

**VILLAGE OF HINSDALE  
ENVIRONMENT AND PUBLIC SERVICES COMMITTEE MINUTES  
MONDAY, JANUARY 13, 2014**

Chairman Laura LaPlaca called the meeting of the Environment and Public Services Committee to order at 7:40 P.M., Monday January 13, 2014, in Memorial Hall of the Memorial Building, 19 East Chicago Avenue, Hinsdale, IL.

**PRESENT:** Chairman Laura LaPlaca, Trustee William Haarlow, Trustee Gerald Hughes, Trustee Bob Saigh

**ABSENT:** none

**ALSO PRESENT:** Kathleen Gargano, Village Manager; George Franco, Director of Public Services; Tom Bueser, Deputy Director of Public Services, John Finnell, Village Arborist; Dan Deeter, Village Engineer.

**Approval of Minutes – December 09, 2013**

The EPS Committee reviewed the minutes from the December 09, 2013 meeting. Chairman LaPlaca noted two spelling errors. Trustee Saigh motioned for approval of the revised December 09, 2013 minutes. Trustee Haarlow seconded. The motion passed unanimously.

**Public Services Monthly Report**

Mr. Franco updated Committee on the possibility of additional salt purchases. Village Manager, Kathleen Gargano, noted that additional purchases will rise \$20 per ton of salt delivered and while the Village wants to be judicious with purchasing, does not want to be without salt. Also noted was that many other towns are still receiving salt through their allotments, however most of these will be completed by February at which time the price of salt will again rise. The last winter similar to this year was 2009 in which the Village spread approximately 1,800 tons of rock salt. Additional salt purchases will place the Village at approximately 1,700 tons of rock salt to be purchased for the year. Trustee Hughes inquired how much salt can be stored at the Public Services facility. Mr. Franco answered that 400 tons can be stored under the salt shed and each slating event results in approximately 75 tons of salt used, with slat treated with calcium chloride as temperatures dictate.

Mr. Franco updated Committee on Public Services activities which included the removal of holiday decorations in the Business District, pot hole filling operations, and Republic Services will be removing Christmas trees throughout the week. Trustee Hughes inquired if pot holes on newer roads are forming and if the longevity of the work is

holding. Mr. Franco responded that the newer roads which have been completely reconstructed are holding up well. Trustee Haarlow noted that there is cracking in spots on North Washington St. and asked if there was some type of warranty on the work. Mr. Deeter noted that there is a 1 year warranty on this type of work which was completed 2 years ago. Mr. Franco stated that this may be an area which could benefit from the upcoming crack sealing contract. Trustee Saigh mentioned that the last couple storms have been taxing on manpower and equipment and inquired if any new equipment or plowing items were needed. Mr. Franco responded that at this time no new equipment was needed that has not been budgeted for. Chairman LaPlaca inquired if the same deicing material that is used on asphalt and concrete streets is used on the brick streets in town. Mr. Franco replied that it is the same deicing material.

### **Proposed Parkway Tree Removal (629 S. Garfield St.)**

Mr. Franco provided background on this item which includes the request to remove a 21" honey locust tree for the installation of a circular driveway. Committee then listened to concerns of the resident, Mr. Bryan Bomba, who stated that the tree removal and circular driveway installation are requests for safety of his family and the residents of Hinsdale due to the following factors:

- Garfield St. carries approximately 7,000 cars per day
- Disallowing the tree removal and circular drive would force drivers to back out onto Garfield St. with limited visibility
- Pedestrian traffic
- Bicycle traffic

Chairman LaPlaca inquired if a three-point turnaround could be installed to which the builder replied that there was minimal area (21 feet) and a substantial elevation difference. Chairman LaPlaca then asked for Mr. Finnell's recommendations. Mr. Finnell stated that due to the tree's condition, size, and spacing it does not meet the Village's criteria for removal.

Chairman LaPlaca received feedback from Trustees who agreed with Mr. Finnell's assessment. Trustees felt there are other ways in which the resident can alleviate the problem. The committee's unanimous decision is to deny the request to remove the honey locust tree.

### **Notice of Annual IPM Review Meeting February 10<sup>th</sup> 2014**

Mr. Franco provided background on this item. The Village Horticulturalist, Ralph Nikischer, will give a presentation on the Village's integrated pest management (IPM) practices during the February EPS meeting.

## **Engineering Monthly Report**

Mr. Deeter stated that staff is including a separate memo highlighting the Oak Street Bridge Design Phase progress. In December, staff and HR Green met with Adventist Hinsdale Hospital to review the current plans and the construction phasing/traffic control plan which will maintain public access to the hospital throughout the construction period. This week HR Green will be submitting a progress set of plans for staff's review. February 6<sup>th</sup> will be the first Community Working Group meeting for the Design Phase. Chairman LaPlaca discussed ideas for this first meeting's agenda and will work with staff and our consultants to implement these.

Staff is reviewing the final plans for the 2014 Reconstruction and Resurfacing projects. James J. Benes & Associates engineering estimates are currently higher than the project's budget. Staff is reviewing the scope of the projects and will set up alternative to keep the projects within the budget.

### **To approve a Resolution for the 2013 Resurfacing Project Construction Contract Change Order Number 1 in the Amount of \$162,611.09 Reduction to Gerardi Sewer & Water Company.**

Mr. Deeter explained that the 2013 Resurfacing Project is complete. This change order includes the final balancing of line item quantities (comparing the bid quantities to the actual construction quantities) as well as all change order requests approved and implemented during the project. The final construction cost is \$162,611.09 below the construction contract. Overall savings for the project (including construction and engineering costs) is \$259,350. With no further questions, Trustee Saigh moved to approve. Trustee Haarlow seconded. The motion passed unanimously.

### **To Award the Engineering Services for the Design of the North Madison Drainage Project to Christopher B. Burke Engineering, Ltd. in the Amount Not To Exceed \$43,616.00.**

Chairman LaPlaca reminded the committee of the board's intent to address the localized flooding on the 400/500-block of N. Madison. The Village has been investigating methods to address this flooding within the funds available. Mr. Deeter explained that requests for proposals were sent out to seven engineering consultants to design a lift station and force main to return the area's drainage to the 1975 standard. This lift station would also be designed to accommodate higher pumping rates if detention upstream became available in the future. Christopher B. Burke Engineering was recommended to conduct the design phase because of their understanding of stormwater design in DuPage County and in the Salt Creek watershed, as well as their experience working in Hinsdale (on the Graue Mills flooding issue). Compared to consultants who proposed much lower and higher design costs, Burke Engineering's proposal indicated that they understood the resources that would be required to address this issue. Trustee

Hughes moved to approve the motion. Trustee Haarlow seconded. The motion passed unanimously.

**To approve reimbursement to Twin Supplies LTD in the amount of \$46,124 for administration and lighting fixtures provided through the DCEO and ICE grant programs.**

Mr. Franco provided summary information on this lighting grant program which has been utilized by the Village for the past two years to improve lighting and reduce energy use in fixtures at the Police Department, Village Hall, KLM Lodge, Water Plant building, and Public Services building. This years projects included exterior lighting at the Public Services building, KLM and Burns Field platform tennis lights. Trustee Saigh moved to approve the motion. Trustee Haarlow seconded. The motion passed unanimously.

**Adjournment**

With no further issues to be brought before the Committee, Trustee Saigh moved to adjourn. Trustee Hughes seconded. Motion carried and the meeting was adjourned at 8:30 P.M.

Respectfully submitted,

Dan Deeter  
Village Engineer

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**MEMORANDUM**

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**DATE:** 2/3/14  
**TO:** CHAIRMAN LA PLACA AND THE EPS COMMITTEE  
**FROM:** GEORGE FRANCO  
**SUBJECT: PUBLIC SERVICES MONTHLY REPORT-JANUARY 2014**

The Public Service Department dispatched snow and ice crews 16 times during December, spreading 576 tons of rock salt on Village roadways, 5 tons of bagged de-icing material used on village sidewalks, ramps, and stairs, and 1,900 gallons of liquid calcium chloride to treat road salt at low temperatures. The cost for chemicals during the month of January is approximately \$29,930 for rock salt, \$1,560 for bagged material, and \$1,083 for liquid calcium chloride. An approximate total monthly chemical cost during these snow events is \$32,573. These crews have logged approximately 1,131 overtime hours and 312 regular hours to complete plowing and salting operations on roadways. A comparison of time and materials related to snow and ice operations from this year to last year (through January 31, 2014) is as follows:

	<u><b>FY 2013-14</b></u>	<u><b>FY 2012-13</b></u>
Crews Dispatched	34	9
Regular hours	530	121.5
Overtime hours	1,933	71
Salt	1,411 tons	243 tons
Sand	40 tons	0 tons
Bagged Material	7.35 tons	2.5 tons
Liquid Calcium	3,000/gal	275/gal
<b>Estimated Chemical Cost</b>	<b>\$83,147</b>	<b>\$16,579</b>

As has been widely reported in the Midwest there is a bulk rock salt shortage and salt is currently unavailable through salt supply vendors. The Village has approximately 375 tons of rock salt in storage. In an effort to conserve our current salt supply main arterial roadways, school zones, hills, and curves will be treated with salt. Snow removal in the Central Business District has been ongoing between weather events and extreme cold weather. In an effort to reduce overtime expenses this snow removal is being completed during normal working hours. Crews are removing snow between 7am and 9 am during weekday mornings. The areas of Hinsdale Avenue between Garfield and Washington and Washington between Hinsdale Ave. and 1<sup>st</sup> St. will require overtime to remove the snow due to vehicle and pedestrian traffic. During the month of January, the sidewalks in the Business District have been shoveled 5 times for a cost of \$2,975.

All snow and ice removal equipment has been inspected and repairs are ongoing after each snow event. Public Service crews also responded to and repaired 8 water main breaks during the month of January. These crews have logged approximately 142 hours of overtime to complete repairs to the water distribution system. The dates, locations, and pipe sizes of the water main breaks are as follows:

- |    |         |                                 |                       |
|----|---------|---------------------------------|-----------------------|
| 1. | 1/1/14  | 5504 S. Garfield St.            | 6 inch cast iron main |
| 2. | 1/14/14 | Adams St. & Hinsdale Ave.       | 6 inch cast iron main |
| 3. | 1/15/14 | 218 S. Lincoln St.              | 4 inch cast iron main |
| 4. | 1/16/14 | 3 <sup>rd</sup> St. & Grant St. | 4 inch cast iron main |
| 5. | 1/23/14 | Hickory St. & Madison St.       | Valve Bonnet leak     |
| 6. | 1/29/14 | 3824 York Road                  | 6 inch cast iron main |
| 7. | 1/30/14 | 123 W. 3 <sup>rd</sup> St.      | 4 inch cast iron main |
| 8. | 1/31/14 | 434 N. Monroe St.               | 6 inch cast iron main |

The Burns Field ice rink continues to be maintained after snow event tasks have been completed. The maintenance includes clearing the rink of snow and applying layers of water as needed. There has been no overtime worked to maintain the ice rink. The Public Services department has been focusing on completing other tasks which include:

- The removal of holiday decorations including light pole wreaths and 11 containers in the Central Business District.
- Monitoring of sump pump discharge locations, which require maintenance to remove icing hazards on roadways. 30 man hours and 18 tons of salt have been utilized to maintain conditions on roadways throughout the Village.
- Paddle tennis court maintenance included snow removal, door hinge replacement, and the replacement of 2 heaters.
- Staff reviewed and commented on 13 tree preservation plans submitted for building permits.
- One staff member attended the Illinois Association of Park Districts annual conference which included topics on water feature maintenance and nature based playgrounds.

Cc: Kathleen Gargano, President Cauley, and Board of Trustees

**PUBLIC SERVICE MONTHLY REPORT FOR      JAN.      2014.00**

**ROADWAY**

1.00 SIGNS  
1.00 POSTS  
4.00 SIGNS REPAIRED  
9.50 TONS OF COLD MIX USED FOR POTHOLES  
0.00 TONS OF HOT MIX  
0.00 TONS OF GRAVEL FOR ALLEYS  
0.00 WHITE PAINT  
0.00 YELLOW PAINT  
16.00 MAN HOURS BASIN TOP CLEANING  
0.00 MAN HOURS ALLEY GRADING  
0.00 MAN HOURS ALLEY TRIMMING  
0.00 YARD OF CONCRETE

**SNOW / ICE**

16.00 Times crews were called out for snow and ice.  
576.00 Tons of road salt used  
20.00 Tons of sand used  
5.00 Tons of salt + calcium for walks, ramps, stairs and train platforms.

**TREE MAINT**

6.00 TREES TRIMMED BY VILLAGE STAFF  
19.00 TREES REMOVED BY VILLAGE STAFF  
0.00 ELM TREES DETECTED BY STAFF      20 Pub. 32 Private  
0.00 ELM TREES REMOVED BY STAFF  
0.00 ELM TREES THAT HAVE HAD AMPUTATED LIMBS  
0.00 TREE STUMPS REMOVED  
0.00 TREES PLANTED  
0.00 TREES TRIMMED BY CONTRACTOR  
0.00 NON ELMS REMOVED BY CONTRACTOR  
0.00 ELMS REMOVED BY CONTRACTOR  
16.00 ASH TREES REMOVED DUE TO EAB      342 since Feb. 2011

**EQUIP MAINT**

0.00 SCHEDULED MAINT  
0.00 UNSCHEDULED REPAIRS

**WATER OPERATIONS**

75092.00 GALLONS OF WATER PUMPED TO DISTRIBUTION SYSTEM  
63419.00 PUMPED IN JANUARY 2013  
700.00 FEET OF SEWER LINES CLEANED  
0.00 SEWER BACKUP INVESTIGATIONS  
0.00 BASINS REPAIRED  
0.00 BASINS REBUILT  
0.00 BASINS CLEAN FROM DEBRIS INSIDE  
167.00 METER READINGS  
0.00 WATER METERS REPAIRED  
5.00 WATER METERS INSTALLED

0.00 HYDRANTS REPAIRED  
2.00 HYDRANTS FLUSHED  
8.00 WATER MAINS REPAIRED  
5.00 SEWER SERVICE LOCATED  
164.00 J U L I E LOCATE REQUEST  
4.00 WATER CONNECT OR DISCONNECT INSPECTIONS  
12.00 VALVES EXERCISED  
1.00 VALVES REPAIRED  
3.00 WATER METERS REMOVED  
0.00 SEWER CONNECT INSPECTIONS  
0.00 FOUNTAINS SERVICED

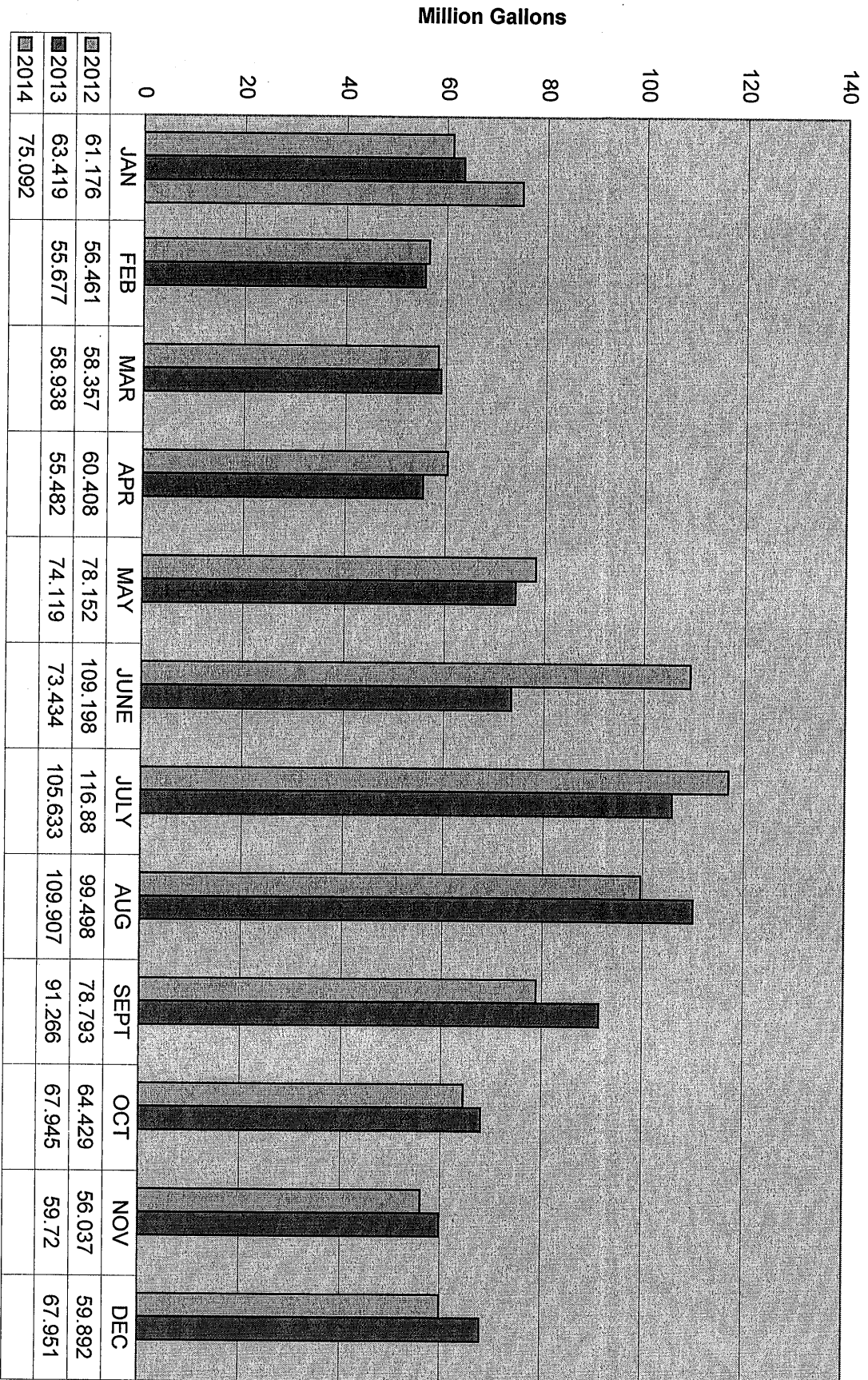
#### **PARKS MAINTENANCE**

Parks maintenance crews continued routine maintenance including cleaning and stocking of Park facility bathrooms and refuse removal in the Business District. Holiday decorations have been removed from the Central Business District. Preventative maintenance has continued on all parks equipment including mowers, weed eaters, and blowers. The Burns Field ice rink has been maintained when finish snow and ice operations.

#### **BUILDING MAINTENANCE**

Building maintenance crews have been monitoring and servicing heating systems in Village owned buildings, making repairs as needed. Service calls for the month of January include: heating system repairs at the Memorial building and Youth Center. Preventative maintenance was completed on the sprinkler system at the Community Pool. The Highland station door lock was rebuilt.

## MONTHLY PUMPAGE



VILLAGE OF HINSDALE - IL 0434520

MONTHLY REPORT

Month: January, 2014

Day	Dist x1000	Finished Water				Air Temp Average	Total Precip
		Free Cl <sub>2</sub> Avg (mg/l)	Turbidity Avg (NTU)	Fluoride Avg (mg/l)	H <sub>2</sub> O Temp Average		
1	2285				38		0.00
2	2171	0.91	0.03	1.10	38	20	0.00
3	2336	0.89	0.03	1.11	38	30	0.00
4	2383	0.88	0.03	1.09	38	35	0.00
5	2318	0.90	0.03	1.11	38		0.00
6	2376				38		0.00
7	2484	0.97	0.03	1.02	37	-10	0.00
8	2478	0.92	0.02	1.03	37	-4	0.00
9	2458	0.94	0.02	1.05	37	10	0.00
10	2450	0.95	0.02	1.02	37	21	0.00
11	2453				37		0.00
12	2483	0.93	0.02	1.01	37	39	0.00
13	2421	0.88	0.02	1.01	37	31	0.00
14	2447	0.85	0.02	1.02	37	35	0.00
15	2420	0.86	0.02	1.03	37	30	0.00
16	2312	0.82	0.02	1.01	37	28	0.00
17	2407	0.84	0.02	1.01	37	20	0.00
18	2347	0.91	0.02	1.06	37	20	0.00
19	2302				37		0.00
20	2355	0.91	0.02	1.06	37	38	0.00
21	2401	0.90	0.02	1.03	37	25	0.00
22	2519	0.89	0.02	1.03	36	18	0.00
23	2487	1.10	0.03	1.19	36	0	0.00
24	2483	1.00	0.03	1.09	36	15	0.00
25	2433	0.98	0.02	1.06	36	20	0.00
26	2436				36		0.00
27	2473	0.99	0.02	1.10	36	15	0.00
28	2532	1.00	0.02	1.05	36	20	0.00
29	2628	1.01	0.02	1.08	36	5	0.00
30	2512	1.00	0.02	1.11	36	10	0.00
31	2502	0.98	0.02	1.06	37	28	0.00

Day	Dist x1000	Free $Cl_2$ Avg (mg/l)	Turbidity Avg (NTU)	Fluoride Avg (mg/l)	H <sub>2</sub> O Temp Average	Air Temp Average	Total Precip
<i>Sum:</i>	75092						0.00
<i>Avg:</i>	2422	0.93	0.02	1.06	37	20	0.00
<i>Max:</i>	2628	1.10	0.03	1.19	38	39	0.00
<i>Min:</i>	2171	0.82	0.02	1.01	36	-10	0.00

Reported By: \_\_\_\_\_

# High Service and Well Pump Maintenance

January 2014

## **High Service Pump Motors**

High Service Pump Motor #1- Check oil and lubricate grease fittings

High Service Pump Motor #2- Check oil and lubricate grease fittings

High Service Pump Motor #3- Check oil and lubricate grease fittings

High Service Pump Motor #4- Check oil and lubricate grease fittings

## **Well Pump Motors**

Well #2 Pump Motor- Check oil, grease fittings, and run for Bacteria Samples.

Well #5 Pump Motor- Check oil, grease fittings, and run for Bacteria Samples.

Well #10 Pump Motor- Check oil, grease fittings, and run for Bacteria Samples.

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## MEMORANDUM

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(2a)

**DATE:** 2/4/2014  
**TO:** CHAIRMAN LAPLACA & EPS COMMITTEE  
**FROM:** Ralph Nikischer, Pest Management Coordinator  
**SUBJECT:** IPM Compliance 2013

The IPM report describes various activities conducted by the Village in 2013 including turf and prairie maintenance, tree preservation and sustainable landscaping. This report also offers recommendations for future actions including a tentative schedule for 2014. The review meeting features a power point presentation that outlines the 2013 report. Attached to this memo is a resident response to the 2013 IPM report, a summary of the annual review presentation and the 2013 IPM report. Residents are encouraged to attend this meeting to learn about the Village's IPM program.

cc: President Cauley and Board of Trustees  
Kathleen Gargano  
George Franco

## MEMORANDUM

To: To Village of Hinsdale EPS Committee

From: Ruta Jensen

Date: February 3, 2014

Re: 2013 IPM Report

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### I. Pesticide Free Parks

Thank you for adding Ehret Park as a pesticide free park. The butterflies and bees will especially appreciate it. The Girl Scouts who will be working there on the butterfly garden will also benefit. Unfortunately, I was not able to see the renovation in person, but am concerned that the mulch in that park should be well maintained if weed killers will not be used.

### II. Good Plans

Aeration, top dressing, and overseeding are all good practices to help the vigor of the turf. Note, however, that the report does not include records for top dressing.

Adding sustainable planting beds in the Village is also a good practice.

Water gardens in low areas are a very good alternative to trying to get grass to grow in areas like that.

### III. Prairie

Prairie burns are a necessary procedure to maintain the prairie and keep out invasive species. Keep doing them. Last spring, I was showing my granddaughter the burned prairie and noticed that daylilies seemed to have invaded in part of it. When we moved into our house in Hinsdale many years ago, there was a stand of daylilies that were very pretty. I had no experience with the plants and before I knew it, they had pretty much overtaken a large part of the gardens. I finally discovered that a pitchfork used to dig them up was the best method for removing them. You don't have to go deep, just under the mat of roots to get them up. The digging does have to be repeated several times, however, to get them all.

### IV. Follow the Plan!

In order for IPM to work the good practices need to be followed meticulously!

The turf evaluations for May and July 2013 have recommendations for aeration, fertilizing, and or seeding for a majority of the parcels in the Village. The IPM Maintenance Schedule calls for 4 rounds of aeration, yet only 3.7 acres were aerated in Spring 2013 and 18 acres in Fall 2013 for a total of 21.7 acres. This is much less than the 120 to over 200 acres in the previously reported years. Our good turf will not survive without aeration.

Also, only 99.7 acres were fertilized last year when the recommendations were for two rounds of fertilization and most parcels were listed for fertilization in the turf evaluations. Previous years have fertilized over 200 acres and up to 260.

### V. Pesticides Are Toxic!

**Please refer to last year's report**, which gave details of the toxicity of the pesticides we use on the turf. They are still toxic. Pesticides should only be used in cases where health issues arise. Dandelions do not constitute a health issue! Judicious use of good practices produces a reasonable looking turf.

## VI. Mosquito Control

The IPM report mentions Natular, or spinosad, which is to be used for mosquito control. It is listed as less toxic than other insecticides, but the following references show toxicity.

[http://www.epa.gov/opp00001/chem\\_search/reg\\_actions/registration/fs\\_PC-110003\\_19-Jul-99.pdf](http://www.epa.gov/opp00001/chem_search/reg_actions/registration/fs_PC-110003_19-Jul-99.pdf)  
toxic to trout, minnows, bluegills, highly toxic to bees

[http://www.pesticideinfo.org/Detail\\_Chemical.jsp?Rec\\_Id=PC35758](http://www.pesticideinfo.org/Detail_Chemical.jsp?Rec_Id=PC35758)  
toxic to bluegills, minnows, bees

<http://www.beyondpesticides.org/gateway/index.php?pesticideid=274>  
toxic to fish/aquatic organisms and has reproductive effects.

The first two references corroborate the toxicity to fish and bees. I could not find a reference for the reproductive effects.

Since this product is meant to be put into water, care should be taken when using it. The label also mentions that mosquitoes could become immune to its effects.

Bt, the product that has been used is not toxic to fish or humans according to Beyond Pesticides, but is toxic to bees. (If used only in water, what would be the exposure to bees?)

## Village of Hinsdale

### IPM Presentation 2013

## IPM Policy

- Hinsdale adopted its IPM policy in November of 1995
- Village property maintained to promote public health, safety, and welfare
- Minimize reliance on chemical pesticides
- Maximize advantages from alternative pest-control

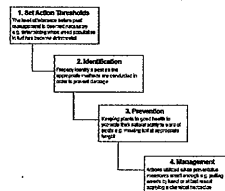
## What is IPM?

- Integrated Pest Management (IPM) is a program which manages insects, disease, weeds and other pests through environmentally sensitive and economic practices
- Utilize best management practices **FIRST**
- Chemical pesticides are only used as a **LAST** resort

## IPM Process

- Establish action thresholds
- Identify pests
- Prevent pest damage
- Manage pests

## IPM Process



## Action Thresholds

- Level of tolerance for particular pests
- Set to prevent harm to people, plants, or property
- Management is only taken when a threshold is broken

## Action Threshold

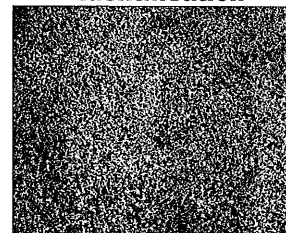


Honey Locust Plant Bug

## Identification

- Identification of pests determines any necessary action for control
- Proper identification helps target specific pests which minimizes pesticide applications

## Identification



White Clover at Pierce Park

### Prevention

- Utilizes cultural practices to promote healthy plant growth
- Encourage natural ability to defend against pests

### Prevention

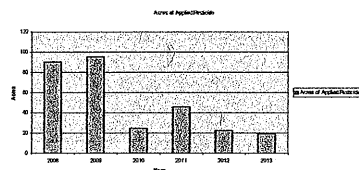


Tree pruning

### Management

- Final step in the IPM process
- Only necessary if action threshold is broken
- Begin with methods which have little or no environmental impact
- Herbicide was applied to 95 acres of Village green space in 2009
- One autumn application of pesticide was conducted over 19 acres in 2013

### Management



### Turf Maintenance

- Evaluate
- Recommend
- Document

### Turf Evaluations

- Performed three times per season (April, July and November)
- Evaluated based on turf density, weed population and overall appearance
- Scale of 1 (lowest) to 5 (highest)

### Turf Evaluations



Brook Park Playing Field – Fall '13

### Turf Evaluations

NOV 2013						
Type	Site Location	Turf Density	Overall Appearance	Active Weeds	Filling	Notes
A	PLAYING FIELD	1	3	1	28	100
PP	PLAYING FIELD	3	4	4	28	200

\* Area has existing turf with active weeds

A = Active F = Filling S = Seed W = Weed Control  
100 = High Quality A = Active PP = Playing Field P = Private without Cost Table C = Other

### Turf Improvements

- Soil
- Seed
- Water

### Soil

- Conduct soil tests
  - On deficient turf areas
  - Determines nutrient availability
  - Explains soil pH and texture
- Aeration
  - Ideal soil composition: 25% water, 25% pore space and 50% soil solids
  - Alleviates compaction
  - Ideally four rounds of aeration cycles on heavily used turf areas

### Soil

- Fertilization
  - Can be performed three times per season
  - Utilized as needed based on turf evaluations
- Top dress with organic matter
  - Materials include biosolids, peat moss and compost
  - Improve soil structure
  - Increase cation exchange capacity
  - Adjust soil pH

### Top Dressing



Veeck Park Spring 2011

### Top Dressing



Veeck Park Fall 2012

### Over seeding

- Seed is chosen based on soil structure, water availability and use
- Perennial Rye and Bluegrass mix used on athletic fields
- Fescue mixes used on shaded areas
- Test out new varieties and mixes

### Over seeding



Robbins Park – Spring 2013

### Over seeding



Robbins Park – Fall 2013

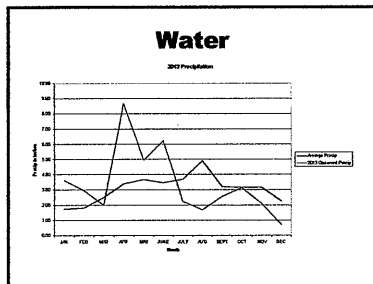
### Water

- Turf can require at least two inches of water per week
- 11 Village green spaces have irrigation systems
- A season of extremes (record spring rainfall, summer drought)
- Limit excessive irrigation

### Water

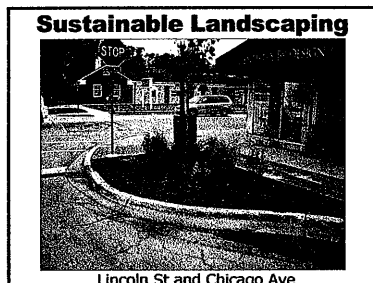
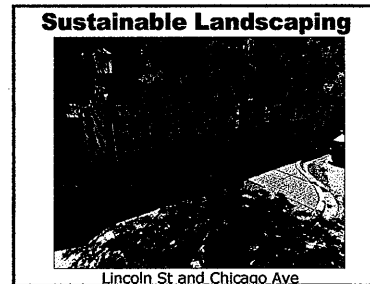


Drought stress at Stough Park



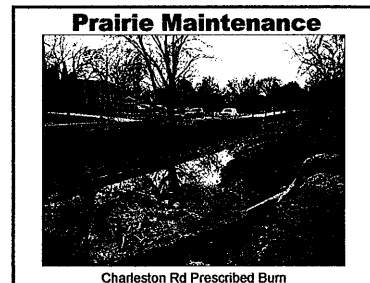
### Sustainable Landscaping

- 13 planting beds in the business district converted to sustainable landscaping
- New bed constructed at Lincoln St and Chicago Ave
- Provides aesthetic landscape with minimal maintenance
- Mulch was installed for multiple benefits



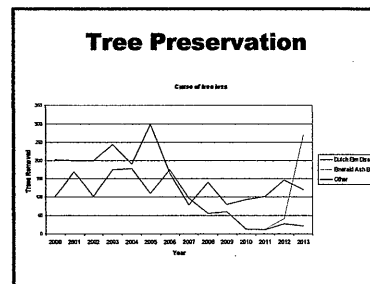
### Prairie Maintenance

- Performed prescribed prairie burns for Charleston Road Aquatic Garden and Jackson Street Prairie in April 2013
- Native plants root systems withstand heat
- Locations continue to improve quantity and quality of native plant species

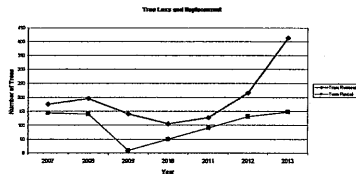


### Tree Preservation

- Emerald Ash Borer
  - Confirmed in February of 2011
  - 449 trees treated in 2013
  - Lost 270 trees
- Elm Program
  - 425 trees treated in 2013
  - Lost 20 public and 32 private
- 148 new trees were planted



## Tree Preservation



## Mosquito Abatement

- Cases of West Nile decreased in 2013
- 56 cases in Cook County
- 7 cases in DuPage County
- Mosquito abatement services include surveillance, monitoring, larva and adult control as necessary
- Investigate alternative natural larvacide

## Recommendations

- Turf Maintenance
  - Continue using corn gluten meal and Burn Out II as non-toxic herbicides
  - Continuing expanding soil testing to develop a long term soil amendment program
  - Approve the use of TriPower pesticide for fall 2014 application as necessary with prior notification
  - Reduce irrigation on unused athletic fields during summer months. Turf can remain dormant until fall athletics begin.
  - Continue testing new grass seed varieties for drought tolerance and pest resistance

## Recommendations

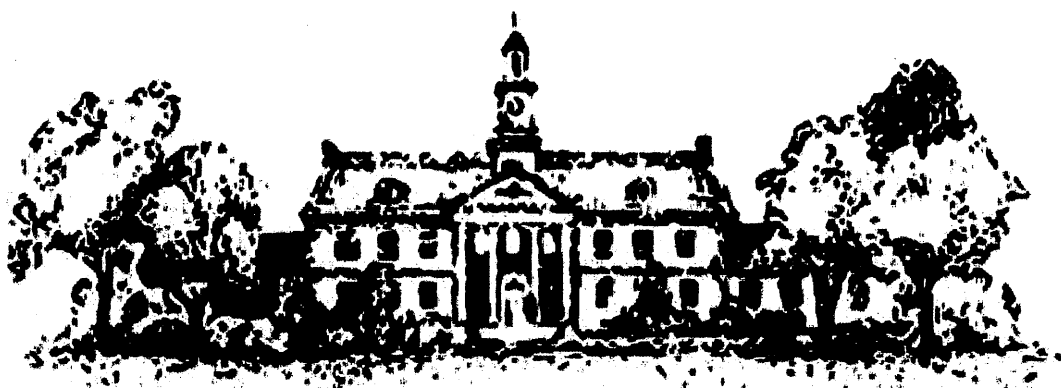
- Sustainable Landscaping
  - Monitor the aesthetic appearance of the 13 sustainable planting beds in the business district and replace perished material as necessary.
  - Incorporate sustainable plants to KLM entrance beds
  - Combine perennial (sustainable) and annual plantings to the Lincoln St and Chicago Ave planting bed and document progress.
  - Continue working with Girl Scout troops to monitor the health and appearance of the Ebert Park butterfly garden
  - Work with Village contractor Encap to monitor the health and appearance of the Woodlands rain gardens. Ensure any perished plant material is replaced per contract agreement.
  - Conduct prescribed burns at Charleston Road Aquatic Garden and Jackson Street Prairie in spring 2014

## Recommendations

- Tree Maintenance
  - Continue Emerald Ash Borer injections and document results
  - Continue elm preservation program
- Continue mosquito abatement program
- Other
  - Introduce Ebert Park as a pesticide free park
  - Seek assistance from outside groups to remediate the portion of Pierce Park behind the Wellness House as an appealing public vegetable garden
  - Convert 10 business district planting beds to self watering systems

## Questions?

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# **VILLAGE OF HINSDALE**

FOUNDED IN 1873

**Integrated Pest Management  
2013 Report**

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## 1. IPM Process

Integrated Pest Management or IPM is the control of insects, disease, weeds and other pests through environmentally sensitive practices. The Village of Hinsdale adopted an IPM policy on November 21, 1995 which requires an annual report from the Pest Management Coordinator. Listed in this report are practices used by the Village in order to maintain quality flora while limiting adverse affects on people and the environment. The IPM process consists of **action thresholds, identification, prevention and control**. The Village has developed a diverse program in order to manage a large scope of pests. This report contains IPM information regarding **turf maintenance, sustainable landscaping, prairie maintenance, tree preservation and mosquito abatement**.

