address the required comments and disclosures which included, but were not limited to the following:

- **Deposit of public funds with financial institutions (ORS Chapter 295)**
- **Indebtedness limitations, restrictions and repayment.**
- **Budgets legally required (ORS Chapter 294).**
- **Insurance and fidelity bonds in force or required by law.**
- **Highway revenues used for public highways, roads, and streets.**
- **Programs funded from outside sources.**
- **Authorized investment of surplus funds (ORS Chapter 294).**
- **Public contracts and purchasing (ORS Chapters 279A, 279B, 279C).**

In connection with our testing nothing came to our attention that caused us to believe the City of Sutherlin was not in substantial compliance with certain provisions of laws, regulations, contracts, and grants, including the provisions of Oregon Revised Statutes as specified in Oregon Administrative Rules 162-10-000 through 162-10-320 of the Minimum Standards for Audits of Oregon Municipal Corporations.

OAR 162-10-0230 Internal Control

In planning and performing our audit, we considered the internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of internal control over financial reporting.

This report is intended solely for the information and use of the City Council, management and the Oregon Secretary of State, and is not intended to be and should not be used by anyone other than these parties.

[redacted]

Kenneth Allen, CPA
PAULY, ROGERS AND CO., P.C.

126 E. Central Avenue
Sutherlin, OR 97479
541-459-2856
Fax: 541-459-9363
www.cityofsutherlin.com

City of Sutherlin

STAFF REPORT					
Re: Ford's Pond Community Park Master Plan				Meeting Date:	11-13-2017
Purpose:	Action Item ☐	Workshop ☐	Report Only ☒	Discussion ☐	Update ☒
Submitted By: Brian Elliott, Community Development Director, Colin McArthur Project Manager with Cameron McCarthy Landscape Architecture & Planning and Jim Houseman, FOFP President				City Manager Review	☒
Attachments: Ford's Pond Community Park Master Plan Draft					

WHAT IS BEING ASKED OF COUNCIL?

This staff report is to provide Council with the Ford's Pond Community Park Masterplan draft for their review.

EXPLANATION

Cameron McCarthy, Landscape Architecture & Planning firm, will provide Council with an overview of the proposed Ford's Pond Community Park Masterplan draft. We ask that Council review the proposed draft and provide staff with comments. The final masterplan will then be brought to Council for adoption at the December 11, 2017 meeting.

OPTIONS

Not Applicable

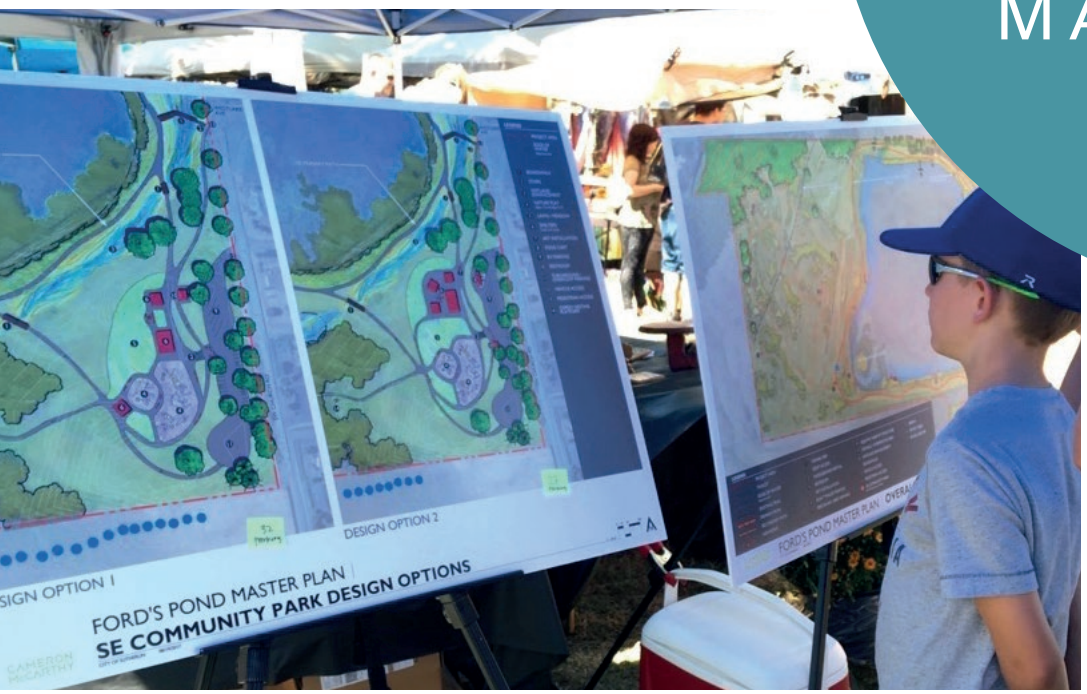
SUGGESTED MOTION(S)

None

FORD'S POND COMMUNITY PARK

MASTER PLAN

Final Draft
2017



City of Sutherlin

CITY OF SUTHERLIN

ACKNOWLEDGEMENTS

CITY OF SUTHERLIN CITY COUNCIL

Todd McKnight, Mayor
Wayne Luzier, City Council President
Tom Boggs, City Council
Dennis Riggs, City Council
Forrest Stone, City Council
Travis Tomlinson, City Council
Seth Vincent, City Council

CITY OF SUTHERLIN COMMUNITY DEVELOPMENT DEPARTMENT

Brian Elliott, Community Development Director
Kristi Gilbert, Community Development Specialist

FRIENDS OF FORD'S POND

Jim Houseman, President
Wendi Stinnett, Treasurer
Beth Houseman, Secretary
Chuck Brummel
Colin Murphy
Janel Sorenson
James Thatcher

FORD'S POND PLANNING TEAM

Brian Elliott, City of Sutherlin
Kristi Gilbert, City of Sutherlin
Tom Boggs, City Council
Seth Vincent, City Council
Jim Houseman, Friends of Fords Pond
Wendi Stinnett, Friends of Fords Pond
Beth Houseman, Friends of Fords Pond
James Thatcher, Friends of Fords Pond
Vicki Holland, Parks Advisory Committee
Tim Bradley, Parks Advisory Committee
Molly Mason, Park Neighbor

DESIGN TEAM

Cameron McCarthy Landscape Architecture & Planning
Colin McArthur, AICP
Larry Gilbert, ASLA
Vivian Schoung
Marina Wrensch, ASLA
Kelsey Zlevor

CAMERON McCARTHY LANDSCAPE ARCHITECTURE & PLANNING

CONTENTS

INTRODUCTION

05-15

OPPORTUNITIES AND CONSTRAINTS

17-23

BACKGROUND

25-29

DESIGN PROCESS

31-37

IMPLEMENTATION

39-48

APPENDICES

A1-A96

Ford's Pond Community Park is a 202-acre property located on the west side of Sutherlin, and includes the 95-acre Ford's Pond. The City of Sutherlin in a partnership with the Friends of Ford's Pond envision a park where citizens and visitors can engage in year-round recreation and wildlife-viewing, feel safe and welcome, and become the stewards of this community asset.

PAGE 7

VISION AND PURPOSE

PAGE 8

PROCESS DIAGRAM

PAGE 11

EXISTING PLANNING CONTEXT

SECTION 1

INTRODUCTION

The Ford's Pond Community Park Master Plan guides future development of the Ford's Pond site owned by the City of Sutherlin. The Master Plan documents the research and public process that led to the final vision and conceptual design for the park. It prioritizes improvements to be completed in phases. Phase 1 focuses on access and path improvements while future phases involve the community park, trail, water access, parking improvements, and ecological restoration. The design reflects a balanced approach of meeting community needs while responding to and enhancing the inherent natural qualities of the site. The Master Plan was developed in collaboration with the City of Sutherlin Community Development Department, Parks Advisory Committee, the Friends of Ford's Pond, the Ford's Pond Planning Team, and community residents.

FORD'S POND: EXISTING CONDITIONS

VISION AND PURPOSE

The establishment of a Master Plan for Ford's Pond Community Park satisfies priority needs. According to the City's Parks and Open Space Plan, the Ford's Pond property is identified as a future community park for the City's southwest planning area. The property is currently undeveloped with only a primitive 1.7-mile loop trail around the 95-acre pond. A 5-acre community park site located in the southeast corner of the property provides opportunities for transformative community engagement.

Ford's Pond was once a logging pond. In August 2014, the City acquired the property as part of an upgrade to its wastewater treatment plant for summer storage of Class A treated wastewater. Federal regulations require the City to store Class A treated wastewater instead of discharging the water directly into the Calapooya Creek (from May 1 to October 31), as the water has been deemed too warm and nutrient-rich to be discharged into fish-bearing streams.

The non-profit Friends of Ford's Pond (FOFP) partnered with the City to assist in the coordination of the future development and maintenance of the property. FOFP seeks to maintain and enhance Ford's Pond's reputation as a popular location with residents and visitors for fishing, birding, and hiking.

The purpose of this Master Plan is to conceptualize a vision for Ford's Pond Community Park that draws on the needs of the community, enhances the natural character of the site, fosters an engaging and educational space, and helps formalize key attributes of this public asset that will serve generations of residents and visitors to come. The Master Plan process also focused on public input sessions to draw new ideas for revenue strategies and recreational activities. Because the park does not have a significant commitment of financial support from the City of Sutherlin, developing revenue strategies and raising awareness of the funding requirements for the project's development is imperative. The Master Plan process involved consultation with City staff, City Council, the Parks Advisory Committee, the Ford's Pond Planning Team, and an extensive public input process to develop an implementation program, cost estimate, park maintenance plan, revenue generating ideas for the construction phase and future implementation, and recommendations for City revenue and pricing policy for the park. Specifically, the Master Plan includes:

- Summary of current site conditions,
- Overview of public outreach and engagement,
- Design concepts of recreation facilities and amenities,
- Planning level costs,
- A phasing and prioritization timeline,
- Capital improvement revenue generation strategies,
- Maintenance and operation plans, and
- Summary of sustainable park operations.

PROCESS DIAGRAM

I. ANALYSIS

EXISTING CONDITIONS & SITE ANALYSIS

The Design Team reviewed documentation of existing site conditions provided by the City of Sutherlin, and conducted a site visit with the Friends of Ford's Pond. The Design Team also analyzed existing conditions related to utilities, natural resources, soils, natural hazards, and geotechnical considerations. This analysis, paired with review of aerial images, helped develop a comprehensive understanding of the site.

OPPORTUNITIES & CONSTRAINTS ANALYSIS

The Design Team gathered information through site visits and meetings with City of Sutherlin staff and the Friends of Ford's Pond to generate an Opportunities and Constraints diagram. The Opportunities and Constraints diagram identifies conditions on or adjacent to the site that have bearing on the site design. This diagram was shared with the public at the first community meeting and revised to reflect input obtained from neighbors and residents. The revised diagram was shared at the second community meeting.

II. DESIGN

CONCEPT DEVELOPMENT

One site plan and three initial concepts were prepared using information from the Site Analysis and Opportunities and Constraints diagrams, meetings with City of Sutherlin staff and the Friends of Ford's Pond, survey results, Blackberry Festival comments, and feedback from the first community meeting. The design options were presented and reviewed at the second community meeting.

The Design Team used feedback from the second community meeting, and input from City of Sutherlin staff and the Friends of Ford's Pond to develop the revised conceptual overall site plan and southeast community park conceptual design. A planning level cost estimate and review of land use code requirements were performed using the conceptual site plan.

III. DOCUMENTATION

MASTER PLAN PRODUCTION

All information and analysis resulting from the production of the conceptual site and southeast park plans are included in this document and appendices.

The Master Plan includes a phasing plan. Future phase improvements are identified and will be designed and constructed as funding is made available.

2017

MARCH

- SITE VISIT
- EXISTING CONDITIONS & SITE ANALYSIS

APRIL

- OPPORTUNITIES & CONSTRAINTS
- CONCEPTUAL MASTER PLAN OPTIONS

MAY

- NEIGHBORHOOD MEETING #1
- ONLINE QUESTIONNAIRE

JUNE

- DRAFT CONCEPTUAL SITE PLAN

JULY

- FOCUS GROUP MEETING
- DRAFT SOUTHEAST PARK CONCEPT

AUGUST

- REVISED SOUTHEAST PARK CONCEPT
- BLACKBERRY FESTIVAL

SEPTEMBER

- NEIGHBORHOOD MEETING #2
- FINAL CONCEPTUAL SITE PLAN AND PARK CONCEPT

EXISTING PLANNING CONTEXT

The Master Plan and associated recommendations are consistent with relevant City and State planning guidelines. The following outlines the Master Plan's unique features; which fulfill specific City and State planning goals.

1. Oregon State Planning Goals

Oregon's statewide land use planning program mandates that all local planning projects are consistent with the State's policies on land use and related topics. The foundation of the state's planning program is a set of 19 Statewide Planning Goals and accompanying guidelines. The following Goals apply to the concept and implementation plans for Ford's Pond Master Plan:

- Goal 1: Citizen Involvement.

The purpose of Planning Goal 1 is to provide the opportunity for citizen participation and to incorporate local input in all planning phases. The planning process included two Community Open Houses, a pop-up event at the annual Blackberry Festival, focus group meetings, City Council and Parks Advisory Committee updates, an online survey and regular meetings with the Ford's Pond Planning Team comprised of city staff, the Friends of Ford's Pond members, city council, and residents. In addition, elementary-aged students participated in the planning and design phase through the Sutherlin School District's West Intermediate Migrant Education Summer School. In total, over 450 Sutherlin and Douglas County residents participated in the planning process.

- Goal 5: Natural Resources.

Goal 5 aims to protect Oregon's natural environment by charging local entities with inventorying an area's renewable and non-renewable resources, and stipulating all land use development is planned to conserve the quality and necessary quantity of those resources. The site contains a wide variety of environmental features, including scenic waterways, wetlands, natural areas, and wildlife habitats. Design concepts and recreational uses proposed at Ford's Pond Community Park were selected based on their full consistency with the site's existing resources. Implementation plans include measures that enhance the health and aesthetics of the site's environmental features. Lastly, the Design Team utilized technical assistance in inventorying the site's existing conditions, and employed that data to best meet the site's future needs.

- Goal 14: Urbanization.

The purpose of Goal 14 is to ensure the efficient use of land and livability of current and future communities by establishing guidelines for the provision of public facilities and services, standards for development, and consumption of land based on the location of City Urban Growth Boundaries (UGB). The subject site is currently in the City UGB, however the majority of the site will be transferred to County jurisdiction following the completion of a pending UGB adjustment process. Approximately 5 acres of the site will remain in the City UGB. This area includes the proposed community park, which can then be served by urban services including water, sewer, and power. The final design concept reflects this requirement.

2. Statewide Comprehensive Outdoor Recreation Plan

Every five years Oregon Parks and Recreation Department (OPRD) develops a Statewide Comprehensive Outdoor Recreation Plan (SCORP) to outline priorities and recommendations that guide park facility planning and fund allocation. The most recent 2013 SCORP included a county-level needs assessment based on survey data gathered from Oregon public recreation providers and Oregon residents. The following key findings relate to Ford's Pond Community Park in Douglas County.

- Ford's Pond Community Park can provide opportunities for all three "Close-To-Home Priorities," which include public restrooms, community trail systems, and picnicking/day-use facilities.
- Ford's Pond Community Park provides one of the three "Dispersed-Area Priorities" for Douglas County by providing a water trail route.
- Proposed park improvements and amenities fulfill all nine Oregon Resident Survey priorities for Douglas County. Those priorities include: dirt/other soft surface walk trails and paths, public access sites to waterways, picnic areas and shelters for small visitor groups, nature and wildlife viewing areas, natural play areas for children, picnic areas and shelters for large visitor groups, paved/hard surface walking trails and paths, off-street bicycle trials and pathways, and off-highway vehicle trails/areas.

3. Oregon Water Trails Plan

The Oregon Parks and Recreation Department (OPRD) defines water trails as "corridors between specific locations on a lake, river, or ocean." The proposed Ford's Pond Community Park design concept includes a water access point for small watercrafts such as canoes, kayaks, rafts, and drift boats on the north side of the pond. Future development plans will consider the following guidelines outlined by the OPRD:

- Basic Facilities- safe ingresses and egresses, designated and signed parking for vehicles, and sanitation facilities at access point.
- Trail Manager- a nonprofit, public agency or water trail association responsible for the overall coordination and maintenance of any facility associated with a water trail.
- Management Plan- addresses linking public resources, Leave No Trace, general recreational use, public access, private property protection, signage, day use, restroom facilities, and overall issues; identifies the Trail Manager and Trail Partners, facility inventory and future needs by responsible Partner, potential funding sources.
- Water Trail Guide- published, waterproof guide that provides standard information requirements.
- Water Trail Web Site- electronic access to all published materials, management plan, manager contact information, and route suggestions.
- Local Government Support- letters expressing support of the water trail management plan.
- Management of the Ford's Pond Community Park may be coordinated in partnership with the Friends of Ford's Pond, Oregon Parks and Recreation Department, Travel Oregon, and Oregon State Marine Board.

4. Douglas County Local Parks Master Plan (2016)

Located within Douglas County, the Ford's

Pond Community Park will help achieve numerous county goals. While the Ford's Pond site is not explicitly mentioned in the Local Parks Master Plan, the Plan details suggestions for possible future amenities at active park properties, which include hiking/interpretive nature trails, ADA accessible paths/walkways, designated wildlife viewing areas, picnic shelters, and pavilion/gazebos. The county also outlines requirements for pavilion reservations for events. Special event permits are issued for all types of circumstances. They can include weddings, family reunions, celebrations of life and business/church/youth/social group gatherings, and other community organizational events. The concept designs prepared for the Ford's Pond Community Park capitalize on the use of the proposed amenities, and include the development of recreational facilities that support the county's goals.

5. Douglas County Community Health Assessment (2013)

The 2013 Douglas County Community Health Assessment identifies several key health issues in the county, all of which could be improved through the use of Ford's Pond for recreational activity.

One-third of adults in Douglas County are overweight, and an additional 31% of residents are obese. Douglas County exceeds the national goal and the state average for obesity and being overweight. Research has shown that obesity is associated with increased risk of coronary heart disease, type 2 diabetes, cancer, high blood pressure, stroke, liver, and gallbladder disease.

Regular physical activity and a healthy diet can reduce the risk for chronic disease and obesity. However, approximately 22% of Douglas County residents are defined as being physically inactive. Physical inactivity is defined for adults as 20 and over reporting no leisure time physical activity. Ford's Pond can provide local, accessible outdoor recreation opportunities to foster a more active community.

6. City of Sutherlin Parks and Open Space Plan (2005)

The 2005 Sutherlin Parks and Open Space Plan identifies Ford's Pond as an opportunity site to connect to three stream corridors and create bike/pedestrian connections, improve habitat and corridors for wildlife, and provide more open space. Specifically, the Plan references ODOT's planned expansion of Highway 138 access under Interstate 5 as a valuable opportunity to expand bicycle and pedestrian facilities to Ford's Pond. The Plan categorizes Ford's Pond as the primary greenway/natural area in Sutherlin, and the only park to serve the southwest park planning area. Redevelopment of Ford's Pond accomplishes the vision of the Plan as an "open expanse of informal open space." The concept plans take into account the City's and community's desire for better waterfront access by improving boating facilities and providing easily-accessible walking trails throughout the site.

7. City and County Zoning

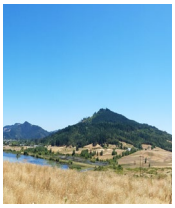
The subject property is designated Low Density Residential (R-1), Residential Hillside (R-H), and Forestry Resource (FR-20) with corresponding zoning per the Sutherlin Comprehensive Plan and Development Code[1]. With the adoption of the UGB exchange, the subject property will be identified as Public Semi Public by the Douglas County Comprehensive Plan (PSP) and Public Reserve (PR), by the Douglas County Land Use and Development Ordinance (LUDO).

[1] The subject property is located inside the UGB and in city limits at the time of purchase by the City in 2014. A UGB Exchange process seeks to maintain only the southeast corner (approximately 5 acres) of the subject property within the City's jurisdiction.

8. Development Code Regulations

Ford's Pond is located within Douglas County. The subject property will be subject to the criteria of the PR Zone as identified in the Douglas County Land Use and Development Ordinance (LUDO), excluding the approximate five acres that will remain inside city limits. Development of Ford's Pond is consistent with the preliminary vision prepared by the Friends of Ford's Pond, and the use is permitted outright in accordance with the PR zoning requirements. The subject area to remain inside city limits will be zoned FR-20 and subject to the criteria as outlined in the Sutherlin Development Code. All permit requirements are to be obtained at the time of development of the Ford's Pond Community Park.

The Master Plan was developed through collaboration with the Friends of Ford's Pond, the City of Sutherlin, and a public process with Sutherlin residents.



PAGE 18

EXISTING CONDITIONS

PAGE 18

LAND USE

PAGE 21

ENVIRONMENT

PAGE 23

OPPORTUNITIES & CONSTRAINTS

SECTION 2

OPPORTUNITIES & CONSTRAINTS

Site opportunities and constraints were derived from existing conditions, site analysis, public involvement, Design Team input, City and the Friends of Ford's Pond input, land use requirements, and additional research. The opportunities and constraints inform the range of design options considered in the Master Plan process. Some of the more technical information will be used during the project's design stage.

EXISTING CONDITIONS

Ford's Pond Community Park is a 202-acre park located in west Sutherlin on the west side of Interstate 5. The park, in its entirety, is located within Sutherlin's urban growth boundary (UGB) and city limits boundary. The City is currently engaged in a UGB adjustment process with the Oregon Department of Land Conservation and Development. The process is expected to result in the removal of the majority (~200 acres) of the Ford's Pond site from the UGB in order to enable the development of other land not currently in the UGB for residential purposes. Approximately 5 acres in the southeast corner of the Ford's Pond site adjacent to Church Road will remain in the UGB and city limits. This area is planned for the development of community park components. The Master Plan assumes that the majority of the park outside City jurisdiction will be developed under Douglas County jurisdiction. The park serves the broader Sutherlin community, as well as outdoor enthusiasts all over the region.

The site is identified as Tax Lot 800 in Section 13, and Tax Lot 900 in Section 14, both of Township 25 South, Range 6 West per the Douglas County Assessor's Office. The park is flanked by residential development on the east side, and largely undeveloped county property on the north, south, and west sides.

Vehicle access to the site is limited. Church Road provides primary access to the site, and a small dirt patch alongside the road with minimal parking is located at the southeast corner of the future community park site. Pedestrian access currently occurs from Church Road.

The south and north sides of the park are bordered by Fort McKay Road to the south and Highway 138 W to the north. The site has two existing access points from Highway 138 with limited parking available. These roads are connected by Church Road, running north and south. Vehicle parking is not permitted along any of the abutting streets or highways.

Vehicle speeds are often high on Highway 138 W. Church Road also has poor visibility and sight distances at the Highway 138 W intersection. This creates a need for safe crossings along the street frontages adjacent to Ford's Pond Community Park, and on Church Road itself.

LAND USE

City of Sutherlin Comprehensive Plan

The City of Sutherlin Comprehensive Plan provides guidance and policies for the city over time. Applicable policies from the Sutherlin Comprehensive Plan include:

Natural and Cultural Resources

2. Improve the quality of the area's air, water, noise, and land resources.

7. Advocate for the reforestation of previously forested vacant lands.

8. Discourage radical changes to existing wildlife habitat.

Development of Ford's Pond is consistent with the Natural and Cultural Resources Polices outlined in the Comprehensive Plan. By developing Ford's Pond as a formal community park, landscape practices will improve the natural area, restore the oak savannah landscape, and as a result, overall habitat for wildlife will be enhanced.

City of Sutherlin Development Code

2.7.110 Permitted Uses and Structures: Single family dwelling associated with resource management activities.

2.7.120 Conditional Uses and Structures: In the FR-20 zone, the following uses are conditionally permitted subject to the development standards in Sections 2.7.130 after hearing and, if necessary, attachment of conditions according to the procedures listed in Section 4.5 [Conditional Use Permits], to ensure compatibility with adjacent land uses.

Table 2.7.120 – Conditional Uses

Uses	Status of Use
Traditional Home Uses	P
Public facilities; except public business offices, repair, or storage facilities.	C
Public parks, recreation areas, and publicly owned and operated properties.	C
Uses similar to those listed above in nature and intent, as deemed by Planning Commission.	C

2.7.130 Development Standards: All development within the forestry resource district must comply with the development standards listed in Table 2.7.130.

Table 2.7.130 – Development Standards

Standard	P
Lot size minimum	20 acres
Lot depth minimum	None
Lot frontage minimum	None
Lot Coverage maximum	None
Yard Setback minimums - front setback - side setbacks - rear setbacks	 30 feet 25 feet 25 feet
Building Height maximum (feet)	50 feet; increased height allowed subject to Conditional Use Permit.

Douglas County Comprehensive Plan

Douglas County's Comprehensive Plan includes Park and Recreation Policies which generally support the development of Ford's Pond:

1. The County shall continue to provide cooperation with other appropriate agencies regarding the planning, acquisition, and development of new recreation areas and facilities.

4. The County shall place a high priority on preserving prime recreation sites inside urban growth boundaries until such time as the sites are developed.

11. The County shall consider environmental quality with regard to recreation. Areas shall be developed to ensure a minimum damage to the environment, while still providing a recreational experience to the user.

13. The County shall encourage the development of recreational facilities via private enterprise. In particular, tourist facilities and those facilities involving spectator and participating sporting events and those activities requiring a high level of supporting services and supplies are especially encouraged.

20. The County shall continue to plan for and provide, if feasible, water based recreation

on future impoundment projects developed in the County.

21. The County shall continue to evaluate the needs and suggestions of visitors to the County Park System, along with requests for recreational areas and facilities by various organizations and special interest groups.

The Douglas County Comprehensive Plan generally encourages the planned vision for the development of Ford's Pond through the aforementioned policy language.

Douglas County Zoning Ordinance

Ford's Pond is located within Douglas County and will be subject to the Douglas County Zoning Ordinance. The Public Reserve (PR) zone is the most applicable receiving zone for Ford's Pond (DC 3.700-3.7.150). Relevant code excerpts are provided as follows:

Public Reserve (PR) Zone

<u>DC 3.7.050 Permitted Uses:</u> In the PR zone, the following uses and their accessory buildings and uses are permitted, subject to the provisions and exceptions set forth by this ordinance:

12. Parks, playground, campgrounds, boating facilities, lodges, camps, and other such recreational facilities.

<u>DC 3.7.100 Buildings and Uses Permitted Conditionally:</u> In the PR zone, the following uses and activities and their accessory buildings are permitted…:

2. Solid waste transfer and disposal sites.

<u>DC 3.7.150 Property Development Standards:</u>

1. Size:
   b. Minimum property size is one acre or larger when determined necessary for proper sewage disposal by the appropriate sanitation authority in areas not served by a community sanitary sewer system.
   c. In areas served by community water supply system or by community sanitary sewer system but not both, lots or parcels may have a minimum area of 15,000 square feet.
   d. In areas which are served by both community water supply system and community sanitary sewer system, the minimum lot or parcel area may be 6,500 square feet.
   e. For uses not requiring sewage disposal or water supply the minimum lot or parcel size should be appropriate to proposed use.

3. Setbacks:
   a. Front Yard: No structure other than a fence or sign shall be located closer than 15 feet from the front property line.
   b. Side Yard: No structure other than a fence or sign shall be located closer than 5 feet from side property lines for interior lots, and 10 feet from exterior side property lines for corner building sites.

5. Signs:
   a. Signs shall not extend over a public right-of-way or project beyond the property line.
   b. Signs may be illuminated, but shall not be capable of movement,

flashing or blinking.

c. *The total sign area of all signs on the property shall be limited to thirty-two square feet.*

6. *Parking: Off street parking shall be provided in accordance with Article 35.*

Development of Ford's Pond is consistent with the preliminary vision prepared by the Friends of Ford's Pond, is permitted outright, and can comply with PR zone development requirements.

ENVIRONMENT

Documentation of existing site conditions was obtained through site visits by the Design Team, Natural Resource Conservation Service (NRCS) soil survey, aerial imagery, sensitive species and habitat information from the Oregon Biodiversity Information Center (ORBIC), flood hazards, and geological and geohazard maps. The Design Team used this information to develop a complete understanding of the site's current conditions, which impact site design.

The site's topography is defined by medium to steep slopes on the west end of the site overlooking the pond, and man-made terraces on the west side, east side and southeast corner of the pond. Closer to the pond, the topography is fairly flat, but there is a significant transition from the street to the pond in terms of steep grades in the surrounding banks.

Soils

The Ford's Pond site is comprised of eight different soil types according to the Natural Resources Conservation Service (NRCS) soil survey. In the southeastern corner along Church Road, the soil is classified as Nonpareil-Oakland complex, which is identified in hills, has slopes of 3%-12% and is considered well-drained. Nonpareil-Oakland complex is typically 20-40 inches above bedrock, the restrictive feature.

The western side of the pond has several soil profiles. The largest portion of the site, directly west and bordering the pond is Oakland-Nonpareil-Sutherlin complex, which is most common in hills, has slopes of 30%-60%, and is considered well-drained. This soil type is 20-40 inches above bedrock.

The southwest corner of the pond and a bordering area along Church Road is comprised of Conser silty clay loam, which has slopes of 0%-3% and is typical of stream terraces. This soil is poorly drained, and is more than 80 inches above the most restrictive soil feature.

The ridge further west of Ford's Pond is comprised of both Nonpareil-Oakland complex and Oakland silt loam. Nonpareil-Oakland complex has slopes of 12%-30%, and is typical of hills. This soil is well-drained and is 10-20 inches above bedrock. Oakland silt loam has slopes of 30%-60%, and is typical of hills. This soil is well-drained and is 20-40 inches above bedrock.

The northern edge bordering the pond, adjacent to Highway 138, is Waldo silty clay loam, which has slopes of 0%-3% and is most often found in flood plains. This soil is poorly drained and is more than 80 inches above bedrock.

SPECIES DATA

The Oregon Biodiversity Information Center (ORBIC) provided environmental species data on rare, threatened, or endangered species within a two-mile radius of the site. Several key species found include: the western pond turtle, pacific lamprey, Coho salmon, steelhead, Umpqua chub, red-root yampah, rough popcorn flower, and Umpqua dace. All of these species were either observed outside of the Ford's Pond area (Calapooya Creek, etc.) or have not been observed at Ford's Pond since 1999 or earlier. Although there is no evidence of endangered species located at the site, the ORBIC data provides impetus to emphasize habitat restoration around the pond in order foster ecological diversity, as the area is suitable for reestablishment of these species.

Hazards

Earthquakes are an unlikely hazard in Douglas County, but are possible given the area's geologic history. The Ford's Pond site is categorized as at-risk for strong earthquakes should an earthquake occur per the Oregon Department of Geology and Mineral Industries (DOGAMI), and is surrounded by areas subject to potentially very strong to severe shaking. There is also a moderate risk of liquefaction along the western ridge on the site. For a Cascadia earthquake event, the site is expected to experience very strong to severe shaking.

According to the Statewide Landslide Information Database for Oregon (SLIDO), the northwest corner of the Ford's Pond site is most at risk of landslides, with the higher-most ridge ranking high for landslide susceptibility.

OPPORTUNITIES & CONSTRAINTS

Site Opportunities

The Ford's Pond site contains elements and features that combine to contribute to a vibrant community recreation area. Opportunities include:

- Diverse bird species that provide opportunities for viewing and habitat restoration and enhancement.
- The pond provides opportunity for fishing.
- Deeper water on the north side of the pond allows for potential boat access (electric motors only).
- The west hillside offers views of surrounding mountains and provides opportunities for scenic overlooks and trails.
- The site and has established access points along Highway 138 W, which serves as the main route between the Oregon coast, I-5, and the Cascades.
- Existing wetlands provide habitat enhancement and wildlife viewing opportunities.
- There are a variety of habitat types (oak woodland, ash woodland, wetland) that offer multiple park user experiences.

Site Constraints

The Ford's Pond site contains elements and features that impact decisions on how to best develop the park in a responsible manner. Constraints include:

- Steep slopes west of the pond and along Church Road present challenges for access and trail construction.
- Poor visibility of north-bound traffic on Church Road from the SE Corner access point creates a safety concern.
- The site has poor pedestrian and bike connectivity to the surrounding area. There are no sidewalks along Church Road or Highway 138 W. (Westlake Avenue and the immediate neighborhood to the east have sidewalks.) Fast moving traffic along Highway 138 W limits pedestrian and bike crossing/access.
- Designated wetlands limit active recreation development opportunities in the western portion of the site.
- Seasonally inundated areas around the pond impact future trail layout and design.
- A portion of the hillside abutting the western portion of Ford's Pond was previously terraced and is in need of re-grading and restoration.
- Seasonal water levels fluctuate up to 3 feet with Class A treated wastewater discharge from the wastewater treatment plant.
- Water pump and water outlet structures are visible and occupy space on the southwest and northwest corners of Ford's Pond, respectively.

"Our vision is that families will be able to enjoy the area, individuals can safely spend time walking or enjoying the view, and that it will become a wonderful gathering place for small events, and specialized groups to use here in Sutherlin– a place for the community." –Survey Respondent

PAGE 26

PUBLIC INVOLVEMENT

PAGE 29

IDENTIFIED STAKEHOLDERS AND POTENTIAL PARTNERSHIPS

SECTION 3

BACKGROUND

The master planning process relied upon technical data and a series of public involvement activities to inform the design options and the conceptual development plan. The process was shaped by community feedback to produce a plan for future improvements to Ford's Pond Community Park.

PROCESS

The master planning process began with an assessment of the existing park conditions and an inventory of opportunities and constraints. A series of public involvement activities were used throughout the process to inform initial, draft, and final stages of the park concepts. Three community park design options were prepared to illustrate a range of options and alternatives for future park development. The design options were refined and consolidated into a preferred alternative along with the site plan, the basis for the conceptual master plan. Additional analysis, including code compliance and cost estimating, supplemented and informed the planning process.

PUBLIC INVOLVEMENT

Public involvement and outreach occurred throughout the planning process. The primary methods of public involvement were works sessions with the Planning Team, a series of community open houses, a focus group meeting, attendance at the Blackberry Festival, an online survey, and a summer school class.

The Design Team recorded notes during all Planning Team meetings. The project initiation meeting focused on providing project background, work components and timeline, and a general discussion on project opportunities, issues, and vision. The first meeting focused on discussing wastewater treatment plant construction and site impacts; reviewing key stakeholders for the park and a strategy for public outreach; and discussing opportunities, constraints, and site programming. The second meeting focused on a review of the site analysis documentation to-date, the proposed survey, and plans for the community meeting. The third meeting presented the first round of survey data, reviewed the ORBIC report, and discussed the community park element. The fourth meeting focused on design concepts for the overall site plan, the north frontage, and the southeast community park. The fifth meeting involved a review of three conceptual plan options for the park and included a discussion of advantages and disadvantages related to each option. The sixth meeting included a presentation of the Draft Master Plan and identification of changes and revisions. All meeting notes can be found in Appendix 6.

Two community meetings were held to gather community input on the overall Master Plan and specific park design concepts. Notices of the meetings were provided to community residents via local reader boards, posters, radio, newspaper, and the Friends of Ford's Pond and City's websites and Facebook pages. All community meetings were held on weekday evenings at the City's Community Center.

PUBLIC INPUT

As noted previously, public input and feedback was gathered throughout the planning process. Results from these efforts are summarized in the following section.

Community Meeting 1

In the first community meeting held on May 24, 2017, the Design Team provided participants an overview of the site, project goals, and timeline. Participants were then asked to identify opportunities and constraints on the site, and provide recommendations in break-out groups under the categories of passive recreation, active recreation, and natural environment. Twenty-seven community members attended this meeting.

Community Meeting 2

In the second community meeting held on September 28, 2017, participants were asked to identify their preferred park design concept from three options and confirm program elements. Attendees had the opportunity to ask questions and discuss perceived issues pertaining to the concepts. The Design Team used these comments to refine the final concept to best reflect the community's desired outcome. Thirty-five community members attended this meeting.

Focus Group Meeting

In addition, a focus group meeting was held on July 11, 2017, that included the following stakeholders: U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, Sutherlin School District, Sutherlin Area Chamber of Commerce, Umpqua Valley Audubon Society, Umpqua Valley Fly-Fishers, Umpqua Community College, and CHI Mercy Health. This meeting focused on recreational opportunities, environmental restoration and enhancement opportunities, and discussion around capital improvement and revenue generation. Meeting notes from this meeting can be found in Appendix 5.

Blackberry Festival

The Design Team also attended the Sutherlin Blackberry Festival on August 18, 2017. Partnering with the Friends of Ford's Pond, the Design Team staffed a booth and invited visitors to indicate their preferred design concept, and provide any additional comments or design suggestions. The Design Team received over 30 comments at this community event, which the Design Team then used to finalize the preferred concept. A summary from this event can be found in Appendix 5.

Online Questionnaire

An online questionnaire was also created and managed using the Qualtrics online survey platform. It was released on May 24, 2017, and remained open through August 31, 2017. Links to the questionnaire were posted to the City of Sutherlin's website, the Friends of Ford's Pond Facebook page, and were distributed locally via QR code postings in public places. Survey questions were directed at identifying preferences for park features, amenities, and improvements.

The questionnaire generated 365 responses. All comments were received outside of the community meetings and hardcopy surveys were collected by Friends of Ford's Pond and forwarded to the Design Team. Survey results revealed the majority of respondents believed the City should consider passive, recreation activities at the park, along with basic park amenities such as benches, tables, bathrooms, and a parking lot. The most important features, rated respectively in descending order included: restrooms, walking/hiking trails, vehicle parking, nature trails, park amenities, fishing access, children's play area, bike parking, running trails, and boating access. A complete detailed summary of survey results is included in Appendix 4.

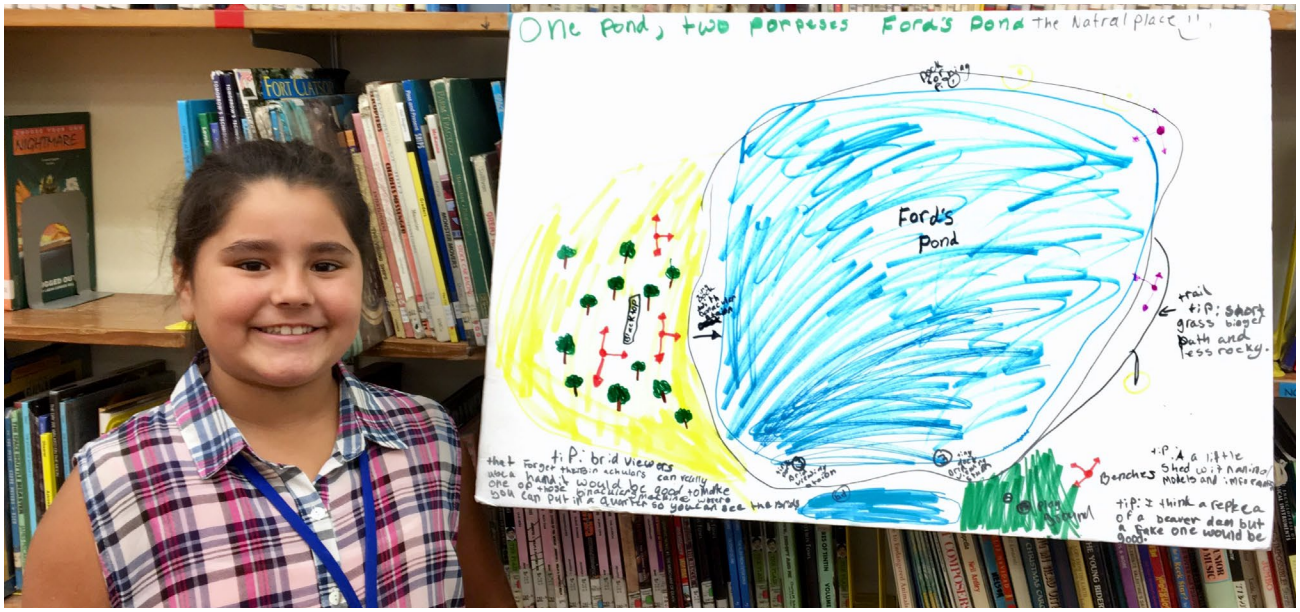
Migrant Education Summer Adventures

Ana Ramirez and her K-6 Migrant Education Summer Adventures Class used Ford's Pond as the focus of their three-week class. The class visited, researched, and created presentations on what they would like to see at Ford's Pond. Their speeches on July 12 at Sutherlin's West Intermediate School offered insight from a needed youth perspective. Their ideas are provided in Appendix 5.

IDENTIFIED STAKEHOLDERS AND POTENTIAL PARTNERSHIPS

Both public and private consultation contributed to establishing the Ford's Pond Community Park program features. The Design Team worked closely with the City of Sutherlin, Sutherlin City Council, and the Friends of Ford's Pond to gather relevant data on site conditions and finalize final concept plans. Public comment guided refined concept designs to best reflect the community's self-identified needs. The City was consulted throughout the design process to ensure the plan meets their expectations and to identify any potential changes to the plan due to the water treatment plant discharge storage requirements.

Partnerships in both park development and funding is advantageous for all relevant stakeholders. The Park's size, location, and purpose render co-management a viable option between the City of Sutherlin and the Friends of Ford's Pond. Collaboration with the Oregon State Parks and Recreation Department (OPRD) may also generate potential grant income and service support. Historically, OPRD has welcomed partnerships with a variety of community organizations and civic groups. Opportunities may include volunteer support, fundraising, or more formal relationships operating under a one-year contract agreement. The site also presents educational and service learning partnership opportunities with Umpqua Community College and the Sutherlin School District.



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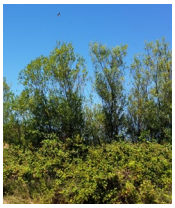
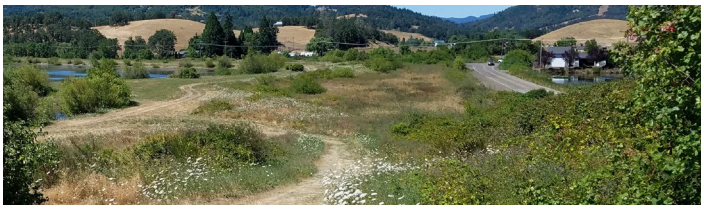




PAGE 32

OVERALL SITE PLAN

PAGE 34

PROGRAM ELEMENTS

PAGE 36

SOUTHEAST COMMUNITY PARK CONCEPT

SECTION 4

DESIGN PROCESS

Overall site improvements include new trail systems, parking, restrooms, a fishing dock, wetland enhancements, scenic viewpoints, bird blinds, and osprey platforms. Educational signage and wayfinding improvements are proposed throughout the park where appropriate. Additional pedestrian access is proposed off of Church Road and Westlake Avenue.

New community park improvements include pavilions, natural play equipment separated by age group, restrooms, benches, picnic tables, food cart hook-up pad, and open meadow area.

Overall Site Plan

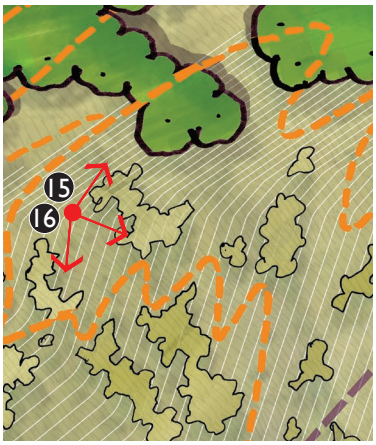
The overall site plan illustrates seventeen key elements of the Ford's Pond area. A fishing pier and boating access is proposed at the north end of the site, where the pond is the deepest. This northern area is supplemented by parking, restrooms, an art installation, paddlecraft rental kiosk, and picnic tables. On the eastern end of the site, a polishing pond and wetland enhancement is proposed, supplemented by interpretive signage and bird viewing. This area seeks to educate and inform visitors about the pond's functional purposes and ecological value. Wetland

enhancements and boardwalks are also proposed along the eastern side of the site leading south to the community park. Continuing west, a wetland enhancement area is proposed in the southwest corner of the pond, and an extensive trail network along the steep slopes to the west lead up to views of the Calapooya Creek. Benches and picnic tables will be placed along this route. The entire pond is circled by an ADA-accessible primary path with a width of 10 feet, which will be asphalt-paved and accessible year-round.

PROGRAM ELEMENTS

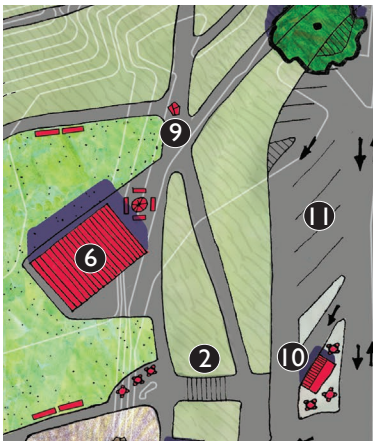
NATURAL PLAY AREA

Natural Play parks encourage free play with natural materials. It does not include play equipment or designed play elements. The nature play area consists of play structures from the natural environment including elements such as logs and boulders. Natural Play elements encourage imaginative play and are sensitive to the site's surroundings by incorporating natural materials and colors.



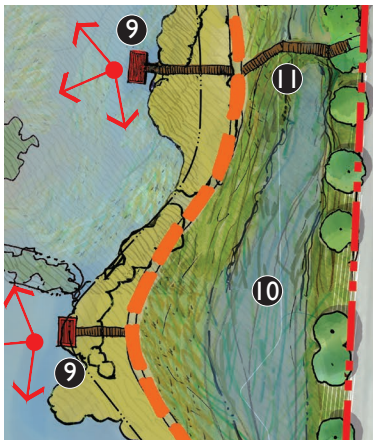
PASSIVE RECREATION

Passive recreation elements enable visitors to walk, jog, or view wildlife. Key elements include secondary paths on the west side of the pond, scenic viewpoints with benches or bird blinds, picnic tables, and interpretive signage. Boardwalks across wetland enhancement areas also help visitors safely view and interact with wetland environments on the eastern side of the pond.



FAMILY AMENITIES

These improvements include park features that encourage general use and community gathering in the park. Improvements include pavilions, picnic tables, benches, lawn areas, restroom facilities, a food cart hook-up pad, and paved parking. The parking lot, as well as paths and paving to access bathrooms, pavilions, and the park are ADA accessible.

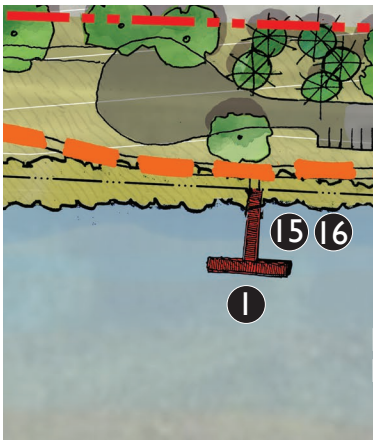


NATURAL AREA RESTORATION

Natural area restoration will occur in identified areas, as well as where appropriate for providing specific habitat. Existing invasive and noxious plants will be removed, and re-vegetation with native species is proposed to re-establish native plant communities on the site.

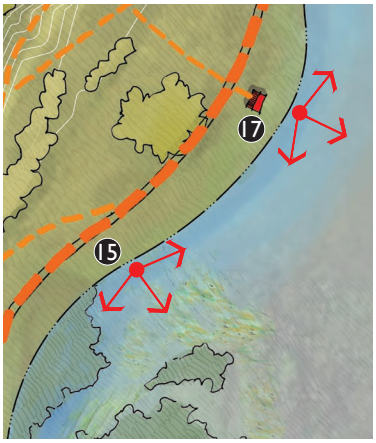
Wetland enhancement is proposed in two locations within the pond to foster growth of aquatic species, including fish and turtles. Restoration will also be targeted towards the oak savannah landscape on west hillside.

Additionally, osprey nesting platforms are proposed to support birds on site.



FISHING AMENITIES

Fishing amenities are located along the north frontage of the site where the pond is the deepest. A parking lot is located along this frontage, with room for RV and trailer parking. Amenities include boating access from the parking lot to the pond, an ADA-accessible T-dock that extends out into the pond, and restrooms, picnic tables, and benches along the shore. A kiosk for paddleboat or other paddlecraft rentals is located nearby.



PATHS & TRAILS

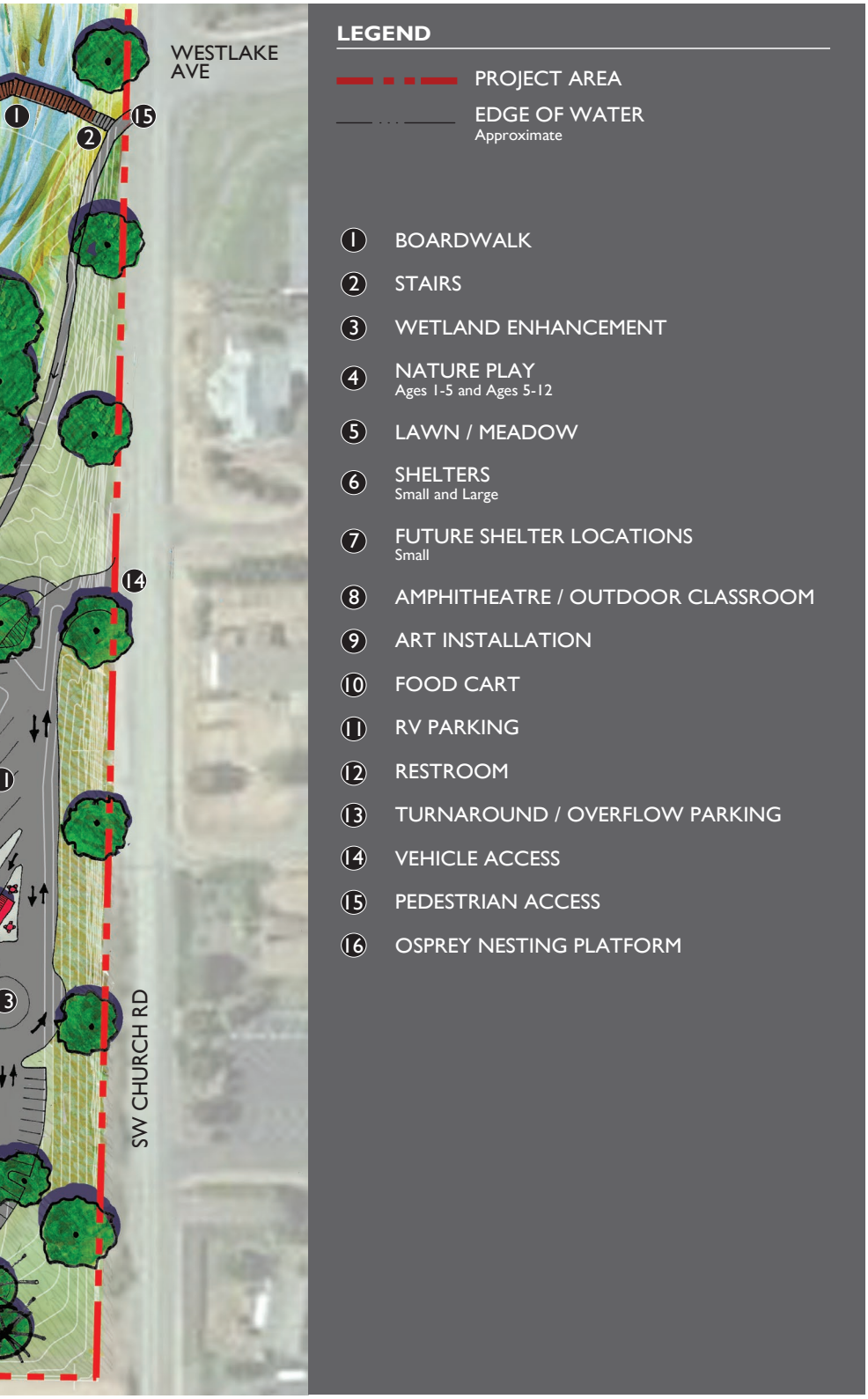
Three path/trail types are proposed in the park - primary, secondary, and tertiary. The primary path is pervious asphalt and 10 feet wide. This path provides ADA accessible routes to key features of the park. The path provides access for runners, pedestrians, bikes, and required access for maintenance vehicles.

Secondary paths are crushed rock and 4-5 feet in width. These paths provide access to viewing areas, natural features, and other park amenities.

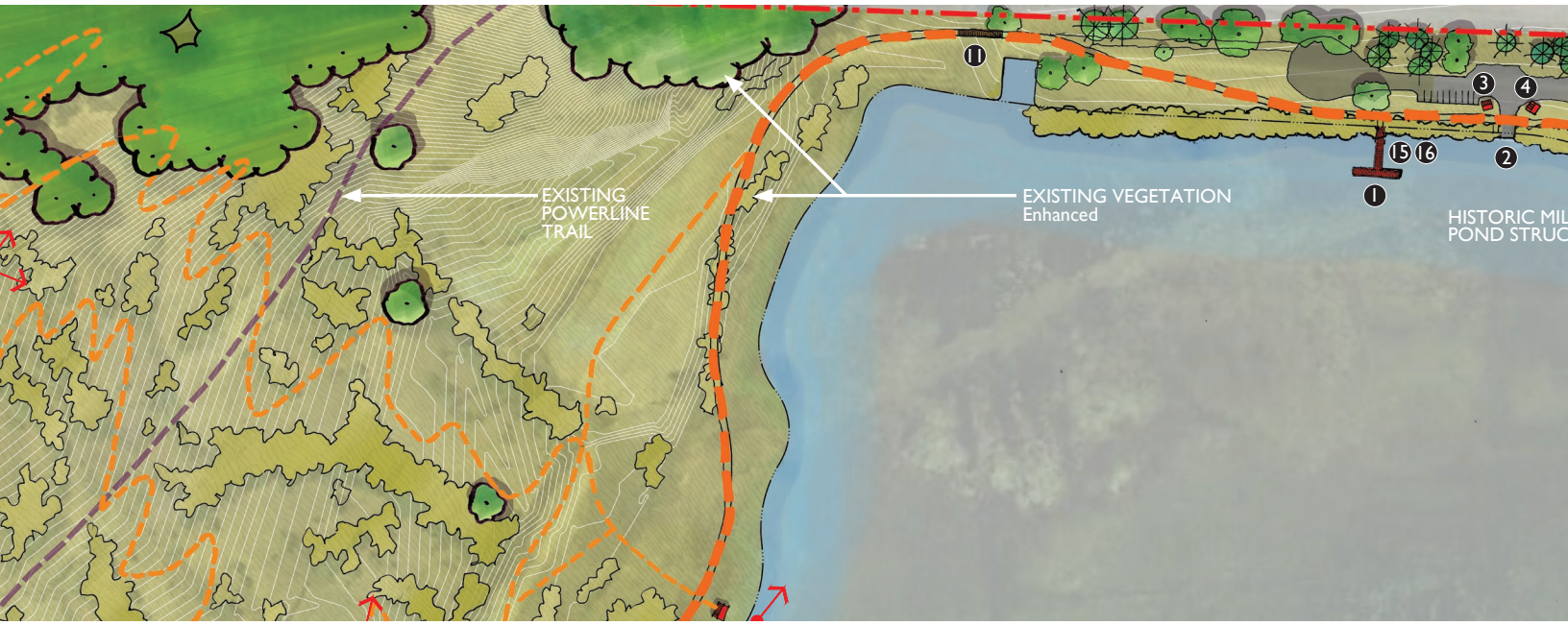
Tertiary trails are native material and 3-4 feet in width. These trails provide access up the steeper slopes on the west end of the pond for hikers, and provide a view of the Calapooya Creek to the west.

SE Community Park

The final southeast community park concept illustrates sixteen key elements of the park area. The park is accessed on the first tier by a parking lot off of Church Road that includes a food cart hook-up pad. The parking lot includes a turnaround in the middle, with additional access to overflow parking. The second tier is accessed by stairs and ADA-accessible paths, which also provide access to the bathroom. The second tier includes multiple pavilions for day-use and rental use, located along the meadow/open play area, and playground. The playground features



natural play structures, and is separated by age groups into two smaller playgrounds. The playground is bordered by benches, and trees on the southwest side. Potential future pavilions are also shown on the western side of the park. An amphitheatre/ outdoor classroom is proposed closest to the pond, near the wetland enhancement area. Boardwalks to the north and west of the park cross the wetland enhancement area to lead visitors onto the main path around the pond.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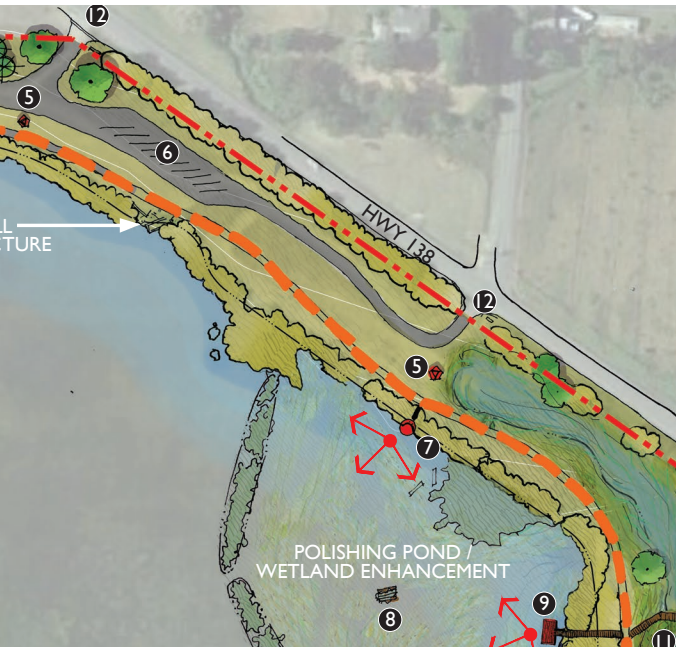
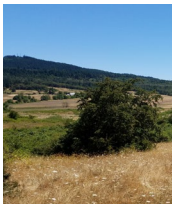




PAGE 40
PLANNING LEVEL COST

PAGE 40
PHASING AND PRIORITIZATION

PAGE 43
OPERATING COST MODEL AND PARK MAINTENANCE

PAGE 45
REVENUE GENERATION STATEGIES

PAGE 48
SUSTAINABLE PARK OPERATIONS

SECTION 5

IMPLEMENTATION

Key benchmarks for implementation are broken down into development costs, maintenance and operations costs, potential funding sources, and revenue generation strategies. These steps will be dependent on timelines, partnerships, and secured funding.

Overview

Implementation of the Ford's Pond Master Plan will occur over a time period to be determined by a number of factors. Key determinants and benchmarks for implementation include permitting, establishing funding sources for the projects, preparing construction documents for park improvements, establishing maintenance and operations reserves, and initiating phased construction. The City of Sutherlin and the Friends of Ford's Pond are interested in beginning construction of select projects as early as 2019, or as soon as funding is secured and maintenance and operations responsibilities are clearly defined. This chapter discusses development costs, based on the Overall Park Concept Plan and SE Community Park Concept Plan, and organized by project; maintenance and operations costs; potential funding sources; and revenue generation strategies.

Development Costs

Development costs are organized by project and prioritization level. The selection of projects and their components is determined by consideration of complimentary uses, geographical location within the project site, consistency with the original vision for the park developed by the Friends of Ford's Pond, and consideration of grant funding eligibility and criteria. Projects are listed in sequential order by priority level, however the prioritization is not intended to be definite, rather projects can be moved in sequence depending on need, available funding, and other factors. Projects are generally prioritized in the order of those that provide multiple uses for the benefit of diverse population groups first, followed by more specialized projects.

Project 1. Pond Perimeter Path

This project involves the construction of a 10-foot wide paved path extending around the perimeter of Ford's Pond. The path is constructed of pervious asphalt with a crushed rock base. The primary use is by walkers and joggers, as well as City maintenance vehicles that need to access pond inflow and outflow structures. The path is predominately on-grade, however sections are slightly elevated to be above seasonal inundation levels. The path is approximately 1.7 miles in total length.

Project 2. Southeast Community Park

The proposed community park site is within the larger project area and is located in the southeast corner of the site, abutting Church Road and residential neighborhoods to the east. The project site is generally composed of three terraces; an upper terrace that is a few feet below the elevation of Church Road; a middle terrace; and a lower terrace that is approximately 5-10 feet above the pond elevation. There is approximately 10-15 feet of grade change between the upper, middle, and lower terraces, respectively.

The project involves the construction of a new access drive extending from Church Road and the parking area. The parking area includes short-term vehicle parking with views of Ford's Pond, a few larger vehicle or bus parking spaces, a turnaround, food cart or vendor staging area, and standard vehicle parking. The parking area is designed in consideration of potential future expansion to the southwest.

The main park elements are proposed on the middle terrace, including: a pavilion with

a hearth and fire place; two picnic shelters; restroom; nature playground with separate areas for 1-5 and 6-12 age groups; informal lawn area; benches; and other site furnishings. The park is connected to the upper terrace by stairs and two accessible paths. Accessible paths extend to the north and south, to the lower terrace, providing access to the Pond Perimeter Path and other trails throughout the site.

The lower terrace contains an amphitheatre stage/outdoor classroom that utilizes the informal lawn area and slope for seating and two sites for future picnic shelter expansion, as needed. The lower terrace also links to the Pond Perimeter Path, trails, and boardwalks extending through the wetland areas.

Project 3. North Frontage

This project involves the construction of new ingress (east) and egress (west) points from Highway 138 W that provide access to a parking area, boat launch, and accessible fishing pier. The parking area includes parking for vehicles and boat trailers or other large vehicles. The boat launch is sized to accommodate large drift boats and all manner of personal paddle craft. A seasonal restroom enclosure and informational/interpretive kiosk are located next to the boat launch. A monument sign and art installation is proposed in the NE corner of the frontage, in an area that has good visibility from Highway 138 W. The North Frontage is intended to be a wayside for people traveling along Highway 138 W, as well as a community boat launch and day-use park for Sutherlin residents. The improvements are linked to the Pond Perimeter Path by paths and trails.

Project 4. West Hillside

This western portion of the site contains a hillside and miniature butte that has expansive views of Sutherlin and the valley to the west, as well as remnant oak woodlands. The western portion of the butte has frontage along Calapooya Creek. This project involves the construction of a series of trail routes of varying steepness and extend west up to the summit of the butte. Another trail connection, with multiple switchbacks, extends west, downward to Calapooya Creek. The trails will be constructed of native materials, approximately 3-4 feet in width, and graded to be accessible where feasible. Seating is proposed at key viewpoints to take advantage of the vistas that the park provides. A picnic shelter is located near the pond, on a terrace above the surface of the pond. A powerline corridor bisects the hillside that can be used by mountain bikers. The upper half of the hillside contains remnant oak woodlands to be restored and enhanced through the removal of non-native and invasive understory species.

Project 5. Secondary Trails

The project involves the construction of secondary walking and hiking trails that extend from the Pond Perimeter Path. Trails near the pond access viewpoints with seating and bird blinds provide opportunities for wildlife observation. Trails near the hillside provide seating and vantage points across the Pond. Additional trails are proposed connecting the Southeast Community Park, North Frontage, and Wetland Enhancement Areas. The trails are constructed of crushed rock and are approximately 4-5 feet in width.

Project 6. Wetland Enhancement

The site contains delineated wetland areas that are located between the pond and Church Road, to the east, and in the southern portion of the site on the lower terrace below the

proposed Southeast Community Park site. This project involves wetland restoration and enhancement through minimal re-grading and invasive and non-native species removal. A new wetland area will be created at the wastewater treatment plant outfall, identified as a polishing pond. The current wetlands in the east and south are to be improved. The project also involves the construction of two trails and boardwalk segments providing pedestrian access from Church Road to the Pond Perimeter Path, and another segment connecting the Southeast Community Park to the Pond Perimeter Path. Two viewing platforms are also proposed on the east side of the pond, extending out into the pond.

Table 5.1 Summary Project Cost Estimates presents a summary of the development costs for each identified project. The development costs include estimated direct construction costs, indirect construction costs, and owner soft costs. Detailed estimates for each project are included in Appendix 9 Detailed Project Cost Estimates.

- Direct Construction Costs consist of the hard costs for materials required to construct improvements. These items include demolition, site preparation, and improvement costs.

- Indirect Construction Costs consist of mark-ups and contingencies. Generally, mark-ups are applied to the total improvement costs and account for the necessary costs associated with performing the work. These items include the following items and are estimated at 18 percent of direct construction costs:

  - ◊ General Requirements: This accounts for all the contractors' site supervision and management, site accommodation, utilities, office equipment and supplies, as well as head office costs. General requirements are estimated at 10 percent of direct construction costs.

  - ◊ Bonds & Insurance: The contractor will be required to take out various bonds, sub-guards, and insurances to protect the owner (and the contractor) against construction claims. Bonds & Insurance is estimated at 2 percent of direct construction costs.

  - ◊ Contractor Fee: The contractor will charge a fee on the project to cover overhead and profit margin. The Contractors Fee is estimated at 6 percent of direct construction costs.

- Owner Costs include administration, staffing, permitting, system development charges, design fees, topographic survey, geotechnical investigation, furnishings, commissioning, and other miscellaneous costs. Owner Costs are estimated at 23 percent of direct construction costs.

  - ◊ Design Contingency: The estimates are at a very conceptual level and therefore it is necessary to have a design contingency to account for any scope that has not been considered in the estimate. As the design progresses and more is known about the project, the design contingency would reduce accordingly. Design Contingency is estimated at 10 percent of direct construction costs.

- Total Estimated Project Costs are the compounded total of Direct Construction Costs + Indirect Construction Costs + Owner Costs.

- Escalation Costs: The estimates have

been priced in today's dollars. As the construction activities are planned to commence in the future, there is a need to account for construction cost escalation. The project cost estimates include two years of escalation (2018 and 2019) and are priced in 2019 dollars.

Table 5.1 Summary Project Cost Estimates

PROJECT #	NAME	DESCRIPTION	COST
1	Pond Perimeter Path	Multi-use Path around Pond	$ 705,200
2A	Southeast Community Park Phase 1	Parking, Restrooms, Utilities, Paths, Site Furnishings, Security Gate	$ 748,100
2B	Southeast Community Park Phase 2	Additional Parking, Nature Play Area, Shelter, Additional Paths, Lawn, Plantings	$ 473,900
2C	Southeast Community Park Phase 3	Pavilion, Shelter, Expanded Nature Play, Stage, Art, Signage	$ 315,900
3	North Frontage	Parking, Boat Launch, Boat Parking, Fishing Pier, Monmument Sign, Restroom Enclosure, Paths	$ 945,000
4	West Hillside	Trails, Viewpoints, Benches, Oak Woodland Restoration	$ 94,000
5	Secondary Trails	Trails, Viewpoints, Bird Blinds, Shelter	$ 228,800
6	Wetland Enhancement	Wetland Restoration/Enhancement, Viewing Platforms, Boardwalks	$ 476,200
TOTAL COST			$ 3,987,100

Maintenance and Operation

The City of Sutherlin operates a well-planned and developed parks, trails, and open space system. As confirmed through the online survey, residents value recreational amenities such as trails, natural areas, and open space. The Friends of Ford's Pond is a non-profit organization that is assisting the City with planning for park development, fundraising, and volunteer coordination. This plan anticipates that future maintenance and operation responsibilities will be shared between the City of Sutherlin and the Friends of Ford's Pond. This section addresses the implications of operating and maintaining Ford's Pond Community Park.

Maintenance Levels

Park maintenance activities are defined based on the level of maintenance for typical amenities found in the park type. This plan assumes that the overall site includes two park types: a community park and a natural

area park. The community park is defined as the southeast 5 acres detailed on page 36. The natural area park is defined as the remaining 104 acres, excluding the pond and other water bodies. Following are the typical maintenance tasks appropriate for each park type.

Community Park Maintenance Tasks

- Maintenance of special facilities (pavilion, shelters, etc.)
- Setup and cleanup after festival/event reservations
- Basic shrub and landscape beds
- Basic mowing and trimming
- Restroom cleaning
- Trash removal
- Graffiti removal
- Vandalism surveys
- Paved surface maintenance
- Parking lot maintenance
- Playground safety inspections
- Structure safety evaluations

Natural Area Park Maintenance Tasks

- Parking lot maintenance
- Paved surface maintenance
- Other surface maintenance (boardwalk)
- Trail maintenance
- Natural resource restoration
- Forest management (oak woodland)
- Invasive species management
- Trash removal
- Vandalism surveys

Table 5.2 Maintenance Costs per Acre estimates ongoing maintenance and operations costs per acre by park type within the overall site. Maintenance costs per acre are derived from a comparison of costs for maintaining similar facilities, general park system maintenance costs by park type in other Oregon communities, and data from the 2016 Natural Recreation and Park Association 2016 NRPA Field Report. Trail maintenance costs, specifically the proposed perimeter trail around the Pond, are assessed

Table 5.2 Maintenance Costs per Acre

FACILITY TYPE	SIZE	UNIT	ANNUAL MAINTENANCE COST (PER UNIT)	ANNUAL MAINTENANCE COST
Pond Perimeter Path	1.84	miles	$2,500	$4,600
Southeast Community Park Phase 1	3.5	acres	$3,000	$10,500
Southeast Community Park Phase 2	1	acres	$12,000	$12,000
North Frontage	29	acres	$500	$14,500
West Hillside	51	acres	$200	$10,200
Secondary Trails	0.67	miles	$1,500	$1,005
Southeast Community Park Phase 3	0.5	acres	$5,000	$2,500
Wetland Enhancement	24	miles	$500	$12,000
TOTAL COST				$67,305

on a cost per-mile basis due to the unique maintenance responsibilities associated with that facility type. Maintenance costs include labor and materials for the purposes of park maintenance.

The total maintenance cost reflected in Table 5.2 is based on the full build-out of the park and completion of projects previously identified. The earliest any park development is anticipated to occur is 2019 and the projected timeline for the completion of all projects is 10-20 years. Maintenance costs are highly variable across agencies, districts, and other park and recreation providers and are subject to local conditions and fluctuations in resource allocations.

Funding and Revenue Generation

As noted previously, the projected timeline for the completion of all projects identified in the Plan is 10-20 years. The completion of planned projects will require the acquisition of funding from various sources. In order to sustain operation and maintenance of the park, funding for ongoing maintenance and operation will also need to be secured from various sources. This section addresses funding strategies for construction of capital projects and revenue generation strategies for maintenance and operation.

Project Funding

The Plan assumes that all funding for capital projects will be secured from outside sources (other than the City of Sutherlin). These sources include partnerships, private donations, and grants.

- Partnerships with federal, state, and local agencies and not-for-profit groups play an important role in the development of park facilities. Partnerships can also provide one-time or ongoing maintenance support.

- Donations of labor, land, or cash by service agencies, private groups or individuals are a popular way to raise funds for specific projects. Most organizations implement capital campaigns focused on specific projects for cash donations. The Friends of Ford's Pond is a tax-exempt (IRS 501(c)(3)) organization that can implement a capital campaign and accept and manage donations. Generally, donations are not stable source finances and should not be relied upon for a major portion of funding.

- Securing grants is a good strategy to support park development. Many grant organizations fund park improvements, although few provide funds for ongoing maintenance activities. Most grant organizations have lengthy processes that require staff time and effort, and grants usually have very specific guidelines and only fund projects that address the granting organization's overall goals. The grant process is highly competitive. As grant agencies often look favorably upon collaborative projects, developing partnerships between agencies, organizations, and the City will improve competitiveness in the grant application process.

The Plan assumes that partnerships will be utilized to support ongoing maintenance and operations, and are therefore not accounted for as a funding source for capital project funding. The Plan identifies grants and donations as the primary funding sources for capital projects. A comprehensive discussion of potential funding sources is included as Appendix 8 Funding Options.

Although numerous funding sources are identified, the Plan considers grants administered by the Oregon Park and Recreation Department (OPRD) as the most likely source for capital project funding. Following is a summary of grants in categories that align with project eligibility awarded by ORPD in 2016, including; average, median, and high grant awards.

- OPRD Recreational Trails Grant (RTP)
  - ◊ Average $93,076; Median $76,138; High $377,883
- OPRD Land and Water Conservation Fund (LWCF)
  - ◊ Average $155,441; Median $156,169; High $265,000
- OPRD Local Government Grant Program (LGGP) – Large Award
  - ◊ Average $221,386; Median $164,000; High $452,125
- OPRD Local Government Grant Program (LGGP) – Small Award
  - ◊ Average $49,444; Median; $51,485; High $75,000

Additional grant sources of capital funding for which the project may be eligible include Oregon Department of Fish and Wildlife (ODFW), Oregon State Marine Board (OSMB), and Oregon Watershed Enhancement Board (OWEB). Following is a summary of grants awarded by these sources in 2016:

- ODFW (average single grant amount)
  - ◊ Access and Habitat Grant: Under $100,000
  - ◊ Information and Education Grant: $10,000
  - ◊ Restoration and Enhancement Grant: Under $100,000
  - ◊ Bird Stamp: $1,000-$50,000
  - ◊ STEP Mini-Grants: Under $2,000
- OSMB (average single grant amount)
  - ◊ Individual Grant: $170,000
- OWEB (average single grant amount)
  - ◊ Small Grant Program: Up to $15,000
  - ◊ Restoration: $174,328
  - ◊ Technical Assistance: $31,858

Table 5.3 Projected Ongoing Maintenance Costs by Year presents annual cumulative maintenance costs based on a projected timeline for the development of each project/facility identified in the plan. Project development dates are highly variable and only included herein for estimating and review purposes.