The first step taken when developing an IPM program is setting **action thresholds**. An action threshold is the level of tolerance in which pest management action is needed. For example the Village sets action thresholds on all public green space turf. Thresholds are determined by turf density, weed population and appearance. Action (aeration, fertilization, weed control and over seeding) is taken when a particular area falls below a set threshold. Management methods that have the lowest environmental impact are used first, which include aeration and over seeding. It is important to note not every weed or insect needs to be managed. Many insects and weeds have beneficial properties which strengthen an ecosystem. Once a threshold falls below acceptable levels, proper identification is necessary when developing a control plan.

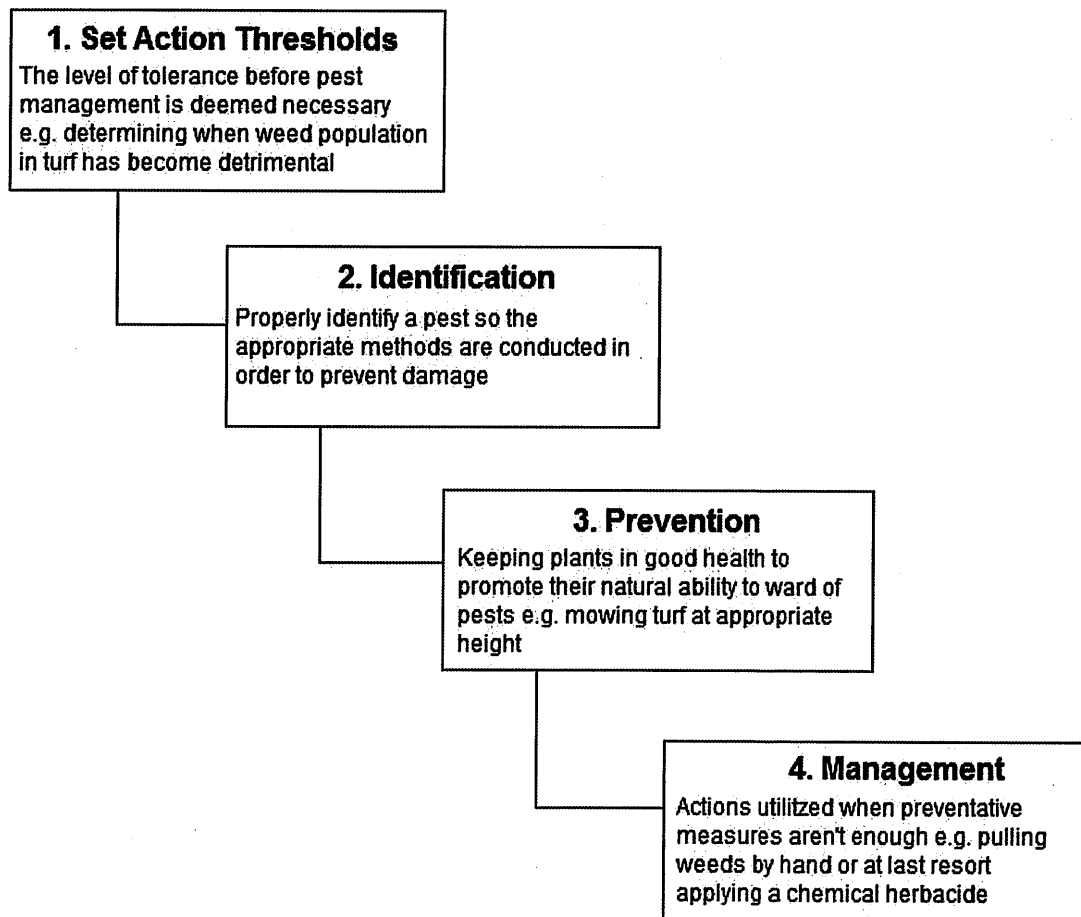
The next step of the IPM process is **identification**. A sound IPM program will first identify the source of a problem and then take necessary actions once the problem falls below the set action threshold. Good identification helps reduce the amount of applied pesticide by targeting the core problem. A specific weed or insect can be targeted in the most suitable manner for management. For example Crabgrass is best managed in a different season than Creeping Charlie. Understanding a pest's lifecycle gives the best opportunity for management. A pest's lifecycle cannot be determined unless it is properly identified. After identification, effective measures can be taken to prevent falling below action thresholds.

Many pests can be managed through proper **prevention**. Steps can be utilized to prevent pesticide action. Some actions may include selecting pest resistant varieties, cutting turf at appropriate length and conducting prescribed prairie burns on an annual basis. All plants have natural resistance to pests. Under a sound IPM program one should promote a plant's natural ability to ward off insects or diseases prior to any chemical use. For example tree limbs that are dead or decaying provide insect breeding grounds and often contain disease. Pruning such limbs will allow the tree to naturally

defend against other pests that may be present. When preventive measures aren't enough to ward off pests then management must be developed.

Once an action threshold is broken appropriate **management** should be taken. The first management approach should have the least amount of environmental impact. These methods include trapping insects or hand weeding. Target spraying of pesticides should be used as a last resort when all other methods of management fail. If a pesticide application is necessary it must be used in the appropriate manner. If the Village applies a pesticide, the work is completed by a reputable contractor who holds a State of Illinois Pesticide Applicator's License. A pesticide application is most effective during the appropriate lifecycle stage, thus reducing the chance for repeat applications. Management practices have been used in the Village's turf maintenance, tree preservation and mosquito abatement programs.

### The IPM Process



## 2. Turf Maintenance

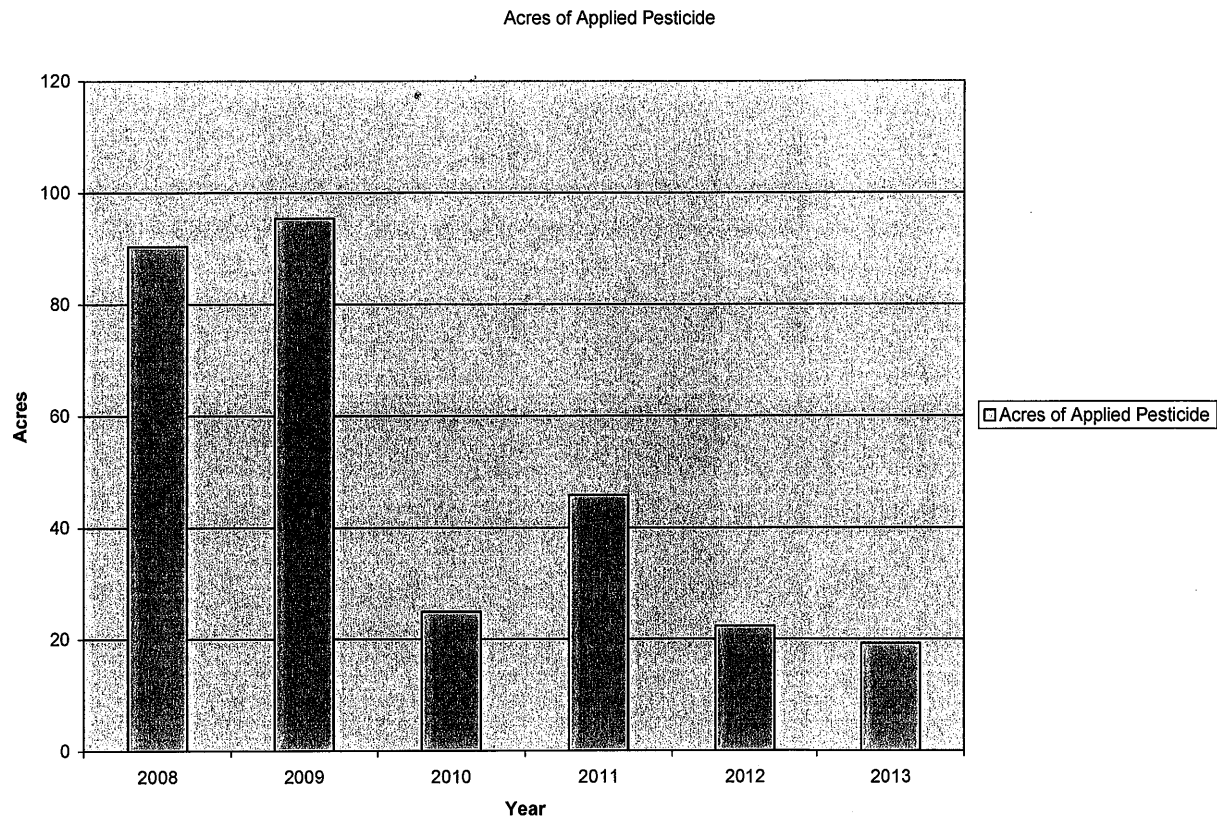
Maintaining turf is an ever changing process as new techniques are constantly being developed. Meticulous notes are extremely important when developing a turf maintenance program. The Village continues to take notes on turf conditions and all treatments used to improve or maintain turf grass. In 2013, the Village used non-organic pesticides and fertilizers as needed. In 2009 pesticides were applied to ninety five acres of Village green space. In 2013 the number of acres applied with pesticides has been reduced to nineteen, an eighty percent reduction. Three essential factors to consider when maintaining turf grass are **soil**, **seed** and **water**. All of these factors can be addressed first without the use of chemicals.

A critical component to consider when evaluating the health of any plant including turf grass is the **soil**. The Village conducts soil analysis tests on areas where turf grass is deficient and the underlying issues are not apparent. The analysis outlines what nutrients are available in the soil for plant growth. The test also includes soil pH and texture. The results show if a lawn is deficient in nutrients which could be corrected with fertilizer. A good soil composition contains 25% pore (air) space, 25% water and 50% soil solids. Soils in northern Illinois typically contain small clay particles which reduces pore space. Limited pore space adversely affects drainage. Stress occurs to plant roots when soil pore spaces are filled with water which is the result of poor drainage. The Village addresses poor soil composition and texture through top dressing and aerating. Aerating alleviates soil compaction by increasing soil pore space. Aeration is conducted by Village staff on green spaces. Aerating is extremely important for heavily used areas such as athletic fields. Top dressing areas with organic materials help improve soil quality. Organic materials in the soil have countless benefits. The combination of top dressing and aerating help alleviate clay issues and improve the soil composition. The IPM manger shall coordinate with the Parks and Recreation staff to ensure top dressing projects will not interfere with scheduled athletics.

The Village uses various **seed** blends to achieve success in quality turf. Seed is chosen based on soil structure, water availability and use of green space. Most of our fields use a blend of Perennial Rye and Bluegrass. The Village staff is constantly exploring new seed introductions to achieve success. Hinsdale has been aerating and over seeding for many seasons with positive results. Village staff spread over 750lbs of grass seed in 2013. Blue grass blends were used on athletic fields while fescue blends were used on other locations. Fescue blends have tolerate some shade while requiring less moisture. Replacing spent grass plants helps prevent weeds from establishing. A diverse mixture of grass plants helps protect turf from adverse conditions and pests.

**Water** is essential for any plant to grow and turf grass is no exception. Turf requires at least two inches of water every week. Rain was excessive in the Spring of

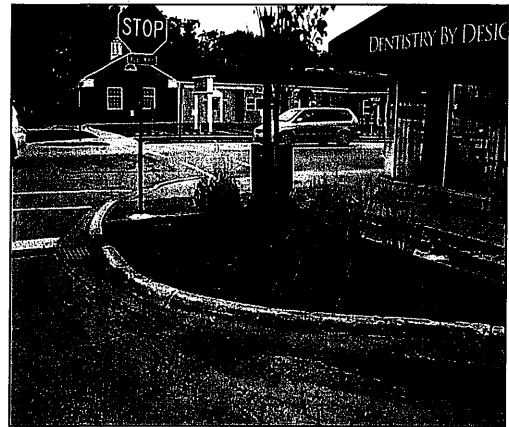
2013 followed up by drought conditions during the summer months. Drought conditions over the summer of 2013 significantly stressed Village turf areas. Some turf was allowed to become dormant in the summer heat and re-establish when conditions are right in the fall. Irrigated areas held up much stronger in the summer drought. Aerating and over seeding will help reestablish areas affected by the drought. Staff will continue aerating and over seeding during the spring of 2014 to help damaged green space recover.



**3. Sustainable Landscaping**

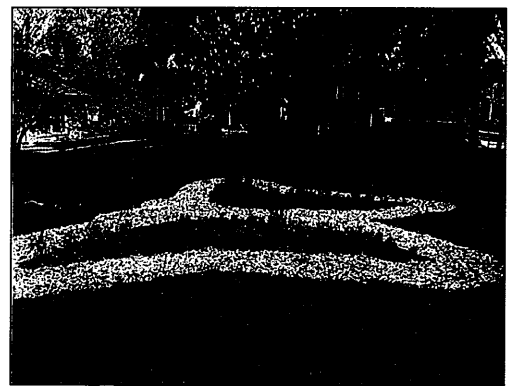
In May of 2012 Village staff converted 13 of 38 business district planting beds to sustainable landscaping. The Village did not have to purchase annual plants for these 13 beds in the spring of 2013. This annual savings on spring bulbs and annual flowers will amount to approximately \$4,000. Additionally, sustainable plants require less maintenance which saves the Village water and man hours. Staff installed shredded hardwood mulch in these beds in the fall of 2013. Mulch will further reduce the amount of labor necessary to maintain these beds. Mulched beds yield fewer weeds and simplify hand weeding.

In September 2013, Village staff constructed a new planting bed on the southeast corner of Chicago Ave and Lincoln Street. This planting bed helps establish uniformity between the southern and northern sections of the business district. The base plantings of this bed are sustainable. It includes a Japanese Tree Lilac, Boxwood shrubs, Viburnum shrubs and perennial plants and grasses. Spring flowering bulbs have also been installed. This bed will serve as a combination planting which will include the sustainable landscaping in addition to summer flowering annuals. If successful the Village could convert the remaining 25 annual beds to this type of combination planting. Benefits would include a reduction in annual cost for plant material and time spent on installation and watering. Progress will be documented throughout 2014 including seasonal pictures and presented to the EPS committee for further investigation.



*Planting Bed on Lincoln St and Chicago Ave*

Girl Scout Troop 1207 installed a butterfly garden at Ehert Park in June 2013. The Girl Scouts worked with Wingreen Landscapes and Village staff to complete this project. With the help of a Wingreen Landscape architect the troop designed a garden with many native plantings ideal for butterflies. The garden is also designed in the shape of a butterfly. The garden is an excellent addition to the park and it was quality learning experience for the troops.



*Ehert Park butterfly garden*

As part of the Woodlands reconstruction project various rain gardens were installed in the Spring of 2013. The gardens are filled with native plantings which help absorb rain water run off. A Village contractor will be maintaining these beds until fall of 2014. Maintenance includes plant establishment, pruning, replacing perished plant material and to monitor overall plant health. These plantings will take a few years to fully establish. Village staff will monitor Encap, the contractor, until maintenance duties are taken over in 2015.

#### 4. Prairie Maintenance



*Jackson St prescribed burn on April 5<sup>th</sup>, 2013*

Staff conducted prescribed prairie burns for The Charleston Road Aquatic Garden and The Jackson Street Prairie in April 2013. Prescribed burns are an effective form of weed control and also helps invigorate native plants. Positive results were shown as native plants began to establish by June. A permit to burn before November 13<sup>th</sup>, 2014 has already been granted by the Illinois EPA.

#### 5. Tree Preservation

On February 22, 2011, the Illinois Department of Agriculture (IDOA) confirmed an infestation of Emerald Ash Borer (EAB) in Hinsdale. EAB is a small, metallic green beetle native to Asia. Since EAB was discovered in Michigan in 2002, more than 20 million ash trees have been lost. The Village of Hinsdale has an estimated 14,860 trees on public property. This includes parkways, parks, street islands, alleys, and public easements. Of this total tree population there is approximately 1,600 trees in the ash group (green, white, and European ash) that are susceptible hosts to EAB, roughly 11% of the population. There are as many or more ash trees on private property. Few if any areas in the Village do not have ash trees in the parkways or lawns. Therefore the impact of tree loss caused by EAB may be felt by all residents.

The Village has been managing the threat of EAB in several ways: education and extension, incorporating management of the pest into the forestry program, and continued communication with other municipalities that have confirmed presence or are threatened by EAB infestation to examine their response to EAB in order to develop management strategies for Hinsdale.

In 2013, the Village treated 449 Ash trees with insecticides. These trees were treated either by soil injection or basal injection. Village staff is also working with the Morton Arboretum and the Illinois Department of Agriculture to generate new methods for controlling the insect. There is valuable information about this destructive pest included in this report. The Village has removed 270 ash trees due to EAB infestation this year and 322 infested ash since the pest has been distracted.

The Village lost 20 public elm trees and 32 private elm trees in 2013. Hinsdale treated 425 elms with fungicide. The loss of elm trees treated on a three year cycle has been minimal.

The number of trees planted in the Village increased in 2013. A total of 148 trees were planted. 88 trees were planted through the Village's annual planting program, 86 trees were planted through a grant of \$10,000 awarded to the Village, 11 trees were planted by residents through the reimbursement program, 7 trees were planted by Village crews in the Central Business District, 4 trees were planted through the Tribute Tree program and 3 trees were planted for Arbor Day celebrations.

#### Tree Removal History

YEAR	DED	EAB	OTHER	TOTAL
2013	22	270	121	413
2012	27	42	146	215
2011	12	13	102	127
2010	13		93	106
2009	60		80	140
2008	56		140	196
2007	97		79	176
2006	175		167	342
2005	110		299	409
2004	178		191	369
2003	175		244	419
2002	102		200	302
2001	169		200	369
2000	102		202	304
1999	107		unknown	107
1998	101		unknown	101
1997	121		unknown	121
1996	57		131	188
1995	193		unknown	193
1994	70		181	251
1993	55		unknown	55
1992	63		149	212
1991	119		116	235
1990	57		204	261
1989	44		149	193
1988	143		unknown	143
<b>TOTAL</b>	<b>2428</b>	<b>55</b>	<b>3194</b>	<b>5947</b>

#### Public Elm Injections

2006	21
2007	515
2008	466
2009	436
2010	225
2011	429
2012	326
2013	425

#### Public Ash Injections

2006	0
2007	0
2008	0
2009	0
2010	0
2011	0
2012	420
2013	449

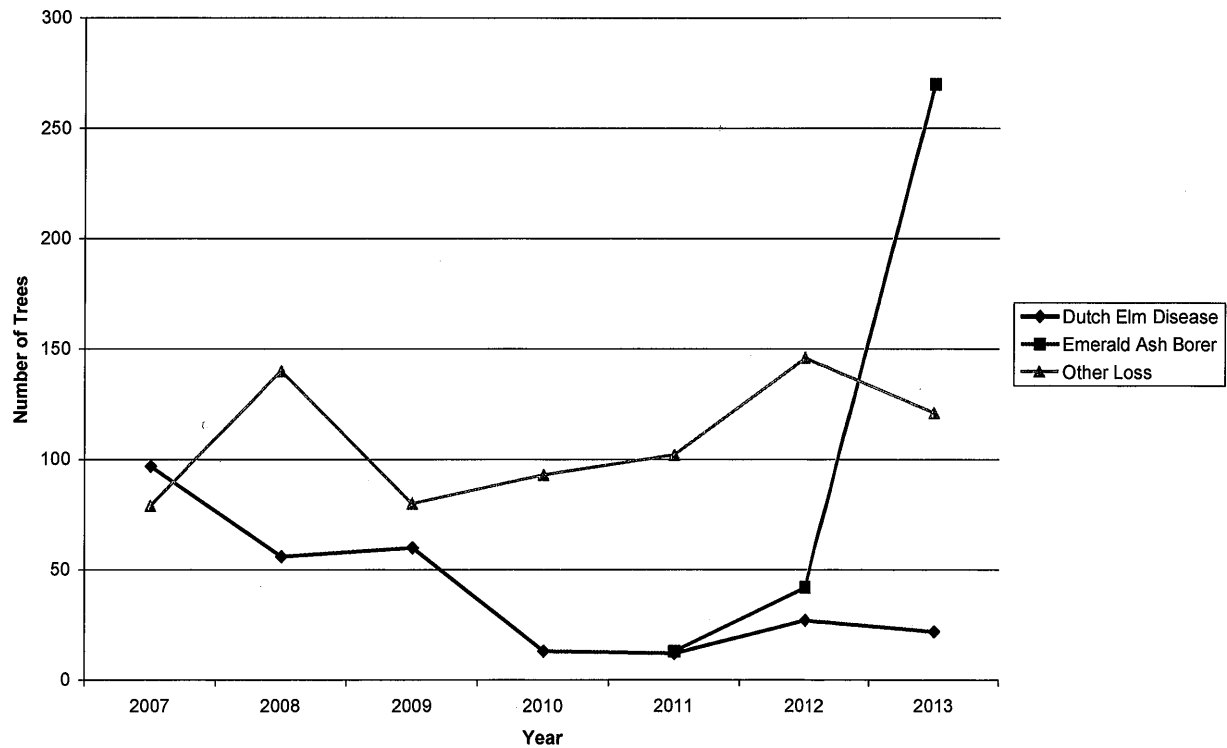
### Tree Planting

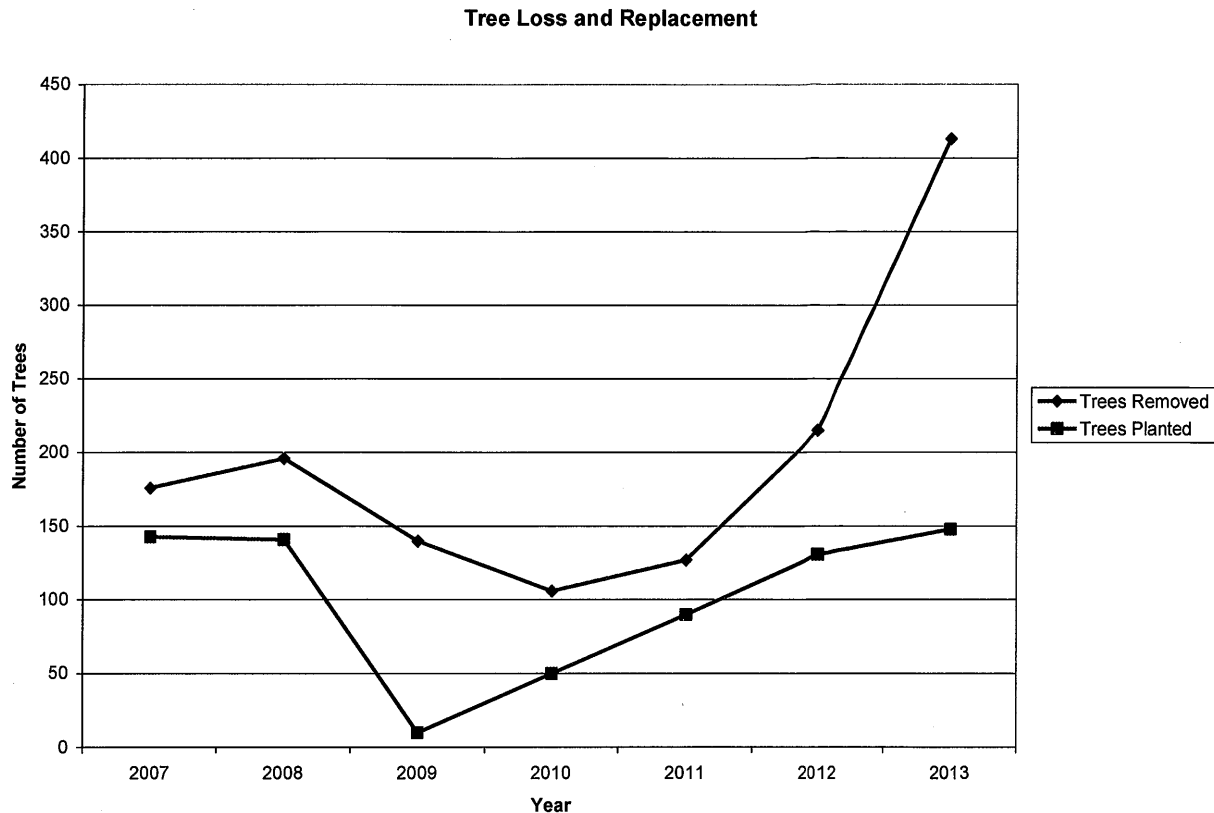
2013 Breakdown

Spring	86
Grant	37
Resident	11
Tribute	4
Arbor Day	3
CBD	7
<b>TOTAL</b>	<b>148</b>

2007	143
2008	141
2009	10
2010	50
2011	90
2012	131
2013	148
<b>TOTAL</b>	<b>565</b>

### Cause of Tree Removal





## 6. Mosquito Abatement

The Village's mosquito management program is completed by Clarke Mosquito Management, Inc. for the areas on DuPage County and the Desplaines Valley Mosquito Abatement District for the areas in Cook County. Mosquito abatement services which include surveillance, monitoring, larva and adult control as needed began in May and continued through September. Cases of West Nile Virus declined in 2013. A total of 112 human cases occurred in Illinois. There were 56 cases in Cook County and DuPage County reported 7 cases.

Clarke Mosquito Management has introduced a new portfolio of larvicides that contain naturally derived active ingredients. The product is named Natular and contains Spinosad, a product derived from a naturally occurring soil bacterium. Spinosad alters the function of insect receptors. Natular is the first larvacide evaluated as a Reduced Risk product by the EPA. Village staff will continue gathering information regarding this product and may elect its use in 2014 upon further review by the EPS committee.

## **7. 2014 Recommendations**

### **Turf Maintenance:**

1. Continue with grounds maintenance contracts for mowing and fertilizing
2. Continue using corn gluten meal and Burn Out II as non-toxic herbicides
3. Continue education on natural lawn care through various educational materials.
4. Further develop relationships within the industry to discuss new and innovative methods for naturally controlling pests.
5. Continuing expanding soil testing to develop a long term soil amendment program.
6. Approve the use of TriPower chemical pesticide for fall 2014 application as necessary.
7. Reduce irrigation on certain athletic fields when use subsides during summer months. Turf can remain dormant until fall athletics begin.
8. Continue testing new grass seed varieties for drought tolerance and pest resistance.

### **Sustainable Landscaping:**

1. Monitor the aesthetic appearance of the 13 sustainable planting beds in the business district and replace perished material as necessary.
2. Continue pruning sustainable plants and shrubs to encourage vigorous growth.
3. Incorporate sustainable plants to the KLM entrance beds in the spring of 2014.
4. Combine perennial (sustainable) and annual plantings to the Lincoln St and Chicago Ave planting bed and document progress.
5. Continue working with Girl Scout troops to monitor the health and appearance of the Ehert Park butterfly garden.
6. Work with Village contractor Encap to monitor the health and appearance of the Woodlands rain gardens. Ensure any perished plant material is replaced per contract agreement.

### **Prairie Maintenance:**

1. Conduct prescribed burns at Charleston Rd. aquatic garden and Jackson St. prairie in spring 2014.

### **Trees:**

1. Continue Emerald Ash Borer injections and document results.
2. Continue elm preservation program.

### **Mosquito Abatement:**

1. Investigate new environmentally sensitive mosquito controls and present to EPS for review.

Other:

1. Introduce Ehert Park as a pesticide free park and apply corn gluten meal in Spring of 2014.
2. Seek assistance from outside groups such as local scout troops and Community Services to reestablish the portion of Pierce Park behind the Wellness House as an appealing public vegetable garden.
3. All planting beds in the business district are currently watered by hand during the growing season. Staff is obtaining prices to install irrigation in the business district planting beds where water is readily available. Obtain price quotes to have self watering planting beds installed and present to EPS committee for review.

## **8. Annual Pest Management Review Meeting**

The November 1995 ordinance requires an annual review meeting to be held by the Environment and Public Services committee sometime before the end of February. The tentative date for this meeting will be Monday, February 10<sup>th</sup>, 2014. As the acting Pest Management Coordinator, I ask that any technical or scientific questions regarding the compliance report be submitted in writing, no less than seven days before the IPM Review Meeting. It is appropriate that the EPS Committee make a motion to approve the report. Proper notice will be given.

## **9. Proposed 2014 IPM Maintenance Schedule**

### February 10<sup>th</sup>, 2014

- a. IPM Annual Review Meeting

### March 3<sup>rd</sup>, 2014

- a. Seek permission to conduct prairie burns
- b. Submit prairie burn notification to Village of Hinsdale newspaper of general circulation
- c. Notify neighboring residents of upcoming prairie burns

### March 13<sup>th</sup>, 2014

- a. Conduct prairie burns on Jackson St and Charleston Rd (weather permitting)

### April 1<sup>st</sup>, 2014

- a. Begin aeration program
- b. Over seed depleted turf areas  
Rate: Varies per application

- c. Continue corn gluten meal testing
  - 1. Ehert Park turf
- d. Ash tree soil injections
  - Type: Xytect (EPA Reg 42750-117-74779)
  - Rate: 1.6 oz per 24-48" diameter

April 14<sup>th</sup>, 2014

- a. Spring Fertilization Program
  - 1. Apply as needed based on action thresholds
    - Type: Lesco 32-0-16
    - Rate: 0.5lbs N/1000ft<sup>2</sup>

June 1<sup>st</sup>, 2014

- a. Elm tree inoculation program
  - Type: Arbortech (EPA Reg 100-892)
  - Rate: 12 fl oz per 5 inches of diameter
- b. Ash tree injections
  - Type: Tree-äge (EPA Reg 100-1309-74578)
  - Rate: 10-15 ml of product per inch of diameter
- c. Mosquito abatement program
  - Type: VectoBac (EPA Reg 2724-375)
  - Rate: 0.25-2qts/acre
  - Type: Altosid (EPA Reg 1021-1688-8329)
  - Rate: 1 briquet/100ft<sup>2</sup> up to 2 ft water depth
  - Type: Anvil (EPA Reg 1021-1688-8329)
  - Rate: 1.9 oz/min at 5mph
- d. Second round of aeration program

August 1<sup>st</sup>, 2014

- a. Third round of aeration program
- b. Over seed depleted turf areas
  - Rate: Varies per application
- c. Athletic field maintenance
  - 1. Top dress resting athletic fields with organic materials

September 15<sup>th</sup>, 2014

- a. Fall fertilization program
  - 1. Apply as needed based upon action thresholds
    - Type: Lesco 24-0-16
    - Rate: 1lbs N/1000ft<sup>2</sup>

November 1<sup>st</sup>, 2014

- a. Fourth round aeration program
- b. Dormant seed depleted turf areas  
Rate: Varies per application
- c. Late fall fertilization program (excluding seeded areas)  
Type: Lesco 32-0-16  
Rate: 1.5lbs/1000ft<sup>2</sup>

## 10. Turf Condition Rating Summary

Unlike separate plots of farmland whose crops can be weighed and compared, turf areas are evaluated by the way they look, not what they produce. By definition any rating will be subjective. However, horticulturalists and other turfgrass professionals have developed a numerical rating system by which, plots of different grass seed mixes are compared in the National Turf Evaluation Program (NTEP). Several attributes of turf are rated on a 10-point scale then averaged together to create an overall number, which is used in comparisons, of for example, new variations of bluegrass.

Staff took a simplified approach, using only three attributes – turf density, weed content and overall appearance. Each attribute is rated from one (way below average) to 5 (way above average). Each turf area is classified by its use: high visibility, athletic, passive with foot traffic, passive without foot traffic or other.

Since 1996 sub-areas within locations have been identified and rated separately. A composite average equally weighing the three measures is computed next. An overall rating for each turf use is determined multiplying the sum of each place's rating average by its area and dividing by the total area of that turf use.

Here is a simple example of one turf type:

	Density	Weed	Appear.	Average	Area	Avg x Area
<b>Park A</b>	2	2	3	2.3	7 acres	16.1
<b>Park B</b>	3	3	3	3.0	1 acre	3.0
<b>Bldg C</b>	3	4	5	4.0	2 acres	8.0
					10 acres	27.1

Composite rating  $\frac{27.1}{10} = 2.71$

10

Goals based upon the rating system were established in 1999. These are the ideals to which the turf management program strives, but they are also based in reality. Lawns of green carpet are not appropriate everywhere. Next the objectives, the practical gauges by which progress is assessed were set. Neither the goals nor the objectives should change often. Maybe in time, sights can be set higher.

The goals are as follows:

- High visibility areas shall be treated to maintain a well above average rating (4.0).
- Athletic areas shall be treated to maintain an above average rating (3.5).
- Passive areas with foot traffic shall be treated to maintain an above average rating (3.5).
- Passive areas without foot traffic shall be treated to maintain an average rating (3.0).
- Other areas shall be treated as appropriate to their use.

The objectives are based on a three-year basis and are 80% of the goals. They are:

- |                                |                |
|--------------------------------|----------------|
| • High visibility              | 3.2            |
| • Athletic                     | 2.8            |
| • Passive with foot traffic    | 2.8            |
| • Passive without foot traffic | 2.4            |
| • Other                        | as appropriate |

The above numbers represent the action threshold. An action threshold is the point at which an IPM Coordinator should take action to improve the turf quality by increasing turf density, decreasing weed population, and/or improving overall appearance. Any area that falls below the action threshold should receive attention to bring the levels up to or above the action threshold. Methods that can help bring levels up to action threshold include: aerating, fertilizing (organic/inorganic), top dressing, overseeding, and weed control (organic/chemical).

Staff has discussed this methodology with its turf consultant, Dr. Fermanian. He thought the approach was reasonable and agreed that a three-year average is a long enough time frame to judge progress. Individual seasons of extreme weather may tilt study lengths of shorter duration.

The object of a turf management program is stability over time. Any activity influenced by weather will see periodic advances and declines. The goals and objectives allow the Village to look past the seasonal battles over turf growth to assess its long-term programmed approach reflected in the IPM policy. An analysis using these tools will reveal long-range trends.

## 11. Grounds Maintenance History

[illegible]





## 12. Acres of Activity

	SPRING 2007	FALL 2007	SPRING 2008	FALL 2008	SPRING 2009	FALL 2009	SPRING 2010	FALL 2010	SPRING 2011	FALL 2011	SPRING 2012	FALL 2012	SPRING 2013	FALL 2013
FERTILIZATION	0.0	132.7	0.0	114.3	130.4	130.8	122.3	130.8	120.3	123.3	120.3	90.9	20.4	79.3
WEED CONTROL	0.0	0.0	43.0	47.3	31.9	63.4	0.0	24.9	0.0	45.8	0.0	22.3	0.0	19.2
SEEDING	0.0	13.2	1.6	24.0	23.0	63.7	10.4	66.3	42.9	93.3	61.5	81.6	0.0	8.0
AERATE	45.7	38.0	50.9	119.8	111.4	111.4	9.1	112.2	28.2	106.7	38.7	90.9	3.7	18.0

## 13. Turf Evaluations

May-13

	Site Location	Turf Density	Weed Population	Appearance	Action Threshold	Rating	Recmd.
MEMORIAL BUILDING							
HV	NORTH	3	3	3	3.2	3.00	A,F,S
HV	SOUTH	3	3	3	3.2	3.00	A,F,S
HV	BURLINGTON PARK	4	4	4	3.2	4.00	A,F,S
P	SYMONDS DRIVE	2	2	2	2.4	2.00	A,F,S
HV	POLICE/FIRE BLDG	3	3	3	2.8	3.00	A,F,S
WATER PLANT							
HV	WEST OF PLANT	3	3	3	2.8	3.00	A,F
P	S ALONG SYMONDS	3	2	3	2.4	2.67	A,F
PF	RESERVOIR	3	3	3	2.8	3.00	A,F
P	PUB WORKS GARAGE	2	2	2	2.4	2.00	A,F,S
P	BRUSH HILL	2	3	2	2.4	2.33	A,F,S
PEIRCE PARK							
A	FAR EAST FIELDS	4	3	4	2.8	3.67	A,F
A	NEAR EAST FIELDS	4	3	4	2.8	3.67	A,F
PF	PASSIVE AREAS	2	3	3	2.8	2.67	A,F,S
A	WEST FIELD	4	3	3	2.8	3.33	A,F
P	RAVINE & CTY LINE	3	3	3	2.4	3.00	A,F
P	RAVINE & OAK	3	3	3	2.4	3.00	A,F
P	YORK & WALKER	1	2	1	2.4	1.33	A,S
P	MADISON @ OGDEN	2	1	1	2.4	1.33	A,S
BURNS FIELD							
A	ICE RINK	1	3	2	2.8	2.00	A,F,S
A	SOCCER AREA	4	3	4	2.8	3.67	A,F
A	PLAYGROUND	4	3	4	2.8	3.67	A,F
PF	FRINGE	4	3	4	2.8	3.67	A,F
STOUGH PARK							
A	ICE RINK	3	3	3	2.8	3.00	A,F
O	RAILROAD BANK	1	2	2	2.4	1.67	A,F
PF	EAST PASSIVE	2	3	3	2.8	2.67	A,F,S
PF	CENTRAL PASSIVE	3	3	3	2.8	3.00	A,F
PF	W HINSDALE STA	2	2	2	2.8	2.00	A,F,S,W
P	JACKSON: 4TH - 8TH	2	3	3	2.4	2.67	A,F,S
P	JACKSON PRAIRIE	3	3	3	2.4	3.00	A,S
A	MELIN PARK	4	4	4	2.8	4.00	A,S
A	DIETZ PARK	3	4	3	2.8	3.33	A,F
ROBBINS PARK							
A	NE - NORTH	2	3	3	2.8	2.67	A,F,S
A	NE - SOUTH	2	3	3	2.8	2.67	A,F,S
A	CENTRAL	2	3	2	2.8	2.33	A,F,S
A	SOUTHWEST	2	3	3	2.8	2.67	A,F,S
PF	PARKWAYS	3	4	3	2.8	3.33	A,S
A	FOOTBALL	2	3	2	2.8	2.33	A,F,S

## May-13

	Site Location	Turf Density	Weed Population	Appearance	Action Threshold	Rating	Recmd.
SWIMMING POOL							
PF	NORTH	3	3	3	2.8	3.00	A,F
PF	SOUTH	3	3	3	2.8	3.00	A,F
A	WEST	3	4	3	2.8	3.33	A,F
PF	EHRET PARK	2	2	2	2.8	2.00	A,F,S
P	HINS: STOUGH - GARF	1	2	2	2.4	1.67	A,F,S,W
HV	ELEANOR'S PARK	4	3	4	3.2	3.67	A,F
P	CHICAGO @ BNRR	3	3	3	2.4	3.00	A,F
HIGHLAND PARK							
PF	PASSIVE	3	3	3	2.8	3.00	A,F
PF	PARKWAYS	2	1	3	2.8	2.00	A,F,W,S
A	VEECK PARK	4	3	3	2.8	3.33	A,S
P	CHICAGO @ PRINCE	3	4	4	2.4	3.67	A,F
P	1ST & PRINCETON	2	3	3	2.4	2.67	A,F
P	3RD & PRINCETON	3	3	3	2.4	3.00	A,F
P	COLUMBIA: 1ST - 3RD	3	4	3	2.4	3.33	A,F
BROOK PARK							
A	PLAYING FIELD	2	3	3	2.8	2.67	A,F
PF	FRINGE AREAS	3	3	3	2.8	3.00	A,F,S
PF	6TH & PRINCETON	3	3	3	2.8	3.00	A,F
P	7TH & HARDING	3	3	3	2.4	3.00	A,F
PF	WOODLAND PARK	3	3	3	2.8	3.00	A,F
O	TAFT @ 55TH	1	1	1	n/a	n/a	n/a
P	7TH & WILSON		N/A Construction		n/a	n/a	n/a
O	CLEVELAND @ 55TH	1	1	1	n/a	n/a	n/a
PF	WOODLAND DR ISLES	3	3	3	2.8	3.00	A,F
P	DALEWOOD ISLAND	3	3	3	2.4	3.00	A,F
P	COUNTY LINE CT	1	1	1	n/a	n/a	n/a
O	PAMELA CIRCLE		n/a		n/a	n/a	n/a
PF	CHARLESTON RD	3	3	3	2.8	3.00	A,F
KLM PARK							
HV	NEAR BUILDINGS	3	3	3	3.2	3.00	A,F,S
HV	CONCERT HILL	4	3	3	3.2	3.33	A,F
A	NORTH OF CREEK	3	3	3	2.8	3.00	A,F,S
A	EAST PLAY AREA	3	3	3	2.8	3.00	A,F
PF	SOUTH OF ROAD	2	3	3	2.8	2.67	A,F,S
PF	4TH ST ISLANDS	3	3	3	2.8	3.00	A,F
P	OAK @ 9TH	2	2	1	n/a	n/a	n/a
P	ELM ; 9TH - 55TH	3	2	3	2.4	2.67	A,F
PF	WASHINGTON CIRC	3	3	3	2.8	3.00	A,F
O	WASHINGTON LOT	1	1	1	2.8	1.00	A,F,W,S
PF	PARKWAYS @ HMS	2	1	1	2.8	1.33	A,F,W,S
O	LINCOLN LOT	1	1	1	2.8	1.00	A,F,W,S
O	VILLAGE LOT	1	1	1	2.8	1.00	A,F,W,S
O	W OF POST CIRCLE	1	1	1	2.8	1.00	A,F,W,S
A	DUNCAN FIELD	3	2	2	2.8	2.33	A,F,S



= Area has a rating that falls below the Action Threshold. Action should be taken to remedy this.

A = Aerate

F = Fertilize

S = Seed

W = Weed Control

## July-13

	Site Location	Turf Density	Weed Population	Appearance	Action Threshold	Rating	Recmd.
<b>MEMORIAL BUILDING</b>							
HV	NORTH	2	3	3	3.2	2.67	A,F,W,S
HV	SOUTH	3	2	3	3.2	2.67	A,F,W,S
HV	BURLINGTON PARK	3	2	3	3.2	2.67	A,F,W,S
P	SYMONDS DRIVE	2	1	2	2.4	1.67	A,F,W,S
HV	POLICE/FIRE BLDG	3	2	2	2.8	2.33	A,F,W,S
<b>WATER PLANT</b>							
HV	WEST OF PLANT	4	4	4	2.8	4.00	A,S
P	S ALONG SYMONDS	2	2	2	2.4	2.00	A,F
PF	RESERVOIR	3	3	3	2.8	3.00	A,S
P	PUB WORKS GARAGE	2	3	3	2.4	2.67	A,S
P	BRUSH HILL	2	3	2	2.4	2.33	A,F,S
<b>PEIRCE PARK</b>							
A	FAR EAST FIELDS	3	2	3	2.8	2.67	A,F,W,S
A	NEAR EAST FIELDS	3	3	3	2.8	3.00	A,S
PF	PASSIVE AREAS	3	2	2	2.8	2.33	A,F,W,S
A	WEST FIELD	3	2	2	2.8	2.33	A,F,W,S
P	RAVINE & CTY LINE	3	3	3	2.4	3.00	A,S
P	RAVINE & OAK	2	3	3	2.4	2.67	A,S
P	YORK & WALKER	2	2	2	2.4	2.00	A,S
P	MADISON @ OGDEN	1	2	1	2.4	1.33	A,S
<b>BURNS FIELD</b>							
A	ICE RINK	2	3	2	2.8	2.33	A,F,S
A	SOCCER AREA	4	3	4	2.8	3.67	A,S
A	PLAYGROUND	3	3	3	2.8	3.00	A,S
PF	FRINGE	3	3	3	2.8	3.00	A,S
<b>STOUGH PARK</b>							
A	ICE RINK	4	3	3	2.8	3.33	A,S
O	RAILROAD BANK	2	2	2	2.4	2.00	A,S
PF	EAST PASSIVE	3	3	3	2.8	3.00	A,S
PF	CENTRAL PASSIVE	3	3	3	2.8	3.00	A,S
PF	W HINSDALE STA	2	1	1	2.8	1.33	A,F,W,S
P	JACKSON: 4TH - 8TH	3	3	3	2.4	3.00	A,S
P	JACKSON PRAIRIE	3	4	4	2.4	3.67	A,S
A	MELIN PARK	4	4	4	2.8	4.00	A,S
A	DIETZ PARK	3	4	3	2.8	3.33	A,S
<b>ROBBINS PARK</b>							
A	NE - NORTH	3	3	3	2.8	3.00	A,S
A	NE - SOUTH	3	2	3	2.8	2.67	A,F,S
A	CENTRAL	2	3	3	2.8	2.67	A,F,S
A	SOUTHWEST	3	3	3	2.8	3.00	A,S
PF	PARKWAYS	3	3	3	2.8	3.00	A,S
A	FOOTBALL	3	3	3	2.8	3.00	A,S

## July-13

	Site Location	Turf Density	Weed Population	Appearance	Action Threshold	Rating	Recmd.
	SWIMMING POOL						
PF	NORTH	3	3	3	2.8	3.00	A,S
PF	SOUTH	3	3	3	2.8	3.00	A,F,S
A	WEST	4	3	3	2.8	3.33	A,F,S
PF	EHRET PARK	2	2	2	2.8	2.00	A,S
P	HINS: STOUGH - GARF	2	2	2	2.4	2.00	A,S
HV	ELEANOR'S PARK	4	3	4	3.2	3.67	A,S
P	CHICAGO @ BNRR	2	1	2	2.4	1.67	
	HIGHLAND PARK						
							A,S
PF	PASSIVE	3	3	3	2.8	3.00	A,S
PF	PARKWAYS	2	1	2	2.8	1.67	A,S
A	VEECK PARK	3	4	3	2.8	3.33	A,S
P	CHICAGO @ PRINCE	3	4	4	2.4	3.67	A,F,W,S
P	1ST & PRINCETON	2	3	3	2.4	2.67	A,S
P	3RD & PRINCETON	3	3	3	2.4	3.00	A,F,W,S
P	COLUMBIA: 1ST - 3RD	3	4	3	2.4	3.33	
	BROOK PARK						
							A,F,S
A	PLAYING FIELD	3	2	3	2.8	2.67	A,F,W,S
PF	FRINGE AREAS	3	4	3	2.8	3.33	A,S
PF	6TH & PRINCETON	3	3	3	2.8	3.00	A,S
P	7TH & HARDING	3	3	3	2.4	3.00	A,S
PF	WOODLAND PARK	3	3	3	2.8	3.00	A,S
O	TAFT @ 55TH	1	1	1	n/a	n/a	A,S
P	7TH & WILSON		n/a		n/a	n/a	
O	CLEVELAND @ 55TH	1	1	1	n/a	n/a	A,F,S
PF	WOODLAND DR ISLES	3	3	3	2.8	3.00	A,S
P	DALEWOOD ISLAND	3	3	3	2.4	3.00	A,S
P	COUNTY LINE CT	1	2	1	n/a	n/a	N/A
O	PAMELA CIRCLE		n/a		n/a	n/a	N/A
PF	CHARLESTON RD	3	3	3	2.8	3.00	A,S
	KLM PARK						
HV	NEAR BUILDINGS	3	4	4	3.2	3.67	A,S
HV	CONCERT HILL	4	3	3	3.2	3.33	A,S
A	NORTH OF CREEK	4	3	3	2.8	3.33	A,S
A	EAST PLAY AREA	3	3	3	2.8	3.00	A,S
PF	SOUTH OF ROAD	3	3	3	2.8	3.00	A,S
PF	4TH ST ISLANDS	3	3	3	2.8	3.00	A,S
P	OAK @ 9TH	2	2	1	n/a	1.66	A,S
P	ELM ; 9TH - 55TH	3	2	3	2.4	2.67	A,S
PF	WASHINGTON CIRC	3	3	3	2.8	3.00	A,S
O	WASHINGTON LOT	1	1	1	2.8	1.00	A,F,W,S
PF	PARKWAYS @ HMS	2	1	1	2.8	1.33	A,F,W,S
O	LINCOLN LOT	1	1	1	2.8	1.00	A,F,W,S
O	VILLAGE LOT	1	1	1	2.8	1.00	A,F,W,S
O	W OF POST CIRCLE	1	1	1	2.8	1.00	A,F,W,S
A	DUNCAN FIELD	3	2	2	2.8	2.33	A,S



= Area has a rating that falls below the Action  
Threshold. Action should be taken to remedy this.

A = Aerate

F = Fertilize

S = Seed

W = Weed Control

# Nov-13

	Site Location	Turf Density	Weed Population	Appearance	Action Threshold	Rating	Recmd.
MEMORIAL BUILDING							
HV	NORTH	3	3	3	3.2	3.00	A,F,S
HV	SOUTH	4	3	3	3.2	3.33	A,F
HV	BURLINGTON PARK	3	4	4	3.2	3.67	A,F
P	SYMONDS DRIVE	3	3	3	2.4	3.00	A,S
HV	POLICE/FIRE BLDG	3	3	3	2.8	3.00	A
WATER PLANT							
HV	WEST OF PLANT	4	4	4	2.8	4.00	A
P	S ALONG SYMONDS	2	2	2	2.4	2.00	A,F,S
PF	RESERVOIR	4	3	3	2.8	3.33	A
P	PUB WORKS GARAGE	2	3	3	2.4	2.67	A
P	BRUSH HILL	2	3	2	2.4	2.33	A,F,S
PEIRCE PARK							
A	FAR EAST FIELDS	4	3	3	2.8	3.33	A,F
A	NEAR EAST FIELDS	4	4	4	2.8	4.00	A,F
PF	PASSIVE AREAS	3	4	3	2.8	3.33	A
A	WEST FIELD	4	3	3	2.8	3.33	A,F
P	RAVINE & CTY LINE	2	3	3	2.4	2.67	A,S
P	RAVINE & OAK	2	3	3	2.4	2.67	A,S
P	YORK & WALKER	2	2	2	2.4	2.00	A,S
P	MADISON @ OGDEN	1	1	1	2.4	1.00	A,S
BURNS FIELD							
A	ICE RINK	2	2	2	2.8	2.00	A,F,W,S
A	SOCCER AREA	4	4	4	2.8	4.00	A,F,S
A	PLAYGROUND	3	3	3	2.8	3.00	A,F
PF	FRINGE	4	4	3	2.8	3.67	A,F
STOUGH PARK							
A	ICE RINK	2	2	2	2.8	2.00	A,F,S
O	RAILROAD BANK	2	2	2	2.4	2.00	A,F,S
PF	EAST PASSIVE	3	3	3	2.8	3.00	A
PF	CENTRAL PASSIVE	4	3	3	2.8	3.33	A
PF	W HINSDALE STA	2	3	2	2.8	2.33	A,F,S
P	JACKSON: 4TH - 8TH	3	3	3	2.4	3.00	A
P	JACKSON PRAIRIE	3	3	3	2.4	3.00	A
A	MELIN PARK	4	3	3	2.8	3.33	A
A	DIETZ PARK	2	2	2	2.8	2.00	A,F,S
ROBBINS PARK							
A	NE - NORTH	3	3	3	2.8	3.00	A,F
A	NE - SOUTH	3	3	3	2.8	3.00	A,F
A	CENTRAL	2	3	3	2.8	2.67	A,F,S
A	SOUTHWEST	3	3	3	2.8	3.00	A,F
PF	PARKWAYS	4	3	4	2.8	3.67	A
A	FOOTBALL	2	3	3	2.8	2.67	A,F,S

# Nov-13

	Site Location	Turf Density	Weed Population	Appearance	Action Threshold	Rating	Recmd.
SWIMMING POOL							
PF	NORTH	3	3	3	2.8	3.00	A
PF	SOUTH	3	3	3	2.8	3.00	A
A	WEST	4	3	3	2.8	3.33	A
PF	EHRET PARK	2	3	2	2.8	2.33	A,F,S
P	HINS: STOUGH - GARF	1	2	2	2.4	1.67	A,F,S
HV	ELEANOR'S PARK	4	3	3	3.2	3.33	A
P	CHICAGO @ BNRR	4	4	4	2.4	4.00	A
HIGHLAND PARK							
PF	PASSIVE	3	3	3	2.8	3.00	A
PF	PARKWAYS	3	3	3	2.8	3.00	A
A	VEECK PARK	1	4	2	2.8	2.33	A,F,S
P	CHICAGO @ PRINCE	4	4	4	2.4	4.00	A
P	1ST & PRINCETON	2	3	3	2.4	2.67	A,S
P	3RD & PRINCETON	2	3	3	2.4	2.67	A,S
P	COLUMBIA: 1ST - 3RD	3	3	3	2.4	3.00	A
BROOK PARK							
A	PLAYING FIELD	1	3	1	2.8	1.67	A,F,S
PF	FRINGE AREAS	3	4	4	2.8	3.67	A
PF	6TH & PRINCETON	4	3	3	2.8	3.33	A
P	7TH & HARDING	2	3	3	2.4	2.67	A
PF	WOODLAND PARK	2	3	3	2.8	2.67	A,S
O	TAFT @ 55TH	1	2	1	n/a	1.33	N/A
P	7TH & WILSON	3	3	3	n/a	3.00	A
O	CLEVELAND @ 55TH	1	1	1	n/a	1.00	N/A
PF	WOODLAND DR ISLES	3	3	3	2.8	3.00	A
P	DALEWOOD ISLAND	3	2	3	2.4	2.67	A
P	COUNTY LINE CT	1	2	2	n/a	1.67	N/A
O	PAMELA CIRCLE		n/a		n/a		N/A
PF	CHARLESTON RD	3	3	3	2.8	3.00	A
KLM PARK							
HV	NEAR BUILDINGS	2	3	3	3.2	2.67	A,F,S
HV	CONCERT HILL	4	3	3	3.2	3.33	A
A	NORTH OF CREEK	2	2	2	2.8	2.00	A
A	EAST PLAY AREA	3	3	3	2.8	3.00	A
PF	SOUTH OF ROAD	2	3	3	2.8	2.67	A,S
PF	4TH ST ISLANDS	4	3	3	2.8	3.33	A
P	OAK @ 9TH	2	2	2	n/a	2.00	A
P	ELM ; 9TH - 55TH	3	3	3	2.4	3.00	A
PF	WASHINGTON CIRC	2	3	3	2.8	2.67	A,S
O	WASHINGTON LOT	2	3	3	2.8	2.67	N/A
PF	PARKWAYS @ HMS	2	2	2	2.8	2.00	A,S
O	LINCOLN LOT	2	3	3	2.8	2.67	A,S
O	VILLAGE LOT	3	2	3	2.8	2.67	A,S
O	W OF POST CIRCLE	2	3	2	2.8	2.33	A,S
A	DUNCAN FIELD	3	2	3	2.8	2.67	A,S



= Area has a rating that falls below the Action Threshold. Action should be taken to remedy this.

A = Aerate

F = Fertilize

S = Seed

W = Weed Control

# 14. Weather Data

## 2012-2013 WEATHER DATA 2013 PRECIPITATION TOTALS IN INCHES 2013 TEMPERATURES IN °F

	AVERAGE		OBSERVED	
JAN	2013	1.73	3.63	210%
FEB	2013	1.79	2.96	165%
MAR	2013	2.50	2.00	80%
APR	2013	3.38		257%
MAY	2013	3.68	4.96	135%
JUNE	2013	3.45	6.23	181%
JULY	2013	3.70	2.22	60%
AUG	2013	4.90	1.69	34%
SEPT	2013	3.21	2.57	80%
OCT	2013	3.15	3.12	99%
NOV	2013	3.15	2.09	66%
DEC	2013	2.25	0.70	31%
ANNUAL TOTAL		36.89	40.85	111%

	AVERAGE		OBSERVED	
JAN	2013	23.8	26.6	112%
FEB	2013	27.7	26.1	94%
MAR	2013	37.9	32.6	86%
APR	2013	48.9	46.9	96%
MAY	2013	59.1	61.0	103%
JUNE	2013	68.9	68.5	99%
JULY	2013	74.0	73.2	99%
AUG	2013	72.4	73.0	101%
SEPT	2013	64.6	67.2	104%
OCT	2013	52.5	53.1	101%
NOV	2013	40.3	37.5	93%
DEC	2013	27.7	22.9	83%
ANNUAL TOTAL				97.60%

## 2012 PRECIPITATION TOTALS IN INCHES

	AVERAGE		OBSERVED	
JAN	2012	1.73	1.86	108%
FEB	2012	1.79	1.64	92%
MAR	2012	2.50	2.68	107%
APR	2012	3.38	1.65	49%
MAY	2012	3.68	4.38	119%
JUNE	2012	3.45	0.90	26%
JULY	2012	3.70	3.66	99%
AUG	2012	4.90	2.07	42%
SEPT	2012	3.21	1.76	55%
OCT	2012	3.15	3.15	100%
NOV	2012	3.15	0.95	30%
DEC	2012	2.25	2.21	98%
ANNUAL TOTAL		36.89	26.91	73%

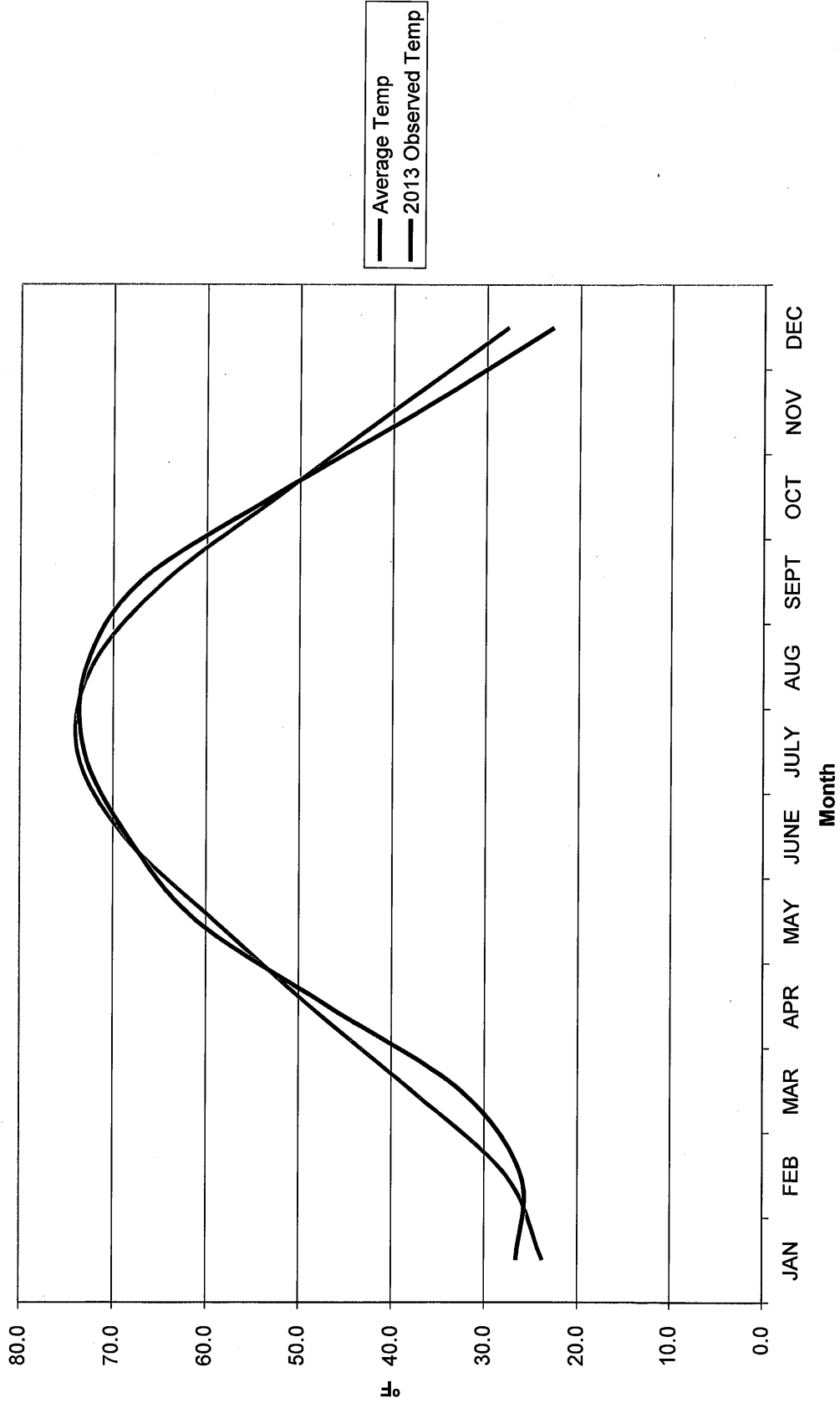
= RECORD

FIGURES WERE OBTAINED FROM THE NATIONAL WEATHER SERVICE

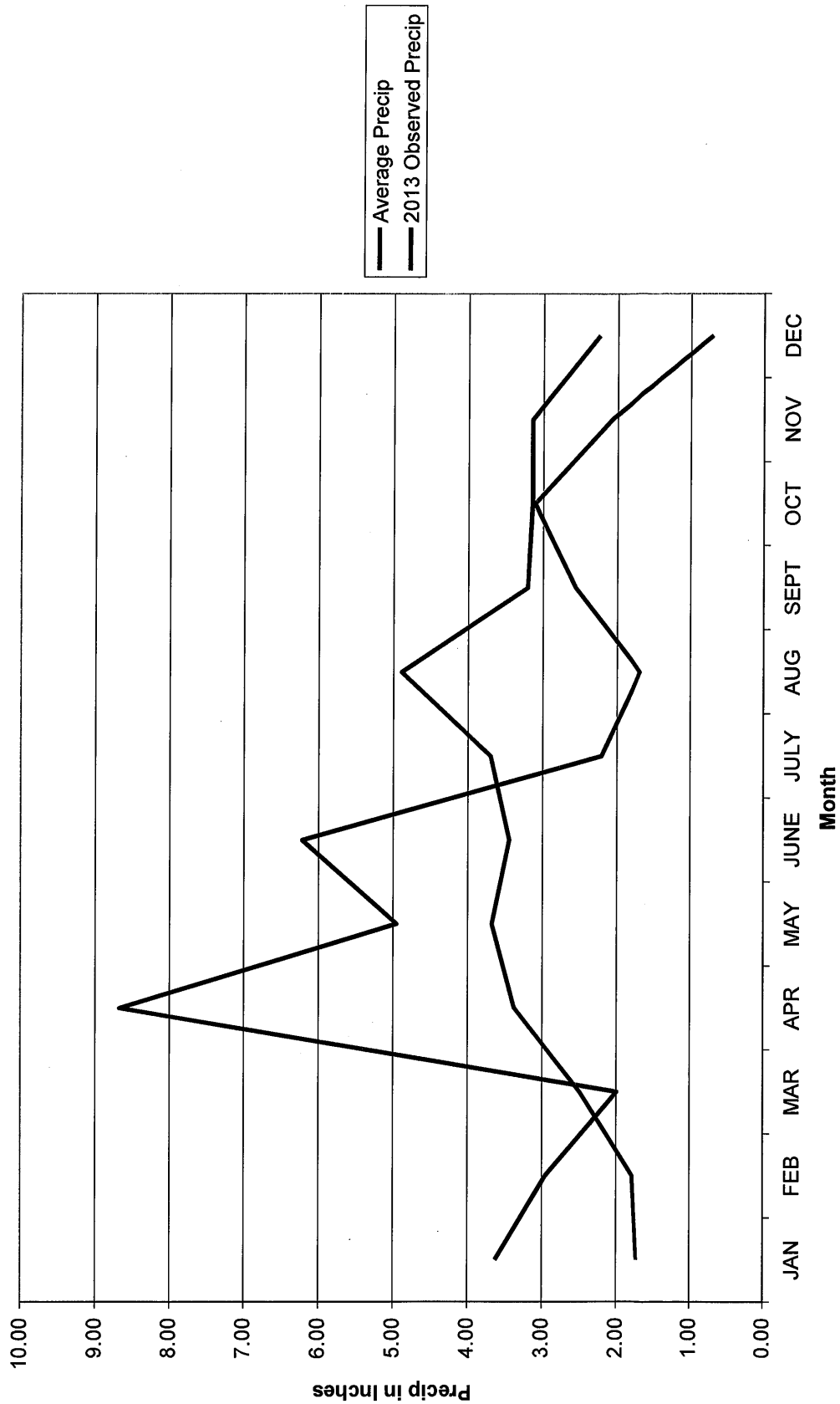
## 2012 TEMPERATURES IN DEGREES FAHRENHEIT

	AVERAGE		OBSERVED	
JAN	2012	23.8	30.2	127%
FEB	2012	27.7	32.9	119%
MAR	2012	37.9	53.5	141%
APR	2012	48.9	50.7	104%
MAY	2012	59.1	65.6	111%
JUNE	2012	68.9	73.9	107%
JULY	2012	74.0	81.1	110%
AUG	2012	72.4	73.3	101%
SEPT	2012	64.6	64.1	99%
OCT	2012	52.5	51.5	98%
NOV	2012	40.3	40.5	100%
DEC	2012	27.7	36.1	130%
ANNUAL TOTAL				112.31%

## 2013 Temperatures



# 2013 Precipitation



## **15. Contact Information**

If any individual ever has any questions or would like additional information please contact:

Ralph Nikischer  
Village Horticulturalist  
Village of Hinsdale  
19 E Chicago Ave  
Hinsdale, IL 60521  
630-789-7042  
[rnikischer@villageofhinsdale.org](mailto:rnikischer@villageofhinsdale.org)

## **16. EAB Information (Attached)**

## **16. Labels and Safety Data Sheets (Attached)**

You Can Help<sub>too</sub>

# Do Not Move Firewood!

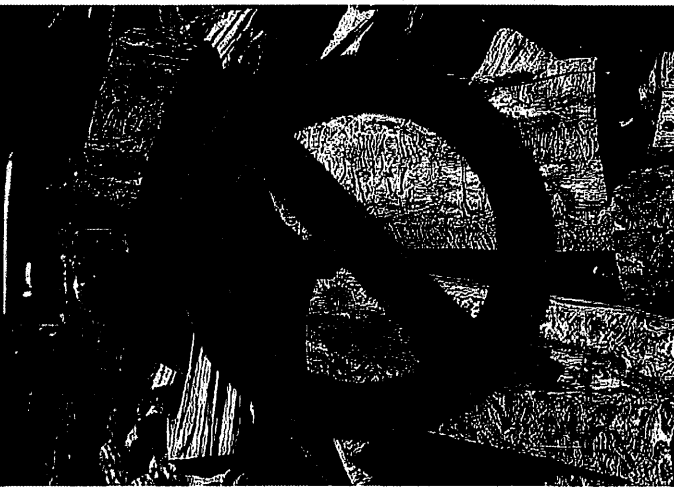


Photo: Canadian Food Inspection Agency

- Emerald ash borer can easily be transported in ash logs.
- Purchase firewood locally from a known source.
- Be sure to use all of the firewood in the cold months so that no hidden emerald ash borer larvae or adults can survive on logs left through the spring.
- Monitor the health of ash trees. Look for dead and dying branches at the top of the tree's crown.

## If You Think You Have Emerald Ash Borer:

- For assistance in identifying suspect insects visit [www.emeraldashborer.info/](http://www.emeraldashborer.info/) or [www.na.fs.fed.us/fhnp/eab/](http://www.na.fs.fed.us/fhnp/eab/)
- Call the national EAB hotline 866-EAB-4512
- Contact Illinois Department of Agriculture's Pesticide Hotline at 800-641-3934 or in the Chicago area use 312-74BEETL (312-742-3385)
- Contact your city or village forester or arborist for assistance.
- Contact the University of Illinois Extension Service office in your county. Find a nearby office at <http://web.extension.uiuc.edu/cie2/offices/findoffice.cfm> or by calling 217-333-5900
- Contact a certified arborist. You may find one nearby at [www.isa-arbor.com/findArborist/findarborist.aspx](http://www.isa-arbor.com/findArborist/findarborist.aspx)
- Or contact The Morton Arboretum Plant Clinic at 630-719-2424



For more information about The Morton Arboretum  
visit [www.mortonarb.org](http://www.mortonarb.org)

The Morton Arboretum  
4100 Illinois Route 53, Lisle, IL 60532-1293



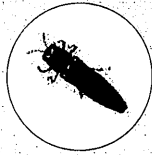
## Stop the Borer, Save Ash Trees



# Emerald Ash Borer

## Emerald Ash Borer

The emerald ash borer, (*Agrius planipennis* Fairmaire) is a small (1/2 inch long, 1/8 inch wide) metallic green beetle native to Asia. Though it was first found in Michigan in 2002, it was likely that a beetle population had been established in the Detroit area for many years prior. More than 15 million ash trees have been killed. It has been also detected in Ohio, Indiana, Virginia, Maryland, and Ontario, Canada.



Actual size

## Biology

The adult emerald ash borer emerges in

May – July and the female lays numerous eggs in bark crevices and between layers of bark.

The eggs hatch in 7 – 10 days and larvae bore into the tree where they chew the inner bark and phloem creating serpentine galleries as they feed.

This cuts off the flow of water and nutrients in the tree, causing dieback and death.



Larva

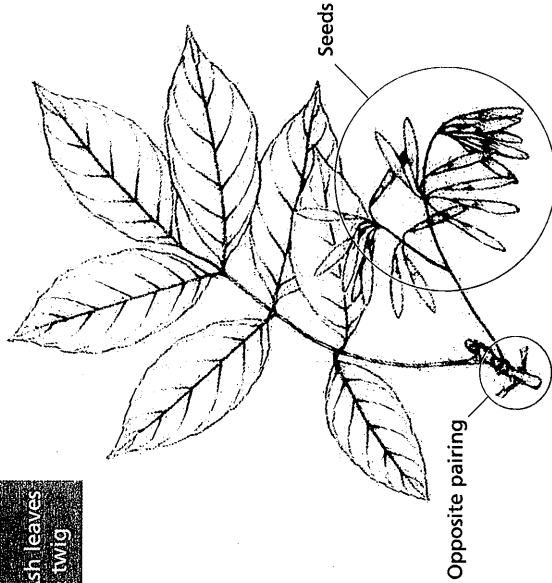


S-shaped galleries

## Ash Trees

Ash trees are very common in landscapes and most species, namely white ash (*Fraxinus americana*) and green ash (*F. pennsylvanica*) are native to Illinois forests. It is estimated that as much as 20% of street trees in the Chicago area are ash.

Ash leaves & twig



Opposite pairing

Seeds

## Characteristics of ash:

- Compound leaves made up of small, glossy green leaflets.
- Leaves, twigs and branches grow in opposite pairs.
- Bark of mature trees is gray and furrowed, often appearing in a diamond pattern.
- Some ash trees will produce small canoe paddle-shaped seeds.
- Seedless ash trees may develop ash flower galls that turn from green to brown and may persist in the crown throughout the year.

## Signs and Symptoms

The most visible sign of infestation is crown dieback, which appears after the first year. Branches at the top of the crown will die and more branches will die in subsequent years. Typically, the tree will be completely dead in about three years, though suckers will sprout from the base of the tree and on the trunk. The bark may also split vertically and woodpeckers may feed on the beetle leaving visible damage on the bark. Treatments with insecticides are being studied. However, all ash trees proximate to any new infestation will be lost.

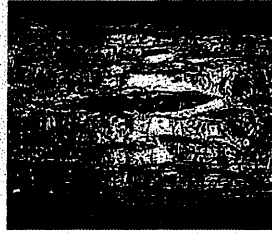
Adult beetles emerging from trees will leave a very small, 1/8 inch diameter distinctly "D" shaped exit hole that may appear anywhere on the trunk or upper branches.



Dieback



Epicormic branching or suckers



Bark splits



Emergence hole - Shown actual size of 1/8" and D-shaped

## Other Stressors:

Ash trees may suffer from a large number of pest and disease problems that cause similar symptoms. Native borers also attack ash trees, though they leave larger exit holes up to a 1/4 inch in diameter that are usually circular or oval in shape.



GARDENA, CA  
NEW BRUNSWICK, NJ

# Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment
		 See Section 15.

Section 1. Chemical Product and Company Identification			Page Number: 1
Common Name/ Trade Name	Corn Gluten Meal	Catalog Number(s).	C3846
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS#	6071-96-3
Commercial Name(s)	Not available.	RTECS	Not available.
Synonym	Corn Gluten	TSCA	TSCA 8(b) inventory: Corn Gluten Meal
Chemical Name	Glutens, Corn	CI#	Not available.
Chemical Family	Not available.	<b>IN CASE OF EMERGENCY</b> <b>CHEMTREC (24hr) 800-424-9300</b> CALL (310) 516-8000	
Chemical Formula	Not available.		
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248		

Section 2. Composition and Information on Ingredients					
		Exposure Limits			
Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) Corn Gluten Meal	6071-96-3				100
Toxicological Data on Ingredients Not applicable.					

Section 3. Hazards Identification	
Potential Acute Health Effects	Slightly hazardous in case of eye contact (irritant), of inhalation. Non-irritant for skin. Non-hazardous in case of ingestion.
Potential Chronic Health Effects	<b>CARCINOGENIC EFFECTS:</b> Not available. <b>MUTAGENIC EFFECTS:</b> Not available. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Continued on Next Page

**Section 4. First Aid Measures**

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin Contact	Wash with soap and water. Get medical attention if irritation develops.
Serious Skin Contact	Not available.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Not available.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Serious Ingestion	Not available.

**Section 5. Fire and Explosion Data**

Flammability of the Product	May be combustible at high temperature.
Auto-Ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence of heat.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Section 6. Accidental Release Measures**

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

**Section 7. Handling and Storage**

Precautions	Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

**Section 8. Exposure Controls/Personal Protection**

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Safety glasses. Lab coat. Gloves (impervious). Respiratory protection is not necessary for normal handling and with adequate room ventilation. A dust respirator is recommended if ventilation is inadequate and/or if handling of material generates visible dust clouds.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

**Section 9. Physical and Chemical Properties**

Physical state and appearance	Solid. (Solid powder.)	Odor	Not available.
Molecular Weight	Not available.	Taste	Not available.
pH (1% soln/water)	Not available.	Color	Yellow with a brown cast
Boiling Point	Not available.		
Melting Point	Not available.		
Critical Temperature	Not available.		
Specific Gravity	Not available.		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	Not available.		
Solubility	Not available.		