Table 5.3 Project Ongoing Maintenance Costs by Year

FACILITY TYPE	ANNUAL MAINTENANCE COST	PROJECTED DEVELOPMENT (YEAR)	ONGOING MAINTENANCE COST (BY YEAR)
Pond Perimeter Path	$4,600	2019	$4,600
Southeast Community Park Phase 1	$10,500	2021	$15,100
Southeast Community Park Phase 2	$12,000	2023	$27,100
North Frontage	$14,500	2025	$41,600
West Hillside	$10,200	2027	$51,800
Secondary Trails	$1,005	2029	$52,805
Southeast Community Park Phase 3	$2,500	2031	$55,305
Wetland Enhancement	$12,000	2033	$67,305

Table 5.4 Funding Sources

PROJECT #	NAME	COST	FUNDING SOURCES
1	Pond Perimeter Path	$ 705,200	Grants, Donations
2A	Southeast Community Park Phase 1	$ 748,100	Grants, Donations
2B	Southeast Community Park Phase 2	$ 473,900	Grants, Donations
2C	Southeast Community Park Phase 3	$ 315,900	Grants, Donations
3	North Frontage	$ 945,000	Grants, Donations
4	West Hillside	$ 94,000	Partnerships, Volunteers
5	Secondary Trails	$ 228,800	Partnerships, Volunteers
6	Wetland Enhancement	$ 476,200	Partnerships, Volunteers

Table 5.5 Funding Sources by Project

PROJECT #	NAME	COST	GRANT SOURCE
1	Pond Perimeter Path	$ 705,200	OPRD RTP
2A	Southeast Community Park Phase 1	$ 748,100	OPRD LGGP
2B	Southeast Community Park Phase 2	$ 473,900	OPRD LGGP
2C	Southeast Community Park Phase 3	$ 315,900	OPRD LGGP
3	North Frontage	$ 945,000	OPRD LWCF, OSMB, or ODFW
4	West Hillside	$ 94,000	OPRD LWCF
5	Secondary Trails	$ 228,800	N/A
6	Wetland Enhancement	$ 476,200	ODFW

Table 5.4 Funding Sources presents a tabulation of projects, costs, and most likely funding sources. Table 5.5 Funding Sources by Project presents a tabulation of projects, costs, likely funding source, and amounts attributed to each funding source. Grant funding source amounts are estimated from interpolating the median and high values from the 2016 grant cycle. Project 2 Southeast Community Park and Project 3 North Frontage are phased in order to present a methodical approach to park development over time. Grant award estimates decrease across phases due to the competitive nature of grant applications and in consideration of the likelihood that one community will receive multiple grants of similar amounts over the 20 year planning horizon. Project 4 West Hillside, Project 5 Secondary Trails, and Project 6 Wetland Enhancement are excluded from the tabulation because these projects can be executed through other means.

Revenue Generation

The Planning Team discussed revenue generation strategies during the design process for the Master Plan. The following potential revenue generation sources were identified for operations:

- Partnerships
- Special events
- Rental facilities (pavilion, shelter, etc.)
- Pedal boat, kayak, and paddleboard rentals
- Food and beverage sales
- Educational programs (community college)
- Advertisements on shelters, kiosks, or signage
- Membership fees

Estimating annual revenue by potential source is dependent upon the timeline for park development and the construction, location, or implementation of sources that generate revenue. The Ford's Pond master planning process revealed broad community support for the vision and confirmed support from key project partners that have the ability to contribute to ongoing operations and maintenance. The estimated park operations and maintenance costs are comparable to similar facilities and it is anticipated that funding for operations and maintenance can be secured, as the park develops, through contributions from the Friends of Ford's Pond, the City of Sutherlin, and other partnerships.

Sustainability

Appendix 10 Sustainability Criteria Checklist contains a list of sustainability criteria that were addressed during the Master Plan process or should be addressed during subsequent project phases. These criteria include the following categories:

- Design
- Site
- Materials and Landscaping
- Jobsite and Operational Practices

APPENDICES

APPENDIX 1

EXISTING CONDITIONS MAP

APPENDIX 2

OPPORTUNITIES AND CONSTRAINTS MAP

APPENDIX 3

PARK PROGRAM

APPENDIX 4

COMMUNITY SURVEY RESULTS

APPENDIX 5

COMMUNITY & FOCUS GROUP INVOLVEMENT

APPENDIX 6

PLANNING TEAM INVOLVEMENT

APPENDIX 7

DESIGN CONCEPTS

APPENDIX 8

FUNDING OPTIONS

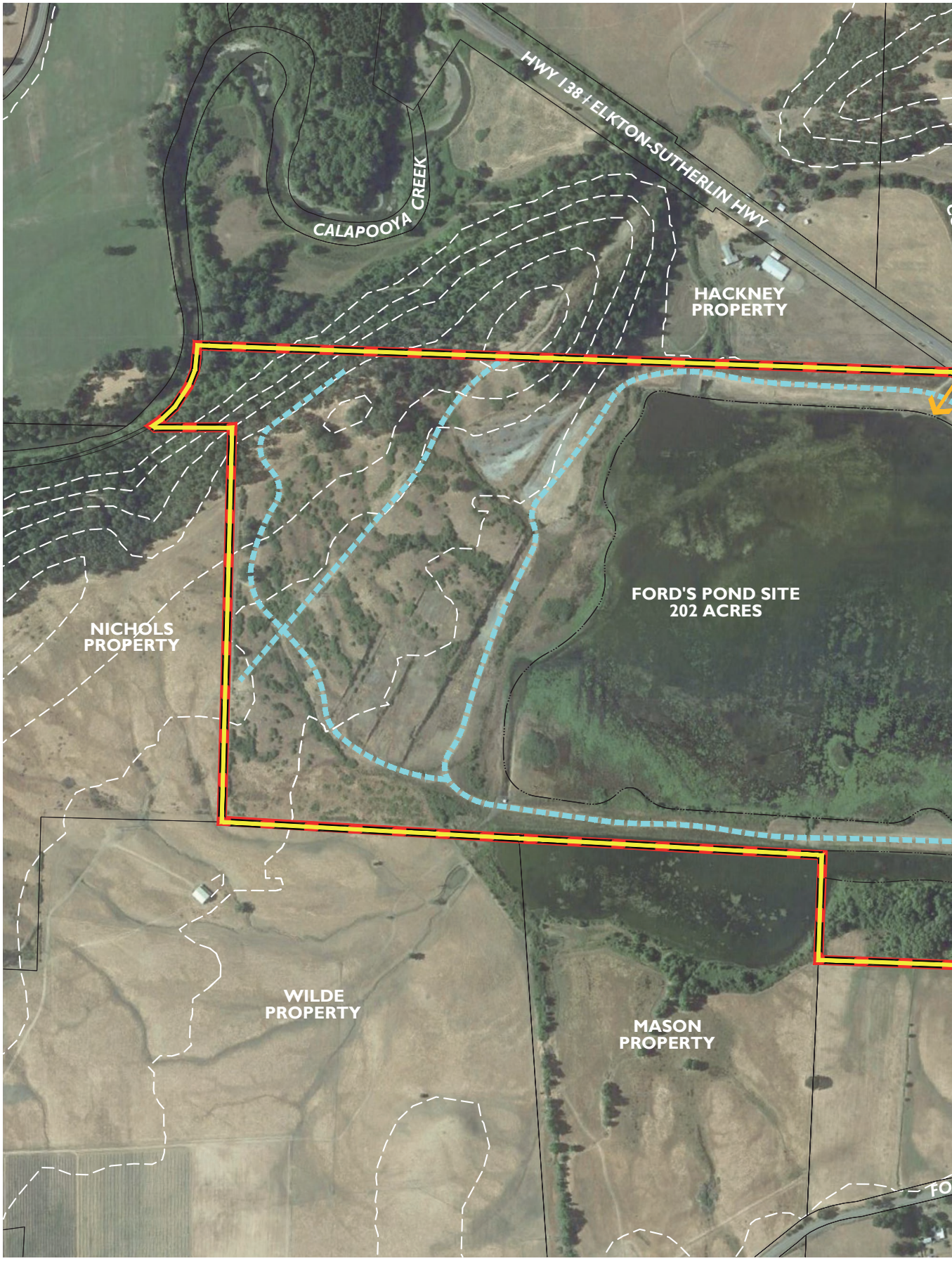
APPENDIX 9

DETAILED PROJECT COST ESTIMATES

APPENDIX 10

SUSTAINABILITY CRITERIA CHECKLIST

A 2



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FORD'S POND MASTER PLAN

EXISTING CONDITIONS

CITY OF SUTHERLIN

APPENDIX 1: EXISTING CONDITIONS MAP

0' 100' 200' 400'

1" = 200'-0"

A 4

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FORD'S POND MASTER PLAN

SITE ANALYSIS

CITY OF SUTHERLIN

EXISTING CONDITIONS

- PROJECT BOUNDARY
- URBAN GROWTH BOUNDARY
- CITY LIMITS BOUNDARY
- TAXLOTS
- CONTOURS - 40 FT INTERVAL
- UNIMPROVED TRAIL
- EDGE OF WATER Approximate
- STEEP SLOPES - >15%
- VIEWPOINT
- WATER PUMP STRUCTURE
- POTENTIAL SITE ACCESS IMPROVEMENTS

OPPORTUNITIES & CONSTRAINTS

- ZONE 1: FORD'S POND
- ZONE 2: FORD'S POND PERIMETER
- ZONE 3: WEST HILLSIDE
- ZONE 4: SOUTHEAST CORNER
- TRAIL EXPANSION

1. Fishing Access
2. Boat Access
3. Bird Viewing
4. Wastewater Inflow
5. Primary Path
6. Secondary Paths
7. Pedestrian Bridges at Swale & Outflow
8. Park Amenities
9. Dog Waste Stations & Receptacles
10. Signage - Directional & Interpretive
11. Signage - Entrance
12. Park Facilities
13. Children's Play Area
14. Public Gathering Areas
15. Parking - Pull Through; ADA, RV, Bus
16. Natural Area Protection/Enhancement

0' 100' 200' 400'

1" = 200'-0"

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Memorandum

To: CM Design Team

From: Kelsey Zlevor

Subject: **Draft Park Program**
Ford's Pond Community Park

Date: July 19, 2017

Landscape and Aquatic Restoration/Enhancement

- Rehabilitate oak savannah woodland on the hillside by removal of exotic species, supplemental native plantings.
- Non-invasive ground covers in multiuse areas are preferred to assuage concern over Canada geese congregating on grassy areas.
- Enhancement of up to 5 acres of wetlands at the NE comer inflow, as a "pretreatment of water into the pond" using cattails, etc. Include interpretive panels and trail connections for additional nature viewing. There is also potential for 2 acres of wetland enhancement projects in the SW corner.
- Pond is not stocked and is not eligible for cold-water fish stocking. Focus should be improving habitat to enhance resource—plants and native fish.
- Consider monarch butterfly habitat and pollinator planting.
  - Milkweed and nectars.
  - Habitat for native bees: gardens (small, outdoor ed); off the beaten path for those with allergies.
- Planting/seeding for rough popcorn flower.
  - Along Church Road near #16 on Site Analysis
- Nest boxes for swallows and bluebirds.
- Augment beaver habitat with willow and preferred food.
  - "Beaver Deceiver": use tube with cages so they can't dam the culvert.
  - #9 & 10 on Site Analysis map: consider the dam; controlling willows to deter nutria and protect integrity of the dam.
- Terrace transition: cascading levels of use down to the pond. Top to be mostly hardscape and active; progress toward more natural at lower terrace.
  - Potentially use top for parking, middle for seating and play area, bottom tier leads to the pond.
  - Concern over noise level with big groups, using landscaping can provide some buffer.
  - Need ADA accessibility, especially along the terraces. Sloping, gradual curves instead of handrails.

Park and Trail Amenities

- Restrooms.
- All-weather dependable trail system around Ford's Pond that is inclusive to multiple users (bikes, runners, birders, walkers, and ADA). Trails can be of different lengths. Horses and private motorized vehicles prohibited.
  - Minimum of 6 miles of trails on the property, with the hillside offering primitive trails, including access to Calapooya Creek.

- Amenities for scenic viewing, such as seating and benches. Benches need to look natural.
- Consider adding a fire pit on one of the terraces.
- Creating possibility of a concessions stand.
  - Housing for rentals: kayaks, paddle boats, paddle boards
- Provide infographics/interpretive signage at front and viewpoints.
  - Foster possibility of outdoor classroom
- Consider boat launch, parking for trailers, ramp.
  - Accessible "T" dock.
- Pavilion design needs to be unique, personalized, and natural; not just a large covering.
- Vehicle bridge over the outfall not needed, only a footbridge in the NW comer.
- The Hwy 138 log dump should be removed, as it is an eyesore and potentially dangerous.
- Need for small gathering areas, with shade: either tables with umbrellas or shade overhangs.
- Play areas designed for a range of ages and abilities, using natural materials. Play areas should not necessarily be limited to a "play area," but rather around the property (e.g., a strategically placed log to practice balance along the trail).
  - Consider concrete table tennis or chess tables
- SE corner should allow flexible uses to enable FOFP to offer temporary programming.

Parking and Circulation

- Develop parking along the Hwy 138 access, to help separate user groups, with sufficient distance and separation from the NE comer inflow. Fishing/boating/ADA access could be accomplished here. A restroom/vault toilet is also likely needed.
- Pedestrian-only access from the intersection at Church and Westlake, to allow safer access from the adjoining neighborhood.

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City of Sutherlin
Ford's Pond Community Park Master Plan
Public Survey of Park Program Options
Summary of Survey Results

BACKGROUND

The public survey was created and managed using Qualtrics online survey software. It was released mid-May and remained open for 3 months. Links to the questionnaire were posted to the City of Sutherlin's website, Friends of Ford's Pond Facebook page, and was distributed locally via QR code postings in public places. Survey questions were directed at identifying preferences for park features and improvements.

A total of 365 surveys were completed, with 357 being completed in their entirety (some questions were optional). Questions and responses are provided in the following section.

RESULTS

1. Please select the option that best describes your place of residence:

Of 365 responses, 208 (57%) respondents live in Sutherlin city limits. Respondents who live within 1-2 miles of Sutherlin city limits comprised 46 (13%) responses. The remaining respondents (111, or 30%) live elsewhere.

2. How long have you lived at your location?

Of 365 responses, 208 (57%) respondents live in Sutherlin city limits. Respondents who live within 1-2 miles of Sutherlin city limits comprised 46 (13%) responses. The remaining respondents (111, or 30%) live elsewhere. While a majority of respondents live within city limits, the 30% that live elsewhere are a testament to the site's role as a regional asset in terms of outdoor recreation and wildlife viewing. Planning for and accommodating a broader spectrum of visitors is therefore imperative to the site's master plan.

3. Please select your age group:

Of 365 responses, 23% of respondents, the largest majority, are 65 to 84 years old. The second largest demographic are respondents ages 35 to 44, at 21%. Overall, survey

respondents collectively were usually 35 years or older. Younger respondents ages 10 to 25 constituted 9% of responses. These numbers generally represent the populations who have historically used the site.

---

4. Including yourself, how many people live in your household?

Of 365 respondents, 151 (41%) respondents live in a two-person household. 181 respondents (50%) live in a household with three or more people. The additional 9% of respondents either lived alone, or preferred not to answer.

---

5. How many children live in your household?

Of 365 respondents, 196 people (54%) report no children in their household, whereas 167 people (46%) report at least one child or more in their household. While those without children are the majority of respondents, the gap between those with and those without is under 10%, meaning a diverse range of user groups and interests are represented in the survey without a distinct skew in vision for the park.

---

6. Approximately how many times in the past year have you visited Ford's Pond?

Of 365 respondents, 180 people (49%) report having visited the site a few times (10 or less), whereas 31% of respondents reported having never visited Ford's Pond. The other 19% of respondents visit Ford's Pond anywhere from daily to monthly. Results from this question demonstrate that there is a large contingency of potential park visitors who have visited the site little, or not at all, but may be interested in visiting the site if more amenities were provided. While the input of frequent visitors who know the site best is crucial to reimagining the site, considering the needs and vision of this untapped group of visitors is also valuable to the site master plan.

---

7. Please select the top three activities the City should consider at the park:

Respondents were given eight options: maintaining natural character, passive recreation (paths, trails, wildlife observation, dog walking, etc.), habitat enhancement (fish & wildlife), active recreation (open lawn areas, children's play areas, etc.), water recreation (non-motorized boating, fishing, etc.), public gathering (picnics, events, etc.), other, and none of the above.

Ford's Pond Community Park Master Plan
Public Survey of Park Program Options
Summary of Survey Results

81% of respondents listed **passive recreation** in their top three choices. 46% of respondents listed **habitat enhancement** in their top three, and 39% listed **public gathering** in their top three. The next highest-ranking activities include water recreation (39%), active recreation (38%), and maintaining natural character (31%). For those who selected "other" in their top three (3%), their responses are as follows:

Other:
bird habitat including song birds
motorized sports park
Parking
All that is possible
All the above
sewer water- NOT SAFE
Birding
This is not a "natural" body of water, yet over the past 60 yrs. it has become arguablely the most "Wild...Natural"; site within the City's urban growth boundary. Now it is, ironically, a nearly sacred spot for old and young residents to come and quietly be at peace with simply observing the life of the Pond with little fanfare and disturbance. It's a small body of water in proximity with a growing urban area, turning it into a "Developer's Dream" or some "fun"; venue for outdoor community concerts or mass picnicking would be disasterous ...let Cooper
Gravel walkways, safer to walk around the pond, the pot holes are dangerous and not seeing snakes until you're standing on them is not fun.

---

8. Please rate the importance of each potential park feature:

Respondents were given twelve options: vehicle parking, restrooms, amenities (tables, benches), biking trails, boating access, nature trails, fishing access, walking/hiking trails, children's play areas, bike parking, running trails, and park structures (pavilion, etc.).

The top "**very important**" park features are **restrooms** (195 respondents), **walking/hiking trails** (170 respondents), and **vehicle parking** (162 respondents). The "important" park features are vehicle parking (159 respondents), walking/hiking trails (155 respondents), and nature trails (152 respondents). The majority of respondents are neutral to running trails, bike parking, boating access, and biking trails.

---

9. What mode of transportation would you typically use to get to Ford's Pond Community Park?

Of 357 responses, 291 (82%) respondents would drive to Ford's Pond, 53 would walk (15%), and 12 (3%) would bike. The remaining respondents (1) chose other. This data further informs the recognized need for formalized vehicle parking.

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10. Are there other features you would like to see at the park? If so, please list your ideas in the space below:

Over 110 respondents provided ideas for the park. A summary of the most commonly used words in responses is illustrated in the graphic below. Exact responses are listed thereafter.

Wildlife viewing shelters

wildlife information, trail guides/markers with mileage

Whatever you do, you should address your priorities to families with younger children. There are plenty of accessible natural habitat locations near by. Play areas, swimming areas are what area needs. Let Cooper Creek attract fishermen and boaters.

Wetland Area

Water park

Wading, beach / launch area for non-motorized water craft, fishing platform

Trails, benches for resting at viewpoints, maintenance of natural habitat for wildlife and birds

This seems to be good habitat for some non-native species such as pheasants and migratory species If vegetation management for that goal were possible.

swimming most towns have a pool...

Something explaining the history of the pond, what it almost was, how deep it is, etc.

Some trash containers and something to keep people from destroying the area

Some sort of water play area or public indoor pool

Some differentiation of aquatic habitat, such as a diked area where some water level could be controlled to create shallow water or mud during shorebird migration.

Signs-educational, informative, directional (1/4 mile markers, length of trail), bike rack, a place for yoga.

Shady spots to rest.

Ford's Pond Community Park Master Plan
Public Survey of Park Program Options
Summary of Survey Results

Shaded seating areas,

Separate paths for walking and biking

Sculpture, possibly functioning as playground equipment, possibly related to the design of a pavilion.

Sandy beach for swimming

restore native plant communities

Rest areas up on the oak hillside

Preservation and wildlife enhancement.

Please, if possible, make sure there are shaded spots to rest and get out of sun

plant fish

Place for high quality food, beer, and wine in a relaxed outdoor atmosphere.

picnic areas and paths to bike or walk on

Photography blinds

Parking, restroom, viewing benches

Parking for fishing

Park Benches along path, lighting, playground

paddle boats

Paddle boarding!!! :)

non motorized water vehicle rentals (kayak and paddle boards)

Non concrete surface to walk on. Markers for distance and anything that encourages walking, movement, exercise and allows for rest as needed.
No fish stocking. Every reservoir has stocked fish, but fish enrich water with nutrients and cause more algae. I will visit a birding place with clean water, not yet another fishing hole for people who want free fish to eat.

No boats other than pontoon boats, kayaks, canoes, etc.

Nice walking path around pond (year round-stone, bark, etc.)? Covered benches with good views.

Nice 4-6 foot wide walking path useable year round

Never been there to give any suggestions

nesting boxes for birds and keeping the property as a natural habitat as possible

Native plant restoration

mostly go for bird watching. Would hate for any development to destroy that.

more nesting areas for osprey and more; can we have beaver too, instead of the nutria?

More garbage cans

Memorials for service persons.

Make the path more walkable.

Mabe a coverd shed with info of birds with googles! :)

live ACOUSTIC music--but not loud and not rock. Positive, peaceful folk music that befits the natural and beautiful setting of the pond area.

kid friendly trails and nature learning stations, exercise spots along a path

Keep the park maintained and updated unlike the rest of the city that looks run down.

Keep it as natural as possible, with noxious weed control by weeding or mowing, not spraying poisons.

Kayak access

It would be nice to have a large platform constructed out in the middle and maybe add a few benches to it. Kayakers/boaters could dock to it and fish, picnic, or swim from it. It would also be nice to have docks added for people to exercise/jump/train their water dogs from. Pet stations would be great too (garbage cans with poopy bags).
It would be great to have a good restaurant and a hotel to bring in tourists too. Somewhere that could be a destination place to stay

Is the pond good for swimming? Then a designated beach/swimming area.

Interpretive signs- about birds and plants and history of pond

interpretive signs regarding plants and history of Ford's Pond, shelter

Interpretive signage

increase native plants and varies habitat

In keeping with Oregon's practice of public space enhancements, include some interesting sculptures (perhaps a sculpture garden, sculptures along paths, large sculpture at entrance or at pavilion, etc.) that would enhance the park's attractiveness to potential visitors. (Think Storm King Sculpture Park in NY!)

Identification charts for common birds and fish.

I would use the park primarily for birding.

I would like to see natural plantings while taking advantage of seasonal plant interest, bird/wildlife enhancement.

I would like to see a wheelchair access path to fishing areas

I would like to be able to park a bit closer. It is a pain to carry our kayaks and canoe back and forth from the water
I would like the childrens play structures to be natural ala http://www.play-scapes.com/play-design/natural-playgrounds/westmoreland-nature-play-area-portland-oregon-2014/

I think there should be outdoor mini golf, bumper cars, indoor wave pool and toddler activities as well.

I think proper parking and a restroom alone would be a significant improvement.

Ford's Pond Community Park Master Plan
Public Survey of Park Program Options
Summary of Survey Results

Handicap accessible/fishing

Fishing accessibility

Fish cleaning area, shade area's, Drinking water, paddle boat rentals

Fireworks, concerts, movies

Family play features.

Encourage nature habitat , ie: bird nest boxes, and walking paths to encourage bird watching. Possibly introduce river otter/ and/or beaver habitat areas that could be used by the schools as a learning tool. Encourage pond turtles, waterfowl and common shore bird to nest and visit the area. Restrict boating to non motorized. This pond is too small for motor boats.

Electrical outlets, wi-fi, water fountains

educational signage re natural features, flora, fauna

Eateries onsite (kiosks), outside hardscape event space,

Easily Accessible. ample parking

Drinking fountains would be nice, but keep it natural as possible.

Dog walking.

Dog park

Dog bags so others pick up after their dogs

Disc golf course

Disc golf

Disabled considered in construction

Dirt bike terrain course

Development and recreation facilities should be concentrated at the other end of the pond.

Designated area for dogs to swim.

Definitely dog waste bag posts. It has been very helpful in other areas to minimize waste. For Sanitary purposes with young kids I feel like this is important.

Cross Country meets, boating competitions paddle, Archery Shoots, running events

camping area

boat ramp, dock, roped off swim area, bathrooms

Boat ramp no motor

Boat ramp

boat races,drag strip or a 1/4 mile dirt oval for auto races

Ford's Pond Community Park Master Plan
Public Survey of Park Program Options
Summary of Survey Results

Boat launch

Bird watching blind

bird identification and information signs

Bird habitat ought to be maintained and supported. I first visited it on an Audubon Society outing.

Bird blinds

bird and photography blinds; information signs about wildlife and plants

Benches to sit and relax, covered if budgets allow

Areas to bird watch, areas to fish

An improved hiking / running trail.

ADA fishing dock.

Accessibility features! (For wheelchair users and other persons with disabilities). Playground equipment, benches to rest during walks, and occasional hand or guard rails to use for support. Smooth pavement for access to most areas.

access to fishing

a walking bridge, benches, observation platforms

A visitors center with viewing guides and pamphlets that tell you about Douglas County outdoor recreation.

a small fenced play area near the picnic tables for kids

A nice swimming area without goose poop, grassy area where kids can play and picnic with playstructure nearby

A kiosk detailing the birds that use the pond area

A few benches and puppy waste stations

A dock/ pier for handicapped fishermen & kayak/canoe/float-tube access (2) Educational bulletin board: (a.)honoring Kenneth Ford (b.) showing the varied lifeforms [flora & fauna] on site (c) "LifeCycle" of the Pond interactive activities contained under a Pavillon (??)

A dock for water activities

Ford's Pond Community Park Master Plan
Public Survey of Park Program Options
Summary of Survey Results

10. Would you like to describe your vision for the park? If so, please comment in the space below:

Over 120 respondents provided a vision for the park. A summary of the most commonly used words in responses is illustrated in the graphic below. Exact responses are listed thereafter.

I love nature as it is. We walk a lot as a family and love Ford's pond for little walking/hiking/exploring adventures. I think keeping it as close to natural as possible is best. I know my husband and kids would love to be able to fish and even use a boat there as part of an outing. We're already getting a new play structure at the park in town so I dont see how that would be necessary. Maybe just some scattered picnic tables... Some made trails/paths. Just a peaceful place to go!

A beautiful nature/park setting that provides walking paths, with viewing areas. Plant selections would be native in nature, but selected to provide seasonal interest.

I would love Ford's pond to be an area families can enjoy nature and fishing, without having to worry about paying to get in. Too many low income children miss out on the joy of fishing! Nature should be free to all.

For years Ford's pond has been a great birding place. To maintain this I would hesitate to add too many activities going on, yes some, but....A rest room, good hiking trails, maybe tables for picnicking.

A small parking lot that opens up into a small grass area that has a couple picnic tables and a restroom. Fishing access could also be in that area or near it. A dock to fish off of or for families to view the pond and maybe a sign that explains the surrounding wildlife and/or the history of Sutherlin and/or of the pond. For trails, it would be nice to have a longer dirt trail that goes around the pond for hiking and running. Trees and common plants like Rhododendrons on either side of the trail. Possibly a shorter trail available? I think the most important thing I would love to see is keeping it natural and beautiful. Enhancing what's already there to cut back on costs and to provide a quiet area for city dwellers to enjoy.

Easy access to fishing for people with disabilities would be much appreciated!
I would like to see a ADA, multi use trail circling the lake with overview points or /decks for wildlife viewing, in addition several fishing areas (access) located at different locations throughout the trail system.
Our vision is that families will be able to enjoy the area, individuals can safely spend time walking or enjoying the view, and that it will become a wonderful gathering place for small events, and specialized groups to use here in Sutherlin- a place for the community.
A place for our community to enjoy nature
Big beautiful trees.
Nature walks, public gathering.
Fishing and recreation for kids.
A place to take your family to have a good time.
Lots of trees and flowers
A park where kids could play, access wifi, use restrooms, fish and picnic
A place where people can go to be with family and friends
Please have a physical address listed for your park so people can plug it into their GPS and find the park. Have address listed online website when you talk about park.
Cleaning station, seats around lake, fresh water
Space that is available to everyone that is well maintained, long term
public park with amenities
An area with foam padding where a dozen or so water sprinklers or open fountains can spray water up and children can run in and play in or a public indoor pool with slides for children and families to use
Beauty, nature, habitat, recreation, fun outdoor games, tennis, quiet and calm serene areas
NATURALISTIC... as few plastic objects as possible. Walk, bike, play. Folks can go to Cooper Creek to run loud boats and fish.
Simple open space with hard pack trails
Limit boats to fishing type only. Plenty of picnic tables with holes in center to put in your own umbrella. Several fresh water outlets. More trees
a peaceful, walking area for all, habitat for wildlife, fishing (non motorized boating) and an enjoyable place for all
Fishing is the main thing that people do, so anything to make the fishing better is good.
A peaceful but active place for family and friends to gather.
A wonderful family park, picnicking, bikes, water fun.

Ford's Pond Community Park Master Plan
Public Survey of Park Program Options
Summary of Survey Results

I envision the pond with a nice dirt path (nothing paved ideally) around the perimeter for walking/running. I would prefer no motorized vehicles or bikes in the park and ideally no boats on the water so birds and other wildlife are not disturbed. Ideally the vegetation is managed to maintain the best habitat possible for native wildlife species.
Quiet, beautiful place for walking, kayaking, fishing, enjoying nature. Would like to have easy access to water - but no motorized vehicles. A place to be proud of! Not too crowded! It'd be great to get rid of a lot of the invasive plants and tick-friendly spaces!
Keep some natural setting. Also there needs to be trees. I say no boats or water skiing. bank fishing ok. pavilion. for larger groups.
It needs to be used by all ages equally. So this means there must be items used by all ages: seating, walking, etc.
the park should be a place to attract and support wildlife and allow people to commune with and observe nature. Swimming, boating. picnicking and biking should be concentrated on the opposite side of the pond from the wildlife corridor. Walking trails and wildlife observation areas could be located strategically within the corridor. Interpretive signs should be located at stations around the lake informing the public about fish and wildlife issues.
I would love if there was a paved path that went all the way around the pond. My wife and I would probably be over there daily walking or riding bikes. Also would be great if there was a park and playground for our little one to play at.
It should be family oriented.
A family park, community supported, lighting for safety reasons
Bank/non motorized boat fishing
We fished from our tailgate and sat in lawn chairs when I was a kid. Keep it simple.
I would love to see the park in as close to a natural state as possible. People strolling along hiking paths with their dogs enjoying nature and the wildlife would be preferable. We have a very large population of Dog owners, having a place for people to take them other than the HOT pavement to walk on would be wonderful. Add a few puppy waste stations around the park along with a few benches for people to rest at. Bikes tend to get dangerous if you have people walking through with their dogs. In my experience bikers tend to go too fast and not watch for people around them, of course not all. A bike speed limit would be nice but I don't know how you would enforce that. I wouldn't mind seeing people sitting in the grass on blankets having picnics but to add tables would add more of a chance for damage and graffiti, as well as… well, unsavory people loitering. Adding these amenities sounds wonderful, but with the park out of town, are we ready for an increase in Transient population? Or Drug deals as this is in a more secluded location, how would we police that? We will already have an amazing park in down town Sutherlin for Kids to play at. we don't really need two and having a large pond next to kids play structures might be more dangerous than we want for our youth. Let's fence in the one we will have soon and the parents in our community would feel more safe letting their kids play. Having pavilions for events will take away from the beauty and peacefulness that people will be there for as they wander around the park. Events in the park will also scare away the wildlife that we (I hope) are trying to preserve. If we keep the fishing you will have to deal with the broken equipment everywhere and the balls of used line that's left all around for the wildlife to get caught in, this will do more harm than good for our wildlife.

Adding bathrooms sounds like a nice thing but they will be destroyed and not kept up, as you see in many parks around the area. I love to see people enjoy themselves in a family friendly environment, I just would like to see people be able to use it without creating another place in our community that people will take advantage of it in a negative way. Sometimes simple is a better option for our community.
NO Camping (squatters/homeless) allowed. Patrolled regularly by Law Enforcement.
Clean, safe place to walk, run, fish.
Family fun.
Family friendly and safe
A place for families to come and enjoy various activities. Fishing, sand volleyball, playing on slides and swings, maybe going on a nature walk. Also a place to eat a picnic with cover, or a place to have birthday parties.
Natural play and picnic areas
Place for families to spend an hour or a day.
See above, somewhere families can spend am afternoon. Also, paved trails for biking would be AMAZING. There are not any safe paved bike paths for kids just learning how to ride
Such a beautiful area, just really need to make it more accessible to the public.
I love fishing at fords pond because it's very basic. There's not benches and pavilions and boats. I wish there was a better trail around the pond and more trash cans around the pond. Over all it is almost perfect. I would really like to see the grass cut back just a little bit more maybe twice a year instead of only in June. But let the nature be for the most part. No boats and no structures. The benches allow people to bring a bunch of food and then the geese swarm the common spots and make a mess. (Cooper creek)
Mainly peace and quiet and allowance for wildlife. Elevated areas over spots that become muddy so can also be used in winter to walk, jog around. Trail wide enough to allow passing and animals on leash safely.
Eradicate weeds and plan some trees
A place for kids to have fun and do activities as we don't have enough places around here that are geared towards children.
I love the natural beauty of Ford's pond and would like to see it preserved but still make the area more user friendly and accessible for people to enjoy.
We tried to check it out but there was no signage and we couldn't find anywhere to park. I have no idea how to access this place.
We live right next to the park. The kids love going over there to ride their bikes. The only other place in Sutherlin is at the other end of the town. I think it would be nice to have more things to do here instead of always going to roseburg
The more things you include the more it will cost. Isn't treated sewer water soon going to be put into the pond? So we don't think it would be good for fishing or boating. Bikes and walking don't really mix unless the trail is wide enough. I think Sutherlin could really use a city pool for all ages. Myrtle Creek has a lovely city pool. We need activities for children, activities that don't

Ford's Pond Community Park Master Plan
Public Survey of Park Program Options
Summary of Survey Results

involve technology.
Would like to see a place for young family's to enjoy there time together fishing place for the kids to play walking trails picnic areas
I love going and walking around the water so I'm looking for a path that I'm able to walk/run on and enjoy the water and nature.
It would be nice to be able to rent a pavilion for events
What I see is a place that attracts families to Sutherlin. I think making the nature to center but enhancing it with other family friendly activities. I see a pavilion, grass areas/picnic tables for lunch after a walk and a play ground for all ages. Capitalize on the outdoor experience... fishing, walking,biking, seeing nature, blackberry picking (our favorite), picnics, playing, gatherings, grass area for games and maybe even community activities.
Would love to see open grass, picnic tables, paved walking/bike trails, and possibly a very open child's play area- nothing too condensed or closed off.
A place for families to gather and have activities to do.
An area for families to gather, play, fish and have a great time. A place for children to run and play and parents to relax.
A place to gather for our community.
Welcoming
Place to hike (with dogs), picnic, enjoy nature. Maybe have some events with music and wine.
Fords Pond is near my home and I go bass fishing daily. I would hate for it to be taken over by playgrounds and large picnic areas near the water.
Fishing reserve
Please preserve as much of the natural beauty as possible.
I think it should be a place where all citizens can enjoy it. I know some will turn their nose up at the motorsport idea but it could produce income to help maintain the park. I believe more people would come and enjoy it.
I think it would be useful to at least consider if it is possible to construct a natural water-cooling and purifying area within the pond complex that would create water quality suitable enough to allow discharge to Calapooya Creek during any and all months of the year. This would have the following benefits: (1) increased habitat diversity at Ford's Pond for fish and wildlife, (2) flexibility to manage water levels at Ford's Pond, and (3) water contribution to a water-starved Calapooya Creek in summer (which may help with fish and other aquatic populations there). Construction of this habitat would require obtaining grant money, but with multiple benefits to wildlife, water, and the community, it would be a good candidate for funding. The feasibility of such a thing should be done at least "on the back of an envelope" to see if a more detailed analysis or plan should be pursued.
my sister lives several blocks from the pond. we walk around the pond as often as we can. we would like the area to be as natural and healthy as possible, good for wild life with nature trails for humans to visit. i hope the pond could be more natural looking; it has a very square (man-made) look to it. thanks for asking.

A bird watching area.
A safe place to go to run and enjoy the outdoors as a family. Also, this park would be a great place to host cross country meets as long as there is enough parking for buses. This park would also benefit people who visit from out of town as a place they can go and exercise.
I would like to see a safe place where families and the community can go and enjoy nature while enjoying each other and have a good time.
I would love to see the wildlife and waterfowl habitat enhanced as well as family entertainment options. Hiking ping pong etc.
A safe place for families to get out and enjoy Sutherlin
Somewhere to take dogs for a walk, the grandkids fishing, picnic. Add enhancement to the neighborhood we live in. A big reason we bought nearby.
It would be really nice to see the natural landscape preserved and the area to be pet friendly (year round).
Not a park. A natural habitat area being managed for existing ecosystems. Maybe emphasize it's value from an educational standpoint more than recreational.
safe walking and bike trails
A nice place to relax, fish, enjoy the water without a noise problem for the homeowners close the the area.
public aware huge signage treated SEWER WATER park
I believe having a small outdoor recreational park with mini golf, bumper cars, go car racing, indoor wave pool and indoor toddler activities would bring money to our community and jobs to our high school students, we need something that will keep children off the streets but give them something fun like this to do. Like the fun center down in grants pass and the wave pool in Eugene. Look at how much money they are bringing to the community, we are in a great location especially off I-5 and it being in a great location from people coming from/to the coast. Our community needs this!!
Nice hiking and walking area to view wildlife and nature.
The best to do destination fishing, hiking, birding, and family recreation site in Douglas County. Only 1 mile off I-5.
Welcoming to those who enjoy a low impact style of life. Encouraging the young family and the senior citizens who aren't able to partake in an active, high energy lifestyle. Dogs on leash, no skatepark, waterskiing or other motorized watercraft.
I would like to see the park in as much of a natural state as possible. Restoration completed to remove weeds, plant native plant species, have trails around the park that minimally disturbs wildlife. A wildlife blind/observing platform or two would be desired as well. Dogs not allowed or at a minimum, required to be on leash. No bikes or horses allowed. This is a wonderful resource for the community! I would like to see it treated with care.
Most important to keep it a good site for birding.
The birding is incredible at this site and this is for which the park should be maintained. This habitat is a jewel for this passive recreation and for which the park is well known and used. Minimual improvements for safe parking, a restroom and a few benches for viewing is all that

Ford's Pond Community Park Master Plan
Public Survey of Park Program Options
Summary of Survey Results

is needed
Enhance fish and wildlife, wood duck nesting, non motorized boat use. Hiking trails.
I prefer it to be accessible, but left as natural as possible for bird and other wildlife.
We love the bald eagles. don't want them disturbed!! This is where we came from, this small lake was a pleasure to have in the community, not overdone but enough to enjoy- lovely place to meet neighbors, get exercise and see wildlife. http://www.midlomines.org/tour.html
Would like it to continue to be a refuge for birds. Very important for them to continue using it as they migrate north and south. Therefore, I don't think boating would be a good idea.
A natural place where people and animals can safely co-exist. Something that is easily patrolled by law enforcement to keep out the illegal campers and drug users
(1) Blackberry Festival Kayak Race (2) a 1 hour Blackberry Bluegill Derby w/ (5?)tandem kayak teams paying entry fees that go to a Charity or to a picnic table & bench building fund. (3) A Blackberry Birders Derby: timed 90 min count w/3 [three] teams, ea. w/ two persons & a judge (!). Each A.M.of the festival NEW teams would go out. HighCount team is awarded on last day of Festival. Teams Pay for entry into Derby. (4) Blackberry Butterfly Derby...perhaps a similar [mid-day/P.M.] format as Blackberry Birders'Derby.
My husband and i would like to have a quiet natural, pond setting like this with trails and parking and picnic facilities. A place to walk, hike, and even sit quietly in contemplation, prayer.
A nature trail park and fishing/hunting area.
Quiet natural area
A place where people of all ages and abilities could come to enjoy nature and get some exercise in a peaceful setting.
A natural space for birdwatching and walking and picnicking and feeling the serenity of the place.
Minimal Hiking/nature trails- Bird watching-fishing opportunities,
Lot's of natural areas with passive park. A few well-designed picnic structures.
A place of natural beauty, with habitat enhancement for birds and other wildlife. Trails for people to be able to interact with nature, not overcome it. Bird blinds for viewing.
Make the park a birding destination. Considering how close and accessible the park is to I-5 and the great variety of birds, it has a huge potential and positive impact on our local economy.
Mainly wildlife habitat...
Stop with family while traveling I5.
low level maintenance, trails, bathroom, possible blind for wildlife viewing, toilet would be nice, don't sterilize this natural area with excessive mowing and herbicide spraying except in aiding nonnative species control
Keep it as wild as possible. Dogs on leashes only. No motorized vehicles or boats, bicycle races or "dock dog" trials; these activities can be done elsewhere. Keep "active recreation" in one limited area. Certain invasive plants, such as knapweed, should be removed, but plants like blackberry do provide shelter and food for wildlife; use of herbicides should be kept to a

minimum.

Every reservoir has stocked fish, but fish enrich water with nutrients and cause more algae. I will visit a birding place with clean water, not yet another fishing hole for people who want free fish to eat.

Public uses that stress relaxing activities as opposed to speedy, potentially harmful fast bikes

Place to walk, view migratory birds, walk with leashed dogs, have signage for native plants

open space no mororized vehicles or boats

My main vision for the park is the enjoyment of the outdoors to include enjoying the views, birds, plants, or other wildlife via sitting on a bench, or walking/hiking/running trails. I worry biking has the potential to interfere with the enjoyment of those on foot but maybe okay. Even though I enjoy fishing, I have mixed feelings about it being a fishing spot. Urban trout stocked ponds become littered with garbage, fishing line, and destruction to the habitat. Maybe fishing for bass or crappie in specific zones, no bait (just lures and flies) Should be signs for fines for littering and fishing out of specific zones.. Canoes or kayaks might be okay, I have concern that too much traffic on the pond might be detrimental for waterfowl. A pavillion with picnic tables, small playground, and restrooms would be okay in the already suggested s.e. area, but that being the only developed area other than some benches placed around the pond. Habitat restoration for some mudflats and wetlands would be beneficial for shorebirds and wetland species. Birding is good for tourism. I would love a trail to go up into the oak habitat in the west, northwestern section of the park. I would also love a trail that would start in the Pavillion/parking lot area and go down through the treed area between the slew and the southern border heading west that would end with a view looking west toward the larger more westernly section of the slew that is private land but is used by alot of waterfowl. This could be a single trail down the middle of the trees (for viewing birds in that habitat) or a loop trail that would also encompass along the slew's southern edge.

A safe place off the highway for jogging or walking your dog.

That it be a haven for wildlife/fish first, with human enjoyment kept low-impact. It's a small gem, please don't over-develop it. Thank you for letting a longtime Roseburg conservationist speak about your sweet pond. I proudly display a Friends of Ford Pond sticker on my car.

To keep it as natural as possible - while still enabling viewing of the critters.

Marshy area set aside for salmon spawning. Work with school district to create habitat for salmon spawning in nearby watershed.

I would like to see wildlife preservation, especially birds and fish.

A proper parking area; maintained trails for walking, running, etc; a restroom; picnic tables sprinkled throughout the area for general use, or a specific area that is developed for picnicking/play with benches and/or tables and a grassy area for kids.

Maintaining the current sense of nature while making the park somewhat more accessible - boat ramp, parking, slightly improved trails.

A place for people of any age and with any ability to be able to come together and enjoy the local nature and scenery.

Ford's Pond Community Park Master Plan
Public Survey of Park Program Options
Summary of Survey Results

create a loon lake type recreation area but prohibit motorized water craft. and no sand beach or camping either.
Very beautiful.
Keep the natural park setting.
Fishing again
I would like to see an amphitheater at some point for all ages to enjoy, music in the park, concerts, speakers etc.
Green, accessible, quiet. Trails around the pond and hills are critical, reasonable parking too. People have mentioned the lack of facilities for kids birthday parties, and waiting for hours at other parks for their turn to have a birthday gathering--the pavilion would probably see a lot of this sort of use, and could be a source of revenue for park sustainability.
First, a good neighbor: no RV park, no overnights, closed at dusk. Not lit up with streetlights. Protect views of those who live adjacent. No benches like downtown. Make them natural looking and without big letters. And comfortable.
Keep it a nature Park with minimal human impact. Walking trails but no water access.
Quiet walking trails, fishing and non motorized boating
You are going the right way.
I like it as a place to be alone and view birds and the scenery. Having play structures or picnic benches would ruin it for me.
In keeping with the natural atmosphere, structures and paths to blend with the area, and not visually intrusive.
Natural, used frequently by Sutherlin.
A gathering place for the community that is valued and used daily.
Nature trails, running trails, benches, fishing docks. keep it natural, be able to hold different events.

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City of Sutherlin
Ford's Pond Community Park Master Plan

COMMUNITY MEETING #1: MEETING NOTES

May 24, 2017
5:30PM – 7:00PM
Sutherlin Community Center
150 S. Willamette Street

Attendees: Brian Elliott (City of Sutherlin), Seth Vincent (City Council), Tom Boggs (City Council), Beth Houseman (Friends of Ford Pond), Jim Houseman (Friends of Ford Pond), Colin McArthur (Cameron McCarthy), Vivian Schoung (Cameron McCarthy), Kelsey Zlevor (Cameron McCarthy)

INTRODUCTION

- Seth, Jim, and Colin provided background and introduction to Ford's Pond, Friends of Ford's Pond, and the master plan process.

GENERAL DISCUSSION

Opportunities

- Birding location
- Fishing
  - Carp, bass, bluegill, catfish, perch, crappie
- Need for simple access, and parking
- General consensus: like site mostly as-is
- Enhancing trails
- Preserving water quality
- Like the low noise level compared to other Sutherlin parks
- Need for ADA accessibility
  - Hard-pack trails
- Bike trails
- Potential as a public gathering space
- Need restrooms
- Partner with Bench Project for memorial benches
- Potential for events (Dock Trials)
- Emphasize habitat protection, wetland enhancement
- Birding/photography blinds
- Food/vendors
- Playground

Issues

- Invasive species

Ford's Pond Community Park Master Plan
City of Sutherlin **May 27, 2017**
Community Meeting #1 Notes

- Generating revenue
- Non-motorized site access
- Connectivity to the site
- Parking
- Fishing access
- General safe access (across Church Road)
- Improving mud conditions/drainage crucial to year-round access
    - Trail improvements
- Residential compatibility (consider low light, low noise, parking)
- Minimizing environmental impacts to the site during construction
- Preserve trees and riparian areas
- Use native species
- Hillside damage/terraces: consider repairing
- Potential for increased traffic
    - Consider traffic calming measures

Vision ("Ford's Pond is…)

- Great place for birding
- Community gathering place
- Family-friendly
- Quiet
- Tourist attraction/destination
- Incredible asset
- Great fishing venue
- Rich in history
- Place for events
- Known for trails
- Community-supported

BREAK-OUT GROUPS

Active Recreation

- Home to events: Woofstock, end location for Hot Rod Fun Run
- Need year-round access on trail
- Value of trail signage
- Location for cross-country meet
- Kite flying
- Kayaks, canoes
- Offer different trails: hard-pack versus soft
- BMX trails
- Grass lawn space
- Pavilion
- Water electricity
- Need parking strategy
- Playground
- Dog play area
- Dog water stations
- Filtered water station

Ford's Pond Community Park Master Plan
City of Sutherlin **May 27, 2017**
Community Meeting #1 Notes

Passive Recreation

- Emphasize protecting the view shed
- Use benches and seating for strategic views
- Accommodate parking strategically
- Consider impact of lighting options: attract bugs, residential across the street
    - Close at dusk
- Use natural play equipment to preserve aesthetic
- Make walking and hiking trails with multiple length and difficulty options
- Use natural maintenance practices (no pesticides)
- Develop drainage mechanisms to keep trails open year-round
- Use natural trail materials
    - Making mountain biking in its own designated area
- Need places of shelter in winter and heat
- Need system for trash pick-up

Natural Environment

- Keep as wild as possible
    - Emphasis on protecting nesting birds (Migratory Bird Act)
- Promote diversity of native vegetation
- Promote diversity of water depth for habitat
- Create marshland area for water quality and habitat
- Restore oak woodland/savannah
- Consider timing of events to not disturb nesting birds (Federal law; Migratory Bird Act)
- Consider compatibility of uses:
    - Off-trail mountain bikes
    - Off-leash dogs
    - Motorized bikes
- Concentrate active recreation, also easily accessible
- Increasingly wild away from entry
- Constructed wetland at outfall of wastewater (polishing pond)
- Enhance seasonal wetland

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City of Sutherlin
Ford's Pond Community Park Master Plan

COMMUNITY MEETING #2: MEETING NOTES

September 28, 2017
6:00PM – 7:30PM
Sutherlin Community Center
150 S. Willamette Street

Attendees: Brian Elliott (City of Sutherlin), Kristi Gilbert (City of Sutherlin), Vicki Holland (Parks Advisory Committee), Beth Houseman (Friends of Ford Pond), Jim Houseman (Friends of Ford Pond), James Thatcher (Friends of Ford's Pond), Wendi Stinnett (Friends of Ford's Pond), Colin McArthur (Cameron McCarthy), Vivian Schoung (Cameron McCarthy), Kelsey Zlevor (Cameron McCarthy)

INTRODUCTION

- Colin and Kelsey provided background and review of Ford's Pond, survey data, and the master plan process.

GENERAL DISCUSSION

Overall Site Plan

- Pros and cons to allowing motorized boats. Need to allow people to move around the pond, but should not be loud/distracting.
    - ODFW managing fishing licenses.
- Concern over parking: people will try and park (illegally) near any place that is developed as a walkway. For boardwalk on West Lake, consider placing boulders in areas people may try and pull off, or post No-Parking signs.
- Consider endangered and at-risk species, such as the popcorn flower. Implement habitat restoration techniques that improve growing conditions for these species.
- Consider how lighting at the park and along the perimeter can improve public safety.
- Phasing:
    - Phase 1) paths/trail, bathroom, parking
    - Phase 2) Boat launch, north frontage
    - Phase 3) boardwalk, extended trail system (steep slope area)
- Work with the County to update/add speed limit postings on surrounding streets.
- Develop dog policy.
- Include native species management plan.
- Include several stalls per bathroom.
    - Consider a bathroom on the west end.
- Consider exercise stations along trail.
- Interest in phasing cost.
- Pond level fluctuation to be expected, but manageable.

Ford's Pond Community Park Master Plan
City of Sutherlin **October 1, 2017**
Community Meeting #2 Notes

Southeast Park Concept

- Consider whether the bathroom on the middle terrace is ADA accessible from the parking lot.
- Consider adding an amphitheater; could be used by school groups.
- Interest in outdoor fire pit/fireplace.
- Implement view shed parking that allows people to enjoy the pond without having to leave the car (on lunch break, etc.).
- Adjust large pavilion in Concept 3 further south.
- Preference for having shelters closer to the playground equipment.
- Plan for future expansion, as more parking may be needed as site gets busier.
- Consider means of lighting the pavilion for special events (outlets).

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City of Sutherlin
Ford's Pond Community Park Master Plan

FOCUS GROUP MEETING: MEETING NOTES

July 11, 2017
12:00PM – 1:00PM
Sutherlin Community Center
150 S. Willamette Street

Attendees: Alison Manwaring (U.S. Fish and Wildlife Service), Terry Prestiani (Sutherlin School District), Pamela Semas (Sutherlin Area Chamber of Commerce and Visitor Center), Greg Huchko (Oregon Department of Fish and Wildlife), Matt Hunter (Umpqua Valley Audubon Society), Wayne Spicer (Umpqua Valley Fly-Fishers), Jessica Richardson (Umpqua Community College), Shawn (CHI Mercy Health), Brian Elliott (City of Sutherlin), Kristi Gilbert (City of Sutherlin), Jim Houseman (Friends of Ford Pond), Colin McArthur (Cameron McCarthy), Marina Wrensch (Cameron McCarthy), Kelsey Zlevor (Cameron McCarthy)

Notetaker: Kelsey Zlevor

INTRODUCTION

- Group introductions.
- Colin and Jim provided project background and overview.

RECREATIONAL OPPORTUNITIES DISCUSSION

- Discussion of fishing opportunities.
  - Currently need to be a skilled angler to catch anything; site isn't necessarily suitable for beginner fishing.
  - Most catch large-mouth bass.
  - Pond is not stocked.
    - Not eligible for stocking cold-water species.
    - ODFW: improving habitat to enhance resource should be the focus.
    - When last tested by ODFW, pond had typical species composition and densities.
      - ODFW can provide data on this breakdown.
- Consider outdoor education opportunities.
- Cross-country course; potential training facility.
  - Potential for regional use (Yoncalla, Drain, schools without track resources).
- Consider exercise course/stations.
- Natural trails and paths.
- Mercy Blue Zone project: opportunities to engage the public in physical activities.
- Importance of access to points for education/nature viewing or observation.

    - Need water access, seating, shade/shelter, year-round trails.
- Boat access: non-motorized boat designation being sought by FOFP.
    - Consider boat launch, parking for trailers, ramp.
    - Accessible "T" dock.

ENVIRONMENTAL RESTORATION AND ENHANCEMENT OPPORTUNITIES DISCUSSION

- Habitat restoration opportunities: value of aquatic habitat.
    - Consider feasibility of creating a water-cooling wetland. Possible to discharge year-round (not likely).
- Increasing opportunity for other wildlife/plant types.
- Dependent on wastewater fluctuation; need to use as retention pond.
    - Shallow waters promote weed growth.
    - Class A recycled water; NE corner (view point) is location for discharge from treatment plant.
    - Polishing pond to control temperature and nutrient cleansing (N, P); consider impact.
        - Regulatory hurdles.
- Problems with geese on trails/bench (okay, just part of operating a park).
- Consider monarch butterfly habitat and pollinator planting.
    - Milkweed and nectars.
    - Habitat for native bees.
- Planting/seeding for rough popcorn flower.
    - Along Church Road near #16 on Site Analysis, need to determine soil moisture.
- Nest boxes for swallows and bluebirds.
- Augment beaver habitat with willow and preferred food.
    - "Beaver Deceiver": use tube with cages so they can't dam the culvert.
    - #9 & 10 on Site Analysis map: consider the dam; controlling willows to deter nutria and protect integrity of the dam.
- Columbia white-tailed deer: enhance oak savannah; planting and caging oaks.
    - Need to get a handle on hawthorn and non-native species (scotchbroom, knapweed).
- Western pond turtle: provide berm for nesting, basking structures.
    - Unsure how much to prioritize pond turtle as they do not co-inhabit well with the current fish in the pond (which many people want to keep as a priority).
- Pollinator location opportunities: gardens (small, outdoor ed); off the beaten path for those with allergies.

CAPITAL IMPROVEMENT AND REVENUE GENERATION DISCUSSION

- Kayak/boat rentals.
- Local restaurant advertisement on kiosks.
- Sign with map located on site that provides advertisement space.
    - Sponsor display?
- County parking permit? Soon Ford's Pond will be out of the county given the UGB adjustment, but will remain city property, so no county permit.
    - Day-use fees?
    - Generally averse to anything that increases fees for community members.

- Kids hang out there and can't afford, or won't buy, a pass.

NEXT STEPS

- CM to distribute meeting notes and follow up with individuals for additional information as needed.

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Memorandum

To: Planning Team

From: Kelsey Zlevor

Date: August 24, 2017

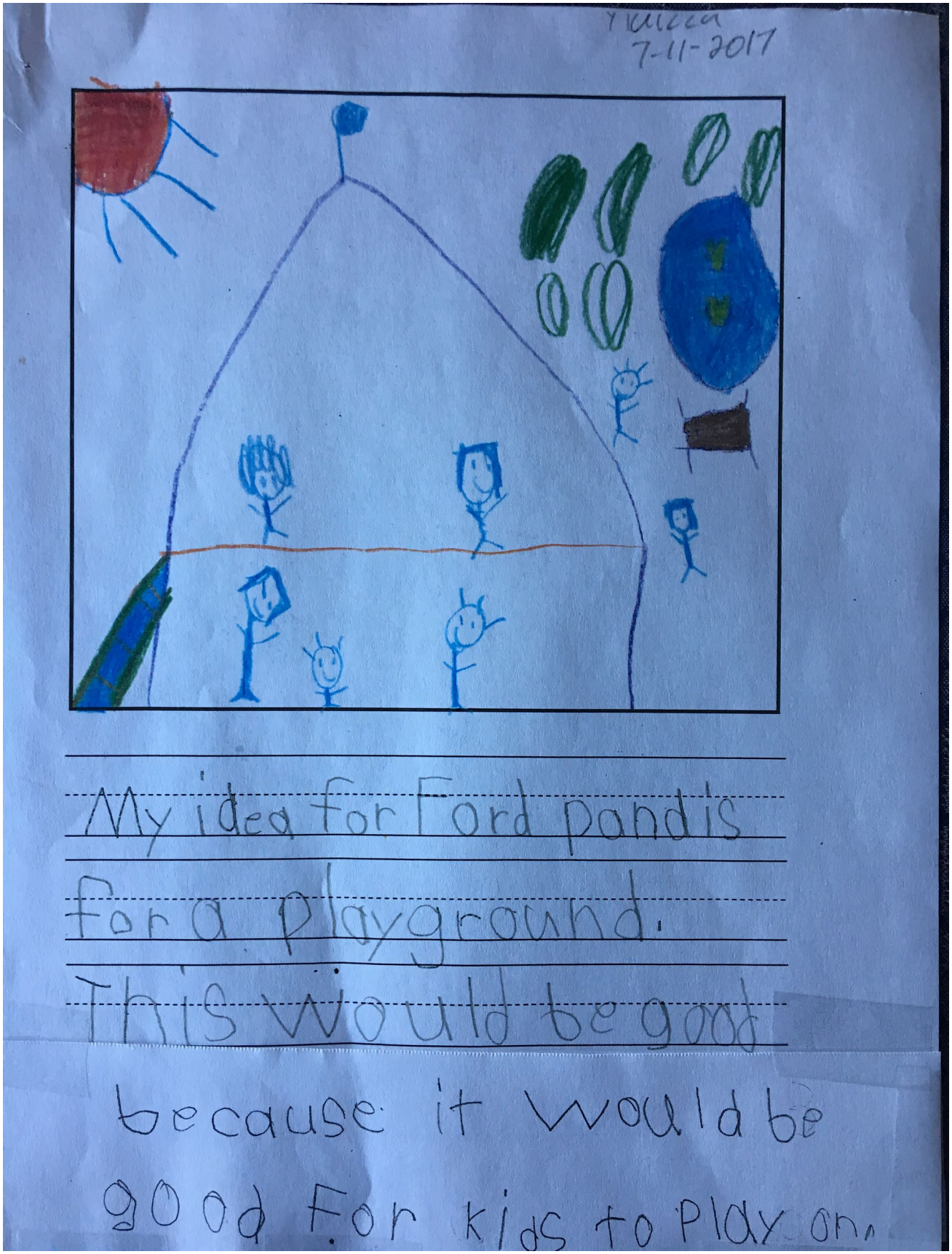
Subject: Ford's Pond Community Park
Blackberry Festival Public Comment Summary

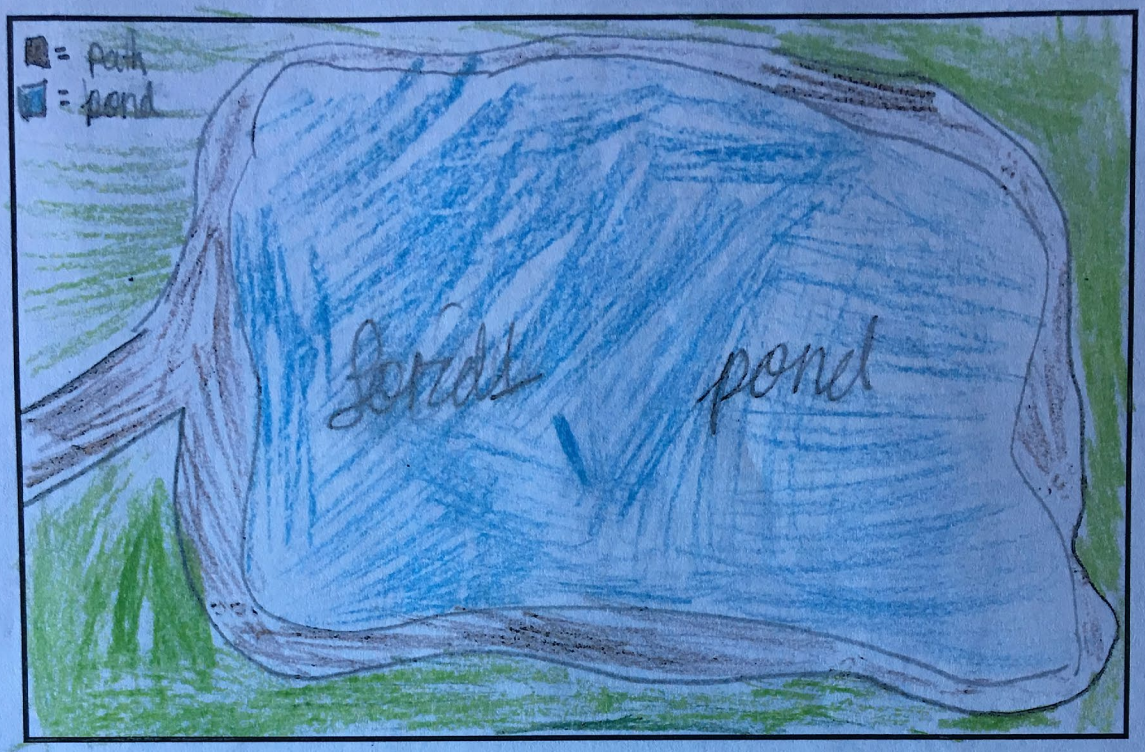
GENERAL PUBLIC COMMENT

- Consider dog walkers and cyclists on the trail around the pond.
- Consider offering a water safety course for kayakers, stand-up paddle boarding, etc.
- Consider safety along the whole route of the trail, especially for the elderly.
- Provide large and small doggie bags.
- Consider mountain bike trail; skate park.
- Implement wayfinding measures, or more directions.
- Consider a park host for additional surveillance.
- Interested in weighing in on what would be put in place for public art installation.
- Add additional bathrooms along the trail.
- Check out Sparks Marina Loop in Nevada as a case study (https://www.alltrails.com/trail/us/nevada/sparks-marina-loop)

PUBLIC COMMENT ON CONCEPTS

- Interest in prioritizing whichever concept option has the most parking (✓✓).
- Post informational boards with development concepts at Church Road entrance.
- Concept 1 is preferred if a food cart component is added (✓✓✓✓✓✓✓).
- Prefer separate pavilions (Concept 1) due to noise/space (✓✓✓✓✓✓✓✓✓✓).
- Revise bathroom proximity to the park (make it visible from the playground) (✓✓✓).
- Consider kitchen amenities in pavilions.
- Consider adding a smaller pavilion away from the playground.
- Add lighting in the park for the elderly—difficult for people with poor eyesight at dusk.
- Consider solar opportunities on rooftops to create net-negative system (pays for itself).
- Overall Tally: Concept 1 (24 votes); Concept 2 (13 votes).


7-11-2017
My idea for Ford pandis
for a playground.
This would be good
because it would be
good for kids to play on.



My idea for Lordt pond is to make a better path. This would be good so they don't get things in there shoes. Also so we can run and walk and ride bikes better. Also this would be better also, so are feet don't get itchiy. So these are some reasons to have a path.

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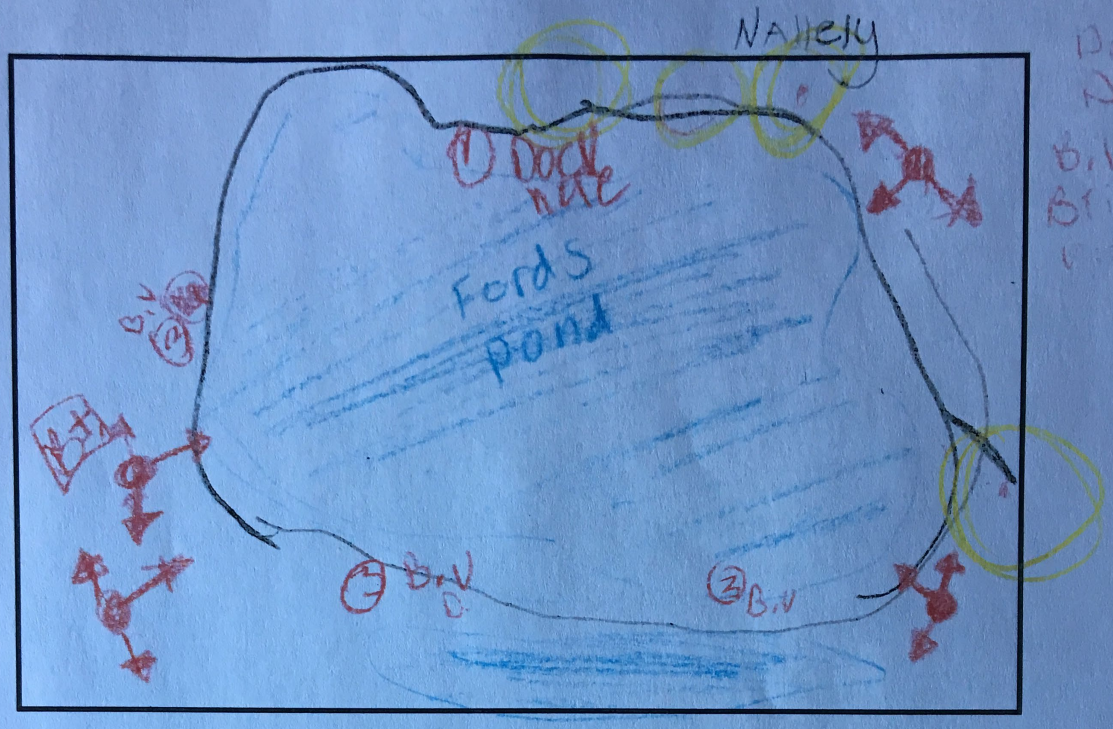

My idea for Ford pond is to make pinic benches around the view points because it would be very nice to have a view of fords pond while enjoying a nice meal. A Blacktop would be a good idea for Birthdays and lots of other things like company pinics.

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A40

My idea for Ford pond is to have a play Ground. This would be good because kids can have fun and play.

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Karia

My idea for Ford
Pond is for a play ground.
this would be good
For kids to Play
on.

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Josselyn
7-11-2017

My idea for Fords Pond is for a covered area with information about all the types of species that lives there. It could be made of wood (so it can look natural) and bionaclers to see birds. Then you just can go in to there if your like animals and learn about them.

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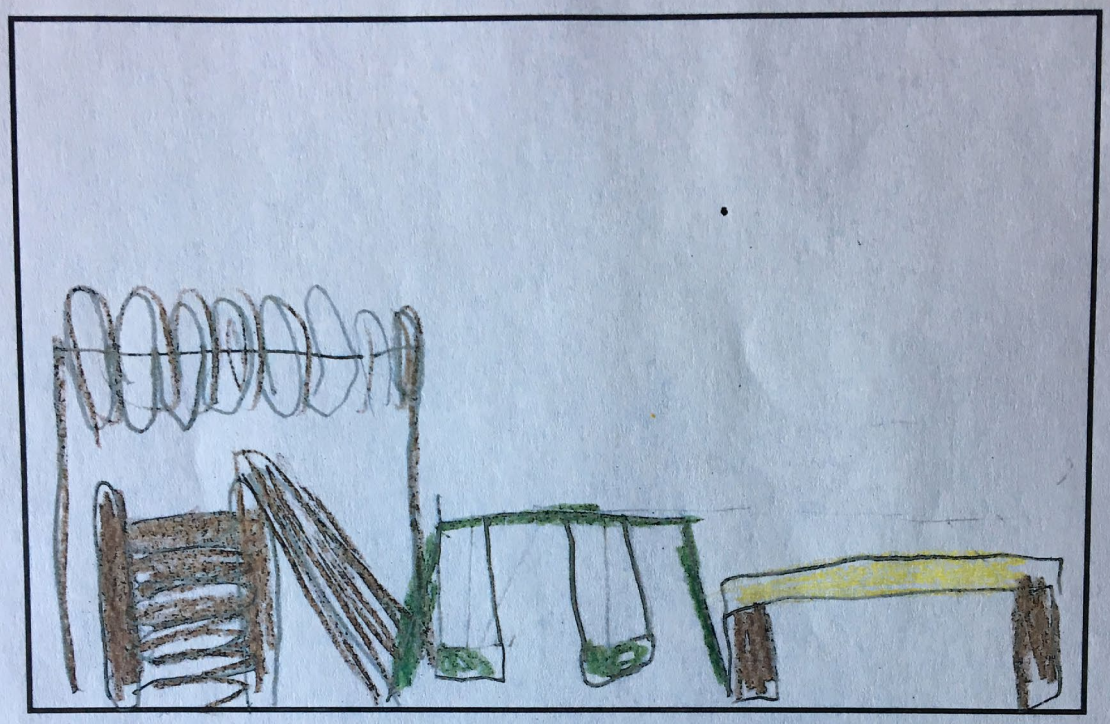
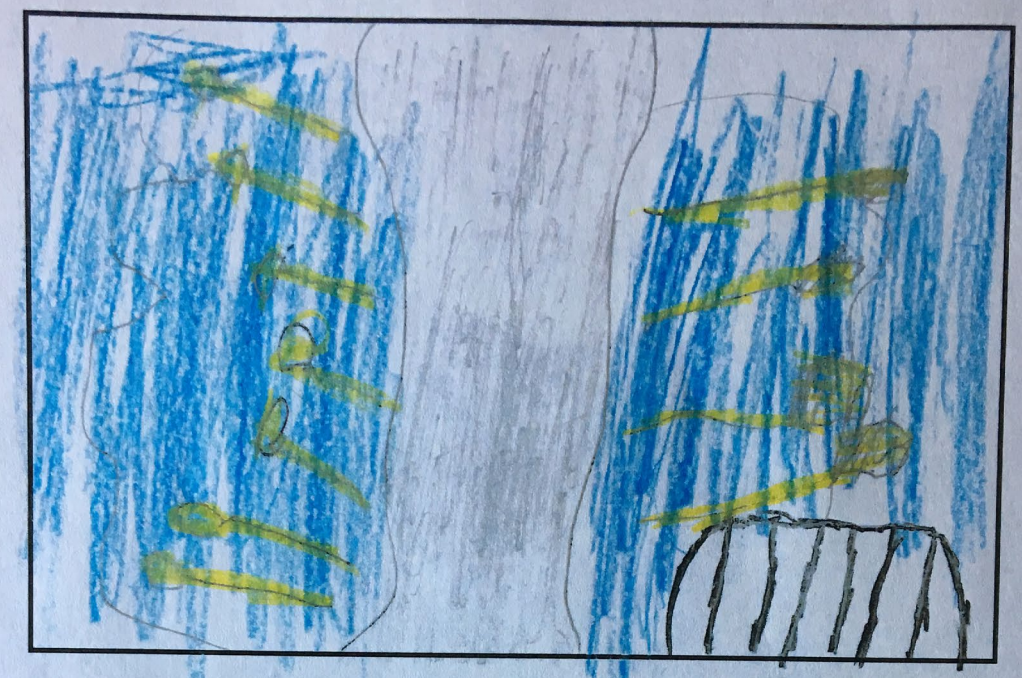
Ramón



MY idea forford pond is to have a playground. This would be good because kids can play and look at the pond. Also to have the playground closic to the picnic table so the parents could see the pond and their kids.

Ricardo
7-11-2017



My idea is to mak a better walk path that dosent get muddy. This would be good because pepole could ride their bikes easily. It would be good to have a bikerack.

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My ideas for Fords Pond is to build a shed where it tells you what kind of animals and plants are there.
This would be good because it would help kids learn about the animals and plants.

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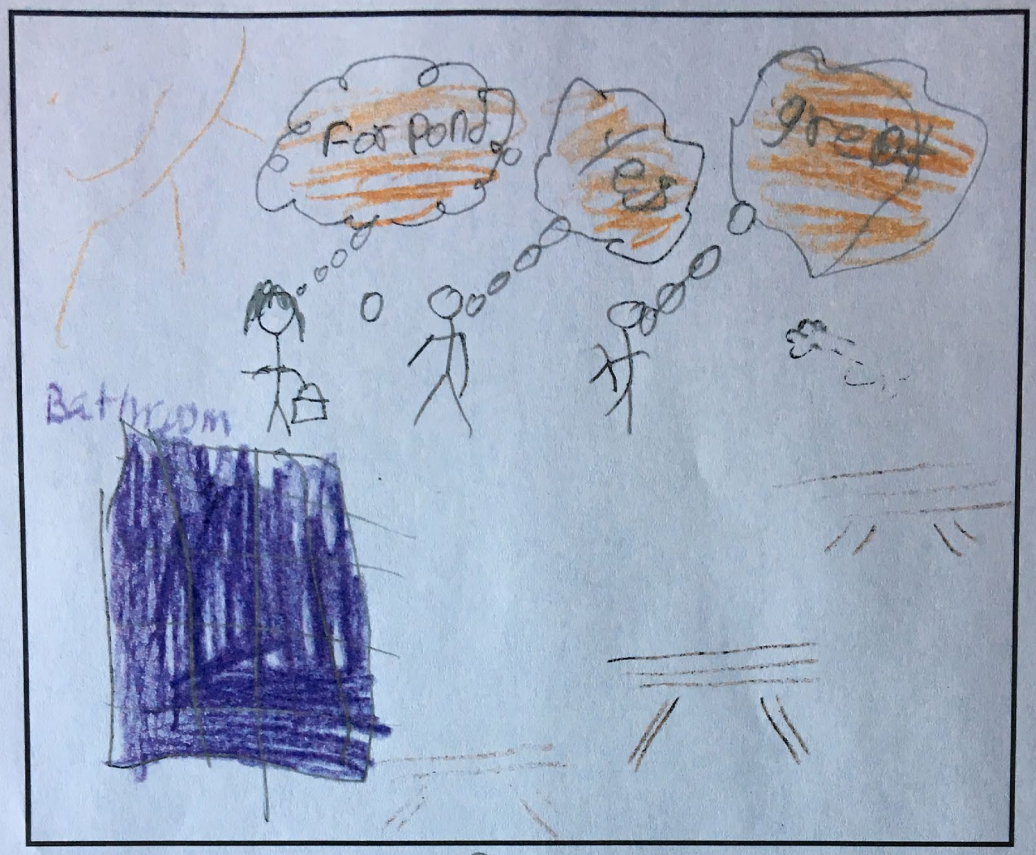
7-11-2017



My idea is For.
Pichic tables. For my Families.
This would be good because
Families can bring food to
eat.

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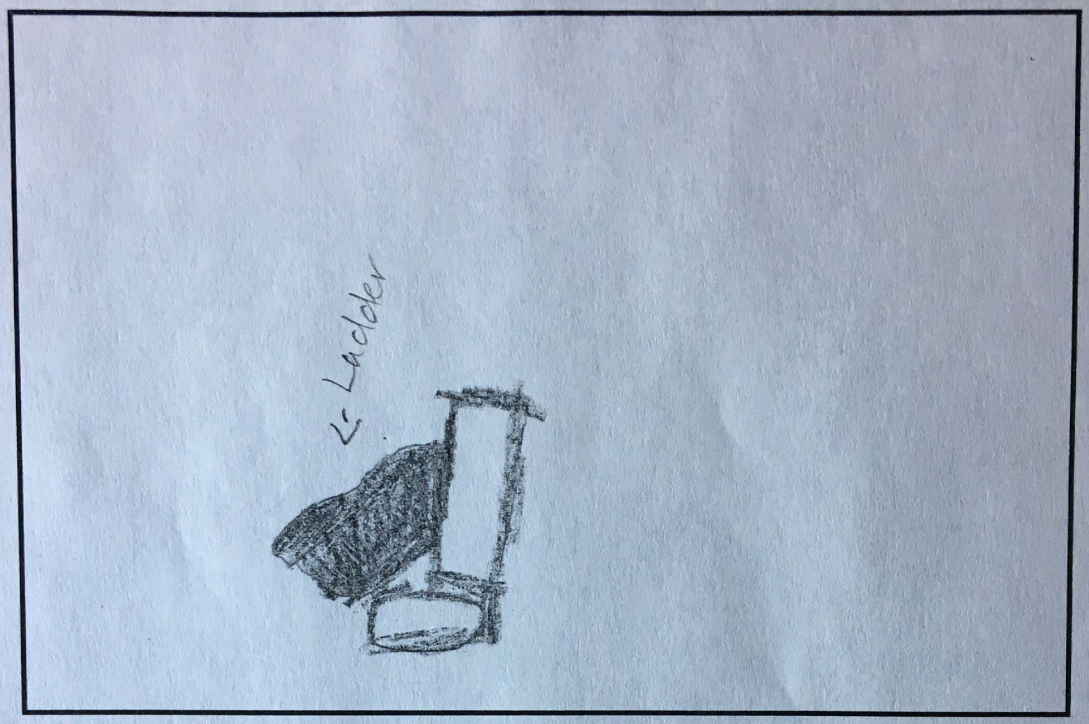

My idea is for a play house. This would be good because it would be fun for little kids to play on.

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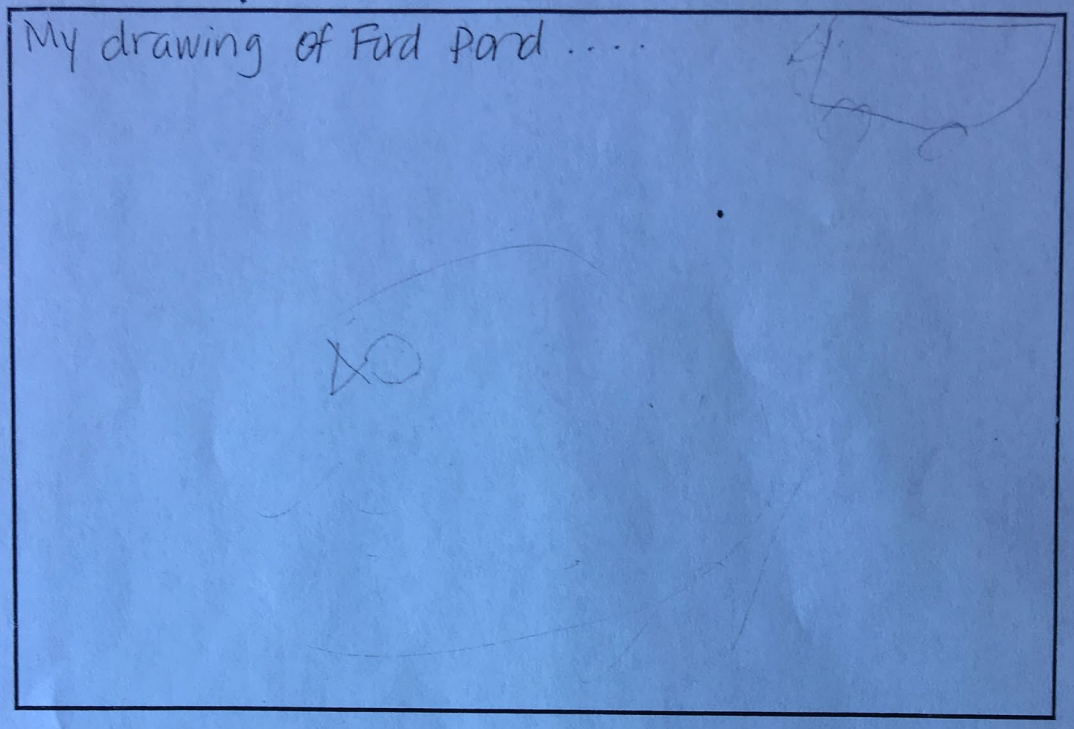
Ford Pond

My drawing of Ford Pond ....



My ideas for Ford Pond are ....

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City of Sutherlin
Ford's Pond Community Park Master Plan

PLANNING TEAM INITIATION MEETING: MEETING NOTES

March 3, 2017
3:00PM – 4:30PM
Sutherlin City Council Chambers

Attendees: Brian Elliott (City of Sutherlin), Kristi Gilbert (City of Sutherlin), Vicki Holland (Parks Advisory Committee), Beth Houseman (Friends of Ford Pond), Jim Houseman (Friends of Ford Pond), James Thatcher (Friends of Ford's Pond), Wendi Stinnett (Friends of Ford's Pond), Molly Mason (Resident), Colin McArthur (Cameron McCarthy), Vivian Schoung (Cameron McCarthy), Kelsey Zlevor (Cameron McCarthy)

BACKGROUND

- The site of Ford's Pond was once planned for a private gated community, however the property is now owned by the City. The City Council supports protection of the pond and use of the site as a community resource.
- Interested parties and stakeholders may include: golf course homeowner's association (Knolls Estates), Umpqua Audubon, School District, local civic groups, rotary club.
- Friend's of Ford's Pond was established in 2014, prior to the site being acquired by the City.
- Ford's Pond is referenced in the Opportunities and Constraints portion of the Sutherlin Parks and Open Space Plan (2005), where the opportunity to connect nearby recreation destinations are highlighted.
- In 2014, the City of Sutherlin purchased the Ford's Pond property from Lone Rock Timber for wastewater storage purposes.

VISION

- A place the City comes to gather and recreate.
- There's currently limited outdoor resources for families on the west side of Sutherlin; consider wildlife observation and passive recreation activities. The site is an anchor for the west side.
- Include space for venues.
- Approach the project as adding livability components: local trails, access to the outdoors in close proximity.
- Site access is currently primitive and undefined.
- Recognize the importance of solitude.
- Consider options for east-west connectivity to the community trail system.
- Strike a careful balance between humans and nature: balance the public interest while taking into account rare, threatened, and endangered species.

- Foster natural aesthetic for kids and families; need local outdoor experience to be a more livable location for young people.
- Consider utilizing scout troops and local craftsmen to furnish parts of site.
- Consider use of the site as a wayside along the coast-to-crater-lake highway in order to generate economic revenue.

EVENTS

- Walk-a-thon events.
- Audubon birding.
- Fishing activity days.
- Using the trail as an event area.
- BMX courses, but keep it non-motorized.
- Cross-country meets.
- Food trucks: picnic areas or place to have coffee; covered pavilion.
- Archery.

SITE IMPROVEMENTS

- On West Lake, perpendicular to Church Road, consider a gated entry, pedestrian only with potential footbridge across the wetlands.
- Safety concerns: can't see north-bound traffic in the SE corner of the road.
- No clear pedestrian pathway: kids walk in the middle of Church Road since there is no shoulder. Church Road is soon to be the west edge of the UGB; Ford's Pond will be removed from the UGB.
    - County owns the remainder of Church Road. City owns one-third.
    - No sidewalk access generally anywhere on site.
- Consider plug-in for electric vehicles with parking lot improvements.
- Parking.
- Capitalize on the old log dump as potential site for a boat launch/restrooms.
    - Water is deepest on the north side of the lake.
    - Be cognizant of ODOT access and egress issues.
    - Need for piers to get out and fish as well.
        - Bass, crappie, catfish.
    - Bank is currently not conducive to ADA access.
    - Be aware of 3-foot fluctuation in water levels with effluent.
- 8,300 cubic yards of material is coming back to the site from wastewater treatment plant improvements.
- Consider soft surfaces for trails. The existing trail is very primitive. The trail to the creek is also very overgrown.
- Concerning the Mason property across the way, the project needs to define their boundary and work within it.
- The existing concrete pad may be an asset.
- Depth of the pond is anywhere from 5 feet to 15 feet; shallower to the south.

UTILITIES

- 1-2 acres in the SE corner will remain in City UGB and can be served with utilities.
- Safety considerations with lighting: for people in the early morning and later at night maintain high visibility.

Ford's Pond Community Park Master Plan
City of Sutherlin **March 3, 2017**
Project Initiation Meeting Notes

    - Consider implementing electric gates that close at a specific time. Gates would let cars parked inside out.
- The south-side dike valve can be opened and closed; water can be discharged around the pond.
    - Dike is not recognized as a separate water body.
- Sanitary sewer service will require a pump station.
- Possibility for a polishing pond, 1-2 feet deep with cattails; good for birders.
- If water needs to be discharged, the dike will be closed and water will be detoured; can't mix with effluent pond water. For routing, must open the spillway not the pipe.
    - Pond receives 90 million gallons of water from the wastewater plant.
        - 1 foot = 30 million gallons of water. This is what causes the yearly fluctuation in depth/height of water on the bank.

NEXT STEPS

- CM to send background data request to City.
- City Council Update; March 27, 2017
- Planning Team Meeting; April 6, 2017, 3:00-4:30PM

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City of Sutherlin
Ford's Pond Community Park Master Plan

PLANNING TEAM MEETING #1: MEETING NOTES

April 6, 2017
3:00PM – 4:30PM
Sutherlin Community Center
150 S. Willamette Street

Attendees: Brian Elliott (City of Sutherlin), Seth Vincent (City Council), Tim Bradley (Parks Advisory Committee), Vicki Holland (Parks Advisory Committee), Beth Houseman (Friends of Ford Pond), Jim Houseman (Friends of Ford Pond), Wendi Stinnett (Friends of Ford's Pond), Molly Mason (Resident), Colin McArthur (Cameron McCarthy), Vivian Schoung (Cameron McCarthy)

MEETING OBJECTIVE

- To review data collected and remaining needs.
- To discuss wastewater treatment plant construction and site impacts.
- To review key stakeholders for the park and a strategy for public outreach.
- To discuss opportunities, constraints, and site programming.

MEETING OUTCOMES

- One to two acres of the Southeast Corner will be zoned as FR-20 and will remain within city limits and the UGB for utility connection to the park site. The remaining acreage of the southeast corner will be transferred into county zoning.
- Construction for the wastewater treatment facility starts in September. Plans include an open trench across the northeast corner of the Ford's Pond site. Open trench installation of the 12-inch drainpipe will be backfilled and contoured with surrounding soil. The Community Development Office provided a diagram of the recycled water discard header.
- ODFW will require a fish screen on the outfall discharge pipe in the northwest corner.
- Pending City Council approval on August 8, the City of Sutherlin will provide fill material from the wastewater facility construction project as base course on the second terrace in the Southeast Corner. The amount of fill is approximately 50 yards by 100 yards by 3 feet deep.
- Asphalt grindings from the City's road resurfacing project could also be used as a base course for the park's trail and potentially parking lot or entrance drive.
- Applications for the two Highway 138 access points are complete and are pending approval.
- Several additions to the stakeholder list were identified including: Murphy Plywood, Evergreen Family Medicine, Nordic Veneer, Sutherlin Sanitary Service, Umpqua Community College, The Ford Family Foundation, Douglas Electric Cooperative, Les

Ford's Pond Community Park Master Plan
City of Sutherlin **April 6, 2017**
Planning Team Meeting #1 Notes

Schwab, Norris Blueberry Farms, Law Offices of Danny Lang, Servpro, Orenco Systems Inc., and adjacent property owners (Wilde, Nichols, Liesinger, and Hackney).

- A focus group meeting will be held in May or June. In addition to representatives from businesses and community groups, attendees will include members of the Parks Advisory Board, City Council, City Staff, and Planning Team. The purpose of this meeting is to generate support and momentum for the project among potential partners. Cameron McCarthy will generate a list of attendees and coordinate dates with Vicki Holland.
- Public outreach events to inform and solicit feedback from the community are scheduled on May 25th and in the fall. An additional pop-up event will be held at the Blackberry Festival in August. Several potential advertising opportunities were identified: KQEN radio station; Post Office Box flyers; Friends of Ford's Pond Facebook page, website, and email list; utility bill flyer; signs at Sutherlin High School, B&D Oil, Lions Club; local restaurants; and local news and TV stations. Information will be posted or distributed in early May to coincide with the start of the Community Survey.
- Regarding Site Analysis, the following changes and additions were noted on the map:
    - Add pedestrian access to the site from Westlake Avenue.
    - Add a northern connector trail for the proposed trail segments in the West Hillside Zone.
    - Remove pedestrian bridge on the southwest corner of Ford's Pond.
    - Include secondary paths on all sides of the Ford's Pond perimeter zone.

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City of Sutherlin
Ford's Pond Community Park Master Plan

PLANNING TEAM MEETING #2: MEETING NOTES

May 4, 2017
3:00PM – 4:30PM
Sutherlin Community Center
150 S. Willamette Street

Attendees: Tom Boggs (City Council), Seth Vincent (City Council), Brian Elliott (City of Sutherlin), Tim Bradley (Parks Advisory Committee), Beth Houseman (Friends of Ford Pond), Jim Houseman (Friends of Ford Pond), Molly Mason (Resident), Colin McArthur (Cameron McCarthy), Kelsey Zlevor (Cameron McCarthy)

SITE UPDATES

- The Highway 138 entrance has been especially busy.
- There is typically parking on the southeast corner of the site off of Church Street, but there area is currently chained off.
    - Potential for talking to police to open this area up.
    - Potential for creating a log border for the parking area.
    - While the situation isn't out of control, there has been a lot of late night AWD activity with the normal parking area chained off; a lot of kids, and people drinking.

SITE ANALYSIS

- Land use zoning is currently for the city, and could be R1 or RA zones. The FR zone was removed from city zoning and is being placed back in the code. The property could be classified as residential if the FR zone cannot be applied.
    - Kristi to provide tax lots numbers for parcels.
    - In the event of the property being removed from residential zoning, it will be removed from non-buildable residential inventory. The property is currently applied towards the housing inventory but not towards buildable lands inventory.
- Include space for venues.
- Approach the project as adding livability components: local trails, access to the outdoors in close proximity.

SURVEY

- Add "Park" to survey title.
- Adjust Q1 to include defining content for how far respondents live within or outside of Sutherlin.

Ford's Pond Community Park Master Plan
City of Sutherlin **May 5, 2017**
Planning Team Meeting #2 Notes

- Add new question: "How many times have you visited Ford's Pond in the last year?"
- For Q6, have respondents select their top three activities.
    - Change "sports fields" to "open green space."
- Adjust Q7 to rank levels of importance (not important, moderately important, very important).
- Edit concluding paragraph to reference the Community Development office, availability of hardcopy surveys, and Ford's pond project email.
- Include length of survey notation.
- Survey needs to be active by May 24th.

COMMUNITY WORKSHOP

- Use project account email on poster.
- Water bill deadline was missed.
- Discussed campaign lawn signs; tabled due to cost.
- Cameron McCarthy will target read boards, the newspaper, and T.V./radio for event promotion.
    - Sharon Elliott at the Visitor's Center recommends posting after Mother's Day.
    - Terry Prestiani is contact for high school reader board.
    - KQEN is local radio station.
- FOFP can contribute 3-4 people for the event.
- Event overview: introductions, questions/comments, break-out groups with 3-4 categories of topics to discuss (different activities). Some people will be floating around concept boards to capture data from those not in small groups and/or those who can only stay for a brief period.

NEXT STEPS

- Brief discussion of low voltage barrier for fish; will get more information at later date.
- CM to send calendar invite for June 15th planning meeting (3:00-4:30 PM Sutherlin Community Center).

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City of Sutherlin
Ford's Pond Community Park Master Plan

PLANNING TEAM MEETING #3: MEETING NOTES

June 15, 2017
3:00PM – 4:30PM
Sutherlin Community Center
150 S. Willamette Street

Attendees: Tom Boggs (City Council), Brian Elliott (City of Sutherlin), Tim Bradley (Parks Advisory Committee), James Thatcher (Friend's of Ford's Pond), Beth Houseman (Friends of Ford Pond), Jim Houseman (Friends of Ford Pond), Wendi Stinnett (Friends of Ford's Pond), Molly Mason (Resident), Larry Gilbert (Cameron McCarthy), Colin McArthur (Cameron McCarthy), Kelsey Zlevor (Cameron McCarthy)

MEETING OBJECTIVE

- Online survey activated on May 24.
- Currently planning focus groups for July; Jim and Seth to represent FOFP and City at focus group meetings.
  - Doodle Poll for mid-July with morning and late afternoon times.
  - Email John Jr. from Murphy.
- Discussion of non-motorized vehicle access restriction.

COMMUNITY MEETING

- Summation of general discussion. Overall turnout was positive.

SURVEY UPDATE

- Kelsey provided update and general overview of current data.
  - Data currently skewed to an older population without children.
  - Need greater participation from younger families. Discussion of how to reach them:
    - School is already out. Consider outreach to summer camps, and through mailers with water bill.
    - FOFP will contact the school district;
    - FOFP attending graffiti event and will get the word out.
  - Some tension identified in survey responses between those who want a peaceful, natural environment, and those who want active amenities.
- 4% of population needs to respond to be statistically significant.

ORBIC REPORT

- Prior sightings of Western Pond Turtle; the information is dated (~1999).

Ford's Pond Community Park Master Plan
City of Sutherlin **June 15, 2017**
Planning Team Meeting #3 Notes

  - Provides impetus to focus on habitat restoration around the pond, regardless.
- Popcorn flower also noted; none have been found recently on-site.

COMMUNITY PARK ELEMENT DISCUSSION

- 10-20 cars observed at busiest times; need parking strategy.
  - Consider parking options for buses, RVs, campers, trailers.
  - Possibility of using church parking lots for overflow.
- Terrace transition: cascading levels of use down to the pond. Top to be mostly hardscape and active; progress toward more natural at lower terrace.
  - Potentially use top for parking, middle for seating and play area, bottom tier leads to the pond.
  - Need to be strategic about what uses are most compatible with each other within each terrace.
- No desire for large pavilion; pavilion design needs a more unique look.
- Potential location in the SE corner;
  - Need gathering space in general.
  - Concern over noise level with big groups, using landscaping can provide some buffer.
- Need ADA accessibility, especially along the terraces. Sloping, gradual curves instead of handrails.
- Need restrooms.
- Focus on natural play. Need to provide some play areas despite survey feedback if we want to achieve a community park. Play is more exploratory and not traditional.
- Paths and trails are a priority and backed-up by current survey respondents.
  - Highlighted importance of using Ford's Pond to provide resources and amenities unlike what already exists in the community. The park is not a campground.
- Need amenities for scenic viewing, such as seating and benches. Benches need to look natural.
  - Do we make spaces for people to park their cars and enjoy views from the car?
- Consider adding a fire pit on one of the terraces.
- Possibility of a concessions stand.
- Green element should not be a big rec field, but also could be synthetic, if only to deter geese.
- Consider concrete table tennis or chess tables.
- Consider viability of rentals for kayaks, paddle boats, paddle boards?
- What are compatible public-private partnerships?
  - Need to consider fee generators to fuel maintenance.
  - Rotating local businesses with food carts.
    - Fee structure would be needed to rent the space.
- Provide infographics/interpretive signage to help people understand where they are and what they are looking at.

- Possibility of using the space as an outdoor classroom.

NEXT STEPS

- CM to send calendar invite for July 27th planning meeting (3:00-4:30 PM Sutherlin Community Center).
- CM to gauge availability of focus group attendees.

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160 East Broadway ▪ Eugene Oregon 97401
v 541.485.7385 ▪ f 541.485.7389
www.cameronmccarthy.com

City of Sutherlin
Ford's Pond Community Park Master Plan

PLANNING TEAM MEETING #4: MEETING NOTES

July 27, 2017
3:00PM – 4:30PM
Sutherlin Community Center
150 S. Willamette Street

Attendees: Brian Elliott (City of Sutherlin), Kristi Gilbert (City of Sutherlin), Vicki Holland (Parks Advisory Committee), Beth Houseman (Friends of Ford Pond), Jim Houseman (Friends of Ford Pond), James Thatcher (Friends of Ford's Pond), Wendi Stinnett (Friends of Ford's Pond), Molly Mason (Resident), Colin McArthur (Cameron McCarthy), Larry Gilbert (Cameron McCarthy), Marina Wrensch (Cameron McCarthy), Kelsey Zlevor (Cameron McCarthy)

UPDATES

- Colin provided summary of focus group meeting.
  - Emphasized good representation and useful feedback.
  - Some concern over the proximity of bees to trails when planting for pollinators: need to decide how visible and accessible this feature would be while taking into account stings and allergies.
- Kelsey provided update on the survey.
  - 340+ respondents, and more healthy distribution of respondents in terms of age range, numbers of children in household.
  - Findings generally support what has already been heard in community and focus group meetings.

DESIGN CONCEPTS

- Larry provided overview of design concepts.
- <u>Overall Site Plan</u>
  - Emphasis on whatever configuration will produce greatest degree of sustainability on trails. This is especially pertinent for deciding trail surfaces.
    - Emphasis on making sure plan stays true to providing universal accessibility.
- <u>N Frontage Concept</u>
  - #14 (water outfall) needs to move further south.
    - Landscaping should avoid downward slope; show wetland enhancement at the new discharge location.
    - High premium on the value of telling a story: use informational boards at key educational places; use interpretive signage as much as appropriate.
  - Consider separation of space for pedestrians versus vehicles in the parking lot.

- Ingress/egress concerns: determine whether both entry-ways need to be two-way with ODOT.
  - 180 trips allowed along 138 for both accesses.
- SE Community Park Concept 1
  - Goal is to try to reduce the amount of earthwork needed by working with the terraces.
    - Need ADA ramp in current proposed location because it is one of the only places to meet required 5% grade.
- SE Community Park Concept 2
  - Focus is on splitting parks by age ranges.
  - Concept 2 is generally much more active than Concept 1.
    - Provides more parking than Concept 1.

DISCUSSION

- Overall Site Plan
  - General trail surface should be permeable; consider hardscape (asphalt). The south side floods, and this should be accounted for in material choice.
    - Secondary trail as crushed rock; minor trails native.
    - Potential A.C. grinding as base for trails.
    - Consider the possibility of making a multi-material trail at different points along the pond.
      - Possibly three types.
    - Trail should be at least 8 feet wide to accommodate walkers and bikers, but will probably need to be wider to accommodate city maintenance vehicles.
  - Consider adding a mountain bike trail under the powerlines.
  - Consider adding a switch back trail down to the Calapooya creek in the NW corner. This could be labeled as the most difficult trail.
    - Need topography is this area.
  - 6-foot no-climb fence will be installed in the SW end of the pond along Woodruff Pond.
  - Consider adding a boardwalk through the Ash woodland in the southern part of the site.
  - Connect wetland at east edge to Woodroof/Mason's Pond with swale/depression overflow.

- N Frontage Concept
  - Move fishing, parking and coffee cart further towards to the west. Wading birds habitat where fishing dock is currently shown. Fishing dock towards to overflow (deepest pool - 17' deep). 30 yards out is best.
    - City of Sutherlin to send survey info on depth and discharge.
    - Dock needs to be on north side of pond because this is deepest area for fishing.
  - Ensure turning radius in the proposed round-about is wide enough for trucks, vans, potential RVs.
  - Include benches and tables near the proposed T-dock.
  - If any toilet is provided in the N Frontage, this should be a vault toilet.
  - Consider adding interpretive signage along N Frontage.

Ford's Pond Community Park Master Plan
City of Sutherlin **July 27, 2017**
Planning Team Meeting #4 Notes

- Add viewpoint at east bump out.
- Kiosk is okay in the N Frontage corner.
  - Unsure about how changes to intersection in the future will impact this corner, but for now it seems feasible.
  - Food cart needs to be self-contained at 138 intersection.
- Consider creating an inlet from the discharge point ("pond within a pond") using emergent vegetation as a pre-treatment.
  - Discharge of class A water into one or two treatment ponds (2-5 acres) within the current pond surface.
- Consider adding pathways through the wetland areas to guide people where to walk (and not walk).
  - Develop landbridge or some way to delineate what is walkable in sensitive landscapes.
  - Bridge crossing over the wetland and swale must stay under 50 CY excavation/fill within wetlands.

- SE Community Park Concept 1 & SE Community Park Concept 2
  - More active option at southeast corner is preferred by families. In either option perimeter trail preferred.
  - Utilize an aesthetic funnel with landscaping from top terrace to lower terrace to keep people on trails and not cutting their own trails from the parking lot.
  - Add benches and eating areas on the play terrace to avoid having people running up and back down.
  - Consider splitting up shelters into smaller, multiple shelters.
    - Smaller shelters may create more welcoming environments, and provides multiple rental opportunities.
    - Counter-point: A larger shelter would provide more room for a fire pit and kitchen, which could provide more rental opportunity and revenue.
- Consider putting a lock-up kitchen in the pavilion in the main SE corner.
- Add viewpoints to Woodruff pond on the south edge.

NEXT STEPS

- CM to send calendar invite for next meeting on Thursday, September 14th, 2017, from 3:00-4:30 PM.

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City of Sutherlin
Ford's Pond Community Park Master Plan

PLANNING TEAM MEETING #5: MEETING NOTES

September 14, 2017
3:00PM – 4:30PM
Sutherlin Community Center
150 S. Willamette Street

Attendees: Kristi Gilbert (City of Sutherlin), Vicki Holland (Parks Advisory Committee), Beth Houseman (Friends of Ford Pond), Jim Houseman (Friends of Ford Pond), James Thatcher (Friends of Ford's Pond), Seth Vincent (City Council), Molly Mason (Resident), Colin McArthur (Cameron McCarthy), Kelsey Zlevor (Cameron McCarthy)

UPDATES

- Kelsey provided final survey update.
  - 365 respondents, and reasonable distribution of respondents in terms of age range, numbers of children in household, and residents of Sutherlin.
  - Concise narrative around findings; emphasis on passive recreation.
- Jim provided update on implications of motorized versus non-motorized boating.
  - TSS needs to pass a 15 mg/L test to determine gas and/or electric motor use.
  - Consider trolling motors, or human-powered personal paddle craft (PPC).
  - Can use governmental regulation as factor for deciding non-motorized boats only if it is a concern.
  - Install PPC launches.
  - Ultimately don't need to decide now but registration fees for boats create a revenue stream that can be accessed by applying to grant funding if motors are allowed at site.

DESIGN CONCEPTS

- Colin provided overview of design concepts.
- <u>Overall Site Plan</u>
  - No changes.
- <u>SE Community Park Concept 1 & SE Community Park Concept 2</u>
  - Same as before.
- <u>SE Community Park Concept 3</u>
  - Includes food cart, moves a shelter to more scenic vista, moves bathroom closer to park, includes roundabout in the middle of parking lot.

DISCUSSION

- <u>SE Community Park Concept 1 & SE Community Park Concept 2</u>
  - Food cart can be contractual; pad with utilities. Rent out the space and can charge rental fees for revenue (operated like fairgrounds).

Ford's Pond Community Park Master Plan
City of Sutherlin **September 18, 2017**
Planning Team Meeting #5 Notes

- Tree height on east side: would homeowners complain about their views being blocked? Consider size-appropriate species and/or eliminating trees.
    - Add more trees around the park for shade.
    - Determine if City Code requires street trees.
    - Consider car viewpoints when placing trees.
- Identify areas for future development SW of Option 3.
    - Expanding parking lot, etc.
- Consider how many people we are trying to seat with pavilions. Once the footprint is built, we are locked in to that size.
    - Consider catering access to the biggest pavilion; implementing bollards to restrict vehicles when necessary.
- Discussion on bathroom location. While the bathroom could be located on the top terrace, it could then be accessed by more street traffic; proposed location is still accessible.
- Kristi provided explanation of map annotations by the City.
    - Move park for smaller kids closer to a pavilion.
    - Lower the overflow parking (farther south).
    - Concern over distance from parking to the pavilion on Concept 3 being too far.
        - Possibly shift pavilion (6) to the east to preserve views.
    - Consider where people will line up for the food cart; keep people out of traffic flow.
    - Like traffic circle AND overflow shown in Concepts 1 & 2.
    - Food cart area should be just hook-ups; not a permanent structure.
- Consider ropes course on hillside.
    - Other activities for teens who may be too big for the park.
- Consider removing log dump before the trail goes in. Question of structural integrity. May need to just discourage access without tearing it down due to cost.

- Revenue Generation
    - Outside sources.
    - Do not consider park utility fees.
    - FOFP is able to contribute trail crews, lawn mowing, and garbage (what is currently being done on-site).
    - Donation box at site; QR code with PayPal.
    - Long-term: potentially consider park district to establish operating levy and/or a parks bond.
    - Donations for benches and tree-planting.

NEXT STEPS

- Community Workshop Thursday, September 28th, 2017, from 6:00-7:30 PM.
- Planning Team Meeting Thursday, October 12th, 2017, from 3:00-4:30 PM.

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City of Sutherlin
Ford's Pond Community Park Master Plan

PLANNING TEAM MEETING #6: MEETING NOTES

October 13, 2017
3:00PM – 4:30PM
Sutherlin Community Center
150 S. Willamette Street

Attendees: Kristi Gilbert (City of Sutherlin), Brian Elliott (City of Sutherlin), Beth Houseman (Friends of Ford Pond), Jim Houseman (Friends of Ford Pond), James Thatcher (Friends of Ford's Pond), Seth Vincent (City Council), Molly Mason (Resident), Colin McArthur (Cameron McCarthy), Kelsey Zlevor (Cameron McCarthy)

UPDATES

- Colin provided update on final park concept.
  - Make separate map for City Council that defines the terraces/tiers.
    - Can include photos on Dropbox of current leveling.
  - Have conversation with county about pedestrian improvements to Church Road and including the project in the TSP; more people will likely be walking from Westlake Street.

IMPLEMENTATION CHAPTER

- Colin provided overview of projects; fees/cost schedules.
- Some adjustments can be made to maintenance costs per acre. $3,500 is considered high relative to current City expenditures. The number is from park districts, where the value is higher.
- Preference for restrooms to be in first phase with the trails and/or part of the park. However, earthwork for permanent location of bathroom needs to be completed, which may not happen with the trail.
- Pedestrian bridge cost may come down; the estimate is based off of a Willamalane bridge that is vehicle-rated.
- Prefer asphalt for the parking in the North Frontage area as opposed to gravel.
- Determine whether playground base is engineered wood fiber or panels. Preference for engineered wood fiber.

<u>EDITS</u>

- Include 3% annual cost escalation of numbers; will apply to direct construction.
- Include bed depth, asphalt depth, thickness of the path in the cost estimate.
- Add the Marine Board and ODFW as potential grant sources.
- Include examples of pavilion rentals or special events for revenue generation.
  - How much are facility rental fees? How are they paid?
  - How do food carts contract?

Ford's Pond Community Park Master Plan
City of Sutherlin **October 13, 2017**
Planning Team Meeting #6 Notes

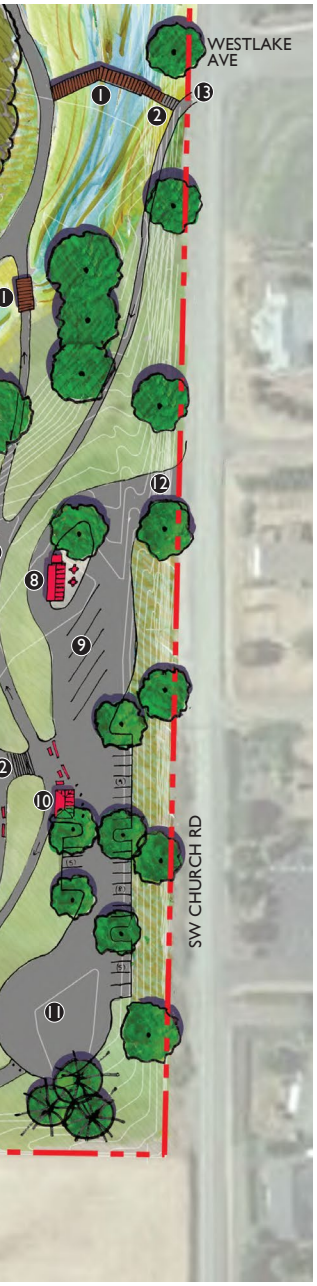
- Consider new language under Opportunities and Constraints regarding the logging ramp. Prefer "structural evaluation."
- Add signage, wayfinding, and interpretive elements into budget.
- Add benches and picnic tables to North Frontage budget.
    - Verify bench pricing.
- Include reference to the school project presentations in Outreach section.
- Minor edits
    - Parks *Advisory* Committee
    - Ford's Pond is a *202* acre site
    - Calapooya *Creek*
    - Add dates to discharge of effluent (May 1st to October 31st)

NEXT STEPS

- CM to provide final draft Master Plan to City by November 6, 2017 (12:00 PM).
- City Council Meeting; November 13, 2017.

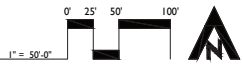
DESIGN OPTION 1

DESIGN OPTION 2



DESIGN OPTION 3

K DESIGN OPTIONS



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City of Sutherlin
Ford's Pond Community Park Master Plan
Funding Options

Local Tax Options

BONDS

To issue long-term debt instruments, a municipality obtains legal authorization from either the voters or its legislative body to borrow money from a qualified lender. Usually, the lender is an established financial institution, such as a bank; an investment service that may purchase bonds as part of its mutual fund portfolio; or, sometimes, an insurance company. Issuing debt is justified based on several factors:

- Borrowing distributes costs and payments for a project or improvement to those who will benefit from it over its useful life, rather than requiring today's taxpayers or rate payers to pay for future use;
- During times of inflation, debt allows future repayment of borrowed money in cheaper dollars;
- Borrowing may improve a municipality's liquidity to purchase needed equipment or for project construction and improvements. Debt issuance also does not exhaust current cash-on-hand, allowing such general fund revenues to be used for operating expenses; and
- Interest rates rise as the maturity term of a bond increases, as borrowers have to compensate investors for locking up their resources for a longer period of time.

Oregon Law requires that all Unlimited-Tax General Obligation (ULTGO) bonds be authorized by a vote of the people. The Oregon Bond Manual – 4th Edition, recommends municipalities hire a bond counsel prior to the bond election to ensure that all requirements are met. The Bond Manual also notes that approval of an ULTGO bond requires considerable effort. Some examples of methods for gaining public support include: attitude polls, forming a bond issue citizens' committee, holding public meetings, leaflets, and door-to-door canvassing. Note that under Oregon law, no public resources may be used to advocate a pro or con position regarding a ballot measure. Accordingly, any printed materials must be purely explanatory in nature.

A fundamental rule associated with issuing long-term debt instruments is not to issue them for a maturity period longer than the project's useful life. People should not be paying for a major park or recreational facility after it is no longer in use. Further, Sutherlin should be very clear about the specific acquisitions and other actions to be carried out with the bond revenue, as

the City will be asking residents to pay for park and recreation acquisitions. Working with the community is a key aspect of a successful bond measure.
The key benefit of bonds for park acquisition and development is that the City can generate a substantial amount of capital. This capital can then be used to purchase parkland or for major capital improvements that will serve the community far into the future.

LEVIES

A local option levy for capital improvements provides for a separate property tax levy outside the City's permanent rate limit. This levy may be used to fund a capital project or a group of projects over a specified period of time, up to ten years. Revenues from these levies may be used to secure bonds for projects, or to complete one or more projects on a "pay as you go" basis.

The advantages of levies include reduced interest, increased flexibility, enhanced debt capacity, improved borrowing terms, and increased fiscal responsibility. The major disadvantages of the approach are insufficient funding, intergenerational inequity (if, for example, long term facilities are paid for disproportionately by current users), inconsistency of funding requirements, and use of accumulated reserves.

Prior to Measure 50, Oregon's property tax system was a levy-based system. With its adoption, the system was converted to a combination rate and levy-based system, eliminating the taxing district's 'tax base' for operational purposes, which automatically increased by six percent annually. Instead, each taxing district has a frozen tax rate for operation expenses, but local jurisdictions may obtain revenue through bonds and local option levies. Revenues from local option levies are also subject to limitations under Measure 5.

Local option levies require voter approval and are subject to the double majority requirement of Measure 50 and are not considered to be a good alternative to the use of general obligation bonds for large projects or groups of projects. Property tax levies can be used for land acquisition and capital improvements; however, they are also frequently used for facility operations and maintenance.

SYSTEM DEVELOPMENT CHARGES

A SDC is a one-time fee charged on new development and certain types of redevelopment to help pay for existing and planned infrastructure to serve the development. Cities, counties and special districts in Oregon may impose SDCs for capital improvements, which include parks and recreation facilities. SDCs cannot be used for operation and maintenance costs or replacement costs for existing infrastructure capacity.

A SDC may be an improvement fee, reimbursement fee, or a combination of the two. SDCs utilized for parks and recreation facilities are generally improvement fee SDCs. Improvement fee SDCs may be charged for new capital improvements that will increase capacity and includes debt service payments. The improvement fee must be calculated such that it funds the portion of the cost of capital improvements that meets the projected need for increased capacity for future users. Revenues generated by improvement fee SDCs may be expended only for capital improvements identified in a required Capital Improvement Plan.

Ford's Pond Community Park Master Plan
City of Sutherlin **October 5, 2017**
Funding Options

Partnerships

Partnerships with federal, state, and local agencies and not-for-profit groups play an important role in the acquisition and development of park and recreation facilities. Partnerships can also provide one-time or ongoing maintenance support.

FEDERAL

U.S. Fish and Wildlife Service (USFWS)

Assistance available through the USFWS include the Partners for Fish and Wildlife program. Since 1987, the program promotes conservation and habitat protection by offering technical and financial assistance to private (non-federal) landowners to voluntarily restore wetlands and other fish and wildlife habitats on their land.

Partners for Fish and Wildlife, Oregon
2600 SE 98th Avenue
Portland, Oregon 97266
Phone: (503) 231-6179
Website: https://www.fws.gov/partners/

Bureau of Land Management (BLM)

The BLM manages a wide variety of public land uses in Oregon. Public land uses include land for wildlife, recreation, timber harvest, livestock grazing, mineral resource extraction and other public uses. The BLM offers grants for land acquisition requiring that it be used for public and recreation purposes. Local government can also obtain parklands at very low or at no cost if there is a developed park plan.

Salem District Office
Bureau of Land Management
1717 Fabry Rd. SE
Salem, Oregon 97306
Phone: (503) 375-5646
Website: www.blm.gov

U.S. Forest Service (USFS)

The Pacific Northwest Region of the USFS offers urban and community forestry funds and assists with economic diversification projects.

Group Leader, Grants and Agreements
USDA Forest Service – Pacific Northwest Region
1220 SW 3rd Ave., Portland, Oregon 97204
Phone: (503) 808-2468
Website: www.fs.fed.us/r6

STATE

Department of State Lands (DSL), Wetland Grant Program

The Wetland Grant Program provides technical and planning assistance for wetland preservation efforts. Elements of the program include wetland inventory, identification, delineation, and function assessments as well as wetland mitigation, public information and education.

Wetland Mitigation Specialist
Division of State Lands
775 Summer Street NE, Suite 100
Salem, Oregon 97301-1279
Phone: (503) 986-5299
Website: http://oregonstatelands.us/DSL/PERMITS/pil.shtml

Oregon Parks and Recreation Department (OPRD)

OPRD provides and protects outstanding natural, scenic, cultural, historical and recreational sites for the enjoyment and education of present and future generations. OPRD administers grants and provides technical assistance to communities involved in parks planning.

Oregon Parks and Recreation Department
725 Summer Street NE, Suite C
Salem, Oregon 97301-1279
Phone: (503) 986-0707
Website: http://www.oregon.gov/oprd/

Oregon Youth Conservation Corps (OYCC)

OYCC provides communities with needed services, while unemployed youth are placed in gainful activities. OYCC funding is distributed in equal amounts to each county in Oregon every summer. The program funds individual projects ranging from $5,000 to $10,000. The OYCC program consists of grants of labor and capital financing. Grants support conservation or environment-related projects proposed by non-profit organizations.

Oregon Youth Conservation Corps
255 Capital Street NE, Third Floor
Salem, Oregon 97310
Phone: (503) 378-8648
Fax: (503) 373-2353
Website: http://www.oyccweb.com/

LOCAL

There are a variety of public, private, and non-profit organizations available to provide the City of Sutherlin with additional parks and recreation facilities and services. Local partnerships create cooperation among public and private partners in the area. Local businesses may also be willing to partner with the City to provide partner services. The Chamber of Commerce is a good way to begin to form such partnerships. A list of potential partners besides police and fire departments, utility providers, and the school district include:

- Religious organizations
- Community associations
- Boy Scouts of America
- Lions Club
- Historical societies & museums
- Kiwanis

Not-for-Profit Organizations

The Nature Conservancy

This is a national environmental organization focused on the preservation of plants, animals and natural communities. They have worked in direct land acquisition and in obtaining conservation easements for protection of wilderness and agricultural lands. Their grants program is usually focused on acquisition of land, but they are willing to work with communities who want to purchase land if it is to be set aside for environmental preservation.

The Nature Conservancy of Oregon
821 S.E. 14th Avenue
Portland, Oregon 97214
Phone: (503) 802-8100
Fax: (503) 802-8199
Website: www.nature.org/Oregon

Oregon Recreation and Park Association (ORPA)

The Oregon Recreation and Park Association, a non-profit organization founded in 1954, serves as a network offering information and contacts directly related to the parks and recreation systems. ORPA's mission is to provide a network of support through professional development and resources in order to enhance the quality of recreation and parks services.

Oregon Recreation and Park Association (ORPA)
1500 Greentree Road
Lake Oswego, Oregon 97034
Phone: (503) 534-5673
Website: www.orpa.org

Land Trusts

The Trust for Public Land

The Trust for Public Land helps public agencies and communities create city parks. This was one of the founding goals of the Trust for Public Land and remains the only large national conservation organization focused on creating parks for people. TPL works with community leaders to identify opportunities for park creation, secure park funding, and acquire parklands. TPL's participatory design process ensures that parks meet community needs. TPL also assists in efforts for land and water conservation, heritage lands, and natural lands.

Specific to the Pacific Northwest, TPL's program, "Parks for People – Northwest" works to ensure that everyone-- in particular, every child--enjoys access to a park, playground, or open space. A community's parks, natural areas, and open spaces are often among its most important assets—identifying its character and essence. Beyond their symbolic value, these parks contribute to quality of life and offer havens where citizens seek renewal. TPL is helping established urban cities and growing communities across the Northwest plan proactively for parks and open spaces.

The Trust for Public Land
Oregon Office
808 SW 3rd Avenue
Suite 570
Portland, Oregon 97204
Phone: (503) 228-6620
E-mail: Oregon@tpl.org
Website: www.tpl.org

The Wetlands Conservancy

The Wetlands Conservancy (TWC) is a non-profit land trust. It is dedicated to preserving, protecting, and promoting the wildlife, water quality and open space values of wetlands in Oregon.

The Wetlands Conservancy
4640 SW Macadam #50
Portland, Oregon 97239
Phone: (503) 227-0778
E-mail: info@wetlandsconservancy.org
Website: www.wetlandsconservancy.org/

Land Trust Alliance

The Land Trust Alliance assists nonprofit land trusts and organizations that protect land through donation and purchase. This is done by working with landowners interested in donating or selling conservation easements, or by acquiring land outright to maintain as open space. Membership of the alliance is one of the qualifications for assistance from this organization.

Ford's Pond Community Park Master Plan
City of Sutherlin **October 5, 2017**
Funding Options

Land Trust Alliance
Brad Paymar
Northwestern Senior Program Manager
Portland, OR
Phone: (971) 202-1483
Website: www.landtrustalliance.org

Private Donations

Donations of labor, land, or cash by service agencies, private groups or individuals are a popular way to raise small amounts of money for specific projects. Two key motives for donation are philanthropy and tax incentives. These benefits should be emphasized when collaborating with landowners. Most organizations implement capital campaigns focused on specific projects for cash donations. The typical strategy for land donations is to identify target parcels (such as identified in the Parkland Acquisition section of the Plan) and then work directly with landowners.

Soliciting donations, like partnering, takes time and effort on the part of City staff, but can be mutually rewarding. The City of Sutherlin should consider establishing a nonprofit parks foundation to implement a capital campaign and to accept and manage donations. The City should begin working on setting up such a group or recruit volunteers to provide the services. Generally, donations are not stable sources of land or finances and should not be relied upon as a major portion of funding.

Pursuing donations through partnerships can provide advantages to all parties involved. For example, working a land transaction through a non-profit organization may provide tax benefits for the donor, provide flexibility to the City, and reap financial benefits for the non-profit.

Grants

The securing of grants is a good strategy to supplement park acquisition and development funds. Many grant organizations throughout the country fund park acquisition and improvements, although few provide funds for ongoing maintenance activities. Most grant organizations have lengthy processes that require staff time and effort, and grants usually have very specific guidelines and only fund projects that address the granting organization's overall goals. Moreover, grants should not be considered a long-term, stable funding source. This appendix provides contacts for state, regional, and federal granting organizations and outlines these organizations' goals.

The grant process is highly competitive. When identifying possible grant funding, allocate staff time appropriately for applicable grants and pursue partnerships for volunteer grant writing. As grant agencies often look favorably upon collaborative projects, developing partnerships between agencies, organizations, and the City will improve the City's competitiveness in the grant application process.

Private Grant-Making Organizations

NATIONAL GRANTS

Bikes Belong Grants

Bikes Belong is sponsored by the U.S. bicycle industry with the goal of putting more people on bicycles more often. From helping create safe places to ride to promoting bicycling, Bikes Belong carefully selects projects and partnerships that have the capacity to make a difference. Their initial goal was to ensure funding for new bicycle facilities that would increase bike riding, boost public health and happiness, and strengthen the bike business. All proposals must encourage ridership growth, support bicycle advocacy, promote bicycling, and leverage funding with other grants. These funds cannot be used for general operating costs.

Grants that have been funding in the past include mountain bike trails, a BMX track, a 10-mile portion of the Lake Wobegon Trail in Minnesota as well as greenways for bicycle commuting and recreation.

Bikes Belong Coalition
P.O. Box 2359
Boulder, CO 80306
Phone: (303) 449-4893
Website: www.bikesbelong.org

STATE GRANTS

Oregon Community Foundation Grants

The Oregon Community Foundation (OCF) prioritizes funding based on a set of principles and four funding objectives.

- To nurture children, strengthen families and foster the self-sufficiency of Oregonians;
- To enhance the educational experience of Oregonians;
- To increase cultural opportunities for Oregonians; and
- To preserve and improve Oregon's livability through citizen involvement.

OCF awards about 200 grants annually. Most Community Foundation Grants are between $5,000 and $35,000, but multi-year grants may range up to $150,000 for projects with particular community impact. Around 5 percent of Community Grants are above $50,000 and tend to be created only for projects that are an exceptionally good fit with OCF priorities, have a broad scope of impact, and address an area to which OCF's board has decided to give special attention.

Oregon Community Foundation

1221 SW Yamhill, #100
Portland, Oregon 97205
Phone: (503) 227-6846
Fax: (503) 274-7771
Website: www.oregoncf.org/receive/grants

The Collins Foundation
The purpose of the Collins Foundation is to improve, enrich, and give a greater expression to the religious, educational, cultural, and scientific endeavors in the State of Oregon and to assist in improving the quality of life in the state. The trustees of the Collins Foundation work through existing agencies and have supported proposals submitted by colleges and universities, organized religious groups, arts, cultural and civic organizations, and agencies devoted to health, welfare, and youth.

Director of Progress
The Collins Foundation
1618 SW First Avenue, Suite 505
Portland, Oregon 97201
Phone: (503) 227-7171
Website: www.collinsfoundation.org

The Oregon Historic Trails Fund
The purpose of the fund is to develop interpretive, educational, and economic projects to preserve and protect the cultural and natural resources of Oregon's historic trails. Grants are made each fall from the Oregon Historic Trails Fund to support projects that interpret, preserve, or maintain trail-related resources. Grants may be awarded also for marketing, education, advocacy, and research related to historic trails. An advisory committee made up of people who are knowledgeable about Oregon's historic trails and cultural resources review grant applications and makes recommendations to The Oregon Community Foundation board of directors.

Historic Trails Fund
c/o The Oregon Community Foundation
1221 SW Yamhill, Suite 100
Portland, Oregon 97205
Phone: (503) 227-6846
Website: www.oregonhistorictrailsfund.org/trails/index.php

Public Grant-making Organizations

FEDERAL

National Park Service – National Heritage Areas Program

The United States Congress designates a national heritage area as a place where "natural, cultural, historic, and recreational resources combine to form a cohesive, nationally distinctive landscape arising from patterns of human activity shaped by geography". (National Park Service, www.cr.nps.gov) Through Strategic public and private partnerships, federal grant money is available to leverage funding opportunities for nationally designated heritage sites.

To determine if the City of Sutherlin qualifies as a National Heritage Area, the community must complete a suitability/feasibility study, using the ten guidelines developed by the National Park Service. All ten guidelines can be found at the National Park Service website.

The designation enhances local pride and includes limited technical planning and financial assistance from the National Park Service. Federal designation depends on Congressional support and the degree to which a community is engaged in a support of the designation. The four critical steps that need to be followed prior designation are:

1. Completion of a suitability/feasibility study;
2. Public involvement in the sustainability/feasibility study;
3. Demonstration of widespread public support among heritage area residents for the proposed designation; and
4. Commitment to the proposal from key constituents, which may include governments, industry, and private, non-profit organizations, in addition to area residents.

National Heritage Areas Program Manager- Pacific West Region
333 Bush Street
San Francisco, CA 94104
Phone: (415) 623-2322
Website: www.nps.gov/history/heritageareas/

Land and Water Conservation Fund

This fund provides federal dollars from the National Park Service that are passed down to states for acquisition, development, and rehabilitation of park and recreation areas, and facilities. To be eligible for Land and Water Conservation Fund grants, the proposed project must be consistent with the outdoor recreation goals and objectives contained in the Statewide Comprehensive Outdoor Recreation Plan (SCORP) and elements of a jurisdiction's local comprehensive land use and parks master plans. Emphasis should be placed on the grants available to the State of Oregon rather than federal funds.

Land and Water Conservation Fund
Phone: (503) 986-0708
725 Summer Street NE, Suite C
Salem, Oregon 97301

Website: http://www.oregon.gov/oprd/GRANTS/pages/lwcf.aspx

U.S. Department of Transportation

Through the Transportation Equity Act for the 21st Century (TEA-21), the U.S. Department of Transportation authorizes federal surface transportation programs for highways, highway safety, and transit. TEA-21 provides funding for parks and connections that include:

- Bicycle transportation and pedestrian walkways;
- Recreational trails program;
- National Scenic Byways Program; and
- Transportation and Community and System Preservation Pilots.

U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington D.C., 20590
Phone: (202) 366-4000
Website: www.fhwa.dot.gov/tea21/index.htm

National Oceanic and Atmospheric Coastal and Estuarine Land Conservation Program (CELCP)

The Coastal and Estuarine Land Conservation Program (CELCP) was established in 2002 to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical or aesthetic values. The program provides state and local governments with matching funds to purchase significant coastal and estuarine lands, or conservation easements on such lands, from willing sellers. To date, the program has protected more than 45,000 acres of land through projects funded between 2002 and 2008.

Department of Land Conservation and Development
635 Capitol Street NE, Suite 150
Salem, Oregon 97301-2540
Phone: (503) 373-0050
Website: http://www.oregon.gov/lcd/Pages/index.aspx

Oregon Coastal Management Program
Department of Land Conservation and Development
635 Capitol St., NE, Suite 150
Salem, OR 97301-2540
Phone: (503) 934-0052

US Fish and Wildlife Service National Coastal Wetlands Conservation Grant Program

The grants will be used to acquire, restore or enhance coastal wetlands and adjacent uplands to provide long-term conservation benefits to fish, wildlife and their habitat. The National Coastal Wetlands Conservation Grant Program was established by Title III of P.L. 101-646, Coastal Wetlands Planning, Protection

and Restoration Act of 1990. Under the Program, the U.S. Fish and Wildlife Service provides matching grants to States for acquisition, restoration, management or enhancement of coastal wetlands.

U.S. Fish & Wildlife Service
Wildlife and Sport Fish Restoration Program
Eastside Federal Complex
911 NE 11th Avenue
Portland, OR 97232-4181
503-231-2096

North American Wetlands Conservation Act Grant Program

The North American Wetlands Conservation Act (Act, or NAWCA) of 1989 provides matching grants to organizations and individuals who have developed partnerships to carry out wetlands conservation projects in the United States, Canada, and Mexico for the benefit of wetlands-associated migratory birds and other wildlife. The Standard Grants Program supports projects that involve long-term protection, restoration, and/or enhancement of wetlands and associated uplands habitats. The Small Grants Program supports the same type of projects and adheres to the same selection criteria and administrative guidelines as the U.S. Standard Grants Program. However, project activities are usually smaller in scope and involve fewer project dollars.

US Fish and Wildlife Service
Division of Bird Habitat Conservation
4401 North Fairfax Drive
Mailstop MBSP 4075
Arlington, Virginia 22203
Phone: (703) 358-1784
Website: www.fws.gov/birdhabitat/Grants/NAWCA/index.shtm

STATE

State Highway Funds

At least 1% of the State Highway Funds that the City receives must be spent for bicycle/pedestrian improvements and maintenance within existing street rights-of-way. Oregon Revised Statute 366.514 required the Oregon Department of Transportation and cities and counties within Oregon to "expand reasonable amounts of the highway fund to provide bikeways and walkways" and it requires "the inclusion of bikeways and walkways whenever highways, roads, streets are constructed or relocated."

ODOT also administers the Pedestrian and Bicycle Facility Improvement Grant Program, which provides grants of up to $200,000 for sidewalk completion, ADA upgrades, crossing improvements, and minor widening for bike lanes or shoulders. Competitive projects involve no right-of-way or environmental

impacts; have significant local matching funds available; consider the needs of school children, the elderly, disables, or transit users; and have support of local elected officials. Grant money may not be used for the completion of trails and/or bikeways within parks but can be used to help fund larger pedestrian and bicycle improvements occurring within street rights-of-way.

Oregon Department of Transportation (ODOT)

State Pedestrian and Bicycle Grants

ODOT provides grants to cities and counties for pedestrian or bicycle improvements on state highways or local streets. Grants amount requires at least 5% local match. Projects must be administered by the applicant, be situated in roads, streets or highway right-of-ways. Project types include sidewalk infill, ADA upgrades, street crossings, intersection improvements, and minor widening for bike lanes. Grants are offered every two years.
For 2010-2011, several of the awarded grants were for pedestrian crossings, sidewalks, bicycle lanes, and streetscaping. These grants ranged from $90,000 up to almost $700,000 for projects.

Oregon Department of Transportation
Bicycle and Pedestrian Program
355 Capital Street N.E., Fifth Floor
Salem, Oregon 97301
Phone: (503) 986-3555
Fax: (503) 986-4063
Website: www.oregon.gov/ODOT/HWY/BIKEPED/grants1.shtml

Transportation Enhancement Program

These funds are available from ODOT projects that enhance the cultural, aesthetic and environmental value of the state's transportation system. Some of the eligible activities include bicycle/pedestrian projects, historic preservation, landscaping and scenic beautification, mitigation of pollution due to highway runoff, and preservation of abandoned railway corridors. The application cycle is every two years. Funding is decided by technical merit and local support. Recently, these grants were used to help build a multi-use path in Corvallis, a bicycle/pedestrian path and landscaping in Coos Bay, and a bike bridge in Eugene.

Patricia Fisher
Transportation Enhancement Program Manager
Transportation Enhancement Program
Oregon Department of Transportation
Phone: (503) 986-3528
E-mail: patricia.r.fisher@odot.state.or.us
Website: www.oregon.gov/ODOT/HWY/LGS/enhancement.shtml

Transportation Safety Safe Routes to School Grants

The goals of the program are to increase the ability and opportunity for children to walk and bicycle to school; promote walking and bicycling to school and encourage a healthy and active lifestyle at an early age; and facilitate the planning, development and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption and air pollution within two miles of the school. The National Center for Safe Routes to School is offering 35 $1,000 mini-grants for Safe Routes programs.

Julie Yip
Safe Routes to School Program Manager
ODOT Transportation Safety Division
4040 Fairview Industrial Drive SE
Salem, Oregon 97302
Phone: (503) 986-4196
E-mail: julie.a.yip@odot.state.or.us
Website: http://oregonsaferoutes.org/
http://www.oregon.gov/ODOT/Safety/Pages/SRTS.aspx

Transportation Growth Management (TGM)

Oregon's Transportation and Growth Management Program supports community efforts to expand transportation choices for people. By linking land use and transportation planning, TGM works in partnership with local governments to create vibrant, livable places in which people can walk, bike, take transit or drive where they want to go.

During the last grant award cycle, these grants were used to update pedestrian and bicycle master plans, a waterfront linkage project, and other plan and project updates. These grants generally require 12% of matching funding in the form of direct expenditures for eligible cost projects. Key requirements for this grant are local support, clear transportation relationships, meeting state mandates, and that the grants are for planning work.

Cindy Lesmeister
Oregon Transportation & Growth Management Grants
Phone: (503) 986-4349
E-mail: Cindy.L.Lesmeister@odot.state.or.us
Website: http://www.oregon.gov/LCD/TGM/pages/grants.aspx

Oregon Tourism Commission

Travel Oregon

Travel Oregon focuses on tourism related projects, and offers matching grants of up to $10,000 for tourism projects. These can include marketing materials,

market analysis, signage, and visitor center development planning. This grant requires a match of funds or materials relevant to the project, and the money does not include funding for construction.

Travel Oregon Grant Program
Michelle Woodard
Grants Manager
Phone: (503) 967-1566
Website: industry.traveloregon.com/Departments/Tourism-Development/Matching-Grants-Program.aspx

Oregon Department of Environmental Quality (DEQ)

Water Quality Non-point Source Grants

The DEQ offers grants for non-point source water quality and watershed enhancement projects that address the priorities in the Oregon Water Quality Non-point Source Management Plan. Grants require a minimum of 40 percent match of non-federal funds and a partnership with other entities. About $1.5 million of federal grants dollars will be available under the Clean Water Act.

Ivan Camacho
Oregon Department of Environmental Quality
811 Sixth Avenue
Portland, Oregon 97204-1390
Phone: (503) 229-5088
Website: http://www.oregon.gov/deq/wq/programs/Pages/Nonpoint-319-Grants.aspx

Oregon Department of State Lands (DSL)

Easements

DSL grants easements for the use of state-owned land managed by the agency. Easements allow the user to have the right to use state-owned land for a specific purpose and length of time. Uses of state owned land subject to an easement include, but are not limited to, gas, electric and communication lines (including fiber optic cables); water supply pipelines and ditches, canals and flumes; innerducts and conduits for cables; sewer, storm and cooling water lines; bridges, skylines and logging lines; roads and trails; and railroad and light track.

Oregon Department of State Lands
Land Management, Waterway Leasing and Ownership
775 Summer St. NE, Suite 100
Salem, Oregon 97301
Phone: (503) 986-5200

Website: http://www.oregon.gov/dsl/WW/Pages/Waterways.aspx

Oregon Parks and Recreation Department

The Oregon Parks and Recreation Department administers several grant programs including the Federal Land and Water Conservation Fund, Local Government, and Recreation Trails grants.

Local Government Grants

These grants provide for the acquisition, development, and rehabilitation of park and recreation areas and facilities. OPRD gives more than $4 million annually to Oregon communities for outdoor recreation projects, and has awarded nearly $40 million in grants across the state since 1999.

Jan Hunt
Recreation Grant and Community Program Manager
Oregon Parks and Recreation Department
Grants & Community Programs Division
725 Summer Street NE
Salem OR 97301
Phone: (503) 986-0772
E-mail: jan.l.hunt@oregon.gov
Website: www.oregon.gov/OPRD/GRANTS/local.shtml

Recreation Trail Grants

The Oregon Parks and Recreation Department accepts applications for Recreation Trial Program (RTP) grants every year for recreational trail-related projects, such as hiking, running, bicycling, off-road motorcycling, and all-terrain vehicle riding. Grant recipients are required to provide a minimum of 20 percent in matching funds. Funding is divided into 30% motorized trail use, 30% non-motorized trail use and 40% diverse trail use. Project sponsors provide at least 20% of the projects total costs.

Jodi Bellefeuille
Recreation Trails Program Grants
Oregon Parks and Recreation Department
Grants & Community Programs Division
725 Summer Street NE
Salem OR 97301
Phone: (503) 986-0716
E-mail: rtp.grantprogram@oregon.gov
Website: www.oregon.gov/OPRD/GRANTS/trails.shtml

Oregon Watershed Enhancement Board

The Oregon Watershed Enhancement Board (OWEB) administers a grant program that awards more than $20 million annually to support voluntary efforts by Oregonians seeking to create and maintain healthy watersheds. Small grants are available for opportunities for learning about watershed concepts

(education/outreach). Watershed education could be incorporated into a parks or trail systems.

Kathy Leopold
Oregon Watershed Enhancement Board
Small Grants Coordinator
775 Summer St NE
Salem OR 97301
Phone: (503) 986-0187
E-mail: kathy.leopold@oregon.gov
Website: www.oweb.state.or.us

FORD'S POND MASTER PLAN
CITY OF SUTHERLIN

BASED ON OVERALL SITE PLAN AND SE COMMUNITY PARK PLAN — October 5, 2017

PROJECT 1
POND PERIMETER PATH

ITEM	QTY	UNIT	UNIT COST	TOTAL COST	NOTES
DIRECT CONSTRUCTION COSTS					
Demolition - General	1	LS	$ 62,583	$ 62,583	inc. invasive removal
Demolition - Concrete Log Dump	1	LS	$ 15,000	$ 15,000	
Earthwork	1	LS	$ 43,067	$ 43,067	
Pervious Asphalt Path	96900	SF	$ 2.84	$ 274,999	base rock included
Bridge	1	LS	$ 60,000	$ 60,000	bridge over outfall
Restoration	4.4	AC	$ 6,500	$ 28,919	
Interpretive Signage	1	AL	$ 5,000	$ 5,000	
Estimated Direct Construction Cost (DCC)				$ 489,567	
INDIRECT CONSTRUCTION COSTS					
General Requirements	@	10%	$ 48,957		
Bonds & Insurance	@	2%	$ 9,791		
Contractor Fee	@	6%	$ 29,374		
Estimated Indirect Construction Cost (ICC)				$ 88,122	
TOTAL ESTIMATED BID COST (DCC + ICC)					$ 577,689
OWNER COSTS					
Design Fees	@	7%	$ 34,270		
Design Contingency	@	10%	$ 48,957		
Permits & Administration	@	5%	$ 24,478		
Escalation (2018, 2019)	@	2%	$ 19,779		
Estimated Owner Soft Cost (OSC)				$ 127,483	
TOTAL ESTIMATED PROJECT COST (DCC + ICC + OSC)					$ 705,172

FORD'S POND MASTER PLAN
CITY OF SUTHERLIN

BASED ON OVERALL SITE PLAN AND SE COMMUNITY PARK PLAN

October 5, 2017

PROJECT 2A

SOUTHEAST COMMUNITY PARK - PHASE 1

ITEM	QTY	UNIT	UNIT COST	TOTAL COST	NOTES
DIRECT CONSTRUCTION COSTS					
Demolition	1	LS	$ 62,391	$ 62,391	
Earthwork	1	LS	$ 71,111	$ 71,111	
Asphalt Parking	22200	SF	$ 3.76	$ 83,509	base rock included
Asphalt Paths	13122	SF	$ 2.84	$ 37,240	base rock included
Concrete Stairs	1	LS	$ 23,950	$ 23,950	incl. railing and base
Site Utilities	1	AL	$ 80,000	$ 80,000	power, water, sanitary
Benches	14	LS	$ 1,500	$ 21,000	
Bicycle Racks	8	EA	$ 350	$ 2,800	
Restroom	1	EA	$ 125,000	$ 125,000	
Double Gate	1	EA	$ 8,760	$ 8,760	lover type, 14'w
Estimated Direct Construction Cost (DCC)				$ 515,761	
INDIRECT CONSTRUCTION COSTS					
General Requirements	@	10%	$ 51,576		
Bonds & Insurance	@	2%	$ 10,315		
Contractor Fee	@	6%	$ 30,946		
Estimated Indirect Construction Cost (ICC)				$ 92,837	
TOTAL ESTIMATED BID COST (DCC + ICC)					$ 608,598
OWNER COSTS					
Design Fees	@	8%	$ 41,261		
Design Contingency	@	10%	$ 51,576		
Permits & Administration	@	5%	$ 25,788		
Escalation (2018, 2019)	@	2%	$ 20,837		
Estimated Owner Soft Cost (OSC)				$ 139,462	
TOTAL ESTIMATED PROJECT COST (DCC + ICC + OSC)					$ 748,059

FORD'S POND MASTER PLAN
CITY OF SUTHERLIN

BASED ON OVERALL SITE PLAN AND SE COMMUNITY PARK PLAN

October 5, 2017

PROJECT 2B

SOUTHEAST COMMUNITY PARK - PHASE 2

ITEM	QTY	UNIT	UNIT COST	TOTAL COST	NOTES
DIRECT CONSTRUCTION COSTS					
Asphalt Parking	14800	SF	$ 3.76	$ 55,672	base rock included
Asphalt Paths	8748	SF	$ 2.84	$ 24,827	base rock included
Concrete Edge	1850	LF	$ 6.00	$ 11,100	surrounding playground
Nature Play Equipment	1	AL	$ 50,000	$ 50,000	
Nature Play Surfacing - Engineered Wood Fiber	200	CY	$ 85.00	$ 17,000	base rock included
Lawn	85000	SF	$ 1.44	$ 122,463	inc. temp. irrigation
Restoration	3.4	AC	$ 6,500	$ 22,383	no irrigation
Plantings	1000	SF	$ 8.24	$ 8,241	inc. temp. irrigation
Picnic Shelter - small	1	EA	$ 15,000	$ 15,000	
Estimated Direct Construction Cost (DCC)				$ 326,686	
INDIRECT CONSTRUCTION COSTS					
General Requirements	@	10%	$ 32,669		
Bonds & Insurance	@	2%	$ 6,534		
Contractor Fee	@	6%	$ 19,601		
Estimated Indirect Construction Cost (ICC)				$ 58,803	
TOTAL ESTIMATED BID COST (DCC + ICC)					$ 385,489
OWNER COSTS					
Design Fees	@	8%	$ 26,135		
Design Contingency	@	10%	$ 32,669		
Permits & Administration	@	5%	$ 16,334		
Escalation (2018, 2019)	@	2%	$ 13,198		
Estimated Owner Soft Cost (OSC)				$ 88,336	
TOTAL ESTIMATED PROJECT COST (DCC + ICC + OSC)					$ 473,825

FORD'S POND MASTER PLAN
CITY OF SUTHERLIN

BASED ON OVERALL SITE PLAN AND SE COMMUNITY PARK PLAN

October 5, 2017

PROJECT 2C

SOUTHEAST COMMUNITY PARK - PHASE 3

ITEM	QTY	UNIT	UNIT COST	TOTAL COST	NOTES
DIRECT CONSTRUCTION COSTS					
Nature Play Equipment	1	AL	$ 50,000	$ 50,000	
Nature Play Surfacing - Engineered Wood Fiber	150	CY	$ 85.00	$ 12,750	base rock included
Art Installation	1	AL	$ 5,000	$ 5,000	
Amphitheater Stage	1	EA	$ 30,000	$ 30,000	
Monument Sign	1	EA	$ 10,000	$ 10,000	
Picnic Shelter - large	1	EA	$ 90,000	$ 90,000	
Picnic Shelter - small	1	EA	$ 15,000	$ 15,000	
Interpretive Signage	1	AL	$ 5,000	$ 5,000	
Estimated Direct Construction Cost (DCC)				$ 217,750	
INDIRECT CONSTRUCTION COSTS					
General Requirements	@	10%	$ 21,775		
Bonds & Insurance	@	2%	$ 4,355		
Contractor Fee	@	6%	$ 13,065		
Estimated Indirect Construction Cost (ICC)				$ 39,195	
TOTAL ESTIMATED BID COST (DCC + ICC)					$ 256,945
OWNER COSTS					
Design Fees	@	8%	$ 17,420		
Design Contingency	@	10%	$ 21,775		
Permits & Administration	@	5%	$ 10,888		
Escalation (2018, 2019)	@	2%	$ 8,797		
Estimated Owner Soft Cost (OSC)				$ 58,880	
TOTAL ESTIMATED PROJECT COST (DCC + ICC + OSC)					$ 315,825

FORD'S POND MASTER PLAN
CITY OF SUTHERLIN

BASED ON OVERALL SITE PLAN AND SE COMMUNITY PARK PLAN

October 5, 2017

PROJECT 3

NORTH FRONTAGE

ITEM	QTY	UNIT	UNIT COST	TOTAL COST	NOTES
DIRECT CONSTRUCTION COSTS					
Demolition	1	LS	$ 51,993	$ 51,993	
Earthwork	1	LS	$ 34,533	$ 34,533	
Asphalt Parking	67500	SF	$ 3.76	$ 253,877	
Restoration	3.3	AC	$ 6,500	$ 21,637	
Tree Plantings	25	EA	$ 250.00	$ 6,250	
Fishing Pier	1	EA	$ 60,000	$ 60,000	
Boat Launch	1	AL	$ 150,000	$ 150,000	
Bicycle Racks	2	EA	$ 350	$ 700	
Benches	2	EA	$ 1,500	$ 3,000	
Restroom Enclosure	1	EA	$ 15,000	$ 15,000	
Kiosk	2	EA	$ 8,500	$ 17,000	
Monument Sign	1	EA	$ 10,000	$ 10,000	
Art Installation	1	AL	$ 5,000	$ 5,000	
Interpretive Signage	1	AL	$ 5,000	$ 5,000	
Double Gate	2	EA	$ 8,760	$ 17,520	lover type, 14'w
Estimated Direct Construction Cost (DCC)				$ 651,510	
INDIRECT CONSTRUCTION COSTS					
General Requirements	@	10%	$ 65,151		
Bonds & Insurance	@	2%	$ 13,030		
Contractor Fee	@	6%	$ 39,091		
Estimated Indirect Construction Cost (ICC)				$ 117,272	
TOTAL ESTIMATED BID COST (DCC + ICC)					$ 768,781
OWNER COSTS					
Design Fees	@	8%	$ 52,121		
Design Contingency	@	10%	$ 65,151		
Permits & Administration	@	5%	$ 32,575		
Escalation (2018, 2019)	@	2%	$ 26,321		
Estimated Owner Soft Cost (OSC)				$ 176,168	
TOTAL ESTIMATED PROJECT COST (DCC + ICC + OSC)					$ 944,950

FORD'S POND MASTER PLAN
CITY OF SUTHERLIN

BASED ON OVERALL SITE PLAN AND SE COMMUNITY PARK PLAN

October 5, 2017

PROJECT 4

WEST HILLSIDE

ITEM	QTY	UNIT	UNIT COST	TOTAL COST	NOTES
DIRECT CONSTRUCTION COSTS					
Native Tertiary Paths	21226	SF	$ 0.50	$ 10,613	
Restoration	17.2	AC	$ 2,500	$ 43,044	
Benches	3	EA	$ 1,500	$ 4,500	
Picnic Table	2	EA	$ 1,500	$ 3,000	
Interpretive Signage	1	AL	$ 5,000	$ 5,000	
Estimated Direct Construction Cost (DCC)				$ 66,157	
INDIRECT CONSTRUCTION COSTS					
General Requirements	@	10%	$ 6,616		
Bonds & Insurance	@	2%	$ 1,323		
Contractor Fee	@	6%	$ 3,969		
Estimated Indirect Construction Cost (ICC)				$ 11,908	
TOTAL ESTIMATED BID COST (DCC + ICC)					$ 78,065
OWNER COSTS					
Design Fees	@	5%	$ 3,308		
Design Contingency	@	10%	$ 6,616		
Permits & Administration	@	5%	$ 3,308		
Escalation (2018, 2019)	@	2%	$ 2,673		
Estimated Owner Soft Cost (OSC)				$ 15,904	
TOTAL ESTIMATED PROJECT COST (DCC + ICC + OSC)					$ 93,969

FORD'S POND MASTER PLAN
CITY OF SUTHERLIN

BASED ON OVERALL SITE PLAN AND SE COMMUNITY PARK PLAN — October 5, 2017

PROJECT 5

SECONDARY TRAILS

ITEM	QTY	UNIT	UNIT COST	TOTAL COST	NOTES
DIRECT CONSTRUCTION COSTS					
Demolition	1	LS	$ 25,482	$ 25,482	
Earthwork	1	LS	$ 22,012	$ 22,012	
Crushed Rock Paths	21225.6	SF	$ 1.25	$ 26,532	
Restoration	2.9	AC	$ 6,500	$ 19,004	
Viewing Platform	2	EA	$ 12,000	$ 24,000	
Bird Blind	2	EA	$ 6,000	$ 12,000	
Picnic Shelter	1	EA	$ 15,000	$ 15,000	
Benches	8	EA	$ 1,500	$ 12,000	
Interpretive Signage	1	AL	$ 5,000	$ 5,000	
Estimated Direct Construction Cost (DCC)				$ 161,030	
INDIRECT CONSTRUCTION COSTS					
General Requirements	@	10%	$ 16,103		
Bonds & Insurance	@	2%	$ 3,221		
Contractor Fee	@	6%	$ 9,662		
Estimated Indirect Construction Cost (ICC)				$ 28,985	
TOTAL ESTIMATED BID COST (DCC + ICC)					$ 190,016
OWNER COSTS					
Design Fees	@	5%	$ 8,052		
Design Contingency	@	10%	$ 16,103		
Permits & Administration	@	5%	$ 8,052		
Escalation (2018, 2019)	@	2%	$ 6,506		
Estimated Owner Soft Cost (OSC)				$ 38,712	
TOTAL ESTIMATED PROJECT COST (DCC + ICC + OSC)					$ 228,727

FORD'S POND MASTER PLAN
CITY OF SUTHERLIN

BASED ON OVERALL SITE PLAN AND SE COMMUNITY PARK PLAN

October 5, 2017

PROJECT 6

WETLAND ENHANCEMENT

ITEM	QTY	UNIT	UNIT COST	TOTAL COST	NOTES
DIRECT CONSTRUCTION COSTS					
Boardwalk	2554	SF	$ 80	$ 204,320	
Viewing Platform	2	EA	$ 12,000	$ 24,000	
Art Installation	1	EA	$ 5,000	$ 5,000	
Wetland Enhancement	4.2	AC	$ 20,000	$ 84,940	
Interpretive Signage	1	AL	$ 10,000	$ 10,000	
Estimated Direct Construction Cost (DCC)				$ 328,260	
INDIRECT CONSTRUCTION COSTS					
General Requirements	@	10%	$ 32,826		
Bonds & Insurance	@	2%	$ 6,565		
Contractor Fee	@	6%	$ 19,696		
Estimated Indirect Construction Cost (ICC)				$ 59,087	
TOTAL ESTIMATED BID COST (DCC + ICC)					$ 387,347
OWNER COSTS					
Design Fees	@	8%	$ 26,261		
Design Contingency	@	10%	$ 32,826		
Permits & Administration	@	5%	$ 16,413		
Escalation (2018, 2019)	@	2%	$ 13,262		
Estimated Owner Soft Cost (OSC)				$ 88,762	
TOTAL ESTIMATED PROJECT COST (DCC + ICC + OSC)					$ 476,109

CAMERON McCARTHY LANDSCAPE ARCHITECTURE & PLANNING

SUSTAINABLE CRITERIA CHECKLIST

Project Name:	**FORD'S POND MASTER PLAN**	**Date: 10/5/2017**	
Job #:	1709G	**Reviewer:** CGM	
Client Info:	CITY OF SUTHERLIN	**Design Stage:** Master Plan	
Document:	**CONCEPTUAL MASTER PLAN**	**Design Category:** Conceptual Design	

DESCRIPTION:

These standards are developed from recommendations contained in the Oregon Parks and Recreation Department's, "Developing Sustainable park Systems in Oregon." This document was included as Appendix D. to the 2013-2017 Oregon Statewide Comprehensive Outdoor Recreation Plan. The guidelines are modified to ensure they are relevant to the project.