**Section 10. Stability and Reactivity Data**

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Excess heat, incompatible materials
Incompatibility with various substances	Reactive with oxidizing agents.
Corrosivity	Not available.

Continued on Next Page

**Corn Gluten Meal**

Page Number: 4

Special Remarks on  
Reactivity

Not available.

Special Remarks on  
Corrosivity

Not available.

Polymerization

Will not occur.

**Section 11. Toxicological Information**

Routes of Entry

Inhalation. Ingestion.

Toxicity to Animals

LD50: Not available.  
LC50: Not available.

Chronic Effects on Humans

Not available.

Other Toxic Effects on  
Humans

Slightly hazardous in case of inhalation.  
Non-irritant for skin. Non-hazardous in case of ingestion.

Special Remarks on  
Toxicity to Animals

Not available.

Special Remarks on  
Chronic Effects on Humans

Not available.

Special Remarks on other  
Toxic Effects on Humans

Acute Potential Health Effects:  
Skin: Not likely to cause skin irritation.  
Eyes: Dust may cause eye irritation by mechanical action.  
Inhalation: Not expected to be an inhalation hazard for normal handling. Dust may cause respiratory tract irritation by mechanical action.  
Ingestion: Non-hazardous. Ingestion of large amounts may cause gastrointestinal upset.

**Section 12. Ecological Information**

Ecotoxicity

Not available.

BOD5 and COD

Not available.

Products of Biodegradation

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products  
of Biodegradation

Not available.

Special Remarks on the  
Products of Biodegradation

Not available.

**Section 13. Disposal Considerations**

Waste Disposal

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14. Transport Information**

DOT Classification

Not a DOT controlled material (United States).

Identification

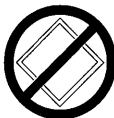
Not applicable.

Special Provisions for  
Transport

Not applicable.

**Continued on Next Page**

DOT (Pictograms)

**Section 15. Other Regulatory Information and Pictograms**

Federal and State Regulations

TSCA 8(b) inventory: Corn Gluten Meal  
 FDA: Direct Food Additives GRAS (21CFR184): Listed as Corn Gluten.  
 FDA: Everything Added to Food in the United States: Listed as Corn Gluten.

California Proposition 65 Warnings

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.  
 California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 266-116-0).  
 Canada: Listed on Canadian Domestic Substance List (DSL).  
 China: Not listed on National Inventory.  
 Japan: Not listed on National Inventory (ENCS).  
 Korea: Not listed on National Inventory (KECI).  
 Philippines: Listed on National Inventory (PICCS).  
 Australia: Listed on AICS.

Other Classifications

WHMIS (Canada) Not controlled under WHMIS (Canada).

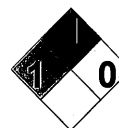
DSCL (EEC) This product is not classified according to the EU regulations. Not applicable.

HMIS (U.S.A.)

Health Hazard	1
Flame Hazard	1
Reactivity	0
Personal Protection	B

National Fire Protection Association (U.S.A.)

Health



Flammability

Reactivity

Specific hazard

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



ADR (Europe) (Pictograms)



Protective Equipment



Gloves (impervious).

Continued on Next Page



Lab coat.



Not applicable.

Safety glasses.

**Section 16. Other Information**

MSDS Code C0529

References Not available.

Other Special Considerations Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.

Printed 9/11/2006.

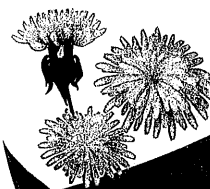
CALL (310) 516-8000

**Notice to Reader**

*All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.*

# St. Gabriel ORGANICS

EST. 1973



**OMRI**  
Listed  
Organic Materials Review Board  
For use in organic  
production

**PET**  
APPROVED  
BRAND

OMRI LISTED  
The National Organic  
Program (NOP) has  
approved this product  
for use in organic  
production. The NOP  
is a federal program  
that sets standards  
for organic products.

# BurnOut II

## Fast Acting Weed & Grass Killer CONCENTRATE

**DANGER: KEEP OUT OF REACH OF CHILDREN**

### FIRST AID

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**IF IN EYES:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**IF SWALLOWED:** Call a doctor or get medical attention. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention if irritation persists.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND ANIMALS

**DANGER:** Causes eye irritation. Wear safety glasses and gloves when applying. Do not get in eyes, on skin, or on clothing. Harmful if swallowed.

In case of contact, immediately flush eyes with plenty of water. Get medical attention if irritation persists. Wash thoroughly with soap and water after handling.

**ENVIRONMENTAL HAZARDS:** Avoid spraying directly into water.

**DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM.**

**PERSONAL PROTECTION EQUIPMENT (PPE):** Applicators and other handlers must wear appropriate protective eyewear, such as goggles or face shield, long sleeved shirt and long pants, waterproof gloves and shoes.

### STORAGE AND DISPOSAL

**Do not contaminate water, food, or feed by storage or disposal.**

**STORAGE:** Keep from freezing. Store only in original tightly sealed container and out of reach of children.

**PESTICIDE DISPOSAL:** Securely wrap original container in several layers of newspaper and discard in trash.

**CONTAINER DISPOSAL:** Do not reuse container (bottle). Rinse thoroughly before discarding in trash.

### DIRECTIONS FOR USE:

**DIRECTIONS FOR USE:** Mix 1 part BurnOut II Weed and Grass Killer concentrate to 3 parts water, (mixing ratio is 3:1). For older more established weeds a (2:1) mixing ratio may be required to kill target plants.

**BROAD CAST APPLICATIONS:** Spray BurnOut to run-off using tank sprayer; typically 35-75 gallons of spray solution per acre.

**BAND APPLICATION:** Using trigger sprayers, cover desired weeds and grasses as needed, typically 25-50 gallons per acre.

### SHAKE WELL BEFORE USING

BurnOut Weed & Grass Killer is non-selective to both broadleaf and grassy weeds and is recommended for areas such as borders, driveways, sidewalks, around mature tree bases, around buildings, in fence rows, in greenhouses, school grounds, and around flower beds.

BurnOut Weed & Grass Killer is fast acting. Foliar contact results in rapid desiccation of plant cell tissue, and top growth reduction of herbaceous perennial weeds and grasses. Re-treatment is required for control of established perennial weeds.

### FOR EARLY SEASON ANNUAL WEED CONTROL:

When weeds are small (3 to 5 leaf) and actively growing, apply BurnOut Weed & Grass Killer to the foliage of the weeds, making sure that all of the foliage is wet. Thorough coverage is necessary to achieve desirable control.

BurnOut Weed & Grass Killer is fast acting. It can be applied up to one hour before rainfall and still be effective. If it rains less than one hour after treatment, determine if the treated leaves are showing symptoms. If symptoms are not obvious, wait until the leaves dry and re-treat.

### FOR CONTROL OF LARGER ANNUALS AND BURNDOWN OF PERENNIAL WEED GROWTH:

Larger annual weeds and perennials are more difficult to control and may require retreatment.

Treat initially as recommended above and repeat if new growth of leaves appear. Thorough coverage of all foliage is necessary to achieve desirable control. Best results are achieved from spring / early summer applications to actively growing young weeds. Weeds that are mature, dormant, or hardened due to moisture stress are more tolerant of herbicide treatments. Only contacted vegetation will be affected. Rainfall within one hour or application will reduce degree of control.

Avoid application to reactive metals such as aluminum, tin, iron, or items such as fencing or lawn furniture in order to prevent staining, mottling, or otherwise interfering with finished metal surfaces.

**NOTE: All contacted vegetation will be affected. Avoid contact with desirable plants. Overspray or drift will injure or kill contacted vegetation.**

### TYPICAL WEEDS CONTROLLED

#### ANNUAL

##### Broadleaf Weeds

Black Medic  
Chickweed  
Cinquefoil (rough)  
Lamb's-quarters  
Mustard spp.  
Oxalis spp.  
Pigweed spp.  
Ragweed spp.

##### Annual Grasses

Crabgrass  
Foxtail spp.

#### PERENNIAL

##### Broadleaf Weeds

Cinquefoil (silvery)  
Dandelion  
Plantain spp.  
Toadflax  
Tufted vetch  
Wild carrot

##### Perennial Grasses

Bluegrass  
Quack grass

### CONDITIONS OF SALE

The label instructions for the use of this product reflect the opinion of experts based on research and field use. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, herbicide resistant weed preparations or the use or application of the product contrary to label instructions, all of which are beyond the control of St. Gabriel Organics. ALL SUCH RISKS WILL BE ASSUMED BY THE USER. St. Gabriel Organics shall not be responsible for losses or damages resulting from the use of this product in any manner not set forth on this label. User assumes all risks associated with the use of this product in any manner not specifically set forth on this label. St. Gabriel Organics warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above. St. Gabriel Organics DOES NOT MAKE OR AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ST. GABRIEL ORGANICS EXCLUSIVE REMEDY AND ST. GABRIEL ORGANICS EXCLUSIVE LIABILITY SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THIS PRODUCT.

This Product has not been registered by the United States Environmental Protection Agency. St. Gabriel Organics Represents That this product qualifies for exemption from registration with the Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act.

**St. Gabriel Organics**

14044 Litchfield Dr., Orange, VA 22960

1-800-801-0061 • [www.StGabrielOrganics.com](http://www.StGabrielOrganics.com)



# Material Safety Data Sheet

May be used to comply with

OSHA's Hazard Communication Standard,  
29 CFR 1910.1200. This Standard must be  
consulted for specific requirements.

## U.S. Department of Labor

Occupational Safety and Health  
Administration

(Non-Mandatory Form)

Form Approved

OMB No. 1218-0072

<b>IDENTITY</b> ( <i>As Used on Label and List</i> ) <b>ST. Gabriel Organics BurnOut II Concentrate</b> Active ingredient: Clove Oil 18%, Citric Acid 30% Inert ingredients: Mineral oil, (USP), Water, Gum Arabic Total other 52% Total 100%	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate this.
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### Section I

Manufacturer's Name: <b>St. Gabriel Organics</b>	Emergency Telephone Number <b>(800) 801-0061 Toll Free</b>
Address: <b>14044 Litchfield Drive</b>	Telephone Number for Information <b>(540) 672-0866</b>
<b>Orange, Virginia</b> <b>22960</b>	Date Revised: November 6, 2008 Revised by: Cathy A. Stiles

### Section II - Physical/Chemical Characteristics

<b>Boiling Point</b>	<b>Data not found</b>	<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	1.05
<b>Vapor Pressure (mm Hg.)</b>	<b>Data not found</b>	<b>Melting Point</b>	N/A
<b>Vapor Density (AIR = 1)</b>	<b>Data not found</b>	<b>Evaporation Rate (Butyl Acetate = 1)</b>	<1.0
<b>Solubility in Water</b> Not soluble – forms an emulsion			
<b>Appearance and Odor</b> <b>Appearance: Milky White      Odor: Clove smell</b>			

**Section III - Fire and Explosion Hazard Data**

<b>Flash Point (Method Used)</b> Not known	<b>Flammable Limits</b> Not tested	<b>LEL</b> N/A	<b>UEL</b> N/A
<b>Extinguishing Media</b> Foam, Carbon Dioxide, or Dry Chemical extinguishers			
<b>Special Fire Fighting Procedures</b> Self contained breathing apparatus.			
<b>Unusual Fire and Explosion Hazards</b> NONE			
<b>Hazardous Decomposition Products:</b> Acid Vapors, Carbon Dioxide, Carbon Monoxide			

**Section IV - Reactivity Data**

<b>Stability:</b> Reacts with organic and inorganic bases.			<b>Conditions to Avoid:</b> Contact with skin, eyes, or prolong inhalation. Do not ingest product.
<b>Incompatibility:</b> Bases and caustic compounds (alkaline compounds)			
<b>Hazardous Decomposition or Byproducts</b> None Known			
<b>Hazardous Polymerization</b> Will not occur.			

**Section V - Health Hazard Data**

<b>Route(s) of Entry:</b>	<b>Inhalation?</b> Yes	<b>Skin?</b> YES	<b>Ingestion?</b> YES
<b>Health Hazards:</b> Contact with this product will result in eye irritation. Contact with this product will cause severe skin irritation. Breathing vapors will cause significant respiratory irritation. Ingestion of this product could cause burns and destroy tissue in the mouth, throat, and digestive tract.			
<b>Carcinogenicity:</b>	<b>NTP?</b> N/A	<b>IARC Monographs?</b> N/A	<b>OSHA Regulated?</b> N/A

<p><b>Emergency and First Aid Procedures: Inhalation:</b> Remove person to fresh air. Seek immediate medical assistance.</p> <p><b>Ingestion:</b> Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinsing mouth with water and give milk or water to drink. If possible, do not leave individual unattended.</p> <p><b>Skin:</b> Immediately flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse and discard contaminated shoes.</p> <p><b>Eyes:</b> Immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Call a physician immediately.</p>

#### Section VI - Precautions for Safe Handling and Use

<p><b>Steps to Be Taken in Case Material is Released or Spilled:</b> Cover the contaminated surface with sodium bicarbonate or a soda ash/flaked lime mixture (50-50). Mix and add water if necessary to form a slurry. Scoop up slurry and wash site with soda ash solution. Proper mixing procedures are essential. Trained personnel should conduct this procedure. Untrained personnel should be removed from the spilled area.</p>
<p><b>Waste Disposal Method:</b>  <b>If Empty</b> - Do not reuse container. Place in trash or offer for recycling if available.  <b>If Partly Filled</b> – Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.</p>
<p><b>Precautions to be taken in Handling and Storing</b>  Avoid contact with eyes, skin or clothing. Keep bottle/container tightly closed and store in a cool, dry place.</p>
<p><b>Other Precautions</b>  NA</p>

## Section VII - Control Measures

<b>Ventilation:</b> Product for outdoor use only.	<b>Local Exhaust</b> N/A	<b>Special</b> N/A

<b>Protective Gloves:</b> Wear Neoprene, Nitrile, or oil/solvent resistant gloves.	<b>Eye Protection</b> Wear chemical goggles when handling the product and during application.
<b>Other Protective Clothing or Equipment:</b> Wear long sleeved shirt, long pants, socks and shoes.	

## Section VIII - Special Precautions

<b>Precautions to be taken in Handling and Storing:</b> Keep container tightly closed when not in use. Store only in the original container in a cool, dry place.

The above information is believed to be correct, but does not purport to be all inclusive. This data should be used only as a guide in handling this material. BurnOut II concentrate/St. Gabriel Organics shall not be held liable for any damage resulting from handling or from direct contact with this product.



# Tri-Power®

## Selective Herbicide

For selective broadleaf weed control in ornamental lawns and turf grasses. Also for woody plants, roadsides, and non-crop areas (as listed on this label).

**CONTROLS:** Dandelion, Chickweed, Black medick, Knotweed, Plantain, Oxalis, Clover, Cocklebur, Thistle and many other species of broadleaf weeds; some of which are listed on this label.

**CONTAINS MCPA, MECOPROP-p AND DICAMBA**

### ACTIVE INGREDIENTS:

Dimethylamine Salt of 2-Methyl-4-Chlorophenoxyacetic Acid* .....	40.42%
Dimethylamine Salt of (+)-R-2-(2-Methyl-4-Chlorophenoxy) propionic Acid** .....	7.99%
Dimethylamine Salt of Dicamba (3,6-Dichloro-o-Anisic Acid)*** .....	3.97%

**OTHER INGREDIENTS:** ..... 47.62%

**TOTAL:** ..... 100.00%

Isomer Specific Method, Equivalent to:

\*2-Methyl-4-Chlorophenoxyacetic Acid ..... 33.00%, 3.1 lbs/gal.

\*\*(+)-R-2-(2-Methyl-4-Chlorophenoxy) propionic Acid ..... 6.60%, 0.6 lbs/gal.

\*\*\*3,6-Dichloro-o-Anisic Acid ..... 3.30%, 0.3 lbs/gal.

†CONTAINS THE SINGLE ISOMER FORM OF MECOPROP-p.

**KEEP OUT OF REACH OF CHILDREN  
DANGER / PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC  
(800) 424-9300

For Medical Emergencies Only,  
Call (877) 325-1840

EPA Reg. No. 228-262

Manufactured for  
Nufarm Americas Inc.  
150 Harvester Drive  
Burr Ridge, IL 60527

  
**Nufarm**

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
DANGER / PELIGRO**

Corrosive causes irreversible eye damage. Do not get in eyes or on clothing. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

**All mixers, loaders, applicators and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Shoes plus socks, and
- Chemical-resistant gloves made of any waterproof material,
- Protective eyewear (goggles, face shield or shielded safety glasses)

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

**Users Should:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

**FIRST AID**

<b>IF IN EYES</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>

**POISON HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

**NOTE TO PHYSICIAN**

Probable mucosal damage may contraindicate the use of gastric lavage.

**ENVIRONMENTAL HAZARDS**

This pesticide may adversely affect non-target plants. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. READ ENTIRE LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS.

This product is for use on Ornamental Turf Lawns (Residential, Industrial and Institutional), Parks, Cemeteries, Athletic Fields and Golf Courses (Fairways, Aprons, Tees and Roughs); also for Woody Plants and Roadsides. Not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production or for research purposes.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Do not apply more than 3.87 pints of this product (1.5 lbs MCPA ae) per acre per year. Do not apply more than 2 applications per year.

The minimum retreatment interval of 30 days.

Aerial applications are prohibited.

## SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather- related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all factors when making decisions.

Apply only as medium or coarser sprays (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Apply only when the wind speed is 2 to 10 mph at the application site.

For ground applications: Do not apply with a nozzle height greater than 4 feet above the crop canopy.

### Temperature Inversions

If applying at wind speed less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

## USE PRECAUTIONS

Avoid drift of spray mist to vegetables, flowers, ornamental plants, shrubs, trees and other desirable plants. Do not pour spray solutions near desirable plants. Do not use on Dichondra, nor on lawns or turf where desirable clovers are present. Avoid fine mists. Use lawn type sprayer with coarse spray as wind drift is less likely. Avoid contact with exposed feeder roots of ornamentals and trees. Maximum control of weeds will be obtained from Spring or early Fall applications when weeds are actively growing. Use the higher rate for hard to control weeds. Do not exceed specified dosages for any area; be particularly careful within the dripline of tree and other ornamental species. Do not apply to newly seeded grasses until well established. Avoid broadcast applications when air temperature exceeds 90 degrees. When using small, spot treatment applications in temperature over 90 degrees, turf injury may occur.

When treating Carpetgrass and St. Augustine grass, avoid broadcast applications when air temperature exceeds 80 degrees. When air temperatures exceed 80 degrees, limit application to spot treatment only.

For optimum results: (1) avoid applying during excessively dry or hot periods unless irrigation is used; (2) avoid applying if rainfall is expected within 24 hours, nor should lawns be irrigated (watered) for 24 hours following application; (3) turf should not be mowed 1 to 2 days before and following application; (4) reseed no sooner than 3 to 4 weeks after application of this product. Adding oil, wetting agent, or other surfactant to the spray may be used to increase effectiveness on weeds, but doing so may reduce selectivity to turf resulting in turf damage. Clean and rinse spray equipment using soap or detergent and water, and rinse thoroughly before reuse for other sprays.

This product can be mixed with some liquid fertilizers or liquid iron materials. Because liquid fertilizers and liquid iron differ in pH, free ammonia content, density, salt concentration, and percentage of water, a compatibility test (given below) is recommended prior to mixing in the application equipment. All regulations, either State or Federal, relating to the application of liquid fertilizers or liquid iron and this product must be strictly followed. The following compatibility test should always be performed prior to full-scale mixing.

1. Pour 18 ounces of water into a quart jar.
2. Add 1 ounce of either the liquid fertilizer or liquid iron to be used.
3. Add 1 ounce of this product.
4. Close jar and shake well.
5. Watch the mixture for several seconds after shaking and check again after 30 minutes.
6. If the mixture does not show signs of separating, the combination may be used. If the mixture foams excessively, gels, separates or gets very thick, do not combine for field application.
7. Compatibility may be improved by the use of a compatibility agent. Some suggested compatibility agents to try are Kalo Laboratories' Complex, Farm Chemicals Inc.'s Compat, Harcross Chemicals' T-Mulz 734-2, Rigo Company's Rigo Compatibility Agent, Witco Chemical's Sponto 1 68D, Amoco Oil's Amoco Spray Mate and Universal Coop's Chem-Link. These agents are all used in the same manner. Follow the previously outlined test procedures and add 1/6 ounce of the compatibility agent between steps (the compatibility agent must be added to the fertilizer or iron before adding this product).
8. If the mixture does not separate, gel, foam or get very thick, it may be used for field application. Mix only the amount to be sprayed. Do not allow to stand overnight.

## WEEDS CONTROLLED

Bedstraw	Dog fennel	Lespedeza	Red clover	Wild carrot
Bindweed	English daisy	Mallow	Red sorrel	Wild garlic
Black medic	Florida pusley	Morningglory	Sheep sorrel	Wild geranium
Buckhorn	Frenchweed	Mustard	Shepherdspurse	Wild lettuce
Burdock	Goldenrod	Oxalis	Smartweed	Wild onion
Buttercup	Ground ivy	Pennywort	Speedwell	Wild radish
Canada thistle	Hawkweed	Peppergrass	Spurge	Wood sorrel
Carpetweed	Healall	Pepperweed	Spurweed	Yarrow
Chickweed	Heartleaf drymary	Pigweed	Stinging nettle	and many other
Chicory	Henbit	Plantain	Stitchwort	broadleaf weeds.
Clover	Jimsonweed	Poison ivy	Thistle	
Cocklebur	Knotweed	Poison oak	Toadflax	
Dandelion	Kochia	Purslane	Veronica	
Dock	Lambsquarter	Ragweed	Wild aster	

## ORNAMENTAL LAWNS AND TURFS

**Cool Season Grasses:** Apply this product at the rate of 2.5 to 3.87 pints in 20 to 240 gallons of spray solution per acre (0.9 to 1.5 fluid ounces in 0.5 to 4 gallons of water per 1,000 square feet) to control (or kill) weeds growing in ornamental lawn turf planted to Kentucky bluegrass, Perennial ryegrass, Tall fescue or Fine fescue.

**Warm Season Grasses:** Apply this product at the rate of 2 to 3 pints in 20 to 240 gallons of spray solution per acre (0.7 to 1.1 fluid ounces in 0.5 to 4 gallons of water per 1,000 square feet) to control weeds growing in Bermudagrass or Zoysiagrass. Applications to other grass species including Bahiagrass, Kikuyugrass, Buffalograss, Centipedegrass, Carpetgrass, or St. Augustinegrass should be avoided unless injury can be tolerated. Avoid applications to warm season grasses emerging from Winter dormancy unless a slight delay in Spring green-up can be tolerated.

**Bentgrass Turf (Other Than Golf Course Greens and Tees):** On closely mowed Bentgrass, apply this product at a maximum rate of 2-1/2 pints per acre (0.9 fluid ounces in 3 gallons of water per 1,000 square feet) in May or mid-August through September when weeds are actively growing. Exercise care when applying to avoid overdosing Bentgrass, or turf injury may result. Slight turf yellowing should disappear after about 1 week.

**Bentgrass Turf (Putting and Bowling Greens):** On closely mowed Bentgrass, apply this product at a maximum rate of 1 fluid ounce in 5 gallons of water per 1,500 square feet, preferably in May or mid-August through September. Slight turf yellowing will disappear after about one week.

**NOTE:** Care should be taken to avoid overdosing Bentgrass, St. Augustine, and Centipede grasses or injury may result. Large volumes of spray water will aid in obtaining uniform coverage. If hand-type sprayers are used, it is preferable to use a single nozzle sprayer rather than a multiple nozzle boom as sideways application with a boom where the spray from more than one nozzle is allowed to fall on the same area will result in heavy local over-application and subsequent turf discoloration or injury.

**Herbi™ Controlled Droplet Application For Cool Season Grasses** - Add 1-2/3 to 2-1/2 pints of this product to the 5 pint Herbi bottle, then fill with water to make 5 pints of mixture or substitute 1/2 pint of a surfactant for water while agitating the solution, per 1 acre treatment.

**For Listed Warm Season Grasses:** Apply 1-1/4 to 1 -2/3 pints of this product, then add water to make total of 5 pints of mixture. While walking at approximately 11 pace (3 feet) per second, spray entire contents over 33,000 square feet (3/4 of an acre). Do not overlap (double coverage) at edge of spray patterns. Reduced rates (use 1/2 of rate shown above) of this product must be applied when grass is stressed from heat, drought, etc.

**Controlled Droplet Applicators - (CDA), Atomizers, and Spinning Disk Applicators:** For Cool Season Grasses - Use this product at the rate of 2-1/2 to 3-1/2 pints per acre (0.9 to 1.25 fluid ounces per 1,000 square feet) in sufficient water to assure coverage (1 to 4 gallons of water per acre is normal for this type of equipment).

**For Listed Warm Season Grasses** - Use 2 to 3 pints of this product per acre (0.7 to 1.1 fluid ounces per 1,000 square feet) in sufficient water to assure coverage (1 to 4 gallons of water per acre is normal for this type of equipment).

**NOTE:** For all grasses (1) Do not overlap spray patterns; (2) Use reduced rates if grass is stressed from heat, drought, etc.; and (3) Follow CDA equipment spray instructions.

## RESTRICTIONS AND LIMITATIONS FOR USE ON TURF

Do not apply more than 3.87 pints of this product (1.5 lbs MCPA ae) per acre per year.

Do not apply more than 2 applications per year.

The minimum retreatment interval of 30 days.

## OTHER NON-CROP AREAS

(fencerows, hedgerows, roadsides (including aprons and guard rails), ditches, rights-of-way, utility, pipelines, powerlines, railroads, airports, commercial plants, storage and lumber yards, barrier strips and firebreaks, equipment areas, nurseries and ornamental plantings, fuel tank farms, pumping stations and other industrial sites)

**Other Non-Crop Areas:** For the control of broadleaf weeds, mix at a rate of 1/4 gallon to 3 pints of this product per 50 to 300 gallons of water. This mixture will cover 43,500 square feet. Thoroughly saturate all weeds with spray mixture. Apply any time between the time when plants come into full leaf (Spring) to when the plants begin to go dormant. Best results are obtained when weeds are young and actively growing. Do not cut weeds until herbicide has translocated throughout the plant causing root death. For small broadleaf weeds, use the lower rate.

**For Control of Woody Plants:** Apply to both stems and foliage any time from the time foliage is completely matured until the time plants start to go dormant. All leaves, stems and suckers must be completely wet to the ground line for effective control. Regrowth may be anticipated on the more resistant species. Add 3 pints of this product to 100 gallons of water applying 200 to 600 gallons of spray mixture per 43,500 square feet depending upon the height and thickness of the brush. Mix thoroughly before spraying.

### RESTRICTIONS AND LIMITATIONS FOR USE ON TURF

Do not apply more than 3.87 pints of this product (1.5 lbs MCPA ae) per acre per year.

Do not apply more than 2 applications per year.

The minimum retreatment interval of 30 days.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Always store pesticides in a secured warehouse or storage building. Store at temperatures above 32°F. If allowed to freeze, remix before using. This does not alter this product. Containers should be opened in well ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not store near open containers of fertilizer, seed, or other pesticide.

**PRODUCT DISPOSAL:** Pesticide wastes are acutely hazardous. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL: Nonrefillable Containers 5 Gallons or Less:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**Nonrefillable containers larger than 5 gallons:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. **Triple rinse** or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**OR**

**Refillable containers larger than 5 gallons:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**OR**

**Refillable Container:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Close all openings and replace all caps. Contact Nufarm's Customer Service Department at 1-800-345-3330 to arrange for return of the empty refillable container.

## WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

## LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR ARISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of the directions for use, the warranty disclaimers, or limitations on liability, do not use the product, and return it unopened to the Seller, and the purchase price will be refunded.

(RV013111)

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All other trademarks are the property of their respective owners.

**SPECIAL**

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Tri-Power® Selective Herbicide  
**EPA Reg. No.:** 228-262  
**Synonyms:** Herbicide Mixture of MCPA, Mecoprop-p (MCP-P) and Dicamba  
**Product Type:** Herbicide

**Company Name:** Nufarm Americas Inc.  
11901 S. Austin Avenue  
Alsip, IL 60803

**Telephone Numbers:** For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,  
Call CHEMTREC Day or Night: 1-800-424-9300  
For Medical Emergencies Only, Call 1-877-325-1840

**Date of Issue:** October 18, 2013      **Supersedes:** March 12, 2012  
**Sections Revised:** 1

**2. HAZARDS IDENTIFICATION****Emergency Overview:**

**Appearance and Odor:** Dark amber colored liquid with slight ammonia odor.

**Warning Statements:** Keep out of reach of children. DANGER. Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**Potential Health Effects:**

**Likely Routes of Exposure:** Inhalation, eye and skin contact.

**Eye Contact:** Corrosive. Causes corneal involvement or irritation.

**Skin Contact:** Slightly toxic and minimally irritating based on toxicity studies. Overexposure by skin absorption may cause symptoms similar to those for ingestion.

**Ingestion:** Harmful if swallowed. May cause nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness, muscle spasms.

**Inhalation:** Harmful if inhaled. May cause symptoms similar to those from ingestion.

**Medical Conditions Aggravated by Exposure:** Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

See Section 11: TOXICOLOGICAL INFORMATION for more information.

**Potential Environmental Effects:**

This pesticide may adversely affect non-target plants. This chemical has properties and characteristics associated with chemicals detected in groundwater.

See Section 12: ECOLOGICAL INFORMATION for more information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

COMPONENT	CAS NO.	% BY WEIGHT
Dimethylamine Salt of 2-Methyl-4-Chlorophenoxyacetic Acid	2039-46-5	40.42
Dimethylamine Salt of (+)-R-2-(2-Methyl-4-Chlorophenoxy) propionic Acid	66423-09-4	7.99
Dimethylamine Salt of Dicamba (3,6-Dichloro-o-Anisic Acid)	2300-66-5	3.97
Other Ingredients		47.62

**4. FIRST AID MEASURES**

**If in Eyes:** Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**If Swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If Inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

**5. FIRE FIGHTING MEASURES**

**Flash Point:** Not applicable due to aqueous formulation

**Autoignition Temperature:** Not determined    **Flammability Limits:** Not determined

**Extinguishing Media:** Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.

**Special Fire Fighting Procedures:** Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

**Unusual Fire and Explosion Hazards:** If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

**Hazardous Decomposition Materials (Under Fire Conditions):** May produce gases such as hydrogen chloride and oxides of carbon and nitrogen.

**National Fire Protection Association (NFPA) Hazard Rating:**

**Rating for this product:** Health: 2    Flammability: 1    Reactivity: 0

Hazards Scale: 0 = Minimal    1 = Slight    2 = Moderate    3 = Serious    4 = Severe

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

**Environmental Precautions:** Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

**Methods for Containment:** Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

**Methods for Cleanup and Disposal:** Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

**Other Information:** Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

## 7. HANDLING AND STORAGE

**Handling:**

Do not get in eyes or on clothing. Avoid contact with skin, eyes or clothing. Wear long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves made of any waterproof material and protective eyewear (goggles, face shield, or shielded safety glasses). Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**Storage:**

Always store pesticides in a secured warehouse or storage building. Store at temperatures above 32°F. If allowed to freeze, remix before using. This does not alter the product. Containers should be opened in well-ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not store near open containers of fertilizer, seed, or other pesticides. Do not contaminate water, food or feed by storage or disposal.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:**

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

**Personal Protective Equipment:**

**Eye/Face Protection:** To avoid contact with eyes, wear face shield or goggles when mixing and loading this product. An emergency eyewash or water supply should be readily accessible to the work area.

**Skin Protection:** To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemical-resistant gloves made of any waterproof material. An emergency shower or water supply should be readily accessible to the work area.

**Respiratory Protection:** Wear a NIOSH approved half-mask respirator equipped with N-,R-,P-Series, or HE particulate air filters with the approval number prefix (84S-XXX). It is recommended that respirator wearers be fit-tested and trained in the proper use, care, cleaning, inspection, and storage of the respirator. Refer to the Occupational Safety and Health Administration (OSHA) standard for Respiratory Protection (29 CFR 1910.134) for additional information.

**General Hygiene Considerations:** Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

**Exposure Guidelines:**

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
DMA Salt of MCPA	NE	NE	NE	NE	
DMA Salt of Mecoprop-p	NE	NE	NE	NE	
DMA Salt of Dicamba	NE	NE	NE	NE	

NE = Not Established

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:** Dark amber colored liquid with slight ammonia odor.

**Boiling Point:** Not determined

**Density:** 9.4 pounds/gallon

**Evaporation Rate:** Not determined

**Freezing Point:** 32°F (0°C)

**pH:** 7.5 – 8.5

**Solubility in Water:** Soluble

**Specific Gravity:** 1.13 @ 20°C

**Vapor Density:** Not determined

**Vapor Pressure:** Not determined

**Viscosity:** 30.16 cps @25°C

**Note:** Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

**10. STABILITY AND REACTIVITY**

**Chemical Stability:** This material is stable under normal handling and storage conditions.

**Conditions to Avoid:** Excessive heat. Do not store near heat or flame.

**Incompatible Materials:** Strong oxidizing agents: bases and acids.

**Hazardous Decomposition Products:** Under fire conditions, may produce gases such as hydrogen chloride and oxides of carbon and nitrogen.

**Hazardous Reactions:** Hazardous polymerization will not occur.

**11. TOXICOLOGICAL INFORMATION****Toxicological Data:**

Data from laboratory studies on this product are summarized below:

**Oral:** Rat LD<sub>50</sub>: 1,400 mg/kg

**Dermal:** Rabbit LD<sub>50</sub>: >2,000 mg/kg

**Inhalation:** Rat 4-hr LC<sub>50</sub>: > 0.23 mg/l

**Eye Irritation:** Rabbit: Severely irritating/corrosive

**Skin Irritation:** Rabbit: Slightly irritating

**Skin Sensitization:** Guinea pigs: Contact sensitizer

**Subchronic (Target Organ) Effects:** Repeated overexposure to phenoxy herbicides may cause effects to liver, kidneys, blood chemistry, and gross motor function. Rare cases of peripheral nerve damage have been reported, but extensive animal studies have failed to substantiate these observations, even at high doses for prolonged periods. Repeated overexposure to dicamba may cause liver changes or a decrease in body weight.

**Carcinogenicity / Chronic Health Effects:** The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, the category for limited evidence for carcinogenicity in humans. However, newer MCPA rat and mouse lifetime feeding studies, as well as a more current MCPP lifetime feeding study in rats, did not show carcinogenic potential. Dicamba did not cause cancer in long-term animal studies. The U.S. EPA has given dicamba a Class D classification (not classifiable as to human carcinogenicity).

**Reproductive Toxicity:** MCPA studies in laboratory animals have shown testicular effects and lower male fertility. No impairment of reproductive function attributable to MCPP has been noted in laboratory animal studies. Dicamba did not interfere with fertility in reproduction studies in laboratory animals.

**Developmental Toxicity:** MCPA and MCPP studies in laboratory animals have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals. Animal tests with dicamba have not demonstrated developmental effects.

**Genotoxicity:** There have been some positive and some negative studies, but the weight of evidence is that neither MCPA nor MCPP is mutagenic. Animal tests with dicamba did not demonstrate mutagenic effects.

**MATERIAL SAFETY DATA SHEET****Tri-Power® Selective Herbicide****Assessment Carcinogenicity:**

This product contains substances that are considered to be probable or suspected human carcinogens as follows:

Component	Regulatory Agency Listing As Carcinogen			
	ACGIH	IARC	NTP	OSHA
Chlorophenoxy Herbicides	No	2B	No	No

See Section 2: HAZARDS IDENTIFICATION for more information.

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

Data on MCPA DMA:

96-hour LC <sub>50</sub> Bluegill:	>310 mg/l	Bobwhite Quail Oral LD <sub>50</sub> :	390 mg/kg
96-hour LC <sub>50</sub> Rainbow Trout:	230 mg/l	Mallard Duck 8-day Dietary LC <sub>50</sub> :	>5,620 mg/l
48-hour EC <sub>50</sub> Daphnia:	190 mg/l		

Data on Mecoprop-p DMA:

96-hour LC <sub>50</sub> Bluegill:	>93 mg/l	Bobwhite Quail Oral LD <sub>50</sub> :	>498 mg/kg
96-hour LC <sub>50</sub> Rainbow Trout:	>150 mg/l	Bobwhite Quail 8-day Dietary LC <sub>50</sub> :	>4,633 mg/kg
48-hour LC <sub>50</sub> Daphnia:	>91 mg/l	Mallard Duck 8-day Dietary LC <sub>50</sub> :	>4,137 mg/kg

Data on Dicamba:

96-hour LC <sub>50</sub> Bluegill:	135 mg/l	Bobwhite Quail 8-day Dietary LC <sub>50</sub> :	>10,000 mg/l
96-hour LC <sub>50</sub> Rainbow Trout:	135 mg/l	Mallard Duck 8-day Dietary LC <sub>50</sub> :	>10,000 mg/l
48-hour EC <sub>50</sub> Daphnia:	110 mg/l	48-hour Honey Bee Contact LD <sub>50</sub> :	>100 µg/bee

**Environmental Fate:**

MCPA DMA rapidly dissociates to parent MCPA in the environment. In soil, MCPA is microbially degraded with a typical half-life of approximately 10 to 14 days. Mecoprop-p DMA rapidly dissociates to parent mecoprop-p acid in the environment. In soil, mecoprop-p is relatively immobile in most soils and has a half-life of several days in surface soils. Dicamba has low bioaccumulation potential, is not persistent in soil, is highly mobile in soil and degrades rapidly.