Some of these criteria are addressed during the master planning phase of the project, however the majority of the criteria will be addressed during design Comments are included to define how the criteria is/could be met or why the criteria is not addressed at all.

STANDARD #	CRITERIA	TO BE ADDRESSED IN: MASTER PLAN	TO BE ADDRESSED IN: DESIGN DEVELOPMENT	NOT ADDRESSED	COMMENTS
DESIGN					
1	Restore habitat and maximize open space.	X			Park improvements are consolidated in one central locations within the park, consisting of approx. 5 acres. The remaining 104 acres are be left as natural area to be managed and restored by the City and Friend's of Ford's Pond.
2	Design for alternative transportation including bicycle storage and plug-in facilities for electric vehicles. Provide marked spots to encourage carpooling.			X	
3	Consider issues regarding the lifecycle of materials in order to ensure most appropriate and least impactful selection.		X		
4	Design buildings and park features to incorporate and use renewable energy.		X		Consider for lighting and restroom facilities.
5	Design water efficient, low maintenance landscaping.		X		
6	Design landscaping first utilizing native plants and then considering other appropriate drought resistant species.		X		
7	Evaluate the feasibility of greywater collection and use for landscape irrigation.			X	Picnic and restroom structures are currently the only proposed, roofed structures onsite. Due to their limited size graywater collection for reuse is not feasible.
8	Design to encourage and permit the collection of recyclables.		X		Coordinate with City to locate recycling receptacles to be located at key, easy to access locations at the park.
9	Reduce light pollution.		X		Limit lighting in the park to locations only required for safety.
SITE					
10	Early in the siting process carry out a careful site evaluation: solar access, soils, vegetation, important natural areas, etc.	X			
11	Provide for erosion and sedimentation control during all phases of the project.		X		Provide sediment and erosion control plan for construction.
12	Manage storm water on site and provide responsible on-site water management.		X		
13	Control and manage known invasive plants found on site.		X		Address removal of invaisive species/noxious weeds in project design specifications.
15	Leave the most pristine areas untouched, and look for areas that have been previously damaged to build on.	X		X	Areas with steep slopes or sensitive habitat were identified during the master planning process. No new improvements are proposed in these areas.
16	Seek to restore or mitigate damaged ecosystems.		X		Specify restoration of areas impacted during development.
17	Minimize automobile dependence and locate park and recreation facilities to provide access to public transportation, bicycle paths, and walking access to basic services. Provide for site accessibility, safety, and wayfinding.	X	X	X	There is currently no bus service provided to Ford's Pond. Bicycle and Pedestrian improvements will be made throughout the park. Trails to be designed to accommodate safe and accessible routes to key features in the park and to neighboring school properties. Wayfinding to be considered and included in the design development phases of the project. The City will be updating their Transportation System Plan and expansion of the UTrans bus system may be considered.
18	Locate park buildings to minimize environmental impact.	X	X		Restrooms and shelters are sited at locations requiring minimal amounts of grading and routing of new utilities.
19	Provide outdoor spaces for social interaction and opportunities for outdoor physical activity.	X	X		
MATERIALS AND LANDSCAPING					
20	Utilize water-efficient landscaping.		X		
21	Increase the number of native trees onsite		X		
22	Install centrally controlled irrigation system.			X	
23	Prioritize use of impervious surfaces	X	X		Impervious surfaces will only be used in select, necessary locations to support: limited service vehicle access, small parking facility, and some recreation improvements.

CAMERON McCARTHY LANDSCAPE ARCHITECTURE & PLANNING

SUSTAINABLE CRITERIA CHECKLIST

Project Name:	**FORD'S POND MASTER PLAN**	**Date: 10/5/2017**	
Job #:	1709G	**Reviewer:** CGM	
Client Info:	CITY OF SUTHERLIN	**Design Stage:** Master Plan	
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Some of these criteria are addressed during the master planning phase of the project, however the majority of the criteria will be addressed during design Comments are included to define how the criteria is/could be met or why the criteria is not addressed at all.

STANDARD #	CRITERIA	TO BE ADDRESSED IN: MASTER PLAN	TO BE ADDRESSED IN: DESIGN DEVELOPMENT	NOT ADDRESSED	COMMENTS
24	Use durable products and building materials which have a record of longer life and reduced maintenance costs.		X		Select long life and vandal-proof materials for all built features and amenities provided in park, including: shelters, play equipment, kiosks, benches, tables, etc.
25	Where possible, select building materials that will require little maintenance (painting, retreatment, waterproofing, etc.), or whose maintenance will have minimal environmental impact.		X		Consider for all built features and amenities provided in park, including: shelters, play equipment, kiosks, benches, tables, etc.
26	To reduce transportation costs and energy use and pollution generation first look to purchase locally or state-wide rather than materials and products imported to the area.		X		
27	Where possible use building products made from recycled materials.		X		
28	Avoid materials that will off gas pollutants such as solvent based finishes, adhesives, carpeting, particle board, and many other building products that release formaldehyde and volatile organic compounds into the air.		X		
29	Use lumber from independently certified well-managed forests. Avoid lumber products produced from old growth timber when acceptable alternative exist. Such as engineered wood which can be substituted for old growth Douglas fir.		X		
30	Minimize use of pressure treated lumber.		X		
31	Use detailing that will prevent soil contact and rot and where possible, use alternatives such as recycled plastic lumber.		X		
32	Install high efficiency and/or solar lights.		X		Provide minimal lighting overall. If lighting is required or desired at locations such as shelters, restrooms, or parking areas, provide high efficiency and/or solar options that produce minimal light pollution.
JOBSITE AND OPERATIONAL PRACTICES					
33	Protect trees and topsoil during site work by fencing of the drip line around them.		X		Provide Tree Protection Plan
34	Avoid use of pesticides and other chemicals that may leach into the groundwater.		X	X	To be specified during design development. Future management to be conducted by City and Friend's of Ford's Pond.
35	Minimize job site waste.		X		Grade site to balance cut/fill as best possible. Master Plan utilizes over-burden from another City project.
36	Find out where different materials can be taken for recycling, and educate workers about recycling procedures. Donate salvaged materials to low-income housing projects, theater groups, etc.			X	No materials currently exist on site.
37	Recycle organic matter generated during site operations and maintenance.	X	X		Use trees or other on site material for construction of Nature Play Areas.

Central Avenue
&
Downtown Improvements

PowerPoint presentation only

SUTHERLIN SCHOOL DISTRICT PRESENTATION

(Verbal)

Consent Agenda

CITY OF SUTHERLIN
Regular City Council Meeting
Sutherlin Civic Auditorium
Monday, October 9, 2017 – 7:00pm

COUNCIL MEMBERS:
Tom Boggs, Wayne Luzier, Dennis Riggs, Forrest Stone, Travis Tomlinson, Seth Vincent
MAYOR: Todd McKnight

CITY STAFF: City Manager, Jerry Gillham
Senior City Recorder, Debbie Hamilton
City Recorder, Diane Harris
Assistant CM/Finance Director, Dan Wilson
Community Development Director, Brian Elliott
Community Development Specialist, Kristi Gilbert
Public Works Superintendent, Aaron Swan
Interim Police Chief, Troy Mills
Interim Fire Chief, Mike Lane
Contracted Do Co Planner, Joshua Shaklee
City Attorney, Chad Jacobs (via Skype)

Audience: Keith Cubic, Allen & Gale Peterson, Jim & Beth Houseman, Jeff Chase, Pamela Semas, Gary & Michelle Dagel, John McDonald, Mark Koch, Jerry Freamon, Tadd Held

Meeting called to order by Mayor McKnight at 7:00pm.

Flag Salute:
Roll Call: All present
Introduction of Media: None

PUBLIC COMMENT (agenda items only)
- None

PRESENTATIONS
- **Business Registration Committee Update**

Business Registration Committee Chair, Gary Dagel, provided the Committee's list of criteria on what they felt was acceptable, not acceptable, and for new and existing businesses.
Questions:
- How will the word get out to businesses in making sure they follow through with registering? ***Chamber Board volunteered to contact businesses.***
- Chamber will then report back to Council? ***Correct.***
- Will a link be added on City's website for registrations? ***Yes, believe the City will want this available.***
- What if a person is occupying a commercial building but doesn't have a business? ***Feels it is important to also have their contact information for public safety purposes.***
- Would like clarification on statement "Allow existing businesses to continue without changing the rules"? ***Our thought is it would be adding a rule by making existing businesses register.*** Regardless if it's an old or new business, whole point of registering is to have contact information for public safety personnel. ***This is a general statement; no one seems opposed to registering.***
- Concerned about "no background checks"; City doesn't necessarily receive information from other government agencies, feels some businesses should have them. ***The thought is City doesn't need that information; that process has already gone through the state or other agencies.***
- At what stage will public safety receive registration information? ***Would like to update as it's collected, City should be involved along the way.***
- Suggested adding "type of business" to the form.

- How much will Staff be affected regarding time and costs? ***Community Development Director, Brian Elliott - Each situation is unique, this proposed process will ultimately save time and is a huge step in the right direction. Would like to suggest adding a signature line on form for Staff to sign, also include "industrial" where "commercial" is mentioned.***
- Feels it's important to have an ordinance making the property owner accountable in case business owner is out of compliance. Property owner to be responsible for informing the City that a business is going into their building.

Council members thanked Dagel and the committee for all of their hard work putting this together.
City Manager, Jerry Gillham – Staff will put together an ordinance and coordinate with Chamber and Committee making sure it meets their expectations. Will present to Council in next couple of months.

PUBLIC HEARING

- **Urban Growth Boundary**

Mayor McKnight opened the Public Hearing at 7:31pm.
Staff Report – Elliott explained Public Hearing's purpose, opportunities, and the benefits it could provide to the community. Douglas County Planning Director, Keith Cubic, Douglas County Planning Manager and City's contracted Planner, Joshua Shaklee, and Community Development Specialist, Kristi Gilbert were in attendance to present the staff report and answer questions.
City Recorder, Diane Harris, was given Exhibits 1 through 14 for the record by Shaklee before explaining the Urban Growth Boundary (UGB) exchange project:

- City is taking an area out of the UGB and exchanging it for a proportionate area.
- Exchange involves approximately 479 acres; 302 acres (2 properties) to be moved out of the UGB. One being 202 acres at Ford's Pond (5 acres will remain in city UGB for future park facilities) and 128 acre parcel off State Street (28 acres will remain and 100 acres removed).
- In exchange 177 acres will be added to the UGB from area southwest of Exit 136.
- Purpose of the exchange is to facilitate more concentrated development in the UGB, allowing better utilization of city services and more orderly expansion for future services.
- 39 properties (150 acres) will annex into the UGB and are subject to zone changes and comprehensive plan designations.
- Staff report addresses all applicable standards and provisions from Sutherlin Develop. Code, OR Revised Statutes, OR Admin. Rules, consistent with Statewide Planning Goals, City and County Comp. Plan.
- One property owner requested not being annexed.
- The record reflects both Sutherlin and County Planning Commissions heard and made recommendations to City Council to approve the actions with 3 conditions:
    1. To complete a TIS (Traffic Impact Study) prior to issuance of any changes.
    2. City to host Q & A Session to answer any questions (session was held September 19th).
    3. Additional properties, 1814 & 1818 Trails End Lane, to be included in UGB amendment, annexation, and zone changes.

Purpose of the TIS is to address any impacts from the changes; as a result the exchange project will be delayed several months. City has contracted with Sandau Engineering to complete the study.
1st reading of ordinance adopting UGB exchange will be presented at January 8th Council meeting. After the 2nd reading and adoption the proposal will be sent to Land Conservation and Development.
Mayor McKnight asked if any Council member had ex parte contact, conflicts of interest or bias to declare. None voiced.
Mayor McKnight called for public comment. None received.
Questions:

- What was the public's general consensus at the Q & A Session? ***Quite a few property owners attended; many with questions for clarification purposes.***
- Property that did not want annexation, therefore creating an island was questioned***. Cubic – If islands are created they are phased in over time. This particular location is a peninsula rather than island and attached to county unincorporated area. There is no preclusion in State Law to prohibit either action.***

DRAFT

- UGB ends at Trails End Lane and not at the road just past that with only 2 homes on it? ***Gilbert – You are running into different zoning issues; the exchange process is a simplified version (zoning for like zoning). When you have to incorporate commercial zones they aren't the same***.
- Is changing the zoning difficult? ***It will have to go through plan amendment and zone change processes. Gilbert explained the processes involved.***

City Manager confirmed a motion is needed for the hearing's continuance. ***Cubic – Since this is a legal procedure a motion is needed to continue the Public Hearing to a date certain.***

MOTION made by Councilor Luzier to continue Public Hearing to Monday, January 8, 2018, at 7:00pm in Civic Auditorium; second by Councilor Vincent.
Discussion: None
In Favor: Councilors Luzier, Riggs, Vincent, Stone, Boggs, Tomlinson, and Mayor McKnight
Opposed: None
Motion carried unanimously.

CONSENT AGENDA

- **September 11, 2017 Minutes – Regular Meeting**
- **September 25, 2017 Minutes – Workshop Meeting**

MOTION made by Councilor Boggs to approve Consent Agenda; second by Councilor Riggs.
In Favor: Councilors Luzier, Riggs, Vincent, Stone, Boggs, Tomlinson, and Mayor McKnight
Opposed: None
Motion carried unanimously.

COUNCIL BUSINESS

- **Resolution 2017.14 – Technical Assistant Grant Approval**

Staff Report – Elliott summarized the Staff Report and proposed resolution.

MOTION made by Councilor Luzier to approve Resolution 2017.14 – Technical Assistant Grant as presented; second by Councilor Stone.
Discussion: Councilor Boggs – How much is the grant? ***Elliott – Between $55,000 and $75,000 with in-kind and/or cash match from City. Exact amount will be determined during grant process.***
Cubic – Part of the grant requirements from DLCD (Division of Land Conservation Department) includes a governing body letter of support with the application. Typically the exact amount isn't stipulate but suggestion is to match up to 50% for a better opportunity. These are competitive grants.
City Manager – Grant is importance in moving forward with UGB and Comprehensive Plan changes.
In Favor: Councilors Luzier, Riggs, Vincent, Stone, Boggs, Tomlinson, and Mayor McKnight
Opposed: None
Motion carried unanimously.

- **Downtown Tree Grate & Frame Purchase Approval**

Staff Report – Elliott – Summarized the Staff Report and request for Council approval. Brick planters will be removed and replaced with a more ADA (American Disabilities Act) compliant in-ground tree grates.

MOTION made by Councilor Luzier to approve purchase of tree grates/frames for $52,389.68 as presented; second by Councilor Vincent.
Discussion: Councilor Tomlinson – Is this in the budget or in addition to? ***This is already in the budget.***
Councilor Stone – Why is there a difference in the amount of grates vs. frames? ***Public Works Superintendent, Aaron Swan – City currently has some frames installed without grates.***
Councilor Tomlinson – New trees will replace the old? ***Yes, a picture of the trees is on City's website.***
In Favor: Councilors Luzier, Riggs, Vincent, Stone, Boggs, Tomlinson, and Mayor McKnight
Opposed: None
Motion carried unanimously.

DRAFT

REPORTS

- **Library Operations Update**

City Manager – The new Library Board held their first meeting, it was very positive. In partnership with the School District, City has agreed to try and help fund a temporary, part-time, staff person (Library Operations Manager – LOM) until the board can get their private non-profit going and fundraise to pay for this position. The intent is to transfer this job and operations over to this new entity. This is for only 1-year; Staff will bring Council a budget adjustment for around $15,000 to pay for proportionate costs. Library Board knows City is moving forward, however did not feel comfortable making a commitment without Council's acceptance. It is our hope Council will be supportive in order to keep the library going.
Questions:

- Is there a chance of reimbursement? ***City Manager – There is a possibility, however, no guarantees, the Board is very motivated to have a system in place. School District's staff person will oversee and assist the LOM. City has advertised and received applications for the position. Library Board will interview and make recommendations to Council on who to hire.***

- **League of Oregon Cities Conference**

Mayor McKnight, Councilors Vincent and Riggs, and City Manager attended the annual LOC conference. City Manager provided a brief report explaining its importance in having the ability to bring up talking points and build relationships with key people that impact the city. History involving DEQ's water standard requirements and costs involved was shared by City Manager who reported by paying attention, advocating, and participating, the city saved approximately $5 million regarding those requirements.

- Councilor Vincent – Great learning process, attended training, spoke other city's councilors, Q & A session was very educational, appreciate being able to attend.
- Councilor Riggs – Attended a class on Emergency Preparedness, learned a lot and came back with ideas to share with Staff who is currently working on this project.

CITY COUNCIL COMMENTS

Councilor Boggs –

- None

Councilor Tomlinson –

- None.

Councilor Luzier –

- None.

Councilor Riggs –

- Is there an update regarding Metzler Computer's planter taken during the sidewalk cleanup project? ***Swan – Stopped by his business to discuss the issue, however he was not there. Do not have the planter, most were old and damaged, but would like to discuss a possible replacement for him.*** He is now present at the business Wednesday through Friday.

Councilor Vincent –

- Would like to thank those responsible for the flags in the community.
- Splash Park has been great, kids are sad to see it closed until next summer, but it's all good.

Councilor Stone –

- Would like to thank staff for replacing the stickers on Sutherlin sign at Exit 135.
- The North Comstock project started about 6 years ago, and is now completed and looks good.
- Would like reiterate having an ordinance brought to Council regarding commercial & industrial property owners being accountable for businesses that lease/rent their property.
- Acknowledged the recent tragic event in Las Vegas, our citizens certainly know what that is like.

Mayor McKnight –

- Would like to thank Community Relations Director, Debbie Hamilton, for all of the project updates on Facebook and keeping the public informed.

PUBLIC COMMENT –

- Jeff Chase reported a citizen recently spoke to him about drainage issues at 500-block on E Central. She said ditches are not being maintained, this year drainage issues have been the worst

DRAFT

she's seen. ***City Manager questioned if that is actually Sutherlin Water Control District's jurisdiction. Swan – Ditches have been maintained every year in the past; however this year they were not. Understand where the area is, however feels that it will not be a big concern.***

ADJOURNMENT –
With no further business meeting adjourned at 8:10pm.

Mayor McKnight announced Council will take a 5-minute break before going into Executive Session ORS 192.660(2) (i) – Performance Evaluations of Public Officers and Employees.

Executive Session called to order at 8:16pm.

Executive Session adjourned at 8:29pm.

Approved: _____
Jerry Gillham, City Manager

Respectfully submitted by,

_____ _____
Diane Harris, City Recorder Todd McKnight, Mayor

DRAFT

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COUNCIL BUSINESS

126 E. Central Avenue
Sutherlin, OR 97479
541-459-2856
Fax: 541-459-9363
www.cityofsutherlin.com

City of Sutherlin

STAFF REPORT					
Re: Fire Station Concrete Approach				Meeting Date:	11-13-17
Purpose:	Action Item X	Workshop	Report Only	Discussion	Update
Submitted By: Aaron Swan, Public Works Superintendent				City Manager Review	X
Attachments:					

EXPLANATION

Three bids were solicited for a concrete approach in front of the fire station. Dustin Firch Construction was low bidder at $32,000. Guido construction also submitted a bid, Trever Co was contacted but did not submit a bid.

OPTIONS

To award Dustin Firch Construction the contract for $32,000 to build the concrete approach in front of the fire station.
Not award the contract.

SUGGESTED MOTION(S)

Motion to award the contract to Dustin Firch Construction for $32,000 as presented.

126 E. Central Avenue
Sutherlin, OR 97479
541-459-2856
Fax: 541-459-9363
www.cityofsutherlin.com

City of Sutherlin

STAFF REPORT					
Re: Fire Station front parking lot paving project				Meeting Date:	11-13-17
Purpose:	Action Item X	Workshop	Report Only	Discussion	Update
Submitted By: Aaron Swan, Public works Superintendent				City Manager Review	
Attachments:					

EXPLANATION

Two bids were solicited for construction a new asphalt surface in the front parking lot of the fire station. Knife River was low bidder at $65,066. Guido Construction returned a bid of $66,500.

OPTIONS

Award the contract to Knife River for $65,066 to pave the new surface in front of the fire station.
Don't award the contract.

SUGGESTED MOTION(S)

Motion to award the contract to Knife River for the bid price of $65,066 as presented.

126 E. Central Avenue
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City of Sutherlin

STAFF REPORT					
Re: Resolution to adopt the Douglas County 2016 Multi-Jurisdictional Natural Hazard Mitigation Plan (NHMP)				Meeting Date:	11/13/2017
Purpose:	Action Item ☒	Workshop ☐	Report Only ☐	Discussion ☐	Update ☐
Submitted By: Brian Elliott, Community Development				City Manager Review	☒
Attachments: Resolution 2017.15, FEMA Letter & Mitigation Plan					

WHAT IS BEING ASKED OF COUNCIL?

Co-Adoption of the Douglas County 2016 Multi-Jurisdictional Natural Hazard Mitigation Plan (NHMP).

EXPLANATION

The Douglas County NHMP is organized into a single document which is intended to be co-adopted as the NHMP for Douglas County as well as each of the twelve incorporated cities within Douglas County. While it is a single document representing multiple jurisdictions, it contains the necessary information for each individual city's mitigation planning purposes.

The planning process for the 2016 Multi-jurisdictional NHMP was specifically designed to provide the most efficient and effective coordination and input. The NHMP is an important factor of the long-range planning program, and with adequate input from the county and each individual city during the process, it is understood that ultimately each jurisdictions decision making body (City Council/Board of Commissioners) will become the implementers of this document.

OPTIONS

Approve Resolution 2017.15 to adopt the Douglas County 2016 Multi-jurisdictional Natural Hazard Mitigation Plan (NHMP).

Not approve Resolution 2017.15 to adopt the Douglas County 2016 Multi-jurisdictional Natural Hazard Mitigation Plan (NHMP).

SUGGESTED MOTION(S)

To approve Resolution 2017.15 to adopt the Douglas County 2016 Multi-jurisdictional Natural Hazard Mitigation Plan (NHMP).

U.S. Department of Homeland Security
FEMA Region 10
130 – 228th Street, SW
Bothell, Washington 98021

FEMA

August 7, 2017

Ms. Angie Lane
State Hazard Mitigation Officer
Oregon Military Department
Office of Emergency Management
P.O. Box 14370
Salem, Oregon 97309

Dear Ms. Lane:

As requested, on August 7, 2017, the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA), Region 10, completed a pre-adoption review of the ***Douglas County Multi-Jurisdictional Hazard Mitigation Plan.*** This letter serves as Region 10's commitment to approve the plan upon receiving documentation of its adoption by the community. The plan successfully contains the required criteria, excluding the adoption, for hazard mitigation plans, as outlined in Code of Federal Regulation Title 44 Part 201.

Once FEMA approves the plan, the communities are eligible for mitigation project grants.

Please contact our Regional Mitigation Planning Program Manager, Brett Holt, at (425) 487-4553 with any questions.

Sincerely,

8/7/201[redacted]

X [redacted]

[redacted] TAMRA D BIASCO

Tamra Biasco
Chief, Risk Analysis Branch
Mitigation Division

AS

RESOLUTION NO. 2017.15

A RESOLUTION ADOPTING THE DOUGLAS COUNTY 2016 MULTI-JURISDICTIONAL NATURAL HAZARD MITIGATION PLAN

IT APPEARING to the City Council, City of Sutherlin Oregon, that the proposed Multi-Jurisdictional Natural Hazard Mitigation Plan, has been developed collaboratively between Federal, Tribal, State, and Local Government, and has included County/City citizen involvement; and

IT FURTHER APPEARING to the City Council that the proposed Douglas County 2016 Multi-Jurisdictional Natural Hazard Mitigation Plan was developed under the guidelines of the FEMA Local Mitigation Plan Review Guide which is taken from the planning requirements of Title 44 Sub-chapter D of the Code of Federal Regulations;

IT FURTHER APPEARING that the Douglas County 2016 Multi-Jurisdictional Natural Hazard Mitigation Plan is in the interest of the citizens of Douglas County and the City of Sutherlin;

NOW, THEREFORE, the City Council of the City of Sutherlin, Oregon does hereby proclaim and declare the Douglas County 2016 Multi-Jurisdictional Natural Hazard Mitigation Plan is adopted by RESOLUTION in the City of Sutherlin, Oregon as described in the attached Exhibit A.

PASSED BY CITY COUNCIL OF THE CITY OF SUTHERLIN, OREGON

APPROVED BY MAYOR ON THIS 13TH DAY OF NOVEMBER, 2017.

_____

Mayor, Todd McKnight

ATTEST:

_____

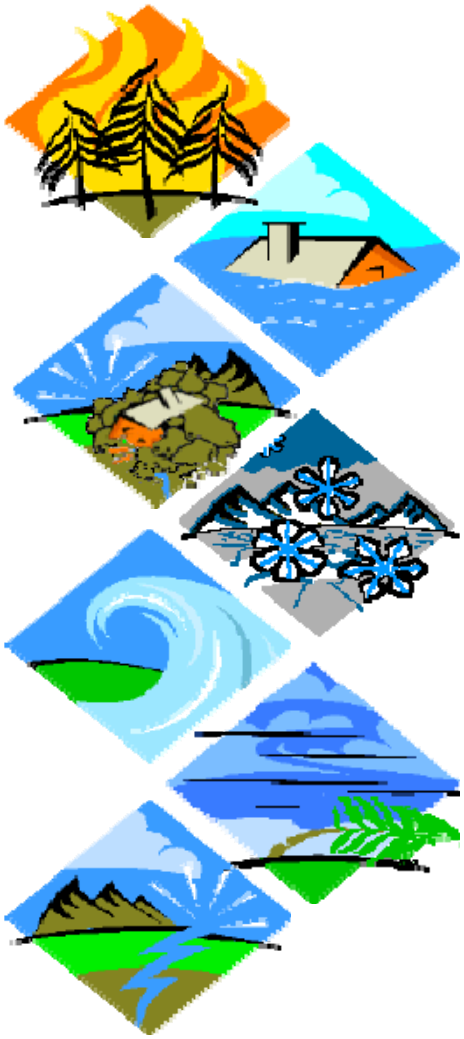
City Recorder, Diane Harris

EXHIBIT A

Douglas County 2016 Multi-Jurisdictional Natural Hazard Mitigation Plan

Douglas County

2016 Multi-Jurisdictional
Natural Hazard Mitigation Plan



Douglas County Sheriff's Office

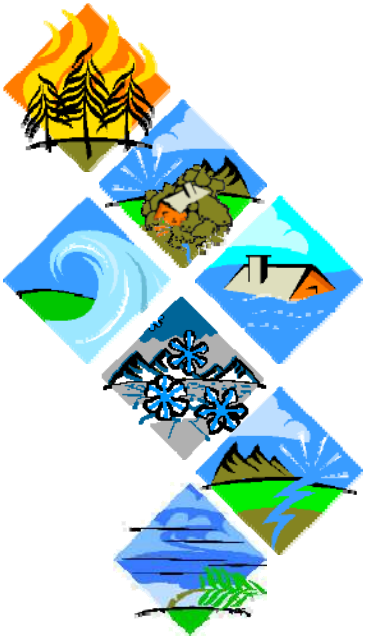
Revised in 2016 by:

- Douglas County Planning Department
- Douglas County Emergency Management

Funded through a partnership with the:

- University of Oregon's Partnership for Disaster Resilience
- Oregon Office of Emergency Management
- FEMA

Douglas County Multi-Jurisdictional Natural Hazard Mitigation Plan



Douglas County Steering Committee

Tim Freeman, Douglas County Board of Commissioners
Bill Clemens, Douglas County Building Department
Wayne Stinson, Douglas County Emergency Management
Cody Smith, Douglas County Public Works
Josh Heacock, Douglas County Public Works
Stuart Cowie, Douglas County Planning Department
Ron Thames, Roseburg Urban Sanitary Authority
Jack Musser, Douglas Education Service District
Pat Skrip, Douglas Fire Protection Association
Phil Bigler, Douglas Electric Cooperative
Darrin Neavoll, Oregon Department of Transportation
Gerry Wright, US Forest Service

Northern Cities Steering Committee

Ricky Hoffman, Douglas County Planning Department
Stuart Cowie, Douglas County Planning Department
Carl Patenode, City of Drain
Gary Trout, City of Elkton
Bette Keehley, City of Oakland
Terri Long, City of Oakland
Jessica Terra, City of Reedsport
Lisa Hawley, City of Sutherlin
Vicki Luther, City of Sutherlin
Kathleen Finley, City of Yoncalla

Southern Cities Steering Committee

Jennifer Arnold, Douglas County Planning Department
Stuart Cowie, Douglas County Planning Department
Janelle Evans, City of Canyonville
Jim Standard, City of Glendale
Ricky Hoffman, City of Myrtle Creek
Kathy Wilson, City of Riddle
John Lazur, City of Roseburg
Jennifer Arnold, City of Winston
Jamie Chartier, City of Winston

Project Coordinators

Stuart Cowie, Douglas County Planning Manager
Ricky Hoffman, Douglas County Planner

NHMP Plan Partners

The Douglas County Multi-Jurisdictional Natural Hazard Mitigation Plan includes all unincorporated areas of Douglas County. It is designed to have all twelve cities in Douglas County have the opportunity to co-adopt the NHMP making it a multi-jurisdictional plan.

It is our intention and hope that the cities of Douglas County can use this document to identify their own natural hazard vulnerabilities and risks, ultimately assessing and taking action through mitigation strategies and measures to reduce the threat of natural hazards.

Cities within Douglas County, Oregon

City of Canyonville	**City of Glendale**	**City of Reedsport**	**City of Sutherlin**
City of Drain	**City of Myrtle Creek**	**City of Riddle**	**City of Winston**
City of Elkton	**City of Oakland**	**City of Roseburg**	**City of Yoncalla**

Douglas County

Multi-Jurisdictional Natural Hazards Mitigation Plan

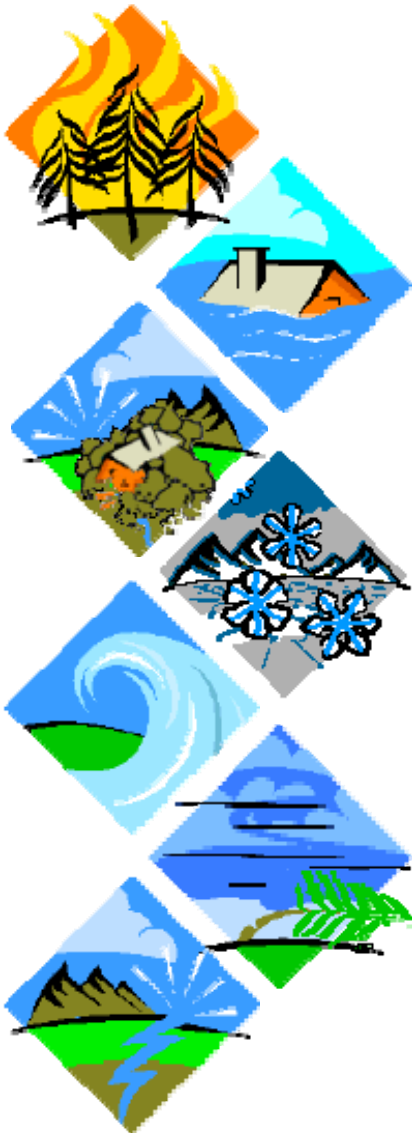


Table of Contents

Chapter 1: Introduction ..... Page 1.1
(Plan Development & Update Process)
Chapter 2: Community Profile ..... Page 2.1
(Douglas County Multi-jurisdictional)
Chapter 3: Hazard Assessment ..... Page 3.1
Drought ..... Page 3.7
Earthquake ..... Page 3.8
Flood ..... Page 3.14
Landslide ..... Page 3.24
Tsunami ..... Page 3.27
Wildfire ..... Page 3.29
Windstorms ..... Page 3.39
Winterstorms ..... Page 3.43
Chapter 4: Mitigation Plan Goals & Action Items ..... Page 4.1
Douglas County & City Action Item Tables ..... Page 4.3
Drought ..... Page 4.17
Earthquake ..... Page 4.19
Flood ..... Page 4.26
Landslide ..... Page 4.33
Tsunami ..... Page 4.36
Wildfire ..... Page 4.38
Windstorms ..... Page 4.42
Winterstorms ..... Page 4.46
Chapter 5: Plan Implementation & Maintenance ..... Page 5.1
Appendix A..... Page A.1
Appendix B..... Page B.1

Chapter 1: Introduction

Chapter 1 provides a general introduction to natural hazard mitigation planning in Douglas County. It addresses the Natural Hazard Mitigation Plan (NHMP) planning process requirements as contained in the Code of Federal Regulations (CFR). The chapter ends with a general description of how the plan is organized.

What is Natural Hazard Mitigation?

Hazard mitigation refers to long-term or permanent measures which reduce or alleviate the loss of life, property, and injury resulting from natural hazards through long and short-term strategies. Hazard mitigation reduces damages to communities and increases their safety and economic stability.

For existing development, hazard mitigation activities can mean things like retrofitting older buildings to withstand an earthquake, or elevating homes above the floodplain, thereby preventing future flood damage to the structure. For new development, hazard mitigation could include identifying high hazard areas prior to building site selection, thus providing a safer building site location.

Why develop a Mitigation Plan?

Engaging in mitigation activities provides jurisdictions with a number of benefits, including reduced loss of life, property, essential services, critical facilities and economic hardship; reduced short-term and long-term recovery and construction costs; increased cooperation and communication within the community through the planning process; and increased potential for state and federal funding for recovery and reconstruction projects.

The dramatic increase in costs associated with natural disasters over the past decades has fostered interest in identifying and implementing effective means for reducing vulnerability. It is impossible to predict exactly when natural hazard events will occur, or the extent to which they will affect community assets. However, with careful planning and collaboration among public agencies, private sector organizations, and citizens within the community, it is possible to minimize the losses that can result from natural hazards.

The Disaster Mitigation Act of 2000 and the regulations contained in Chapter 44 CFR, Section 201 require that jurisdictions maintain an approved NHMP in order to receive federal funds for mitigation projects. Local and federal approval of this plan ensures that the county and listed cities will remain eligible for pre and post-disaster mitigation project grants.

What Federal Requirements Does This Plan Address?

The Disaster Mitigation Act of 2000 is the federal law which addresses mitigation planning. It reinforces the importance of mitigation planning and emphasizes planning for natural hazards before they occur. As such, this Act established the Pre-Disaster Mitigation (PDM) grant program and new requirements for

the national post-disaster Hazard Mitigation Grant Program (HMGP). Section 322 of the Act specifically addresses mitigation planning at the state and local levels. State and local jurisdictions must have approved mitigation plans in place in order to qualify to receive post-disaster HMGP funds. Mitigation plans must demonstrate that State and local jurisdictions' proposed mitigation measures are based on a sound planning process that accounts for the risk to the individual and State and local jurisdictions' capabilities.

Chapter 44 CFR, Section 201.6, requires a local government to have an approved mitigation plan in order to receive HMGP project grants. Pursuant to Chapter 44 CFR, the NHMP planning processes shall include documentation of the public planning process used to develop the plan. The NHMP update must also contain a risk assessment, mitigation strategy and a plan maintenance process that has been formally adopted by the governing body of the jurisdiction. Lastly, the NHMP must be submitted to the Oregon Military Department – Office of Emergency Management (OEM) for initial plan review, and then to FEMA for federal approval.

What is the History of the Natural Hazard Mitigation Plan in Douglas County?

Douglas County adopted its first original NHMP in 2003. Subsequently it was approved by FEMA early in 2004. This initial document consisted of appendices for each of the 12 cities within the county. In order to maintain eligibility with FEMA the plan must be updated every five years. In 2009, an update of the original plan was completed. This update included the review of a 2008 natural hazard analysis and survey. Unlike the original plan, the 2009 update did not include the cities within the county, except for the City of Reedsport, which was added to the county plan as an addendum to the 2009 document. For more information about Douglas County's approach to city engagement, refer to the "Multi-Jurisdictional Capacity Building Approach" section below. During the 2016 NHMP update process, the City of Reedsport obtained separate acknowledgement of the city's NHMP. This was a priority for the City of Reedsport as they have unique circumstances that set their NHMP update on a separate timeline than this update process. However, the City of Reedsport also participated in this update process throughout the steering committee and other development phases of the multi-jurisdictional planning process. Reedsport intends to continue to participate in the development, implementation and ongoing maintenance of this multi-jurisdictional NHMP. For this reason, Reedsport has been included as part of this Multi-Jurisdictional and their previously acknowledged NHMP has been included as an addendum to this plan.

This document serves as the second update to the Douglas County Natural Hazard Mitigation Plan. It includes the cities of Canyonville, Drain, Elkton, Glendale, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla, all of whom chose to participate in the updating process involving their communities. The updated plan focuses on the natural hazards that could affect Douglas County and the specific cities listed above.

It is impossible to predict exactly when disasters may occur, or the extent to which they will affect the Douglas County area. However, with careful planning and collaboration among public agencies, private sector organizations, and citizens within the community, it is possible to minimize the losses that can result from natural hazards.

This NHMP provides a set of actions that aim to reduce the risks posed by natural hazards through education and outreach programs, the development of partnerships, and the implementation of preventative activities such as land use programs. The actions described in this document are intended to be implemented through existing plans and programs within Douglas County and the cities of Canyonville, Drain, Elkton, Glendale, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla when possible.

What is the Policy Framework for Natural Hazards Planning in Oregon?

Planning for natural hazards is an integral element of Oregon's statewide land use planning program. All Oregon cities and counties have comprehensive plans and implementing ordinances that are required to comply with the statewide planning goals.

Statewide land use planning Goal 7: Areas Subject to Natural Hazards calls for local plans to include inventories, policies and ordinances to guide development in or away from hazard areas. Goal 7, along with other land use planning goals, has helped to reduce losses from natural hazards. Through risk identification and the recommendation of risk-eduction actions, this plan aligns with the goals of Douglas County and associated cities' Comprehensive Plans, and helps each jurisdiction meet the requirements of statewide land use planning Goal 7.

How was the Plan Updated and Developed?

Douglas County and the cities of Canyonville, Drain, Elkton, Glendale, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla participated in developing the multi-jurisdictional NHMP. A steering committee was formed for Douglas County to guide and participate in the review of the updated plan. The steering committee was comprised of professionals with experience in Emergency Management, Community Wildfire Protection Planning, Building Code Administration, National Flood Insurance Program Administration, Road and Transportation Issues, and Public Utility Administration.

The Douglas County Steering Committee consisted of the following individuals representing their respective organizations:

Tim Freeman, Douglas County Board of Commissioners
Bill Clemens, Douglas County Building Department
Wayne Stinson, Douglas County Emergency Management
Cody Smith, Douglas County Public Works
Josh Heacock, Douglas County Public Works
Stuart Cowie, Douglas County Planning Department
Ron Thames, Roseburg Urban Sanitary Authority
Jack Musser, Douglas Education Service District
Pat Skrip, Douglas Fire Protection Association
Phil Bigler, Douglas Electric Cooperative

Darrin Neavoll, Oregon Department of Transportation
Gerry Wright, US Forest Service

The Douglas County Steering Committee met September 10, 2015, at the Douglas County Planning Department to discuss the purpose of the plan, the necessity for an update, what the update process would consist of, previous action items identified in the 2009 update, and their role as a steering committee member.

On December 8, 2015, the steering committee met a second time to discuss the history of hazard events in Douglas County. The committee then considered future natural hazards which could potentially affect the area. The committee agreed the same hazards identified in 2009 were still applicable: earthquake, flood, landslide, tsunami, wildfire, windstorm, and winter storm (snow/ice). The committee then agreed that consideration should be given to the effects of a drought if it were to occur within the county.

Each city participating in the NHMP was required to provide a representative which helped to form two committees, one representing northern cities and one representing southern cities. Each representative was charged with going back to their own respective city to consult with experts within the area in order to determine issues involving the city's risks, vulnerabilities, hazard history, and mitigation strategies.

The Northern Cities Steering Committee consisted of the following representatives:

Ricky Hoffman, Douglas County Planning Department
Stuart Cowie, Douglas County Planning Department
Carl Patenode, City of Drain
Gary Trout, City of Elkton
Bette Keehley, City of Oakland
Terri Long, City of Oakland
Jessica Terra, City of Reedsport
Lisa Hawley, City of Sutherlin
Vicki Luther, City of Sutherlin
Kathleen Finley, City of Yoncalla

The Southern Cities Steering Committee consisted of the following representatives:

Jennifer Arnold, Douglas County Planning Department
Stuart Cowie, Douglas County Planning Department
Janelle Evans, City of Canyonville
Jim Standard, City of Glendale
Ricky Hoffman, City of Myrtle Creek
Kathy Wilson, City of Riddle
John Lazur, City of Roseburg
Jennifer Arnold, City of Winston
Jamie Chartier, City of Winston

On September 1, 2015 the southern cities steering committee met at the Douglas County Planning Department. On September 10, 2015 the northern cities steering committee met at the City of Sutherlin's City Hall. Both committees met concerning Douglas County's plan to update the 2009 NHMP

and their role in participating in the update. Information concerning the purpose of the plan, the update process, previous action items identified in the 2009 update were presented and discussed.

The southern cities steering committee met a second time on December 21, 2015 at the Douglas County Planning Department. The northern cities steering committee also met a second time December 9, 2015 at the City of Sutherlin. The committees discussed individual cities needs and hazards that had affected their respective city. The cities were in agreement with the Douglas County steering committee that hazards addressed in the 2009 NHMP including earthquake, flood, landslide, tsunami (Reedsport), wildfire, windstorm, and winterstorm (snow/ice), plus the additional review of a possible drought were necessary within the update.

Public meetings involving the Steering Committees, Planning Advisory Committees (PACs), Planning Commission, and Board of Commissioners were held as part of the plan development and adoption process. These meetings served multiple purposes, but were in part held in an effort to provide the public with an opportunity to comment regarding the process in accordance with 44 CFR 201.6(4)(b) and (c). Comments both verbal and written were provided at multiple PAC meetings in which the NHMP was a specific agenda item. Upon finalizing the document the Board of Commissioners held a meeting as the decision-making authority in order to formally adopt the NHMP. See Appendix A for more detailed information about the steering committee and public participation process meetings held as part of this NHMP update.

Each participating city went through a similar process in which public meetings involving the Planning Commission and City Council were held as part of the adoption process.

How is the Plan Organized?

Each chapter of the plan provides specific information and resources to assist in understanding the hazard-specific issues facing the county and cities. Combined, the chapters work to create a mitigation plan that furthers the community's ability to reduce or eliminate long-term hazard risk to people and their property.

Chapter 1: Introduction
(Plan Development & Update Process)

This chapter reviews why and what natural hazard mitigation planning is, the federal requirement necessary to address within the plan, and the policy framework for natural hazard planning in Oregon. It discusses the history of the Natural Hazards Mitigation Plan in Douglas County and how the plan was updated, developed and organized.

Chapter 2: Community Profile

The community profile describes the county and participating cities in order to help define and understand the regions sensitivity and resilience to natural hazards.

Chapter 3: Hazard Assessment

A hazard summary is provided for each of the hazards addressed in the plan. The summary includes hazard history, location, extent, vulnerability, impacts, and probability.

The hazards included with this Plan are as follows:

- Drought
- Earthquake
- Flood
- Landslide
- Tsunami
- Wildfire
- Windstorm
- Winter Storm (Snow/Ice)

Chapter 4: Mitigation Plan Goals & Action Items

This chapter includes specific goals regarding each hazard that help to guide the direction of future activities aimed at reducing risk and preventing loss from natural hazards. Based on these goals, specific action items have been created. Action items are detailed recommendations for activities that local departments, citizens, and others could engage in to reduce risk.

Chapter 5: Plan Implementation & Maintenance

Douglas County and individual cities addresses statewide planning goals and legislative requirements through their Comprehensive Plan. The NHMP provides a series of recommendations, many of which are closely related to the goals and objectives of existing planning programs. Opportunities to implement recommended mitigation action items within the NHMP are provided as a result of these existing programs.

A Multi-Jurisdictional Capacity Building Approach

The Douglas County NHMP is organized into a single document which is intended to be co-adopted as the NHMP for Douglas County as well as each of the twelve incorporated cities within Douglas County. While it is a single document representing multiple jurisdictions, it contains the necessary information for each individual city's mitigation planning purposes.

The planning process for the 2016 Multi-jurisdictional NHMP was specifically designed to provide the most efficient and effective coordination and input possible given local fiscal and staffing constraints. The majority of incorporated cities within Douglas County have limited staff, constrained budgets, and minimal citizen involvement. This restricts their ability to provide a robust steering and planning process for long-range programs, such as the NHMP. However, each community has identified the NHMP as an important factor of their long-range planning program. Therefore it was important to incorporate each city into a planning process which was not only effective for planning the NHMP multi-jurisdiction update, but also feasible for each jurisdiction based on the aforementioned limitations. This planning process consisted of three main steering committees made up of local representation from Douglas County and each individual city (as shown above). This method provided adequate input from the county and each individual city during the process and it is understood that ultimately each jurisdictions decision making body (City Council/Board of Commissioners) will become the implementers of this document.

1) The **community profile** provides general socio-economic and natural environmental data in regards to the county as a whole. However, the data is specific enough to capture and apply to each individual city. Many of the demographic and economic datasets provided within the community profile are broken down among each city and the information that is not (Example: Figure 2.5 – Douglas County Age Structure of the Population (2000 and 2010)) it can generally be assumed that this data will be accurate and applicable to each individual city. The community profile provides an adequate balance of generalizing the profile to represent Douglas County as a whole, but also characterizing each individual community when generalizing is not sufficient to do so.

2) Similarly, the **hazard assessment** is organized into a singular chapter with the understanding that many of the hazards that affect the county are generally applicable in similar scope to each individual city (Reedsport as an exception). The assessment provides an updated list of all FEMA major disaster declarations in Douglas County, which is applicable to the county and each individual city. It also provides an individual hazard probability and vulnerability assessment table for the county and each city. In this case, it made the most sense to organize the hazard profiles by each hazard rather than each jurisdiction to eliminate redundancies that would occur if making a hazard profile for each hazard across each jurisdiction because of the similarities of how each individual city along with the county are affected by each natural hazard. Rather, this document provides general hazard profiles for each type of hazard and provides greater detail when a city has a specific example of how it has been historically affected or is uniquely vulnerable to that hazard.

3) In order to eliminate redundancy for general mitigation goals, in the **mitigation plan goals & action items** chapter, chapter 4 provides a combined approach for the mitigation plan goals with the understanding that many of these goals are applicable to each city as well as the county. However, the action items portion of this chapter lists each city separately (1 table for each city including a table for the county = 13 action item tables) and organizes the action items applicable to that city into a table format and contains unique identifiers for each type of hazard the action item addresses. Finally, the chapter organizes each action item contained within the document into the applicable hazard to which it address. This portion provides a more specific rationale for each action item, implementation strategies for the action item, the coordinating organizations within each action item and in many cases the specific improvement projects within each jurisdiction.

4) The **plan implementation & maintenance** procedures and process for each jurisdiction is essentially the same. Each jurisdiction identified a similar if not, the same prioritization process for examining and implementing action items. It is also an understood that the implementation of each jurisdiction's action items will ultimately depend upon that jurisdiction's current budget. Each jurisdiction has also identified the same criteria and factors for a five year period update of the NHMP. The implementation & maintenance of the 2016 Multi-Jurisdictional NHMP is intended to also be incorporated into the Planning Advisory Committee Meetings, which played an important role in the development of this update. The meetings are held on a quarterly basis and include members of each specific region of the county. See Appendix A for a list of each PAC roster.

Chapter 2:
Community Profile (Douglas County Multi-jurisdictional)

Community resilience can be defined in as the community's ability to manage risk and adapt to natural hazard impacts. In order to help define and understand the County's sensitivity and resilience to natural hazards, the following capacities must be examined:

- Natural Environment
- Social/Demographic
- Economic
- Built Environment
- Community Connectivity

The Community Profile describes the sensitivity and resilience to natural hazards of Douglas County, and its incorporated cities, as they relate to each capacity. It provides a snapshot in time when the plan was developed and will assist in preparation for a more resilient county.

Natural Environment Capacity

Natural environment capacity is recognized as the geography, climate, and land cover of the area such as urban, water and forested lands that maintain clean water, air and a stable climate. Natural resources such as wetlands and forested hill slopes play a significant role in protecting communities and the environment from weather-related hazards, such as flooding and landslides. However, natural systems can be impacted by human activities, which can positively or adversely affect community resilience.

Geography

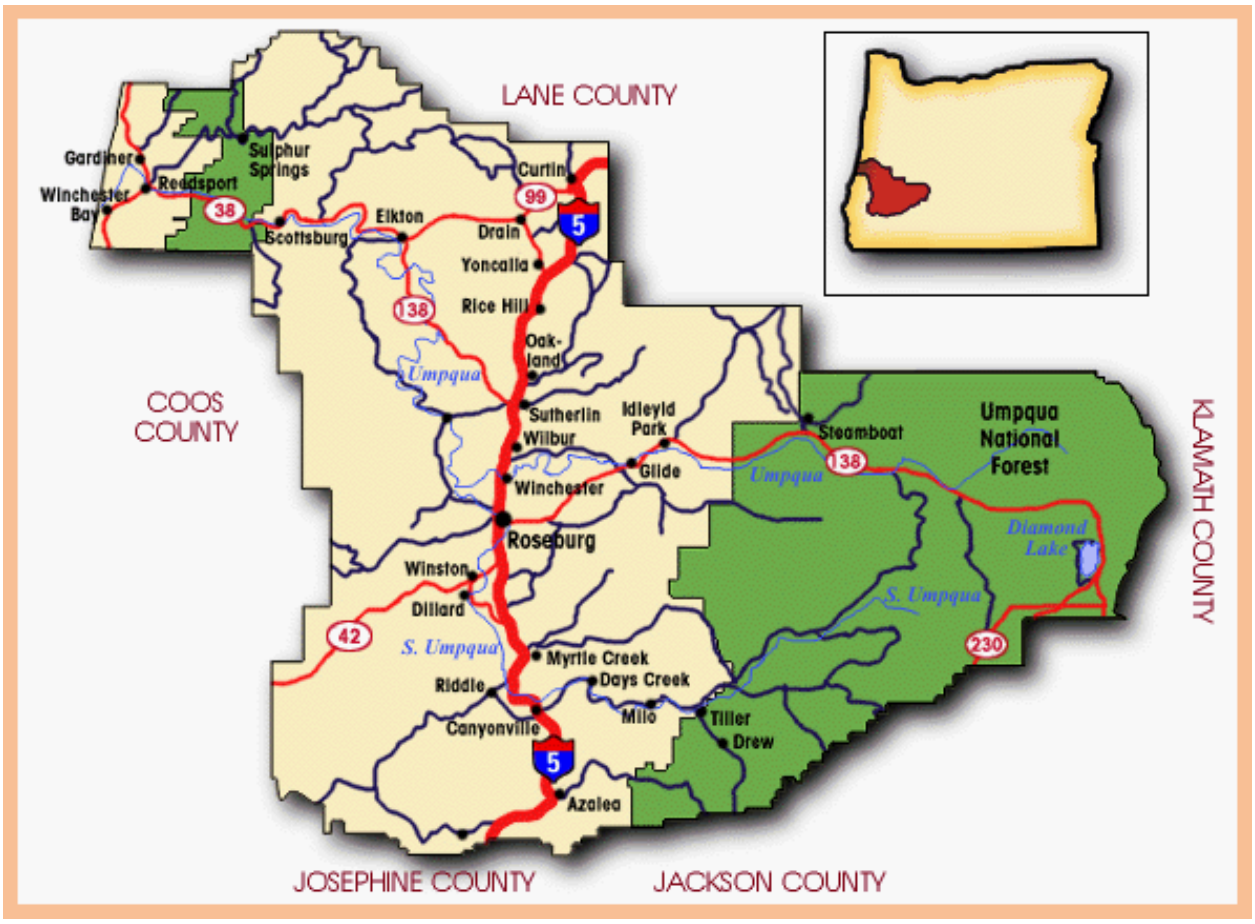
Douglas County is located in Southwest Oregon and covers an area of 5,071 square miles. The County extends from sea level at the Pacific Ocean to 9,182-foot Mount Thielsen in the Cascade Range. The entire Umpqua Watershed is located within Douglas County, which contains nearly 2.8 million acres of forest lands.

Over 50% of the land area in Douglas County is owned by the federal government. The US Forest Service and the Bureau of Land Management manage these lands.

There are 12 incorporated cities within Douglas County: Canyonville, Drain, Elkton, Glendale, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston, and Yoncalla.

Douglas County is comprised of four geologic provinces, three of which converge near the center of the County. The Klamath Mountains Province occupies south central Douglas County. It is the oldest geological province in the County, which was created through volcanic activity, and sedimentary formations of sandstone, siltstone and mudstone. Mountains in the Klamath Province are rugged and rise to an elevation of nearly 4,100 feet. The mountains are steep with a valley floor of about 400 feet.

Map Source: Douglas County Planning Department



The Coast Range Province contains rugged mountains rising to an elevation of 3,000 feet. The valleys in this Province are fertile, with an elevation of about 300 feet above sea level. Sea level is the lowest point in this province, which encompasses the northwestern portion of Douglas County, to the Pacific Ocean. Rocks off the Coast Range province are typically igneous and sandstone.

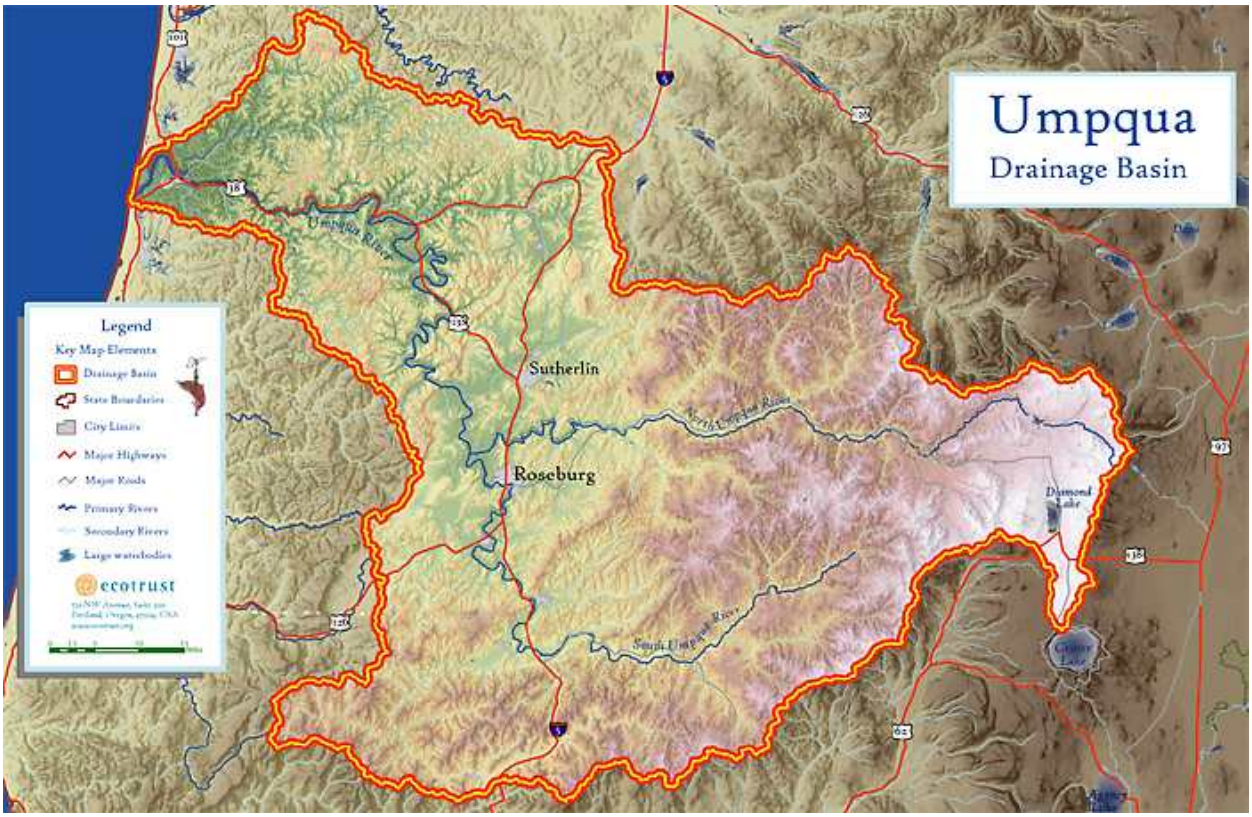
The Western Cascade Province is the third oldest in the county. Here igneous rocks were made from volcanic activity. Narrow "V" shaped valleys are a common natural feature in this region. Elevations in the Western Cascade region top 6,000 feet.

The high Cascade Province is the youngest in the county. This region was formed by volcanic activity. Rocks are much less weathered in this province. Mount Thielsen (9,182 feet) is the most obvious formation in this province.

Umpqua River Basin

Within the boundary of Douglas County lies the entire Umpqua River drainage basin. The basin covers an area of approximately 4,560 square miles. This is unique for a county boundary to entirely encompass a major river watershed.

Map Source: EcoTrust

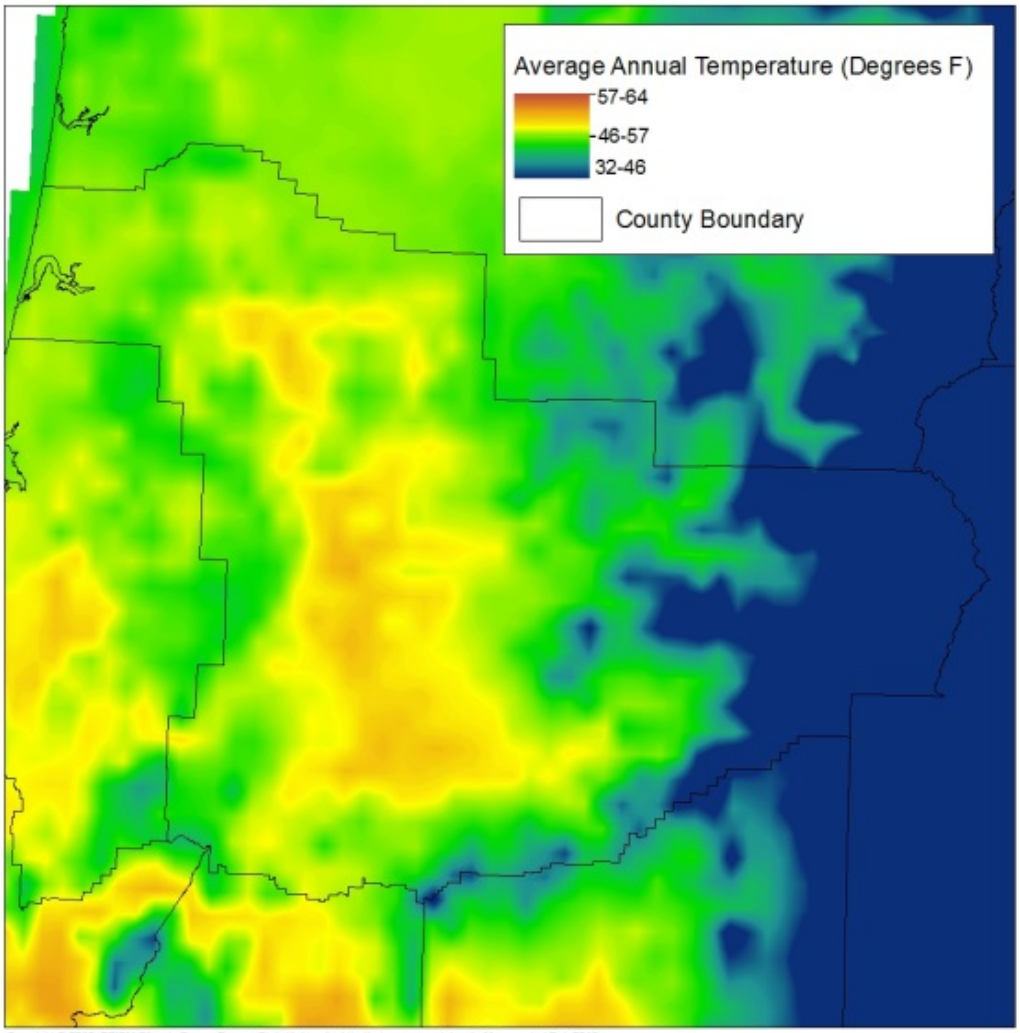


The Umpqua Basin has ten major streams. All ten flow into the main Umpqua River, which meanders westward and joins the Pacific Ocean near Reedsport. From the confluence of the North and South Umpqua Rivers near Roseburg, the Umpqua River flows 111 miles. The North Umpqua, from its headwaters at Maidu Lake, flows 106 miles, while the South Umpqua River flows roughly 104 miles from the headwaters of Castle Rock Creek. The other major tributaries include Cow Creek, Elk Creek, Calapooya Creek, Little River, Lookingglass Creek, Deer Creek and Smith River.

Stream gradients in the basin vary greatly. The North Umpqua River has an average gradient of 86 feet per mile. The South Umpqua to Cow Creek has a relatively flat average gradient of 6 feet per mile, increasing to an average gradient of 42.5 feet per mile near Castle Rock Creek. On the Mainstem Umpqua, there is a gentle average gradient of 4 to 4.5 feet per mile from the confluence of the North and South Umpqua Rivers to tidewater at Scottsburg.

Climate

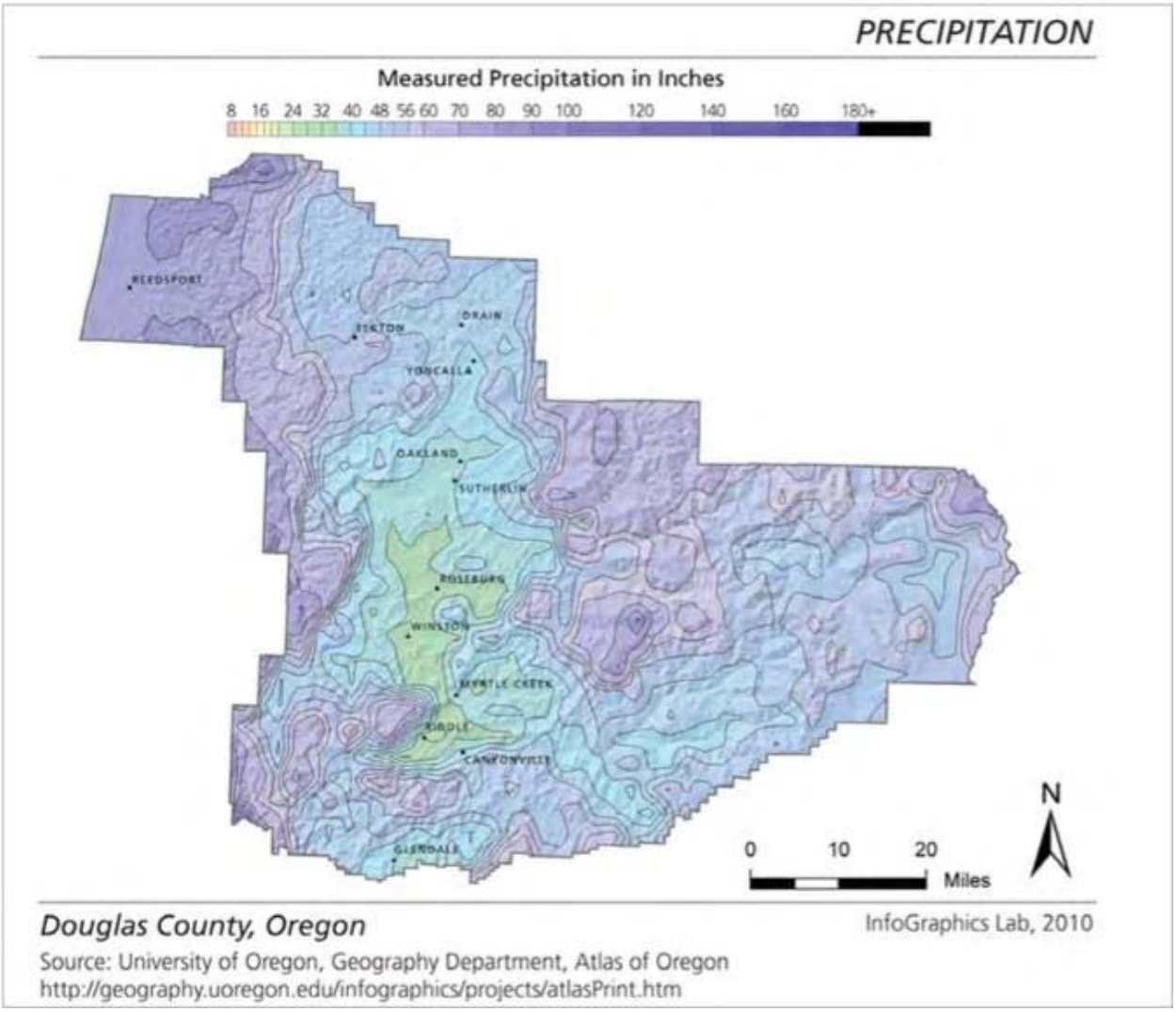
In the Umpqua Valley, moisture-laden breezes from the Pacific Ocean set the pace for seasonal temperatures and rainfall. These breezes blow over the Coast Range, through the inland valleys, and up to the Cascade Mountains, creating three distinct climatic areas. The coastal areas have the most moderate seasons. The inland valleys experience the hottest summer sun, while the Cascades witness the most extreme winter temperatures. In all three areas, however, the prevailing westerly winds cool the heat of summer and warm the chill of winter.



Copyright © 2015, PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu Map created Oct. 2015

The ocean winds lose some of their velocity, and much of their moisture as they climb the Coast Range and enter the inland valleys. Coastal Douglas County receives the most rainfall, reporting 80 inches per year at Reedsport, and over 100 inches per year in the Coast Range. In summer the average countywide temperature ranges between 52 and 70 degrees Fahrenheit. In winter the average temperature does not drop below 37 degrees Fahrenheit. This temperature climate is due, in part, to the ocean winds that flow onshore.

The protected inland valleys have some of the lowest wind velocities in the United States. Here rainfall averages 35 inches annually. This moderate climate is marked with comfortable winters and temperate summers. Days without frost generally occur between April and October. The first hard frost usually does not arrive until December.



As ocean winds climb up the western face of the High Cascade Range they bring relatively warm days, except in winter when they bring cool and wet weather. Winter temperatures are the most extreme at high elevations. Rainfall increases to 70 inches annually. Snow is common at elevations above 2,500 feet.

Minerals and Soils

The soils present in Douglas County are the acidic and leached products of weathering in a moist temperate climate under coniferous cover. Upland soils in Douglas County are characterized by variable thickness, moderate to rapid runoff, and moderate to extreme erosion hazard. Terrace soils have slow to moderate runoff and slight to high erosion potential depending on the steepness of slope. Lowland soils in the Umpqua Valley are the products of ongoing deposition. These deep alluvial soils are rich in minerals and are great for agriculture.

Potential soil related hazards include: landslides when steep slope, shallow soils are inundated and liquefaction, an earthquake related hazard where sandy silt soils turn from a solid state to a liquid state as a result of stress and pressure.

Minerals in the Umpqua Valley are abundant and provide ample sources of ore and building materials. The abundance of minerals is due primarily to the convergence and proximity of the four geologic provinces within Douglas County (refer to geography and environment section).

Understanding the geologic characteristics of Douglas County is an important step in hazard mitigation and avoiding at-risk development sites.

Other Significant Geologic Features

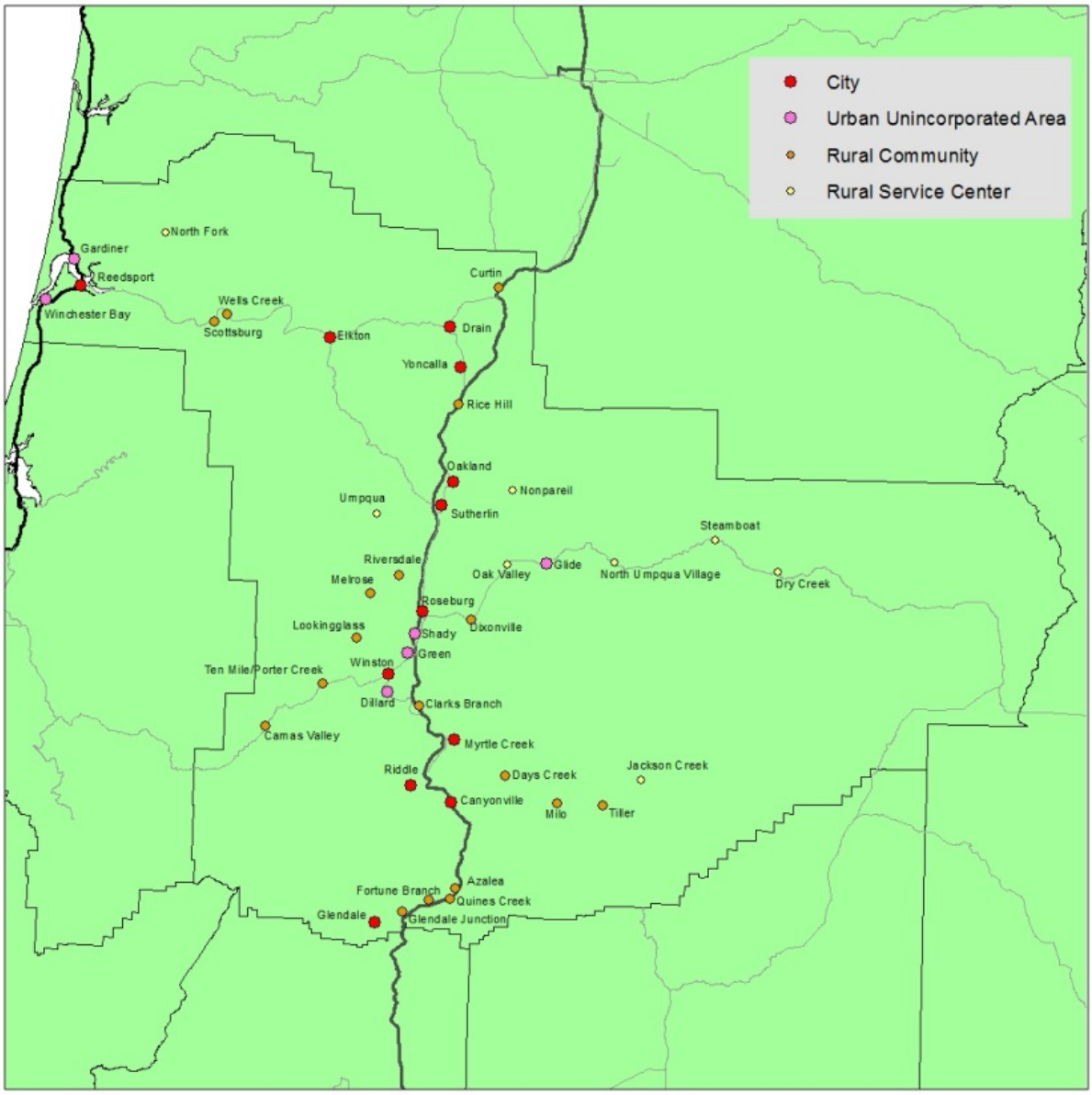
Douglas County, like most of the Pacific Northwest, lies over the Cascadia Subduction Zone where the North American crustal plate overrides the Juan de Fuca plate underneath the earth's crust. The fault along these two plates creates structural sag at the Willamette River Valley. Volcanoes are present along this structural sag, and the activity on these mountains is caused by the buoyant melted rock of the Juan de Fuca plate, as it rises to the surface.

Social/Demographic Capacity

Social/demographic capacity is a significant indicator of community hazard resilience. The characteristics and qualities of the community population such as age, income, and health are significant factors that can influence the community's ability to cope, adapt to and recover from natural disasters. Population vulnerabilities can be reduced or eliminated with proper outreach and community mitigation planning.

Douglas County has a variety of residential community types: incorporated cities, unincorporated urban areas, rural communities and rural service centers.

Map Source: Douglas County



Incorporated Cities

Incorporated cities are given power through the state to govern within their own boundaries. They are required to provide services such as sewer and water. The growth of a city is guided by Urban Growth Boundaries (UGB's). There are 12 incorporated cities within Douglas County:

- Canyonville
- Drain
- Elkton
- Glendale
- Myrtle Creek
- Oakland
- Reedsport
- Riddle
- Roseburg
- Sutherlin
- Winston
- Yoncalla

Urban Unincorporated Areas

Urban unincorporated areas are located outside of UGB's and possess a community identity all their own. These areas, due to their residential densities and the existence of public facilities (including sewer), are urban in nature. These areas have specific issues relative to their development that are not commonly found in the rural portions of Douglas County. The county uses the term "Unincorporated Urban Areas" (UUA) to describe these areas. Boundaries have been established which circumscribe these areas, and are intended to separate urban or urbanizable land from rural land. Within these boundaries it is intended that land be developed at relatively dense levels and that development will be served by a full range of public facilities and services. There are seven urban unincorporated areas within Douglas County:

- Dillard
- Gardiner
- Glide
- Green
- Shady
- Tri City
- Winchester Bay

Rural Communities

As defined by the statewide planning program's Unincorporated Communities Rule (OAR 660-22-010 (6)), a Rural Community is an unincorporated community which consists primarily of residential uses but also has at least two other land uses that provide commercial, industrial, or public uses (including but not limited to schools, churches, grange halls, post offices) to the community, the surrounding rural area, or to persons traveling through the area. There are 16 rural communities in Douglas County:

- Azalea
- Camas Valley
- Clarks Branch
- Curtin
- Days Creek
- Dixonville
- Glendale Junction
- Lookinglass
- Melrose
- Milo
- Quines Creek
- Rice Hill
- Riversdale
- Scottsburg/Wells Creek
- Tenmile/Porter Creek
- Tiller

Rural Service Centers

As defined by the statewide planning program's Unincorporated Communities Rule (OAR 660-22-010 (7)), a Rural Service Center is an unincorporated community consisting primarily of commercial or industrial uses providing goods and services to the surrounding rural area or to persons traveling through the area, but which also includes some dwellings. There are nine rural service centers in Douglas County:

- Dry Creek
- Fortune Branch
- Jackson Creek
- Nonpariel
- North Fork
- North Umpqua Village
- Oak Valley
- Steamboat
- Umpqua

Population

Douglas County has a population of 107,667 in an area of 5,071 square miles. The population of Douglas County has steadily increased in the last 100 years from 19,674 people in 1910 to 107,667 people in 2010. According to the Portland State University Population Research Center (PRC), Douglas County has experienced a 0.7% annual average growth rate from 2000 to 2010. Population growth is projected to continue (as shown in Figure 2.1), according to the Coordinated Population Forecast 2015 – 2065 for Douglas County provided by the PRC.

Figure 2.1 - Projected Douglas County Population

Douglas County Population Projections	**2015**	**2035**	**2065**
	110,051	132,587	153,136

Source: Coordinated Population Forecast 2015 - 2065

The majority of Douglas County's population resides in Central Douglas County from Oakland south to Myrtle Creek. The largest cities in the county are Roseburg and Sutherlin, with 2010 populations of 21,181 and 7,810, respectively. Green is the largest unincorporated area in the County, with a population of 7,515. The largest city in the Coastal Region of Douglas County is Reedsport with a population of 4,154.

Figure 2.2 below shows the historical and forecast average annual growth rate for Douglas County and each of its twelve incorporated cities. Please note, that the population for each city is different than that of the 2000 and 2010 census, due to the fact that this population data includes the number of people in each of the city's urban growth boundaries as well as the city limits. It is anticipated that each city will experience some level of growth within the next 20 years. Douglas County as a whole will experience an average annual growth rate of approximately 1%. Urban and rural growth patterns can impact how agencies, cities and counties prepare for emergencies, because changes in development can increase risk associated with hazards. The figures below show population trends in Douglas County.

Figure 2.2 - Douglas County & Cities including population within the Urban Growth Boundary – Total Population and Average Annual Growth Rate (AAGR) (2000 and 2010)

	Historical			Forecast				
	2000	2010	AAGR (2000-2010)	2015	2035	2065	AAGR (2015-2035)	AAGR (2035-2065)
Douglas County	*100,399*	*107,667*	*0.7%*	*110,051*	*132,587*	*153,136*	*0.9%*	*0.5%*
Canyonville[1]	1,498	2,005	3.0%	2,101	3,243	4,672	2.2%	1.2%
Drain	1,204	1,352	1.2%	1,346	1,510	1,686	0.6%	0.4%
Elkton	169	195	1.4%	207	293	420	1.7%	1.2%
Glendale	946	979	0.3%	981	1,106	1,324	0.6%	0.6%
Myrtle Creek	6,998	7,478	0.7%	7,614	9,469	13,032	1.1%	1.1%
Oakland	1,117	1,097	-0.2%	1,108	1,221	1,250	0.5%	0.1%
Reedsport	4,437	4,244	-0.4%	4,237	4,723	4,903	0.5%	0.1%
Riddle	1,030	1,182	1.4%	1,172	1,245	1,262	0.3%	0.0%
Roseburg	26,599	28,344	0.6%	29,870	39,239	46,805	1.4%	0.6%
Sutherlin	6,883	8,138	1.7%	8,298	11,096	13,994	1.5%	0.8%
Winston	4,917	5,571	1.3%	5,851	7,560	11,095	1.3%	1.3%
Yoncalla	1,082	1,085	0.0%	1,088	1,130	1,131	0.2%	0.0%
Outside UGBs	43,519	45,997	0.6%	46,177	50,752	51,563	0.5%	0.1%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses; Population Research Center (PRC)

[1] *For simplicity each UGB is referred to by its primary city's name.*

The twelve incorporated communities within the county comprise about 57.3% of the county population, leaving the 42.7% of the population in unincorporated areas. Figure 2.3 indicates the change in people living in incorporated areas of the county as compared to those living in unincorporated areas from 2000 to 2010. Please note that the numbers represented within the incorporated areas include the population identified within the UGB of each city, while the areas identified as unincorporated are located outside the UGB.

Figure 2.3 - Douglas County Population, Incorporated (including UGB) and Unincorporated (outside UGB)

Year	Incorporated (including UGB)	Unincorporated (outside of UGB)
2000	56,880	43,519
2010	61,670	45,997

Source: Coordinated Population Forecast 2015 – 2065 for Douglas County; PRC, Portland State University

Figure 2.4 - Douglas County Urban Unincorporated Areas Population

Area	2010 Population
Dillard	478
Gardiner	248
Glide	1,795
Green	7,515
Tri City	3,931
Shady	Undetermined
Winchester Bay	382

Source: 2010 Census

Population size itself is not an indicator of vulnerability. The more important issues are the location, composition, and capacity of the population within the community.

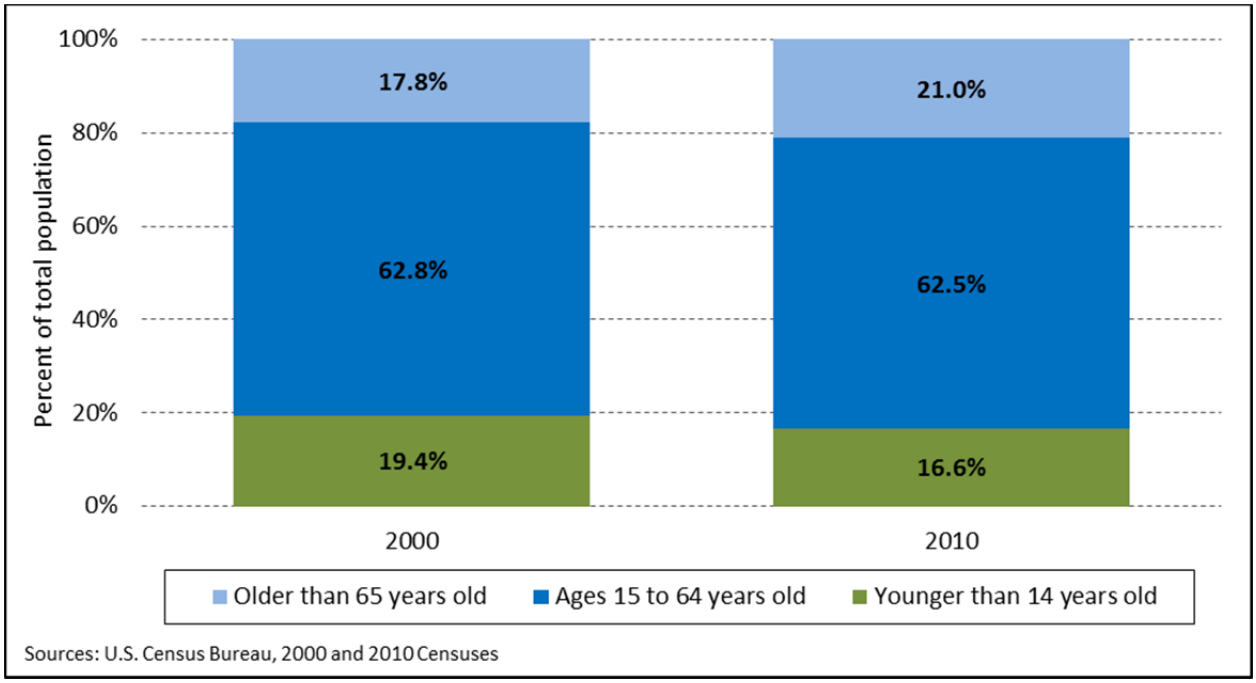
For example, the location of more people living on the edge of rural residential areas and farm/forest land can increase the risk of wildfire as a result of more human activity within the area.

In addition to the location of a certain population, additional composition factors, such as age, income, and health play significant roles in a community's ability to handle a natural hazard. The following portion of the Social/Demographic Capacity section of this chapter will further analyze these composition factors in Douglas County in order to help us better understand our vulnerability.

Age

Similar to most areas across Oregon, Douglas County's population is aging. From 2000 to 2010 the proportion of county population 65 or older grew from about 18 percent to 21 percent. Further evidence of an aging population within the county can be seen by the increase of the median age of individuals from 41 in 2000 to 46 in 2010.

Figure 2.5 - Douglas County – Age Structure of the Population (2000 and 2010)



The age profile of an area has a direct impact both on what actions are prioritized for mitigation and how response to hazard incidents is carried out. Older populations often have special needs prior to, during and after a natural disaster. Older populations may require assistance in evacuation due to limited mobility or health issues. Additionally, older populations may require special medical equipment or medications, and can lack the social and economic resources needed for post-disaster recovery.

Income

Household income and poverty status are indicators of socio demographic capacity and the stability of the local economy. Household income can be used to compare economic areas as a whole, but does not reflect how the income is divided among the area residents. Based on data provided by the US Census Bureau, through the American Community Survey, the 2013 median household income across Douglas County was $40,524; which is lower than the State of Oregon median income for 2013 of $50,229. Figure 2.6, below indicates the median income for each of the twelve cities within the county during 2013.

Figure 2.6 - Median Household Income

Area	Median Household Income
Oregon	$50,229
Douglas County	$40,524
Canyonville	$37,336
Drain	$37,961
Elkton	$43,056
Glendale	$34,167
Myrtle Creek	$34,063
Oakland	$40,455
Reedsport	$33,079
Riddle	$30,962
Roseburg	$38,963
Sutherlin	$36,532
Winston	$32,232
Yoncalla	$32,366

Source: U.S. Census Bureau, 2009-2013 American Community Survey, Table B19013

Figure 2.7, below identifies the percentage of individuals that were below the poverty level in 2013, based on data provided by the US Census Bureau, through the American Community Survey. It is estimated that 19.7% of individuals live below the poverty level across the county. Poverty rates in Douglas County are higher than that of Oregon State. Myrtle Creek and Winston have rates that are twice as high as that of Oregon State.

Figure 2.7 - Total Population in Poverty

Area	Number	Percent
Oregon	638,816	16.7%
Douglas County	20,807	19.7%
Canyonville	475	21.2%
Drain	144	13%
Elkton	50	22.3%
Glendale	231	29.6%
Myrtle Creek	1175	35.1%
Oakland	92	12.6%
Reedsport	1018	25.3%
Riddle	277	24.6%

Roseburg	4499	19.7%
Sutherlin	1404	18.1%
Winston	1175	32%
Yoncalla	246	22.5%

Source: U.S. Census Bureau, 2009-2013 American Community Survey, Table S1701

Research suggests that lack of wealth contributes to social vulnerability because individual and community resources are not as readily available. Affluent communities are more likely to have both the collective and individual capacity to more quickly rebound from a hazard event, while less wealthy communities and individuals may not have this capacity –leading to increased vulnerability. Wealth can help those affected by hazard incidents to absorb the impacts of a disaster more easily. Conversely, poverty, at both an individual and community level, can drastically alter recovery time and quality.

Health

Individual and community health play an integral role in community resiliency, as indicators such as health insurance, people with disabilities, dependencies, and homelessness paint an overall picture of a community's well-being. These factors translate to a community's ability to prepare, respond to, and cope with the impacts of a disaster.

It has been determined that those who lack health insurance or are impaired with sensory, mental or physical disabilities, have higher vulnerability to hazards and will likely require additional community support and resources. The percentage of population in Douglas County without health insurance (14.3%) is lower than that of the State. However, 10 of the 12 cities in Douglas County do have higher rates of uninsured individuals than Oregon (15.8%) (See Figure 2.8). The ability to provide services to the uninsured populations may burden local providers following a natural disaster. Since the survey was conducted by the U.S. Census Bureau many Oregonians have enrolled in health care coverage through the Affordable Care Act (ACA) coverage expansion; future surveys should capture the effects of this coverage expansion.

Figure 2.8 - Health Insurance Coverage

Area	Population	Number of Uninsured	Percentage of Uninsured
Oregon	3,829,588	603,893	15.8%
Douglas County	106,477	15,180	14.3%
Canyonville	2,162	480	22.2%
Drain	1,102	208	18.9%
Elkton	221	47	21.3%
Glendale	808	144	17.8%
Myrtle Creek	3,433	558	16.3%
Oakland	861	157	18.2%
Reedsport	4,102	717	17.5%
Riddle	887	102	11.5%
Roseburg	21,215	3,652	17.2%
Sutherlin	7,766	1,368	17.6%
Winston	5,355	566	10.6%
Yoncalla	1,111	201	18.1%

Source: U.S. Census Bureau, 2009-2013 American Community Survey, Table S2701

Figure 2.9 below describes the disability status of the population. As of 2013, 21.2% of the Douglas County population, had one or more disabilities. This is 7.4 percent more that of the State percentage. Four of the 12 cities located within the county have a level of disabled citizens that is twice the amount of the State percentage.

Figure 2.9 - Health Insurance Coverage

Area	Population	Number of Disabled	Percentage of Disabled
Oregon	3,829,588	526,868	13.8%
Douglas County	106,477	22,641	21.2%
Canyonville	2,162	466	21.6%
Drain	1,102	333	30.2%
Elkton	221	22	10.0%
Glendale	808	300	37.1%
Myrtle Creek	3,433	634	18.5%
Oakland	861	205	23.8%
Reedsport	4,102	968	23.6%
Riddle	887	253	28.5%
Roseburg	21,215	4,253	20.0%
Sutherlin	7,766	1,745	22.5%
Winston	5,355	1,319	24.6%
Yoncalla	1,111	361	32.5%

Source: U.S. Census Bureau, 2009-2013 American Community Survey, Table S1810

Economic Capacity

Economic capacity refers to the financial resources present and revenue generated in the community to achieve a higher quality of life. Income equality, housing affordability, economic diversification, employment and industry are measures of economic capacity. However, economic resilience to natural disasters is far more complex than merely restoring employment or income in the local community. Building a resilient economy requires an understanding of how items like employment sectors, workforce, resources and infrastructure are interconnected in the existing economic picture.

Employment

Employment status and salary level may impact the resilience of individuals and families in the face of disasters as well as their ability to mitigate for natural hazards. Since the end of the financial crisis that began in 2007, job recovery in Douglas County has lagged behind the state's average. Based upon figures presented in the Oregon Natural Hazards Mitigation Plan, as of May 2013 Douglas County has recovered only 17 percent of jobs lost in the recession while 65 percent of jobs statewide have been recovered. The possibility of additional unemployment following a disaster compounds the number of unemployed people within the community, making post recovery efforts from a disaster an even slower process.

Figure 2.10 - Unemployment Rate in Douglas County as compared to State 2009 – 2013

	2009	2010	2011	2012	2013	Change (2009-2013)
Oregon	11.1%	10.8%	9.7%	8.8%	7.7%	-3.4%
Douglas County	15.5%	14.7%	13.4%	12.3%	10.8%	-4.6%

Source: Oregon Employment Department, 2014

Figure 2.11 - Employment and Unemployment Rates in Douglas County as compared to State, 2013

	Civilian Labor Force	Employed Workers		Unemployed	
	Total	Total	Percent	Total	Percent
Oregon	1,924,604	1,775,890	92.3%	148,714	7.7%
Douglas County	43,207	38,531	89.9%	4,676	10.8%

Source: Oregon Employment Department, 2014

Employment by Industry

Economic resilience to natural disasters is particularly important for the major employment industries in the region. If these industries are negatively impacted by a natural hazard, such that employment is affected, the impact will be felt throughout the regional economy. Thus, understanding and addressing the sensitivities of these industries is a strategic way to increase the resiliency of the entire regional economy.

The five major employment sectors in Douglas County are grouped into the following categories: (1) Trade, Transportation, and Utilities; (2) Government; (3) Education and Health Services; (4) Leisure and Hospitality; and (5) Manufacturing. Although employment in wood products manufacturing has declined in recent years, lumber and wood products continue to be one of the largest employment sectors in Douglas County within the manufacturing sector, employing 10 percent of the private sector. Douglas County contains nearly 2.8 million acres in commercial forestland and is the second largest producer of timber in the state (Oregon Natural Hazards Mitigation Plan). Figure 2.12 shows the distribution of total employment across all sectors. Each industry faces distinct vulnerabilities to natural hazards.

Figure 2.12 - Covered Employment by Industry Sector in Douglas County, 2013

Industry	Employment	Percent
Total All Employers	34,651	100%
Total Private Employers	26,920	77.7%
Natural Resources & Mining	1,635	4.7%
Construction	1,026	3.0%
Manufacturing	4,401	12.7%
Trade, Transportation & Utilities	6,289	18.1%
Information	266	0.8%
Financial Activities	1,068	3.1%
Professional & Business Services	3,281	9.5%
Education & Health Services	4,495	13.0%
Leisure & Hospitality	3,159	9.1%
Other Services	1,297	3.7%
Private Non-Classified	(c)	-

Total All Government	7,731	22.3%
Federal Government	1,363	3.9%
State Government	1,021	2.9%
Local Government	5,347	15.4%

Note: (c) = confidential, information not provided by Oregon Employment Department to prevent identifying specific businesses.
Source: Oregon Employment Department, 2013

Employment sectors within Douglas County's twelve cities are comparable to the employment sectors identified in Figure 2.12. However, data obtained from the US Census Bureau, 2006-2010 American Community Survey involving each city categorized employment sectors differently by grouping them into seven categories of which the three most significant will be displayed in Figure 2.13 below. In addition, to identifying significant employment sectors, Figure 2.13 also identifies the Median Household Income for each city, which is an important factor in evaluating the means by which citizens within the community may have to financially help sustain themselves and recover in the event of a natural hazard.

Figure 2.13 - Percent of population involved in key industry/Median Household Income

City of Canyonville	**Median Household Income $33,047**
Industry	**Percent**
Arts, Entertainment, Recreation, Accommodation, Food Services	27.1%
Manufacturing	19.6%
Educational Services, Health Care, Social Assistance	12.3%

City of Drain	**Median Household Income $40,000**
Industry	**Percent**
Manufacturing	31.8%
Educational Services, Health Care, Social Assistance	17.4%
Retail Trade	10.9%

City of Elkton	**Median Household Income $41,719**
Industry	**Percent**
Transportation, Warehousing, Utilities	21.7%
Educational Services, Health Care, Social Assistance	17.4%
Agricultural, Forestry, Fishing, Hunting, Mining	15.9%

City of Glendale	**Median Household Income $35,625**
Industry	**Percent**
Arts, Entertainment, Recreation, Accommodation, Food Services	27.1%
Manufacturing	16%
Transportation, Warehousing, Utilities	14.1%

City of Myrtle Creek	**Median Household Income $35,078**
Industry	**Percent**
Educational Services, Health Care, Social Assistance	16.6%
Arts, Entertainment, Recreation, Accommodation, Food Services	15.7%
Retail Trade	13.7%

City of Oakland	**Median Household Income $41,273**
Industry	**Percent**
Educational Services, Health Care, Social Assistance	15.4%
Construction	13%
Retail Trade	13%

City of Reedsport	**Median Household Income $29,075**
Industry	**Percent**
Educational Services, Health Care, Social Assistance	21%
Arts, Entertainment, Recreation, Accommodation, Food Services	19.3%
Retail Trade	16.6%

City of Riddle	**Median Household Income $38,235**
Industry	**Percent**
Manufacturing	20.8%
Construction	13.4%
Arts, Entertainment, Recreation, Accommodation, Food Services	12.9%

City of Roseburg	**Median Household Income $40,237**
Industry	**Percent**
Educational Services, Health Care, Social Assistance	23.4%
Manufacturing	13%
Retail Trade	11.8%

City of Sutherlin	**Median Household Income $39,171**
Industry	**Percent**
Educational Services, Health Care, Social Assistance	19.4%
Retail Trade	15.3%
Manufacturing	9.1%

City of Winston	**Median Household Income $36,185**
Industry	**Percent**
Educational Services, Health Care, Social Assistance	25.5%
Retail Trade	17.2%
Arts, Entertainment, Recreation, Accommodation, Food Services	8.7%

City of Yoncalla	**Median Household Income $27,000**
Industry	**Percent**
Manufacturing	17.3%
Retail Trade	13.6%
Educational Services, Health Care, Social Assistance	12.5%

Source: US Census Bureau, 2006-2010 American Community Survey

Built Environment Capacity

Built Environment Capacity refers to the built environment and infrastructure that supports the community. The various forms, quantity, and quality of built capital contribute significantly to community resilience. Physical infrastructures, including utility and transportation lifelines, are critical during a disaster and are essential for proper functioning and response. The lack or poor condition of infrastructure can negatively affect a community's ability to cope, respond and recover from a natural disaster. Following a disaster, communities may experience isolation from surrounding cities and counties due to infrastructure failure. These conditions force communities to rely on local and immediately available resources.

Land Use and Development Patterns

The majority of the county has a low population density. In all, the population per square mile is 21 people. Based upon the Douglas County Coordinated Population Forecast for 2015 – 2065 completed by the Population Research Center at Portland State University, 57.3 percent of the population within Douglas County lives inside one of the twelve cities' designated urban growth boundary. Over half the land (54%) in Douglas County is publicly owned (51% Federal Government, 2% State Government, 1% Local Government); the remaining lands (46%) are owned privately.

Housing

In addition to location, the characteristics of housing stock affect the level of risk posed by natural hazards. Figures 2.14 and 2.15 below identifies the types of housing most common throughout the county.

Figure 2.14 - Housing Profile Numbers

	Total Housing Units Number	Single Family Number	Multi-Family Number	Mobile Homes Number	Transient Number
Douglas County	48,918	32,739	7,097	8,462	620

Source: US Census, 2010-2014 American Community Survey, Table DP04

Figure 2.15 - Housing Profile Percentage

	Total Housing Units Percent	Single Family Percent	Multi-Family Percent	Mobile Homes Percent	Transient Percent
Douglas County	100%	66.9%	14.6%	17.3%	1.3%

Source: US Census, 2010-2014 American Community Survey, Table DP04

Aside from location and type of housing, the year structures were built has implications on how structures may be affected after certain natural hazards. Seismic building standards were codified in Oregon building code starting in 1974; more rigorous building code standards were passed in 1993 that accounted for the Cascadia earthquake fault. Therefore, homes built before 1993 are more vulnerable to seismic events. Also in the 1970's, FEMA began assisting communities with floodplain mapping as a

response to administer the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. Upon receipt of floodplain maps, communities started to develop floodplain management ordinances to protect people and property from flood loss and damage. Figure 2.16 illustrates the number and percent of homes built prior to 1970, 1970 to 1989, and from 1990 to the present. Regionally a little over a third of the housing stock was built prior to 1970, before the implementation of floodplain management ordinances and the codification of general building standards. Approximately 28.3 percent of the county's housing stock was built after 1990, meaning that a large portion of the housing stock within the county are more vulnerable to seismic events.

Figure 2.16 - Year Structure Built

	Total Housing Units	Pre 1970		1970-1989		1990-Present	
		Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
OREGON	1,685,814	600,191	35.60%	521,030	30.90%	565,118	33.52%
Douglas County	48,918	18,303	37.40%	16,752	34.20%	13,863	28.33%
Cannyonville	1,048	468	44.70%	236	22.50%	344	33%
Drain	443	257	58.00%	121	27.30%	65	14.70%
Elkton	116	72	62.10%	9	7.75%	35	30.20%
Glendale	368	161	43.75%	128	34.78%	79	21.50%
Myrtle Creek	1,539	671	43.60%	474	30.80%	394	25.60%
Oakland	401	226	56.36%	98	24.44%	77	19.20%
Reedsport	2,152	1,101	51.16%	782	36.34%	269	12.50%
Riddle	526	287	54.56%	174	33.08%	65	12.36%
Roseburg	10,809	5,604	51.85%	3,132	28.98%	2,073	19.17%
Sutherlin	3,256	1,002	30.77%	944	29.00%	1,310	40.23%
Winston	2,006	608	30.31%	720	35.89%	678	33.79%
Yoncalla	492	218	44.31%	147	29.88%	127	25.81%

Source: US Census, 2010-2014 American Community Survey

Critical Facilities and Infrastructure

Transportation networks, systems for power transmission, and critical facilities essential to government response and recovery activities (e.g., hospitals, police, fire and rescue stations, school districts and higher education institutions) are all vital to the functioning of a community. Due to the fundamental role that infrastructure plays both pre- and post-disaster, it deserves special attention in the context of creating more resilient communities. Figures 2.17 through 2.22 below show the location of county-wide critical infrastructure and service assets. The critical infrastructure includes the location of critical facilities, hospitals and nursing homes, public schools, communication sites and dams.

Figure 2.17 - Douglas County Critical Facilities

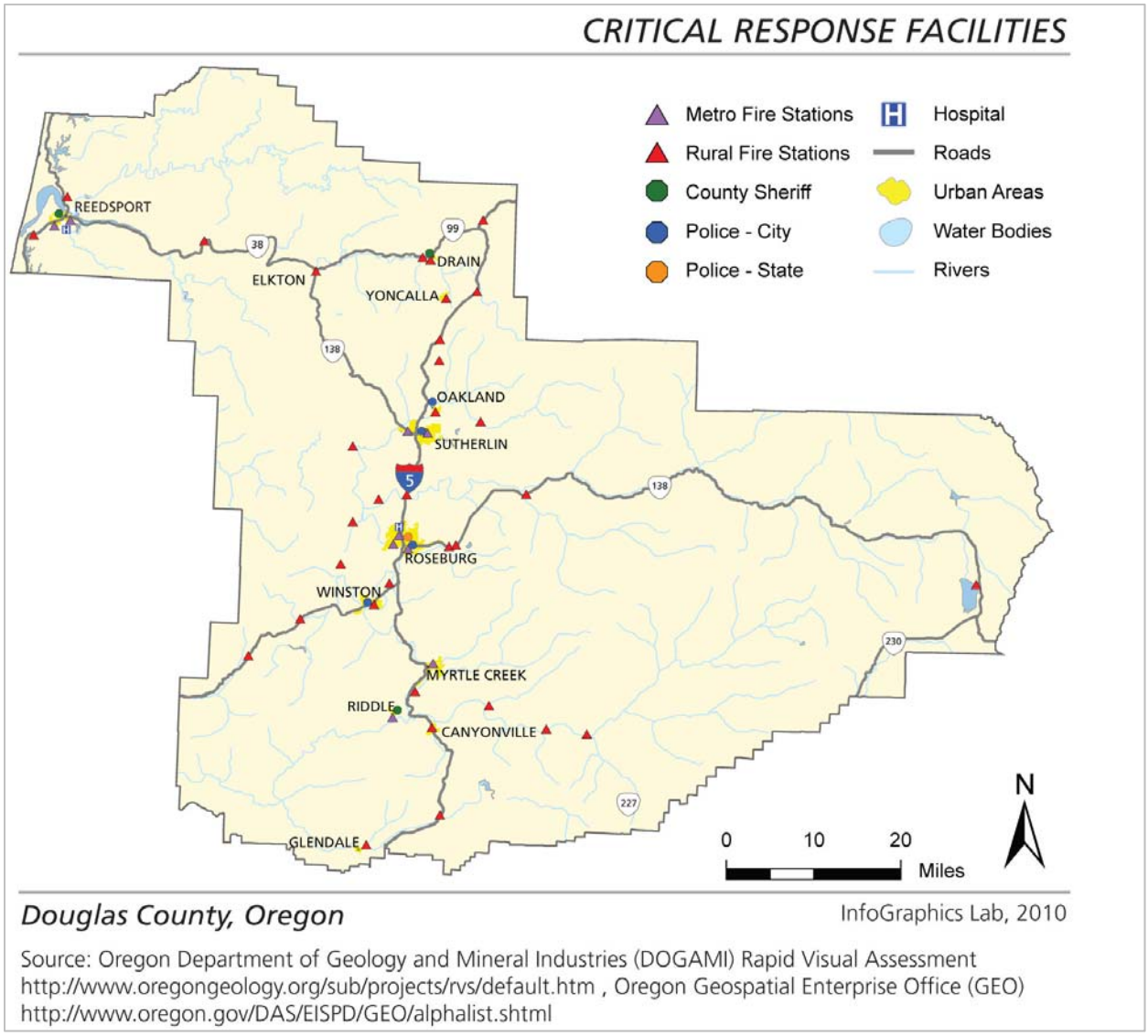


Figure 2.17, indicates the location of critical response facilities. These facilities include sheriff, city police and state police law enforcement locations. They also include metro and rural fire stations and hospital locations.

Figure 2.18 - Douglas County Hospitals and Nursing Homes

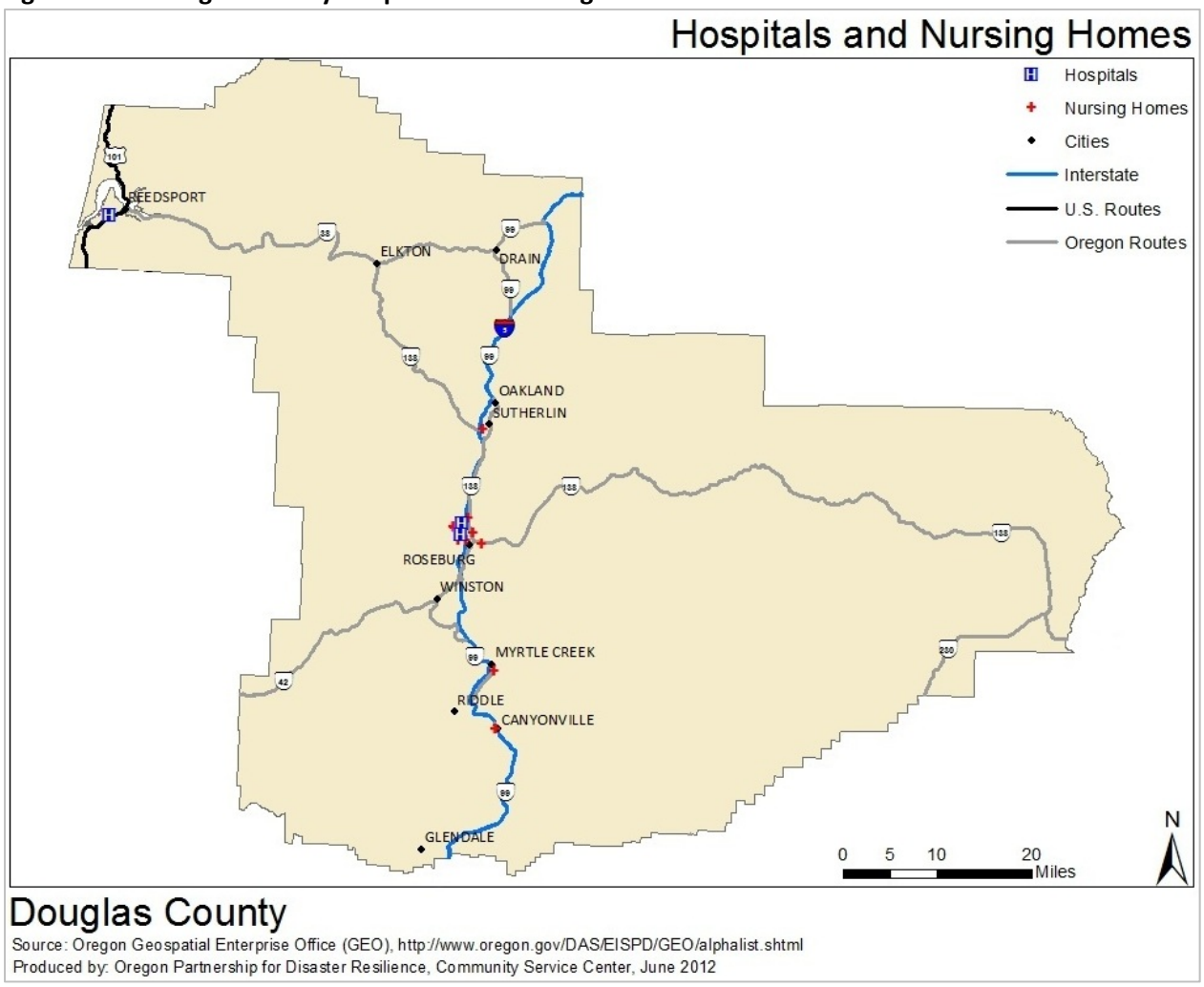


Figure 2.18, shows the location of hospitals and nursing homes within Douglas County. These facilities that are vital to the continued delivery of health services and may significantly impact the public's ability to recover from emergencies. Assisted living centers, nursing homes, residential mental health facilities, and psychiatric hospitals are important to identify within the community because of the dependent nature of the residents; and also these facilities can serve as secondary medical facilities as they are equipped with nurses, medical supplies and beds.

Figure 2.19 - Douglas County Public Schools

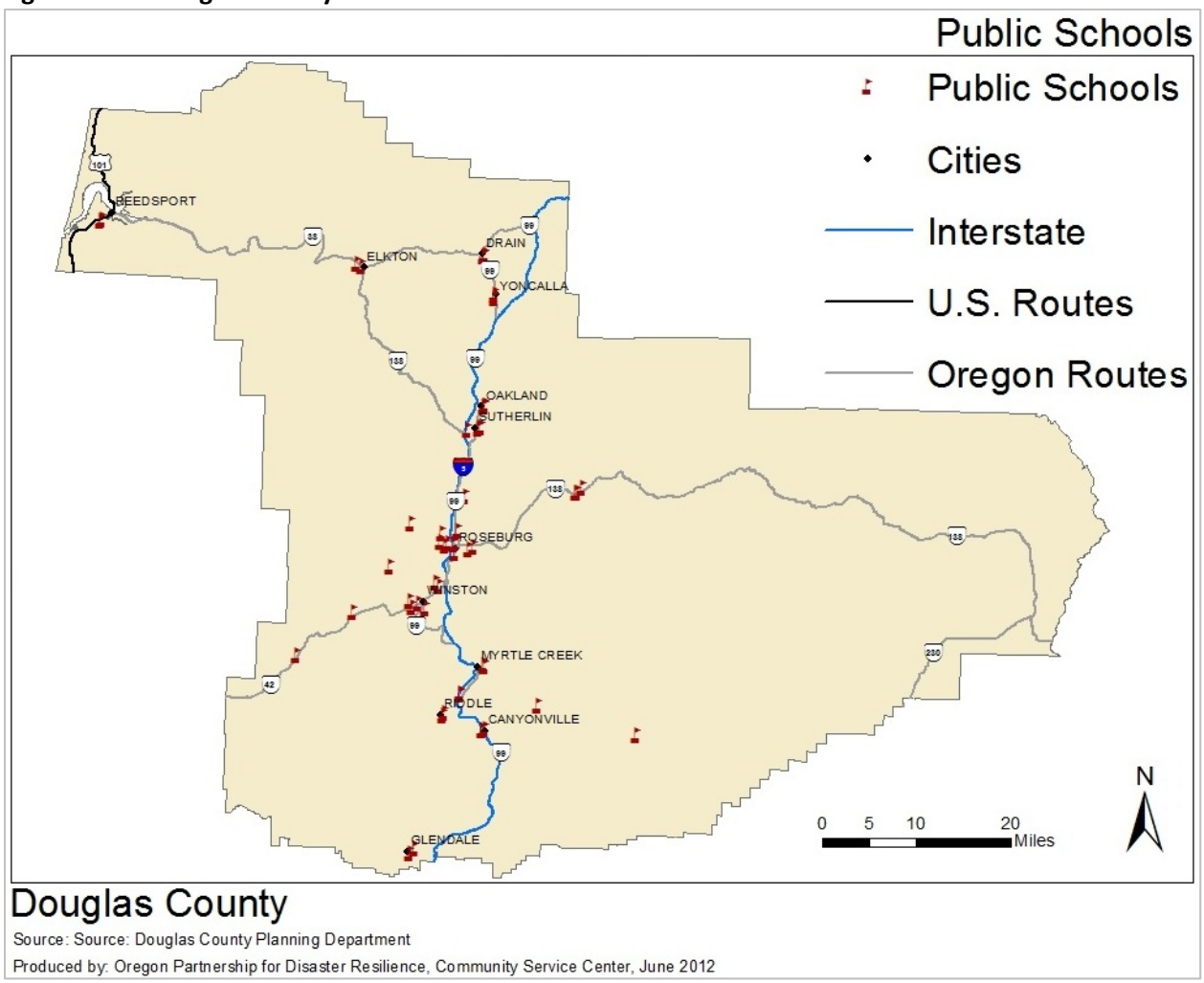


Figure 2.19, shows the location of each public school within Douglas County. Schools in general are centrally located around a community and often are designed to act as a shelter in the event of a large scale disaster. Schools house a vulnerable segment of the population that is dependent upon the needs of family members in order to recover from emergencies and post disaster events.

Figure 2.20 - Douglas County Communication Sites

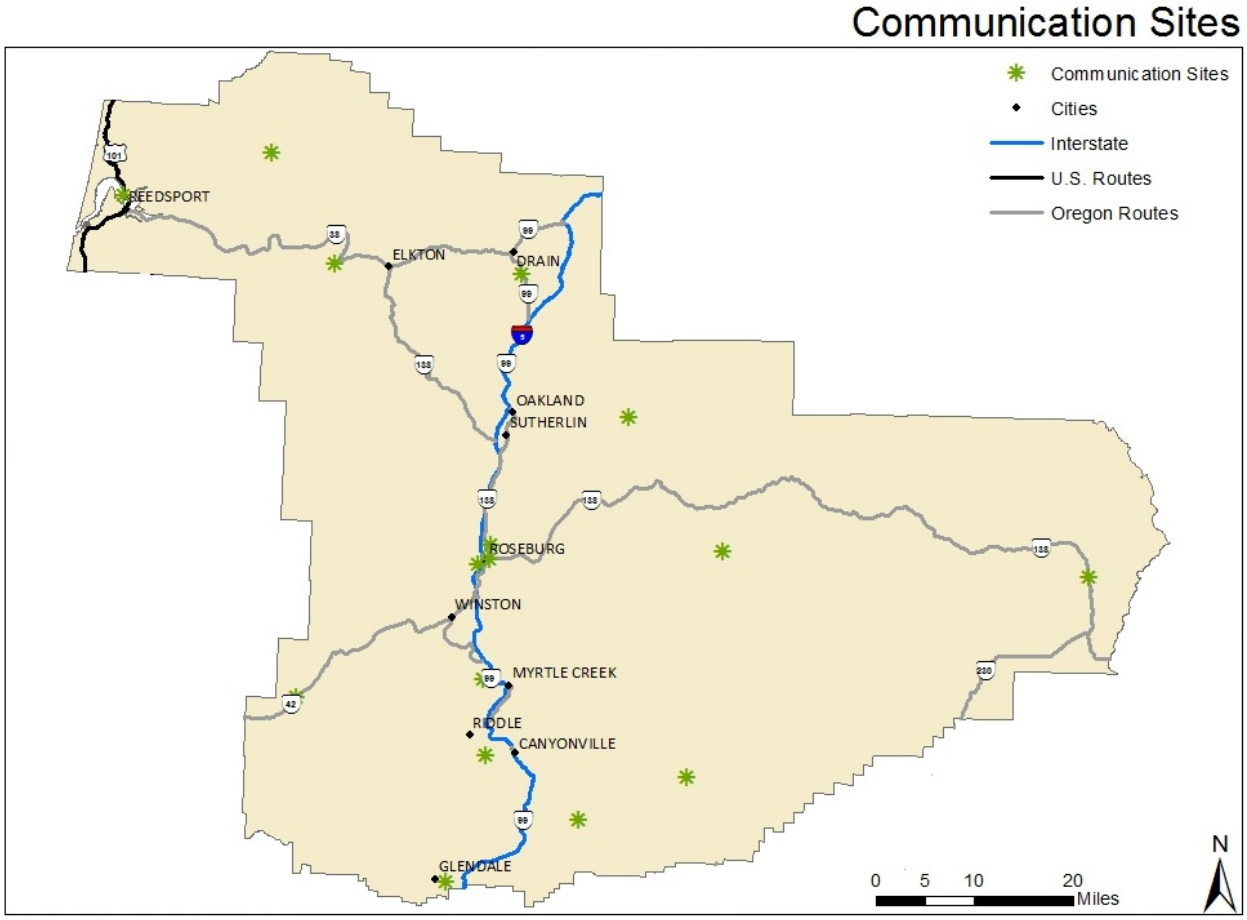


Figure 2.20, indicates the location of communication sites within the county.

Dams

Figure 2.21, shows the locations of dams within Douglas County and their approximate storage size. The Oregon Water and Resources Department has inventoried all dams located in Oregon and Douglas County. There are seven dams categorized with a high hazard rating; Cooper Creek, Bear Creek, Berry Creek, Cow Creek, Sutherlin Creek, North Umpqua River and Tenmile Creek. Based on definitions provided in OAR Ch. 690 Division 20 (Dam Safety), a hazard rating means the rating established by the Water Resource Department of the potential damage to life and property downstream of a dam in the event of a dam failure. A high hazard rating means that if a dam were to fail, loss of human life would be expected. A significant hazard rating means that if a dam were to fail, loss of life would be unlikely but damage to property would be extensive. A low hazard rating means that if a dam were to fail, loss of life would be unlikely and damage to property would not be extensive.

Figure 2.21 - Douglas County Dams

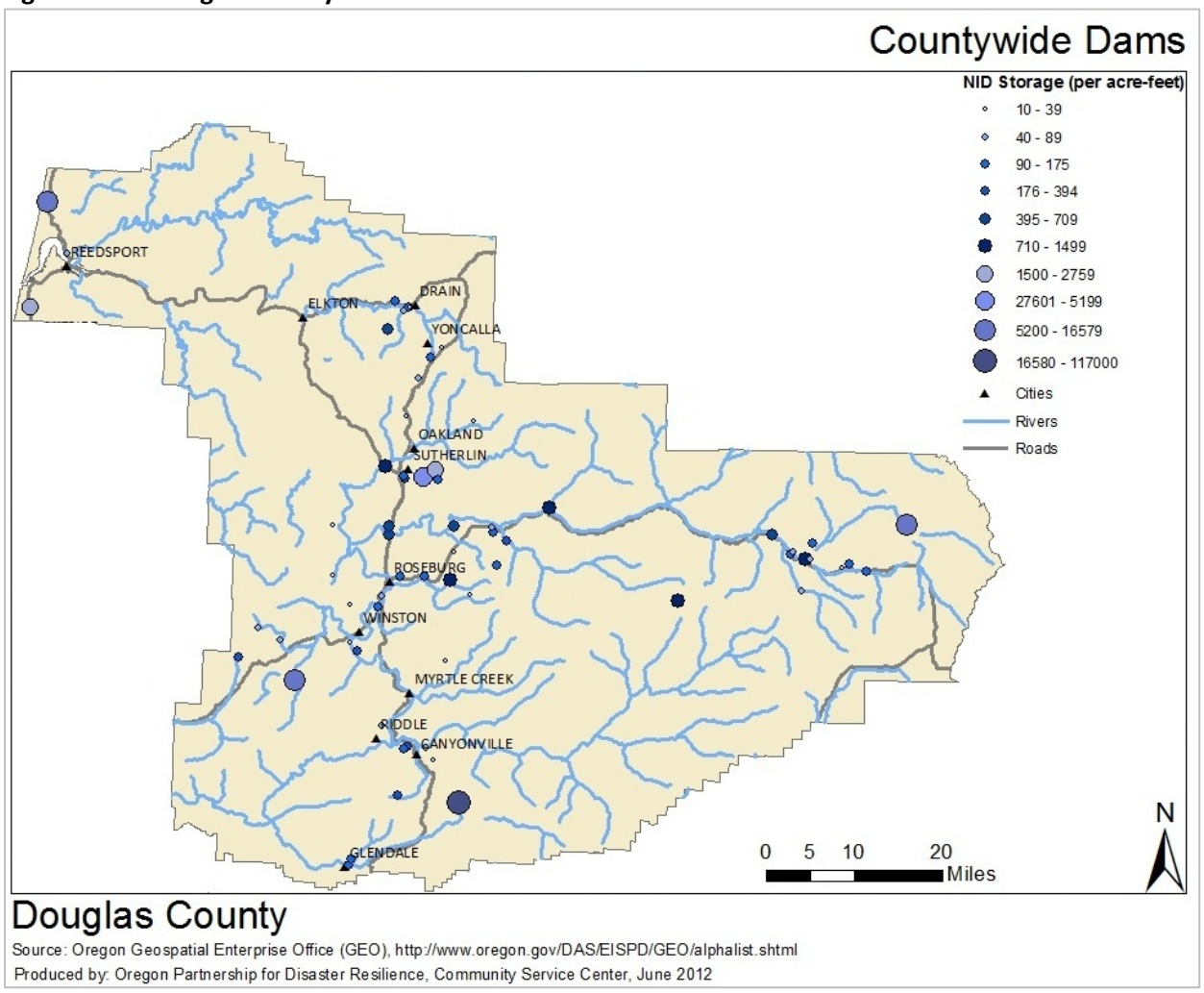


Figure 2.22 below indicates the possible threat potential to dams located within the county.

Figure 2.22 - Douglas County Dam Inventory

Threat Potential	Number of Dams	Rivers, Creeks, Lakes
High	13	Cooper Creek, Bear Creek, Berry Creek, Cow Creek, Sutherlin Creek, North Umpqua River, Tenmile Creek
Significant	20	West Fork Canyon Creek, North Umpqua, Hubbard Creek, Elk Creek, Livingston Creek, Deer Creek, Middle Fork Coquille River
Low	47	Camas Swale, Judd Creek, West Fork Canyon Creek, Bond Creek, Trib to Clear Lake, Clearwater River, North Umpqua, South Fork Deer Creek, Beaver Creek, Bachelor Creek, Hemlock Creek, Adams Creek, Calapooya Creek, Tahkenitch Creek, Yoncalla Creek
Total	80	

Source: http://apps.wrd.state.or.us/apps/misc/dam_inventory/, Oregon Water Resources Department, "Dam Inventory Query"

Public Highways and Roads

Douglas County and its twelve incorporated cities have a vast network of public highways and roads maintained by federal, state, and local governments.

The heaviest traveled routes are the Interstate-5 (I-5) corridor and state highways. I-5, part of the nationwide interstate freeway system runs north and south through the Douglas County interior. I-5 is the main passage for cars and trucks traveling along the west coast. Population growth in the region has brought more workers, cars and trucks onto roads. A high percentage of workers driving alone to work coupled with interstate movement on the I-5 corridor create additional stresses on transportation systems, including added maintenance, congestion, oversized loads, and traffic accidents.

State Highways 38 and 138 run from the coast to Douglas County's eastern border in the Cascades. US Highway 101 goes north and south through Gardiner, Reedsport and Winchester Bay along the Pacific Coast. State Highway 42 connects I-5 with the city of Coos Bay to the west, and goes east and west through Winston, Tenmile and Camas Valley.

Intersecting I-5 and State Highways are many paved county and city roads. County roads access areas throughout Douglas County and provide access to rural communities.

Rail Transportation

The Central Oregon Pacific Railroad provides rail service to central Douglas County, while the Coos Bay Rail Link provides rail service along the coast through Reedsport.

There is no passenger rail service available in Douglas County.

Airports

There are four existing public use airports in Douglas County including the Roseburg Regional, Myrtle Creek, US Forest Service Toketee Airfield and George Felt Airport. According to FAA Airport Facilities Data there are also 17 private airstrips located throughout the county, which provide service to agricultural, industrial and residential users.

Water Transport

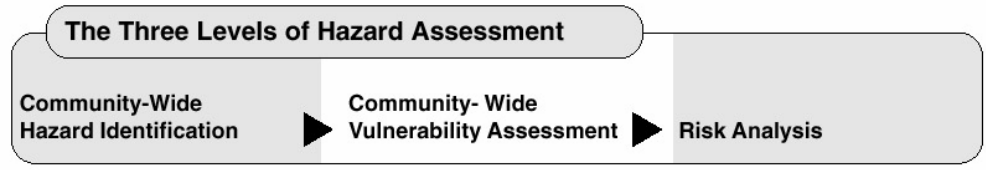
The lower 27 miles of the Umpqua River is a commercially navigable waterway. Port facilities include Salmon Harbor at Winchester Bay and docking facilities at Reedsport, Gardiner and Bolon Island. Channel depths are maintained by the US Army Corps of Engineers.

Chapter 3:
Hazard Assessment

Evaluating Risk

Evaluating the risk of possible natural hazards consists of three phases: hazard identification, vulnerability assessment, and risk analysis, as illustrated in the following graphic.

Figure 3.1 - Three Phases of a Hazard Assessment



Source: Planning for Natural Hazards: Oregon Technical Resource Guide, 1998

The first phase, **hazard identification**, involves the identification of the geographic extent of a hazard, its intensity, and its probability of occurrence. This chapter's primary focus is on the eight different possible natural hazards that may affect Douglas County. It should be noted that much of the information used to analyze the hazards identified within this chapter came from the 2012 Douglas County Comprehensive Hazard Analysis, incorporated herein by reference.

The second phase, **vulnerability assessment**, combines the information from the hazard identification with an inventory of the existing property and population exposed to a hazard, and attempts to predict how different types of property and population groups will be affected by the hazard. Chapter 2 of this document, entitled Douglas County Multi-Jurisdictional Community Profile, helps to establish the vulnerability of Douglas County and its incorporated cities. The Community Profile describes Douglas County's sensitivity and resilience to natural hazards concerning the following capacities: natural environment, social/demographic, economic, built environment, community connectivity, and political accommodations.

The third phase, **risk analysis**, involves estimating the damage, injuries, and costs likely to be incurred in a geographic area over a period of time. Risk has two measurable components: (1) the magnitude of the harm that may result, defined through the vulnerability assessment, and (2) the likelihood or probability of the harm occurring. The purpose of the 2012 Douglas County Comprehensive Hazard Analysis was to develop a comprehensive risk assessment in order to reduce duplicative efforts, enhance data gathering, interpretation, and application capabilities across emergency management related planning activities.

This three-phase approach to developing a risk assessment should be conducted sequentially because each phase builds upon data from prior phases. However, gathering data for a risk assessment need not occur sequentially.

Federal Disaster and Emergency Declarations

Looking at the past events that have occurred within the area can provide a general sense of the hazards that have caused significant damage to the county and the cities. Where trends emerge, disaster declarations can help inform hazard mitigation project priorities.

President Dwight D. Eisenhower approved the first federal disaster declaration in May 1953 following a tornado in Georgia. When requesting a presidential declaration for a major disaster or emergency, governors provide detailed information about the amount of value of public and private property damage resulting from the event. FEMA uses these damage assessments to determine if the event meets the disaster declaration threshold. In addition, FEMA uses the information to determine the amount of federal public and private assistance being made available as well as the specific counties being included in the declaration.

Disaster declarations can help inform hazard mitigation project priorities, by demonstrating and documenting which hazards historically have caused the most significant damage to the county. Figure 3.2 below summarizes the major disasters declared for Douglas County by FEMA since 1964. The table shows that all of the recent major disaster declarations in Douglas County have been flood, fire and weather related.

Figure 3.2 – FEMA Major Disaster Declarations for Douglas County

Declaration Number:	Declaration Date:	Incident(s):	Incident(s) Period:
DR-184	24-Dec-64	Flood	24-Dec-64
DR-319	21-Jan-72	Flood	21-Jan-72
DR-413	25-Jan-74	Flood	25-Jan-74
DR-1036	2-Aug-94	El Nino Effects	1-May-1994 to 31-Oct-1994
DR-1099	9-Feb-96	Severe Storms, Flooding	4-Feb-1996 to 21-Feb-1996
DR-1107	19-Mar-96	Severe Storms, High Winds	10-Dec-1996 to 12-Dec-1996
DR-1149	23-Dec-96	Severe Storms, Flooding	17-Nov-1996 to 11-Dec-1996
DR-1160	23-Jan-97	Severe Winter Storms, Flooding	25-Dec-1996 to 6-Jan-1997
DR-1405	12-Mar-02	Severe Winter Windstorm w/ High Winds	7-Feb-2002 to 8-Feb-2002
DR-1510	19-Feb-04	Severe Winter Storms, Flooding	26-Dec-2003 to 14-Jan-2004
FM-2549	21-Aug-04	Bland Mountain #2 Fire	20-Aug-2004 to 5-Sep-2004
DR-1632	20-Mar-06	Severe Storms, Flooding, Landslides, Mudslides	18-Dec-2005 to 21-Jan-2006
DR-1956	17-Feb-11	Severe Winter Storm, Flooding, Landslides, Mudslides, Debris Flow	13-Jan-2011 to 21-Jan-2011
DR-4055	2-Mar-12	Severe Winter Storm, Flooding, Landslides, Mudslides	17-Jan-2012 to 21-Jan-2012
FM-5037	28-Jul-13	Douglas Fire Complex	27-Jul-2013 to 19-Aug-2013
FM-5092	31-Jul-15	Stouts Creek Fire	30-Jul-2015 to 29-Aug-2015

Source: FEMA, Oregon Disaster History, Major Disaster Declarations

Hazards

Douglas County identifies eight natural hazards that could have an impact on the county. Douglas County and the cities of Azalea, Canyonville, Drain, Elkton, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla have identified the following natural hazards that could have an impact on their respective jurisdiction: earthquakes, drought, floods, landslides, tsunamis, wildfires, windstorm, and winter storms. Note that the City of Reedsport is the only incorporated city subject to a tsunami hazard; the Urban Unincorporated Areas of Gardiner and Winchester Bay are also vulnerable to tsunami hazards.

The probability and vulnerability assessment summaries provided below in Figures 3.3 and 3.4 are derived from multiple documents and online programs and tools. These documents and online tools include the following: 2009 Douglas County NHMP; 2012 Douglas County Comprehensive Hazard Analysis; Douglas County Community Wildfire Protection Plan; 2004 Individual City NHMP's; University of Oregon's Oregon Partnership for Disaster Resilience, 2015 Student Natural Hazard Mitigation Reports; 2015 Oregon NHMP; DOGAMI Statewide Landslide Information Database for Oregon (SLIDO); DOGAMI Oregon HazVu: Statewide Geohazards Viewer; and FEMA Flood Insurance Rate Maps.

Probability is the likelihood of future occurrence within a specified period of time. Douglas County evaluated the best available probability data to develop the probability scores presented below. For the purpose of this plan, the county utilized the Oregon Military Department's Office of Emergency Management (OEM) hazard analysis methodology probability definitions to determine hazard probability. The definitions are:

LOW = one incident likely within 75 – 100 years,
MODERATE = one incident likely within 35-75 years,
HIGH = one incident likely within 10-35 years.

Vulnerability is the percentage of population and property likely to be affected under an average occurrence of the hazard. Again for the purposes of this plan, the county utilized the Oregon Military Department's Office of Emergency Management (OEM) hazard analysis methodology vulnerability definitions to determine hazard vulnerability. The definitions are:

LOW = < 1% affected, scores between 1 and 3 points
MODERATE = 1 – 10% affected, scores between 4 and 7 points
HIGH = > 10% affected, scores between 8 and 10 points

The hazard analysis methodology in Oregon (primarily to inform Emergency Operations Planning) of using low, moderate and high rating associated with the probability and vulnerability was first developed by FEMA in 1983 and has gradually been refined by the Oregon Military Department's Office of Emergency Management over the years. Using this method provides each jurisdiction with a sense of hazard priorities and future planning can be focused where the risk is greatest.

Figure 3.3 – Natural Hazard Probability Assessment Summary

Hazard	Douglas County	Coastal Do. Co.	Canyonville	Drain	Elkton	Glendale	Myrtle Creek	Oakland	Riddle	Roseburg	Sutherlin	Winston	Yoncalla
Drought	Moderate	Low	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Earthquake	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Flood	**High**	**High**	**High**	**High**	**High**	**High**	**High**	Moderate	**High**	**High**	Low	**High**	Low
Landslide	Moderate	**High**	Moderate	Low	Moderate	Moderate	Moderate	Moderate	Low	Moderate	Low	Moderate	Low
Tsunami	N/A	**High**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wildfire	**High**	Moderate	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**
Windstorm	Moderate	**High**	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Low	Moderate
Winterstorm	Moderate	**High**	Moderate	Low	Moderate	**High**	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate

Figure 3.4 – Natural Hazard Vulnerability Assessment Summary

Hazard	Douglas County	Coastal Do. Co.	Canyonville	Drain	Elkton	Glendale	Myrtle Creek	Oakland	Riddle	Roseburg	Sutherlin	Winston	Yoncalla
Drought	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Moderate
Earthquake	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**	**High**
Flood	Moderate	**High**	Low	**High**	Moderate	Moderate	Moderate	Low	Low	Moderate	Low	Moderate	Low
Landslide	Low	Moderate	Moderate	Low	Moderate	Moderate	Low	Low	Low	Low	Low	Moderate	Low
Tsunami	N/A	**High**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wildfire	**High**	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	**High**
Windstorm	Moderate	**High**	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Winterstorm	Moderate	Low	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate

This hazard assessment – including the scoring and values assigned within the assessments above (Figures 3.3 & 3.4) – reflect changes in development since the previous plan was acknowledged. In many cases, the assessment may not have changed as a result of a lack of development within many of the smaller jurisdictions within Douglas County. The minor amount of development that has occurred within many of the smaller jurisdictions result in little to no effect on the probability & vulnerability assessments contained in the previous NHMPs.

Figure 3.5 – Vulnerable Infrastructure by Hazard within Unincorporated Douglas County & each Incorporated City

	Drought	Earthquake	Flood	Landslide	Tsunami	Wildfire	Windstorm	Winter storm
Douglas County	Management of water rights along South Umpqua Watershed	Bridges that provide critical connections/ Galesville Dam	Lack of hydrology data at confluence of North & South Umpqua Rivers (River Forks Area)	Lack of quality landslide data for implementation	Evacuation Routes/Hwy 101	Neighborhoods within WUI	Downed trees and other utilities sequestering rural citizens	Rural citizens separated from urban services by steep terrain
City of Canyonville	Single Water Source (Canyon Creek)	I-5 Bridge south of City	Properties with frontage along Canyon Creek	Water System on Canyon Creek; Residential on south side of city	N/A	Neighborhoods within WUI	Overhead powerlines	I-5/Canyon Pass
City of Drain	Properties northeast and outside city limits	Highway 38 Bridge	Neighborhoods around confluence of Pass and Elk Creeks	Southwest Reservoir	N/A	Neighborhoods within WUI	Overhead powerlines	Overhead powerlines
City of Elkton	Entire city served by single surface water source (Umpqua River)	Elkton School buildings Water reservoirs	River Road/High School, East along Elk Creek Wastewater treatment plant	Western portion of UGB directly North of Hwy 38 Northeast section along Elk Creek	N/A	Neighborhoods within WUI	Overhead powerlines serving WTP and WWTP	Overhead Powerlines serving WTP and WWTP
City of Glendale	Cow Creek Water Source	Galesville Dam; Wastewater Plant	Galesville Dam	Southern properties along steep slopes	N/A	Neighborhoods within WUI	Overhead powerlines	I-5/Stage Pass
City of Myrtle Creek	Properties serviced by Springbrook Water Plant	Coffenberry Middle School Building & City Hall/Police Department	Mill St. Neighborhood	Dole Road and North Water Tank	N/A	Residential properties along East side of City within WUI	N/A	Overhead Powerlines in downtown

City of Oakland	Properties serviced by Oakland Water Treatment System	All brick buildings in downtown Oakland, including Washington School which houses Oakland City Hall, Library, Pre-School and Community Center	City water intake pipes and facility preventing raw water from supplying the system	Water Reservoirs, which are located on hillsides above the City	N/A	All buildings on the perimeter of the City and possibly the entire city which is surrounded by trees	Downed trees and power lines throughout town and some roof damage	Overhead power lines supplying City services and homes throughout the City
City of Reedsport	N/A	Hwy 101 Bridges (Umpqua; Scholfield)	All areas inside levee	Structures along the Crestview Drive Area and properties along the south steep slopes of the city.	Evacuation Routes/Hwy 101	Southern outlying areas adjacent to timberlands	I-5 Bridge Connections and Steep roads	Overhead powerlines
City of Riddle	Bulk Water Users; Whole Sale Contract Users	City Hall Library; Fire Hall ;Twin Oaks Water Tank	Water and Sewer Plants; Transportation	Communications	N/A	Neighborhoods in WUI	Overhead powerlines	Overhead powerlines
City of Roseburg	Water Treatment Plant Reservoir Hill	Water Treatment Plant Fire Station #3	Properties at confluence of South Umpqua River and Newton Creek Properties between Deer Creek and Diamond Lake Blvd.	Terrace/Summit Neighborhood Reservoir Hill	N/A	Roseburg Airport Reservoir Hill	Fulton PW Shop Fire Stations	Fulton PW Shop Fire Stations
City of Sutherlin	N/A	Cooper Creek Reservoir	Cooper Creek Reservoir	Properties along Creekside Street	N/A	Neighborhoods within WUI	Overhead powerlines	Union Gap/I-5
City of Winston	Single Water Source (South Umpqua)	Green (South Umpqua) Bridge	Properties within South Umpqua Flood Plain	Properties to North along Lookingglass Rd	N/A	Neighborhoods within WUI	Overhead powerlines	Overhead powerlines
City of Yoncalla	Single Water Source	High School; City Hall	N/A	Properties along Mathis; Water Reservoir Hill	N/A	Neighborhoods within WUI	Overhead powerlines	Overhead powerlines

The table (Figure 3.5) referenced above provides a general overview of the infrastructure within each city jurisdiction prioritized as the most vulnerable to each specific hazard. This is intended to provide a baseline for prioritization of action items as it relates to the vulnerability assessment for each specific jurisdiction. Capacity constraints for each jurisdiction and lack of quantifiable data limit the ability to assess and break down the vulnerability assessment further. Many of the jurisdictions included within this multi-jurisdictional NHMP would likely provide interest in acquiring professional assessments of vulnerable infrastructure in order to include more quantifiable data for specific vulnerability assessments and action items in a future update of this plan.

Drought

Location: Douglas County, Azalea, Canyonville, Drain, Elkton, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla

Droughts can affect commerce, agriculture, fisheries, and overall quality of life. Douglas County experienced drought conditions in 1992, 1994, 2001, 2002, 2013, 2014 and most recently in 2015. In each of these years except for 2013 and 2014, Douglas County was declared to be under drought emergency by the Governor. Governor Kate Brown declared Douglas County a drought emergency area in June of 2015 indicating, "The extreme drought conditions we are experiencing reflect a new reality in Oregon." (Reference http://www.oregon.gov/newsroom/Pages/NewsDetail.aspx?newsid=754)

Drought means a prolonged period of abnormally low rainfall creating hot and dry conditions leading to water shortages for farming and ranching operations. Each year, the Oregon Drought Council, chaired by the Oregon Office of Emergency Management regularly meets to assess water conditions around the state. In 2015, 25 of Oregon's 36 were declared to be under drought emergency by the Governor. (Reference http://apps.wrd.state.or.us/apps/wr/wr_drought/declaration_status_report.aspx)

Drought is frequently an "incremental" hazard, meaning the onset and end is often difficult to determine. Also, its effects may accumulate slowly over a considerable period of time and may linger for years after the termination of the event. Potential impacts vary among communities. The extent and location of drought can occur region-wide, and can affect all segments of a jurisdiction's population, particularly those dependent on rainfall (e.g. agriculture, hydroelectric generation, recreation, etc.). Within Douglas County and its incorporated cities, potential impacts may include water shortages for farming and ranching, water rationing in rural and urban locations, and decreases in tourism-related activities. Drought is typically measured in terms of water availability in a defined geographical area. It is common to express drought with a numerical index that ranks severity. The National Oceanic and Atmospheric Association (NOAA) uses the Palmer Drought Severity Index to measure drought in the state's regions. The Palmer Drought Severity Index incorporates both local conditions and mountain snow pack, categorizing droughts as mild, moderate, severe, and extreme. Douglas County, including the coastal area experienced months of moderate drought in 2013 and 2014, with severe to extreme drought levels reached and spanning from June-November of 2015. This resulted in a Federal Drought Declaration on March 22, 2015 and a formal drought declaration for Douglas County by the Governor Kate Brown as mentioned previously. While this was a regional categorization, some areas of the county were impacted more directly by the drought then others. Ultimately, should a drought affect the direct water supply of a local water district the entire community would be vulnerable to the hazard. The 2009 Douglas County NHMP did not list drought as a possible hazard within the plan and the 2015 Oregon NHMP, which analyzes southwest Oregon including Douglas, Jackson and Josephine counties did not assess Douglas County with a low, moderate or high ranking regarding the probability or vulnerability involving drought. The Douglas County steering committee reviewed the information and determined that the risk of drought within Douglas County was moderate, and that depending on the severity of the drought the county, as well as participating cities vulnerability to a drought would be moderate.

Earthquake

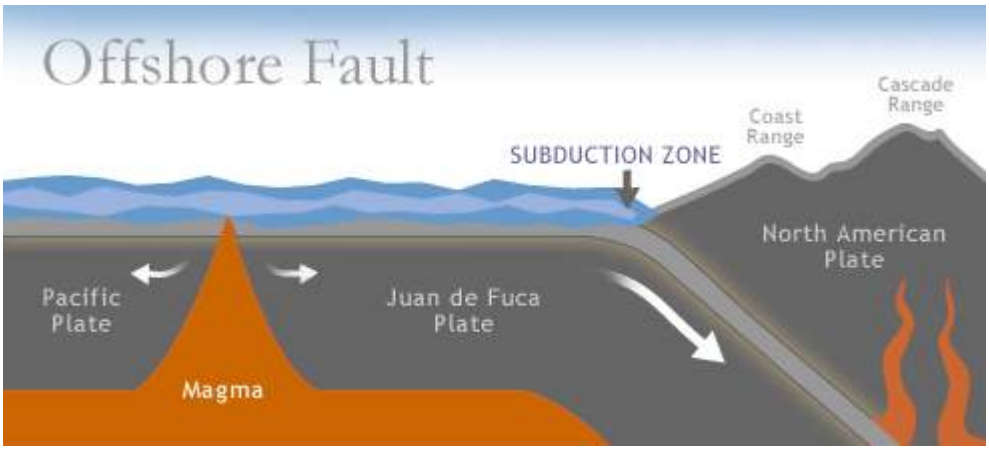
Location: Douglas County, Azalea, Canyonville, Drain, Elkton, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla

The geographic position of Douglas County makes it susceptible to earthquakes from four sources: (a) the off-shore Cascadia Subduction Zone (CSZ), (b) deep intra-plate events within the subducting Juan de Fuca plate, (c) shallow crustal events within the North America Plate, and (d) earthquakes associated with renewed volcanic activity.

Cascadia Subduction Earthquake

In Douglas County the greatest risk from earthquakes would be from an offshore CSZ earthquake. The Pacific Northwest is located at a convergent plate boundary, where the Juan De Fuca and North American tectonic plates meet. The two plates are converging at a rate of about 1 – 2 inches per year. This boundary is called the CSZ. It extends from British Columbia to northern California. Subduction zone earthquakes are caused by the abrupt release of slowly accumulated stress. Subduction zones similar to the CSZ have produced earthquakes with magnitudes of 8 or larger. Historic subduction zone earthquakes include the 1960 Chile (magnitude 9.5) and 1964 southern Alaska (magnitude 9.2) earthquakes.

Figure 3.5 - Cascadia Subduction Zone



Source: *Off Shore Fault Zone: Washington State Department of Ecology*

http://www.ecy.wa.gov/programs/sea/coast/waves/fault.html

Geologic evidence shows that the CSZ has generated significant earthquakes, most recently about 300 years ago. It is generally accepted to have been a magnitude 9 or greater. The average recurrence interval of a CSZ event is approximately 500 years, with gaps between events as small as 200 years and as large as 1,000 years. Such earthquakes may cause great damage to the coastal area of Oregon as well as inland areas in western Oregon. Shaking from a large CSZ earthquake could last up to five minutes. A CSZ earthquake is the most likely to occur, and the most damaging to Douglas County of the four types of earthquakes possible within our area.

Deep Intraplate Earthquake

Occurring at depths from 25 to 40 miles below the earth's surface in the subducting oceanic crust, deep intraplate earthquakes can reach up to magnitude 7.5. The February 28, 2001 earthquake in Washington State was a deep intraplate earthquake. It produced a rolling motion that was felt from Vancouver, British Columbia to Coos Bay, Oregon and east to Salt Lake City, Utah. A 1965 magnitude 6.5 intraplate earthquake centered south of Seattle-Tacoma International Airport caused seven deaths.

Crustal Fault Earthquake

Crustal fault earthquakes occur at relatively shallow depths of 6 – 12 miles below the surface. While most crustal fault earthquakes are smaller than magnitude 4 and generally create little or no damage, they can produce earthquakes of magnitudes up to 7, which cause extensive damage. DOGAMI's HazVu: Statewide Geohazards Viewer shows three small active faults in the vicinity of Yoncalla, Oakland, and Rice Hill.

Volcanic Activity Earthquake

Some earthquakes are related to volcanoes. For example, most earthquakes are along the edges of tectonic plates. This is where most volcanoes are too. However, most earthquakes are caused by the interaction of the plates and not the movement of magma.

Most earthquakes directly beneath a volcano are caused by the movement of magma. The magma exerts pressure on the rocks until it cracks the rock. Then the magma squirts into the crack and starts building pressure again. Every time the rock cracks it makes a small earthquake. These earthquakes are usually too weak to be felt but can be detected and recorded by instrumentation.

Douglas County has no historical evidence of earthquakes centered immediately within the county. However, crustal, intraplate, and prehistoric subduction zone earthquakes centered outside Douglas County may have affected our area. The following list records significant historical earthquakes with an epicenter near Douglas County area which may have had an impact on the county:

Figure 3.6 – Historical Earthquakes in the Douglas County (Southwestern Oregon) Region

Date	Location	Magnitude	Remarks
Jan. 1700	offshore, CSZ	~ 9.0	Generated a tsunami that struck Oregon, Washington and Japan
Nov. 1873	Brookings area	7.3	Origin probably Gorda block of the Juan de Fuca plate; intraplate event
Apr. 1920	Fort Klamath	5	Origin probably in the vicinity of Crater Lake
Mar. 1993	Scotts Mills	5.6	$28 million in damage, damage to homes, schools, building, state buildings; crustal event
Sep. 1993	Klamath Falls	5.9 to 6.0	2 earthquakes causing 2 deaths and extensive damage; $7.5 million in damage to homes, commercial, and governmental buildings; crustal event

Earthquake Related Hazards

Ground shaking, landslides, liquefaction, and amplification are the specific hazards associated with earthquakes. The severity of these hazards depends on several factors, including soil and slope conditions, proximity to the fault, earthquake magnitude, and the type of earthquake.

Ground Shaking

Ground shaking is the motion felt on the earth's surface caused by seismic waves generated by the earthquake. It is the primary cause of earthquake damage. The strength of ground shaking depends on the magnitude of the earthquake, the type of fault, and distance from the epicenter (where the earthquake originates). Buildings on poorly consolidated and thick soils will typically see more damage than buildings on consolidated soils and bedrock.

Earthquake-Induced Landslides

Earthquake-induced landslides are secondary earthquake hazards that occur from ground shaking. They can destroy the roads, buildings, utilities, and other critical facilities necessary to respond and recover from an earthquake. Many communities in Oregon have a high likelihood of encountering such risks, especially in areas with steep slopes.

Liquefaction

Liquefaction occurs when ground shaking causes wet granular soils to change from a solid state to a liquid state. This results in the loss of soil strength and the soil's ability to support weight. Buildings and their occupants are at risk when the ground can no longer support these buildings and structures.

Amplification

Soils and soft sedimentary rocks near the earth's surface can modify ground shaking caused by earthquakes. One of these modifications is amplification. Amplification increases the magnitude of the seismic waves generated by the earthquake. The amount of amplification is influenced by the thickness of geologic materials and their physical properties. Buildings and structures built on soft and unconsolidated soils can face greater risk. Amplification can also occur in areas with deep sediment filled basins and on ridge tops.

Un-reinforced Brick or Masonry Buildings (URMs)

Most injuries in an earthquake are from building failures. The most potentially dangerous buildings are constructed of un-reinforced brick masonry. URMs are typically older brick buildings, often concentrated in an urban setting.

Fire

A serious hazard following an earthquake is fire, often caused by damage to utility lines or broken gas mains. When fire stations suffer building or lifeline damage, quick response to extinguish fires is less likely.

Tsunami

A tsunami is a series of sea waves generated by an earthquake. Damage as a result of Tsunami is discussed more thoroughly later within this chapter (See Tsunami section on Page 3.25).

Earthquake Hazard Assessment

Hazard Identification

The Department of Geologic and Mineral Industries (DOGAMI), in partnership with other state and federal agencies, has undertaken a rigorous program in Oregon to identify seismic hazards and risks, including active fault identification, bedrock shaking, tsunami inundation zones, ground motion amplification, liquefaction, and earthquake induced landslides. Seismic hazard maps have been published and are available for many communities in Oregon through DOGAMI.

Seismic building standards were codified in Oregon building code starting in 1974; more rigorous building code standards were passed in 1993 that accounted for the CSZ. The State Building Codes reflect three seismic zones. An increase in zone number reflects increased seismic activity. The *Current Seismic Zones* map below shows that Douglas County east of Range 10 West is within Zone 3, while west of Range 10 West is within Seismic Zone 4. Homes in Douglas County built before 1993, prior to the Zone 3 and Zone 4 code requirements, are more vulnerable to seismic events.

Vulnerability Assessment

The effects of earthquakes span a large area, and an earthquake occurring in Douglas County would probably be felt throughout the county. However, the degree to which the earthquakes are felt, and the damages associated with them may vary. At risk from earthquake damage are large stocks of old buildings and bridges, hazardous materials facilities, extensive sewer, water, and natural gas pipelines, dams, a petroleum pipeline, and other critical facilities and private property located in the county. The areas that are particularly vulnerable to potential earthquakes in the county have been identified as the coastal area of the county, as reflected in the increased seismic zone rating of the areas west of Range 10W. The relative or secondary earthquake hazards, which are liquefaction, ground shaking, amplification, and earthquake-induced landslides, can be just as devastating as the earthquake. Liquefaction occurs when ground shaking causes wet granular soils to change from a solid state to a liquid state. This results in the loss of soil strength and the soil's ability to support weight. Buildings and their occupants are at risk when the ground can no longer support these buildings and structures.

Risk Analysis

Risk analysis is the third phase of a hazard assessment. Risk analysis involves estimating the damage and costs likely to be experienced in a geographic area over a period of time. Factors included in assessing earthquake risk include population and property distribution in the hazard area, the frequency of earthquake events, landslide susceptibility, buildings, infrastructure, and disaster preparedness of the region. This type of analysis can generate estimates of the damages to the county due to an earthquake event in a specific location.