**13. DISPOSAL CONSIDERATIONS****Waste Disposal Method:**

Pesticide wastes are acutely hazardous. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed, labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Handling and Disposal:**

**Nonrefillable Containers 5 Gallons or Less:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**Nonrefillable containers larger than 5 gallons:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly

after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**OR**

**Refillable containers larger than 5 gallons:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### 14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

##### DOT

Not Regulated

##### IMDG

Not Regulated

##### IATA

Not Regulated

#### 15. REGULATORY INFORMATION

##### U.S. Federal Regulations:

**TSCA Inventory:** This product is exempted from TSCA because it is solely for FIFRA regulated use.

##### SARA Hazard Notification/Reporting:

**Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):**

Immediate, Delayed

##### **Section 313 Toxic Chemical(s):**

Dicamba (CAS No. 1918-00-9), 3.30% equivalent by weight in product

##### Reportable Quantity (RQ) under U.S. CERCLA:

Dicamba (CAS No. 1918-00-9) 1,000 pounds

##### RCRA Waste Code:

None

##### State Information:

Other state regulations may apply. Check individual state requirements.

**California Proposition 65:** Not Listed.

**16. OTHER INFORMATION**

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

Tri-Power is a registered trademark of Nufarm Americas Inc.

# Xytect™ 75WSP

## Insecticide

For foliar and systemic insect control in turfgrass (including sod farms), landscape ornamentals, fruit and nut trees and interior plantscapes.

EACH PACKET CONTAINING **1.6 OZ**

### ACTIVE INGREDIENT:

Imidacloprid, 1- [(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine..... 75.0%

OTHER INGREDIENTS:..... 25.0%

TOTAL:..... 100.0%

KEEP OUT OF REACH  
OF CHILDREN.

## CAUTION

See additional precautionary statements and directions for use inside booklet.

**STOP** - Read the label before use.

Keep water soluble packets in this container and store in a cool dry place but not below freezing (32 F)

EPA Reg. No. 42750-117-74779 EPA Est. No. 65387-AR-001

**Do not remove packets from container except for immediate use.**

**PRECAUCION AL USUARIO:** Si usted no puede leer o entender ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

(TO THE USER: If you cannot read or understand English, do not use this product until the label has been fully explained to you.)

### FIRST AID

#### IF SWALLOWED

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

#### IF ON SKIN OR CLOTHING

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

#### IF IN EYES

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

In case of emergency call CHEMTREC toll free at 1-800-424-9300. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

**Note to Physician:** No specific antidote is available. Treat the patient symptomatically.

### USER SAFETY RECOMMENDATIONS

User should:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed or absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Keep children or pets off treated area until spray is dry.

#### Applicators and Other Handlers Must Wear:

1. Long-sleeved shirt and long pants
2. Chemical resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC) or viton.
3. Shoes plus socks

Follow manufacturer's instructions for cleaning/ maintaining personal protective equipment, PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### ENGINEERING CONTROLS STATEMENTS:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### ENVIRONMENTAL HAZARDS

This product is highly toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

**Do not formulate this product into other end-use products**

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, care-fully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed below. In spill or leak incidents, keep unauthorized people away. You may contact Chemtrec at 800-424-9300 for decontamination procedures or any other assistance that may be necessary.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170.

This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

Exception: If the product is applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

1. Coveralls
2. Chemical resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC) or viton.
3. Shoes plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep children and pets off treated area until dry.

APPLICATION TO TURFGRASS	
Xytect™ 75WSP Insecticide will control the following soil inhabiting pests found in turfgrass	
PEST	SCIENTIFIC NAME
Northern & Southern masked chafers Asiatic garden beetle European chafer Green June beetle May or June beetle Japanese beetle Oriental beetle Billbugs Annual bluegrass weevil Black turfgrass ateniinus European Crane Fly Mole crickets	Cyclocephala borealis, C. immaculata, and/or C. lurida Maladera castanea Rhizotroqus majalis Cotinis nitida Phyllophaga spp. Popillia japonica Anomala orientalis Spherophorus spp. Hyperodes spp. Atanius spretulus and Aphodius spp Tipula paludosa scapteriscus spp.
Xytect™ 75WSP Insecticide will suppress cutworms and chinch bugs.	

**Xytect™ 75WSP Insecticide can be applied on turfgrass in the following sites:** Home lawns, Business and office complexes, Shopping complexes, Multi-family residential complexes, Golf courses, Airports, Cemeteries, Parks, Playgrounds, Athletic fields, Sod farms.

Xytect™ 75WSP Insecticide has adequate residual activity that applications can be made preceding the egg laying activity of the target pests. Best control is achieved when applications are made prior to egg hatch of the pests. Sufficient irrigation or rainfall is required to move the active ingredient through the thatch.

Avoid application when infested turfgrass areas are water-logged or soil beneath turf is saturated with water. These conditions prevent thorough and consistent distribution. Best results are achieved when rainfall or irrigation after

application will penetrate vertically in the soil column carrying the active ingredient into the zone where insects are normally located.

Do not exceed a total of 8.6 ounces application (0.4 lb of active ingredient) per acre per year.

#### APPLICATION EQUIPMENT FOR USE ON TURFGRASS

Xytect™ 75WSP Insecticide should be diluted with enough water to provide adequate volume to promote thorough distribution into the pest zone. Use only accurately calibrated equipment for application to turfgrass. Apply a uniform, coarse droplet spray, using a low pressure setting to eliminate off target drift. Calibration should be performed on a regular basis to ensure that equipment is distributing product properly.

Use Site: TURFGRASS	
To control Larvae of:	RATE
European Crane Fly Annual bluegrass weevil Green June beetle Asiatic garden beetle Japanese beetle Billbug Northern masked chafer Black turfgrass ateniinus Oriental beetle Cutworms (suppression) Phyllophaga spp. European chafer Southern masked chafer	Apply 1.6 ounces (1 packet) per 8,250 to 11,000 sq ft). Make application prior to egg hatch of grubs, billbugs, annual bluegrass weevil, and European Crane Fry to maximize control.
For chinch bugs (suppression) and mole crickets apply 1.6 ounces (1 packet) per 8,250 sq. ft. For suppression of chinchbugs, make application before the hatching of the first instar nymphs.	
For control of mole crickets make application before or during the peak egg hatch period. If adults or large nymphs are actively tunneling, Xytect™ 75WSP Insecticide application should be combined with a curative insecticide. Follow label instructions for other insecticides when tank-mixing.	

Consult your local turf, state Agricultural Experiment Station, or State Extension Service Specialists for more specific Information regarding timing of application.

#### Notes and Restrictions for Turf Grass:

Irrigation or rainfall should occur within 24 hours after application to move the active ingredient through the thatch.

- Do not apply more than 8.6 ounces (0.4 lb of active ingredient) per acre per year.
- Avoid mowing turf or lawn area, until after adequate irrigation or rainfall has occurred.

Use Site: TREES, SHRUBS, EVERGREENS, FLOWERS, FOLIAGE PLANTS, GROUNDCOVERS AND INTERIOR PLANTSCAPES	
(Only in and around Industrial and Commercial Buildings and Residential Areas)	
PEST	RATE
Adelgids Aphids Japanese beetles Lace bugs Leaf beetles (Including elm and viburnum leaf beetles) Leafhoppers (Including glassy-winged sharpshooter) Mealybugs Psyllids Sawfly larvae Thrips (suppression) Whiteflies	Apply 1.6 ounces (1 packet) of Xytect™ 75WSP Insecticide per 300 gallons of water. Make foliar applications before high pest populations become established. Reapply on an as needed basis.
To control White grub larvae, (such as Japanese beetle larvae, Chafers, Phyllophaga spp. Asiatic garden beetle, Oriental beetle) apply 1.6 ounces (1 packet) per 8,250 to 11,000 sq ft.	

Make broadcast applications by mixing specified rate in enough water to uniformly cover the treated area. Do not use less than 2 gallons of water per 1000 sq ft. If necessary, irrigate thoroughly to incorporate Xytect™ 75WSP Insecticide into the upper soil profile.

Refer to use directions specific for FLOWERS and GROUND COVERS concerning additional use directions.

Use Site: TREES, SHRUBS, FLOWERS AND GROUNDCOVERS	
(Only in and around industrial and commercial buildings and residential areas, and state, national, and private wooded and forested areas)	
PEST	RATE
Adelgids Asian longhorn beetle Emerald ash borer Eucalyptus longhorn beetle Japanese beetles Leafminers (including birch, elm, citrus, and boxwood leafminers) Sawfly larvae Aphids Lace bugs Mealybugs Soft scales Armored scales (suppression) Pine tip moth larvae Thrips (suppression) Leaf beetles (including elm and viburnum leaf beetles) Black vine weevil larvae Psyllids White grub larvae Plant Bugs Leafhoppers (including glassywinged sharpshooter) Royal Palm Bugs Whiteflies Flatheaded borers (including bronze birch and alder borer) Roundheaded borers	<p><b>For TREES</b> apply 1.6 ounces (1 packet) of Xytect™ 75WSP Insecticide per 24 to 48 inches of cumulative trunk diameter.</p> <p><b>For SHRUBS</b> apply 1.6 ounces (1 packet) of Xytect™ 75WSP Insecticide per 24 to 48 foot of shrub height.</p> <p><b>For FLOWERS and GROUNDCOVERS</b> apply 1.6 ounces (1 packet) of Xytect™ 75WSP Insecticide per 8,250 to 11,000 sq ft.</p>

#### Application Techniques:

##### TREES

###### Soil Injection

**GRID SYSTEM:** Make applications in a grid pattern on 2.5 foot centers within the drip line of the tree.

**CIRCLE SYSTEM:** Make applications in holes evenly spaced approximately 2 – 3 feet apart in a circle within the drip line of the tree. Larger trees may require additional application circles.

**BASAL SYSTEM:** Make applications into holes evenly spaced around the base of the tree trunk no more than 6 to 12 Inches out from the base.

###### Soil Drench

Apply in no less than 10 gallons of water per 1000 square feet as a drench around the base of the tree, directed to the root zone. Any plastic or other barrier that may prevent drench solution from reaching the root zone must be removed.

Notes and Restrictions for Trees:

- Use sufficient water to be able to inject an equal amount of solution in each hole.
- Use low pressure and sufficient solution for thorough distribution into the treatment zone.
- Maintain soil moisture for 7 to 10 days.
- Do not use less than 4 holes per tree.
- No Soil Injection Applications Allowed In Nassau or Suffolk Counties of New York.
- Application to trees already heavily infested with borers listed may not prevent the eventual loss of the trees.

##### SHRUBS

###### Soil Injection

Apply to individual plants using dosage Indicated.

###### Soil Drench:

Uniformly apply the dosage in no less than 10 gallons of water per 1000 square feet as a drench around the base of the tree, directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone.

###### Notes and Restrictions for Shrubs:

- Mix required dosage in sufficient water to inject an equal amount of solution in each hole.
- Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. Maintain soil moisture for 7 to 10 days.
- Do not use less than 4 holes per shrub.
- No Soil Injection Applications Allowed In Nassau or Suffolk Counties of New York.

##### FLOWERS and GROUNDCOVERS

Apply as a broadcast treatment and incorporate into the soil before piling or apply after plants are established. If application is made to established plants, best control is achieved by irrigating after application.

Use site: PECAN	
(Only in and around residential area) (Use on pecans not permitted in California unless directed by specific supplemental labeling)	
PEST	RATE
Yellow pecan aphid Pecan spittlebug Black margined aphid Pecan stem phylloxera Pecan leaf phylloxera	Apply 1.6 ounces (1 packet) per 300 gallons of water OR 2.1 ounces per acre <sup>1</sup> .

Make foliar applications as pest pressure begins to increase. Make a second application 10 to 14 days after first if field scouting reveals continued pest pressure. Use of an organosilicone based spray adjuvant at recommended rate can insure thorough coverage of foliage.

Notes and Restrictions for residential Pecan Trees:

- Do not apply more than a total of 6.3 ounces of Xytect™ 75WSP Insecticide per acre per year.
- Do not make more than 3 applications.
- Allow 10 or more days between applications.

<sup>1</sup> The amount of Xytect™ 75WSP Insecticide required per acre depends on tree size and/or volume of foliage. The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees with full foliage.

Use site: GRAPES	
(For use only in and around industrial and commercial buildings and residential areas)	
PEST	RATE
Leafhoppers (including glassy-winged sharpshooter) Mealybugs	Apply 1.6 ounces (1 packet) per 300 gallons of water OR 1.0 ounces per acre as a foliar spray using 200 gallons of water per acre.

Notes and Restrictions for residential Grapes:

- Do not apply more than a total of 2.0 ounces of Xytect™ 75WSP Insecticide per acre per year.
- Allow at least 14 days between applications.

- Applications may be applied up to and including day of harvest.

**Use site: POME FRUITS**

(only in and around residential area)

Includes: Apple, Crabapple, Loquat, Mayhaw, Pear, Pear (oriental), Quince

PEST	RATE
Aphids (except Wooly apple aphid) Leafhoppers (including glassy-winged sharpshooter) Leafminer Mealybugs* San Jose Scale*	Apply 1.6 ounces (1 packet) per 300 gallons of water OR 2.1 ounces per acre <sup>1</sup> .

**Notes and Restrictions for residential Pome Fruits:**

- Apply specified dosage as foliar spray as needed after petal-fall is complete.
- For control of rosy apple aphid, apply prior to leafrolling caused by the pest.
- For first generation leafminer control, make first application as soon as petal fall is complete. Greatest leafminer control will result from the earliest possible application. For second and succeeding generations of leafminer, optimal control is obtained from applications made early in the adult flight against egg and early instar larvae. A second application may be required 10 days later if severe pressure continues or if generations are overlapping a single application may result in suppression only. Xytect™ 75WSP Insecticide will not control late stage larvae.
- For San Jose Scale, time applications to the crawl/tar stage. Treat each generation.
- For late season (preharvest) control of leafhopper species, apply Xytect™ 75WSP Insecticide while most leafhoppers are in the nymphal stage.
- For optimal control of mealybug, insure good spray coverage of the trunk and scaffolding limbs or other resting sites of the mealybug.
- Do not apply more than 2.1 ounces per acre in a single application. Do not make more than 5 applications.
- Allow 10 or more days between applications.
- Allow at least 7 days between last application and harvest.
- Not for use in California for control on pears.

<sup>1</sup> The amount of Xytect™ 75WSP Insecticide required per acre depends on tree size and/or volume of foliage. The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees with full foliage.

**APPLICATION TO ORNAMENTALS**

Xytect™ 75WSP Insecticide can be applied to ornamental plants in commercial and residential landscapes and interior plantscapes. Xytect™ 75WSP Insecticide is a systemic insecticide that is transported within the plant system from the roots to upper foliage. Xytect™ 75WSP Insecticide must be applied into a growing area of the plant that allows absorption of the active ingredient. Adding soluble nitrogen type fertilizers to the spray solution when appropriate can promote the uptake of the active ingredient.

Application can be made by foliar application or soil applications; including soil injection, drenches, and broadcast sprays. Foliar applications offer locally systemic activity against insect pests.

The systemic translocation of active ingredient will be slower when applied to woody plants with soil applications. This delay can take 60 days or longer depending on species and size of plant. To offset this, make applications before anticipated pest infestation.

For outdoor ornamentals, broadcast applications cannot exceed a total of 8.6 ounces (0.4 lb of active ingredient) per acre per year.

**ANT MANAGEMENT PROGRAMS**

Use Xytect™ 75WSP Insecticide to control aphids, scale insects, mealybugs and other sucking pests on ornamentals with ant populations because it removes honeydew as a food source. To enhance control of ants, supplement with residual sprays, bait placements or other ant control tactics.

NOTE: Not for use in commercial greenhouses, nurseries, or on grasses grown for seed, or on commercial fruit and nut trees.

**APPLICATION EQUIPMENT FOR FOLIAR APPLICATIONS**

Xytect™ 75WSP Insecticide mixes readily with water and may be used in many types of application equipment. Add a commercial spreader/sticker to promote coverage on hard to wet foliage such as holly, pine, or ivy.

Xytect™ 75WSP Insecticide is compatible with many commonly used fungicides, miticides, liquid fertilizers, and other insecticides. If applicator has no prior experience with a particular tank mix, physical compatibility should be checked by making a small clear jar test using correct proportions of products to be tank mixed.

Do not apply through any irrigation system

**RESTRICTIONS**

- Do not graze treated areas or use clippings from treated areas for feed or forage.
- Avoid runoff or puddling of irrigation water following application.
- Keep children and pets off treated area until dry.
- Avoid application of Xytect™ 75WSP Insecticide to areas which are water logged or saturated, which will not allow penetration into the root zone of the plant.
- Do not apply more than 8.6 ounces (0.4 lb of active ingredient) per acre per year.
- Treated areas may be replanted with any crop specified on an imidacloprid label, or with any crop for which a tolerance exists for the active ingredient.
- For crops not listed on an imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, a 12-month plant-back interval should be observed.

**CONDITIONS OF SALE AND WARRANTY**

The DIRECTIONS FOR USE of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of RAINBOW TREECARE SCIENTIFIC ADVANCEMENTS, its Supplemental Distributors, or the Seller. All such risks shall be assumed by the Buyer.

Rainbow Treecare Scientific Advancements, its Supplemental Distributors and the Seller warrant that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. NEITHER RAINBOW TREECARE SCIENTIFIC ADVANCEMENTS NOR ITS SUPPLEMENTAL DISTRIBUTORS MAKE ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS. BUYER'S EXCLUSIVE REMEDY AND THE EXCLUSIVE LIABILITY OF RAINBOW TREECARE SCIENTIFIC ADVANCEMENTS, ITS SUPPLEMENTAL DISTRIBUTORS AND THE SELLER FOR ANY AND ALL CLAIMS, LOSSES,

DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF OR THE REPAYMENT OF THE PURCHASE PRICE FOR THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. When Buyer suffers losses or damages resulting from the use or handling of this product (including claims based on contract, negligence, strict liability, or other legal theories), Buyer must promptly notify Seller in writing of any claims to be eligible to receive either remedy stated above. IN NO CASE SHALL RAINBOW TREECARE SCIENTIFIC ADVANCEMENTS, ITS SUPPLEMENTAL DISTRIBUTORS, OR THE SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. RAINBOW TREECARE SCIENTIFIC ADVANCEMENTS, its Supplemental Distributors, and the Seller offer this product, and the Buyer accepts it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of RAINBOW TREECARE SCIENTIFIC ADVANCEMENTS.

No employee or agent of RAINBOW TREECARE SCIENTIFIC ADVANCEMENTS, its Supplemental Distributor, or the Seller is authorized to vary or exceed the terms of this Warranty in any other manner.



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EPA Reg. No. 42750-117-74779 EPA Est. No. 65387-AR-001

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## **MATERIAL SAFETY DATA SHEET**

### **SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**COMPANY ADDRESS:**

RAINBOW TREECARE SCIENTIFIC ADVANCEMENTS  
2239 Edgewood Ave. S.  
Minneapolis, MN 55426

**EMERGENCY TELEPHONE NUMBERS:**

(800) 424-9300 (CHEMTREC, transportation and spills)

**PRODUCT NAME** : XYTECT™ 75WSP INSECTICIDE  
**CHEMICAL NAME** : 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine  
**CHEMICAL FAMILY** : Chloronicotinyl insecticide  
**PRODUCT CODE** : EPA Reg. No. 42750-117-74779

### **SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS**

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Imidacloprid	75.0	138261-41-3	Not estab.	Not estab.

### **SECTION 3 - HAZARDS IDENTIFICATION SUMMARY**

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

**HEALTH HAZARDS:** Mildly irritating to the eyes and skin. May be harmful if swallowed.

**PHYSICAL HAZARDS:** Can decompose at high temperatures releasing toxic gases.

**ENVIRONMENTAL HAZARDS:** Extremely toxic to fish, water organisms and bees. Keep out of waterways.

### **SECTION 4 - FIRST AID MEASURES**

**IF SWALLOWED:** Call physician or Poison Control Center immediately. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**IF IN EYES:** Immediately flush eyes with water for at least 15 minutes. Get medical attention if irritation persists.

**IF INHALED:** Remove victim to fresh air. Get medical attention if symptoms develop.

**IF ON SKIN:** Remove contaminated clothing. Wash skin with plenty of soap and water. Get medical attention if irritation persists.

**NOTE TO PHYSICIAN:** No specific antidote available, treat symptomatically.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

### **SECTION 5 - FIRE FIGHTING MEASURES**

**FLASHPOINT (method):** Will not flash

**FLAMMABLE LIMITS (LFL-UFL):** Unknown.

**FIRE AND EXPLOSION HAZARD:** Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

**EXTINGUISHING MEDIA:** Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.

**FIRE FIGHTING INSTRUCTIONS:** Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water run off.

**FIRE FIGHTING EQUIPMENT:** Self-contained breathing apparatus with full facepiece.

**HAZARDOUS COMBUSTION PRODUCTS:** Hydrogen cyanide, Hydrogen chloride, Carbon monoxide, Nitrogen oxides.

## **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**SMALL SPILL:** Vacuum or sweep up material and place in a container for reuse or disposal.

**LARGE SPILL:** Avoid creating dust cloud. Vacuum or sweep up material and place in a container for reuse or disposal. Reduce airborne dust and prevent scattering by moistening with water. Pick up wash liquid with additional absorbent and place in a disposable container. After removal, flush contaminated area thoroughly with water.

This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

## **SECTION 7 - HANDLING AND STORAGE**

KEEP OUT OF REACH OF CHILDREN!

**HANDLING:** Use only in a well-ventilated area. Minimize dust generation and accumulation.

**STORAGE:** Keep container closed when not in use. Keep away from food, feed and drinking water. Store in a well ventilated dry place away from heat.

## **SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

**EXPOSURE LIMITS (8 HOUR TWA):** (Refer to Section 3)

**ENGINEERING CONTROLS:** Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**PERSONAL PROTECTIVE EQUIPMENT:**

**EYE PROTECTION** - Safety goggles

**CLOTHING** - Long-sleeved shirt and long pants, Chemical-resistant footwear plus socks

**GLOVES** - Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC), viton

**RESPIRATOR** – Not required when handled under normal conditions. When handling in enclosed areas with inadequate ventilation, use a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C)

Discard clothing and other absorbent materials that have been heavily contaminated with this product. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS:**

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL DESCRIPTION:** white to gray powder

**ODOR:** No appreciable odor

**BULK DENSITY:** 30-35 lbs/cu ft

**pH:** 6.7

**VAPOR PRESSURE:**  $1.5 \times 10^{-9}$  mmHg @ 20C

**WATER SOLUBILITY:** Dispersable

### **SECTION 10 - STABILITY AND REACTIVITY**

**CHEMICAL STABILITY:** Stable, however may decompose if heated.

**CONDITIONS TO AVOID:** Avoid temperatures above 100°F (38°C) for prolonged period of time. Strong exothermic reaction can occur above 390°F (200°C)

**INCOMPATIBILITY WITH OTHER MATERIALS:** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrogen chloride, Oxides of nitrogen and carbon.

**HAZARDOUS POLYMERIZATION:** Product will not undergo polymerization.

### **SECTION 11 - TOXICOLOGICAL INFORMATION**

#### **ACUTE TOXICITY:**

Oral LD <sub>50</sub> (rat)	- > 4,500 mg/Kg
Dermal LD <sub>50</sub> (rat)	- > 2,000 mg/Kg
Inhalation LC <sub>50</sub> (rat)	- > 5.0 mg/L
Eye Irritation (rabbit)	- Mild
Skin Irritation (rabbit)	- Slight
Sensitization (guinea pig)	- Non-sensitizer

#### **CARCINOGEN STATUS:**

OSHA -	Not listed.
NTP -	Not listed.
IARC -	Not listed.

**MUTAGENIC DATA:** Little or no evidence of mutagenic effects during *in vivo* or *in vitro* studies.

**ADDITIONAL DATA:** No reproductive or teratogenic (birth defect) effects at normal exposure levels.

### **SECTION 12 - ECOLOGICAL INFORMATION**

**ENVIRONMENTAL SUMMARY:** This product is highly toxic to aquatic invertebrates. Keep out of water bodies. Extremely toxic to bees by direct exposure or residues on treated crop. Do not apply to or allow drift on blooming crops that bees may visit.

#### **FISH TOXICITY: (Technical)**

96 hour LC<sub>50</sub>, Rainbow trout - 211 mg/L

96 hour LC<sub>50</sub>, Bluegill - unknown

#### **AVIAN TOXICITY: (Technical)**

Oral LD<sub>50</sub>, Bobwhite quail - 152 mg/Kg

Oral LD<sub>50</sub>, Mallard duck - unknown

#### **BEE TOXICITY:**

Contact LD<sub>50</sub> – Highly toxic.

### **SECTION 13 - DISPOSAL CONSIDERATIONS**

**WASTE:** Pesticide wastes are toxic. Dispose of in accordance with applicable Federal, state and local laws and regulations.

**CONTAINER:** Completely empty container into processing equipment. Then dispose of empty container in sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**SECTION 14 - TRANSPORT INFORMATION**

DOT SHIPPING DESCRIPTION:	Not regulated (all sizes)
DOT HAZARD CLASS:	N/A
UN NUMBER:	N/A
DOT PACKING GROUP:	N/A
DOT PRIMARY/SECONDARY LABEL:	N/A
DOT PRIMARY/SECONDARY PLACARD:	N/A
DOT EMERGENCY RESPONSE GUIDE #:	N/A

**SECTION 15 - REGULATORY INFORMATION**

CERCLA REPORTABLE QUANTITY:	- No components listed
SARA TITLE III STATUS:	
311/312 Hazard Categories	- Immediate Health Hazard
313 Toxic Chemicals	- None

**SECTION 16 - OTHER INFORMATION**

**DISCLAIMER:** The information presented herein is based on available data from reliable sources and is correct to the best of Rainbow Treecare Scientific Advancements knowledge. Rainbow Treecare Scientific Advancements makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

REVISED DATE:	September, 2006
REVISED FOR:	Initial draft

**RESTRICTED USE PESTICIDE**  
DUE TO ACUTE TOXICITY TO HUMANS  
FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED  
APPLICATORS OR PERSONS UNDER THEIR DIRECT  
SUPERVISION, AND ONLY FOR THOSE USES COVERED BY  
THE CERTIFIED APPLICATOR'S CERTIFICATION.

# TREE-äge®

Injected insecticide for two year control of listed arthropod  
pests in deciduous, coniferous, and palm trees

Active Ingredient:  
Emamectin Benzoate<sup>1</sup> ..... 4.0%  
Other Ingredients: ..... 96.0%  
Total: ..... 100.0%

<sup>1</sup>CAS No. 155569-91-8

Contains 0.36 lbs. emamectin per gallon.

EPA Reg. No. 100-1309-74578

**KEEP OUT OF REACH OF CHILDREN.  
WARNING/AVISO**

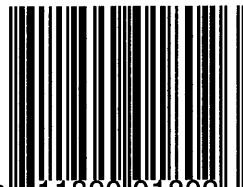
*Si usted no entiende la etiqueta, busque a alguien para que se la explique a  
usted en detalle. (If you do not understand the label, find someone to explain it  
to you in detail.)*

*See additional precautionary statements and directions for use on label in booklet.*

SCPPL ABJ 1309A-LIC 1210 334490

Net Contents: 1 Quart, 2 Fluid Ounces (1 liter)

Product ID: 040-4100



8 11890 01802 6

4019-7483 02-08-11 SCP 01-02 (02-09-11)  
TREE-age - 1 liter booklet - Mech  
SCP 3313... 3970... 4019...

Print Size: - Bklt: 3" wide X 5.625" high  
Base: 3.5" wide X 5.625" high  
Pantone colors: Black, PMS 145, PMS 638,  
PMS 3415, PMS 7542  
No. of pages: 12

NOTES

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## PRECAUTIONARY STATEMENTS

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### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING/AVISO:** Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

### FIRST AID

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If swallowed:** Call poison control center or doctor immediately for treatment advice. Have person sip glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

### NOTE TO PHYSICIAN

Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. Vomiting within one-half hour of exposure can minimize toxicity following accidental ingestion of the product; rapidly after exposure (< 15 minutes) administer repeatedly medical charcoal in a large quantity of water or ipecac. If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements. In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since ivermectin benzoate is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic ivermectin benzoate exposure.

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## PRECAUTIONARY STATEMENTS *(continued)*

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Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

### **HOT LINE NUMBER**

For 24-Hour Medical Emergency Assistance  
(Human or Animal),  
Or Chemical Emergency Assistance  
(Spill, Leak, Fire or Accident)  
Call 1-800-255-3924

## **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves (Category C) such as barrier laminate; butyl rubber ≥14 mils; nitrile rubber ≥14 mils; or neoprene rubber ≥14 mils.
- Shoes and socks
- Protective eyewear

## **ENVIRONMENTAL HAZARDS**

This product is highly toxic to fish, mammals and aquatic invertebrates. Do not apply directly to water; to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater. This product is highly toxic to bees exposed to direct treatment or residues on blooming trees.

#### PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ARBORJET, Inc. or Seller.

To the extent permitted by applicable law, Buyer and User agree to hold ARBORJET and Seller harmless for any claims relating to such factors.

ARBORJET warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or ARBORJET, and, (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, ARBORJET MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, in no event shall ARBORJET be liable for any incidental, consequential or special damages resulting from the use or handling of this product.

TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ARBORJET AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ARBORJET OR SELLER, THE REPLACEMENT OF THE PRODUCT.

ARBORJET and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of ARBORJET.

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#### **DIRECTIONS FOR USE RESTRICTED USE PESTICIDE**

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It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**IMPORTANT:** Read entire label before using this product. Failure to follow label instructions may result in poor control or tree injury. Failure to follow label directions may cause injury to people, animals and environment.

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#### **APPLICATION TO TREES**

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TREE-äge is for control of mature and immature arthropod pests of deciduous, coniferous, and palm trees including, but not limited to, those growing in residential and commercial landscapes, parks, plantations, seed orchards, and forested sites (in private, municipal, state, tribal and national areas). TREE-äge contains the active ingredient emamectin benzoate and is formulated to translocate in the tree's vascular system when injected. This product must be placed into active sapwood and will actively control pest for up to two years.

## USE DIRECTIONS

TREE-äge is designed for use with tree injection devices that meet the label and dose requirements (for example, the Arborjet Tree Injection Systems) for the control of listed pests of trees. Follow manufacturer's directions for equipment use.

Dosages are based on the Diameter (in inches) of the tree at Breast Height (DBH"). Tree DBH is the outside bark diameter at breast height. Breast height is defined as 4.5 feet (1.37m) above the ground on the uphill side of the tree. For the purposes of determining breast height, the ground includes the duff layer that may be present, but does not include unincorporated woody debris that may rise above the ground line.

The diameter is determined by measuring the circumference of the tree at DBH", and dividing circumference (in inches) by three (3). To determine DBH" for multi-stemmed woody ornamentals, measure the DBH" for each stem or branch and add together for the total DBH" per tree.

**Placement of Application/Injection Sites:** Inject at the base of the tree. Inject into the stem within 12" of the soil, into the trunk flare or into tree roots exposing them by shallow excavation. Make applications into intact, healthy sapwood. Do not inject into injured areas or areas with decay. Select injection sites associated with stem growth.

**Number of Injection Sites:** Work around the tree, spacing injection sites approximately every 6.0 inches of tree's circumference.

**Drill Depth:** Drill through the bark then 5/8" to 1-5/8" (hardwoods) or 1-5/8" to 2" (conifers) into the sapwood with the appropriate sized drill bit. Use clean, sharp drill bits. Brad point bits are recommended. Precautions should be taken to avoid diseased areas and transferring infected tissues to other injection sites.

### Resinous Conifers

In resinous conifers, such as pine and spruce, start the injection immediately after drilling into the sapwood. A prolonged delay may reduce uptake on account of resin flow into opening.

## WHEN TO TREAT

TREE-äge contains the active ingredient emamectin benzoate which is a glycoside insecticide. It is active against immature and adult stages of arthropods. The primary route of toxicity is through ingestion.

**ENVIRONMENTAL CONDITIONS:** Uptake of TREE-äge is dependent upon the tree's transpiration. Transpiration is dependent on a number of abiotic and biotic factors, such as soil moisture, soil and ambient temperature, and time of day. For uptake, apply when soil is moist, soil temperatures are above 45°F, ambient temperatures are between 40° to 90°F, and during the 24 hour period when transpiration is greatest, typically before 2:00 PM. Applications to drought or heat stressed trees may result in injury to tree tissue, poor treatment and subsequent control. Avoid treating trees that are moisture stressed or suffering from herbicide damage.

**MONITOR TREE HEALTH and PEST INFESTATIONS:** Effective injection treatment is favored by a full canopy (i.e., leaves) and healthy vascular system. Once these tissues are compromised by arthropod damage (larval galleries, defoliation, leaf mining, etc.) an effective and uniform application of TREE-äge may be difficult to achieve and subsequent control may be poor. Optimally, treatment should be made preventively at least 2 to 3 weeks before arthropods historically infest the host tree. As a result of systemic movement and longevity of TREE-äge in trees, this interval may be extended much earlier to 6 months should tree dormancy, adverse weather, management, asynchronous life cycle of pests, etc., allow earlier application timing.

TREE-äge may also be effective as a remedial treatment against some pests, such as those with slower development or if multiple life stages are susceptible to TREE-äge. Pests that attack the stem and branches such as bark beetles and clearwing borers may disrupt vascular tissue resulting in poor distribution in an infested tree. This includes the initial larval stages of pests, such as bark beetles and clearwing borers, that attack the stem and branches, which may disrupt vascular tissue resulting in poor distribution of the product in an infested tree. However, control may be achieved if larvae come into contact or feed on TREE-äge treated tissues.

## USE

Use as formulated or dilute with equivalent 1 to 3 volumes of water or more, as necessary.

### USE RATE TABLE

Tree Diameter (DBH) (Inches)	Low ml. product/ tree	Medium ml. product/ tree	Medium - High ml. product/ tree	High ml. product/ tree	Number of Injection Sites
4 to 6	15	25	50	-	3
7 to 9	20	40	80	-	4
10 to 12	30	55	110	165	5
13 to 15	35	70	140	210	6
16 to 18	40	75	150	225	7
19 to 21	50	100	200	300	8
22 to 24	-	115	230	345	10
25 to 27	-	130	260	390	11
28 to 30	-	145	290	435	12
31 to 33	-	160	320	480	13
34 to 36	-	175	350	525	15
37 to 39	-	190	380	570	16
40 to 42	-	205	410	615	17
43 to 45	-	220	440	660	18
46 to 48	-	235	470	705	20
49 to 51	-	250	500	750	21
52 to 54	-	265	530	795	22
55 to 57	-	280	560	840	23
58 to 60	-	295	590	885	25
61 to 63	-	310	620	930	26
64 to 66	-	325	650	975	27
67 to 69	-	340	680	1020	28
70 to 72	-	355	710	1065	30

The use of low, medium, medium high and high rates are based on the professional judgment of the applicator as to what constitutes a low, medium or high infestation.

Higher rates tend to provide longer residual and control of more difficult to control insects. See **Target Pest** for additional information in choosing the amount of product to apply.