- Due to the high risk, but low probability of earthquakes in Douglas County, widespread mitigation of seismic hazards is challenging in the case of most typical buildings. New buildings will be built in accordance with current seismic building code requirements. Thus,

the seismic capacity of the Douglas County building stock will improve over time as the existing stock is gradually replaced and/or upgraded.

- Structural retrofit of buildings and infrastructure should focus on buildings that are most vulnerable to seismic damage, and are most important to the community, such as schools, hospitals, and other critical facilities. Priorities should include buildings on soft soil sites subject to amplification of ground motion and/or liquefaction.

- Non-structural bracing of equipment and contents is often the most cost-effective type of seismic mitigation. Inexpensive bracing and anchoring may protect expensive equipment whose function is critical in hospitals or utility companies.

Community Earthquake Issues

What is Susceptible to Earthquakes?

Earthquake damage occurs because humans have built structures that cannot withstand severe shaking. Buildings, airports, schools, and lifelines (highways and utility lines) suffer damage in earthquakes and can cause death or injury to humans. The welfare of homes, major businesses, and public infrastructure is very important. Addressing the reliability of buildings, critical facilities, and infrastructure, and understanding the potential costs to government, businesses, and individuals as a result of an earthquake, are challenges faced by the county and its incorporated cities.

Dams

Douglas County dams hold millions of gallons of water in reservoirs. Releases of water from the major reservoirs are designed to protect Douglas County from high floodwaters. Seismic activity can compromise the dam structures, and the resultant downstream flooding would cause catastrophic flooding.

Buildings

All buildings are susceptible to damage in the event of an earthquake. Buildings that collapse can trap and bury people. Lives are at risk and the cost to clean up the damages is great. In Douglas County, and its incorporated cities, many buildings were built before 1993 prior to specific seismic regulations. In addition, retrofitting is not required except under certain conditions and can be expensive. Therefore, the number of buildings at risk remains high. The Oregon Building Codes Division revised its construction standards for new buildings to make them more resistant to seismic events.

Infrastructure and Communication

Residents in Douglas County commute almost exclusively by automobile. An earthquake can greatly damage bridges and roads, hampering the movement of people and goods. Damaged infrastructure strongly affects the economy of the community because it disconnects people from work, school, food, and leisure, and separates businesses from their customers and suppliers.

Bridge Damage

Even modern bridges can sustain damage during earthquakes, leaving them unsafe for use. Some bridges have failed completely due to strong ground motion. Bridges are a vital transportation link – with even minor damages making some areas inaccessible. Because bridges vary in size, materials, siting, and design, any given earthquake will affect them differently. Bridges built before the mid-1970's have a significantly higher risk of suffering structural damage during a moderate to large earthquake compared with those built after 1980 when design improvements were made.

Much of the interstate highway system was built in the mid to late 1960's. Bridges in Douglas County are state, county, city, or privately owned. A state-designated inspector must inspect all state, county, and city bridges every two years, and the inspections are rigorous, looking at everything from seismic capability to erosion and scour. However, private bridges are not inspected, and can be very dangerous.

Damage to Utilities/Infrastructure

Utilities/Infrastructure includes water and gas lines, transportation systems, electricity, and communication networks. Ground shaking and amplification can cause pipes to break open, power lines to fall, roads and railways to crack or move, and radio and telephone communication to cease. Disruption to transportation makes it especially difficult to bring in supplies or services. These utilities/infrastructure need to be usable after an earthquake to allow for rescue, recovery, and rebuilding efforts and to relay important information to the public.

Disruption of Critical Services

Critical facilities include police stations, fire stations, hospitals, shelters, and other facilities that provide important services to the community. These facilities and their services need to be functional after an earthquake event. Many critical facilities in Douglas County are housed in older buildings that are not up to current seismic codes.

Businesses/Private Sector

Seismic activity can cause great loss to businesses; both large-scale corporations and small retail shops. When a company is forced to stop production for just a day, the economic loss can be tremendous, especially when its market is at a national or global level. Seismic activity can create economic loss that presents a burden to large and small shop owners who may have difficulty recovering from their losses.

The Institute of Business and Home Safety has developed “Open for Business”, which is a disaster planning toolkit to help guide businesses in preparing for and dealing with the adverse effects of natural hazards. The kit integrates protection from natural disasters into the company’s risk reduction measures to safeguard employees, customers, and the investment itself. The guide helps businesses secure human and physical resources during disasters, and helps to develop strategies to maintain business continuity before, during, and after a disaster occurs.

Flood

Location: Douglas County, Azalea, Canyonville, Drain, Elkton, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla

Flooding represents the most common natural hazard threat in Douglas County. It also encompasses the broadest range of characteristics among natural hazards. Floods can occur quickly, as in flash floods, or slowly, as those resulting from the spring thaws. Floods can be of extreme magnitudes in confined locations, such as canyons, or a costly nuisance, as in broad river valleys. The topography and geology of the Umpqua River Basin are conducive to runoff, and peak flows on many of the tributaries occur within hours of the passage of weather fronts. Historically, the highest flows usually occur during the period from November through March as a result of the heavy rains augmented by snow melts.

There are over 320 miles of river or major streams that flow through Douglas County, with an estimated 24,396 acres of land in the 100-year floodplain. Flooding can pose a threat to life and safety, and can cause severe damage to public and private property.

History of Flooding in Douglas County

Douglas County has several and small tributaries in both unincorporated and incorporated areas that are susceptible to flooding. Major floods have affected the citizens of the county since as early as 1861 when the "Great Flood" of 1861-1862 washed away lower Scottsburg. Figure 3.7 illustrates major flood events in Douglas County. Although the 1996 floods were devastating to the entire region, the floods of 1890, and 1964 were larger. Figure 3.8 shows documented flood crests throughout the county for major flooding events since 1955.

Figure 3.7 - Major Flood Events in Douglas County since 1861

Years with Established Flood Records:

1861, 1890, 1893, 1907, 1909, 1927, 1931, 1932, 1942, 1945, 1948, 1950, 1953, 1955, 1956, 1958, 1961, 1964, 1971, 1974, 1981, 1983, 1996

The floods which occurred in 1945, 1955, 1961, 1964, 1971, 1974, 1974, 1981, 1983, and 1996 represent when the North, South and Main Umpqua, Cow Creek, Deer Creek, Elk Creek and Calapooya Creek were at or above established flood levels, representing moderate to major flooding.

Source: Floodplain Management Information Guide-Douglas County

Figure 3.8 - Flood Crest Comparisons

STATION NAME	FLOOD STAGE	1955	1964	1971	1974	1981	1983	1996
S. Umpqua River @ Tiller	18.0’	20.85’	25.72’	18.46’	18.36’	18.37’	16.80’	19.74’
S. Umpqua River @ Winston	26.0’	31.55’	34.28’	30.62’	32.64’	28.74’	30.32’	24.62’
S. Umpqua River @ Roseburg	22.0’	29.20’	34.05’	27.83’	30.50’	24.90’	27.70’	22.09’
Deer Creek near Roseburg	9-10’	13.67’	11.88’	13.43’	12.73’	15.39’	14.29’	14.35’
Cow Creek @ Azalea	10.0’	12.76’	15.63’	11.80’	16.40’	14.94’	14.78’	
Cow Creek @ Riddle	18-22’	27.35’	27.67’	25.01’	28.17’	24.42’	26.79’	14.51’
Steamboat Creek	10.0’	17.96’	25.60’	16.66’	12.23’	16.74’	12.27’	19.56’
N. Umpqua River below Steamboat	19.5’				16.92’	24.30’	18.06’	28.93’
North Umpqua River near Winchester	26.0’	29.14’	34.20’	26.39’	23.36’	25.25’	20.89’	27.64’
North Umpqua River @ Winchester Dam	18.0’	19.80’	24.20’	18.20’	15.70’	18.70’	16.30’	21.30’
Calyapooya Creek near Oakland	14.0’	20.47’	20.72’	18.60’	18.72’	20.83’	19.16’	21.62’
Umpqua River near Elkton	33.0’	45.60’	51.95’	43.63’	44.20’	39.18’	37.53’	38.41’
Elk Creek near Drain	15.5-16’	19.06’	19.48’	14.24’	18.76’	21.97’	17.50’	22.74’
Lookingglass Creek	18.0’	24.93’	25.28’	17.59’	14.28’	17.71’	17.93’	

Source: Floodplain Management Information Guide-Douglas County

Douglas County is a rural community. Over half of Douglas County’s population lives outside of urban areas in rural areas, often times close to or adjacent to a river. The portion of the population that lives in urban areas, also often times live close to a river, in an area that has a rural “atmosphere”. The residential areas are then supported by water and sewer systems that are also in floodplain areas. The residential areas and needed infrastructure are the two most likely components of the community to be impacted by flooding. In the event of a flood, people would be displaced from their homes, and needed infrastructure, water and sewer service, would be damaged.

What Factors Create Flood Risk?

Flooding occurs when weather patterns, geology, and hydrology combine to create conditions where water flows outside of its usual course. In Douglas County, geography, hydrology and climate combine to create flooding conditions.

Precipitation

Douglas County spans from the Pacific Ocean Shoreline to Mt. Thielsen in the Cascade Range. As a result of the vastness of Douglas County, there is considerable variation in precipitation, with elevation being the largest factor in precipitation totals. Moving east from sea level at the coast to Mt. Thielsen at 9,182 feet above sea level, annual precipitation averages range from 80 to 100 inches per year in Coastal Douglas County to just over 30 inches in the interior valleys, to over 70 inches, in the Cascade Mountains. This change in elevation causes a significant increase in precipitation, in the form of both rain and snow. Douglas County enjoys a fairly mild winter, with average temperatures not falling below 37 degrees Fahrenheit. The higher elevations (>2,500 feet) in Eastern Douglas County have snow for the majority of the winter months. Snowmelt in the Cascades and North Umpqua Basin provide a continuous water source throughout the year, and can be a major contributor to high waters.

During the rainy season, monthly rainfall totals average far higher than other months of the year (as shown in Figure 3.9). This results in high water, particularly in December and January. High water is usually the result of heavy rains of two-day to five-day durations augmented by snowmelt at a time when the soil is near saturation from previous rains.

Figure 3.9 - Average Monthly Mean Rainfall for Sites in Douglas County, Oregon (Inches)

Average Monthly Precipitation Rainfall (inches)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
Drain	7.2	6.13	5.28	3.81	2.52	1.3	.46	.87	1.38	3.25	7.79	7.87	47.86
Elkton	8.09	6.97	6.05	3.92	2.42	1.10	.35	.68	1.45	3.29	8.89	9.29	52.50
Glendale	8.5	4.48	3.63	2.39	2.14	1.15	.34	.36	1.03	3.12	5.82	7.53	36.09
Idleyld Park	9.01	7.51	6.99	5.29	3.52	1.88	.74	1.08	2.03	4.58	10.41	10.32	63.36
Oakland	5.66	4.97	3.92	3.37	2.39	1.25	.60	.70	1.29	2.97	6.46	6.48	40.20
Myrtle Creek	5.16	4.51	3.98	3.41	2.62	1.35	.57	.59	1.09	2.82	6.57	6.36	37.01
Riddle	4.7	3.86	3.51	2.42	1.56	.86	.38	.62	1.01	2.15	5.20	5.28	31.55
Roseburg	4.97	4.1	3.81	2.75	1.82	.92	.44	.67	1.07	2.27	5.42	5.42	33.66
Toketee Falls	6.61	5.55	5.44	4.26	3.07	1.75	.80	1.13	1.63	3.55	7.65	7.41	48.85
Winchester	5.14	4.47	3.97	2.94	1.93	.98	.40	.65	1.14	2.41	5.89	5.81	35.73

Source: Oregon Climate Service

Geography and Geology

Douglas County is almost entirely within the Umpqua River basin. The floodplains of the valley are susceptible to inundation by floodwaters. The surface materials include poorly drained, unconsolidated, fine-grained deposits of silt, sand, and gravel. Torrential flood events can introduce large deposits of sand and gravel that assist in the drainage of the otherwise poorly drained soils.

Characteristics of Flooding

Two types of flooding primarily affect Douglas County: riverine flooding and urban flooding (see descriptions below). In addition, any low-lying area has the potential to flood. The flooding of developed areas may occur when the amount of water generated from rainfall and runoff exceeds a storm water system's (ditch or sewer) capability to remove it.

Riverine Flooding

Riverine flooding is the overbank flooding of rivers and streams. The natural process of riverine flooding adds sediment and nutrients to fertile floodplain areas. Flooding in large river systems typically results from large-scale weather systems that generate prolonged rainfall over a wide geographic area, causing flooding in hundreds of smaller streams, which then drain into the major rivers. Shallow area flooding is a special type of riverine flooding. FEMA defines shallow flood hazards as areas that are inundated by the 100-year flood with flood depths of only one to three feet. These areas are generally flooded by low velocity sheet flows of water.

Urban Flooding

As land is converted from fields or woodlands to roads and parking lots, it loses its ability to absorb rainfall. Urbanization of a watershed changes the hydrologic systems of the basin. Heavy rainfall collects and flows faster on impervious concrete and asphalt surfaces. The water moves from the clouds, to the ground, and into streams at a much faster rate in urban areas. Adding these elements to the hydrological systems can result in floodwaters that rise very rapidly and peak with violent force.

The majority of Douglas County is rural in nature, with a low percentage of incorporated city land. However much of the population lives within cities or urban unincorporated areas with a high concentration of impermeable surfaces that either collects water, or concentrates the flow of water. During periods of urban flooding, streets carry water to culverts. Culverts and storm drains sometimes back up with vegetative debris causing localized flooding.

Dam Failure Flooding

Loss of life and damage to structures, roads, utilities and crops may result from a dam failure. Economic losses can also result from a lowered tax base and lack of utility profits. These effects could possibly accompany the failure of one of the major dams in Douglas County. Six major water impoundment dams have been developed in Douglas County to serve flood control and water needs. Because dam failure can have severe consequences, FEMA requires that all dam owners develop Emergency Action Plans (EAP) for warning, evacuation, and post-flood actions. Although there may be coordination with county officials in the development of the EAP, the responsibility for developing potential flood inundation maps and facilitation of emergency response is the responsibility of the dam owner. For more detailed information regarding dam failure flooding, and potential flood inundation zones for a particular dam in the county, please refer to the Douglas County Emergency Action Plan, available at the Douglas County Sheriff’s Department.

What is the Effect of Development on Floods?

When structures or fill are placed in the floodway or floodplain, water is displaced. Development raises the river levels by forcing the river to compensate for the flow space obstructed by the inserted structures and/or fill. When structures or materials are added to the floodway or floodplain and no fill is removed to compensate, serious problems can arise. Floodwaters may be forced away from historic floodplain areas. As a result, other existing floodplain areas may experience floodwaters that rise above historic levels.

Local governments must require engineer certification to ensure that proposed developments would not adversely affect the flood carrying capacity of the Special Flood Hazard Area (SFHA) when development is occurring within the floodway portion of the floodplain. Displacement of only a few inches of water can mean the difference between no structural damage occurring in a given flood event, and the inundation of many homes, businesses, and other facilities. Careful attention should be given to development that occurs within the floodway to ensure that structures are prepared to withstand regional flood events. In highly urbanized areas, increased paving can lead to an increase in volume and velocity of runoff after a rainfall event, exacerbating the potential flood hazards. Care should be taken in the development and implementation of storm water management systems to ensure that these runoff waters are dealt with effectively.

How Are Flood-Prone Areas Identified?

Flood maps and Flood Insurance Studies (FIS) are often used to identify flood-prone areas. The National Flood Insurance Program (NFIP) was established in 1968 as a means of providing low-cost flood insurance to the nation's flood-prone communities. The NFIP also reduces flood losses through regulations that focus on building codes and "sound floodplain management." Douglas County joined the NFIP on December 15, 1978. Douglas County's current FIRM index date is February 17, 2010. NFIP regulations (44 Code of Federal Regulations [CFR] Chapter 1, Section 60.3) require that all new construction in floodplains must be elevated at or above base flood level. The Oregon Building Code requires new construction to be elevated to one foot above the base flood elevation. Communities participating in the NFIP may adopt regulations that are more stringent than those contained in 44 CFR 60.3, but not less stringent.

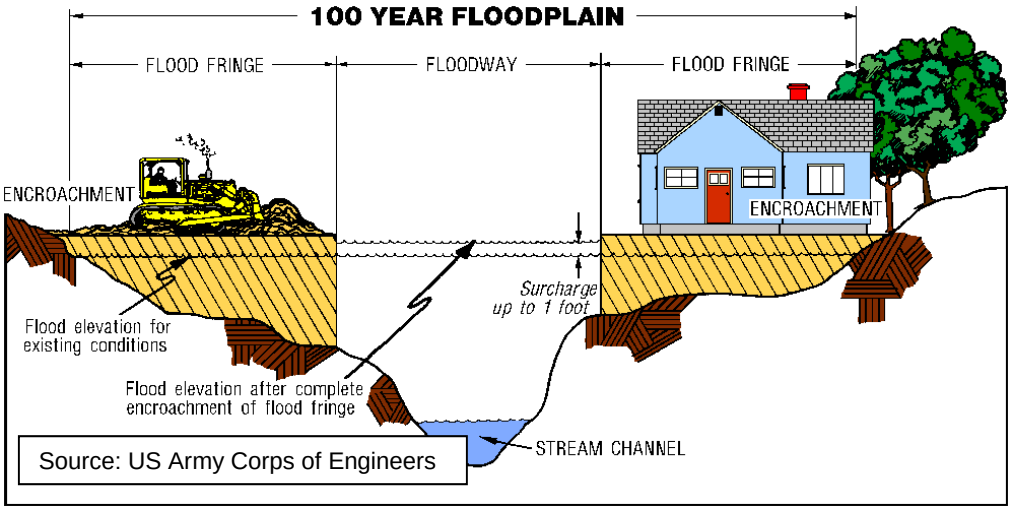
Flood Insurance Rate Maps (FIRM) and Flood Insurance Studies (FIS)

Floodplain maps are the basis for implementing floodplain regulations and for delineating flood insurance purchase requirements. A Flood Insurance Rate Map (FIRM) is the official map produced by FEMA, which delineates SFHA in communities where NFIP regulations apply. FIRMs are also used by insurance agents and mortgage lenders to determine if flood insurance is required and what insurance rates should apply.

Water surface elevations are combined with topographic data to develop FIRMs. FIRMs illustrate areas that would be inundated during a 100-year flood, floodway areas, and elevations marking the 100-year-flood level. In some cases they also include base flood elevations (BFEs) and areas located within the 500-year floodplain.

Flood Insurance Studies and FIRMs produced for the NFIP provide assessments of the probability of flooding at a given location. FEMA conducted many Flood Insurance Studies in the late 1970s and early 1980s. These studies and maps represent flood risk at the point in time when FEMA completed the studies. However, it is important to note that not all 100-year or 500-year floodplains have been mapped by FEMA.

Figure 3.10 - Floodplain Schematic



Hazard Assessment

Hazard Identification

Hazard identification is the first phase of flood-hazard assessment. Identification is the process of estimating: (1) the geographic extent of the floodplain (i.e., the area at risk from flooding); (2) the intensity of the flooding that can be expected in specific areas of the floodplain; and (3) the probability of occurrence of flood events.

Vulnerability Assessment

Vulnerability assessment is the second step of flood-hazard assessment. It combines the floodplain boundary, generated through hazard identification, with an inventory of the property within the floodplain. Understanding the population and property exposed to natural hazards will assist in reducing risk and preventing loss from future events. Because site-specific inventory data and inundation levels given for a particular flood event (10-year, 25-year, 50-year, 100-year, 500-year) are not readily available, calculating a community's vulnerability to flood events is not straightforward. The amount of property in the floodplain, as well as the type and value of structures on those properties, should be calculated to provide a working estimate for potential flood losses.

Risk Analysis

Risk analysis is the third and most advanced phase of a hazard assessment. It builds upon the hazard identification and vulnerability assessment.

A flood risk analysis for Douglas County should include two components: (1) the life and value of property that may incur losses from a flood event (defined through the vulnerability assessment); and (2) the number and type of flood events expected to occur over time. Within the broad components of a risk analysis, it is possible to predict the severity of damage from a range of events. Flow velocity models can assist in predicting the amount of damage expected from different magnitudes of flood events. The data used to develop these models is based on hydrological analysis of landscape features. Changes in the landscape, often associated with human development, can alter the flow velocity and the severity of damage that can be expected from a flood event.

Using GIS technology, aerial photographs and flow velocity models, it is possible to map the damage that can be expected from flood events over time. It is also possible to pinpoint the effects of certain flood events on individual properties.

A specific risk analysis for flood events in Douglas County or specific cities was not completed as part of this document. However, this plan includes recommendations for building partnerships that will support the development of a flood risk analysis in Douglas County and its incorporated cities.

National Flood Insurance Program (NFIP) Vulnerability

FEMA modernized the Douglas County Flood Insurance Rate Maps (FIRMs) in February 2010. The table below shows that as of November 2016, Douglas County (including NFIP participating incorporated cities) has 1,685 National Flood Insurance Program (NFIP) policies in force. Of those, 966 (57%) are for properties that were constructed before development of the initial FIRM. The last Community Assistance Visit (CAV) for Douglas County was in October of 2013. That CAV included the cities of Drain, Glendale, Myrtle Creek and Roseburg. The county and the cities of Myrtle Creek and Roseburg are members of the Community Rating System (CRS); the county and Roseburg have Class 8 ratings while Myrtle Creek has a Class 10 rating. Notably, Myrtle Creek has four listed repetitive flood-loss properties and Winston has one. The city and county are aware of these properties and have included an action item to seek out funding opportunities to elevate or buy-out those properties, provided the property owners are interested. The table shows that the majority (over 90%) of flood insurance policies are for residential structures, primarily single-family homes.

Figure 3.11 - Flood Insurance Detail

Jurisdiction	Current FIRM Date	Initial FIRM Date	Total Policies	Pre-FIRM	Policies by Building Type: Single Family	2 to 4 Family	Other Residential	Non-Residential	Minus Rated A Zone	Minus Rated V Zone
DOUGLAS COUNTY	-	-	1,685	966	1,386	68	63	168	131	0
Douglas County*	2/17/2010	12/15/1978	1,200	633	1,018	9	49	124	101	0
Canyonville	2/17/2010	11/1/1978	6	4	6	0	0	0	0	0
Cow Creek Band of Umpqua Tribe of Indians	Not an NFIP Community									
Drain	2/17/2010	8/1/1979	70	54	56	0	8	6	2	0
Elkton	2/17/2010	9/5/1979	3	3	3	0	0	0	0	0
Glendale	2/17/2010	9/29/1978	7	1	6	0	0	1	1	0
Myrtle Creek	2/17/2010	2/15/1978	26	15	24	1	0	1	0	0
Oakland	2/17/2010	6/19/1985	6	6	2	4	0	0	0	0
Reedsport	2/17/2010	4/3/1984	61	42	36	14	4	7	0	0
Riddle	2/17/2010	8/1/1979	4	4	0	4	0	0	0	0
Roseburg	2/17/2010	6/1/1977	272	190	210	35	2	25	23	0
Sutherlin	2/17/2010	2/17/2010	10	9	10	0	0	0	0	0
Winston	2/17/2010	12/31/1974	20	5	15	1	0	4	4	0
Yoncalla	2/17/2010	2/17/2010	0	0	0	0	0	0	0	0

Jurisdiction	Insurance in Force	Total Paid Claims	Pre-FIRM Claims Paid	Substantial Damage Claims	Total Paid Amount	Repetitive Loss Structures	Severe Repetitive Loss Properties	CRS Class Rating	Last Community Assistance Visit
DOUGLAS COUNTY	$ 328,661,800	174	159	14	$ 1,799,019	5	0	-	-
Douglas County*	$ 231,379,900	90	80	8	$ 898,738	0	0	8	10/28/2013
Canyonville	$ 1,014,100	1	1	0	.	0	0		7/10/1997
Cow Creek Band of Umpqua Tribe of Indians	Not an NFIP Community								
Drain	$ 10,463,600	37	36	4	$ 472,043	0	0		10/23/2013
Elkton	$ 507,700	1	1	0	$ 8,232	0	0		4/1/1992
Glendale	$ 1,387,300	0	0	0	$ -	0	0		10/30/2013
Myrtle Creek	$ 4,400,400	25	25	2	$ 144,557	4	0	10	10/29/2013
Oakland	$ 549,200	0	0	0	$ -	0	0		4/1/1985
Reedsport	$ 13,763,200	1	1	0	$ 151,400	0	0		9/7/2000
Riddle	$ 280,000	0	0	0	$ -	0	0		none
Roseburg	$ 58,573,200	17	13	0	$ 101,312	0	0	8	10/28/2013
Sutherlin	$ 2,835,000	0	0	0	$ -	0	0		none
Winston	$ 3,508,200	1	1	0	$ 1,671	1	0		3/27/1993
Yoncalla	$ -	1	1	0	$ 21,066	0	0		none

Source: Information compiled by Department of Land Conservation and Development, November 2016.
Note 1: The data in this table differs from the data in Figure 3.12 due to the date of the underlying data.

There have been 174 paid claims in the county totaling just under $1.8 million; 159 Pre-FIRM claims paid and 14 substantial damage claims paid to date. As noted above, there are four (4) Repetitive Loss (RL) Properties[1] located in Douglas County. There are no Severe Repetitive Loss Properties in Douglas County[2].

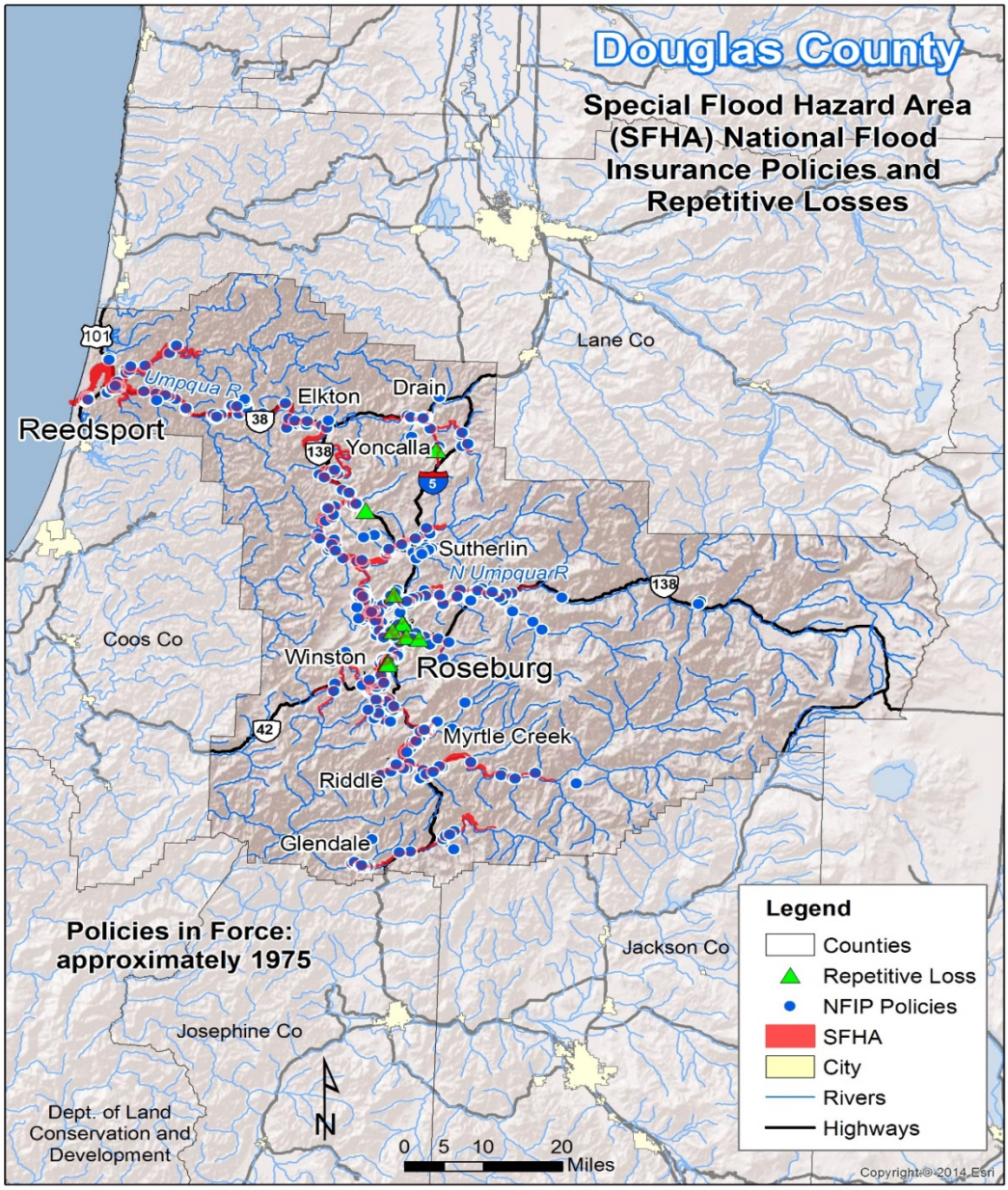
[1] A Repetitive Loss (RL) property is any insurable building for which two or more claims of more than $1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978. A RL property may or may not be currently insured by the NFIP.

[2] A Severe Repetitive Loss (SRL) property is a single family property (consisting of 1 to 4 residences) that is covered under flood insurance by the NFIP and has incurred flood-related damage for which 4 or more separate claims payments have been paid under flood insurance coverage, with the amount of each claim payment exceeding $5,000 and with cumulative amount of such claims payments exceeding $20,000; or for which at least 2 separate claims payments have been made with the cumulative amount of such claims exceeding the reported value of the property.

Mitigation Successes

Of the four RL properties identified within unincorporated Douglas County, all four have completed necessary mitigating efforts qualifying them to be removed from the RL list. 3 of the 4 structures were improved in 2012. NFIP Repetitive Loss Update Worksheets (AW-501) were completed for all 4 structures. The fourth and final RL structure was updated in December of 2015. As a result of the mitigating efforts of each property owner the 4 identified RL properties should no longer be considered as such. Contact will be made with FEMA in order to have the 4 structures officially removed from the RL list. Currently no other repetitive loss structures exist within unincorporated Douglas County.

Figure 3.12 - NFIP Policies, Repetitive Loss, & Severe Repetitive Loss Properties



Source: Department of Land Conservation and Development, November 2016.

Community Flood Issues

What is Susceptible to Damage during a Flood Event?

The largest impact on communities from flood events is the loss of life and property. Property loss from floods strikes both private and public property.

Property Loss Resulting from Flooding Events

The type of property damage caused by flood events depends on the depth and velocity of the floodwaters. Faster moving floodwaters can wash buildings off their foundations and sweep cars downstream. Pipelines, bridges, and other infrastructure can be damaged when high waters combine with flood debris. Extensive damage can be caused by basement flooding and landslide damage related to soil saturation from flood events. Seepage into basements or daylight basements is common during flood events, not only in or near floodplains, but also on hillsides and other areas that are far removed from floodplains. Most flood damage is caused by water saturating materials susceptible to loss (e.g., wood, insulation, wallboard, fabric, furnishings, floor coverings, and appliances). Homes in rural areas of the floodplain can also suffer damage to septic systems and drain fields. Inundation of these systems from floodwater may result in leakage of wastewater into surrounding areas.

Public Infrastructure

Publicly owned facilities are a key component of daily life for all citizens of the county. Damage to public water and sewer systems, transportation networks, flood control facilities, emergency facilities, and offices can hinder the ability of the government to deliver services. Government can take action to reduce risk to public infrastructure from flood events, as well as craft public policy that reduces risk to private property from flood events.

Roads

During natural hazard events, or any type of emergency or disaster, dependable road connections are critical for providing emergency services. Roads systems in Douglas County are maintained by multiple jurisdictions. Federal, state, county, and city governments all have a stake in protecting roads from flood damage. Road networks often traverse floodplain and floodway areas. Transportation agencies responsible for road maintenance are typically aware of roads at risk from flooding.

Bridges

Bridges are key points of concern during flood events because they are important links in road networks, watercourse crossings, and they can be obstructions in watercourses, inhibiting the flow of water during flood events. The bridges in Douglas County are state, county, city, or privately owned. A state-designated inspector must inspect all state, county, and city bridges every two years, but private bridges are not inspected, and can be very dangerous. The inspections are rigorous, looking at everything from seismic capability to erosion and scour. Upon inspection, the bridges are subject to a sufficiency score. This score uses a scale of 1 to 100 with 1 being the worst rating. Then the bridges are ranked throughout the state according to their score. The state then prioritizes the bridge repair according to each score. If the bridge receives a sufficiency score of less than 50, it is on the list for upgrading and rehabilitation. If it scores over 50, it is not included on the list. The smaller, more economically feasible repairs to county

bridges are the responsibility of Douglas County Public Works Department. The larger projects require funding through the Highway Bridge Replacement and Rehabilitation Program (HBRR). HBRR provides 80% of funding, and the county is responsible for 20%.

Storm Water Systems

Local drainage problems are common throughout the region. Several cities within the county have drainage master plans, and local public works staff is often aware of local drainage threats. The problems are often present where open ditches enter culverts or go underground into storm sewers. In addition, high water tables in some areas can mean wet crawl spaces, yards, and basements after storms because the accumulated water does not drain quickly into a stream or storm sewer. Filled ditches and swales near buildings can inhibit or prevent the flow of water and compound these problems. Inadequate maintenance, especially following leaf accumulation in the fall, can also contribute to the flood hazard in urban areas.

Community Issues Summary

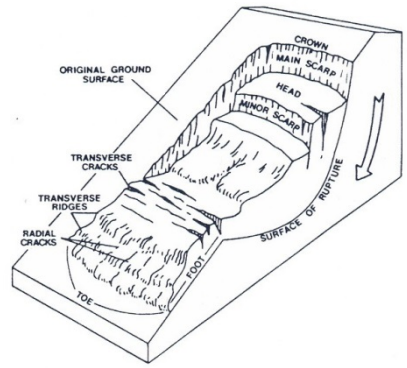
Douglas County and the cities of Azalea, Canyonville, Drain, Elkton, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla work to mitigate problems regarding flooding through a proactive floodplain program in which each city has an adopted and acknowledged floodplain ordinance that is in compliance with FEMA floodplain requirements. Douglas County and each of the municipalities listed above recognize that displacement of people from their homes and damage to needed water and sewer facilities are mitigation priorities for flood events in Douglas County.

Landslide

Location: Douglas County, Azalea, Canyonville, Drain, Elkton, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla

Figure 3.13

Rotational Landslide



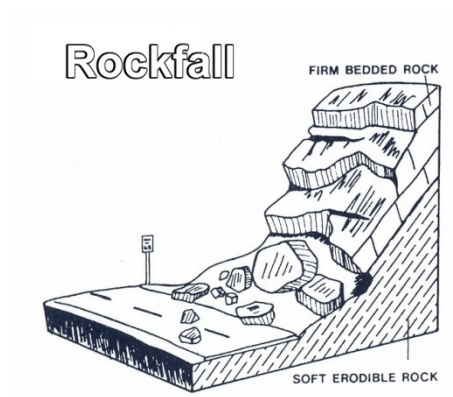
Source: *Federal Emergency Management Agency. FEMA 182, Landslide Loss Reduction. FEMA (1989) p. 12.*

Landslides are downhill movements of rock, debris, or soil mass. The size of a landslide usually depends on the geology and the initial cause of the landslide. Landslides vary greatly in their volume of rock and soil, the length, width, and depth of the area affected, frequency of occurrence, and speed of movement. Some characteristics that determine the type of landslide are slope of the hillside, moisture content, and the nature of the underlying materials. Landslides are given different names, depending on the type of failure and their composition and characteristics, however they are typically broken down into two categories: (1) rapidly moving, and (2) slow moving. Rapidly moving landslides present the greatest risk to human life, and people living in or traveling through areas prone to rapidly moving landslides are at increased risk of serious injury.

Types of rapidly moving landslides include the following;

Slides move in contact with the underlying surface. These movements include rotational slides where sliding material moves along a curved surface, and translational slides where movement occurs along a flat surface. These slides are generally slow moving and can be deep. Slumps are small rotational slides that are generally shallow (See Figure 3.13).

Figure 3.14 Rock fall



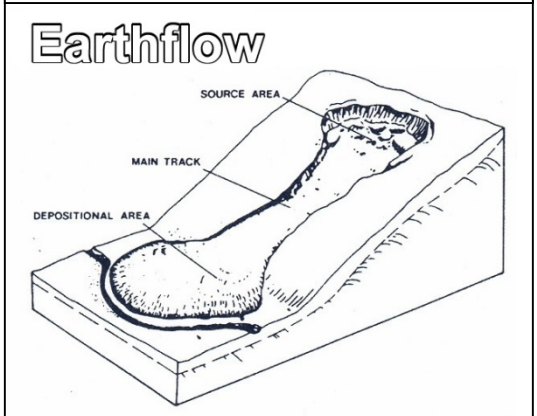
Source: *Federal Emergency Management Agency. FEMA 182, Landslide Loss Reduction. FEMA (1989) p. 11.*

Slow moving landslides can occur on relatively gentle slopes and can cause significant property damage, but are far less likely to result in serious injuries than rapidly moving landslides.

Washouts caused by **erosion** can occur in Douglas County. These occur when ditches or culverts beneath hillside roads become blocked with debris. If the ditches are blocked, run-off from slopes is inhibited during periods of precipitation. This causes the run-off water to collect in soil, and in some cases, cause a slide.

Rock falls (see Figure 3.14) occur when blocks of material come loose on steep slopes. Weathering, erosion, or excavations, such as those along highways, can cause falls where the road has been cut through bedrock. They are fast moving with the materials free detached from a steep slope or cliff. The volume of material involved is generally small, but large boulders or blocks of rock can cause significant damage. A motorist was killed from a rock fall in 1993. The 1993 rock fall occurred near Klamath Falls during the 1993 Earthquakes.

Figure 3.15 Earthflows



Source: *Federal Emergency Management Agency. FEMA 182, Landslide Loss Reduction. FEMA (1989) p. 15.*

Earthflows (see Figure 3.15) are liquid movements of landmass (e.g. soil and rock), which breaks up and flows during movement. Earthquakes are often the mechanism, which trigger flows. Debris flows normally occur when a landslide moves downslope as a semi-fluid mass scouring, or partially scouring soils from the slope along its path. Flows are typically rapidly moving and also tend to increase in volume as they scour out the channel. Flows often occur during heavy rainfall, can occur on gentle slopes, and can move rapidly for large distances. One example of a flow in Oregon is the Dodson debris flow that occurred in 1996. This debris flow started high on the Columbia Gorge cliffs, and traveled far down steep canyons to form

debris fans at Dodson.

Douglas County has had a history of significant landslides occurring in the area. In 1974, nine men were killed by a rapidly moving landslide near Canyonville. The men were attempting to repair the main telephone cable between Portland and Sacramento along the I-5 Freeway. In the five days before the slide, the area had experienced 11 inches of rain.

In 1996 severe winter storms impacted Douglas County creating widespread flooding. A rapidly moving landslide debris flow killed four people in Scottsburg where a home was picked up and moved from its foundation.

Recently in December of 2015 a massive landslide closed Hwy. 42 near the Coos-Douglas county line for several weeks. Shortly thereafter, in February of 2016 a large rock slide covered the Tyee Rd. blocking access from Tyee to Umpqua.

Figure 3.16 – 2016 Tyee Rd. Rock Slide

Landslides are typically triggered by periods of heavy rainfall or rapid snowmelt. Earthquakes, volcanic activity, and excavations may also trigger landslides. Certain geologic formations are more susceptible to landslides than others. Human activities, including locating development near steep slopes, can increase susceptibility to landslide events. Landslides on steep slopes are more dangerous because movements can be rapid. Although landslides are a natural geologic process, the incidence of landslides and their impacts on people can be exacerbated by human activities. Grading for road construction and development can increase slope steepness. Grading and construction can decrease the stability of a hillslope by adding weight to the top of the slope, removing support at the base of the slope, and increasing water content. Other human activities effecting landslides include: excavation, drainage and groundwater alterations, and changes in vegetation.

Identifying hazardous locations is an essential step towards implementing more informed mitigation activities. The Oregon Department of Geology and Mineral Industries (DOGAMI) has been active in developing maps and collecting data on hazard risk. The final products might be useful for local geologists, engineers, planners, and policy makers interested in addressing landslide hazards. One of these products is the Statewide Landslide Information Database for Oregon (SLIDO). SLIDO is a compilation of landslides in Oregon that have been identified on published maps. The maps let you view

information on location, type, and other attributes related to identified landslides in our area.

Identifying hazardous locations is an essential step towards implementing more informed mitigation activities. The Oregon Department of Forestry (ODF) and the Department of Geology and Mineral Industries (DOGAMI) are active in developing maps and collecting data on hazard risk. The final products might be useful for local geologists, engineers, planners, and policy makers interested in addressing landslide hazards.

Landslides can affect utility services, transportation systems, and critical facilities. Communities may suffer immediate damages and loss of service. Disruption of infrastructure, roads, and critical facilities may also have a long term effect on the economy. Utilities, including potable water, wastewater, telecommunications, natural gas, and electric power are all essential to service community needs. Loss of electricity has the most widespread impact on other utilities and on the whole community. Natural gas pipes may also be at risk of breakage from landslide movements as small as a few inches.

Tsunami

Location: Coastal Douglas County, Reedsport, Gardiner, Winchester Bay

Coastal Douglas County is vulnerable to the threat of tsunamis. Much of coastal Douglas County is undeveloped, however populated areas in Winchester Bay, Gardiner, Reedsport and other rural locations along the Umpqua and Smith Rivers and their tributaries could experience the impacts of either a “local” or “distant” tsunami. A distant tsunami is caused by a distant earthquake, in which the tsunami will not reach the coast for several hours, and there is time to issue a warning. An example of a distant tsunami along the Oregon Coast was the 2011 Japan Tsunami. A local tsunami is generated from a nearby source, typically in which there is less than 1 hour of travel time for the tsunami to reach the shore. In the case of a local tsunami, feeling an earthquake could be your only warning.

The high probability and high vulnerability rate associated with a tsunami hazard are based on a local tsunami event.

Tsunamis have been responsible for at least 470 fatalities and several hundred million dollars in property damage in the United States and its territories. A tsunami is a series of sea waves usually caused by a rapid vertical movement along a break in the Earth’s crust (i.e., their origin is tectonic). A tsunami is generated when a large mass of earth on the bottom of the ocean drops or rises, thereby displacing the column of water directly above it. Tsunamis may also be caused by landslides, including earthquake-induced landslides.

Tsunamis along the Oregon coast can potentially occur from a displacement along eastward moving Juan de Fuca tectonic plate as it drives under the westward-moving North American Plate. This area is called the Cascadia Subduction Zone and is found just off the Oregon coast. Powerful earthquakes of up to magnitude 7 or greater can take place on either the North American or Juan de Fuca Plates. The

Cascadia Subduction Zone, however, is capable of generating much larger earthquakes – up to and above a magnitude 9, thousands of times stronger than a magnitude 7. In the past century, several damaging tsunamis have struck the Pacific Northwest coast from northern California to Washington. These distant tsunamis were generated from earthquakes located far across the Pacific basin and are distinguished from tsunamis generated by earthquakes near the coast – termed local tsunamis.

The most recent event which impacted the state was the 2011 Japan Tsunami. This magnitude 9 earthquake generated a tsunami that reached the coast of Oregon in a matter of hours. Minor damage to boats, docks, and harbors were reported along the coast as a result of this distant tsunami. Significant damage was reported in Brookings-Harbor. While Winchester Bay, Gardiner, and Reedsport saw no major effects of the tsunami, a local tsunami would have greater impact to the community. Although located up river from the immediate coast line these communities are still susceptible to local and distant tsunamis.

It is difficult to predict the probability of when the next tsunami will occur, but it is estimated that all CSZ generated tsunamis would cause extensive damage, and the last Cascadia Subduction Zone event occurred about 300 years ago. Geologists predict a 10-14% chance that a Cascadia tsunami will be triggered by a shallow, undersea earthquake offshore Oregon in the next 50 years. The forecast comes from evidence of large but infrequent earthquakes and tsunamis that have occurred at the Oregon coast every 500 years, on average.

Douglas County currently uses tsunami hazard maps that were produced to help implement Senate Bill 379, which passed by the 1995 regular session of the Oregon Legislature. SB 379, implemented as Oregon Revised Statutes (ORS) 455.446 and 455.447, and Oregon Administrative Rules (OAR) 632-005, limits construction of new essential facilities and special occupancy structures in tsunami flooding zones. The focus of the maps is therefore on implementation of this public safety bill and has minor impacts on land use or emergency planning.

The Department of Geology and Mineral Industries released updated Tsunami Inundation Maps in 2013, which is believed to be a better representation of the tsunami impacts on the community. These maps have not been officially adopted by the City of Reedsport or Douglas County.

Maps of the possible Local Source CSZ Tsunami Inundation area are provided below.

In order to help mitigate against possible impacts to a tsunami event, Douglas County has adopted a Tsunami Inundation Overlay as part of their Land Use and Development Ordinance. The purpose of the Tsunami Inundation Overlay is to implement state legislation and agency rules adopted by the Governing Board of the Oregon Department of Geology and Mineral Industries (DOGAMI). The TIO Overlay is intended to reduce the risk of loss of life in the event of a Tsunami inundation. Inundation risks can be reduced by the provision of information and assistance from DOGAMI to developers, and by limiting where certain types of essential facilities or special occupancy structures may be located. This overlay also requires that, after land use approval, developers subject to overlay requirements shall

submit building plans or proposals to DOGAMI for their review and response prior to receiving a development permit. The Overlay shall be applied to the Tsunami Inundation Zone, as defined in this Chapter, and as depicted in the Comprehensive Plan.

Wildfire

Location: Douglas County, Azalea, Canyonville, Drain, Elkton, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla

Fires are a natural part of the ecosystem in Oregon. However, wildfires can present a substantial hazard to life and property in growing communities. There are potential for losses due to wildland/urban interface fires in Douglas County. Forestland comprises approximately 90% of Douglas County. Douglas County's forests play an important role in the economy of the county, as well as surrounding homes and businesses. Wildfire is serious threat to the well-being and quality of life in Douglas County.

Recent Douglas County Fires

Douglas Complex: The Douglas Complex consisted of several fires located north of the City of Glendale. All of the fires started July 26, 2013 by lightning following a thunderstorm that moved through southern Oregon. The fires burned approximately 48,679 acres and cost $55 million dollars to fight.

Cable Crossing: The Cable Crossing fire started July 28, 2015 near Hwy.138, 6 miles east of Glide. The fire started on the north side of the North Umpqua River and then crossed the river to the south side of the North Umpqua. Approximately 1,857 acres of property was burned. The fire cost $10 million to fight.

Stouts Creek: The Stouts Creek fire was reported July 30, 2015, burning approximately 11 miles east of Canyonville near the community of Milo. The fire burned approximately 26,452 acres of property and cost approximately $38 million dollars to fight.

Contributing Factors to Wildfire in Douglas County

The Interface

One challenge Douglas County faces regarding the wildfire hazard is from the increasing number of houses being built on the urban/rural fringe compared to thirty years ago. Since the 1970s, Oregon's growing population has expanded further and further into traditional resource lands including forestlands. The "interface" between urban and suburban areas and the resource lands created by this expansion has produced a significant increase in threats to life and property from fires, and has pushed existing fire protection systems beyond original or current design and capability. Often times, property owners in the interface are not aware of the problems and threats they face. Therefore, many owners have done very little to manage or offset fire hazards or risks on their own property. Furthermore, human activities increase the incidence of fire ignition and potential damage.

There are three categories of interface fire:

- The classic wildland/urban interface exists where well-defined urban and suburban development presses up against open expanses of wildland areas;
- The mixed wildland/urban interface is characterized by isolated homes, subdivisions, and small communities situated predominantly in wildland settings; and
- The occluded wildland/urban interface exists where islands of wildland vegetation occur inside a largely urbanized area.

Certain conditions must be present for significant interface fires to occur. The most common conditions include: hot, dry, and windy weather; the inability of fire protection forces to contain or suppress the fire; the occurrence of multiple fires that overwhelm committed resources; and a large fuel load (dense vegetation). Once a fire has started, several conditions influence its behavior, including fuel, topography, weather, drought, and development.

Fuel

Fuel is the material that feeds a fire, and is a key factor in wildfire behavior. Fuel is classified by volume and by type. Volume is described in terms of "fuel loading," or the amount of available vegetative fuel. The type of fuel also influences wildfire. Oregon, a western state with prevalent conifer, brush, and rangeland fuel types, is subject to more frequent wildfires than other regions of the nation. An important element in understanding the danger of wildfire is the availability of diverse fuels in the landscape, such as natural vegetation, manmade structures, and combustible materials. A house surrounded by brushy growth rather than cleared space allows for greater continuity of fuel and increases the fire's ability to spread. The accumulation of fuels around residential homes enable high intensity fires to flare and spread rapidly. Because of the many different possible "fuels" found in the interface landscape, firefighters have a difficult time predicting how fires will react or spread.

Figure 3.17 - Fire Behavior in High Fuel Loading Area

Fire behavior in a small area that was Thinned Fire burns low and on the ground.	Fire behavior in unthinned forests: Fires burn at high temperatures and reaches tops of trees.

Source: Healthy Forests Initiative, http://www.whitehouse.gov/infocus/healthyforests/

Topography

Topography influences the movement of air, thereby directing a fire's course. For example, if the percentage of uphill slope doubles, the rate of spread in wildfire will likely double. Gulches and canyons can funnel air and act as chimneys, which intensify fire behavior and cause the fire to spread faster. Solar heating of dry, south-facing slopes produces upslope drafts that can complicate fire behavior. Unfortunately, hillsides with hazardous topographic characteristics are also desirable residential areas in many communities. This underscores the need for wildfire hazard mitigation and increased education and outreach to homeowners living in interface areas.

Weather

Weather patterns combined with certain geographic locations can create a favorable climate for wildfire activity. Areas where annual precipitation is less than 30 inches per year are extremely fire susceptible. High-risk areas in Oregon share a hot, dry season in late summer and early fall when high temperatures and low humidity favor fire activity. Predominant wind directions may guide a fire's path.

Drought

Recent concerns about the effects of climate change, particularly drought, are contributing to concerns about wildfire vulnerability. The term *drought* is applied to a period in which an unusual scarcity of rain causes a serious hydrological imbalance. Unusually dry winters, or significantly less rainfall than normal, can lead to relatively drier conditions, and leave reservoirs and water tables lower. Drought leads to problems with irrigation, and may contribute to additional fires, or additional difficulties in fighting fires.

Development

Growth and development in forested areas is increasing the number of human-made structures in the interface in Oregon. Wildfire has an effect on development, yet development can also influence wildfire. Owners often prefer homes that are private, have scenic views, are nestled in vegetation, and use natural materials. A private setting may be far from public roads, or hidden behind a narrow, curving driveway. These conditions, however, make fuel reduction activities, evacuation and firefighting difficult. The scenic views found along mountain ridges can also mean areas of dangerous topography. Natural vegetation contributes to scenic beauty, but it may also provide a ready trail of fuel, leading a fire directly to the combustible fuels of the home itself.

Vulnerability and Risk

Douglas County residents are served by a variety of local fire districts and fire departments, as well as state and federal fire districts. Data that includes the location of interface areas in the county can be used to assess the population and total value of property at risk from wildfire, and direct these fire districts in fire prevention and recovery. Douglas Forest Protective Association is seeking to develop a wildfire hazard map for lands served by the Douglas Forest Protective Association. This map would identify the wildland/urban interface in the Douglas Fire Prevention District, and show acreage in this district that is subject to the wildfire hazard.

The county has a large number of acres that are susceptible to wildland fires. The total number of acres comprises an estimated 90% of the county.

Figure 3.18 - Douglas County Forested Land

Ownership	Acreage	Percentage
Federal	1,646,906	51%
State of Oregon	57,469	2%
Local Government	29,001	1%
Forest Industry	695,000	21%
Other Ownership	492,624	15%
TOTAL	2,921,000	90% of County

Source: Douglas County Planning Department, *"A Place Called Douglas County"*

The mitigation plan will have a direct impact on the health, welfare and safety of residents who live in or near areas of potential wildfires in Douglas County. Development of wildfire hazard maps will assist county fire districts and fire departments in developing fire mitigation plans to address the areas most vulnerable to wildfires in Douglas County.

Key factors included in assessing wildfire risk include ignition sources, building materials and design, community design, structural density, slope, vegetative fuel, fire occurrence, and weather, as well as occurrences of drought. At the time of publication of this plan, data was insufficient to conduct a risk analysis. The National Wildland/Urban Fire Protection Program has developed the Wildland/Urban Fire Hazard Assessment Methodology tool for communities to assess their risk to wildfire. For more information on wildfire hazard assessment refer to http://www.Firewise.org.

Community Wildfire Issues

What is Susceptible to Wildfire?

Growth and Development in the Interface

The development of homes and other structures encroaching onto the forest wildland and natural areas is expanding the wildland/urban interface. The interface areas are characterized by a diverse mixture of varying housing structures, development patterns, ornamental and natural vegetation, and natural fuels.

In the event of a wildfire, vegetation, structures, and other flammables can merge into unpredictable events. Factors relevant to the fighting of wildfires within the interface include: access, firebreaks, proximity of water sources, distance from a fire station, and available firefighting personnel and equipment. Reviewing past wildland/urban interface fires shows that many structures are destroyed or damaged for one or more of the following reasons:

- Combustible roofing material;
- Wood construction;
- Structures with no defensible space;
- Poor road access to structures limiting firefighting apparatus;
- Structures located on steep slopes covered with flammable vegetation;
- Limited water supply;
- Storage of firewood and combustibles beneath or around structures.

Road Access

Road access is a major issue for all emergency service providers. As development encroaches into the rural areas of the county, the number of houses without adequate turn-around space is increasing. Insufficient space for emergency vehicles causes a challenging situation for emergency workers because they cannot access houses. As fire trucks are large, firefighters are challenged by narrow roads and limited access. When there is doubt concerning the stability of a residential bridge, or adequate turn around space, the fire fighters can only work to remove the occupants, but cannot save the structure.

Water Supply

Firefighters in remote and rural areas are faced by limited water supply and lack of hydrant taps. Rural areas are characteristically outfitted with small diameter pipe water systems, inadequate for providing sustained firefighting flows. Some rural fire districts are adapting to these conditions by developing secondary water sources.

Rural Services

People moving from more urban areas frequently have high expectations for fire protection services. Often, new residents do not realize that they are living outside of a fire protection district, or that the services provided are not the same as in an urban area. The diversity and amount of equipment, as well as the number of personnel can be substantially limited in rural areas. Fire protection may rely more on the landowner's personal initiative to take measures to protect his or her own property. Therefore, public education and awareness may play a greater role in rural or interface areas. However, great improvements in fire protection techniques are being made to accommodate for large, rapidly spreading fires that threaten large numbers of homes in interface areas. Growth and development in rural areas of Douglas County influence the wildland/urban interface. While historical losses from wildfires in Douglas County have been relatively low, the increase in growth and development, and along with it an increase in fuel loads, expands the public need for natural hazards mitigation planning in the county.

Wildfire Mitigation Tools/Programs/Laws/Agencies

Wildfire Mitigation Activities

Due to the serious threat of Wildfire in Douglas County, the County has created and adopted a Community Wildfire Protection Plan (CWPP). The CWPP provides clear guidance on the threat of wildfire for thirty three areas in Douglas County. The areas were identified based on level of development in a rural area and mapped based on National Wildfire Plan guidelines. Development of the CWPP involved coordination and approval by the local fire chief as well as participation by citizens of Douglas County. Douglas County's CWPP can be found on line at:
http://www.co.douglas.or.us/planning/Wildfire_Plans/default.asp.

Local Programs

Douglas County residents are served by a variety of local fire districts and fire departments, as well as state and federal fire districts. Although each district or department is responsible for fire related issues in specific geographic areas, they work together to keep Douglas County residents safe from fire.

Douglas Forest Protective Association is responsible for protection from fire to approximately 1.6 million acres of forestland, covering most of Douglas County. The District provides protection to private, state, county and federal lands.

Coos Forest Protective Association is divided into two sub units, with the northern Reedsport unit covering the Douglas County Coastal area.

Western Lane Forest Protective Association provides fire protection to 750,650 acres of private and public forestland in western Lane County and parts of northern Douglas County.

Eastern Lane Forest Protective Association provides fire protection to approximately 3,500 acres of private and public forestland in western Lane County and parts of northern Douglas County.

Forest Protection Associations in Douglas County work closely with Federal; State and local fire agencies to ensure coordination of resources on a regional scale. The Associations have created Fire Operations Plans, and Fire Prevention Management Plans, which document available resources and defined protocol for providing large-scale emergency response and adequate levels of emergency services during an emergency. In addition to individual operations plans, fire jurisdictions in the county have partnered to form the Douglas County Fire Prevention Co-Op, to assist in fire prevention education and outreach, and ensure availability of resources.

The Forest Protection Associations have provided local fire chiefs and local fire departments wildland fire training through Oregon Department of Forestry Funding. Firefighters get a range of experience from exposure to wildland firefighting. Firefighters can also obtain wildland fire training documentation, and attend extensive workshops combining elements of structural and wildland firefighting, defending homes, and operations experience.

Forest Protective Associations have also been involved with training for emergency managers who provide support during non-fire events. Forest Protective Districts partner with timber companies and industry to share equipment in the case of extremely large fires.

Douglas County fire departments and Forest Protective Associations provide essential public services in the communities they serve, and their duties far surpass extinguishing fires. In fact, many of the districts and departments provide other services to their jurisdictions, including Emergency Medical Technicians (EMT) and paramedics who can begin treatment and stabilize sick and injured patients before an ambulance arrives.

All of the fire service providers in the county are dedicated to fire prevention, and use their resources to educate the public to reduce the threat of the fire hazard, especially in the wildland/urban interface.

Douglas County Land Use and Development Ordinance

The Douglas County Land Use and Development Ordinance (LUDO) administered by the Douglas County

Planning Department, lists Fire Siting Standards for new dwellings and structures to be located in areas zoned FF (Farm-Forest; Section 3.5.170 of LUDO), AW (Agriculture and Woodlot; Section 3.6.145 of LUDO), and TR (Timberland Resource; Section 3.2.170 of LUDO). Fire siting does not apply in other zoned areas of the county, due to a lower fuel loading and a much lower risk of wildfire. The fire siting standards are requirements in Forest Zones, where wildland fire is the most dangerous, and require the following standards:

- New dwellings must maintain an adequate water supply and appropriate firefighting equipment suitable for fire protection.
- Must construct a road accessing the dwelling which is capable of serving firefighting vehicles.
- Must maintain a primary and secondary firebreak.
- Use fire resistant building materials and construction standards (ie. fire retardant roofing, spark arrestor on the chimney, insulated power lines).
- Must apply for annexation into the local fire district if within or adjacent to the fire district's boundaries.

State Statutes

ORS 215.730, County governments must require, as a condition of approval, that single-family dwellings on lands zoned as forestland meet the following requirements:

- Dwelling has a fire retardant roof;
- Dwelling will not be sited on a slope of greater than 40 percent;
- Evidence is provided that the domestic water supply is from a source authorized by the Water Resources Department and not from a Class II stream as designated by the State Board of Forestry;
- Dwelling is located upon a parcel within a fire protection district or is provided with residential fire protection by contract;
- If dwelling is not within a fire protection district, the applicant provides evidence that the applicant has asked to be included in the nearest such district;
- If dwelling has a chimney or chimneys, each chimney has a spark arrester; and
- Dwelling owner provides and maintains a primary fuel-free break and secondary break areas on land surrounding the dwelling that is owned or controlled by the owner.

ORS 477.015-061

- Directs the State Forester to establish a system of classifying forest land-urban interface areas;
- Defines forestland-urban interface areas;
- Provides education to property owners about fire hazards in forest land-urban interface areas. Allows for a forestland- urban interface county committee to establish classification standards;
- Requires maps identifying classified areas to be made public;
- Requires public hearings and mailings to affected property owners on proposed classifications;
- Allows property owners appeal rights;
- Directs the Board of Forestry to promulgate rules that set minimum acceptable standards to

minimize and mitigate fire hazards within forestland-urban interface areas; and

- Creates a certification system for property owners meeting acceptable standards. Establishes a $100,000 liability limit for cost of suppressing fires, if certification requirements are not met.

ORS 478, Rural Fire Protection Districts, includes the following provisions, among others, related to wildfire hazard mitigation:

- **ORS 478.120 Inclusion of forestland in district.** Gives a Rural Protection District the authority to include forestland within a rural fire protection district.
- **ORS 478.140 Procedure for adding land to district by consent of owner.**
- **ORS 478.910 Adoption of fire prevention code.** A district board may, in accordance with ORS 198.510 to 198.600, adopt a fire prevention code.
- **ORS 478.920 Scope of fire prevention code.** Authorizes a fire prevention code to provide reasonable regulations relating to:
  1. Prevention and suppression of fires.
  2. Mobile fire apparatus means of approach to buildings and structures.
  3. Providing fire-fighting water supplies and fire detection and suppression apparatus adequate for the protection of buildings and structures.
  4. Storage and use of combustibles and explosives.
  5. Construction, maintenance and regulation of fire escapes
  6. Means and adequacy of exit in case of fires and the regulation and maintenance of fire and life safety features in factories, asylums, hospitals, churches, schools, halls, theaters, amphitheaters, all buildings, except private residences, which are occupied for sleeping purposes, and all other places where large numbers of persons work, live, or congregate from time to time for any purpose.
  7. Requiring the issuance of permits by the fire chief of the district before burning trash or waste materials.
  8. Providing for the inspection of premises by officers designated by the board of directors, and requiring the removal of fire hazards found on premises at such inspections.
- **ORS 478.927 Building Permit review for fire prevention code.** A district adopting a fire prevention code shall provide plan review at the agency of the city or county responsible for the issuance of building permits for the orderly administration of that portion of the fire prevention code that requires approval prior to the issuance of building permits.

Senate Bill 360

The introductory language of Senate Bill 360 states: *"The fire protection needs of the interface must be satisfied if we are to meet the basic policy of the protection of human life, natural resources, and personal property. This protection must be provided in an efficient and effective manner, and in a cooperative partnership approach between property owners, local citizens, government leaders, and fire protection agencies."*

Senate Bill 360, passed in 1997, is state legislation put in place to address the growing wildland/urban interface problem. The bill has three purposes:

- To provide an interface fire protection system in Oregon to minimize cost and risk and maximize effectiveness and efficiency;
- To promote and encourage property owners' efforts to minimize and mitigate fire hazards and risks; and
- To promote and encourage involvement of all levels of government and the private sector in interface solutions.

The bill had a five-year implementation plan that includes public education and outreach, and the development of rules, standards, and guidelines that address landowner and agency responsibilities.

Long-term success of Senate Bill 360 depends upon cooperation among local and regional fire departments, fire prevention cooperatives, and the Oregon Department of Forestry, which means interagency collaboration is vital for successful implementation of the bill. This cooperation is important in all aspects of wildland firefighting. Resources and funding are often limited, and no single agency has enough resources to tackle a tough fire season alone.

Oregon Department of Forestry (ODF)

ODF provides funding and expertise to local Fire Protective Associations, who then train local firefighters in wildfire suppression techniques.

Federal Programs

The proposed role of the federal land managing agencies in the wildland/urban interface is reducing fuel hazards on the lands they administer; cooperating in prevention and education programs; providing technical and financial assistance; and developing agreements, partnerships, and relationships with property owners, local protection agencies, states, and other involved parties in wildland/urban interface areas. These relationships focus on activities before a fire occurs, which render structures and communities safer and better able to survive a fire occurrence.

The Federal Government has two programs administered by the US Forest Service, which assist in meeting the needs of rural areas: the Rural Fire Prevention and Control (RFPC) and Rural Community Fire Protection (RCFP). These programs provide cost-share grants to rural fire districts. Renewed focus on these programs, emphasizing local solutions, is encouraged.

Federal Emergency Management Agency (FEMA) Programs

FEMA is directly responsible for providing fire suppression assistance grants and, in certain cases, major disaster assistance and hazard mitigation grants in response to fires. The role of FEMA in the wildland/urban interface is to encourage comprehensive disaster preparedness plans and programs, which increase the capability of state and local governments, and provide for a greater understanding of FEMA's programs at the federal, state, and local levels.

Fire Management Assistance Grant Program

Fire Management Assistance Grant Program provides funding to a state with an approved hazard mitigation plan for the suppression of a forest or grassland fire that threatens to become a major disaster on public or private lands. These grants are provided to protect life and improved property, and encourage the development and implementation of viable multi-hazard mitigation measures, and provide training to clarify FEMA's programs. The grant may include funds for equipment, supplies, and personnel. A Fire Suppression Assistance Grant is the form of assistance most often provided by FEMA to a state for a fire.

The grants are cost-shared with states. FEMA's US Fire Administration (USFA) provides public education materials addressing wildland/urban interface issues, and the USFA's National Fire Academy provides training programs.

Hazard Mitigation Grant Program

Following a major disaster declaration, the FEMA Hazard Mitigation Grant Program provides funding for long-term hazard mitigation projects and activities which reduce the possibility of damages from all future fire hazards, ultimately reducing the costs to the nation for responding to and recovering from the disaster.

National Wildland/Urban Interface Fire Protection Program

Federal agencies can use the National Wildland/Urban Interface Fire Protection Program to focus on wildland/urban interface fire protection issues and actions. The program helps States develop viable and comprehensive wildland fire mitigation plans and performance-based partnerships.

U.S. Forest Service

The U.S. Forest Service (USFS) is involved in a fuel-loading program implemented to assess fuels and reduce hazardous buildup on US forestlands. The USFS has little to no jurisdiction in the lower valleys, where oftentimes fires start and burn up the hills and into the higher elevation US forestlands.

Prescribed Burning

The health and condition of a forest will determine the magnitude of a wildfire. If fuels such as slash, dry or dead vegetation, fallen limbs and branches are allowed to accumulate over long periods of time without being methodically cleared, fire can move more quickly and destroy everything in its path. The resulting fires are more catastrophic than if the fuels are periodically eliminated. Prescribed burning is the most efficient method to get rid of these fuels.

Firewise

Firewise is a program developed within the National Wildland/ Urban Interface Fire Protection Program, and is the primary federal program addressing interface fire. It is administered through the National Wildfire Coordinating Group whose extensive list of participants includes a wide range of federal agencies. The program is intended to empower planners and decision makers at the local level.

Through conferences and information dissemination, Firewise increases support for interface wildfire mitigation by educating professionals and the general public about hazard evaluation and policy implementation techniques. Firewise offers online wildfire protection information and checklists, as well as listings of other publications, videos, and conferences. The interactive home page allows users to ask fire protection experts questions, and to register for new information as it becomes available.

FireFree Program

FireFree is a unique program for private/public interface wildfire mitigation involving partnerships with insurance companies and local government agencies. It is an example of an effective non-regulatory approach to hazard mitigation. Originating in Bend, the program was developed in response to the city's "Skeleton Fire" of 1996, which burned over 17,000 acres and damaged or destroyed 30 homes and structures. Bend sought to create a new kind of public education initiative that emphasized local involvement. SAFECO Insurance Corporation was a willing supporter in this effort.

FireFree is based on and provides a national model for wildfire mitigation that promotes 10 simple steps that homeowners can take to create defensible space around their homes.

The 10 steps include:

- Define your defensible space.
- Reduce flammable brush around your home and under nearby trees.
- Prune or remove trees.
- Keep grass and weeds cut low.
- Clear wood piles and building material away from your home.
- Keep your yard and roof clean.
- Keep address signs visible.
- Choose fire-resistant building materials and lawn furniture.
- Recycle yard debris – avoid burning.
- Be prepared to respond to wildfire.

Windstorms

Location: Douglas County, Azalea, Canyonville, Drain, Elkton, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla

Windstorms are a concern to communities across Douglas County, especially in coastal areas subject to more severe weather moving immediately across the Pacific Ocean. Winds speeds from 40-60 mph are common in the winter months in coastal communities. Common effects of windstorms include toppled trees on buildings and cars, downed power lines, and widespread power outages. After such an event, it can take communities days, weeks, or longer to return to normal activities. Windstorms are most common from October to March, which is why they are often associated with winter storms.

A windstorm is generally a short duration event involving straight-line winds and/or gusts in excess of 50 mph. Windstorms can affect areas of the county with significant tree stands, as well as areas with exposed property, major infrastructure, and above ground utility lines. The lower wind speeds typical in central Douglas County are still high enough to knock down trees and power lines, and cause other property damage. Windstorms can result in collapsed or damaged buildings, damaged or blocked roads and bridges, damaged traffic signals and/or streetlights. Roads blocked by fallen trees during a windstorm may have severe consequences to people who need access to emergency services. Emergency response operations can be complicated when roads are blocked or when power supplies are interrupted.

Historical Windstorm Events

December 4, 1951 Windstorm

This storm reached its greatest intensity along the coast, where unofficial observations reported sustained wind speeds between 60 and 100 mph, while inland valley locations reported sustained wind speeds up to 75 mph. Serious damage to buildings and widespread power losses occurred throughout the state.

October 12, 1962 "Columbus Day" Windstorm

The Columbus Day storm in 1962 was the most destructive windstorm ever recorded in Oregon, both in terms of loss of life and property damage. Damage was most severe in the Willamette Valley. The storm did upwards of $200 million in damage (over $800 million in today's dollars). Hundreds of thousands of homes were without power for short periods of time, while others were without power for two to three weeks. Statewide, more than 50,000 homes were seriously damaged, and nearly 100 were completely destroyed. Roseburg experienced gusts of up to 62 mph.

October 2, 1967 Windstorm

This storm brought the highest winds recorded since the Columbus Day storm of 1962 to much of western, central, and northeastern Oregon. Significant widespread damage occurred to agriculture, timber, power and telephone utilities, and homes. Wind speeds of 100 to 115 mph were unofficially recorded along the Oregon coast. There was one fatality and about 15 persons were seriously injured. Roseburg experienced 69 mph wind gusts during the storm.

November 1981 Windstorm

November 1981 saw two successive windstorms on November 13 and 14. Numerous injuries resulted from wind-blown debris in western Washington and Oregon. Across the Pacific Northwest, hundreds of downed trees and power lines caused massive power outages and roof damage. Estimates indicated that nearly 500,000 homes were without power for at least a short time during the weekend. Numerous airports across Oregon and Washington suffered damage.

December 1995 Windstorm

On December 11, 1995 a large low pressure storm approached the Southern Oregon/Northern California coast and began to slow and intensify. The National Weather Service issued high wind warnings for the

coast and inland valleys as the storm center tracked north along the Oregon coast. Gusts of over 100 mph occurred along the coast, while gusts in the Willamette Valley exceeded 60 mph. Hundreds of thousands of people in the state lost power, and there was widespread damage to homes, buildings, and boats. Four Oregonians lost their lives during the storm.

Douglas County received a presidential disaster declaration. The most damaged areas included Reedsport and Winchester Bay. Throughout the county, the windstorm tore roofs from buildings, uprooted or otherwise damaged many trees, and knocked out electric and telephone service.

February 7, 2002 "South Valley Surprise" Windstorm

A powerful windstorm hit coastal Douglas County on February 7, 2002. A strong low-pressure system struck the northwest corner of Douglas County before moving inland to the Willamette Valley. Wind gusts were reported at more than 100 miles per hour near Reedsport. The storm lasted less than an hour but caused loss of power, damage to businesses and homes, and officials estimate about 44 acres of timber fell within the drainage of Threemile Creek on the Oregon Dunes National Recreational Area and within the Umpqua Spit Roadless Area.

December 14, 2006 "Hannukah Eve" Windstorm

The Hannukah Eve storm affected the Pacific Northwest between December 14 and 15 of 2006. The storm produced hurricane-force wind gusts and heavy rainfall, causing hundreds of millions of dollars in damage and leaving over 1.8 million residences and businesses without power throughout Oregon Washington and parts of British Columbia. In Oregon, extensive tree damage was reported, some of which fell on houses or on power lines. More than 350,000 customers lost power at the peak of the storm. Shelters were opened in the coastal regions as a result of the storm damage. The Governor requested a federal disaster declaration on January 31, 2007.

"Great Coastal Gale of 2007" Windstorm

The Great Coastal Gale of 2007 was a series of three powerful Pacific storms that affected much of the Northwest between December 1, 2007 and December 4, 2007. The storms produced hurricane-force wind gusts and record flooding throughout the region. The storm's intensity was compared to the Columbus Day Storm of 1962. In Douglas County significant areas of timber were lost along the coast. Throughout Oregon the total estimated loss of timber was approximately $42 million.

Characteristics of Windstorms

The most frequent surface winds in Oregon are from the southwest. These widespread winds are associated with storms moving onto the coast from the Pacific Ocean. Winds coming from the south are the most destructive. The Columbus Day Storm of 1962 was an example of this type of windstorm. West winds generate from the Pacific Ocean and are strong along the coast, but slow down inland due to the obstruction of the Coastal and Cascade mountain ranges. Prevailing winds in Oregon vary with the seasons. In summer, the most common wind directions are from the west or northwest; in winter, they are from the south and east.

Community Windstorm Issues

Windstorms have the ability to cause damage over 100 miles from the center of storm activity. Isolated wind phenomena in the mountainous regions have more localized effects. Winds impacting walls, doors, windows, and roofs, may cause structural components to fail. Wind pressure can create a direct and frontal assault on a structure, pushing walls, doors, and windows inward. Conversely, passing currents can create lift and suction forces that act to pull building components and surfaces outward. The effects of winds are magnified in the upper levels of multi-story structures. As positive and negative forces impact the building's protective envelope (doors, windows, and walls), the result can be roof or building component failures and considerable structural damage. The effects of wind speed are shown in Figure 3.19. Debris carried along by extreme winds can directly contribute to loss of life and indirectly to the failure of protective building envelopes, siding, or walls of buildings. When severe windstorms strike a community, downed trees, power lines, and damaged property can be major hindrances to emergency response and disaster recovery.

Figure 3.19 - The Effect of Wind Speed

Wind Speed (mph)	Wind Effects
25-31	Large branches will be in motion.
32-38	Whole trees in motion; inconvenience felt walking against the wind.
39-54	Twigs and small branches may break off of trees; wind generally impedes progress when walking; high profile vehicles such as trucks and motor homes may be difficult to control.
55-74	Potential damage to TV antennas; may push over shallow rooted trees especially if the soil is saturated.
75-95	Potential for minimal structural damage, particularly to unanchored mobile homes; power lines, signs, and tree branches may be blown down.
96-110	Moderate structural damage to walls, roofs and windows; large signs and tree branches blown down; moving vehicles pushed off roads.
111-130	Extensive structural damage to walls, roofs, and windows; trees blown down; mobile homes may be destroyed.
131-155	Extreme damage to structures and roofs; trees uprooted or snapped.
Greater than 155	Catastrophic damage; structures destroyed.

Source: Washington County Office of Consolidated Emergency Management

Existing Mitigation Activities

One of the most common problems associated with windstorms is power outage. High winds commonly occur during winter storms, and can cause trees to bend, sag, or fail (tree limbs or entire trees), coming into contact with nearby distribution power lines. Fallen trees can cause short-circuiting and conductor overloading. Wind-induced damage to the power system causes power outages to customers, incurs cost to make repairs, and in some cases can lead to ignitions that start wildland fires.

The basic strategy adopted by power companies to avoid wind-induced damage is to maintain adequate separation between its transmission circuits and trees. This is done with tree height limitations and ongoing tree trimming.

Winterstorms

Location: Douglas County, Azalea, Canyonville, Drain, Elkton, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla

Severe winter storms pose a significant risk to life and property in Douglas County by creating conditions that disrupt essential regional systems such as public utilities, telecommunications, and transportation routes. Severe winter storms can produce rain, freezing rain, ice, snow, cold temperatures, and wind. Ice storms accompanied by high winds can have destructive impacts, especially to trees, power lines, highway safety and utility services. Severe freezes, where high temperatures remain below freezing for five or more days, occur every three to five years in Douglas County. Severe or prolonged snow events occur less frequently, and are very geographic in nature. The eastern part of Douglas County is affected the most severely, having widespread impacts on people and property in the county.

Historical Severe Winterstorm Events

SNOWSTORMS

In the past 80 years, there were over 80 days where an inch of snow or greater fell in Roseburg and other areas of the Umpqua Valley. All of the snow events occurred between November and April.

Figure 3.20 - Mean Snowfall (inches) –Areas in Douglas County, Oregon 1971-2000

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Drain	.39	1.2	.03	0	0	0	0	0	0	0	.2	.74	2.91
Elkton	.44	.22	.1	.05	0	0	0	0	0	0	.03	.31	1.42
Idleyld Park	4.28	4.40	1.65	.47	.02	0	0	0	0	1.5	3.9	8.8	39.1
Riddle	.64	.94	.17	0	0	0	0	0	0	0	.26	.79	2.97
Tokette Falls	8.46	7.81	3.98	.24	0	0	0	0	0	.23	3.77	8.37	34.6
Winchester	.45	.20	.02	0	0	0	0	0	0	0	.03	.31	0.59

Source: Oregon Climate Service

December 24, 1889 to February 13, 1890

The big snow of '90 started the day before Christmas. Snow fell continually for 52 days, leaving between 5 ½ and 7 ½ feet, in the town of Glendale and more in the surrounding mountains. The weather then turned warm and the snow began to melt so fast, the ground became soggy and there was high water and flooding. A severe landslide covered the railroad tracks and dammed up Cow Creek near West Fork below Glendale for many days. Reportedly several Chinese workers perished in the slide and that unstable area of the mountain became known as the Chinaman's slide. Nothing could get through except people on foot, by climbing on the canyon wall high above the slide and mud area.

December 1919

The December 1919 snowstorm was recorded as the third heaviest snowfall-producing storm in Oregon.

January 1950

A total of 28.0 inches of snow fell in Roseburg January 9-15. Riddle was hit even harder with 42.9 inches

of snow. There were three severe storms in January 1950, with very little time separating them. Their net effect was a nearly continuous storm. The storm had severe effects on infrastructure, residents, and businesses across the state. Deep snowdrifts closed all highways west of the Cascades. Sleet that turned to freezing rain caused unsafe conditions on highways and damaged trees and power lines.

Figure 3.21 - 1950 Snowstorm Accumulation - Areas in Douglas County, Oregon

Location	January 1950 Snowfall
Reedsport	5.0 inches
Riddle	42.9 inches
Roseburg	28.0 inches
Crater Lake	136.0 inches

Source: National Weather Service

Winter 1969

January 21 to February 6, 1969 when strong storms, accompanied by snow, ice, wind, and freezing rain hit Oregon statewide. In the Roseburg area alone, 43.7 inches of snow fell over an 8-day period, including 25.5 inches between January 26th and 27th.

Figure 3.22 – Douglas County Winterstorm of 1969

ICESTORMS

Ice storms (sleet and freezing rain), are typically a short-lasting event in Douglas County. In the winter of 1978, freezing rain covered the Umpqua Valley. The build-up of ice caused power failures, brought down trees, and created serious hazards for motorists.

Characteristics of Severe Winterstorms

Weather Patterns

Severe winter storms affecting Oregon typically originate in the Gulf of Alaska and in the central Pacific Ocean. These storms are most common from October through March. Most of Douglas County has average annual precipitation of between 30 and 70 inches, with parts of the Coastal County receiving over 70 inches. Oregon's latitude, topography, and nearness to the Pacific Ocean give the state diversified climates. The county's climate generally consists of wet winters and dry summers. Normal distribution of precipitation is about 50% of the annual total from December through February, lesser amounts in the spring and fall, and very little during summer months.

There is an average of only five days per year of measurable snow with snowfall accumulations rarely measuring more than two inches. Very cold air rarely moves west of the Cascades Range. The Cascades act as a natural barrier, damming cold air east of the range. The only spigot is the Columbia River Gorge, which funnels the cold air into the Portland area. Cold air then begins deepening in the Columbia River valley, eventually becoming deep enough to sink southward into the Willamette and Umpqua valleys. If the cold air east of the Cascades is deep, it will spill through the gaps of the Cascades and flow into the western valleys via the many river drainage areas along the western slope. The cold air in western Oregon is now in place. If a storm from the Pacific moves near or over the cold air, freezing rain, sleet, and/or snow will be produced. Nearly every year, minor snowfalls of up to six inches occur in the western interior valleys. However, it is a rare occurrence for snowfalls of over a foot in accumulations.

Snow

Snow is very common in the higher elevations of the Cascades. Diamond Lake reports an average of 6-8 feet of snow per year. In the lower elevations of the Umpqua Valley snow is relatively rare, however snowfall events do occur. An example of a snowstorm event occurred in January 1969, when 43.7 inches of snow fell over an 8-day period in Roseburg.

Severe snowfall events can result in loss of life, property, power, gas, and/or other service disruptions. The variable character of this hazard is determined by a variety of meteorological factors including snowfall, snowpack, rainfall, temperature, and wind.

Ice

Like snow, ice storms are comprised of cold temperatures and moisture, but subtle changes can result in varying types of ice formation, including freezing rain, sleet, and hail. While sleet and hail can create hazards for motorists when it accumulates, freezing rain can be the most damaging of ice formations. Ice buildup can bring down trees, communication towers, and wires creating hazards for property owners, motorists, and pedestrians.

Extreme Cold Weather

Extreme cold weather stretches are also rare throughout Douglas County with the exception of very high altitudes. Extreme cold hazards include infrastructure damage to pipes, power lines and roadways. Prolonged low temperatures when combined with power outages could be a hazard to vulnerable populations like the elderly.

Severe Winterstorm Hazard Assessment

Hazard Identification

A severe winter storm is generally a prolonged event involving snow or ice. The characteristics of severe winter storms are determined by the amount and extent of snow or ice, air temperature, wind speed, and event duration. If a severe ice storm occurs within Douglas County, there may be prolonged power outages over widespread areas. The probability of such an ice storm is uncertain due to limited historical records. The National Weather Service, Medford Bureau, monitors the stations and provides public warnings on storm, snow, and ice events as appropriate.

Vulnerability and Risk

A vulnerability assessment that describes the number of lives or amount of property exposed to elements of severe winter storms has not yet been conducted for Douglas County. However, severe winter storms can cause power outages, transportation and economic disruptions, and pose a high risk for injuries and loss of life. The events can also require needed shelter and care for adversely impacted individuals. The county has suffered severe winter storms in the past that brought economic hardship and affected the life safety of county residents.

Factors included in assessing severe winter storm risk include population and property distribution in the hazard area, the frequency of severe winter storm events, and information on trees, utilities, and infrastructure that may be impacted by severe winter storms. When sufficient data is collected for hazard identification and vulnerability assessment, a risk analysis can be completed. Insufficient data currently exists to complete a risk analysis.

What is Susceptible to Winterstorms

Life and Property Damage

Winterstorms have the potential for loss of life. Loss of life can occur indirectly from traffic accidents on icy roads, heart attacks while shoveling snow, and hypothermia from prolonged exposure to the cold.

Property is at risk of damage due to flooding and landslides resulting from heavy snow melt. Trees, power and telephone lines, television and radio antennas can all be impacted by ice, wind, snow, falling trees and limbs. Saturated soil can cause trees to lose their ability to stand and results in damage to houses, cars, utilities, roads and other structures. Heavy snowpack on flat or low-pitched roofs can cause structural damage, or roof collapse in vulnerable buildings. If streets are icy, blocked by downed trees or damaged, it is difficult for emergency personnel to travel, posing a secondary threat to life if police, fire, and medical personnel cannot respond to calls.

Prolonged cold weather events can sometimes cause damage to water lines. Breaks most often times occur during severe freeze events, as well as during extreme cooling periods during the months of October, November, and December. Inadequately insulated potable water and fire sprinkler pipes can rupture and cause extensive damage to property.

Chapter 4:
Mitigation Plan Goals & Action Items

Mitigation Goals

The plan goals help guide the direction of future activities aimed at reducing risk and preventing loss from natural hazards. The goals serve as checkpoints as agencies and organizations begin implementing mitigation action items. The following goals were derived from the 2009 Douglas County NHMP. The goals reflect the mitigation priorities of both Douglas County and the cities of Canyonville, Drain, Elkton, Glendale, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston and Yoncalla. Each jurisdiction will adopt the following goals regarding the following hazards:

Drought Mitigation Goals

GOAL A: Prevent loss of life from drought.
GOAL B: Reduce the economic impact of drought to agricultural uses.
GOAL C: Enhance education and public awareness of drought danger.
GOAL D: Increase preparedness of communities and agencies to deal with drought.

Earthquake Mitigation Goals

GOAL A: Prevent loss of life from earthquakes.
GOAL B: Reduce property damages.
GOAL C: Enhance education and public awareness of earthquake danger.
GOAL D: Increase preparedness of communities and agencies to deal with earthquakes.

Flood Mitigation Goals

GOAL A: Prevent loss of life from flooding.
GOAL B: Protect structures in the floodplain from flooding.
GOAL C: If a structure becomes a repetitive loss structure, inform owner of possible mitigation funding options.
GOAL D: Protect public infrastructure from the effects of flooding.
GOAL E: Increase preparedness of communities and agencies to deal with flooding.

Landslide Mitigation Goals

GOAL A: Prevent loss of life from landslides.
GOAL B: Reduce property damages.
GOAL C: Enhance education and public awareness of landslide danger.
GOAL D: Increase preparedness of communities and agencies to deal with landslides.

Tsunami Mitigation Goals

GOAL A: Protect lives of residents and visitors in tsunami prone areas.
GOAL B: Reduce property damages and loss in tsunami prone areas.
GOAL C: Enhance education and public awareness of tsunami dangers.
GOAL D: Increase preparedness of communities and agencies to deal with tsunami threat.

Wildfire Mitigation Goals

GOAL A: Protect lives of residents and firefighters in wildfire hazard areas.
GOAL B: Increase fire prevention/reduction activities and firefighting response abilities.
GOAL C: Reduce property damages and loss in wildfire hazard areas.
GOAL D: Enhance education of wildland/urban interface area property owners and public awareness of wildfire dangers and prevention.
GOAL E: Increase preparedness of communities and agencies to deal with wildfire threat.

Windstorm Mitigation Goals

GOAL A: Protect lives during windstorms.
GOAL B: Reduce property damage resulting from windstorms.
GOAL C: Enhance survivability of infrastructure and utilities during windstorms.
GOAL D: Enhance education and public awareness of windstorm dangers.
GOAL E: Increase preparedness of communities and agencies.

Winter Storm Mitigation Goals

GOAL A: Protect structures from winter storm damage.
GOAL B: Maintain road system circulation capacity.
GOAL C: Prevent utility damage from falling trees.
GOAL D: Prevent falling trees from becoming a fire hazard.

Douglas County Mitigation Successes:

- City of Drain – Relocation of water line washed out during 1996/97 storm event
- City of Drain – House elevation program after 1996/97 storm event
- City of Myrtle Creek – Buy out of trailer park along the South Umpqua River (Conv. to park)
- City of Myrtle Creek – House Elevation Program
- Douglas Electric – Transmission line relocation (between Elkton & Scottsburg)
- Galesville Dam – Flood control for Cow Creek
- City of Reedsport – Stream gage installation for flood forecasting

The implementation of each individual jurisdiction's mitigation plan is integrated into each local Comprehensive Plan by way of local adoption of the NHMP as a supporting document of the Comprehensive Plan. Communities in Oregon depend upon a Local Comprehensive Plan in order to organize and prioritize goals & policies for the community. These goals & policies assist with the implementation of planning, capital improvement, budgeting and other various decisions made in order

to achieve the city's goals. This multi-jurisdictional NHMP, once acknowledged by FEMA will subsequently to be adopted by each jurisdiction as a support document for each local comprehensive plan. At which time, the action strategies and mitigation planning goals are incorporated in the local jurisdictions plan for the purpose of implementation in the local decision making process.

Action Items

The following action items are detailed recommendations for activities that local departments, citizens, and others could engage in to reduce risk. Action items are followed by rationale for the proposed action item, coordinating organizations, and ideas for implementation. Each action item identifies which goals are addressed. Goals are identified within the actions as a means for monitoring and evaluating how well the mitigation plan is achieving its goals. Action items are categorized by each specific hazard, however it should be noted that some action items are driven by the possibility of several different hazards occurring at separate times or during one multi-hazard event. Be aware that although an action item may be listed under one hazard, does not mean it could not qualify for implementation under another possible event. Some action items are specific to an individual city and will be identified as such.

The action items listed within this chapter are first categorized as follows:

- Action Items are organized into the following tables based on the action item's relativity to each jurisdiction within this plan. The action items which are listed in alphabetical order and described in greater detail within the latter portion of this chapter are listed and identified by unique I.D. which corresponds to the natural hazard in which the action item is categorized. The number within the alphanumeric I.D. corresponds to the action items number in which it is listed within the natural hazard. The I.D.'s are as follows:

    - D = Drought
    - E = Earthquake
    - F = Flood
    - L = Landslide
    - T = Tsunami
    - WF = Wildfire
    - WD = Windstorm
    - WT = Winterstorm

- After the tables the action items are then categorized by each specific type of hazard, at which time they are discussed in further detail. Analysis involving each action item starting on page 4.17, includes review of the following items:

    - Rationale for Proposed Action Item
    - Coordinating Organizations
    - Implementation
    - Goal Coordination

*(Priority Action Items are identified with a * next to the Item I.D.)*

Douglas County	
Item I.D.	**Action Item**
D-1	Connect local farmers and ranchers with organizations such as the local Soils and Water Conservation District, Oregon Department of Agriculture, and the USDA to educate them on water conservation methods they can implement to reduce the impact of droughts.
D-2	Continue implementing the objectives of the "Water Resource Element" of the Douglas County Comprehensive Plan.
E-1*	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-3	Further assess and fix the seismic needs of bridges identified as being seismically vulnerable during an earthquake event.
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
E-6	Assist the Sutherlin Water Control District in updating the Emergency Action Plan for Plat I and Cooper Creek Dams.
F-1*	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
F-5	Further assess and fix the scouring impacts to bridge foundation elements identified and determined to be unstable due to observed and evaluated scour conditions by implementing commonly accepted scour countermeasure projects.
F-6	Identify surface water drainage obstructions, seek funding for culvert mitigation projects, fix and repair culverts identified in "very poor" condition.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
L-4	Increase coordination between local jurisdictions, emergency responders, homeowners and landslide warning systems.
T-1	Investigate the possibility of adopting more accurate tsunami inundation maps created by DOGAMI in 2013 as compared to the existing regulatory map created in 1995.
T-2	Work with coastal communities, citizen groups, property owners, recreation areas, emergency responders, schools and businesses in promoting tsunami awareness and evacuation.
T-3	Improve technology capacity of communities, agencies and responders needed to adequately map hazard areas, broadcast warnings, inform, and educate residents and visitors of tsunami dangers.
T-4	Enhance tsunami evacuation route capacity and visibility and control evacuation of hazard areas by ensuring capacity of evacuation routes.
WF-1*	Seek funding and labor opportunities to staff fuel-reduction projects throughout

	wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.
WD-1	Develop and implement programs to keep trees from threatening lives, property, and public infrastructure during windstorm events.
WD-2	Map locations around the county that have the highest incidence of extreme windstorms.
WD-3	Encourage critical facilities to secure backup emergency power.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WD-5	Encourage harvesting of trees along utility and road corridors, preventing potential windstorm damage.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-3	Encourage harvesting of trees that are blown down during winterstorms.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Canyonville	
Item I.D.	**Action Item**
E-1	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
F-1*	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.

L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
WF-1*	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1*	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Drain	
Item I.D.	**Action Item**
E-1*	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
F-1	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4*	Explore funding for repetitive loss property mitigation projects.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard

	prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5*	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Elkton	
Item I.D.	**Action Item**
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
F-1	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3*	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3*	Mitigate activities in identified potential and historical landslide areas through public outreach.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.

WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2*	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Glendale	
Item I.D.	**Action Item**
E-1	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-5*	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
F-1	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2*	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4*	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.

WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Myrtle Creek	
Item I.D.	**Action Item**
E-1	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
F-1*	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
F-5*	Further assess and fix the scouring impacts to bridge foundation elements identified and determined to be unstable due to observed and evaluated scour conditions by implementing commonly accepted scour countermeasure projects.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6*	Look for solutions to protect structures located outside of fire districts through partnerships,

	grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Oakland	
Item I.D.	**Action Item**
E-1*	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
F-1	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3*	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
F-8*	Assess the possibility of an alternate raw water intake in Calapooya Creek for the City of Oakland.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire

	identification, initial response and evacuation if necessary.
WD-3	Encourage critical facilities to secure backup emergency power.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Riddle	
Item I.D.	**Action Item**
E-1*	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-4	Identify and enhance/replace water, storm water, sewer, electric, gas and other utilities to improve their ability to survive an earthquake.
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
F-1*	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6*	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.

WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Roseburg	
Item I.D.	**Action Item**
E-1	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-2	Further assess and fix the seismic needs of additional structures not included in DOGAMI's rapid visual screening assessment, but identified by the county or individual cities (public structures) as being vulnerable during an earthquake event.
E-4*	Identify and enhance/replace water, storm water, sewer, electric, gas and other utilities to improve their ability to survive an earthquake.
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
F-1	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
F-7*	Upgrade an 8-inch diameter exposed water main crossing the South Umpqua River at Portland Avenue within the City of Roseburg that is susceptible to damage due to possible flooding events affecting water flow, velocity and floating debris.
F-9*	Improve storm water storage capacity along Newton Creek as part of the Stewart Parkway Realignment project which will help to mitigate the flooding of local streets and possible road closures within the City of Roseburg.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
L-5*	The City of Roseburg proposes to construct a 30-inch transmission main on Reservoir Hill to provide water to three of the city's reservoirs located atop the hill.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing

	strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.
WD-3	Encourage critical facilities to secure backup emergency power.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Sutherlin	
Item I.D.	**Action Item**
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
E-6*	Assist the Sutherlin Water Control District in updating the Emergency Action Plan for Plat I and Cooper Creek Dams.
F-1	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3*	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to

	wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.
WD-3	Encourage critical facilities to secure backup emergency power.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Winston	
Item I.D.	**Action Item**
E-1	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-4*	Identify and enhance/replace water, storm water, sewer, electric, gas and other utilities to improve their ability to survive an earthquake.
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
F-1	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2*	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.

WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.
WD-3*	Encourage critical facilities to secure backup emergency power.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

City of Yoncalla	
Item I.D.	**Action Item**
E-1*	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
F-1	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.
L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.

WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.
WD-4*	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

Drought Action Items

ACTION ITEM 1: Connect local farmers and ranchers with organizations such as the local Soils and Water Conservation District, Oregon Department of Agriculture, and the USDA to educate them on water conservation methods they can implement to reduce the impact of droughts.

Rationale for Proposed Action Item: Connecting local farmers and ranchers with resources from agencies such as the local soil and water conservation districts, the Oregon Department of Agriculture, and the US Department of Agriculture can help farmers and ranchers learn about water conservation and share in the responsibility of implementing drought related mitigation activities. These partnerships can help Douglas County establish effective methods of water curtailment within the agricultural industry that typically have high water use.

Coordinating Organizations: Douglas County, Oregon Department of Agriculture, USDA, Oregon Water Resources Department, Local Soil and Water Conservation Districts, Watershed Councils, Irrigation Districts

Implementation:

- Collaborate with agricultural organizations that represent the farming and ranching community to build on existing outreach methods with the goal of providing water conservation and drought management training to farmers and ranchers.
- Encourage storage facilities where they are needed and where they are feasible to construct. Example locations include placing storage facilities in high drainage basins so that the impact to anadromous fish would minimal.

Potential Funding: General fund

Goal: A, B, C & D

ACTION ITEM 2: Continue implementing the objectives of the "Water Resource Element" of the Douglas County Comprehensive Plan.

Rationale for Proposed Action Item: The Water Resource Element assesses both surface and subsurface water sources in order to evaluate how an ample supply of high quality water can be obtained for present needs and future growth. The Water Resource Element addresses four specific items: (1) The important issues affecting the Umpqua River Basin; (2) A detailed description of the six major sub-basins with findings addressing surface water, groundwater, lakes, current and future water use, and alternatives to meet future demand; (3) Land and water use policies directed toward specific water resource issues and concerns; and (4) Maps describing the various sub-basins as well as potential and existing water impoundment sites.

Coordinating Organizations: Douglas County Planning Department, Oregon Water Resources

Department, Local Soil and Water Conservation Districts, Watershed Councils, Irrigation Districts

Implementation:

- Continue to monitor ground and surface water in Douglas County watersheds.
- Conduct a regular review of policies found in the Water Resource Element to see if they adequately address the needs in Douglas County.

Potential Funding: General fund

Goal: A, B, C & D

Earthquake Action Items

ACTION ITEM 1: Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.

Rationale for Proposed Action Item: Under the direction of Oregon Senate Bill 2 (2005), DOGAMI completed a statewide seismic needs assessment that surveyed critical facilities including public school and community college buildings, hospital buildings, fire stations, police stations, sheriff's offices and other law enforcement agency buildings. The needs assessment consisted of rapid visual screenings (RVS). RVS is a process for visually inspecting a building for 15 to 30 minutes to assess its level of vulnerability, but does not include an in depth structural assessment. The following projects have been completed since the 2005 RVS:

- Douglas Co. received a grant for Roseburg High School Gym in 2013-14 for $1.5 million (http://www.oregon4biz.com/News-&-Media/index.php?a=144)
- Roseburg School District: Green Elementary in 2015-17 for $1,497,500 (http://www.orinfrastructure.org/Infrastructure-Programs/Seismic-Rehab/0416SeismicAwardPh1.pdf)

Results of the survey were grouped into risk categories. The following buildings listed by location in unincorporated Douglas County and/or city are each at a "very high" level (100%) or "high" level (>10%) of potential collapse in the event of a possible earthquake:

"Very High" (100%) level of collapse -
Douglas County

- Glide High School (18990 N Umpqua Hwy. Glide)
- Green Elementary School (4498 SW Carnes Rd. Roseburg) (funding approved and project initiated)
- Lookingglass Elementary School (7421 Lookingglass Rd. Roseburg)
- Education Skills Building – UCC (1140 Umpqua College Rd. Roseburg)
- Whipple Fine Arts Building – UCC (1140 Umpqua College Rd. Roseburg)

Canyonville

- Canyonville School (124 N Main St. Canyonville)

Drain

- North Douglas Elementary School (100 N School St. Drain)

Myrtle Creek

- Coffenberry Middle School (591 NE Rice St. Myrtle Creek)

Riddle

- Riddle High School (127 Main St. Riddle)

"High" (>10%) level of collapse –
Douglas County

- Camas Valley School (197 Main Camas Rd. Camas Valley)
- Gardiner RFPD (208 Marsh St. Gardiner)
- South Umpqua High School (501 NW Chadwick Ln. Myrtle Creek)
- Tri City Elementary School (546 SW Chadwick Ln. Myrtle Creek)
- Tri City RFPD (136 N Old Pacific Hwy. Myrtle Creek)
- Melrose Elementary School (2960 Melrose Rd. Roseburg)
- Rose Elementary School (948 SE Roberts Ave. Roseburg)
- Sunnyslope Elementary School (2230 Cannon Rd. Roseburg)
- Winchester Elementary (217 Pioneer Way. Winchester)

Drain

- North Douglas County Fire & EMS (531 S. Cedar St. Drain)

Glendale

- Glendale Elementary School (100 Pacific Ave. Glendale)

Myrtle Creek

- Myrtle Creek Elementary School (651 NE Division St. Myrtle Creek)

Oakland

- Oakland RFD (117 SE 3rd St. Oakland)

Reedsport

- Highland Elementary School (2605 Longwood Dr. Reedsport)
- Reedsport Junior/Senior High School (2260 Longwood Dr. Reedsport)
- Lower Umpqua Hospital (600 Ranch Rd. Reedsport)
- Reedsport FD Station 1 (124 N 4th St. Reedsport)
- Reedsport Police Dept. (146 N 4th St. Reedsport)
- Douglas County Sheriff's Office (680 Fir Ave. Reedsport)

Riddle

- Riddle Elementary School (463 Park St. Riddle)

Roseburg

- Roseburg FD (801 NW Garden Valley Blvd. Roseburg)
- Roseburg FD (2177 W Harvard Ave. Roseburg)

- Douglas County Sheriff's Office & ERC -911 (1036 SE Douglas St. Roseburg)

Winston

- Douglas High School (1381 NW Douglas Blvd. Winston)
- McGovern Elementary School (600 NW Elwood St. Winston)
- Winston Middle School (330 SE Thompson Ave. Winston)

Yoncalla

- Yoncalla Elementary School (401 1st St. Yoncalla)

Assessing critical facilities will reduce Douglas County's overall vulnerability to a major earthquake. Based on further assessment outcomes, these facilities should be earthquake retrofitted to protect against a major earthquake hazard.

Coordinating Organizations: County and City Planning and Public Works Departments, School Districts, Law Enforcement Agencies, Fire Departments, Oregon Emergency Management, DOGAMI, FEMA

Implementation:

- If an assessment has not already been conducted, conduct seismic structural studies for each building given a "very high" or "high" level of potential collapse.
- Research and seek funding for seismic retrofitting of the listed buildings that have been given a "very high" or "high" level of potential collapse and do not meet the current seismic standards.
- Retrofit, rebuild, or relocate facilities given a "very high" or "high" level of potential collapse.

Potential Funding: Oregon Seismic Rehabilitation Grant Program; Local Bonds; Capital Improvements Program.

Goal: A, B & D

ACTION ITEM 2: Further assess and fix the seismic needs of additional structures not included in DOGAMI's rapid visual screening assessment, but identified by the county or individual cities (public structures) as being vulnerable during an earthquake event.

Rationale for Proposed Action Item: During consultation with the City of Roseburg, the city indicated that the city public work (Fulton) shops is constructed of unreinforced concrete and will most likely not withstand an earthquake. The Fulton Shop is where the entire city's street and water maintenance equipment is stored including back hoes, excavators, pickup trucks, sweepers, flusher and vacuum trucks. Public Works maintenance crews are essentially first responders along with Police and Fire in the event of a natural disaster. The equipment will need to be used to respond for rescue and debris removal purposes. It is essential to keep this equipment available and operational when an earthquake event occurs.

Coordinating Organizations: City of Roseburg Planning and Public Works Departments, Oregon Emergency Management, DOGAMI, FEMA

Implementation:

- Conduct a seismic structural study for the Fulton Shop buildings.
- Research and seek funding for seismic retrofitting of the buildings.
- Retrofit or rebuild the buildings based upon the findings determined within the seismic structural study.

Potential Funding: Oregon Seismic Rehabilitation Grant Program; Local Bonds; Capital Improvements Program.

Goal: A, B & D

ACTION ITEM 3: Further assess and fix the seismic needs of bridges identified as being seismically vulnerable during an earthquake event.

Rationale for Proposed Action Item: The Douglas County Public Works Department has identified five bridges that are vulnerable to failure during large seismic events. Seismic vulnerability is not considered during routine bridge inspections and is not reflected in the overall sufficiency rating for a bridge, so it must be considered separately. In 1995, ODOT, Oregon Local Agencies, and their consultant, CH2M Hill, performed a seismic retrofit prioritization study for Oregon's Local Agency Bridges. The study provided a list of seismically vulnerable bridges in Douglas County. The Vulnerability (V) for each bridge was determined by the Vulnerability Function as adopted by the Oregon Department of Transportation.
The bridges shown below are on sole-access routes (routes with no viable detours) and are among the most seismically vulnerable bridges under County jurisdiction due to the presence of unstable bearings, resulting in catastrophic lateral displacement of superstructure members during a large-magnitude earthquake. The required retrofits would include the installation of lateral restraints, anchorage, and other seismic mitigation features.

The following figure identifies the Douglas County bridge seismic retrofit projects:

Figure 4.1 – Douglas County Bridge Seismic Retrofit Projects

BRIDGE #	ROAD #	MILE POST	BRIDGE NAME	VUNERABILITY (V)	COST ESTIMATE
19C501	48	1.01	RAILROAD X-ING	11.9	$648,000
19C509	195	0.01	SMITH RIVER	10.7	$1,400,000
19C231	6	14.54	UMPQUA	8.1	$1,310,000
19C500	48	0.17	EAST GARDINER	7.3	$1,380,000
19C480	1	34.8	ELK CREEK	6.2	$320,000

The Douglas County 2015 Bridge Condition Report prepared by the Engineering and Construction Division of the Douglas County Public Works Department acts as the supporting document to the retrofit projects identified above and can be made available for further review.

Coordinating Organizations: Douglas County Public Works, ODOT, DOGAMI, FEMA

Implementation:

- Conduct additional seismic structural studies of the bridges if necessary.
- Research and seek funding for seismic retrofitting of the bridges.
- Retrofit the bridges based upon the findings determined within the seismic structural study.

Potential Funding: Local Bonds; Capital Improvements Program; state and federal transportation infrastructure grants.

Goal: A, B & D

ACTION ITEM 4: Identify and enhance/replace water, storm water, sewer, electric, gas and other utilities to improve their ability to survive an earthquake.

Rationale for Proposed Action Item: Each city, as well as other utility providers, commonly express concern regarding aging infrastructure involving water, sewer, electric and gas distribution and in this case its vulnerability to seismic events. In past iterations of the NHMP, action items identified this concern in broad terms, but did not identify specific utilities that needed to be addressed. For example, the City of Oakland recognizes that much of its underground infrastructure varies in age and is susceptible to earth movement. In order to mitigate against the concern, the City of Oakland would like to develop a plan to upgrade all water and sewer lines with the ultimate goal of replacing 90% of its underground infrastructure.

Within this NHMP update, although some cities have discussed utility replacement in broad terms, others have been specific in identifying exact utilities, locations and issues surrounding the utility and the impact an earthquake event may have on the utility itself. These possible projects fall under Action Item 4 and will be listed based upon the city in which they are located.

Riddle

The City of Riddle is concerned about the structural condition of the Twin Oaks Water Storage Reservoir, a .25 million gallon welded steel tank, within the City of Riddle's water distribution system. The concern is based on prior underwater inspections and apparent leakage reported by city staff. The tank is necessary for storage of potable water for the City of Riddle. A structural condition assessment and seismic evaluation of the tank was provided to the city in March of 2015. One of the purposes of the assessment was to identify the estimated construction cost to structurally rehabilitate, recoat, and

seismically rehabilitate the welded steel tank to currently adopted codes and standards.

Roseburg
The City of Roseburg has expressed concerns that during the course of a major earthquake event the hard connections between water transmission mains and the reservoirs will fail. This will take the reservoirs out of service for an indefinite amount of time. Seismically rated connections could be used to replace these rigid connections. If a seismic analysis were to be completed, possible consideration concerning these seismically rated connections could be determined.

In the event of a major earthquake and the water plant is still operational, the City of Roseburg's water plant discharges approximately 8,300 gallons of water per minute, but unfortunately cannot reduce flow significantly enough to allow residents to fill up their own smaller water containers. As a result, a portable treatment system would be one way to continue to provide potable water during a disaster.

Winston
The City of Winston has identified two sewage pump stations that need to be brought up to current seismic standards. The pump stations play a significant role in the city's sewage distribution system. They are identified as the Snow Ave. and Lookingglass Creek Pump Stations. No preliminary engineering has been done to determine the scope of work for this project.

Coordinating Organizations: City Public Works Departments, DOGAMI, FEMA

Implementation:
- Further identify, prioritize and rank utilities vulnerable to an earthquake event.
- Research and seek funding for retrofitting or replacement of utility infrastructure.
- Retrofit/replace utility infrastructure based upon utility vulnerability assessments.

Potential Funding: Local Bonds; Capital Improvements Program; federal infrastructure grants.

Goal: A, B & D

ACTION ITEM 5: Encourage earthquake safety promotion and drills to schoolchildren and community groups.

Rationale for Proposed Action Item: Provide educational opportunities to inform citizens about how they can better prepare for earthquakes and post-earthquake events. Encourage Douglas County Schools to promote earthquake safety education.

Coordinating Organizations: Douglas County Emergency Management, Oregon Emergency Management, Douglas County Schools, Community Organizations, DOGAMI

Implementation:

- Conduct safety seminars with community groups to describe earthquake dangers and steps that can be taken to reduce their impact.

Potential Funding: General fund; Emergency Management Performance Grant; Homeland Security Grant Program

Goal: C

ACTION ITEM 6: Assist the Sutherlin Water Control District in updating the Emergency Action Plan for Plat I and Cooper Creek Dams.

Rationale for Proposed Action Item: The Emergency Action Plan was last updated in 2007, utilizing inundation mapping data from the 1992 plan. The Sutherlin Water Control District just recently had new inundation mapping completed for the area utilizing LIDAR data. This new mapping has yet to be referenced or included in the Emergency Action Plan. An update to the plan would rectify this situation. The Sutherlin Water Control District is anticipating that the cost to update the plan would be approximately $4,000 to $5,000 to complete.

Coordinating Organizations: Sutherlin Water Control District, City of Sutherlin, Douglas County Emergency Management, Oregon Emergency Management

Implementation:

- Evaluate the cost to complete an update to the Emergency Action Plan.
- Seek funding to pay for the cost to update the plan.
- Hire consultant to update the plan.

Potential Funding: General fund; Homeland Security Grant Program; EPA Water Infrastructure and Resiliency Finance Center.

Goal: A, B, C & D

Flood Action Items

ACTION ITEM 1: Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).

Rationale for Proposed Action Item: The FIRMs are the official map used by cities and counties that are participants in the National Flood Insurance Program (NFIP). The NFIP provides communities with federally backed flood insurance, provided that communities develop and enforce adequate floodplain management measures. The more accurate the FIRMs are, the easier it is to administer the floodplain program and thus ensure quality participation in the NFIP.

Coordinating Organizations: County and City Planning Departments, DOGAMI, FEMA

Implementation:

- Douglas County should continue coordination with DOGAMI, FEMA, and Reedsport involving the Coastal Floodplain Mapping Update Project.
- Research and seek funding opportunities to have the FIRMs reevaluated. Coordinate with FEMA regarding this process.

Potential Funding: FEMA RiskMAP Program; general fund.

Goal: B

ACTION ITEM 2: Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.

Rationale for Proposed Action Item: Although the FIRMs are the official maps used to determine the location of the regulatory floodplain, the GIS floodplain mapping overlay is the actual day-to-day tool used to determine the location of the floodplain in relationship to development. The effectiveness of the GIS floodplain overlay directly correlates to the effectiveness of planning staff making correct interpretations regarding development within the floodplain.

Coordinating Organizations: County and City Planning Departments, DOGAMI, FEMA

Implementation:

- Douglas County should continue coordination with DOGAMI, FEMA, and Reedsport involving the Coastal Floodplain Mapping Update Project.
- Research and seek funding opportunities to update GIS software and data and have the FIRMs reevaluated. Coordinate with FEMA regarding this process.

Potential Funding: FEMA RiskMAP Program; general fund.

Goal: B

ACTION ITEM 3: Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.

Rationale for Proposed Action Item: Provide educational opportunities to inform citizens about how they can better prepare for flooding and post-flood events. Encourage Douglas County Emergency Management to promote flooding safety education.

Coordinating Organizations: County and City Planning Departments, Douglas County Emergency Management, Oregon Emergency Management, Community Organizations, FEMA

Implementation:

- Conduct floodplain seminars to educate the public about floodplain development standards. Conduct safety seminars with community groups to describe flood dangers and steps that can be taken to reduce their impact.

Potential Funding: General fund; Emergency Management Performance Grant.

Goal: A, E

ACTION ITEM 4: Explore funding for repetitive loss property mitigation projects.

Rationale for Proposed Action Item: Douglas County and different cities have obtained funding to assist in retrofitting and elevating past repetitive loss properties. Continued funding should be explored for those repetitive loss properties throughout the county that have yet to be elevated to avoid similar flooding issues in the future.

Coordinating Organizations: Douglas County and City Planning Departments, Douglas County Emergency Management, Oregon Emergency Management, FEMA

Implementation:

- Coordinate with FEMA to see what funding opportunities may exist in order to elevate repetitive loss structures.

Potential Funding: General fund; Pre-Disaster Mitigation Grant; Hazard Mitigation Grant Program; Flood Mitigation Assistance.

Goal: B, C

ACTION ITEM 5: Further assess and fix the scouring impacts to bridge foundation elements identified and determined to be unstable due to observed and evaluated scour conditions by implementing commonly accepted scour countermeasure projects.

Rationale for Proposed Action Item: Scour critical bridges, as defined by the Federal Highway Administration, are bridges with foundation elements that have been determined to be unstable for the observed or evaluated scour condition. Bridge scour is rapidly accelerated during flood events, when high flows cause advanced degradation of streambed materials. The scour critical determination is made by ODOT, who maintains the state bridge inventory and is responsible for the inspection and evaluation of all National Bridge Inventory (NBI) bridges (highway bridges that span 20 ft. or more) in Oregon. The bridges shown below are scour critical bridges that require scour countermeasures, which may include riprap placement, concrete repairs, sheet pile installation, or other work. Cost estimates for these projects have not yet been prepared.

The following figure identifies the Douglas County bridge scour countermeasure projects:

Figure 4.2 – Douglas County Bridge Scour Countermeasure Projects

BRIDGE #	ROAD #	MILE POST	BRIDGE NAME	SCOUR CODE (NBI #113)
19C085	103	1.46	BILGER CREEK	2
19C203	100	0.44	KENT CREEK	2
19C149	148	0.01	DEER CREEK	3
19C457	389	0.09	ELK CREEK	3
19C056	54	5.81	ELK CREEK	U
19C060	7	4.05	ADAMS CREEK	U
19C066	50	1.30	BACHELLOR CREEK	U
19C071	22	5.05	OLDHAM CREEK	U
19C109	63	0.14	YONCALLA CREEK	U
19C111	74	2.66	WILLIAMS CREEK	U
19C192	146	0.80	LOOKINGGLASS CREEK	U
19C209	43	4.93	RICE CREEK	U
19C317	240	0.17	LITTLE MILL CREEK	U
19C366	94	2.40	BEALS CREEK	U

In addition to the bridges identified by the Douglas County Public Works Department, the City of Myrtle Creek has identified the Johnson Street Bridge as being compromised by substantial scouring and abrasion that has occurred to the supports of the bridge.

The Johnson Street Bridge was constructed in 1961 and has received little to no maintenance throughout the duration of its usage, except for some rip-rap which was placed around the foundation elements of the bridge.

The bridge received an engineer's evaluation of the support columns and underwater footings in June of 2015. This documented the deteriorating state of the bridge, noting the substantial scouring and abrasion that has occurred to the supports of the bridge. The report provides an overall substandard

rating of the structures condition. Some of the scouring occurs as a result of the average/normal water levels flowing through the channel. However, it is likely that flooding is a large factor resulting in the ongoing scouring and abrasion of the existing structure. The stronger flows during a flood event provide the necessary force for aggregate to be carried into the current and scoured along the support columns.

Coordinating Organizations: Douglas County and City Public Works Departments, ODOT, FEMA

Implementation:

- If necessary, further assess the scouring impacts to the identified bridges located above.
- Research and seek funding for scouring countermeasures.
- Fix bridge foundation elements affected by scouring by constructing scouring countermeasures such as riprap placement, concrete repairs, sheet pile installation, or other work.

Potential Funding: Local Bonds; Capital Improvements Program; federal infrastructure grants.

Goal: A, B, D

ACTION ITEM 6: Identify surface water drainage obstructions, seek funding for culvert mitigation projects, fix and repair culverts identified in "very poor" condition.

Rationale for Proposed Action Item: Douglas County Public Works Department routinely inspects culverts to determine condition and hydraulic functionality. Inspected culverts are assigned a condition of Very Good, Good, Fair, Poor, and Very Poor. "Very Poor" culverts include culverts with extensive deterioration, making them susceptible to scour during high flow events. Generally, these are metal culverts that have experienced significant corrosion and abrasion. The culverts shown below are large diameter (36" or greater) culverts that have been identified as "Very Poor" and require repair, lining, or replacement. Cost estimates for these projects have not yet been prepared.

The following figure identifies Douglas County culvert projects:

Figure 4.3 – Douglas County Culvert Projects

Road	Milepost	Length (ft.)	Cover Depth (ft.)	Shape Type	Material Type	Rise Height (in.)	Span/ Width (in.)
009 - FORT MCKAY RD	3.61	60	4	C - Circular	CS - Corrugated Steel	36	36
010E - AZALEA DR	0.49	50	4	C - Circular	CS - Corrugated Steel	36	36
012 - AZALEA-GLEN RD	2.46	42	3	C - Circular	CS - Corrugated Steel	42	42
015 - NORTH MYRTLE RD	14.69	22	0	C - Circular	CS - Corrugated Steel	36	36
015 - NORTH MYRTLE RD	15.01	29	1	C - Circular	CS - Corrugated Steel	36	36
017 - BUCKHORN RD	16.78	64	6	C - Circular	CS - Corrugated Steel	36	36
021 - CANYONVLLE-RIDDLE RD	0.34	110	3	P - Pipe Arch	CS - Corrugated Steel	44	72
027 - REUBEN RD	1.42	60	9	C - Circular	CS - Corrugated Steel	36	36

037 - UPPER SMITH RIVER RD	1.35	52	7	C - Circular	CS - Corrugated Steel	36	36
037 - UPPER SMITH RIVER RD	17.52	64	6	C - Circular	CS - Corrugated Steel	36	36
042 - DAYS CREEK CUTOFF RD	6.59	28	4	C - Circular	CS - Corrugated Steel	36	36
043 - RICE CREEK RD/WILLIS CREEK RD	2.65	60	3	C - Circular	CS - Corrugated Steel	36	36
046 - SOUTH UMPQUA RD	1.15	65	4	P - Pipe Arch	CS - Corrugated Steel	36	58
048 - LOWER SMITH RIVER RD	9.88	78	12	C - Circular	CS - Corrugated Steel	36	36
052 - COLONIAL RD	3.69	74	9	P - Pipe Arch	CS - Corrugated Steel	44	72
062 - BEAR CREEK RD	0.91	110	8	C - Circular	CS - Corrugated Steel	36	36
067 - JOE HOOKER/HENDERER RD	3.72	100	20	C - Circular	CS - Corrugated Steel	36	36
088A - WILLIS CREEK RD	1.68	55	3	C - Circular	CS - Corrugated Steel	36	36
092 - WOODS CREEK RD	0.39	50	1	P - Pipe Arch	PS - Structural Plate Steel	78	120
105 - CLARKS BRANCH RD	2.19	75	4	C - Circular	CS - Corrugated Steel	36	36
128 - UPPER CAMAS RD	6.15	30	4	C - Circular	CS - Corrugated Steel	36	36
131S - BURMA RD/SOUTH CAMAS RD	0.07	61	2	C - Circular	CS - Corrugated Steel	36	36
164 - DOE CREEK RD	1.63	40	2	C - Circular	CS - Corrugated Steel	36	36
295H - SUSAN ST	0.09	90	1	P - Pipe Arch	CS - Corrugated Steel	36	58
387 - OLD HWY 99 SOUTH	2.77	60	4	C - Circular	CS - Corrugated Steel	36	36
388 - OLD HWY 99 NORTH	2.77	72	5	C - Circular	CS - Corrugated Steel	36	36
389 - EAGLE VALLEY ROAD	5.53	48	3	C - Circular	CS - Corrugated Steel	36	36

Coordinating Organizations: Douglas County and City Public Works Departments

Implementation:

- If necessary, further assess surface water drainage obstructions and the impacts they have on surrounding property.
- Research and seek funding for culvert repair and replacement.
- Fix, repair or replace culverts identified as “very poor” by the Douglas County Public Works Department.

Potential Funding: Local Bonds; Capital Improvements Program; federal infrastructure grants.

Goal: B, D

ACTION ITEM 7: Upgrade an 8-inch diameter exposed water main crossing the South Umpqua River at Portland Avenue within the City of Roseburg that is susceptible to damage due to possible flooding events affecting water flow, velocity and floating debris.

Rationale for Proposed Action Item: The City of Roseburg Water System Master Plan identifies upgrading an 8-inch diameter water main crossing the South Umpqua River at Portland Avenue to a 12-

inch main. Not only is the river crossing undersized, it is also the single source of water supply to the Douglas County Fairgrounds and all residents living in this area. Built in 1965, the water main was constructed as an exposed main on the surface of the river channel and is vulnerable to water flow, velocity, debris in the water, and flooding. Should a failure occur, the City has no ability to supply water to this area. The City also has an intertie to supply water to the Roberts Creek Water District during an emergency that will be compromised if the river crossing is ruptured. Further data supporting this action item is referenced in the "City of Roseburg Water System Master Plan", July 2010 compiled by Murray Smith & Associates, Inc.

Coordinating Organizations: City of Roseburg Public Works Department, Roberts Creek Water District, FEMA

Implementation:

- Coordinate with FEMA and other agencies to see what funding opportunities may exist in order to replace the water main.
- Analyze possibilities involving counter measures to having a new water main exposed along the river bottom (e.g. boring).
- Replace old water main with new water main.

Potential Funding: Local Bonds; Capital Improvements Program; federal infrastructure grants.

Goal: B, D, E

ACTION ITEM 8: Assess the possibility of an alternate raw water intake in Calapooya Creek for the City of Oakland.

Rationale for Proposed Action Item: Calapooya Creek is the sole city water source and runs through ranch and farm lands with unimproved creek bed and banks. During flood events the creeks is dense with runoff particulates that lodge in the city's raw water intake equipment and pipes preventing delivery of raw water to the drinking water filtration system. This negative impact to the equipment and pipes causes the water treatment plant to go off-line and become unable to produce water.

Coordinating Organizations: City of Oakland Public Works Department, Oregon Water Resource Department

Implementation:

- Prepare a feasibility study for alternate raw water intake in Calapooya Creek.
- Develop a back-up raw water intake system to minimize the infiltration of sand and silt to mitigate clogging the equipment and pipes.

Potential Funding: Local Bonds; Capital Improvements Program; federal infrastructure grants.

Goal: B, D, E

ACTION ITEM 9: Improve storm water storage capacity along Newton Creek as part of the Stewart Parkway Realignment project which will help to mitigate the flooding of local streets and possible road closures within the City of Roseburg.

Rationale for Proposed Action Item: Stewart Parkway is the last remaining arterial street in Roseburg that still floods on a regular basis and has to be closed when Newton Creek reaches flood stage. When this occurs, nearby areas such as Keasey St. and Domenico Dr. also experience high water issues and are forced to close. This result forces police, fire, medical and local residents to use alternate routes when heading either north to Garden Valley Blvd. or south to Harvard Ave. Further data supporting this action item is referenced within the "Roseburg Storm Drainage Master Plan" prepared by HDR Engineering in August of 2011. The City of Roseburg hopes to address this problem through the realignment of Stewart Parkway near Newton Creek by providing a storm water detention area near the realignment that will improve storm water storage capacity in this area during significant rain events.

Coordinating Organizations: City of Roseburg Planning & Public Works Departments, Department of State Lands, FEMA

Implementation:

- If necessary, further assess surface water drainage obstructions and the impacts they have on Stewart Parkway, Keasey St. and Domenico Dr., as well as surrounding property.
- Research and seek funding for culvert repair and replacement as part of the Stewart Parkway Realignment project.
- Fix/repair drainage issues in relation to the new location of Stewart Parkway and Newton Creek.

Potential Funding: Local Bonds; Capital Improvements Program; federal infrastructure grants.

Goal: A, B, D, E

Landslide Action Items

ACTION ITEM 1: Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.

Rationale for Proposed Action Item: The purpose of a geologic hazards overlay district is to protect the public health, safety and welfare by assuring that development in hazardous or potentially hazardous areas is appropriately planned to mitigate the threat to life and property.

Coordinating Organizations: County and City Planning Departments, Building Department, DOGAMI

Implementation:

- Investigate, analyze and study areas subject to possible geologic hazards.
- Research funding mechanisms to enable possible geological hazard delineation studies.
- Investigate other jurisdictions geological hazard overlay zoning ordinances.
- Develop a geological hazard overlay ordinance for the affected jurisdiction.

Potential Funding: General fund.

Goal: A, B, C, D

ACTION ITEM 2: Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.

Rationale for Proposed Action Item: To help protect public welfare by assuring that development in potentially hazardous areas is appropriately planned to mitigate the threat to life and property.

Coordinating Organizations: County and City Planning Departments and Public Works Departments

Implementation:

- Develop a “How-To” development and construction guide for homeowners in potential landslide hazard areas.
- Develop public information to emphasize economic risk when building on potential or historical landslide areas.

Potential Funding: General fund.

Goal: A, B, C, D

ACTION ITEM 3: Mitigate activities in identified potential and historical landslide areas through public outreach.

Rationale for Proposed Action Item: To help protect public welfare by assuring that development in hazardous and potentially hazardous areas is appropriately planned to mitigate the threat to life and property.

Coordinating Organizations: County and City Planning Departments, Douglas County Emergency Management, DOGAMI

Implementation:

- Identify and use existing mechanisms for public outreach (e.g., SWCD, NRCS, watershed councils, etc.).
- Distribution of landslide educational materials to public.

Potential Funding: General fund.

Goal: A, B, C

ACTION ITEM 4: Increase coordination between local jurisdictions, emergency responders, homeowners and landslide warning systems.

Rationale for Proposed Action Item: To help protect public welfare by assuring that development in hazardous and potentially hazardous areas is appropriately planned to mitigate the threat to life and property.

Coordinating Organizations: Douglas County Emergency Management, DOGAMI

Implementation:

- Educate at risk home sites about climatic and soil conditions that are conducive to landslides.
- Develop mitigation and evacuation information and procedures for at risk home sites.

Potential Funding: General fund.

Goal: A, B, C, D

ACTION ITEM 5: The City of Roseburg proposes to construct a 30-inch transmission main on Reservoir Hill to provide water to three of the city's reservoirs located atop the hill.

Rationale for Proposed Action Item: The Water System Master Plan identifies the need for a 30-inch transmission main extension on Reservoir Hill. Three of the city's water reservoirs are located at this location and store a combined 5.6 million gallons of water, the majority of Roseburg's storage capacity. Currently the reservoirs are fed by a single 24-inch transmission main that was constructed in 1955. The

transmission main traverses a steep hillside and is susceptible to landslides during heavy periods of rain events. This project will add much needed redundancy to the system in case of an emergency and act as a backup supply to the 24-inch main. It will add more capacity making it more efficient to provide water to the reservoirs. Further data supporting this action item is referenced in the "City of Roseburg Water System Master Plan", July 2010 compiled by Murray Smith & Associates, Inc.

Coordinating Organizations: City of Roseburg Public Works Department

Implementation:

- If necessary further investigate the stability of the existing 24-inch main line and the vulnerability of the hillside to a landslide event.
- Research funding mechanisms to construct the new 30-inch transmission line.
- Construct the 30-inch transmission line.

Potential Funding: Local Bonds; Capital Improvements Program; federal infrastructure grants.

Goal: B, D

Tsunami Action Items

(See the Reedsport NHMP for Action Items involving the City of Reedsport and a Tsunami hazard event.)

ACTION ITEM 1: Investigate the possibility of adopting more accurate tsunami inundation maps created by DOGAMI in 2013 as compared to the existing regulatory map created in 1995.

Rationale for Proposed Action Item: Douglas County currently uses tsunami hazard maps that were produced to help implement Senate Bill 379, which passed by the 1995 regular session of the Oregon Legislature. SB 379, implemented as Oregon Revised Statutes (ORS) 455.446 and 455.447, and Oregon Administrative Rules (OAR) 632-005 limits construction of new essential facilities and special occupancy structures in tsunami flooding zones. The Department of Geology and Mineral Industries released updated Tsunami Inundation Maps in 2013, which is believed to be a better representation of the tsunami impacts on the community. These maps have not been officially adopted by the City of Reedsport or Douglas County.

Coordinating Organizations: City of Reedsport and Douglas County Planning Department, Douglas County Building Department, DOGAMI, DLCD

Implementation:

- Investigate updated DOGAMI tsunami inundation maps.
- Discuss issues involving adopting new tsunami inundation maps with coordinating agencies
- Adopt new maps.

Potential Funding: General fund.

Goal: B, D

ACTION ITEM 2: Work with coastal communities, citizen groups, property owners, recreation areas, emergency responders, schools and businesses in promoting tsunami awareness and evacuation.

Rationale for Proposed Action Item: The purpose of promoting tsunami awareness is to reduce the risk of life and property in the event of a tsunami event.

Coordinating Organizations: City of Reedsport and Douglas County Planning Department, Douglas County Emergency Management, DOGAMI

Implementation:

- Distribution of tsunami information describing dangers and evacuation routes for visitors at the coast and continued educational outreach for local residents and business owners.

Potential Funding: General fund; Emergency Management Performance Grant.

Goal: A, B, C, D

ACTION ITEM 3: Improve technology capacity of communities, agencies and responders needed to adequately map hazard areas, broadcast warnings, inform, and educate residents and visitors of tsunami dangers.

Rationale for Proposed Action Item: The purpose of promoting tsunami awareness is to reduce the risk of life and property in the event of a tsunami event.

Coordinating Organizations: City of Reedsport and Douglas County Planning Departments, Douglas County Emergency Management, DOGAMI

Implementation:

- Improve and utilize tsunami information, utilize technology to assist in determining evacuation needs and concerns.

Potential Funding: General fund.

Goal: A, B, C, D

ACTION ITEM 4: Enhance tsunami evacuation route capacity and visibility and control evacuation of hazard areas by ensuring capacity of evacuation routes.

Rationale for Proposed Action Item: Improve evacuation route road conditions, expand use and visibility of Tsunami Evacuation Route signs around hazard areas.

Coordinating Organizations: City of Reedsport and Douglas County Planning and Public Works Departments, Douglas County Emergency Management, DOGAMI

Implementation:

- Evaluate existing tsunami evacuation routes and signage to determine the feasibility of these routes and to determine if road conditions are adequate.

Potential Funding: General fund.

Goal: A, B, C, D

Wildfire Action Items

ACTION ITEM 1: Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.

Rationale for Proposed Action Item: Fuel reduction projects and vegetation treatments have been proven as a means of mitigating wildfire hazards, to lessen catastrophic fire and its threat to public and firefighter safety, and damage to property. The objective is to remove enough fuel so that when a wildfire burns, it is less severe and can be more easily suppressed.

Coordinating Organizations: Douglas County Emergency Management, City/Rural Fire Departments, Douglas and Coos Forest Protective Associations

Implementation:

- Work on Wildfire Hazard mapping of Douglas County to identify areas and homes that would most benefit from fuel reduction projects.
- Promote opportunities for landowners to utilize fuel reduction projects.
- Enable communities and agencies to quickly transform grant opportunities to on-the-ground projects.
- Investigate potential funding opportunities for individual mitigation projects.

Potential Funding: General fund; Oregon Department of Forestry Fuels Reduction Program

Goal: A, B, C, D, E

ACTION ITEM 2: Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.

Rationale for Proposed Action Item: Encourage single-family residences in wildfire hazard areas to have fire plans and promote homeowner wildfire hazard mitigation in accordance with Planning Department development standards and current fire prevention practices.

Coordinating Organizations: Douglas County Planning Department, Douglas County Building Department, Douglas Forest Protective Association; Coos Forest Protective Association, Douglas County Emergency Management, City/Rural Fire Departments

Implementation:

- Encourage Planning and Building Departments to educate landowners and/or developers who choose to build in the wildland/urban interface to identify and mitigate conditions that aggravate wildland/urban interface wildfire hazards, including:
    1. Limited access for emergency equipment due to width and grade of roadways;

2. Inadequate water supplies ;
3. Inadequate fuel breaks, or lack of defensible space;
4. Inappropriate construction materials;
5. Preexisting, older building lots and subdivisions that are not in compliance with state and local land use and fire protection regulations;
6. Encourage all new homes and major remodels involving roofs or additions that are located in the interface to have fire resistant roofs and residential sprinkler systems; and
7. Encourage the public to evaluate access routes to rural homes for fire-fighting vehicles and to develop passable routes if they do not exist.

Potential Funding: General fund; Firewise.

Goal: A, B, C, D, E

ACTION ITEM 3: Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.

Rationale for Proposed Action Item: Fuel reduction projects and vegetation treatments have been proven as a means of mitigating wildfire hazards, to lessen catastrophic fire and its threat to public and firefighter safety, and damage to property. The objective is to remove enough fuel so that when a wildfire burns, it is less severe and can be more easily suppressed.

Coordinating Organizations: Douglas County Emergency Management, City/Rural Fire Departments, Douglas and Coos Forest Protective Associations

Implementation:

- Maintain and enhance protocol for fire jurisdictions, private industry cooperators and landowners to avoid problems during wildfire chaos.
- Promote and advocate reduction of "red tape" to enable faster private industry assistance (use of vehicles, manpower, etc.) in a wildfire situation.

Potential Funding: General fund.

Goal: A, B, C, D, E

ACTION ITEM 4: Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.

Rationale for Proposed Action Item: Wildfire prevention and risk reduction is a cost effective way to proactively address wildfire concerns and issues. Public acceptance or rejection of mitigation actions can make or break even the best wildfire risk reduction program. Outreach and education programs are

designed to raise awareness and improve audience knowledge of wildfire risk reduction needs and practices. In addition, outreach and education programs can build skills, develop capacity, and create social capital. In the best cases, education and outreach programs will influence attitudes and opinions and result in effective action.

Coordinating Organizations: Douglas County Emergency Management, City/Rural Fire Departments, Douglas and Coos Forest Protective Associations

Implementation:

- Visit urban interface neighborhoods and rural areas and conduct education and outreach activities;
- Conduct specific community-based demonstration projects for fire prevention and mitigation in the urban interface;
- Perform public outreach and information activities in Douglas County by creating "Wildfire Awareness Week" activities. Fire stations can hold open houses and allow the public to visit, see the equipment, and discuss wildfire mitigation with the station crews.

Potential Funding: General fund; Firewise.

Goal: A, B, C, D, E

ACTION ITEM 5: Create incentives and assist landowners in reducing fuel loads on private property.

Rationale for Proposed Action Item: An incentive is a reward for performing the desired behavior. Incentives tend to be more successful than disincentives that penalize individuals for negative actions. While sometimes monetary in nature, incentives can also be social. For instance, a neighborhood contest for the best Firewise landscape can result in the winning homes receiving a sign or medallion they can post on their lawn or mount on their house. Before creating an incentive program, consider that discontinuing it later could result in losing the desired behavior.

Coordinating Organizations: Douglas County Emergency Management, City/Rural Fire Departments, Douglas and Coos Forest Protective Associations

Implementation:

- Investigate potential funding opportunities for individual mitigation projects.
- Develop, approve, and promote cost share and assistance programs for landowners seeking fire mitigation activities and suppression preparedness.

Potential Funding: General fund.

Goal: A, B, C, D, E

ACTION ITEM 6: Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.

Rationale for Proposed Action Item: Help to reinforce on-site fire siting standards for residential structures located in forest zones. Promote collaboration with other community groups who could help to combat fire in areas outside a rural fire protection district.

Coordinating Organizations: Douglas County Emergency Management, City/Rural Fire Departments, Douglas and Coos Forest Protective Associations

Implementation:

- Form community partnerships that are equipped and trained by fire district personnel to combat fires in those areas.

Potential Funding: General fund.

Goal: A, B, C, D, E

ACTION ITEM 7: Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.

Rationale for Proposed Action Item: Improved information gathering and distribution will help to promote mitigation opportunities and faster response and evacuation time.

Coordinating Organizations: Douglas County and City Planning Departments, Douglas County Emergency Management, City/Rural Fire Departments, Douglas and Coos Forest Protective Associations

Implementation:

- Update wildland/urban interface hazard maps.
- Conduct risk analysis and create hazard maps using GIS technology to identify risk sites and further assist in prioritizing mitigation activities.
- Encourage development and use of new data and systems to identify hazard areas and better inform firefighters, communities and landowners of wildfire status once a fire occurs.

Potential Funding: General fund.

Goal: A, B, C, D, E

Windstorm Action Items

ACTION ITEM 1 - Develop and implement programs to keep trees from threatening lives, property, and public infrastructure during windstorm events.

Rationale for Proposed Action Item: Falling vegetation is the primary source of wind-related damage. Much of the property damage that occurs during windstorms results from tree limbs breaking or entire trees uprooting. The Oregon Department of Forestry's Urban and Community Forestry Program provides assistance to communities to help them deal with hazard tree issues. The program provides technical, financial, and educational assistance on a wide range of urban forestry topics, including tree inventories, hazard tree evaluation, tree risk assessment, tree species selection, and tree care standards.

Coordinating Organizations: Douglas County and City Public Works Departments, Utility Providers

Implementation:

- Partner with responsible agencies (ODF) and organizations to design and disseminate education information to property owners to reduce risk from tree failure to life, property, and utility systems.
- Enhance partnerships between utility providers and county and local public works agencies and landowners to document known hazard areas.
- Identify and find solutions to potentially hazardous trees in urban areas, near utility corridors, and near vital infrastructure.

Potential Funding: General fund.

Goal: A, B, C, E

ACTION ITEM 2 - Map locations around the county that have the highest incidence of extreme windstorms.

Rationale for Proposed Action Item: Enhance mapping and tracking of severe windstorms and vulnerable homes, infrastructure and utilities. Identify public infrastructure and facilities subject to damage or closure during windstorm events.

Coordinating Organizations: Douglas County and City Public Works Departments, Utility Providers, Douglas County Emergency Management

Implementation:

- Future mapping and tracking of severe windstorms should include:
    1. Windstorm data (sustained speeds, gusts, storm durations) for localities throughout the county;
    2. Maps of the locations within the county, which are most vulnerable to high winds; and

3. Injury and property damage estimates, including locations.

Potential Funding: General fund; Hazard Mitigation Grant Program Planning Grant

Goal: A, B, C, D, E

ACTION ITEM 3 - Encourage critical facilities to secure backup emergency power.

Rationale for Proposed Action Item: Severe windstorms often produce property damage resulting from fallen vegetation including tree limbs or entire trees uprooting. When the storms hit, trees fall over roadways, often pulling power lines down with them. When power is lost, without backup emergency power critical facilities are unable to provide essential services.

Within this NHMP update, some cities have provided specific details concerning the need for backup emergency services. These possible backup emergency power situations fall under Action Item 3 and will be listed based upon the city in which they are located.

Oakland

- **Water Treatment Plant**
  Power outages affect the City of Oakland's ability to provide essential services such as drinking water to homes and businesses as well as waste water removal. The City needs to obtain a backup emergency power generation system in order to continue to provide service in the event power is lost during a windstorm event.

Roseburg

- The City of Roseburg has identified five critical facilities that are in need of backup emergency power in order to provide critical service in the event of a windstorm event:

  1. **Water Treatment Plant**
     The City of Roseburg Water Treatment Plant does not have backup emergency power generation. During a power outage, the City's water treatment plant goes off-line and is unable to produce water. Currently there is an estimated one day's water storage available in the system.
  2. **Fire Station #3 – 801 NW Garden Valley Blvd**
     Fire Station #3 is the backup Emergency Operations Center to the City's Public Safety Center and currently does not have backup emergency power.
  3. **Radio Tower/Radio System**
     Backup emergency power is not available for radio communications equipment located at Reservoir Hill. The City uses Reservoir Hill as a central high point location within the City for radio antennas to relay all communications for Police, Fire, and Public Works. During a power outage, there is no backup generation to stay functional during an emergency.
  4. **Fire Station #2 – 2177 W Harvard Ave**

Fire Station #2 currently does not have backup emergency power.

5. **City Maintenance Facility**
   The City of Roseburg maintenance facility on Fulton Street does not have backup emergency power generation. The facility is headquarters for the Street Division and Water Division maintenance crews. It is also the City's fuel storage depot for all City vehicles, including Police and Fire. All personnel and equipment who would respond to a Public Works related emergency operate out of this location.

Sutherlin

- Backup emergency power is not available at Sutherlin City Hall or the Sutherlin Police Department. An alternate power source will need to be evaluated in order to keep these facilities functional in the event of a significant power outage.

Winston

- Backup emergency power is not available for the Snow Ave. or Lookingglass Creek pump stations. In the event of a power outage the City of Winston will need an alternate power source to operate the pump stations and the water treatment plant.

Coordinating Organizations: Douglas County and City Planning and Public Works Departments, Utility Providers, Douglas County Emergency Management

Implementation:

- Seek funding and capital improvements for emergency power stations for critical facilities.

Potential Funding: General fund.

Goal: A, C, E

ACTION ITEM 4 - Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.

Rationale for Proposed Action Item: Encourage where possible underground utilities and anchoring of structures that may not require a building permit to meet current wind loads.

Coordinating Organizations: Douglas County and City Planning and Public Works Departments, Douglas County Building Department, Utility Providers

Implementation:

- Increase the use of underground utilities where possible.
- Provide guidance on wind-resistant construction methods.

Potential Funding: General fund.

Goal: A, B, C, D, E

ACTION ITEM 5 - Encourage harvesting of trees along utility and road corridors, preventing potential windstorm damage.

Rationale for Proposed Action Item: High winds can topple trees and break limbs which in turn can result in power outages and disrupt telephone, computer, and TV and radio service. All overhead electrical lines are subject to high winds and winter storm damage. Initiating and maintaining existing programs that reduces or eliminates tree hazards to all critical utilities in Douglas County can prevent future damages to power lines from wind events.

Douglas County Agencies, State Agencies, Federal Agencies and Utility Operators shall encourage the harvesting of trees along utility corridors and roads, which will prevent windstorm damage. The Planning Department shall encourage Federal, State, Local Agencies and Utility Operators to harvest trees in the corridors which will prevent windstorm damage, mitigate fire hazards, and could be used in fish enhancement projects.

Coordinating Organizations: Douglas County and City Public Works Departments, Utility Providers, Douglas County Emergency Management

Implementation:

- Develop criteria for prioritizing which facilities should be addressed first.
- Coordinate efforts with the utility company and public works companies to identify who will carry out the task of trimming and/or removing tree hazards in identified critical areas.

Potential Funding: General fund.

Goal: A, B, C, D, E

Winter Storm Action Items

ACTION ITEM 1 – Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.

Rationale for Proposed Action Item: Destructive winter storms that produce heavy snow, ice, rain and freezing rain, high winds have a long history in Oregon. These storms are most common from October through March and have closed down transportation routes in the area. Assuring a sufficient supply of sand and de-icing agent will maintain safe transportation corridors and ensure the delivery of services to residents.

Coordinating Organizations: Douglas County and City Planning and Public Works Departments, ODOT

Implementation:

- Maintain current levels of sand and de-icing agents.
- Continuing the practice of including sand and de-icing agent within county and city budgets.

Potential Funding: General fund.

Goal: B

ACTION ITEM 2 – Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.

Rationale for Proposed Action Item: Douglas County Agencies, State Agencies, Federal Agencies and Utility Operators shall encourage the harvesting of trees along utility corridors and roads, which will prevent winterstorm damage. The Planning Department shall encourage Federal, State, Local Agencies and Utility Operators to harvest trees in the corridors which will prevent winterstorm damage, mitigate fire hazards, and could be used in fish enhancement projects.

Coordinating Organizations: Douglas County and City Planning and Public Works Departments, Utility Providers, Douglas County Emergency Management

Implementation:

- Develop criteria for prioritizing which areas should be cleared.
- Coordinate efforts with utility companies and public work companies to identify who will carry out the removal of trees.

Potential Funding: General fund.

Goal: A, B, C, D

ACTION ITEM 3 – Encourage harvesting of trees that are blown down during winterstorms.

Rationale for Proposed Action Item: Douglas County shall encourage Federal, State, and local agencies to harvest trees that have fallen during a winterstorm, which will mitigate fire hazards in summer months.

Coordinating Organizations: Douglas County Planning Department, Douglas County Emergency Management, Oregon Department of Forestry, local logging industry

Implementation:

- Coordination between the Oregon Department of Forestry and the local logging industry should occur to determine feasible locations for harvesting downed timber.

Potential Funding: General fund.

Goal: A, B, C, D

ACTION ITEM 4 – Develop partnerships between utility providers and public works agencies to document known hazard areas.

Rationale for Proposed Action Item: A working knowledge of specific areas more prone to severe winter weather within the county or city will help to assess what resources are necessary for the area to mitigate against the storm and recover more quickly.

Coordinating Organizations: Douglas County and City Planning Departments, Douglas County Public and City Public Works Departments, Douglas County Emergency Management

Implementation:

- Coordination between public works departments, planning departments and emergency responders to identify areas know for more severe winter weather.

Potential Funding: General fund.

Goal: A, B, C, D

Chapter 5:
Plan Implementation & Maintenance

The Plan Implementation and Maintenance Chapter details the formal process that will ensure that the NHMP remains an active and relevant document. The success of the NHMP depends on how well the outlined action items are implemented. Proper implementation and maintenance of the plan ensures that this plan will maximize the county and/or cities efforts to reduce the risks posed by natural hazards. The respective county and/or city Planning Department will act as the agency responsible for implementing this process.

The NHMP includes a range of action items that, when implemented, will reduce loss from hazard events in the county. Within the plan, FEMA requires the identification of existing programs that might be used to implement these action items. Douglas County, and its participating cities, currently address statewide planning goals and legislative requirements through their comprehensive land use plans, capital improvement plans, mandated standards and building codes. To the extent possible, Douglas County, and participating cities, will work to incorporate the recommended mitigation action items into existing programs and procedures.

Many of the recommendations contained in the NHMP are consistent with the goals and objectives of the participating cities and county's existing plans and policies. Plans and policies already in existence often have support from local residents, businesses, and policy makers. Many land-use, comprehensive, and strategic plans get updated regularly, and can adapt easily to changing conditions and needs. Implementing the action items contained in the NHMP through such plans and policies increases their likelihood of being supported and implemented.

Examples of plans, programs or agencies that may be used to implement mitigation activities include:

- City and County Budgets
- Community Wildfire Protection Plans
- Comprehensive Land Use Plans
- Economic Development Action Plans
- Public Utility & Facility Plans
- Zoning Ordinances & Building Codes

The Douglas County Planning Department will serve as the convener for the NHMP involving items concerning activity within the jurisdiction of Douglas County. Each individual city will be responsible for convening their own meeting with their respective quasi-steering committee concerning implementation and maintenance involving action items in their specific jurisdiction. (See the table below for a list of conveners and Bodies for each specific city)

Jurisdiction	Convener	Committees
Douglas County	Keith Cubic (Planning Director)	Planning Commission & PAC'S
Canyonville	Janelle Evans (City Admin)	City Council & Planning Com.
Drain	Chris Lee (Office Assistant)	City Council & Planning Com.
Elkton	Gary Trout (PW Director)	City Council & Planning Com.
Glendale	Rebecca Lawson (Recorder)	City Council & Planning Com.
Myrtle Creek	Ricky Hoffman (Planner)	City Council & Planning Com.
Oakland	Bette Keehley (Mayor)	City Council & Planning Com.
Reedsport	Jessica Terra (Planner)	City Council & Planning Com.
Riddle	Kathy Wilson (Recorder)	City Council & Planning Com.
Roseburg	Stuart Cowie (Director)	City Council & Planning Com.
Sutherlin	Lisa Hawley (Planner)	City Council & Planning Com.
Winston	Jamie Chartier (Planner)	City Council & Planning Com.
Yoncalla	Kathy Finley (Recorder)	City Council & Planning Com.

Note: Given the capacity constraints for most of the local jurisdictions included in this multi-jurisdictional plan most of the jurisdictions involved utilize existing Planning Commissions and City Councils as the reviewing body for maintenance of the NHMP

The convener will be responsible for conducting meetings with the plan's steering committee on a semi-annual basis to identify new risk assessment data, review status of mitigation actions, identify new actions, and seek funding to implement mitigation actions. Roles and responsibilities of the steering committee will include:

- Serving as the local evaluation committee for funding programs such as the Pre-Disaster Mitigation Grant Program, the Hazard Mitigation Grant Program, and the Flood Mitigation Assistance program;
- Prioritizing and recommending funding for natural hazard risk reduction projects;
- Documenting successes and lessons learned;
- Evaluating and updating the Natural Hazards Mitigation Plan following a disaster;
- Evaluating and updating the Natural Hazards Mitigation Plan in accordance with the prescribed maintenance schedule; and
- Developing and coordinating ad hoc and/or standing subcommittees as needed.

To make the coordination and review of the NHMP as broad and useful as possible, the steering committee will engage additional stakeholders and other relevant hazard mitigation organizations and agencies to implement the identified action items. The stakeholder's engaged as part of the ongoing implementation and maintenance of the NHMP includes but is not limited to:

- Special district Representatives
- Watershed Districts
- Economic Development Agencies
- Local Utility Representatives

- State and Federal Agencies
- Soil & Water Conservation Groups
- Other NGO's
- Port Agencies

In addition, the Douglas County Planning Department will utilize existing Planning Advisory Committees (PACs) in order to evaluate public input concerning implementation and maintenance of the plan. PACs provide the opportunity for countywide citizen involvement in the land use planning process. There are six PACs in Douglas County. The primary function of each PAC is to evaluate local and countywide planning issues and submit recommendations (concerning those issues) to the appropriate decision-making body. It is intended that PAC recommendations reflect the needs and concerns of the people living in the area the PAC represents. The PAC's meet quarterly to review Planning Department related issues including ongoing maintenance and proposed updates to the local NHMP; such recommendations are summarized and forwarded on to the Planning Commission for review and action. See Appendix A for a roster sheet of the PAC's and CCI.

Project Prioritization Process

Potential mitigation activities often come from a variety of sources; therefore the project prioritization process needs to be flexible. Projects may be identified by committee members, local government staff, other planning documents, or the risk assessment. The following four steps illustrate the project development and prioritizations process.