Applications in Trees			
Tree Tissue	Target Pest	Recommended Rate <sup>1</sup>	Comments
Seed and Cone	Pine Coneworm ( <i>Dioryctria</i> spp) Pine Cone Seed Bug (suppression of <i>Leptoglossus</i> and <i>Tetyra</i> spp in the year of treatment)	Medium to High	For optimal control apply in the fall for early season pests or at least 30 days before insect attack.
Bud and Leaf	Bagworm Fall Webworm Gypsy Moth Mimosa Webworm Oak Worm Tussock Moth Leafminers (including Lepidoptera Coleoptera Hymenoptera) Honeylocust Plant Bug Pine Needle Scale Red Palm Mite Sawfly (including Elm, Pine)	Low to High	Apply at least 2-3 weeks before the pest has historically been present. Consult with local extension agent for when this will occur in your area.
	Tent Caterpillars (including Eastern, Forest, Pacific, and Western) Western Spruce Budworm Winter Moth	Low to Medium	

### Applications in Trees

Tree Tissue	Target Pest	Recommended Rate <sup>1</sup>	Comments
Shoot, Stem, Trunk and Branch	Flatheaded borers (including adult and larvae of Emerald Ash Borer)	Low to High	For control apply at least 30 days before historical egg hatch or adult flight and to trees whose vascular tissue is not damaged.
	Clearwing borers (including Ash and Sequoia Pine Pitch Tube Moth)	Low to Medium	
	Roundheaded borers excluding (Asian longhorn borer)	Medium to High	If vascular tissue is damaged or plugged by insect galleries, nematodes or fungi, uniform treatment and control may not be achieved.
	Scolytids (bark beetles) / Ips Engraver Beetles Mountain Pine Beetle Southern Pine Beetle Spruce Beetle Western Pine Beetle  Pinewood Nematode		

<sup>1</sup> Use medium to high rates for remedial and longer residual control.

### Compatibility

Do not mix TREE-äge before injection with other products such as insecticides, fungicides, plant growth regulators, surfactants, adjuvants, and fertilizers.

### RESTRICTION

Do not apply to trees that may yield food consumed by humans or used in animal feed.

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## STORAGE AND DISPOSAL

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Do not contaminate water, food, or feed by storage and disposal.

**Pesticide Storage:** Store in a cool, dry place, away from children and pets. Keep from freezing.

**Pesticide Disposal:** Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

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**TREE-äge** is a registered trademark of Arborjet, Inc.

Manufactured for: Arborjet Inc.  
99 Blueberry Hill Road  
Woburn MA 01801

SCPPLABJ 1309A-LIC 1210  
334490



**FIRST AID:**

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call poison control center or doctor immediately for treatment advice. Have person sip glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**NOTE TO PHYSICIAN:** Early signs of intoxication include dilation of pupils, muscular incoordination, and muscular tremors. Vomiting within one-half hour of exposure can minimize toxicity following accidental ingestion of the product; rapidly after exposure (< 15 minutes) administer repeatedly medical charcoal in a large quantity of water or ipecac. If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms, and measurements. In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since emamectin benzoate is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic emamectin benzoate exposure.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**HOT LINE NUMBER**

For 24-Hour Medical Emergency Assistance (Human or Animal), Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call 1-800-255-3924.

**CONTAINER HANDLING:**

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

**STORAGE AND DISPOSAL:**

See booklet for Storage and Disposal instructions.

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SCPPLABJ 1309A-LIC 1210  
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## MATERIAL SAFETY DATA SHEET

Syngenta Crop Protection, Inc.  
Post Office Box 18300  
Greensboro, NC 27419

In Case of Emergency, Call  
1-800-888-8372

### 1. PRODUCT IDENTIFICATION

Product Name: **TREE-äge** Product No.: A16297A  
EPA Signal Word: Warning  
Active Ingredient(%): Eamectin Benzoate (4%) CAS No.: 155569-91-8  
Chemical Name: Avermectin B1, 4"-deoxy-4"-(methylamino)-, (4"R)-, benzoate (salt)  
Chemical Class: Insecticide  
EPA Registration Number(s): Not Available Section(s) Revised: New

### 2. HAZARDS IDENTIFICATION

#### Health and Environmental

Causes eye and skin irritation. May be harmful if swallowed. Harmful if inhaled. Vapors may cause drowsiness and dizziness.

Inhalation can cause irritation to the respiratory tract and can result in chemical pneumonitis if aspirated. Ingestion results in central nervous system effects such as muscle tremors, decreased activity, ataxia (unsteadiness or incoordination), and dilated pupils (mydriasis).

#### Hazardous Decomposition Products

May decompose at high temperatures forming toxic gases.

#### Physical Properties

Appearance: Blue liquid

Odor: Aromatic

#### Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Tetrahydrofurfuryl Alcohol (THFA)	Not Established	Not Established	2 ppm (TWA) ****	No
Eamectin Benzoate (4%)	Not Established	Not Established	0.02 mg/m <sup>3</sup> TWA ***	No

\*\*\* Syngenta Occupational Exposure Limit (OEL)

\*\*\*\* Recommended by AIHA (American Industrial Hygiene Association)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.  
Syngenta Hazard Category: C, S

### 4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison

control center or doctor, or going for treatment.

- Ingestion:** If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Inhalation:** If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

#### Notes to Physician

Contains petroleum distillate - vomiting may cause aspiration pneumonia.

Early signs of intoxication include dilation of pupils, muscular incoordination and muscular tremors. Vomiting within one-half hour of exposure can minimize toxicity following accidental ingestion of the product; rapidly after exposure (<15 minutes) administer repeatedly medical charcoal in a large quantity of water or ipecac. If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms and measurements.

In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since emamectin benzoate is believed to enhance GABA activity in animals, it is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic emamectin benzoate exposure.

#### Medical Condition Likely to be Aggravated by Exposure

None known.

## **5. FIRE FIGHTING MEASURES**

### Fire and Explosion

- Flash Point (Test Method): > 226°F (Pensky-Martens CC)
- Flammable Limits (% in Air): Lower: Not Applicable Upper: Not Applicable
- Autoignition Temperature: 662°F
- Flammability: Not Applicable

### Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

### In Case of Fire

Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

## **6. ACCIDENTAL RELEASE MEASURES**

### In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

## 7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

- Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
- Eye Contact: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- Skin Contact: Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.
- Inhalation: A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any R, P or HE filter.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: Blue liquid
- Odor: Aromatic
- Melting Point: Not Applicable
- Boiling Point: Not Available
- Specific Gravity/Density: 1.08 g/cm<sup>3</sup> @ 68°F (20°C)
- pH: 4.6 (1% solution in deionized H<sub>2</sub>O @ 77°F [25°C])

### Solubility in H<sub>2</sub>O

- Emamectin Benzoate: 30 - 50 ppm (pH 7)

### Vapor Pressure

- Emamectin Benzoate: 3 x 10<sup>-8</sup> mmHg @ 70°F (21°C)

## 10. STABILITY AND REACTIVITY

- Stability: Stable under normal use and storage conditions.
- Hazardous Polymerization: Will not occur.
- Conditions to Avoid: None known.
- Materials to Avoid: None known.
- Hazardous Decomposition Products: May decompose at high temperatures forming toxic gases.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity/Irritation Studies (Finished Product)

- Ingestion: Oral (LD<sub>50</sub> Female Rat) : 3129 mg/kg body weight
- Dermal: Dermal (LD<sub>50</sub> Rat) : > 5000 mg/kg body weight
- Inhalation:

Inhalation (LC50 Rat) : > 2.54 mg/l air - 4 hours  
Eye Contact: Severely Irritating (Rabbit)  
Skin Contact: Slightly Irritating (Rabbit)  
Skin Sensitization: Not a Sensitizer (Guinea Pig)

#### Reproductive/Developmental Effects

Emamectin Benzoate: Developmental and reproductive toxicity observed in dosages that are toxic to mature animals.

#### Chronic/Subchronic Toxicity Studies

Emamectin Benzoate: Tremors and nerve lesions observed at lowest dose tested in rabbits. Bladder changes reported in rats.

#### Carcinogenicity

Emamectin Benzoate: None observed.

#### Other Toxicity Information

None

#### Toxicity of Other Components

Tetrahydrofurfuryl Alcohol (THFA)

May be harmful if swallowed. Causes respiratory tract irritation. Causes skin irritation. May cause digestive tract irritation. Causes severe eye irritation. Inhalation overexposure may cause dizziness, incoordination and unconsciousness. Chronic overexposure may affect the kidney.

#### Target Organs

##### Active Ingredients

Emamectin Benzoate: Central nervous system, bladder

##### Inert Ingredients

Tetrahydrofurfuryl Alcohol (THFA): Digestive tract, respiratory tract, skin, eye, CNS, kidney

## 12. ECOLOGICAL INFORMATION

#### Summary of Effects

Emamectin Benzoate:

Very toxic to aquatic life with long lasting effects.

#### Ecotoxicity Effects

Emamectin Benzoate:

Fish (Rainbow Trout) 96-hour LC50 174 ppb

Fish (Bluegill Sunfish) 96-hour LC50 180 ppb

Green Algae 5-day EC50 > 3.9 ppb

Bird (Bobwhite Quail) LD50 Oral 264 mg/kg

Bee (Contact) LD50 0.0035 ug/bee

Invertebrate (Water Flea) 48-hour EC50 1.0 ppb

#### Environmental Fate

Emamectin Benzoate:

The information presented here is for the active ingredient, emamectin benzoate.

Low bioaccumulation potential. Persistent in soil. Stable in water. Immobile in soil. Sinks in water (after 24 h).

## 13. DISPOSAL CONSIDERATIONS

#### Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

## 14. TRANSPORT INFORMATION

### DOT Classification

Ground Transport - NAFTA  
Not regulated by US DOT.

Air Transport - NAFTA  
Not regulated by US DOT.

### B/L Freight Classification

Insecticides, NOI, O/T Poison

### Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Emamectin Benzoate), Marine Pollutant

Hazard Class or Division: Class 9

Identification Number: UN 3082

Packing Group: PG III

IMDG EMS #: F-A, S-F

Air Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Emamectin Benzoate), Marine Pollutant

Hazard Class or Division: Class 9

Identification Number: UN 3082

Packing Group: PG III

Packing Auth.: 914

Note: Max. inner container 5 liter; Max. single container 450 liter

## 15. REGULATORY INFORMATION

### EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Not Applicable

### California Proposition 65

Not Applicable

### CERCLA/SARA 302 Reportable Quantity (RQ)

None

### RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

### TSCA Status

Exempt from TSCA, subject to FIFRA

## 16. OTHER INFORMATION

### NFPA Hazard Ratings

Health: 2  
Flammability: 1  
Instability: 0

### HMIS Hazard Ratings

Health: 1  
Flammability: 1  
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 11/30/2007

Revision Date:

Replaces:

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

End of MSDS



PULL HERE TO OPEN ►

# **Arbotect<sup>®</sup>**

## **20-S**

### **Fungicide**

*For Dutch Elm Disease and Sycamore Anthracnose*

*Active Ingredient:*

Thiabendazole Hypophosphite (CAS No. 28558-32-9) ..... 26.6%  
(equivalent to 20% Thiabendazole)

*Other Ingredients:* ..... 73.4%

*Total:* ..... 100.0%

**KEEP OUT OF REACH OF CHILDREN.**

### **CAUTION**

*See additional precautionary statements and  
directions for use inside booklet.*

*EPA Reg. No. 100-892*

*EPA Est. 39578-TX-1*

*Product of India*

*Formulated in the USA*

**SCP 892A-L1K 0308**

**1 gallon**

**Net Contents**

**syngenta<sup>®</sup>**

<b>FIRST AID</b>	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<p align="center"><b>HOT LINE NUMBER</b></p> <p align="center">For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call <b>1-800-888-8372</b></p>	

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

#### CAUTION

Harmful if swallowed. Harmful if inhaled. Avoid breathing spray mist. May irritate skin. Avoid contact with skin or eyes.

### Personal Protective Equipment (PPE)

Mixers, loaders, applicators, and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### User Safety Recommendations

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticides get inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

### Environmental Hazards

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wastes.

## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, Inc. or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. To the extent permitted by applicable law, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential, or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

## **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses; and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**The restricted entry interval (REI) is 0 hours.**

#### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**The restricted entry interval (REI) is 0 hours.**

#### **GENERAL INFORMATION**

Arbotect 20-S is a systemic fungicide for use as a flare root injection for prevention of Dutch elm disease (*Ophiostoma ulmi* and *O. novo-ulmi*) on elms (*Ulmus* spp.) and treatment of sycamore anthracnose (*Apiognomonia platani*) on sycamores and London plane trees (*Platanus* spp.). It is recommended that Arbotect 20-S be administered by trained arborists or others trained in injection techniques and in the identification of diseases.

### **Correct Location for Injector Placement**

The flare root area is the transitional zone between the trunk and the root system. Uptake and distribution of Arbotect 20-S is more effective when injections are made into the flare roots. In addition, wounds created in the flare root area close more rapidly in comparison to wounds above the flare root area.

### **Tree Preparation**

1. Heavy, thick, or loose outer bark may be carefully shaved to form a smoother injection point and to ensure the operator that the drill hole penetrates through the bark to the xylem.
2. If the flare roots are not clearly exposed, carefully remove enough soil from the base of the tree to uncover the top of the flare roots. Brush away loose soil.
3. Drill holes through the bark, into the sapwood using a clean, sharp, drill bit (high-helix or brad-point bits are recommended). For best results, change drill bits every 5-10 trees. Drill hole diameter should be adequate to allow insertion of injection tees and formation of an airtight contact between active xylem and the delivery point of the injection tees. Generally, the drill hole should not exceed 1/2 inch in diameter.

Drill hole depth should be adequate to deliver the product into active xylem tissue. Generally, one inch depth is appropriate. Drill perpendicular to the surface of the root flare.

Place injectors 3-6 inches apart around the base of the tree. Do not drill in the valleys between the flare roots or into cankered areas. Drill above these areas into the trunk, then continue into sound sapwood on the flares.

4. Insert into the drilled holes the injection ports ("tees"), which are connected to the plastic tubing. Insert the tees by hand and lightly tap with a small hammer to set in the hole. Do not push the tees past the current year's xylem.
5. Do not dilute Arbotect 20-S with highly alkaline water as a precipitate may form. For hard water or water with high pH, use a deionizer tank or pH stabilizer (for example, muriatic acid) to keep Arbotect 20-S in solution.

### **Tree Measurement**

Measure the diameter of the tree using a tree diameter-tape (D-tape) at 4 1/2 feet above the ground. This is the diameter at breast height (DBH). If only a regular tape is available, measure the tree circumference and divide that number by 3.14 to obtain the diameter.

### **Injection**

For best results, use a pressurized system that holds constant pressure at 15-20 psi. Pull out two tees, on opposite sides of the tee, and bleed the air out of the harness. When all air bubbles have been removed, insert the two tees, adjust the pressure to 15-20 psi, and check for leaks. Do not add the Arbotect 20-S until the system is running.

After the injection is complete, remove injection tees and leave drill holes unplugged. A water flush to cleanse the hole may assist with wound closure. Soil should be replaced around the root flares. It is not necessary to treat the drill holes with wound paint or other sealing compounds.

The injection system described is meant as an example; please refer to manufacturer's instructions when using other types of tree injection systems.

## **APPLICATION PROCEDURES**

### **Elm Trees – 1-Year Growing Season Treatment – Aids in the Control of Dutch Elm Disease**

**Preventive Treatment** – For each 5 inches of trunk diameter, inject 1 fl. oz. of Arbotect 20-S in 40 fl. oz. (1<sup>1</sup>/<sub>4</sub> qts.) of water to 2 fl. oz. of Arbotect 20-S in 80 fl. oz. (2<sup>1</sup>/<sub>2</sub> qts.) of water. Use the higher levels of Arbotect 20-S under high disease pressure situations.

Preventive applications should be made when leaves approach full size, usually in late May or June.

**Therapeutic Treatment** – For each 5 inches of trunk diameter, inject 2 fl. oz. of Arbotect 20-S in 80 fl. oz. (2<sup>1</sup>/<sub>2</sub> qts.) of water to 4 fl. oz. of Arbotect 20-S in 160 fl. oz. of water. Use the higher levels of Arbotect 20-S under high disease pressure situations.

Therapeutic applications should be made as soon as the current year infections are seen, usually in late June through August.

For optimum disease control, preventive treatment is recommended. When a tree shows more than 5% crown symptoms, treatment may not be effective. Treatment should be used in conjunction with an insect control and sanitation program (pruning of diseased limbs) in order to obtain best results. Trees that are 5 inches or less in diameter at chest height should not be treated.

Place injection sites as near to ground level as possible at 3 to 10-inch intervals around the trunk with a maximum hole diameter of 1/2 inch using a minimum of 3 or 4 equally spaced injection points per tree.

#### **Elm Trees – 3-Year Growing Season Treatment – For Preventive Treatment of Dutch Elm Disease**

Inject 12 fl. oz. of Arbotect 20-S for each 5 inches of trunk diameter. Dilute each 2.0 fl. oz. of Arbotect 20-S with 1 gal. of water. Inject into any exposed root flares, below ground, once every three years. Place injection sites into root flares at 3-10 inch intervals around the tree with a maximum hole diameter of 1/4 inch. Where needed, the root flares will need to be exposed through soil excavation. Trees treated into trunk wood will not be as effectively protected. A typical tree will require 1.3 injection sites per diameter inch. For best results, injections should be made after the tree is fully leafed and the seeds have dropped, through late summer or early fall.

- Do not use this treatment if trees are less than 10 inches in diameter.
- If pressure injection is to be used, do not exceed 30 psi.
- Do not dilute Arbotect 20-S with highly alkaline water as a precipitate may form. Pre-test your water source by mixing a small amount of Arbotect 20-S with water. If the solution turns white, use different water.

#### **Retreatment**

Arbotect 20-S will provide three growing seasons of protection in most situations. However, protection in the third year after treatment will be slightly less than the first two years. In high disease pressure situations and for trees over 30 inches in diameter, retreatment may need to be considered during the third growing season after the tree was initially treated.

#### **Therapeutic Treatment of Elms**

Before treating a diseased elm with Arbotect 20-S, it is important to first isolate the disease from the tree using tracing techniques or limb removal. Injecting an elm tree that has the Dutch elm disease fungus actively growing will result in the failure of the treatment.

#### **Sycamore Trees and London Plane Trees – 3-Year Growing Season Treatment – Aids in the Control of Sycamore Anthracnose**

For each 5 inches of trunk diameter, inject 8 fl. oz. of Arbotect 20-S. (One part Arbotect 20-S should be diluted with between 20 and 40 parts of water). For large trees over 30 inches in diameter, inject up to 12 fl. oz. of Arbotect 20-S per 5 inches of trunk diameter.

For best results, injections should be made after the tree is fully leafed (post infection) through late summer or early fall. Treatments will aid in the control of sycamore anthracnose for up to three growing seasons. Trees over 50 inches diameter may need two consecutive treatments one year apart to obtain the desired level of protection.

Place injection sites at 3-10 inch intervals around the root flares. Trees treated into trunk wood will not be as effectively protected. Use a maximum hole diameter of 1/4 inch using a minimum of 3 or 4 equally spaced injection points per tree. A typical tree will require 1.3 injection sites per diameter inch. It is important that injection sites be placed in root flares at or below ground level.

- Trees that are 5 inches or less in diameter at chest height should not be treated.
- If pressure injection is to be used, do not exceed 30 psi.
- Do not dilute Arbotect 20-5 with highly alkaline water as a precipitate may form. Pre-test your water source by mixing a small amount of Arbotect 20-5 with water. If the solution turns white, use different water.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

### **Pesticide Storage**

Store in original containers only. Keep container closed when not in use. Do not store near food or feed.

### **Pesticide Disposal**


Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures under the Resource Conservation and Recovery Act.

### Container Disposal

Do not reuse container. Triple rinse (or equivalent), then puncture and dispose of in a sanitary landfill or alternatives allowed by State and local authorities.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

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Arbotect®, the Syngenta logo, and the CP FRAME  are trademarks of a Syngenta Group Company

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For non-emergency (e.g., current product information), call  
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:  
Syngenta Crop Protection, Inc.  
P. O. Box 18300  
Greensboro, North Carolina 27419-8300  
[www.syngenta-us.com](http://www.syngenta-us.com)

**SCP 892A-L1K 0308**

BAR CODE # IS  
(01) 0 07 02941 81235  
LAST DIGIT IS CHECK DIGIT  
UCC/EAN 128



## Fungicide

For Dutch Elm Disease and Sycamore  
Anthracnose

Active Ingredient:  
Thiabendazole Hypophosphite  
(CAS No. 28558-32-9) ..... 26.6%  
(equivalent to 20% Thiabendazole)

Other Ingredients:	73.4%
Total:	100.0%

See additional precautionary statements and  
directions for use inside booklet.

EPA Reg. No. 100-892

EPA Est. 39578-TX-1

Product of India

Formulated in the USA

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trademarks of a Syngenta Group Company

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Manufactured for:  
Syngenta Crop Protection, Inc.  
P. O. Box 18300  
Greensboro, North Carolina 27419-8300  
www.syngenta-us.com

SCP 892A-L1K 0308

**1 gallon**  
Net Contents

## KEEP OUT OF REACH OF CHILDREN. CAUTION

### PRECAUTIONARY STATEMENTS

Hazards to Humans and  
Domestic Animals

#### CAUTION

Harmful if swallowed. Harmful if  
inhaled. Avoid breathing spray  
mist. May irritate skin. Avoid con-  
tact with skin or eyes.

#### FIRST AID

**If swallowed:** Call a poison con-  
trol center or doctor immediately  
for treatment advice. Do not give  
any liquid to the person. Do not  
induce vomiting unless told to do  
so by the poison control center or  
doctor. Do not give anything by  
mouth to an unconscious person.

**If inhaled:** Move person to  
fresh air. If person is not breath-  
ing, call 911 or an ambulance,  
then give artificial respiration,  
preferably mouth to mouth, if  
possible. Call a poison control  
center or doctor for further treat-  
ment advice.

**If on skin or clothing:** Take off  
contaminated clothing. Rinse  
skin immediately with plenty of  
water for 15-20 minutes. Call a  
poison control center or doctor  
for treatment advice.

**If in eyes:** Hold eye open and  
rinse slowly and gently with  
water for 15-20 minutes. Remove  
contact lenses, if present, after  
the first 5 minutes, then continue  
rinsing eye. Call a poison control  
center or doctor for treatment  
advice.

Have the product container or  
label with you when calling a  
poison control center or doctor,  
or going for treatment.

**HOT LINE NUMBER:** For 24 Hour  
Medical Emergency Assistance  
(Human or Animal) or Chemical  
Emergency Assistance (Spill,  
Leak, Fire, or Accident), Call  
1-800-888-8372.

**Environmental Hazards:** Do not  
apply directly to water, or to  
areas where surface water is  
present, or to intertidal areas  
below the mean high water  
mark. Do not contaminate water  
by cleaning of equipment or dis-  
posal of wastes.

## STORAGE AND DISPOSAL

Do not contaminate water, food,  
or feed by storage or disposal.  
Open dumping is prohibited.

**Pesticide Storage:** Store in  
original containers only. Keep  
container closed when not in use.  
Do not store near food or feed.

**Pesticide Disposal:** Pesticide,  
spray mixture, or rinsate that  
cannot be used according to  
label instructions must be dis-  
posed of according to federal,  
state, or local procedures under  
the Resource Conservation and  
Recovery Act.

**Container Disposal:** Do not  
reuse container. Triple rinse (or  
equivalent), then puncture and  
dispose of in a sanitary landfill or  
alternatives allowed by State and  
local authorities.

For minor spills, leaks, etc., follow  
all precautions indicated on this  
label and clean up immediately.  
Take special care to avoid con-  
tamination of equipment and  
facilities during cleanup proce-  
dures and disposal of wastes. In  
the event of a major spill, fire, or  
other emergency, call 1-800-888-  
8372, day or night.

**syngenta®**



## MATERIAL SAFETY DATA SHEET

Syngenta Crop Protection, Inc.  
Post Office Box 18300  
Greensboro, NC 27419

In Case of Emergency, Call  
1-800-888-8372

### 1. PRODUCT IDENTIFICATION

Product Name: **ARBOTECH 20-S**  
EPA Signal Word: Caution  
Active Ingredient(%): Thiabendazole (26.6%)  
Chemical Name: 2-(thiazol-4-yl)benzimidazole  
Chemical Class: Benzimidazole Fungicide

Product No.: A10345A

CAS No.: 148-79-8

EPA Registration Number(s): 100-892

Section(s) Revised: 14

### 2. HAZARDS IDENTIFICATION

#### Health and Environmental

Causes mild skin irritation.

#### Hazardous Decomposition Products

None known.

#### Physical Properties

Appearance: Yellow orange liquid

Odor: Weak, like hydrogen sulfide

#### Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
No inerts required to be listed				
Thiabendazole (26.6%)	Not Established	Not Established	10 mg/m <sup>3</sup> TWA ***	No

\*\*\* Syngenta Occupational Exposure Limit (OEL)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.  
Syngenta Hazard Category: B

### 4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

- Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Inhalation:** If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

#### Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

#### Medical Condition Likely to be Aggravated by Exposure

None known.

## **5. FIRE FIGHTING MEASURES**

### Fire and Explosion

Flash Point (Test Method):	Not Applicable	
Flammable Limits (% in Air):	Lower: Not Applicable	Upper: Not Applicable
Autoignition Temperature:	Not Available	
Flammability:	Not Applicable	

### Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

### In Case of Fire

Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

## **6. ACCIDENTAL RELEASE MEASURES**

### In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

## **7. HANDLING AND STORAGE**

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.**

**FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

**Ingestion:** Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact: Where eye contact is likely, use chemical splash goggles.

Skin Contact: Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation: A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH certified respirator with any N, R, P or HE filter.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellow orange liquid

Odor: Weak, like hydrogen sulfide

Melting Point: Not Applicable

Boiling Point: 212 °F

Specific Gravity/Density: 1.1 @ 77°F (25°C)

pH: 2.7 (1% suspension in water)

### Solubility in H<sub>2</sub>O

Thiabendazole: 30 mg/l (pH 7, pH 10) @ 68°F in water

### Vapor Pressure

Thiabendazole: 4.0 x 10<sup>-9</sup> mmHg @ 77°F (25°C)

## 10. STABILITY AND REACTIVITY

Stability: Stable under normal use and storage conditions.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: None known.

Materials to Avoid: Oxidizing agents (e.g., chlorates, nitrates)

Hazardous Decomposition Products: None known.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity/Irritation Studies (Finished Product)

Ingestion: Oral (LD50 Rabbit) : > 5000 mg/kg body weight

Dermal: Dermal (LD50 Rabbit) : > 5050 mg/kg body weight

Inhalation: Inhalation (LC50 Rat) : Not Available

Eye Contact: Non-Irritating (Rabbit)

Skin Contact: Practically Non-Irritating (Rabbit)

Skin Sensitization: Not a Sensitizer (Guinea Pig)

### Reproductive/Developmental Effects

Thiabendazole: Evidence of developmental effects (skeletal defects, cleft palate) observed in animal studies.

### Chronic/Subchronic Toxicity Studies

Thiabendazole: Increased incidence of anemia and changes in the gall bladder, kidney, liver, spleen and thyroid gland in rat and dog tests.

No adverse health effects are expected in humans at airborne levels below the occupational exposure limit.

Carcinogenicity

Thiabendazole: None observed.

Other Toxicity Information

None

Toxicity of Other Components

No inerts required to be listed

Not Applicable

Target Organs

Active Ingredients

Thiabendazole: Thyroid, liver, spleen, kidney, gall bladder, blood

Inert Ingredients

No inerts required to be listed:

## 12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Thiabendazole:

Bird (Bobwhite Quail) LD50 Oral > 2250 mg/kg

Fish (Trout) 96-hour LC50 0.56 ppm

Invertebrate (Water Flea) 48-hour EC50 0.31 ppm

Environmental Fate

Thiabendazole:

The information presented here is for the active ingredient, thiabendazole.

Low bioaccumulation potential. Stable in soil and water. Sinks in water (after 24 h).

## 13. DISPOSAL CONSIDERATIONS

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

## 14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

Not regulated.

Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Thiabendazole), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Air Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Thiabendazole)

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Note: This product is currently not regulated for airfreight within the NAFTA region. However, effective 01/01/2011 the above classification must be used.

## 15. REGULATORY INFORMATION

### EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Thiabendazole (26.6%) (CAS No. 148-79-8)

### California Proposition 65

Not Applicable

### CERCLA/SARA 302 Reportable Quantity (RQ)

None

### RCRA Hazardous Waste Classification (40 CFR 261)

Corrosive D002

### TSCA Status

Exempt from TSCA, subject to FIFRA

## 16. OTHER INFORMATION

### NFPA Hazard Ratings

Health: 1  
Flammability: 1  
Instability: 0

### HMIS Hazard Ratings

Health: 1  
Flammability: 1  
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 6/5/1989

Revision Date: 8/12/2010

Replaces: 9/25/2009

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

End of MSDS



# Altosid<sup>®</sup> BRIQUETS

**ZOËCON**

**A SUSTAINED RELEASE MOSQUITO GROWTH REGULATOR TO PREVENT ADULT MOSQUITO EMERGENCE (INCLUDING THOSE WHICH MAY TRANSMIT WEST NILE VIRUS)**

## SPECIMEN LABEL

### ACTIVE INGREDIENT:

(S)-Methoprene (Dry Weight Basis)  
(CAS #65733-16-6) ..... 8.62%

**OTHER INGREDIENTS:** ..... 91.38%  
Total .... 100.00%

This product contains water, therefore the weight of the briquet and percent by weight of active ingredient will vary with hydration. The Ingredient Statement is expressed on a dry weight basis.

EPA Reg. No. 2724-375

EPA Est. No. 2724-TX-1

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

### FIRST AID

Call a poison control center or doctor for treatment advice.

- |                   |  |
|-------------------|--|
| <b>If in eyes</b> | <ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li></ul> |
|-------------------|--|

### FIRST AID (CONTINUED)

- |                               |  |
|-------------------------------|--|
| <b>If on skin or clothing</b> | <ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li></ul> |
|-------------------------------|--|

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

### ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of unused product.

### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

**Note to User:** Do not remove **ALTOSID<sup>®</sup> Briquets** from container except for immediate use.

Because of the unique mode of action of **ALTOSID<sup>®</sup> Briquets**, users must be familiar with special techniques for accurate evaluation of treatments. See Application Rates and Intervals section of this label or consult local Mosquito Abatement Agency. Effective use of **ALTOSID<sup>®</sup> Briquets** in sites subjected to periodic heavy flow of water requires careful attention to briquet placement and to the possible need for retreatment. Use of the product in storm drains, waste treatment and settling ponds, and similar systems should therefore be limited to experienced pesticide applicators, such as personnel of Mosquito Abatement Districts and Public Health Agencies.

**Introduction:** The **ALTOSID<sup>®</sup> Briquet** is a formulation designed to release effective levels of **ALTOSID<sup>®</sup> Insect Growth Regulator** up to 30 days under typical environmental conditions. Release of **ALTOSID<sup>®</sup> Insect Growth Regulator** is effected by dissolution of the **ALTOSID<sup>®</sup> Briquet**. If briquets become covered by obstructions such as debris, vegetation, and loose

sediment as a result of high rainfall or flow, normal dispersion of the active ingredient can be inhibited. Water flow may increase the dissolution of the briquet thus reducing the residual life of the briquet. Inspect areas of water flow to determine appropriate retreatment intervals. To assure positive results, place **ALTOSID® Briquets** where they will not be swept away by flushing action. **ALTOSID® Briquets** prevent the emergence of adult mosquitoes including *Anopheles*, *Culex*, *Culiseta*, *Coquillettidia*, and *Mansonia* spp., as well as those of the floodwater mosquito complex (*Aedes*, *Ochlerotatus*, and *Psorophora* spp.) from treated water. Treated larvae continue to develop normally to the pupal stage where they die.

#### APPLICATION TIMING

Apply **ALTOSID® Briquets** at the beginning of the mosquito season. **ALTOSID® Briquets** provide up to 30 days residual control. Continue treatment through the last brood of the season. Apply at any stage of larval development. **ALTOSID® Briquets** may be applied as a pre-flood treatment prior to wetting events. **ALTOSID® Briquets** will be unaffected in dry down situations and will begin working again during subsequent wetting events until the briquet is exhausted.

**NOTE:** This insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

#### APPLICATION SITES

**ALTOSID® Briquets** are designed to control mosquitoes in small bodies of water. Examples of application sites are: storm drains, catch basins, roadside ditches, fish ponds, ornamental ponds and fountains, other artificial water-holding containers, animal watering troughs, cesspools and septic tanks, waste treatment and settling ponds, flooded crypts, transformer vaults, abandoned swimming pools, tires, construction and other manmade depressions, cattail marshes, water-hyacinth beds, vegetation-choked phosphate pits, pastures, meadows, rice fields, freshwater swamps and marshes, salt and tidal marshes, treeholes, woodland pools, floodplains, and dredging spoil sites. For application sites connected by a water system, i.e., storm drains or catch basins, treat all of the water holding sites in the system to maximize the efficiency of the treatment program.

#### APPLICATION RATES AND INTERVALS

For mosquito control in non-(or low-) flow, shallow depressions (up to two ft in depth), treat on the basis of surface area placing one **ALTOSID® Briquet** per 100 sq ft. For applications in storm water drainage areas, sewers, and catch basins: Place one **ALTOSID® Briquet** into each catch basin. Follow the chart below to determine the number of **ALTOSID® Briquets** to use in large catch basins. Place one **ALTOSID® Briquet** per 100 sq ft of surface area up to two feet deep for storm water drainage areas. Use one additional **ALTOSID® Briquet** per two feet of water depth in areas deeper than two feet.

#### ALTOSID® BRIQUET APPLICATION CHART

Number of Briquets	Catch Basin Size	Water Depth (Feet)
1	0-1,500	0-2
2	1,500-3,000	2-4
3	3,000-4,500	4-6
4	4,500-6,000	6-8

#### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **Storage:** Store in cool, dry place. **Pesticide Disposal:** Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility. **Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty bag and box in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

To the fullest extent permitted by law, Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and handling of this material when such use and handling are contrary to label instructions.

Always read the label before using this product.

For more information call 1-800-248-7763.

**www.altosid.com**

**Wellmark International**  
1501 East Woodfield Road 200W  
Schaumburg, Illinois 60173



ALTOSID and ZOECON are registered trademarks of Wellmark International.

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March, 2010  
Schaumburg, IL

Date Issued: November, 2004  
Supersedes: November, 2003

**MATERIAL SAFETY DATA SHEET**  
**ZOECON ALTOSID® BRIQUETS**

**Manufacturer:** Wellmark International  
**Address:** 1501 E. Woodfield Rd., Suite 200 West, Schaumburg, IL 60173  
**Emergency Phone:** 1-800-248-7763  
**Transportation Emergency Phone:** CHEMTREC: 1-800-424-9300

**1. CHEMICAL PRODUCT INFORMATION**

**Product Name:** Zoecon Altosid® Briquets  
**Chemical Name/Synonym:** S)-Methoprene: Isopropyl (2E,4E,7S)-11-methoxy-3,7,11-trimethyl-2,4-dodecadienoate  
**Chemical Family:** Terpenoid  
**Formula:** C<sub>19</sub>H<sub>34</sub>O<sub>3</sub>  
**EPA Registration No.:** 2724-375-  
**RF Number:** 433A

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

<u>Component (chemical, common name)</u>	<u>CAS Number</u>	<u>Weight</u>	<u>Tolerance</u>
(S)-Methoprene: Isopropyl (2E,4E,7S)-11-methoxy-3,7,11-trimethyl-2,4-dodecadienoate	65733-16-6	8.62%	Not established
Inert ingredients (non-hazardous and/or trade secret):		91.38%	

**3. HAZARD INFORMATION**

**PRECAUTIONARY STATEMENT**  
Caution: Keep out of the reach of children..

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

No adverse reactions have resulted from normal human exposure during research and testing. Adverse animal reactions to this product have not been shown.

**PRIMARY ROUTE OF ENTRY**     Dermal/Eye: Yes     Oral: Yes     Inhalation: Yes

**ACUTE TOXICITY**

**Oral:** LD<sub>50</sub> (rat): > 34,600 mg/kg bw (highest dose level tested) (Based on S-Methoprene)

**Dermal:** LD<sub>50</sub> (rabbit) >5,000 mg/kg bw (Based on S-Methoprene)

**Inhalation:** LC<sub>50</sub> (rat): >5.19 mg/L air (Based on S-Methoprene)

**OTHER TOXICOLOGICAL INFORMATION**

**Skin Irritation:** Non-irritating (rabbit) (Based on S-Methoprene)

**Eye Irritation:** Practically non-irritating (rabbit) (Based on S-Methoprene)

**Sensitizer:** Not a sensitizer(guinea pig) (Based on S-Methoprene)

#### 4. FIRST AID MEASURES

**Eye:** Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.

**Skin:** Wash material off with soap and water. Remove contaminated clothing and footwear. See a physician if symptoms persist.

**Ingestion:** Drink 1-2 glasses of water and try to induce vomiting. Seek medical attention. Never give anything by mouth to an unconscious person.

**Inhalation:** Remove victim to fresh air. See a physician if cough or other respiratory symptoms develop

**Note to Physician:** Treat symptomatically

#### 5. FIRE FIGHTING MEASURES

**NFPA Rating:**      **Health:** 0                      **Fire:** 0                      **Reactivity:** 0

**Flammability Class:** N/A

**Flash Point:** Does not flash

**Explosive Limits (% of Volume):** N/A

**Extinguishing Media:** Water, foam, dry chemical

**Special Protective Equipment:** Firefighters should wear protective clothing, eye protection, and self contained breathing apparatus.