Step 1: Examine funding requirements

The first step in prioritizing the Plan's action items is to determine which funding sources are open for application. Several funding sources may be appropriate for the county's/city's proposed mitigation projects. Examples of mitigation funding sources include but are not limited to: FEMA's Pre-Disaster Mitigation competitive grant program (PDM), Flood Mitigation Assistance (FMA) program, Hazard Mitigation Grant Program (HMGP), National Fire Plan (NFP), Community Development Block Grants (CDBG), local general funds, and private foundations, among others. Because grant programs open and close on differing schedules, the county and/or city will need to examine upcoming funding streams' requirements to determine which mitigation activities would be eligible. The steering committee may consult with the funding entity, OEM, or other appropriate state or regional organizations about project eligibility requirements. This examination of funding sources and requirements will happen during the steering committee semi-annual NHMP maintenance meetings.

Step 2: Complete risk assessment evaluation

The second step in prioritizing the NHMP's action items is to examine which hazards the selected actions are associated with and where these hazards rank in terms of community risk. The steering committee will determine whether or not the NHMP's risk assessment supports the implementation of eligible

mitigation activities. This determination will be based on the location of the potential activities, their proximity to known hazard areas, and whether community assets are at risk. The committee will additionally consider whether the selected actions mitigate hazards that are likely to occur in the future, or are likely to result in severe/catastrophic damages.

Step 3: Coordinating Body Recommendation

Based on the steps above, the committee will recommend which mitigation activities should be moved forward. If the committee decides to move forward with an action, the coordinating organization designated on the action item form will be responsible for taking further action and, if applicable, documenting success upon project completion. The committee will convene a meeting to review the issues surrounding grant applications and to share knowledge and/or resources. This process will afford greater coordination and less competition for limited funds.

Step 4: Complete quantitative and qualitative assessment, and economic analysis

The fourth step is to identify the costs and benefits associated with the selected natural hazard mitigation strategies, measures or projects. Two categories of analysis that are used in this step are: (1) benefit/cost analysis, and (2) cost-effectiveness analysis. Conducting benefit/cost analysis for a mitigation activity assists in determining whether a project is worth undertaking now, in order to avoid disaster-related damages later. Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating natural hazards provides decision makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects. Figure 5.1 shows decision criteria for selecting the appropriate method of analysis.

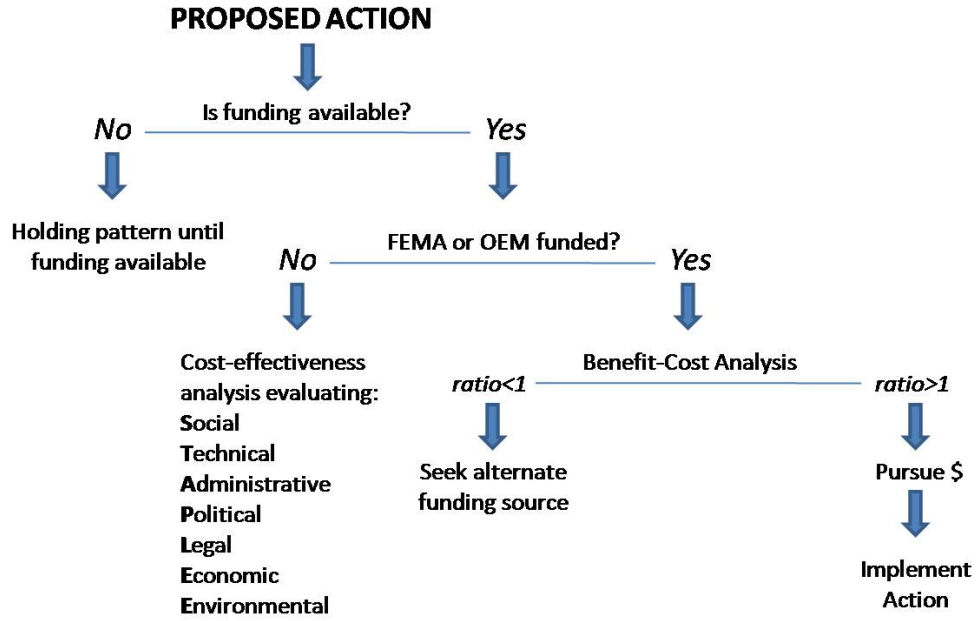


Figure 5.1 – Benefit Cost Decision Criteria

Source: Oregon Partnership for Disaster Resilience, 2010

If the activity requires federal funding for a structural project, the committee will use a FEMA-approved cost-benefit analysis tool to evaluate the appropriateness of the activity. A project must have a benefit/cost ratio of greater than one in order to be eligible for FEMA grant funding.

For non-federally funded or nonstructural projects, a qualitative assessment will be completed to determine the project's cost effectiveness. The committee will use a multivariable assessment technique called STAPLE/E to prioritize these actions. STAPLE/E stands for Social, Technical, Administrative, Political, Legal, Economic, and Environmental. Assessing projects based upon these seven variables can help define a project's qualitative cost effectiveness. OPDR at the University of Oregon's Community Service Center has tailored the STAPLE/E technique for use in natural hazard action item prioritization.

Five-Year Review of Plan

This plan will be updated every five years in accordance with the FEMA review cycle. During plan updates, the following questions will be asked to determine what actions are necessary to update the plan. Douglas County and /or the appropriate city will be responsible for convening the committee to address the questions outlined below.

- Are the plan's goals still applicable?
- Have new issues or problems related to hazards been identified in the community?
- Are there new partners that should be brought to the table?
- Are there new local, regional, state or federal policies influencing natural hazards that should be addressed?
- Has the community successfully implemented any mitigation activities since the plan was last updated?
- Do existing actions need to be reprioritized for implementation?
- Are the actions still appropriate, given current resources?
- Have there been any changes in development patterns that could influence the effects of hazards?
- Are there new studies or data available that would enhance the risk assessment?
- Has the community been affected by any disasters? Did the plan accurately address the impacts of this event?

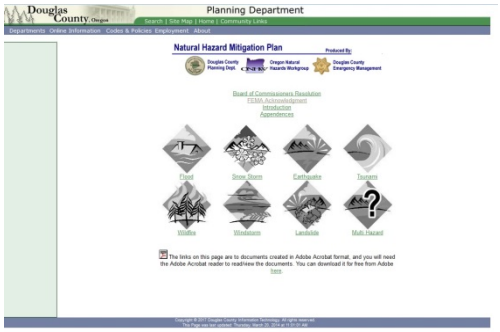
The questions above will help the committee determine what components of the mitigation plan need updating. The committee will be responsible for updating any deficiencies found in the plan based on the questions above.

Appendix A:

Planning and Public Outreach

Websites & Social Media

The Douglas County Planning Department in coordination with the Emergency Management Office of the Douglas County Sheriff's Department provides several online pages and services to ensure that adequate information is available to the public in regards to emergency preparedness and the Natural Hazard Mitigation Plan.



- The **Douglas County Natural Hazard Mitigation Plan** is available at the following web-link:

http://www.co.douglas.or.us/planning/Natural_Hazard/default.asp

In addition, the Sheriff's Office webpage provides a webpage dedicated to emergency preparedness which provides links to:

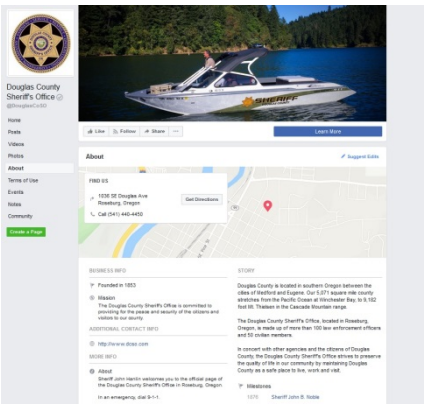
- Tsunami Evacuation Maps
- Community Wildfire Protection Plans
- Oregon Emergency Management Webpage
- Road Condition Information
- Other related information

The webpage is dedicated to provide citizens with the tools necessary to prepare themselves for many different natural hazard conditions and educate themselves about other natural hazard information.

- The **Emergency Preparedness** webpage is available at the following web-link:

http://www.dcso.com/preparedness_N.asp

The Douglas County Sheriff's Office also utilizes Facebook & Twitter pages, which allows them to provide real time information about hazardous conditions and other emergency/safety related information. This forum is useful for announcing times and locations for informational meetings in regards to the Natural Hazard Mitigation Planning process.



- The Douglas County Sheriff's Office Facebook & Twitter Pages are available at the following web-link:

https://www.facebook.com/DouglasCoSO

https://twitter.com/DouglasCoSO

Steering Committees

The Douglas County Planning Department staff selected and convened the steering committees, which played a vital role in shaping the plan. The steering committees guided the update process through several steps, including updates to the hazard history, action item development and review, and determining a strategy for implementation and maintenance. The steering committees met on the following dates:

- **Meeting #1: Kickoff, Hazard Identification, and Community Profile** –
  - **North County – September 10th, 2015**
  - **South County – September 1st, 2015**
  - **Douglas County - September 10th, 2015**

- **Meeting #2: Public Involvement Strategies, Goal Updates, and Action Item Review** –
  - **North County – December 9th, 2015**
  - **South County – December 21st, 2015**
  - **Douglas County - September 10th, 2015**

- **Meeting #3: Public Outreach Strategies, Action Item Prioritization, and Plan Implementation and Maintenance –**
  - **North Umpqua Planning Advisory Committee – July 25, 2016**
  - **Callahan Planning Advisory Committee – August 14, 2016**
  - **North County Planning Advisory Committee – August 29, 2016**
  - **Committee for Citizen Involvement – November 3, 2016**
  - **Douglas County Planning Commission – October 27, 2016**
  - **Coastal Planning Advisory Committee – December 12, 2016**

The following documents include the cover sheets for each steering committee presentation documenting the date of each steering committee meeting. Additionally, the meeting announcements for each of the PAC meetings and other public involvement meetings have been included as part of this appendix. A roster of the current PAC's and CCI are included at the end of this appendix.

Natural Hazard Mitigation Plan Update 2015-16

North Douglas County
Kick-Off Meeting

September 10, 2015

Natural Hazard Mitigation Plan Update 2015-16

Douglas County
Kick-Off Meeting

September 10, 2015

Natural Hazard Mitigation Plan Update 2015-16

South Douglas County
Kick-Off Meeting

September 1, 2015

Natural Hazard Mitigation Plan Update 2015-16

Douglas County
Meeting #2

December 8, 2015

Natural Hazard Mitigation Plan Update 2015-16

North County
Meeting #2

December 9, 2015

Natural Hazard Mitigation Plan Update 2015-16

South County
Meeting #2

December 21, 2015

DOUGLAS COUNTY

PLANNING DEPARTMENT

Room 106 • Justice Building • Douglas County Courthouse
Roseburg, Oregon 97470

Planning Services	On-Site Services	Environmental Health
(541) 440-4289	(541) 440-6183	(541) 440-3574
Fax # (541) 440-6266	Fax # (541) 464-6429	Fax # (541) 957-2097

"A Program With Great Spirit"

July 20, 2016

To: The Media

For: Agenda Column

Publication Date: Monday, July 25, 2016

The North Umpqua Planning Advisory Committee (PAC) will hold a public meeting on Tuesday, July 26, 2016, 6:30 p.m., at the Glide Fire Station. The agenda will include: 1) Review and comments on the draft Local Douglas County Parks Master Plan; and, 2) Any other business that may come before the Committee, 3) Update of Natural Hazard Mitigation Plan.

For more information, please contact the Douglas County Planning Department at 541-440-4289.

c: PAC Members

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Recycled Paper

DOUGLAS COUNTY

PLANNING DEPARTMENT

Room 106 • Justice Building • Douglas County Courthouse
Roseburg, Oregon 97470

Agency Coordination • Administrative • Long Range • Support Services
(541) 440-4289 • (541) 440-6266 Fax

On-Site Services (541) 440-6183
Community Services (541) 464-6443
(541) 464-6429 Fax

August 9, 2016

To: The Media

For: Agenda Column

Publication Date: Sunday, August 14, 2016

The Callahan Planning Advisory Committee (PAC) will hold a public meeting on Monday, August 15, 2016, at 7:00 p.m., in the Melrose Elementary School Gymnasium. The agenda will include the following: 1) the B. Renee Booker application for a land partition on property located off of Garden Valley Road. PD 16-040; 2) Douglas County Local Parks Master Plan update; and, 3) Natural Hazard Mitigation Plan update.

For more information, please contact the Douglas County Planning Department at 440-4289.

c: PAC Members

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DOUGLAS COUNTY

PLANNING DEPARTMENT

Room 106 • Justice Building • Douglas County Courthouse
Roseburg, Oregon 97470

Agency Coordination • Administrative • Long Range • Support Services
(541) 440-4289 • (541) 440-6266 Fax

On-Site Services (541) 440-6183
Community Services (541) 464-6443
(541) 464-6429 Fax

To: The Media

For: Agenda Column

Publication Date: Monday, August 29, 2016

The North County Planning Advisory Committee (PAC) will hold a public meeting on Tuesday, August 30, 2016, at 7:00 p.m., at the Sutherlin Community Center. The agenda will include the following: 1) Douglas County Local Parks Master Plan; and, 2) Natural Hazard Mitigation Plan.

For more information, please contact the Douglas County Planning Department at 440-4289.

c: PAC Members

PLANNING DEPARTMENT

Room 106 • Justice Building • Douglas County Courthouse
Roseburg, Oregon 97470

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"A Program With Great Spirit"

October 27, 2016

AGENDA

TO: Committee for Citizen Involvement

FROM: Cheryl Goodhue, Citizen Involvement Coordinator

RE: **CCI Meeting for November 3, 2016, at 3:00 p.m.**
Room 103, Justice Building, Douglas County Courthouse

	ITEM	ACTION OR PRESENTER
1.	Call to Order	Chair
2.	Approval of August 4, 2016 Minutes	CCI Action
3.	PAC Activity Update	All
4.	PAC Reappointments:	CCI Action

1) Rhonda Black - Coastal PAC
2) Becky Brosi-Shepherd - Coastal PAC +CCI
3) Brenda Priest - Coastal PAC
4) Judith Bacon - No. County PAC
5) Gerald Briggs - So. County PAC
6) Carolyn Ireland - So. County PAC

5.	SORPP Wrap-up	Keith Cubic
6.	Parks Master Plan & Natural Hazard Mitigation Plan Updates	Stuart Cowie
7.	PPI (Program for Public Information) Update	Jeff Lehrbach
8.	Planning Commission Report	Brian Parkinson
9.	Update on Legislative Amendments to the LUDO	Cheryl Goodhue
10.	Good of the Order	
11.	Adjournment	

Our next meeting will be held on **February 2, 2017** at 3:00 pm

♣ ♣ AMERICANS WITH DISABILITIES NOTICE ♣ ♣

As part of public policy, Douglas County will attempt to provide public accessibility to services, programs, and activities. If accommodation is needed to participate at this meeting, please contact the Douglas County Planning Department at 440-4289, at least 48 hours prior to the scheduled meeting time.

Recycled Paper

DOUGLAS COUNTY PLANNING COMMISSION
DOUGLAS COUNTY COURTHOUSE, ROOM 216
OCTOBER 27, 2016, 7:00 P.M.

PLANNING DEPARTMENT

Room 106 • Justice Building • Douglas County Courthouse
Roseburg, Oregon 97470

Planning Services	On-Site Services	Environmental Health
(541) 440-4289	(541) 440-6183	(541) 440-3574
Fax # (541) 440-6266	Fax # (541) 464-6429	Fax # (541) 957-2097

"A Program With Great Spirit"

AGENDA

This meeting may be audio recorded for live webcast (at www.co.douglas.or.us) or future broadcast. A CD copy is available upon written request made to the Information Technology department. Cost is $5 per CD.

CALL TO ORDER

PRESENTATION:

1. Presentation and Workshop Review of the Douglas County Local Parks Master Plan

PUBLIC HEARING - QUASI - JUDICIAL

2. Public Comments and Testimony on the Douglas County Local Parks Master Plan

OTHER BUSINESS

3. Business from the Audience

4. Business from the Planning Commission

5. Business from the Planning Department (Update of Natural Hazard Mitigation Plan)

ADJOURNMENT

♣ ♣ AMERICANS WITH DISABILITIES NOTICE ♣ ♣
As part of public policy, Douglas County will attempt to provide public accessibility to services, programs, and activities. If accommodation is needed to participate at this meeting, please contact the Douglas County Planning Department at 440-4289, at least 48 hours prior to the scheduled

Coastal Planning Advisory Committee Meeting

December 12, 2016

Location: Douglas County Reedsport Annex (Reedsport, OR)

Time: 4:00 PM

Agenda:

1. **Call to Order**

    a. Attendance list and introductions

2. **2016 Planning Department Coastal Activity/Recap**

3. **Douglas County Marijuana Regulation (Follow up to Election Results)**

    a. **Legislative Amendments and Zoning Implementation**

4. **Other Planning Department Updates**

    a. **Public Service Hours Change**

    b. **NHMP & Parks Plan Updates and Timelines**

5. **Final Remarks, Questions & Adjournment**

Thank you all for attending

Appendix B:

Summary & Outline of changes from 2009-2016

Chapter 1: Introduction

Chapter 1 of the 2016 NHMP introduces the concept of natural hazard mitigation planning, reviews federal requirements necessary to be addressed and answers the questions, “Why develop a mitigation plan?” Additionally, Chapter 1 summarizes how the plan was updated and developed and the way in which the plan is organized.

Chapter 2: Community Profile

The Community Profile describes Douglas County’s ability to manage risk and adapt to natural hazards. The chapter focuses on four components specific to a thriving area and the community’s capacity to adequately maintain those components in the event of a natural hazard. Those factors are as follows:

- Natural Environment Capacity
- Social/Demographic Capacity
- Economic Capacity
- Built Environment Capacity

Within each component more specific items are evaluated concerning geography, climate, population, cities, urban and rural communities, age, income, health, employment, housing, critical facilities and infrastructure, public highways and roads, and alternative transportation methods.

Chapter 3: Hazard Assessment

Chapter 3 briefly summarizes how risk is evaluated through hazard identification, vulnerability assessment and risk analysis. It further identifies FEMA’s major disaster declarations that have occurred in Douglas County within the last 50 years.

The majority of the chapter includes details involving the characteristics, history, probability, and vulnerability of specific natural hazards that could affect Douglas County. Updated information was provided, extraneous information was removed, and the possibility of a drought was included as a specific hazard which was not part of the 2009 NHMP.

Chapter 4: Mitigation Plan Goals & Action Items

Chapter 4 includes mitigation goals used to help determine the direction of future activities aimed at reducing risk and preventing loss from natural hazards. The majority of the goals are the same or similar to those provided in the 2009 NHMP. Mitigation goals related to flooding experienced the most significant change. Few repetitive loss structures now exist within Douglas County. As a result, goals related to repetitive loss structures were replaced with an emphasis on mitigation efforts to protect public infrastructure and/or utilities during a flood event.

Action items are categorized by each specific type of hazard. Analysis involving the action item includes review of the following items:

- Rationale for Proposed Action Item
- Coordinating Organizations
- Implementation
- Goal Coordination

Generally speaking in the 2009 NHMP action items were broad in nature and intended to be expansive enough to allow for multiple applications by different departments, organizations, citizen groups and the public. Although the current NHMP update still maintains broadly applied goals, specific action items were included in order to provide eligibility for mitigation activities unique to services provided by individual departments and or agencies within Douglas County and its twelve cities.

Chapter 5: Plan Implementation & Maintenance
The Plan Implementation and Maintenance section of the 2016 NHMP outlines the way in which action items are prioritized and implemented. The following four steps are included in chapter 5 and illustrate the project development and prioritization process:

- Examine Funding Requirements
- Complete Risk Assessment Evaluation
- Coordinating Body Recommendation
- Complete Quantitative and Qualitative Assessment and Economic Analysis

The chapter concludes by referencing the requirement to update the plan every five years. Questions concerning what components of the plan need updating will be evaluated at that time.

*****Figure 1 on page 3 provides a general outline of how the 2016 NHMP is organized as compared to the 2009 version. The column on the left hand side shows an outline of the contents of the 2009 Douglas County NHMP and on the right hand side the outline of the 2016 NHMP contents can be seen.***

*****Figure 2 on page 4 provides a table outline of the new action items and action items which have carried over from the 2009 NHMP. Action items highlighted in green are new additions to this update and action items highlighted in yellow are carried over items from the 2009 NHMP. Other action items which have not been carried over from the 2009 NHMP have either been completed or are no longer applicable and therefore were not included in the 2016 update. Please note that the action items for the 12 incorporated cities, included within this update have not been included in this summary, as the cities were not included within the 2009 version of the NHMP. Therefore, all of the action items relating to the cities are new to this NHMP's maintenance cycle. Also notable, Drought as a hazard was not individual addressed within the 2009 NHMP and therefore all action items related to Drought are a new addition to the NHMP in the 2016 update.***

Figure 1 – Changes to Plan Organization

2009 Douglas County NHMP	2016 Douglas County Multi-jurisdictional NHMP
Approved Letters & Resolutions	Approved Letters & Resolutions
Acknowledgements	Acknowledgements
Executive Summary	Table of Contents
Table of Contents	Chapter 1: Introduction
Division 1: Plan Process, Organization & Information	Purpose of an NHMP
Section 1: Plan Introduction & Planning Process	Federal Requirements
Introduction	History of NHMP Planning in Douglas County (DC)
Planning Process	Planning Process
Plan Maintenance	Plan Organization
Plan Adoption	Chapter 2: DC Multi-Jurisdictional Community Profile
Action Item Prioritization	Natural Environment Capacity
2009 NHMP Benchmarks	Social/Demographic Capacity
Section 2: DC Community Profile	Economic Capacity
Geography & Environment	Built Environment Capacity
Land & Development	Chapter 3: Hazard Assessment
Housing & Community Development	Evaluating Risk
Employment & Industry	DC Federal Disaster & Emergency Declarations
Transportation & Commuting Patterns	Hazard - Drought
Division 2: Hazard Specific Information	Hazard - Earthquake
Section 3: Flooding	Hazard - Flood
Section 4: Severe Winter Storms	Hazard - Landslide
Section 5: Earthquake	Hazard - Tsunami
Section 6: Tsunami	Hazard - Wildfire
Section 7: Windstorm	Hazard - Windstorm
Section 8: Wildfire	Hazard - Winterstorms
Section 9: Landslide	Chapter 4: Mitigation Plan Goals & Action Items
Section 10: Multi Hazards Action Items	Goals
Division 3: Resources	Action Items - Drought
Appendix A: Hazard Analysis for DC	Action Items - Earthquake
Appendix B: Hazard Agency Contact Information	Action Items - Flood
Appendix C: PAC Natural Hazard Survey	Action Items - Landslide
Appendix D: DC Cities - Natural Hazard Survey	Action Items - Tsunami
	Action Items - Wildfire
	Action Items - Windstorm
	Action Items - Winterstorms
	Chapter 5: Plan Implementation & Maintenance
	Project Prioritization
	Five-Year Review of Plan

Figure 2 - Changes in Action Items

Item I.D.	Action Item
D-1	Connect local farmers and ranchers with organizations such as the local Soils and Water Conservation District, Oregon Department of Agriculture, and the USDA to educate them on water conservation methods they can implement to reduce the impact of droughts.
D-2	Continue implementing the objectives of the "Water Resource Element" of the Douglas County Comprehensive Plan.
E-1	Further assess and fix the seismic needs of critical facilities rated with a high potential of collapse by DOGAMI's rapid visual screening assessment.
E-3	Further assess and fix the seismic needs of bridges identified as being seismically vulnerable during an earthquake event.
E-5	Encourage earthquake safety promotion and drills to schoolchildren and community groups.
E-6	Assist the Sutherlin Water Control District in updating the Emergency Action Plan for Plat I and Cooper Creek Dams.
F-1	Identify opportunities to upgrade the Federal Insurance Rate Map (FIRM).
F-2	Identify opportunities to upgrade Douglas County Planning Department's GIS system for floodplain mapping.
F-3	Distribute information regarding flooding to the general public efficiently, and develop flood evacuation routes which do not use highways or bridges.
F-4	Explore funding for repetitive loss property mitigation projects.
F-5	Further assess and fix the scouring impacts to bridge foundation elements identified and determined to be unstable due to observed and evaluated scour conditions by implementing commonly accepted scour countermeasure projects.
F-6	Identify surface water drainage obstructions, seek funding for culvert mitigation projects, fix and repair culverts identified in "very poor" condition.
L-1	Identify areas within a jurisdiction that are subject to possible geologic hazards. Amend the zoning ordinance to include a geologic hazard overlay which provides mitigating standards required for development within those areas subject to possible geologic hazards.

L-2	Encourage construction, site location and design that can be applied to steep slopes to reduce the potential threat of landslides.
L-3	Mitigate activities in identified potential and historical landslide areas through public outreach.
L-4	Increase coordination between local jurisdictions, emergency responders, homeowners and landslide warning systems.
T-1	Investigate the possibility of adopting more accurate tsunami inundation maps created by DOGAMI in 2013 as compared to the existing regulatory map created in 1995.
T-2	Work with coastal communities, citizen groups, property owners, recreation areas, emergency responders, schools and businesses in promoting tsunami awareness and evacuation.
T-3	Improve technology capacity of communities, agencies and responders needed to adequately map hazard areas, broadcast warnings, inform, and educate residents and visitors of tsunami dangers.
T-4	Enhance tsunami evacuation route capacity and visibility and control evacuation of hazard areas by ensuring capacity of evacuation routes.
WF-1	Seek funding and labor opportunities to staff fuel-reduction projects throughout wildfire hazard prone areas in Douglas County.
WF-2	Increase communication, coordination, and collaboration between wildland/urban interface property owners, city and county planners, and fire prevention crews and officials to address risks, existing mitigation measures, and federal assistance programs.
WF-3	Maintain and further develop interagency and private industry relationships for continuing strong fire response in rural Douglas County.
WF-4	Enhance outreach and education programs aimed at mitigating wildfire hazards and reducing or preventing the exposure of citizens, public agencies, private property owners, and businesses to wildfire.
WF-5	Create incentives and assist landowners in reducing fuel loads on private property.
WF-6	Look for solutions to protect structures located outside of fire districts through partnerships, grant funding or expansion of fire district services.
WF-7	Seek improved information gathering, and distribution and technology for enhancing fire identification, initial response and evacuation if necessary.

WD-1	Develop and implement programs to keep trees from threatening lives, property, and public infrastructure during windstorm events.
WD-2	Map locations around the county that have the highest incidence of extreme windstorms.
WD-3	Encourage critical facilities to secure backup emergency power.
WD-4	Support/encourage contractors, homeowners and electrical utilities to use windstorm resistant construction methods where possible to reduce damage and power outages from windstorms.
WD-5	Encourage harvesting of trees along utility and road corridors, preventing potential windstorm damage.
WT-1	Assure a sufficient supply of sand and anti-icing agent to use on priority and secondary transportation routes for a minimum of one major winterstorm event each year.
WT-2	Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage.
WT-3	Encourage harvesting of trees that are blown down during winterstorms.
WT-4	Develop partnerships between utility providers and public works agencies to document known hazard areas.

Summary of changes from 2009:

Earthquake Action Items: One of the two major changes from 2009 is the county's emphasis on bridges that are in need of seismic upgrades. The county is a large provider of the transportation system within the area and in turn has maintenance responsibility over many bridges that provide critical connections for citizens. The second item is the removal of promoting building code standards that implement earthquake resistant development. After coordination with the local building official it is clear to the county that earthquake resistant construction is being considered and implemented under the current building codes.

Flood Action Items: The main change and success from the 2009 NHMP is the removal of action items 1 & 2 which were regarding policies on flood development permitting and ensuring that proper documentation was acquired by the county prior to approval of any development within the flood hazard area. As a positive result of those action items, the procedures to achieve those action items have been incorporated into the county's day to day operations and are no longer necessary as an action item within the updated version of the NHMP.

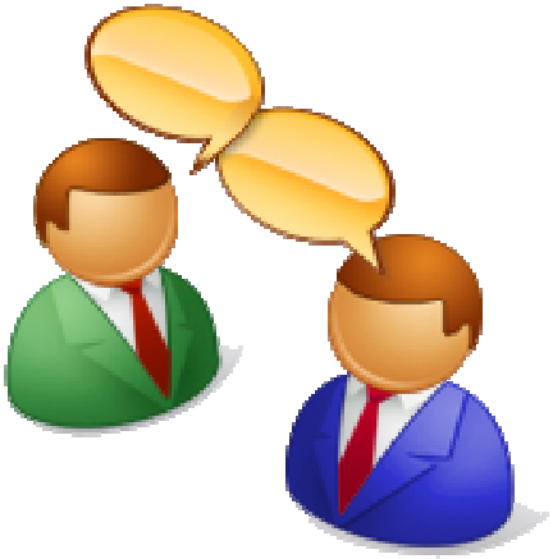
Landslide Action Items: An increasingly important aspect of planning for landslide mitigation is accurate and comprehensive data which provides a reference point for implementing development regulations that minimize landslide risk. The county has included an action item prioritizing updates to the limited and out-of-date landslide data currently being used for implementation of development regulation.

Tsunami Action Items: Similar to the issue raised under the Landslide Action Item changes, the county has included an action item prioritizing updates to the limited and out-of-date Tsunami Inundation data currently being used for implementation of development regulation.

Winterstorm Action Items: A major concern of the county is the increase threat of debilitation of the transportation network during major winterstorm events each year. As rural portions of the county become more dependent upon transportation to urban areas for basic goods, ensuring major transportation connections are not cut-off in the event of major storms is an increased concern of the county.

***Wildfire & Windstorm Action Item lists contained no changes*

COUNCIL COMMENTS



PUBLIC COMMENT

ADJOURNMENT

FOR YOUR INFORMATION

126 E. Central Avenue
Sutherlin, OR 97479
541-459-2856
Fax: 541-459-9363
www.cityofsutherlin.com

City of Sutherlin

STAFF REPORT					
Re: Water Master Plan Approval **Water Management & Conservation Plan Update**				Meeting Date:	11-13-2017
Purpose:	Action Item ☐	Workshop ☐	Report Only ☒	Discussion ☐	Update ☒
Submitted By: Brian Elliott, Community Development Director				City Manager Review	☒
Attachments: Letter from Oregon Water Resources Department (OWRD)					

WHAT IS BEING ASKED OF COUNCIL?

This staff report is to provide Council an update on the Water Management and Conservation Plan.

EXPLANATION

The Water Management & Conservation Plan final draft was submitted to Oregon Water Resources Department (OWRD) at the end of June, 2017. OWRD's public comment period ended August 10, 2017 with no public comments received. Following the OWRD internal review, they provided the attached comments, indicating that the overall plan was very well done and included most of the elements required by OAR 690-086. Staff/Dyer will be addressing the comments and submitting the revisions to OWRD. OWRD will then issue a final order, and staff will present the final draft of the Water Management & Conservation Plan to council for approval.

OPTIONS

Not Applicable

SUGGESTED MOTION(S)

Not Applicable

Oregon
Kate Brown, Governor

Water Resources Department
North Mall Office Building
725 Summer St NE, Suite A
Salem, OR 97301
Phone (503) 986-0900
Fax (503) 986-0904
www.wrd.state.or.us

September 27, 2017

City of Sutherlin
Attn: Randy Harris, Water Supervisor
126 E. Central Ave.
Sutherlin, OR 97479

SUBJECT: Water Management and Conservation Plan

Dear Mr. Harris:

Thank you for preparing the City of Sutherlin's (City) Water Management and Conservation Plan (WMCP) for submittal on June 30, 2017. The Department appreciates City's commitment to water conservation and management.

Our Department has completed a review of City's WMCP, and pursuant to OAR 690-086-0905, the Department published notice of the availability of the plan for review on July 11, 2017. No public comments were received during the 30-day public comment period.

Overall, the City's plan was very well done and includes most of the elements required by OAR 690-086. Our main concern about the plan revolves around future water demand forecasting. The results of our review are provided in the attached review worksheet.

There are two alternatives available to the City in response to this review. The City may choose to:

1. Identify information in the draft plan that we may have missed that would alter the results of the review and provide a basis for concluding that the plan is fully consistent with OAR Chapter 690, Division 86; ***or***

2. Modify the draft plan to address the deficiencies identified in the attached comments and review worksheet.

   NOTE: The Department's preferred method is to receive a "preliminary" revised plan with edits identified *(i.e., track-changes, red-line, etc.)*. You may also use the review worksheet format to assist in responding to the Department's comments. The Department will review the "preliminary" revised plan and, when all deficiencies have been sufficiently addressed, will notify you to submit the <u>final</u> revised plan.

Please notify us by **November 27, 2017** of the alternative you wish to pursue or if you would like additional time to evaluate these alternatives. If you select to modify your plan under Alternative 2, please indicate the date by which you can submit the additional information. If you do not notify us by **January 25, 2018** of the alternative you wish to pursue, we will issue a final order on your water management and conservation plan as we understand it now.

Please do not hesitate to contact me by telephone at 503-986-0883 or by e-mail at Chris.C.Kowitz@oregon.gov if you have any questions or if I can be of any assistance.

Sincerely,

[redacted]

Chris Kowitz
Water Management and Conservation Analyst
Water Right Services Division

Enclosure

cc: WMCP File
Susan Douthit, District 15 Watermaster (*via e-mail*)
GSI Water Solution, Inc. Attn: Adam Sussman 1600 Western Blvd., Suite 240 Corvallis, OR 97333

Oregon Water Resources Department (OWRD)
Municipal Water Management and Conservation Plan (WMCP) Review Worksheet
(OAR Chapter 690, Division 086)

Name of Supplier: City of Sutherlin (Date WMCP Received by OWRD: June 30, 2017)	
OWRD Reviewer:	Chris Kowitz
Date of OWRD Review:	September 15, 2017
Reason for submittal of the WMCP:	As required in the Final Order approving the City's previous WMCP; As required in the Final Order approving an extension of time for Permit S-44926 (now S-55041); and, As required in the Final Order approving an extension of time for Permit S-32426.
If a previous WMCP has been submitted, was it approved contingent upon the completion of certain **Work Plan** activities? If so, list those Work Plan items here:	N/A – a work plan was not required.
Are there any "Development Limitation" conditions established by a Final Order approving a previous WMCP or Permit Extension of Time?	Yes, as follows: S- 55041 (original permit S-44926): 0.0 cfs out of a permitted 3.0 cfs; S-32426: 3.0 cfs (live flow) / 179.5 AF (stored water) out of a permitted 5.0 cfs (live flow) / 500 AF (stored water)

Rule Reference	**OWRD Review Comment**
ORS 536.050(1)(u) – Fees for Water Management and Conservation Plans	
$900 – for examination of a Plan submitted by a municipal water supplier serving a population of 1,000 or fewer; or **$1800** – for examination of a Plan submitted by a municipal water supplier serving a population of more than 1,000. ***Current fee schedule effective July 1, 2013 (ORS 536.050).***	The required fee of $1800 was submitted on June 30, 2017. Population: 8578

OAR 690-086-0125 – Additional Requirements	
(5) A list of the affected local governments to whom the draft plan was made available pursuant to 690-086-0120(8) and a copy of any comments on the plan provided by the local governments;	Meets this rule requirement. Page 1-2
(6) A proposed date for submittal of an updated plan within no more than 10 years based on the proposed schedule for implementation of conservation measures, any relevant schedules for other community planning activities, and the rate of growth or other changes expected by the water supplier; or an explanation of why submittal of an updated plan is unnecessary and should not be required by the Department; and	Meets this rule requirement. Page 1-2
(7) If the municipal water supplier is requesting additional time to implement metering as required under OAR 690-086-0150(4)(b) or a benchmark established in a previously approved plan, documentation showing additional time is necessary to avoid unreasonable and excessive costs.	Meets this rule requirement. Page 1-3
OAR 690-086-0140 – Water Supplier Description	
(1) A description of the supplier's source(s) of water; including diversion, storage and regulation facilities; exchange agreements; intergovernmental cooperation agreements; and water supply or delivery contracts;	Meets this rule requirement. Page 2-1
(2) A delineation of the current service areas and an estimate of the population served and a description of the methodology(ies) used to make the estimate;	Meets this rule requirement. Page 2-2 / Exhibit 2-1
(3) An assessment of the adequacy and reliability of the existing water supply considering potential limitations on continued or expanded use under existing water rights resulting from existing and potential future restrictions on the community's water supply;	Meets this rule requirement. Pages 2-24 – 2-28 / Exhibits 2-21 – 2-23
(4) A quantification of the water delivered by the water supplier that identifies current and available historic average annual water use, peak seasonal use, and average and peak day use;	Meets this rule requirement. Pages 2-5 – 2-9 / Exhibits 2-2 – 2-7
(5) A tabular list of water rights held by the municipal water supplier that includes the following information:	
(a) Application, permit, transfer, and certificate numbers (as applicable);	Meets this rule requirement. Page 2-21 / Exhibit 2-18
(b) Priority date(s);	Meets this rule requirement. Page 2-21 / Exhibit 2-18

(c) Source(s) of water;	Meets this rule requirement. Page 2-21 / Exhibit 2-18
(d) Type(s) of beneficial uses specified in the right;	Meets this rule requirement. Page 2-21 / Exhibit 2-18
(e) Maximum instantaneous and annual quantity of water allowed under each right;	Meets this rule requirement. Page 2-21 / Exhibit 2-18
(f) Maximum instantaneous and annual quantity of water diverted under each right to date;	Meets this rule requirement. Page 2-21 / Exhibit 2-18
(g) Average monthly and daily diversions under each right for the previous year, and if available for the previous five years;	Meets this rule requirement. Page 2-21 / Exhibit 2-18
(h) Currently authorized date for completion of development under each right; and	Meets this rule requirement. Page 2-21 / Exhibit 2-18
Environmental Concerns: **(i)** Identification of any streamflow-dependent species listed by a state or federal agency as sensitive, threatened or endangered that are present in the source, any listing of the source as water quality limited and the water quality parameters for which the source was listed, and any designation of the source as being in a critical ground water area.	Meets this rule requirement. Page 2-23 ➢ Calapooya Creek: E-coli was also delisted in 2010 following a TMDL approval ➢ My research shows that Fall run Chinook Salmon populations are also found in the N. Umpqua
(6) A description of customers served including other water suppliers and the estimated numbers; general water use characteristics of residences, commercial and industrial facilities, and any other uses; and a comparison of the quantities of water used in each sector with the quantities reported in the water supplier's previously submitted water management and conservation plan and progress reports;	Additional information is required to meet this rule requirement. Pages 2-10 – 2-18 / Exhibits 2-8 – 2-16 ➢ Please provide a comparison of the quantity of water used in each sector with the quantities reported in the water supplier's previously submitted water management and conservation plan and progress report.
(7) Identification and description of interconnections with other municipal supply systems;	Additional information is required to meet this rule requirement. Page 2-1 ➢ As stated in -0140(1), the City does not have a formal agreement with the Union Gap Water District – please provide any available information about the interconnection's use, quantity of water typically provided to the Water District, etc.

(8) A schematic of the system that shows the sources of water, storage facilities, treatment facilities, major transmission and distribution lines, pump stations, interconnections with other municipal supply systems, and the existing and planned future service area; and	Meets this rule requirement. Pages 2-28 – 2-9 / Exhibits 2-1, 2-24 – 2-26
(9) A quantification and description of system leakage that includes any available information regarding the locations of significant losses.	Meets this rule requirement. Page 2-19 / Exhibit 2-17
OAR 690-086-0150 – Water Conservation Element	
(1) A progress report on the conservation measures scheduled for implementation in a water management and conservation plan previously approved by the Department, if any;	Meets this rule requirement. Pages 3-3 – 3-4 / Exhibit 3-1
(2) A description of the water supplier's water use measurement and reporting program and a statement that the program complies with the measurement standards in OAR Chapter 690, Division 85, that a time extension or waiver has been granted, or that the standards are not applicable;	Meets this rule requirement. Page 3-4
(3) A description of other conservation measures, if any, currently implemented by the water supplier, including any measures required under water supply contracts;	Meets this rule requirement. Page 3-1
(4) A description of the specific activities, along with a schedule that establishes five-year benchmarks, for implementation of each of the following conservation measures that are required of all municipal water suppliers:	
(a) An annual water audit that includes a systematic and documented methodology for estimating any un-metered authorized and unauthorized uses;	Meets this rule requirement. Pages 3-5 – 3-6
(b) If the system is not fully metered, a program to install meters on all un-metered water service connections. The program shall start immediately after the plan is approved and shall identify the number of meters to be installed each year with full metering completed within five years of approval of the water management and conservation plan;	Meets this rule requirement. Page 3-6
(c) A meter testing and maintenance program;	Meets this rule requirement. Page 3-6
(d) A rate structure under which customers' bills are based, at least in part, on the quantity of water metered at the service connections;	Meets this rule requirement. Pages 3-6 – 3-7

(e) If the annual water audit indicates that system leakage exceeds 10 percent, a regularly scheduled and systematic program to detect leaks in the transmission and distribution system using methods and technology appropriate to the size and capabilities of the municipal water supplier; and	Clarification needed to meet this rule requirement. Pages 3-7 – 3-8 ➢ The benchmark should be updated to state that the leak detection program will continue until non-revenue water is below 10% (it now reads that the program will only be conducted in 2018, regardless of its effectiveness).
(f) A public education program to encourage efficient water use and the use of low water use landscaping that includes regular communication of the supplier's water conservation activities and schedule to customers;	Meets this rule requirement. Page 3-8
(5) If the supplier proposes to expand or initiate diversion of water under an extended permit for which resource issues have been identified under OAR 690-086-0140(5)(i), a description of the specific activities, along with a schedule that establishes five-year benchmarks, for implementation of:	
A system-wide leak repair or line replacement program to reduce system leakage to no more than 15 percent or sufficient information to demonstrate that system leakage currently is no more than 15 percent.	Clarification needed to meet this rule requirement. Page 3-9 ➢ Please establish a 5-year benchmark for this requirement (the last paragraph reads like a benchmark, but please clarify).
(6) If the supplier serves a population greater than 1,000 and proposes to expand or initiate diversion of water under an extended permit for which resource issues have been identified under OAR 690-086-0140(5)(i), or if the supplier serves a population greater than 7,500, a description of the specific activities, along with a schedule that establishes five-year benchmarks, for implementation of each of the following measures; or documentation showing that implementation of the measures is neither feasible nor appropriate for ensuring the efficient use of water and the prevention of waste:	
(a) A system-wide leak repair program or line replacement to reduce system leakage to 15 percent, and if the reduction of system leakage to 15 percent is found to be feasible and appropriate, to reduce system leakage to 10 percent;	Clarification needed to meet this rule requirement. Pages 3-9 ➢ The benchmark should be updated to state that the leak detection program will continue until non-revenue water is below 10% (it now reads that the program will only be conducted in 2018, regardless of its effectiveness).
(b) Technical and financial assistance programs to encourage and aid residential, commercial and industrial customers in implementation of conservation measures;	Meets this rule requirement. Page 3-9
(c) Supplier financed retrofitting or replacement of existing inefficient water using fixtures, including distribution of residential conservation kits and rebates for customer investments in water conservation;	Meets this rule requirement. Page 3-9 ➢ The Department recommends that the City to also evaluate the idea of providing outdoor conservation kits to encourage outdoor water conservation.

(d) Adoption of rate structures, billing schedules, and other associated programs that support and encourage water conservation;	Meets this rule requirement. Page 3-10
(e) Water reuse, recycling, and non-potable water opportunities; and	Meets this rule requirement. Page 3-10 ➢ Are there additional options to implement a water reuse program to supplement irrigation at other City-owned facilities (i.e., Central Park)?
(f) Any other conservation measures identified by the water supplier that would improve water use efficiency.	Meets this rule requirement. Page 3-10
OAR 690-086-0160 – Municipal Water Curtailment Element	
(1) A description of the type, frequency and magnitude of supply deficiencies within the past 10 years and current capacity limitation. The description shall include an assessment of the ability of the water supplier to maintain delivery during long-term drought or other source shortages caused by a natural disaster, source contamination, legal restrictions on water use, or other circumstances;	Meets this rule requirement. Pages 4-1 – 4-2
(2) A list of three or more stages of alert for potential shortage or water service difficulties. The stages shall range from a potential or mild alert, increasing through a serious situation to a critical emergency;	Meets this rule requirement. Pages 4-2 – 4-4 / Exhibit 4-1
(3) A description of pre-determined levels of severity of shortage or water service difficulties that will trigger the curtailment actions under each stage of alert to provide the greatest assurance of maintaining potable supplies for human consumption; and	Meets this rule requirement. Pages 4-2 – 4-4 / Exhibit 4-1
(4) A list of specific standby water use curtailment actions for each stage of alert ranging from notice to the public of a potential alert, increasing through limiting nonessential water use, to rationing and/or loss of service at the critical alert stage.	Meets this rule requirement. Pages 4-4 – 4-7

OAR 690-086-0170 – Municipal Water Supply Element	
(1) A delineation of the current and future service areas consistent with state land use law that includes available data on population projections and anticipated development consistent with relevant acknowledged comprehensive land use plans and urban service agreements or other relevant growth projections;	Clarification is needed to meet this rule requirement. Page 5-1 ➢ The population growth rate used to calculate future population stated in the plan is 1.5%; however, using that rate the Department calculated the following: o 2026: 9229 (w/in UGB) + 553 = 9782 o 2036: 10443 (w/in UGB) + 553= 10986 ➢ The average annual population growth rate from 2010-2016 was 1.004% - how has the more recent population data been incorporated into future water forecasting?
(2) An estimated schedule that identifies when the water supplier expects to fully exercise each of the water rights and water use permits currently held by the supplier;	Meets this rule requirement. Pages 5-2 – 5-3
(3) Based on the information in (1), an estimate of the water supplier's water demand projections for 10 and 20 years, and at the option of the municipal water supplier, longer periods;	Clarification is needed to meet this rule requirement. Page 5-2 ➢ Using the population data discussed in section (1), the following projected MMD was calculated: o 2026: 3.50 mgd / 5.41 cfs o 2036: 3.93 mgd / 6.08 cfs ➢ Water use data from 2016 included a large increase in non-revenue water. The plan states that the City is unclear of why this increased occurred, but is assuming that non-revenue water calculations in the near term will mirror those found in 2013-2015. Given this information, it may be more appropriate to use water use data from 2015 for water demand forecasting as that usage is more likely representative of system demands moving forward.

(4) A comparison of the projected water needs and the sources of water currently available to the municipal water supplier and to any other suppliers to be served considering the reliability of existing sources;	Clarification is needed to meet this rule requirement. Pages 5-2 – 5-3 ➢ Using data provided in this draft, the City has shown a need for 3.93 mgd / 6.08 cfs (MDD) by 2036. As detailed in this section, the City currently has reliable rights on the Calapooya Creek (3 cfs) and Cooper Creek (3cfs) resulting in deficit of 0.05 mgd / 0.08 cfs. ➢ Justification provided for additional water under extended permit S-32426 revolves around the potential of a catastrophic failure of the Calapooya Creek water system. In such an emergency, the City would – as detailed in the curtailment plan – enact Stage 3: Water Emergency (pages 4-3, 4-6 – 4-7). This stage of the curtailment plan seeks to reduce demand by roughly 50% through both residential and commercial/industrial mandatory actions. Through these actions, MDD would be reduced to 1.54 mgd (current) / 1.75 mgd (2026) / 1.97 mgd (2036). ➢ The Department has other mechanisms to help municipalities address situations such as a catastrophic failure of a water system. Through the emergency limited license process, the City would be able to apply for and receive approval of an emergency limited license within 24 hours of submitting an application to the Department. ➢ After evaluating the Department's comments under section (3) and (4), please provide a revised 'greenlight' water request under extended permit S-32426
(5) If any expansion or initial diversion of water allocated under existing permits is necessary to meet the needs shown in (3), an analysis of alternative sources of water that considers availability, reliability, feasibility and likely environmental impacts. The analysis shall consider the extent to which the projected water needs can be satisfied through:	
(a) Implementation of conservation measures identified under OAR 690-086-0150;	Clarification is needed to meet this rule requirement. Page 5-4 ➢ The 2nd paragraph in this section states that, "if the City implemented…". The City does have a conservation program in place (existing and future benchmarks) – has the City considered how or factored in a reduction of forecasted MDD through the implementation of its program (i.e., 5% as mention in the plan)?
(b) Interconnection with other municipal supply systems and cooperative regional water management; and	Meets this rule requirement. Page 5-4
(c) Any other conservation measures that would provide water at a cost that is equal to or lower than the cost of other identified sources.	Meets this rule requirement. Page 5-4

(6) If any expansion or initial diversion of water allocated under existing permits is necessary to meet the needs shown in (3), a quantification of the maximum rate and monthly volume of water to be diverted under each of the permits;	Meets this rule requirement. Page 5-5
(7) For any expansion or initial diversion of water under existing permits, a description of mitigation actions the water supplier is taking to comply with legal requirements including but not limited to the Endangered Species Act, Clean Water Act, Safe Drinking Water Act; and	Meets this rule requirement. Page 5-5
(8) If acquisition of new water rights will be necessary within the next 20 years to meet the needs shown in (3), an analysis of alternative sources of the additional water that considers availability, reliability, feasibility and likely environmental impacts and a schedule for development of the new sources of water. The analysis shall consider the extent to which the need for new water rights can be eliminated through:	
(a) Implementation of conservation measures identified under OAR 690-086-0150;	N/A – the City has not determined that the acquisition of a new water right is necessary to meet the forecasted 20 year demand. Page 5-5
(b) Interconnection with other municipal supply systems and cooperative regional water management; and	N/A – the City has not determined that the acquisition of a new water right is necessary to meet the forecasted 20 year demand. Page 5-5
(c) Any other conservation measures that would provide water at a cost that is equal to or lower than the cost of other identified sources.	N/A – the City has not determined that the acquisition of a new water right is necessary to meet the forecasted 20 year demand. Page 5-5
OAR 690-086-0130 – Approval Criteria for Access to Water under an Extended Permit	
Requests for Greenlight Water: **(7)** If during the next 20 years the maximum rate of water diverted under an extended permit will be greater than the maximum rate authorized for diversion under the extension or previously approved water management and conservation plan;	
(a) The plan includes a schedule for development of any conservation measures that would provide water at a cost that is equal to or lower than the cost of other identified sources, unless the supplier has provided sufficient justification for the factors used in selecting other sources for development or the supplier serves a population of less than 1,000;	Clarification is needed to meet this rule requirement. Page 5-4 The 2nd paragraph in this section states that, "if the City implemented…". The City does have a conservation program in place (existing and future benchmarks) – has the City considered how or factored in a reduction of forecasted MDD through the implementation of its program (i.e., 5% as mention in the plan)?
(b) Increased use from the source is the most feasible and appropriate water supply alternative available to the supplier; and	Meets this rule requirement. Page 5-4

(c) If mitigation is legally required to address limitations or restrictions on the development of permits for which resource issues are identified under OAR 690-086-0140(5)(i), the plan contains documentation that the supplier is complying with the mitigation requirements. The Department may consult with federal and state agencies in making this determination; and	Meets this rule requirement. Page 5-5

PUBLIC HEALTH DIVISION
Center for Health Protection, Drinking Water Services
Kate Brown, Governor

Oregon Health Authority

444 A Street
Springfield, OR 97477
(541) 726-2587
(541) 726-2596
www.healthoregon.org/DWP

October 9, 2017

Randy Harris
City of Sutherlin
126 E. Central Ave.
Sutherlin, OR 97479

Re: **Master Plan (PR#2017-101)**
City of Sutherlin (PWS# 00847)
Final Approval

Dear Randy Harris:

Thank you for your submittal for plan review for the Water Master Plan for the City of Sutherlin to the Oregon Health Authority's Drinking Water Services (DWS). On August 18, 2017, our office received the master plan and the plan review fee of $4,125. At this time DWS has determined that the Master Plan submitted is complete and grants final approval.

If you have any questions or would like this in an alternate format, please feel free to call me at (541) 726-2587 x29.

Sincerely,

[redacted]

Rebecca Templin, P.E.
Regional Engineer
Drinking Water Services

cc: Julie Wray, DWS Portland
James Parmenter, The Dyer Partnership

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City of Sutherlin

STAFF REPORT					
Re: Recycled Water Reuse Plan and National Pollutant Discharge Elimination System (NPDES) Permit Update				Meeting Date:	11-13-2017
Purpose:	Action Item ☐	Workshop ☐	Report Only ☒	Discussion ☐	Update ☒
Submitted By: Brian Elliott, Community Development Director				City Manager Review	☒
Attachments: DEQ Memo – Sutherlin NPDES Permit					

WHAT IS BEING ASKED OF COUNCIL?

This staff report is to provide Council an update on Recycled Water Reuse Plan and National Pollutant Discharge Elimination System (NPDES) Permit.

EXPLANATION

On August 29, 2016, City of Sutherlin submitted a draft of the recycled water reuse plan for the use of Class A recycled water to DEQ. The plan includes the use of Ford's Pond to store recycled Class A Effluent. DEQ sent comments on the plan to the city on Sept 29, 2016. DEQ cannot approve the plan until it receives public comment and the conditions are incorporated into the permit. The revised plan will be effective when the new treatment plant goes on-line. Until then, Sutherlin will operate under the existing plan.

March 2011, City of Sutherlin submitted the NPDES permit renewal application to DEQ. The attachment that is included has identified some of the major hurdles that have been completed since the renewal application was submitted. The NPDES Permit is anticipated to be completed by December, 2018.

OPTIONS

Not Applicable

SUGGESTED MOTION(S)

Not Applicable

Memo – Sutherlin NPDES Permit Renewal Status

To: Brian Elliott, Community Development Director, City of Sutherlin, Oregon

From: Jon Gasik, Senior Engineer, DEQ Medford Office

Date: Oct. 9, 2017

Subject: Sutherlin NPDES Permit No. 101601 – Renewal Status

State of Oregon Department of Environmental Quality

The Oregon Department of Environmental Quality met with Sutherlin to discuss renewing the city's National Pollutant Discharge Elimination System permit in November 2015. The discussion included the schedule for permit renewal and some new items in the permit, including using Fords Pond as a recycled water impoundment and permitting a new discharge from Fords Pond to Fords Creek. DEQ also explained that NOAA Fisheries has concerns about a "new" discharge into Fords Pond and Fords Creek. DEQ and Sutherlin have been working on the renewal since that time. A report on the status of the project is below.

STATUS OF STUDIES, REPORTS, AND PLANS NECESSARY TO RENEW PERMIT

Mixing Zone Study – DEQ completed a draft of the mixing zone study and submitted it to the city for its review on Jan. 5, 2016. DEQ submitted a revised report on July 22, 2016 that included the design flow needed to calculate potential ammonia toxicity. The city can either accept DEQ's study or conduct its own.

pH Limits – On July 20, 2017, DEQ sent Sutherlin an email with proposed new lower pH limits.

Recycled Water Use Plan Update – On Aug. 29, 2016, Sutherlin submitted a draft recycled water use plan update for the use of Class A recycled water. The plan includes the use of Fords Pond to store recycled water. DEQ sent comments on the plan to the city on Sept. 29, 2016. DEQ cannot approve the plan until it receives public comment and the conditions are incorporated into the permit. The revised plan will be effective when the new treatment plant goes on line. Until then, Sutherlin will operate under the existing plan.

Discussion Draft of Permit Fact Sheet – On Nov. 29, 2016, DEQ sent the city's consultants a discussion draft of the permit fact sheet. The email stated that Fords Pond will be considered a recycled water impoundment and part of the treatment system. Accordingly the water in Fords Pond only needs to meet Class A requirements, but Fords Creek must meet all water quality standards. DEQ will need to include permit conditions to assure that Fords Creek meets water quality standards. The discussion draft also identified mercury, copper, and Bis (2-ethylhexyl) phthalate as potential pollutants of concern.

Fords Creek Water Quality Study – On March 10, 2017, DEQ's Jon Gasik conducted a field survey of Fords Creek with city staff. On Aug. 30, 2017, DEQ sent Sutherlin a draft of the Fords Creek study showing that the dissolved oxygen decrease will be minimal if the biochemical oxygen demand in the Fords Pond discharge is less than 15 mg/L. On Sept. 1, 2017, Brian Elliot, Sutherlin Public Works Director, expressed concern that city may not have full control over the biochemical oxygen demand in Fords Pond because of upstream influences. DEQ proposed the following alternatives:

- Instead of a "limit", DEQ will propose a 15 mg/L benchmark that if exceeded, would trigger either a pond management plan or a more robust water quality modeling effort (such as a dynamic model).
- DEQ will also propose a clause that there is no permit violation if the dissolved oxygen in Fords Creek is 11 mg/L or greater (i.e. meets water quality standards).

Biosolids Management Plan Update – On Feb. 8, 2017, Sutherlin sent DEQ an updated biosolids management plan. DEQ assisted with revising this plan and on Sept. 21, 2017 Sutherlin confirmed they are OK with DEQ putting this plan on public notice with the permit documents.

Memo – Sutherlin NPDES Permit Renewal Status

Mass limits for the proposed wastewater treatment plant – On Oct. 16, 2017, DEQ sent Sutherlin and the Dyer Partnership a draft memo calculating performance-based biochemical oxygen demand and total suspended solids mass limits for the proposed wastewater treatment plant. The calculations indicate that the new treatment plant can produce an effluent of higher quality than needed to meet the existing mass limits.

NEXT STEPS

Copper Toxicity Evaluation - Earlier this year, DEQ adopted a new water quality standard for copper. DEQ needs to evaluate the potential for the discharge to exceed this new standard and if that potential exists, DEQ will need to include permit requirements to reduce copper in the discharge.

Complete Draft Permit and Fact Sheet –DEQ needs to complete the draft documents.

DEQ Internal Review - DEQ must complete an internal review process.

Draft Permit and Fact Sheet for applicant review – DEQ will provide the city a copy of the draft permit and fact sheet. The city will have a minimum of two weeks to review the documents.

Public Review and EPA Review – DEQ will make the documents available for public comment for at least 35 days. The city and the U.S. Environmental Protection Agency may also comment on the documents during the public comment period. DEQ will hold a public hearing if 10 or more people or if an organization representing at least 10 people requests one. In this case, the public comment period is extended to allow for a 30-day notice of the public hearing.

Permit Issuance – DEQ will review all public comments and make a final determination. DEQ may issue, modify or deny the permit. If conditions of the permit issued are different from those in the proposed permit, DEQ will notify the city of the reasons for the changes made.

Permit Contest Period – The renewed permit will be effective 20 days from the date that the city receives the final renewed permit unless DEQ receives a written request for a hearing to contest the renewed permit from the city during this 20-day period.

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City of Sutherlin

STAFF REPORT					
Re: Long Term Budget Forecast Update				Meeting Date:	11/13/17
Purpose:	Action Item ☐	Workshop ☐	Report Only ☒	Discussion ☐	Update ☐
Submitted By: Dan Wilson, Finance Director				City Manager Review	☒
Attachments: None					

WHAT IS BEING ASKED OF COUNCIL?

Please review the progress report below with regards to creating a long term budget forecast.

EXPLANATION

As part of the City-wide strategic plan, the Finance Department is tasked to create a long term budget forecast. The objective is to project revenues, expenditures, and fund balances over a 5 year period in order to determine where the strengths and shortfalls are, from a financial perspective, for the City. This project has been started and will be completed over the next few months prior to the start of the budget for the fiscal year 2018-19. It will first be presented to the Council Financial subcommittee and then presented to the Council as a whole. Beginning fund balances from the audited financial statements for the fiscal year 2016-17 will be the starting basis for this report.

OPTIONS

N/A

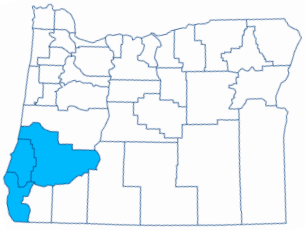
SUGGESTED MOTION(S)

N/A

Southwest Oregon Economic Indicators

October 2017 (September 2017 Data)

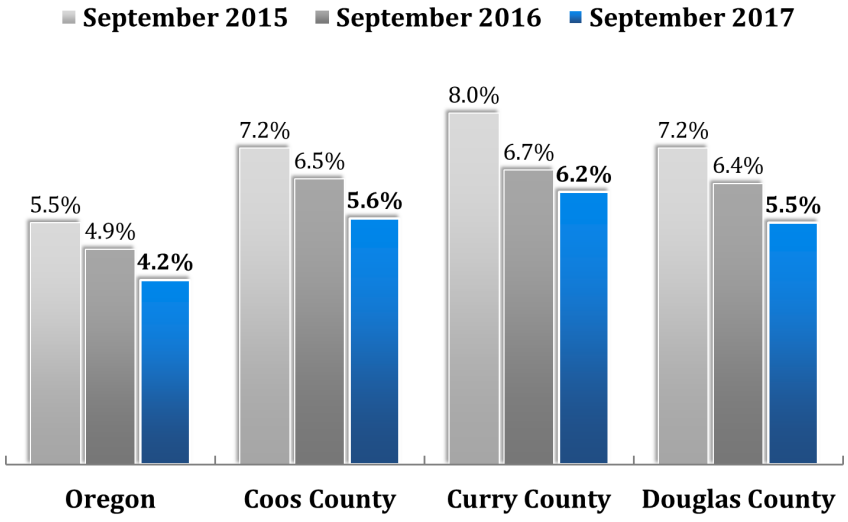
For data or publications on Southwestern Oregon, visit us at: **QualityInfo.org**



Local and State Unemployment Rates

(Seasonally-adjusted)

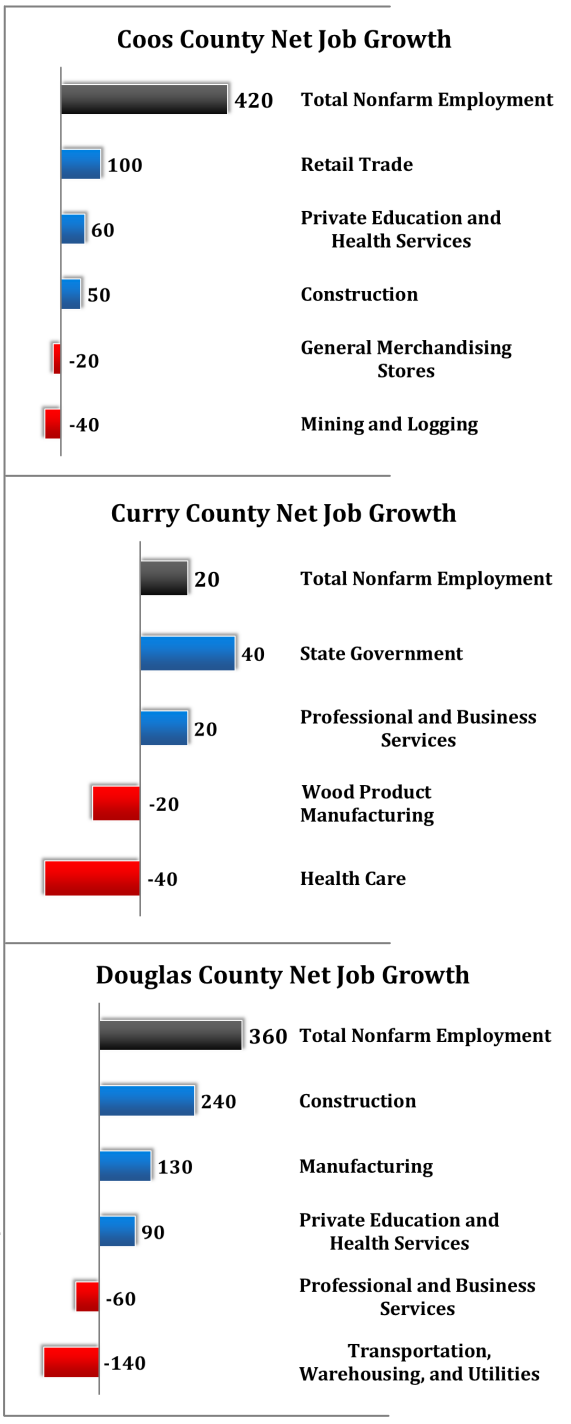
Source: Oregon Employment Department, LAUS



Industry Gains and Losses

(Over-the-year net change in employment)

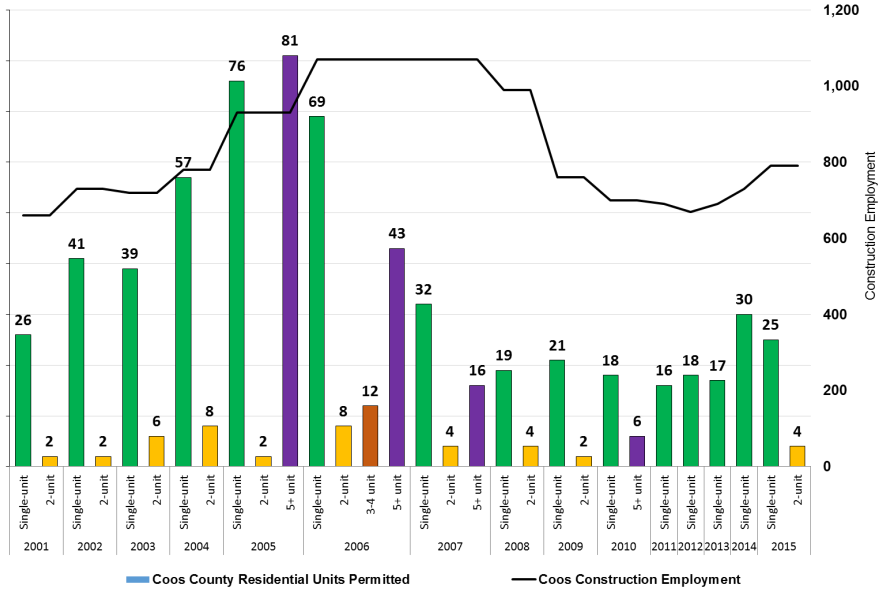
Source: Oregon Employment Department, CES



Graph of the Month

Coos County Building Permits and Construction Employment

Source: "Coos County, an Economic Update" by Annette Shelton-Tiderman



Continuing from last month's graph of increasing rents in Southwest Oregon, the monetary increase *could* be attributed to a large number of homeowners transitioning to renting after the Great Recession *and* a lack of newly constructed multi-family units (in gold, orange, and purple). When the supply of a certain good (apartments) does not align with a substantial increase in demand (more renters), an upward movement of prices is likely to occur. Construction employment has been steadily increasing in recent months — a hopeful sign that housing availability could potentially increase to accommodate a workforce hoping to move to Southwest Oregon.

Kale Donnelly | Workforce Analyst | E-mail: Kale.Donnelly@oregon.gov | Phone: (541) 530-0605

State of Oregon Employment Department

STRATEGIC PLAN - ACCOUNTABILITY BENCHMARKS

MONTH	DEPT	GOAL	ACTION	√
FEB 2017				
02/27/17	CDD/Planning	Strengthen Building Development Code - Zone Restrictions	Establish methodology and timeline, report to Council-Workshop	√
02/27/17	CDD/Planning	Strengthen Building Development Code - Zone Restrictions	Draft Development Code language, present to Planning Comm for review and recommendations to Council	√
02/27/17	CDD/Planning	Dev. Code Updates & Mixed Use Zone	Present to Council-Workshop	√
MAR 2017				
03/13/17	CDD/Planning	Strengthen Building Development Code - Zone Restrictions	Present to Council for adoption	√
03/27/17	Finance	Enact a Court Fine Amnesty Program	Report to Council - Email to Council	
03/27/17	PW/WWTR	Establish and implement plan to assume full responsibility for city-wide STEP System inspection	Report to Council - Workshop 4/24/17	√
03/27/17	City Mgr/Admin	Business Licenses & Building Safety Inspection	Establish methodology and timeline and report to Council-Workshop - 4/10/17	√
APR 2017				
04/10/17	Finance	Develop long-term facility & physical asset equipment replacement reserve	Report to Council - Email to Council	√
04/10/17	PW/WWTR	Establish/implement plan to assume full responsibility for STEP system inspection	Report to Council - 4/24/17 Workshop	√
04/10/17	City Mgr/Admin	Business Licenses & Building Safety Inspection	Research options & report to Council - Workshop	√
04/24/17	Fire	Emergency Operations Center-Public Safety Building/City Hall	Establish methodology and timeline-report to Council	√
MAY 2017				
05/08/17	Fire	Upgrade Fire Equipment	Establish methodology and timeline and report to Council - Discuss during Budget Process - 4/17/17	√
05/22/17	PW/WWTR	Wastewater system improvement SBR Pre-load	Council Approval - 5/8/17	√
JUN 2017				
06/12/17	City Mgr/Admin	CBA-AFSCME	Present to Council - 4/10/17	√
06/26/17	PW/WWTR	14" Sanitary Sewer Forcemain	Report to Council	√
JUL 2017				
07/24/17	CDD/Eng	Develop solutions to water storage deficiencies for new dev	Establish methodology and timeline and report to Council	√
07/24/17	Finance	Examine SDC Rates	Establish methodology and timeline and report to Council	√
AUG 2017				
08/28/17	CDD/Econ Dev (8/28 & 9/11 Packet)	Clean-up deteriorated properties in Sutherlin especially along Central Ave	Research ordinances used by other Oregon cities to present to Council	√
08/28/17	PW Fac/Parks	Rehabilitation of Central Park Playground	Report to Council (Verbal)	√
08/28/17	Police (8/28 & 9/11packet)	Develop a plan for improving Emergency Communications Infrastructure	Establish a methodology and timeline and report to Council	√

Note: "Report to Council" can be a written Strategic Plan Update, Presentation or Workshop

Revised 11/7/17

STRATEGIC PLAN - ACCOUNTABILITY BENCHMARKS

SEP 2017				
0~~9/25/17~~ 07/24/17	CDD/Eng	Develop solutions to water storage deficiencies for new dev	Establish methodology and timeline and report to Council	√
OCT 2017				
10/23/17 (moved to 2018)	Finance	Create Street Mgmt Masterplan w/funding options - (create after Central Ave project is completed - 2018)	Establish methodology and timeline and report to Council	
~~10/23/17~~ 10/9/17	CDD/Planning	UBG land exchange/Expansion	Report to Council	√
10/23/17	PW/Water	Update Water Master/Management & Conserv Plan	Report to Council - (WMP draft presented 8/28)	√
NOV 2017				
11/13/17	Finance	Create long-term budget forecast	Report to Council - FYI in Council Pkt	√
11/13/17	Police	Develop a plan for improving Emergency	Develop a listing of possible solutions	
11/13/17	PW Fac/Parks	Ford's Pond Outdoor Activity Development and Restoration Plan	Present final report to Council	√
11/13/17	PW/Water	Water Rights, Water Agreement Review and Implementation	Report to Council - FYI in Council Pkt	√
11/13/17	PW/WWTR	Recycled Water Reuse Plan Update	Report to Council - FYI in Council Pkt	√
11/13/17	PW/WWTR	NPDES Permit Renewal	Report to Council - FYI in Council Pkt	√
11/13/17	PW Fac/Streets	Complete Central Avenue & Downtown Improvements	Report to Council	√
DEC 2017				
12/11/17	Finance	Earn a clean Audit	Accept audited financials and present to Council	
12/11/17	PW Fac/Streets	N. Comstock Project	Report to Council	
12/11/17	PW Fac/Parks	Ford's Pond Outdoor Activity Development and Restoration Plan	Report to Parks Advisory Committee and Council	
12/11/17	Fire	Emergency Operations Center	Report outcome to Council	
12/11/17	Fire	Fire Supervisor Training	Report to Council	
JAN 2018				
01/08/18	City Mgr/Admin	Continue working with volunteers in keeping library services in Sutherlin	Report to Council	
01/22/18	PW/Water	Schoon Mtn. Tank Upgrade	Establish timeline and report to Council	
01/22/18	PW/Water	Upper Umpqua Tank Upgrade	Establish methodology and timeline and report to Council	
01/22/18	CDD/Planning	Evaluate Industrial Lands Inventory	Establish a pemitted uses timeline and report to Council-Workshop	
01/22/18	CDD/Planning	Evaluate Industrial Lands Inventory	Examine current contractual conditions w/county & present options to Council	
FEB 2018				
02/12/18	PW Fac/Streets	Street Maintenance Management Plan	Present viable alternatives to Council	
02/26/18	Finance	Examine SDC Rates	Develop new SDC matrix and present to Council-Workshop	
02/26/18	CDD/Eng	With ODOT, establish on/off ramp transportation plan at both exits	Provide report to Council-Workshop	

Note: "Report to Council" can be a written Strategic Plan Update, Presentation or Workshop

Revised 11/7/17

Diane Harris

From: Diane Harris
Sent: Wednesday, November 08, 2017 9:56 AM
To: 'Ashley KQEN News (ashley@bciradio.com)'; 'DC Commissioners'; KUGN; 'KYLE-KQUEN'; News Desk (newsdesk@nrtoday.com); 'Register Guard'; Roseburg Beacon; 'Vera Westbrook (vwestbrook@nrtoday.com)'
Subject: PUBLIC MEETING NOTICE
Attachments: CC AGENDA NOV 13.17 Meeting.pdf

Good morning!

Please see attached agenda for Sutherlin's November 13th City Council Meeting.

Thank you,

Diane Harris

City Recorder/HR Manager
City of Sutherlin
126 E Central
Sutherlin, OR 97479
(541) 459-2856 ext 207
d.harris@ci.sutherlin.or.us

SACC Budget vs Actual
Tourism - Motel Tax Fund
October, 2017

	BUDGET:	ACTUAL:
Receipts from City	***109,375.00***	***24,675.46***
Receipts from Street Fair		***1,100.00***
Receipts from Hot Rod Fun Run		***470.00***
Total Revenue		***$ 26,245.46***
Expenditures:		
Personnel:	***46,500.00***	***14,790.00***
Mat'l & Services:		
Advertising	20,000.00	7,101.25
Building Maint. & Services	1,500.00	
Furnishings & Equipment	750.00	
Memberships	500.00	360.00
Office Supplies	500.00	331.45
Postage	250.00	
Telephone	1,500.00	546.76
Tour. Promotion-Music...	600.00	292.00
Tour. Event - Museum	250.00	80.00
Tour. Event - Blackberry	5,000.00	
Tour. Event - Hot Rod Run	3,000.00	2,257.29
Tour. Event - Rodeo	2,000.00	2,000.00
Tour. Event - Street Fair	4,000.00	1,521.95
Tour. Event - New Event	5,000.00	
Tour. Flag Proj Dev.	6,400.00	1,500.00
Travel & Training	800.00	512.43
Utilities	1,200.00	227.06
Total Mat'l & Services	***53,250.00***	***16,730.19***
General Admin:	***7,500.00***	***1,066.88***
Totals	2,125.00	(7,911.61)
Carry-over Discretionary Funds	14,000.00	1,641.80
Tourism Promo Plan-Carry Frwd	24,843.00	1,101.50