**Fire Fighting Procedures:** Normal procedures. Do not allow run-off to enter waterways inhabited by aquatic organisms

**Combustion Products:** Carbon dioxide, carbon monoxide

**Unusual Fire/Explosion Hazards:** None

#### 6. ACCIDENTAL RELEASE MEASURES

**Steps to be taken:** Sweep up material and place in a container for disposal. Do not allow spill to enter waterways inhabited by aquatic organisms

**Absorbents:** None necessary due to product form

**Incompatibles:** None

#### 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling.

**Storage:** Store in a cool, dry place. Do not contaminate food or feed by storage or disposal. Keep away from children.

#### 8. EXPOSURE CONTROL / PERSONAL MEASURES

**Exposure Limits:** Not applicable

**Ventilation:** Use with adequate ventilation.

**Personal Protective Equipment:** Under ordinary use conditions, no special protection is required. If prolonged exposure is expected, it is recommended to wear a MSHA/NIOSH approved organic vapor/pesticide respirator, impervious gloves, chemical goggles or safety glasses with side shields.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance and Odor:</b>	Grey to black solid with slight hydrocarbon odor.
<b>Boiling Point:</b>	N/A
<b>Melting Point:</b>	N/A
<b>Vapor Pressure (mm Hg):</b>	N/A
<b>Vapor Density (Air = 1):</b>	N/A
<b>Specific Gravity:</b>	1.4 g/cc
<b>Bulk Density:</b>	N/A
<b>Solubility:</b>	1 ppm
<b>Evaporation Rate:</b>	N/A
<b>pH:</b>	N/A

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable
<b>Reactivity:</b>	Non-reactive
<b>Incompatibility w/ Other Materials:</b>	None
<b>Decomposition Products:</b>	None
<b>Hazardous Polymerization:</b>	Will not occur

## 11. TOXICOLOGICAL INFORMATION

### **CHRONIC TOXICITY [Based on (RS)-Methoprene Technical]**

Methoprene is not considered as a carcinogen. The NOEL for non-carcinogen effects in an 18-month mouse study was 250ppm.

### **DEVELOPMENTAL/REPRODUCTIVE TOXICITY [Based on (RS)-Methoprene Technical]**

Methoprene is not a teratogen. The NOEL for maternal and embryo toxicity in rabbits was 200 mg/kg/day. The NOEL for reproductive effects in rats was 500 ppm.

### **MUTAGENICITY [Based on (RS)-Methoprene Technical]**

Methoprene is not a mutagen.

## 12. ECOLOGICAL INFORMATION

### **ENVIRONMENTAL FATE [Based on (RS)-Methoprene Technical]**

<b>Hydrolysis:</b>	T1/2 > 4 weeks
<b>Photolysis:</b>	T1/2 < 10 hours
<b>Soil half life:</b>	~ 10 days
<b>Water solubility:</b>	< 2 ppm

### **ECOTOXICITY [Based on (S)-Methoprene Technical]**

**Acute Toxicity:** fish:LC50 (trout): 760 ppb, (bluegill): > 370 ppb ((S)-Methoprene); **aquatic invertebrates:**LC50 (Daphnia): 360 ppb ((S)-Methoprene. )

### 13. DISPOSAL CONSIDERATIONS

Wastes resulting from the use of this product may be disposed of on site or at an approved waste management facility. Triple rinse (or equivalent). Do not contaminate water when disposing of rinsate or equipment wash waters. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### 14. TRANSPORT INFORMATION

**DOT49CFR Description:** Not regulated as hazardous by D.O.T.

**Freight Classification:** Insecticides, NOI other than poison in boxes or drums. NMFC 102120

### 15. REGULATORY INFORMATION

**CERCLA (Superfund):** Not regulated

**RCRA:** Not regulated as hazardous

#### **SARA 311/312 HAZARD CATEGORIES**

**Immediate Health:** Yes (irritation)

**Delayed Health:** No

**Fire:** No

**Sudden Pressure:** No

**Reactivity:** No

*The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to the best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.*



# ANVIL<sup>®</sup> 10+10 ULV

Contains an Oil Soluble Synergized Synthetic Pyrethroid for Control of Adult Mosquitoes (Including Organophosphate-Resistant Species), Midges and Black Flies in Outdoor Residential and Recreational Areas.

## ACTIVE INGREDIENTS

3-Phenoxybenzyl-(1RS, 3RS, 1RS, 3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl) cyclopropanecarboxylate.....	10.00%
Piperonyl Butoxide*	10.00%
OTHER INGREDIENTS**.....	80.00%
	100.00%

Contains 0.74 lbs of Technical Sumithrin@/Gallon and 0.74 lbs of Piperonyl Butoxide/Gallon

\*(butyl carbityl) (6-propylpiperonyl) ether and related compounds

\*\* Contains a petroleum distillate

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

**PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente**

### FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information regarding medical emergencies or pesticide incidents, call 1-888-740-8712.

**IF SWALLOWED:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Note to Physician:** Contains petroleum distillate - vomiting may cause aspiration pneumonia.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Harmful if absorbed through the skin. Avoid contact with skin, eyes and clothing. In case of contact, flush with plenty of water. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment (PPE):** Mixers, loaders, applicators, and other handlers must wear the following: long-sleeve shirt, long pants, shoes and socks, chemical resistant gloves made of barrier laminate nitrile rubber, neoprene rubber or viton. See engineering controls for additional requirements.

**User Safety Requirements:** Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

**USER SAFETY RECOMMENDATIONS:** Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

**Engineering Controls:** Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial applica-

tions is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

### ENVIRONMENTAL HAZARDS

This product is toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes, or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

### PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

### DIRECTIONS FOR USE

**It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.**

### USE RESTRICTIONS

For use by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

**IN CALIFORNIA:** This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel only.

**IN FLORIDA:** Do not apply by aircraft unless approved by the Florida Department of Agriculture and Consumer Services.

Do not treat a site with more than 0.0036 lbs of Sumithrin or 0.0036 lbs of PBO per acre in a 24-hour period. Do not exceed 0.1 lb of Sumithrin or PBO per acre in any site in any year. More frequent applications may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

**NOTE:** When rotating products with other insecticides containing PBO, do not exceed 2 lbs PBO per acre per year.

Not for use in outdoor residential misting systems.

### USE INFORMATION

ANVIL 10+10 ULV is approved for application as a thermal aerosol and an Ultra Low Volume (ULV) nonthermal aerosol (cold fog) in mosquito adulticiding programs involving outdoor residential and recreational areas where adult mosquitoes are present in annoying numbers in vegetation surrounding parks, woodlands, swamps, marshes, overgrown areas and golf courses. ANVIL 10+10 ULV may be applied over agricultural areas for the control of adult mosquitoes within or adjacent to the treatment areas.

For best results, apply when mosquitoes are most active and weather conditions are conducive to keeping the fog close to the ground. Application in calm air conditions is to be avoided. Apply only when wind speed is greater than or equal to 1 mph. All types of applications should be conducted at temperatures above 50 °F.

NOTE: ANVIL 10+10 ULV can not be diluted in water. Dilute this product with light mineral oil if dilution is preferred.

#### SPRAY DROPLET SIZE DETERMINATION

**Ground-based, wide area mosquito abatement application:** Spray equipment must be adjusted so that the volume median diameter is less than 30 microns (Dv 0.5 < 30 um) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 um). Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

**Aerial Equipment, wide area mosquito abatement application:** Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 um) and that 90% of the spray is contained in droplets smaller than 80 microns (Dv 0.9 < 80 um). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

#### GROUND ULV APPLICATION

Apply ANVIL 10+10 ULV through a standard ULV cold aerosol or non-thermal aerosol (cold fog) generator. Consult the following table for examples of various dosage rates using a swath width of 300 feet for acreage calculations. Vary flow rate according to vegetation density and mosquito population. Use higher flow rate in heavy vegetation or when pest populations are high.

Dosage Rate (Lbs. Sumithrin/Acre)	ANVIL 10+10 Fl.oz/ Acre	Flow Rates in Fl.oz./Minute at truck speeds of:			
		5 MPH	10 MPH	15 MPH	20 MPH
0.0036	0.62	1.9	3.8	5.7	7.6
0.0024	0.42	1.3	2.5	3.8	5.1
0.0012	0.21	0.6	1.3	1.9	2.5

ANVIL 10+10 ULV may also be applied with non-thermal, portable, motorized backpack equipment adjusted to deliver ULV particles of less than 100 microns VMD. Use 0.21 to 0.62 fl.oz. of the undiluted spray per acre (equal to 0.0012 to 0.0036 lb ai/acre) as a 50 ft (15.2 m) swath while walking at a speed of 2 mph (3.2 kph). Dilute with a suitable mineral oil if dilution is preferred. Do not exceed 0.62 fl.oz. of the undiluted spray per acre. Do NOT use portable backpack equipment for application in enclosed spaces.

ANVIL 10+10 ULV may be applied through truck mounted thermal fogging equipment. Do not exceed the maximum rates listed above. May be applied at speeds of 5 to 20 mph. To reduce oil requirement and sludge buildup in equipment, use a 60-100-second viscosity mineral "fog" oil, or other fuel-type oil. Use a clean, well-maintained and properly calibrated fogger. Do not wet foliage since oil base formulations may be phytotoxic. For use with hand carried foggers, use same rates of active ingredient per acre and a swath width of 50 ft with a walking speed of 2 mph. Fog downwind, with the wind at your back. Do NOT use hand-carried foggers for application in enclosed spaces.

#### AERIAL APPLICATION

ANVIL 10+10 ULV may be applied at rates of 0.21 to 0.62 fluid ounces ANVIL 10+10 ULV per acre by fixed wing or rotary aircraft equipped with suitable ULV application equipment. ANVIL 10+10 ULV may also be diluted with a suitable solvent such as mineral oil and applied by aerial ULV equipment so long as 0.62 fluid ounces per acre of ANVIL 10+10 ULV is not exceeded. Do not apply by fixed wing aircraft at a height less than 100 feet above the ground or canopy, or by helicopter at a height less than 75 feet above the ground or canopy unless specifically approved by the state or tribe based on public health needs.

### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in a cool, dry place. Keep container closed.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

#### CONTAINER HANDLING:

[For 2.5-gallon Jugs]: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with mineral oil and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[For refillable drums & totes]: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

#### FOR MORE INFORMATION CALL 1-800-323-5727

NOTICE: To the extent provided by law, seller makes no warranty, expressed or implied, concerning the use of this product other than as indicated on the label. Buyer assumes all risk of use/handling of this material when use and/or handling is contrary to label instructions.

ANVIL™ is a trademark of Clarke Mosquito Control Products, Inc.

Sumithrin™ is a trademark of Sumitomo Company Ltd.

MANUFACTURED FOR:  
CLARKE MOSQUITO CONTROL PRODUCTS, INC.  
159 N. GARDEN AVENUE  
ROSELLE, ILLINOIS 60172

AVAILABLE PACKAGING: 2.5 GAL, 30 GAL, 55 GAL, 275 GAL, TOTE

LOT NO.: Marked on Container Label

EPA REG. NO. 1021-1688-8329

EPA EST. NO. 8329-IL-001

AL0261

# Material Safety Data Sheet

Date last revised: 4 February 4, 2009

## I. General Information

**Active Ingredient(s)**  
d-Phenothrin (SUMITHRIN®); Piperonyl Butoxide

**Product Description**  
A mosquito control insecticide for outdoor residential and recreational areas

**Proper Shipping Name (DOT, ICAO/IATA) (non-bulk shipments)**  
Insecticides, Insect or Animal Repellent, Liquid, N.O.S.

**Manufacturer**  
Clarke Mosquito Control Products, Inc.

**Manufacturer's Address**  
159 North Garden Avenue  
Roselle, Illinois 60172

**Trade Name & Synonyms**  
ANVIL® 10+10 ULV

**EPA Registration Number**  
1021-1688-8329

**Primary Hazard Classification/Division (DOT, ICAO/IATA)**  
Non-Hazardous (non-bulk shipments)

**Manufacturer's Phone Number**  
(630) 894-2000

**INFOTRAC (Transportation/Spill Emergency)** 1-800-553-5053

**Medical Emergency or Incident** 1-888-740-8712

## II. Composition / Ingredients

Chemical Name	CAS #	Exposure Limits	Wt. %
d-Phenothrin (SUMITHRIN®)	026002-80-2	None	10
Piperonyl Butoxide	000051-03-6	None	10
Petroleum Distillates		200 mg/m <sup>3</sup> [1]	<5
Mineral Oil		5 mg/m <sup>3</sup> [2]	50-75

[1] ACGIH TLV, TWA, skin exposure

[2] OSHA PEL/ACGIH TLV, TWA, oil mist

COMMENTS: Ingredients not identified are proprietary or non-hazardous. Values are not product specifications.

## III. Hazards Identification

**Physical State:** liquid **Color:** colorless **Odor:** mineral oil

**CAUTION!** Harmful if absorbed through the skin. Contains petroleum distillate – Vomiting may cause aspiration pneumonia. Avoid contact with skin, eyes, and clothing.

### Signs and Symptoms of Acute Exposure

**Eye contact** May cause temporary eye irritation, tearing, and blurred vision. Irritation clearing within 48 hours.

**Skin contact** Can cause mild skin irritation (irritation index 0.04). No irritation noted at 72 hours. Can cause a burning or prickling sensation on more sensitive areas (face, eyes, mouth). Harmful if absorbed through the skin. Not a dermal sensitizer.

**Ingestion** May be harmful if swallowed. Product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe lung injury.

**Inhalation** No significant adverse health effects are expected to occur upon short-term exposure.

**Chronic effects** No significant signs or symptoms indicative of any adverse health effects are expected to occur.

**Conditions aggravated by exposure** None known

**Target organs** None

**Toxicological Information:** Acute Dermal LD50: > 2.0 gm/kg (Albino rabbit)

Oral LD50: > 5.0 gm/kg (Albino rat)

Inhalation LC50: 3.76 mg/L (4 hr, rat)

**Carcinogenic potential** None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as being carcinogens.

Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures to piperonyl butoxide (PBO). The significance of these observations is questionable and under review. The doses at which tumors were observed for PBO greatly exceeded potential human exposure from labeled uses. Doses at which these effects were observed greatly exceed anticipated human dietary intake. At anticipated dietary exposure levels, it is highly unlikely that this product will result in carcinogenic effects.

# Material Safety Data Sheet

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ANVIL 10+10 ULV

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## IV. First Aid Measures

**EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**SKIN:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**INGESTION:** If swallowed, immediately call a poison control center or doctor for treatment advice. DO NOT give any liquid to the person. Do not induce vomiting unless told to do so by a poison control center or doctor. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove affected person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**NOTES TO PHYSICIAN:** Contains Pyrethroids and Petroleum Distillates; vomiting may pose an aspiration pneumonia hazard. For skin effects, a highly efficient therapeutic agent for pyrethroid exposure is topical application of Tocopherol Acetate (Vitamin E).

## V. Fire Fighting Measures

**Flammability Classification:** This product is NOT classified as flammable or combustible by OSHA.

**Flash Point (Test Method):** >200 °F, >93.3 °C (TAG Closed Cup)

**Hazardous combustion products:** Carbon dioxide, carbon monoxide, smoke, fumes, and unburned hydrocarbons

**Hazardous Combustion Products:** Under fire conditions this product may support combustion and may decompose to give off toxic gases such as carbon monoxide, carbon dioxide, and nitrogen oxides.

**Extinguishing Media:** Foam, carbon dioxide or dry chemical.

**Fire Fighting Procedures:** Treat as an oil fire. Use a full-faced self-contained breathing apparatus along with full protective gear. Keep nearby containers and equipment cool with a water stream.

**Sensitive to Static Discharge:** Yes, use proper bonding and/or grounding procedures.

## VI. Physical and Chemical Properties

**Appearance:** Clear, colorless liquid

**Odor:** odor of mineral oil

**Specific Gravity (H<sub>2</sub>O = 1):** 0.887 at 20 °C

**Vapor Density (Air = 1):** heavier than air

**Melting/Freezing point:** Not determined

**(VOC):** <1.000%

**Solubility in Water:** Immiscible in water

**pH:** Not applicable

**Viscosity #1:** 25 CPS at 24 °C (Brookfield)

**Density:** 7.4 Lbs/Gal

## VII. Stability and Reactivity

**Stable** Yes

**Hazardous Polymerization** No

**Conditions to Avoid** Not compatible with strong acids or bases. Not compatible with strong oxidizers.

## VIII. Accidental Release Measures

Stop release, if possible without risk. Dike or contain release, if possible, and if immediate response can prevent further damage or danger. Isolate and control access to the release area. Take actions to reduce vapors.

**Small Spill** Absorb with appropriate absorbent such as sand or vermiculate. Clean spill area of residues and absorbent.

**Large Spill** Collect product into drums, storage tanks, etc., via drains, pumps, etc. Absorb with appropriate absorbent such as sand or vermiculate. Clean spill area of residues and absorbent.

**Environmental Precautions:** Water Spill: Contains pyrethroids which are toxic to fish and other aquatic invertebrates. Contaminated absorbent and wash water should be disposed of according to local, state/provincial and federal/national regulations.

## IX. Handling and Storage

**General Procedures:** Do not use or store near heat, sparks, open flame, or any other ignition sources.

**Handling:** Take prudent precautions to avoid contact with skin, eyes, and clothing. Mechanical ventilation should be used when handling this product in enclosed spaces. Do not contaminate water, food or feedstuffs, by storage, handling, or by

# Material Safety Data Sheet

Date last revised: 4 February, 2009

ANVIL 10+10 ULV  
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disposal. Read and observe all precautions and instructions on the label.

**Storage:** Store in a cool, dry place. Keep container closed. KEEP OUT OF REACH OF CHILDREN.

**Electrostatic Accumulation Hazard:** This product contains petroleum distillates for which there is potential for the accumulation of static electricity. Consideration should be given to bonding and grounding of equipment during loading, unloading, and transfer of this product.

**Disposal Method:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Empty Container:** Triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of container in a sanitary landfill, or by other procedures approved by State and Local authorities.

**RCRA/EPA Waste Information:** None of the ingredients in this product appear on RCRA lists (40 CFR 261.24, 40 CFR 261.33) or CERCLA Hazardous Substance list (40 CFR Part 302 Table 302.4).

## X. Exposure Controls / Personal Protection

**Engineering Controls:** Mechanical ventilation should be used when handling this product in enclosed spaces. Local exhaust ventilation may be necessary.

**Personal Protective Equipment:** Personal protective equipment should be selected based upon the conditions under which this material is used.

**Eyes and Face:** Take prudent precautions to avoid contact with eyes.

**Skin:** Take prudent precautions to avoid contact with skin and clothing.

**Work Hygienic Practices:** DO NOT SMOKE, EAT, OR DRINK, OR APPLY COSMETICS IN WORK AREA! Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking, or using the toilet.

## XI. Other Regulatory Information

**TSCA Inventory** All chemical substances in this product comply with the TSCA inventory reporting requirements.

### SARA Title III

#### **Section 311/312 Hazard Categories:**

**FIRE:** No    **PRESSURE GENERATING:** No    **REACTIVITY:** No    **ACUTE:** Yes

**Section 302/304 Extremely Hazardous Substances:** None

**Section 313 – Reportable Ingredients:**  
Sumithrin (d-Phenothrin), 026002-80-2, 10.00 wt%  
Piperonyl butoxide, 000051-03-6, 10.00 wt%

**DOT (Department of Transportation):** This material is not regulated by the DOT as a hazardous material when shipped in Non-Bulk quantities (i.e., less than 119 Gal / 450 Liter).

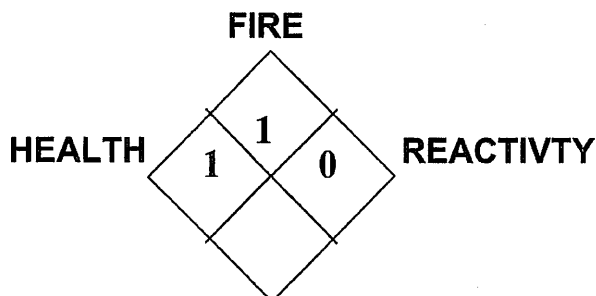
#### **DOT Shipping Name (bulk quantity) and IMO/IMDG (Vessel) shipping classification:**

Environmentally Hazardous Substance, Liquid, N.O.S. Marine Pollutant (d-Phenothrin) 9 UN 3082 III

#### **US States Regulatory Reporting**

**CA Prop 65:** This product is not known to contain any substances known to the State of California to cause cancer, birth defects, or other reproductive harm.

**Volatile Organic Compounds (VOC):** This product contains less than 1% VOC.



#### **NFPA Code Key**

4 = Severe  
3 = Serious  
2 = Moderate  
1 = Slight  
0 = Minimal

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

# VectoBac<sup>®</sup> 12AS

BIOLOGICAL LARVICIDE

AQUEOUS SUSPENSION

#### Active Ingredient:

*Bacillus thuringiensis*, subsp. *israelensis*, strain

AM 65-52, fermentation solids and solubles	11.61%
Other Ingredients	88.39%
Total	100.00%

Potency: 1200 International Toxic Units (ITU) per mg  
(Equivalent to 4.84 billion ITU per gallon, 1.279 billion ITU per liter)

There is no direct relationship between intended activity (potency) and the Percent Active Ingredient by Weight.

EPA Reg. No. 73049-38

EPA Est. No. 33762-IA-001

List No. 05605

#### INDEX:

- 1.0 First Aid
- 2.0 Precautionary Statements
  - 2.1 Hazard to Humans (and Domestic Animals)
  - 2.2 Physical and Chemical Hazards
- 3.0 Directions for Use
  - 3.1 Chemigation
- 4.0 Storage and Disposal
- 5.0 Application Directions
- 6.0 Nuisance Flies
- 7.0 Nuisance Aquatic Midges
- 8.0 Ground and Aerial Application
- 9.0 Small Quantity Dilution Rates
- 10.0 Chemigation
  - 10.1 Rice-Flood (Basin) Chemigation
- 11.0 Notice to User

#### KEEP OUT OF REACH OF CHILDREN CAUTION

1.0 FIRST AID	
If in eyes	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
If on skin or clothing	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-315-9819 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-323-9597.	

## 2.0 PRECAUTIONARY STATEMENTS

### 2.1 HAZARD TO HUMANS (AND DOMESTIC ANIMALS) CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash contaminated clothing before reuse. Mixer/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

### 2.2 Physical and Chemical Hazards

Diluted or undiluted VectoBac 12AS can cause corrosion if left in prolonged contact with aluminum spray system components. Rinse spray system with plenty of clean water after use. Care should be taken to prevent contact with aluminum aircraft surfaces, structural components and control systems. In case of contact, rinse thoroughly with plenty of water. Inspect aluminum aircraft components regularly for signs of corrosion.

## 3.0 DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply directly to finished drinking water reservoirs or drinking water receptacles when water is intended for human consumption.

Do not apply when weather conditions favor drift from treated areas. Do not apply to metallic painted objects, such as automobiles, as spotting may occur. If spray is deposited on metallic painted surfaces, wash immediately with soap and water to avoid spotting.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the treatment coordinator are responsible for considering all these factors when making decisions.

### 3.1 Chemigation

Do not apply this product through any type of irrigation system unless labeling on chemigation is followed.

## 4.0 STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **STORAGE:** Store in a cool, [less than 86° F (30° C)], dry place.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Do not reuse container.

CONTINUED

## 5.0 APPLICATION DIRECTIONS

Do not apply when wind speed favors drift beyond the area of treatment.

Mosquito Habitat	Suggested Rate Range*
(Such as the following examples): Irrigation ditches, roadside ditches, flood water, standing ponds, woodland pools, snow melt pools, pastures, catch basins, storm water retention areas, tidal water, salt marshes and rice fields. In addition, standing water containing mosquito larvae, in fields growing crops such as: Alfalfa, almonds, asparagus, corn, cotton, dates, grapes, peaches and walnuts, may be treated at the recommended rates.	0.25 - 2 pts/acres

When applying this product to standing water containing mosquito larvae in fields growing crops, do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Polluted water (such as sewage lagoons, animal waste lagoons).	1 - 2 pts/acre
--	----------------

\*Use higher rate range in polluted water and when late 3rd and early 4th instar larvae predominate, mosquito populations are high, water is heavily polluted, and/or algae are abundant.

Blackflies Habitat	Suggested Rate Range
Streams Stream water† (= ppm) for 1 minute exposure time	0.5 - 25 mg/liter
Stream water† (= ppm) for 10 minutes exposure time	0.05 - 2.5 mg/liter

†Use higher rate range when stream contains high concentration of organic materials, algae, or dense aquatic vegetation.

†Discharge is a principal factor determining carry of Bti. Use higher rate or increase volume by water dilution in low discharge rivers or streams under low volume (drought) conditions.

## 6.0 NUISANCE FLIES

For control of nuisance flies (*Psychoda* spp., *Chironomus* spp.) in sewage treatment facilities utilizing trickling filter systems.

### APPLICATION DIRECTIONS

Nuisance Fly Habitat	Suggested Rate Range*
Trickling filter system of wastewater treatment plants	10 - 20 mg/liter a.(0.833-1.67 ml) per liter of wastewater feed to the filter per 30 minutes

\* Use high rate for control of *Chironomus* spp. Apply undiluted with pre-calibrated pump or other device into the wastewater feeding into the filters for a period of 30 minutes. Repeat applications as needed after 2-4 weeks. Control of *Chironomus* spp. may take up to 2 weeks.

## 7.0 NUISANCE AQUATIC MIDGES

For control of *Chironomine* midges (*Chironominae: Chironomini*) inhabiting shallow, manmade and natural lakes or ponds.

### APPLICATION DIRECTIONS

Nuisance Midge Habitat	Suggested Rate Range*
Shallow Lakes and Ponds per sewage oxidation ponds (less than acre 6 feet deep)	1 gallon (3,785.5 ml) per acre

\* Apply diluted with water in total volume of 5 gallons/acre by pouring or spraying over the surface to be treated with pre-calibrated device. Repeat application as needed after 2-4 weeks. Control of *Chironomine* midges may take up to 2 weeks.

## 8.0 GROUND AND AERIAL APPLICATION

VectoBac 12AS may be applied in conventional ground or aerial application equipment with quantities of water sufficient to provide uniform coverage of the target area. The amount of water will depend on weather, spray equipment, and mosquito habitat characteristics. Do not mix more VectoBac 12AS than can be used in a 72-hour period.

For most ground spraying, apply in 5-100 gallons of water per acre using hand-pump, airblast, mist blower, etc., spray equipment.

For aerial application, VectoBac 12AS may be applied either undiluted or diluted with water. For undiluted applications, apply 0.25 to 2.0 pt/acre of VectoBac 12AS through fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or rotary atomizers.

For diluted application, fill the mix tank or plane hopper with the desired quantity of water. Start the mechanical or hydraulic agitation to provide moderate circulation before adding the VectoBac 12AS. VectoBac 12AS suspends readily in water and will stay suspended over normal application periods. Brief recirculation may be necessary if the spray mixture has sat for several hours or longer. AVOID CONTINUOUS AGITATION OF THE SPRAY MIXTURE DURING SPRAYING.

Rinse and flush spray equipment thoroughly following each use.

For blackfly aerial applications, VectoBac 12AS can be applied undiluted via fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or open pipes. Rate of application will be determined by the stream discharge and the required amount of VectoBac 12AS necessary to maintain a 0.5 - 25 ppm concentration in the stream water. VectoBac 12AS can also be applied diluted with similar spray equipment. Do not mix more VectoBac 12AS than can be used in a 72-hour period.

## 9.0 SMALL QUANTITY DILUTION RATES

### Gallons Spray Solution/Acre (Ounces Needed per Gallon of Spray)

#### VectoBac 12AS

#### Rate in Pints

Per Acre	10 Gal/A	25 Gal/A	50 Gal/A
0.25 (4 oz)	0.4	0.16	0.08
0.5 (8 oz)	0.8	0.32	0.16
1.0 (16 oz)	1.6	0.64	0.32
2.0 (32 oz)	3.2	1.28	0.64

CONTINUED

## **10.0 CHEMIGATION**

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Apply this product through flood (basin) irrigation systems. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have any questions about calibration, you should contact State Extension Service Specialists, equipment manufacturers or other experts.

A person knowledgeable of this chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### **10.1 RICE-FLOOD (BASIN) CHEMIGATION**

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

VectoBac 12AS is metered or dripped into rice floodwater at application stations positioned at the point of introduction (levee cut) of water into each rice field or pan. Two to three pints of VectoBac 12AS are diluted in water to a final volume of 5 gallons. The diluted solution is contained in a 5 gallon container and metered or dispersed into the irrigation water using a constant flow device at the rate of 80 ml per minute. Introduction of the solution should begin when 1/3 to 1/2 of the pan or field is covered with floodwater. Delivery of the solution should continue for a period of approximately 4-1/2 hours. Floodwater depth should not exceed 10-12 inches to prevent excessive dilution of VectoBac 12AS which could result in reduced larval kill.

Agitation is not required during the period in which the VectoBac 12AS solution is being dispersed.

Application of VectoBac 12AS into rice floodwater is not permitted using a pressurized water and pesticide injection system.

## **11.0 NOTICE TO USER**

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Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

VectoBac is a registered trademark of Valent BioSciences Corporation.



**VectoBac® 12AS****MSDS# BIO-0031 Rev.4**

ISSUED 03/08/10

-----  
1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION  
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MATERIAL NAME: VectoBac® 12AS  
                  VectoBac® 12AS II  
EPA REG. NO.: 73049-38  
List Number: 5605

MANUFACTURER: Valent BioSciences Corporation  
                  870 Technology Way, Suite 100  
                  Libertyville, Illinois 60048

## EMERGENCY TELEPHONE NUMBERS

Emergency Health or Spill:

Outside the United States: 651-632-6184

Within the United States: 877-315-9819

2. COMPOSITION/INFORMATION ON INGREDIENTS  
-----

INGREDIENT NAME: Bacillus thuringiensis, subsp. israelensis, strain  
AM 65-52, fermentation solids and solubles

CONCENTRATION: 11.61 %

CAS/RTECS NUMBERS: 68038-71-1 / N/A

OSHA-PEL 8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV 8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER 8HR TWA: N/A

LIMITS STEL: N/A

CEILING: N/A

INGREDIENT NAME: Inert Ingredients - identity withheld as a Trade

Secret

CONCENTRATION: 88.39 %

CAS/RTECS NUMBERS: N/A / N/A

OSHA-PEL 8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV 8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER 8HR TWA: N/A

LIMITS STEL: N/A

CEILING: N/A

VectoBac® 12AS

MSDS# BIO-0031 Rev. 4

ISSUED 03/08/10

-----  
2. COMPOSITION/INFORMATION ON INGREDIENTS, continued  
-----

EEC (European Community): N/A

Symbol Designation: N/A

Risk Phrases: N/A

Safety Phrases: N/A

3. HAZARDS INFORMATION  
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EMERGENCY OVERVIEW: Product is non-toxic by ingestion, skin contact, or inhalation. May be irritating to skin and eyes, and may be a skin sensitizer.

ROUTE(S) OF ENTRY:           Skin: No  
                                  Inhalation: No  
                                  Ingestion: No

SKIN CONTACT:           Mild irritant

SKIN SENSITIZATION: Possible mild sensitizer

EYE CONTACT:           Mild irritant

TARGET ORGANS:           N/D

CARCINOGENICITY RATING: NTP: N/L IARC: N/L OSHA: N/L ACGIH: N/L  
None

SIGNS AND SYMPTOMS: Direct contact with eyes or skin may cause mild irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: N/D

VectoBac® 12AS

MSDS# BIO-0031 Rev.4

ISSUED 03/08/10

## 4. FIRST AID MEASURES

EYES: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

SKIN: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

INGESTION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

INHALATION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

## 5. FIRE FIGHTING PROCEDURES

FLASH POINT: N/D

FLASH POINT METHOD: N/D

LOWER EXPLOSIVE LIMIT(%): N/D

UPPER EXPLOSIVE LIMIT(%): N/D

AUTOIGNITION TEMPERATURE: N/D

FIRE & EXPLOSION HAZARDS: Non-flammable and no explosive properties.

EXTINGUISHING MEDIA: Use appropriate media for underlying cause of fire.

FIRE FIGHTING INSTRUCTIONS: Wear protective clothing and self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

SPILL OR RELEASE PROCEDURES: Recover product and place in appropriate container for disposal. Ventilate and wash area.

VectoBac® 12AS

MSDS# BIO-0031 Rev. 4

ISSUED 03/08/10

## 7. HANDLING AND STORAGE

HANDLING: N/D.

STORAGE: Store in a cool, dry place. For further information refer to local country registration and label.

SPECIAL PRECAUTIONS: Wash thoroughly with soap and water after handling. Keep impervious gloves on until all potentially contaminated personal protective equipment is removed.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust.

RESPIRATORY PROTECTION: Not usually required. If necessary (Mixers/loaders and applicators not in enclosed cabs or aircraft), use a MSHA/NIOSH approved (or equivalent) respirator with a dust/mist filter (N-95, R-95, or P95).

SKIN PROTECTION: Impervious, waterproof gloves and clothing to minimize skin contact.

EYE PROTECTION: Not usually required. If necessary, use safety glasses or goggles.

OTHER PROTECTION: Wash thoroughly with soap and water after handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Light brown suspension.

ODOR: N/D

BOILING POINT: N/D

MELTING/FREEZING POINT: N/D

VAPOR PRESSURE (mm Hg): N/D

VAPOR DENSITY (Air=1): N/D

EVAPORATION RATE: N/D

BULK DENSITY: 1.06-1.1 g/mL

SPECIFIC GRAVITY: N/D

SOLUBILITY: Disperses well in water

pH: 4.6-5.0

VISCOSITY: 250-1000 cps at 25 C

**VectoBac® 12AS****MSDS# BIO-0031 Rev. 4**

ISSUED 03/08/10

## 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

INCOMPATIBILITIES: Diluted or undiluted product can cause corrosion if left in prolonged contact with aluminum surfaces (e.g. spray equipment, aircraft components).

HAZARDOUS DECOMPOSITION PRODUCTS: N/D.

HAZARDOUS POLYMERIZATION: Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

ORAL LD50: > 5,000 mg/kg (rat)

DERMAL LD50: > 5,000 mg/kg (rabbit)

INHALATION LC50: > 5.34 mg/l (rat) No lethality was observed in rats after a 4 hour whole body exposure to this concentration of the product as an undiluted aerosol.

CORROSIVENESS: N/D. Not expected to have any corrosive properties.

DERMAL IRRITATION: Transient, mild to moderate redness was observed at the site of application in a skin irritation test in rabbits.

OCULAR IRRITATION: Transient, redness and conjunctival irritation observed in test animals in a study with this product. No positive ocular effects were observed.

DERMAL SENSITIZATION: Eight of ten animals positive in a dermal sensitization study in guinea pigs. Considered to be a mild sensitizer.

SPECIAL TARGET ORGAN EFFECTS: N/D.

CARCINOGENICITY INFORMATION: N/D. None of the components are classified as carcinogens.

VectoBac® 12AS

MSDS# BIO-0031 Rev. 4

ISSUED 03/08/10

## 12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Technical product  
Non-pathogenic to birds, fish, honeybees, or earthworms.

## 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Dispose of product in accordance with federal,  
state, and local regulations.

## 14. TRANSPORTATION INFORMATION

DOT STATUS: Not Regulated  
PROPER SHIPPING NAME: N/A  
HAZARD CLASS: N/A  
UN NUMBER: N/A  
PACKING GROUP: N/A  
REPORTABLE QUANTITY: N/A

IATA/ICA0 STATUS: Not Regulated  
PROPER SHIPPING NAME: N/A  
HAZARD CLASS: N/A  
UN NUMBER: N/A  
PACKING GROUP: N/A  
REPORTABLE QUANTITY: N/A

IMO STATUS: Not Regulated  
PROPER SHIPPING NAME: N/A  
HAZARD CLASS: N/A  
UN NUMBER: N/A  
PACKING GROUP: N/A  
REPORTABLE QUANTITY: N/A  
FLASH POINT: N/D

## 15. REGULATORY INFORMATION

TSCA STATUS: Exempt RCRA STATUS: N/D

CERCLA STATUS: N/D PROP 65 (CA): N/D

SARA STATUS: N/D

**VectoBac® 12AS****MSDS# BIO-0031 Rev. 4**

ISSUED 03/08/10

## 16. OTHER INFORMATION

REASON FOR ISSUE: Updated storage as per local regulation.  
APPROVAL DATE: 03/08/10  
SUPERSEDES DATE: 08/13/09  
MSDS NUMBER: BIO-0031 Rev. 3

LEGEND: N/A = Not Applicable

N/D = Not Determined

N/L = Not Listed

L = Listed

C = Ceiling

S = Short-term

® = Registered Trademark of Valent BioSciences

(TM) = Registered Trademark of Valent BioSciences

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870 Technology Way, Suite 100  
Libertyville, IL 60048 - 800-323-9597  
Corporation

August 2009 © Valent BioSciences

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**MEMORANDUM**

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**DATE:** 2/4/2014  
**TO:** CHAIRMAN LAPLACA & EPS COMMITTEE  
**FROM:** Ralph Nikischer, Pest Management Coordinator  
**SUBJECT:** Clarke Mosquito Control, EarthRight Presentation

A representative from Clarke mosquito control will attend the EPS meeting to present a newly offered mosquito control service, EarthRight. The EarthRight program combines effective control with sustainability. Attached to this memo is additional information regarding the EarthRight program. Residents are encouraged to attend the meeting to learn about this alternative mosquito control program.

cc: President Cauley and Board of Trustees  
Kathleen Gargano  
George Franco

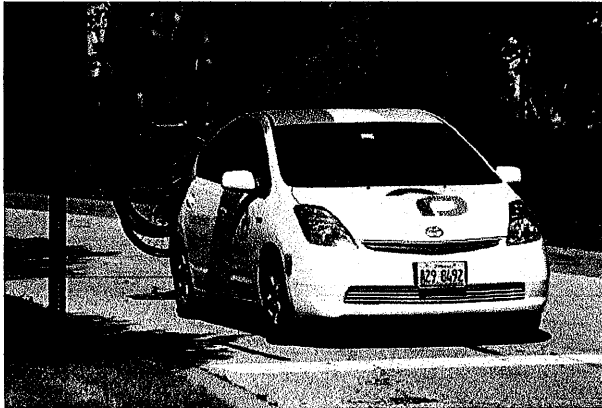
## EarthRight™

## *Earth-friendly community mosquito control*

### What is EarthRight?

EarthRight is the first and only public health mosquito control program to utilize products listed with the Organic Materials Review Institute (OMRI). By being OMRI listed, both the larvicide and adulticide are recognized as being safe to use in and around organic crops and gardens.

Coupled with low carbon-footprint application methods, EarthRight marks a revolution in mosquito control designed to “Love the Earth. Not mosquitoes.” Both larvicide and adulticide



used in the EarthRight program are made from naturally-derived active ingredients along with other inert ingredients that are registered by the USEPA and meet all requirements of the Organic Materials Review Institute.

### About the products used in EarthRight

EarthRight employs a unique pairing of two EPA-registered products to give communities

the most advanced choice for effective mosquito control. All formulations were exclusively developed to achieve public health use labeling and OMRI organic use pattern listing. That means the formulations had to demonstrate 95% or better efficacy at the lowest labeled use rate in order to receive EPA registration . . . as well as have every ingredient, ingredient source and manufacturing process reviewed and approved by OMRI. For you, this provides an unprecedented peace of mind for your venue.

- **Natular®** is a larvicide with a naturally-derived active ingredient, which is used to kill mosquito larvae before they hatch. Natular won the U.S. Environmental Protection Agency’s Presidential Green Chemistry Challenge Award in 2010, and was the first “Reduced Risk” EPA-registered larvicide. It was the first EPA-approved new active ingredient for promoting public health in nearly three decades.
  - Active ingredient: Spinosad, a product derived from a naturally occurring soil bacterium.
  - Formulations: Five total (tablet, granule and liquid) to meet any mosquito habitat or program need. Six years in development and regulatory review. Effective at low use rates.
  - Proven: Since introduction in 2009, Natular is now in commercial use in 22 states and 12 countries around the world. Active ingredient is used in agricultural, consumer and animal health products in over 85 countries.

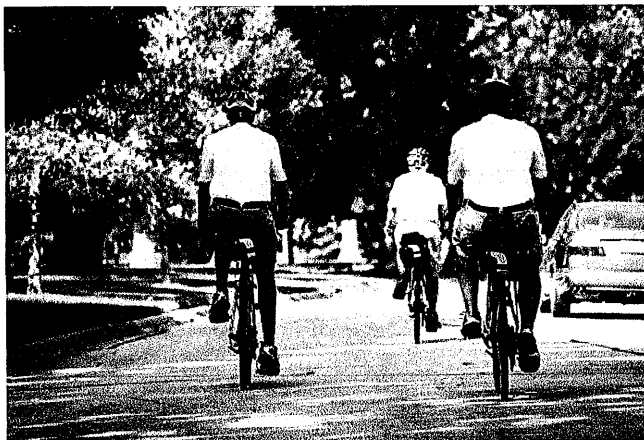
- **Merus™** is an adulticide used to control flying adult mosquitoes via ultra-low volume application methods. This is the *first and only* Organic Materials Review Institute (OMRI) Listed® adulticide for wide-area mosquito control.
  - Active ingredient: Pyrethrum, a natural, botanical active ingredient derived from chrysanthemum flowers. Degrades rapidly leaving no residue after several hours.
  - Formulation: Liquid - pale, translucent with light fresh scent (does not linger). Acts on contact as well as repels.
  - Proven: Pyrethrum has been used for mosquito control since first entered the market in the 1940s. The active itself is not stable and breaks down quickly. Advancements in formulation technology and art have made consistent performance and exceptional environmental compatibility possible.
  - Safety: 10 to 100 times less toxic to fish than products containing the synthetic mimic of the active ingredient. Relatively water insoluble nature of the pyrethrum, it is considered immobile in soil. This property greatly limits its ability to migrate into groundwater.

### Why is EarthRight a better choice?

EarthRight service integrates the newest, sustainable choices for effective mosquito control with carbon-footprint friendly application methods – utilizing bikes, electric club cars and electric backpack sprayers. It is a service choice that respects community residents and the environment.

### Who is the provider of the EarthRight service program?

EarthRight was developed by Clarke, a family-owned, global environmental product and services company with headquarters in Roselle, Ill. Our mission is to make communities more livable, safe and comfortable for families around the world. We do this by pioneering, developing and delivering environmentally-responsible mosquito control and aquatic services to help prevent disease, control nuisances and create healthy waterways.



Today, Clarke touches more than 300 million people around the world, and The Clarke Cares Foundation works to save lives and reduce people's suffering from mosquito-borne illnesses.

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**MEMORANDUM**

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**DATE:** 2/3/14  
**TO:** CHAIRMAN LA PLACA AND THE EPS COMMITTEE  
**FROM:** GEORGE FRANCO  
**SUBJECT:** PROPOSED VILLAGE LOT RESURFACING AND  
LIGHTING UPGRADES

The proposed 2014-15 budget includes \$245,000 funding to complete asphalt resurfacing and lighting upgrades for the Village parking lot located north of the railroad tracks between Washington and Lincoln streets.

The current asphalt in the parking lot is considered in fair to poor condition. There has been ongoing asphalt patching over the last 5 years in this lot by Public Service crews as well as ongoing cold patching to relieve trip hazards. Due to the proximity of this lot to the Brush Hill Depot and Burlington Park activities throughout the year, Public Services would recommend the resurfacing of this parking lot for the safety of all patrons.

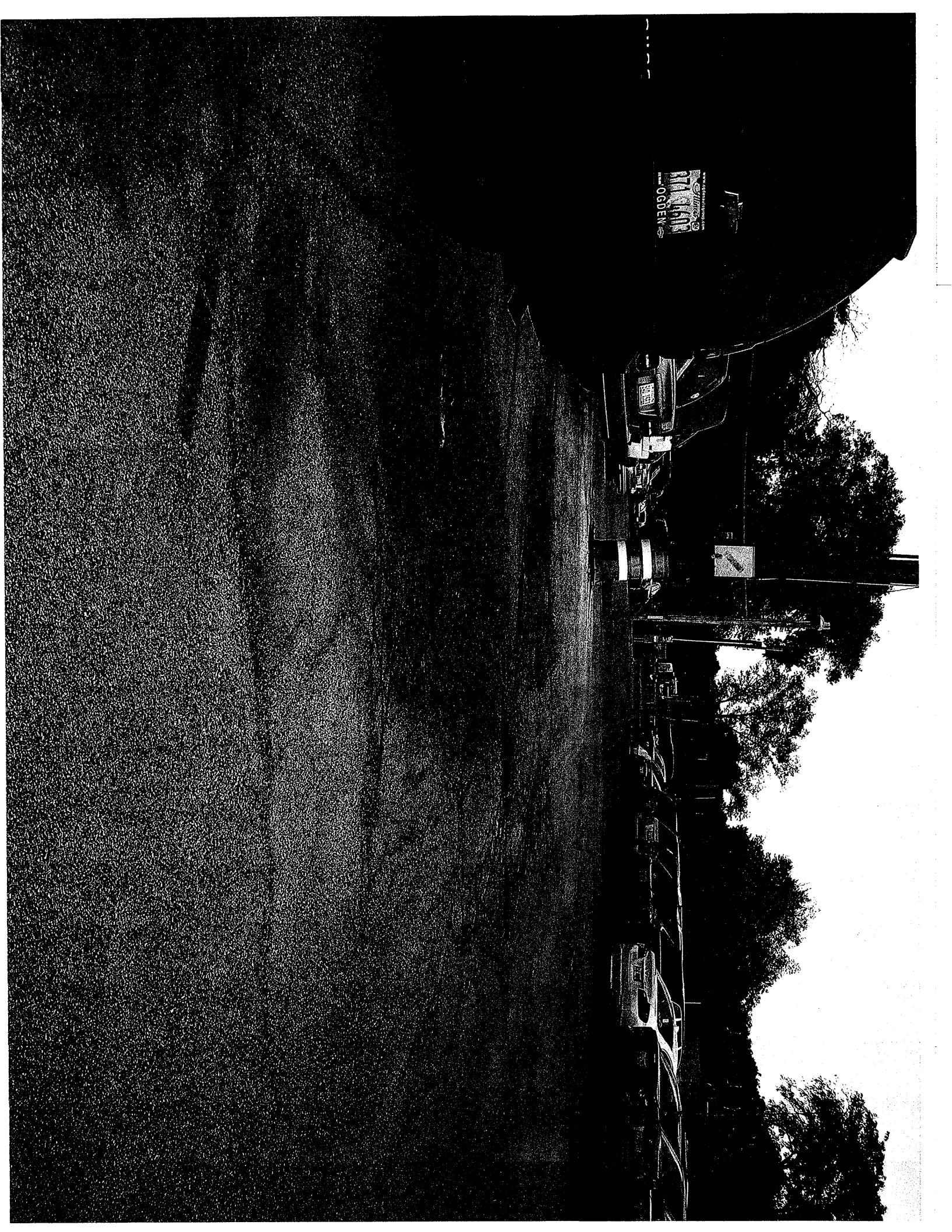
There are currently 3 light poles in the interior of the parking lot which should be relocated to aid in ease of parking and overall travel through the parking lot. In addition to moving the light poles, staff would recommend underground directional boring the electrical component for these lights to improve aesthetics of the parking lot; which would include the removal of the wooden poles currently in use.

The current lighting would also need to be upgraded by either using our current decorative light poles or a similar pole with a cobra head mounted fixture. Recent large scale parking lot improvements in the Washington lot and Chestnut lot have utilized decorative lamp poles with fixtures. The current light fixtures in the Village lot are approximately 18-20 feet tall, while Village code permits only 15 foot tall lamp fixtures.

Staff respectfully requests consideration from Committee to review the resurfacing and lighting upgrades in the Village lot for inclusion in the FY 2014-15 budget or reassessment for future budgeting.

Cc: Kathleen Gargano, President Cauley, and Board of Trustees





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**MEMORANDUM**

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**DATE:** 2/3/14  
**TO:** CHAIRMAN LA PLACA AND THE EPS COMMITTEE  
**FROM:** GEORGE FRANCO  
**SUBJECT:** PERMISSION TO SEEK BIDS

Staff is requesting the permission to seek bids on the following items for the upcoming fiscal year:

1. Fuel
2. Business District Irrigation

Public Services staff has been attending meetings and a working group with an array of communities in DuPage, Will, and Cook counties in Illinois in the hope to save money on contractual services. The purpose is to conduct a MPI (Municipal Partnering Initiative) for same services which are used by many different communities and have those services contracted to independent contractors. Through the MPI, savings are expected through joint purchasing which raises the economies of scale and the costs of handling the procurement process. The Village is not locked into using the contracts procured through the MPI and does retain the ability to re-bid the service contracts in house if the pricing is not favorable. The MPI has made progress over the last few months and is preparing to place bids in circulation on March 1, 2014. Bids which would include the Village of Hinsdale are:

- Crack Sealing
- Resurfacing (Parking Lots)

- Concrete flatwork
- Sewer Lining
- Sewer televising and cleaning
- Contractor assistance
- Water main leak detection
- Cold patch material
- Hauling and delivery
- Street sweeping
- Generator maintenance
- Tree trimming
- Tree & stump removal
- Tree treatments (Elm/Ash)
- Water meter testing

Cc: Kathleen Gargano, President Cauley, and Board of Trustees

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**MEMORANDUM**

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**TO:** CHAIRMAN LA PLACA AND THE EPS COMMITTEE  
**FROM:** GEORGE FRANCO, DIRECTOR OF PUBLIC SERVICES  
**SUBJECT:** PROPOSED CIRCULAR DRIVE AT 629 S. GARFIELD ST.  
**DATE:** FEBRUARY 5, 2014

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Bryan Bomba's request for a permit to remove a parkway tree in order to install a circular driveway was denied at last month's EPS Committee meeting. Since then Mr. Bomba, his architect and builder have been working with staff to investigate possible solutions that would include his request for a circular drive while working within the Village guidelines for public tree protection.

A preliminary plan for the drives is attached. The following will need to be incorporated into of a letter of agreement signed by Mr. Bomba.

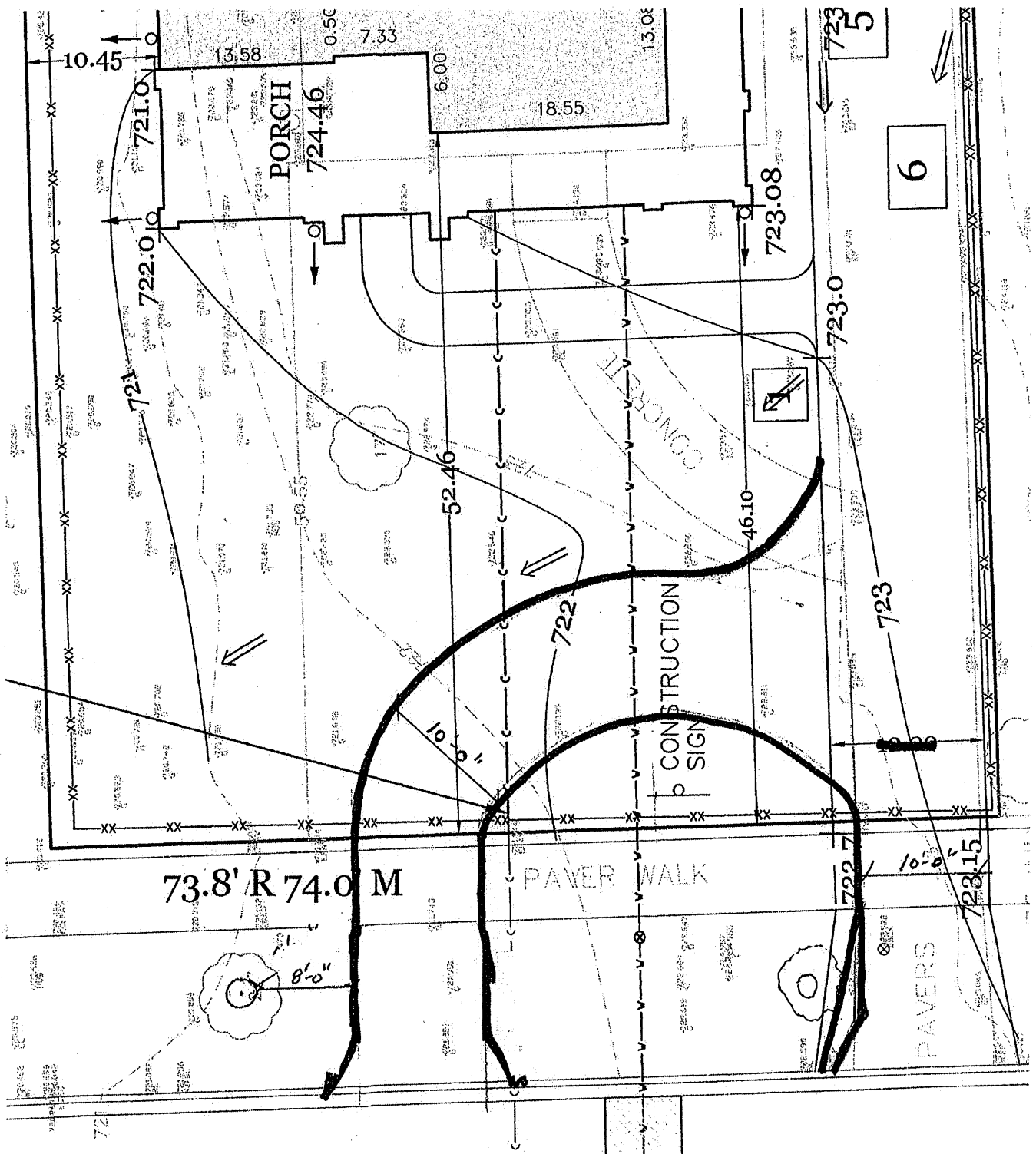
1. The Village Forester will be notified prior two any construction activity in order to monitor tree protection measures.
2. Work within the Tree Protection Zone will be supervised by an arborist.
3. Root pruning will be used as necessary to prune tree roots
4. All tree protection fencing will be maintained in all areas outside of the apron excavation area.
5. The aprons will be composed of brick pavers to limit excavation and provide a permeable layer for water infiltration into the roots zone.
6. The excavation for the drive within the Tree Protection Zone will be limited to 6" and be hand dug.
7. At no point will the new apron or excavation for the new apron be within 8' from the south face of the north parkway tree and the existing apron reconstruction will not be within 8' of the south face of the south parkway tree. If this occurs the party acknowledges the fact that penalties outlined under Title 7 Chapter 2 will be enforced.
8. The party acknowledges this apron project could be impacted by penalties outlined under Title 7 Section 1-Chapter 2-B(3); which reads: Any person who removes or cuts down any tree in any public street or parkway or other public place without a permit from the

Village or causes the death of the tree in any public street or parkway or other public place by negligence or failure to adequately protect said tree during construction on that person's property shall pay the Village a permit fee of twenty-five thousand dollars (\$25,000).

These requirements would be incorporated into all of the approved civil drawings prior to any permit being issued.

Staff believes that if these requirements are followed, there is adequate tree protection. If the committee concurs, staff is agreeable in allowing the project to move forward with the permitting process.

Cc: Kathleen Gargano, President Cauley and Board of Trustees



GARFIELD DRIVEWAY 2-3-14

— existing parking  
Apron foot print  
Not to be  
Altered

## MEMORANDUM

**TO:** Chairman LaPlaca and EPS Committee  
**FROM:** Dan Deeter  
**DATE:** February 10, 2014  
**RE:** Engineering Monthly Report

---

The Engineering Division has continued to work with the Building Division in order to complete site inspections, as well as responding to drainage complaint calls. In total, three Engineering employees performed 25 site inspections for the month of December. In January, staff submitted six reports to the Illinois EPA before their respective deadlines. These include four Discharge Monitoring Reports (DMRs) for our four Combined Sewer Overflow (CSO) locations; the annual Capacity, Management, Operation & Maintenance Plan (CMOM) Report; and the annual Fiscal Report for National Pollution Discharge Elimination System (NPDES) Permittees. The following capital improvement projects and engineering studies are underway:

**Oak Street Bridge Replacement Engineering Phase II/Design Engineering** (See attached memo.)

**Woodlands Green Infrastructure Improvements, Phase 1**

- Final Completion (plantings, surface course) June 2013
- The contractor will provide two years of rain garden maintenance to establish native plantings

**2013 Reconstruction (W. Fourth Street)**

- Construction May – Nov. 2013
- 2013 Reconstruction (W. Fourth and other streets)
  - Chicagoland Paving has completed all road reconstruction on 11/15/13. They will address the remaining punch list items in the Spring 2014.
  - One of those punch list items was identified while our engineering consultant was reviewing the post-construction videos of the project sewers. Rempe-Sharpe identified a location at 825 S. Bodin Street where there is a break in the existing sanitary sewer pipe that was not addressed by the sub-contractor. The construction contract included re-lining this pipe and making spot repairs as necessary. While the televising confirmed that re-lining the entire pipe is not necessary (which saved the Village the re-lining cost), the spot repair at this location are still necessary. Staff is directing Chicago Paving to make the necessary repair in the Spring of 2014.
  - The Village continues to retain \$453,824 for liens filed against Chicagoland Paving and for our maintenance retention. The liens were filed by Chicagoland Paving's trucking service providers against Chicagoland Paving. The Village has met with the parties to facilitate a resolution of the dispute. These liens do not change the contract price between Chicagoland Paving and the Village of Hinsdale.

- Total construction change orders to date for 2013 Reconstruction: \$33,085 addition.  
Remaining Project Budget/Contingency: \$1,590,055.

## **2014 Resurfacing (S. Adams), 2014 Reconstruction (Walnut St.), & Woodlands Phase 2**

- ✓ Design Engineering Proposal presented to EPS/BOT February 2013
- Design Engineering & Permitting Mar 2013 – Jan 2014
  - Staff has reviewed & commented on the 60% and 90% plan sets for original Resurfacing & Watermain projects
- Construction bidding target date: February 2014
- Construction Contract Awarded target date: March 2014
- Construction Target Start: April 2014
- 2014 Resurfacing Streets
  - S. Adams Fourth to Eighth (utilities & resurfacing)
  - S. Bodin Ninth to 55<sup>th</sup> (utilities & resurfacing)
  - S. Monroe Ninth to 55<sup>th</sup>, Seventh to Eighth (utilities & resurfacing)
  - W. Seventh Monroe to Madison (utilities & resurfacing)
  - W. Sixth Bodin to Monroe (utilities & resurfacing)
  - E. Maple Garfield to Park (utilities & resurfacing)
  - S. Garfield 55<sup>th</sup> to 57<sup>th</sup> (2013-14 WM improvements)
  - Fuller Justina to Mills (2013-14 WM improvements)
  - S. Adams Hinsdale to Fourth (resurfacing only)
  - N. Bruner North End to North Street (resurfacing only)
  - N. Grant Ogden to Center (resurfacing only)
  - W. Hickory Adams to Madison (resurfacing only)
  - N. Lincoln Pavement Change south to Ayres (resurfacing only)
  - S. Clay Fourth to Sixth Street (PCC pavement patching only)
  - Brook Park Third Street parking lot (resurfacing only)
  - Brook Park Woodside parking lot (resurfacing only)
  - Brook Park East walking path (resurfacing only)
  - Parking Lot Lincoln to Washington north of BNSF (resurfacing only)
  - Burlington Park Lot Washington to Garfield north of BNSF (resurfacing only)
  - Robbins Park Vine to Grant (storm sewer only)
- 2014 Reconstruction Streets
  - W. Walnut Madison to Washington
  - E. Walnut Garfield to Oak
  - N. Clay Walnut to Maple
  - N. Garfield vicinity of Walnut St.
  - N. Madison Walnut to Hickory
  - Walker York to The Lane
  - Maple Lincoln to Washington
- Woodlands Phase 2
  - Woodland Avenue County Line Road to Taft
  - Cleveland Woodland to 55<sup>th</sup>
  - Taft Woodland to 55<sup>th</sup>
  - Harding Woodland to Taft

**State and Federal Funding Opportunities**

A summary of the Grant Funds awarded or applied for by the Village of Hinsdale is attached. An application for the 2014 Illinois Green Initiative Grants was submitted before the 12/15/13 deadline. The IEPA acknowledged receipt of our application. This year there was a total of 81 applications valued at approximately \$36 million are competing for the \$5 million IGIG grants available. Notification of awards will be made around 07/01/14.

Cc: President and Board of Trustees  
Village Manager

## MEMORANDUM

**TO:** Chairman LaPlaca and the Environment & Public Services Committee

**FROM:** Dan Deeter, Village Engineer

**DATE:** February 10, 2014

**RE:** Oak Street Bridge Phase 2 (Design Engineering) Update

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In January 2014, our consultants, HR Green, submitted partial plans to the Village of Hinsdale staff for review. In addition to plan development, staff and our consultants began preparations for the first community working group meeting in Phase 2. This meeting will be held on February 6, 2014 at the Katherine Legge Memorial Lodge at 7:30 PM.

Hitchcock Design Group presented imagery of the proposed bridge and the surrounding area to staff. These images will provide the hospital and public with an idea of the finish grade conditions, retaining walls, and proposed architectural features of the completed bridge.

cc: Kathleen Gargano, Village Manager

Oak Street Bridge Phase 2 (Design Engineering) Schedule  
Hinsdale, Illinois

Revised: 01/13/14

IDOT Project Kickoff Meeting	HRG/Staff	10-15-2013 Completed
<i>This is an initial coordination meeting at IDOT District 1's Bureau of Local Roads which is required for any project receiving federal funds</i>		
Project Working meeting	HRG/Staff	11-22-2013 Completed
<i>Coordination meeting with Village staff to review transition issues from Phase 1 to Phase 2 and prepare for a meeting with Adventist Hinsdale Hospital (AHH).</i>		
AHH Coordination Meeting	HRG/ Staff/AHH	12-9-2013 Completed
<i>A meeting to review AHH concerns and update them on plans to address these issues including Oak Street access, traffic staging plans, and maintenance of utilities.</i>		
Draft 30% Submittal To Village	HRG/Staff	01-10-2014 Completed
<i>Progress drawings for Staff's review and information. This allows the Village to monitor and comment as the consultant provides more details to the plan's structural components (typically described as "Type, Size, &amp; Location" information or TSLs) and civil components (typically described as "Plans, Specifications, &amp; Estimates" information or (PSEs).</i>		
CWG Update Meeting	Staff/CWG/HRG	02-6-2014 Completed
<i>A meeting to update Community Working Group (CWG) members concerning the status of the design development. These meetings will highlight significant design changes (if any) and update the CWG members on plan development in areas of public interest such as traffic management and aesthetics.</i>		
Preliminary Plans to IDOT	HRG	02-14-2014
<i>Submittal will consist of roadway plans with all required Right of Way shown; revised Type, Size and Location drawings for the bridge and retaining wall; a technical memorandum covering any changes from the approved Project Development Report and a preliminary opinion of constructed cost. If Right of Way impacts are the same or less than what was estimated in Phase 1, development of the Right of Way Plats, appraisals and appraisal reviews will begin immediately.</i>		
Preliminary Plans and Costs to ICC	HRG	02-14-2014
<i>Preliminary information to the ICC. More detailed plans will accompany the formal petition.</i>		

Right of Way Plats to IDOT                      HRG                      03-27-2014  
Plats must be submitted to and approved by IDOT before negotiations can be started.

BNSF Coordination Meeting	HRG/BNSF	June, 2014
<p><i>BNSF support will be required for ICC to process the petition. This meeting will be held to show the anticipated Right of Way impacts at the bridge and adjacent to Hillgrove Avenue. BNSF restrictions on construction will also be addressed. This item will require at least one meeting and multiple follow up submittals.</i></p>		

Negotiations with Property Owners	HRG	May-August 2014
<i>Process follows IDOT guidelines using IDOT certified negotiator.</i>		

ICC Petition for review	HRG/Vill. EPS Comm.	7-1-2014
<p><i>Completed Petition should be filed by end of June. Will include letter of support from BNSF and 60% plans. We'll have to meet with BNSF in June to go over the 60% plans. B. Vercruyssen requested a draft before we file so will target June 15<sup>th</sup> for the draft.</i></p>		

ICC Petition to Hearing	ICC	8-15-2014
<p><i>Completed petition Administrative Law Judge to review in August. It does not appear the board has to sign this document but a cover letter from the Village will certainly be required.</i></p>		

ICC Approval ICC 11-15-2014  
*Need no later than early January in order for IDOT to authorize project for construction.*

CWG Update Meeting	Vill. Staff/CWG/HRG	6-26-2014
<p><i>A final update for the Community Working Group. Plans should be sufficiently developed and the Right of Way process far enough along that most details can be shared with the group.</i></p>		

Submit ROW to IDOT                                  HRG/IDOT                                  10-15-2014

*IDOT Bureau of Land Acq. must approve. Some documents may require Village Engineer's signature.*

90% (Prefinal) plans to IDOT & Village <i>Hard deadline for submittal.</i>	HRG/IDOT	10-17-2014
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Final Plans, Specifications and Estimate to IDOT byHRG <i>Again, deadline must be met make letting. Plan cover sheet will have to be signed by Village Engineer.</i>		12-15-2014
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Draft Joint and Const. Agreements to IDOT <i>Selection of a construction engineer should be started before this date. IDOT may allow the Village to use HR Green if Village wishes to do so (policy is ambiguous right now) but, if the consultant selection process is required, the process should start when Pre-Final Plans are available.</i>	HRG/Vill. Staff	12-15-2014
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**Construction Phase Agreements through the Village Board**

Final CE, Joint and RR Agt. To IDOT <i>The above are intergovernmental agreements prepared by HRG or IDOT. The Board will have to approve them.</i>	EPS Comm/Vill. Board	1-16-2015
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**Preparation for Letting Project**

ROW Certified by IDOT <i>All IDOT.</i>	IDOT	1-21-2015
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Letting by IDOT	IDOT	3-6-2015
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Start relocation of Private Utilities <i>Coordination with private utilities will resume as the Pre-Finals are submitted to IDOT.</i>	HRG/Vill. Staff	1-1-2015
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**Village of Hinsdale**  
**Grant Funds Awarded in 2009 - 2013**

Source	Program	Purpose	Funds Available	Amount
Illinois Commerce Commission	Crossing Safety Improvement Program	Oak Street Bridge - 60% Funding	2015 Capital Budget	\$10,200,000
Senator Dillard	State Capital Bill	Oak Street Bridge	Effective January 1, 2011	\$825,000
West Suburban Mass Transit	Car Sale Proceeds	Oak Street Bridge Eng/Construction	50/50 Reimbursement	\$395,000
Illinois Dept of Transportation	Federal Highway Bridge Program	Oak Street Bridge Phase I	July 2010 - 80/20	\$680,000
DuPage Mayors & Managers	Federal Stimulus	S. Garfield Reconstruction	Paid Through IDOT	\$1,632,000
Senator Dillard & Rep Bellock	Emergency Repair Program	Street resurfacing	Upon Project Completion	\$300,000
Representative Bellock	State Capital Bill	N. Washington Reconstruction	Upon issuance of bonds	\$340,000
New Local Transportation Projects	State Capital Bill	Road Improvements	20% released October, 2010	\$389,540
Lyons Township	Bond Proceeds	KLM Park Pavilion	Upon Project Completion	\$150,000
DuPage Mayors & Managers	STP Program	Oak Street Bridge	2015 Capital Budget	\$3,830,000
IDNR	OSLAD	Improvements to KLM	Awarded	\$150,000
IEPA	ARRA/State Revolving Loan	Garfield Sewer Separation	Loan docs received 7/05/11	\$444,160
IEPA	ARRA/State Revolving Loan	Chestnut Sewer Separation	Loan docs received 8/16/11	\$3,728,196
DuPage Mayors & Managers	Surface Transportation Projects	Hinsdale Avenue Resurfacing	Approved by DMMC 11/16/11 for FY 2017	\$311,627
DuPage Mayors & Managers	Surface Transportation Projects	Chicago Avenue Resurfacing		\$203,291
DuPage Mayors & Managers	Surface Transportation Projects	York/Garfield Resurfacing		\$293,442
DuPage Mayors & Managers	Surface Transportation Projects	N. Madison Resurfacing	Approved by DMMC 12/04/12 for FY 2018	\$317,765
DuPage Mayors & Managers	Surface Transportation Projects	S. Madison Resurfacing		\$274,000
West Suburban Mass Transit	Car Sale Proceeds	Highland Parking Lot	2/3 reimbursement	\$100,000
Total				<u>\$24,564,021</u>

**Village of Hinsdale**  
**Grant Applications Under Consideration**

Source	Program	Purpose	Status	Amount
IDOT	Federal Highway Bridge Grant	Oak Street Bridge Phases II & III	Committed to by IDOT	\$4,895,000
IEPA	Illinois Green Initiative Grant (IGIG)	Woodlands Green Infrastructure	Award Date: 07/01/14	\$750,000
Total				<u>\$5,645,000</u>

Veeck Park Wet Weather Facility  
Hinsdale, Illinois

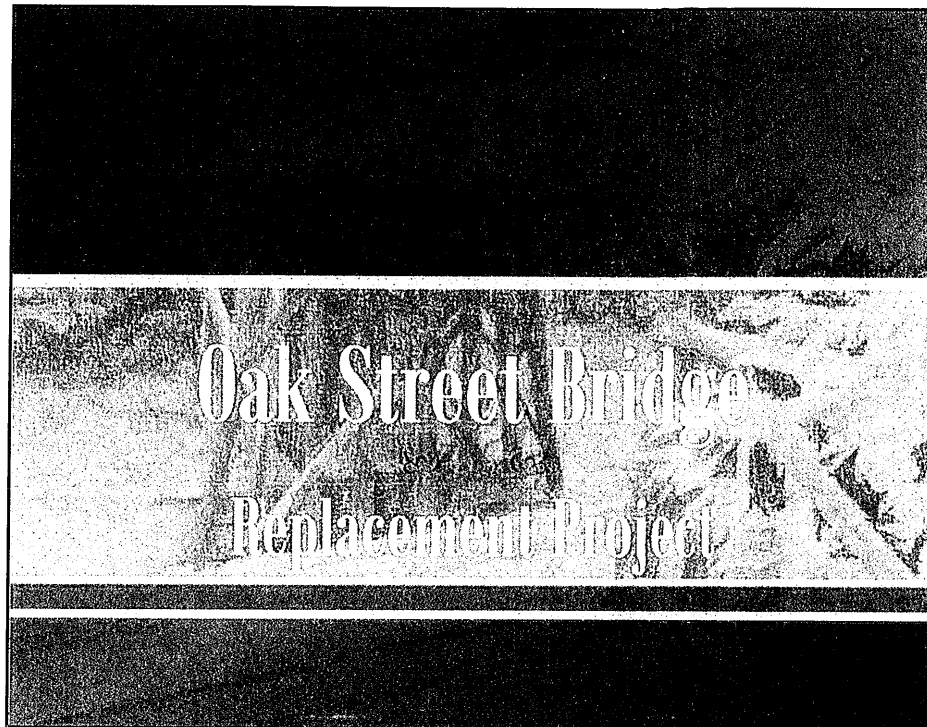
Date	Bar Screen Channel Downstream (feet)	Overflow Ht. Above Weir (feet)	Storage Tank Elevation (feet)	Precipitation (inches of water)
01/01/14	0.00		3.30	
01/02/14	0.00		3.31	
01/03/14	0.02		3.40	
01/04/14	0.05		3.45	
01/05/14	0.00		3.48	
01/06/14	0.05		3.47	
01/07/14	0.10		3.48	
01/08/14	0.32		3.48	
01/09/14	0.41		3.55	
01/10/14	8.13	0.13	26.00	1.00
01/11/14	6.70		24.69	0.07
01/12/14	0.01		11.91	
01/13/14	0.11		8.62	
01/14/14	0.00		3.39	
01/15/14	0.00		3.65	
01/16/14	0.00		3.67	
01/17/14	0.00		3.87	
01/18/14	0.00		3.93	
01/19/14	0.00		4.00	
01/20/14	0.00		4.03	
01/21/14	0.00		4.07	
01/22/14	0.00		4.94	
01/23/14	0.00		4.96	
01/24/14	0.00		4.98	
01/25/14	0.00		5.01	
01/26/14	0.05		5.04	
01/27/14	0.00		5.07	
01/28/14	0.30		5.10	
01/29/14	0.02		5.11	
01/30/14	0.04		5.13	
01/31/14	0.01		5.16	

Total Precipitation in January: 1.07  
Departure from Normal: -0.66

Notes:


1. Minimum tank elevation is 2.0 feet to avoid running the pumps dry and damaging them.
2. Rain data from Hinsdale Middle School weather station.

Construction	Project Budget
ChicagoLand Paving Bid	
Change Order Requests to date	
Revised Contract Amount	
Remaining Project Budget/Contingency	



## Introductions

- ☞ Village of Hinsdale
- ☞ Consultant Team
  - HR Green
  - Hitchcock Design Group
- ☞ Community Working Group Members

A small, stylized graphic of a building with a central tower and multiple windows, located in the bottom right corner of the slide.

## Meeting Agenda

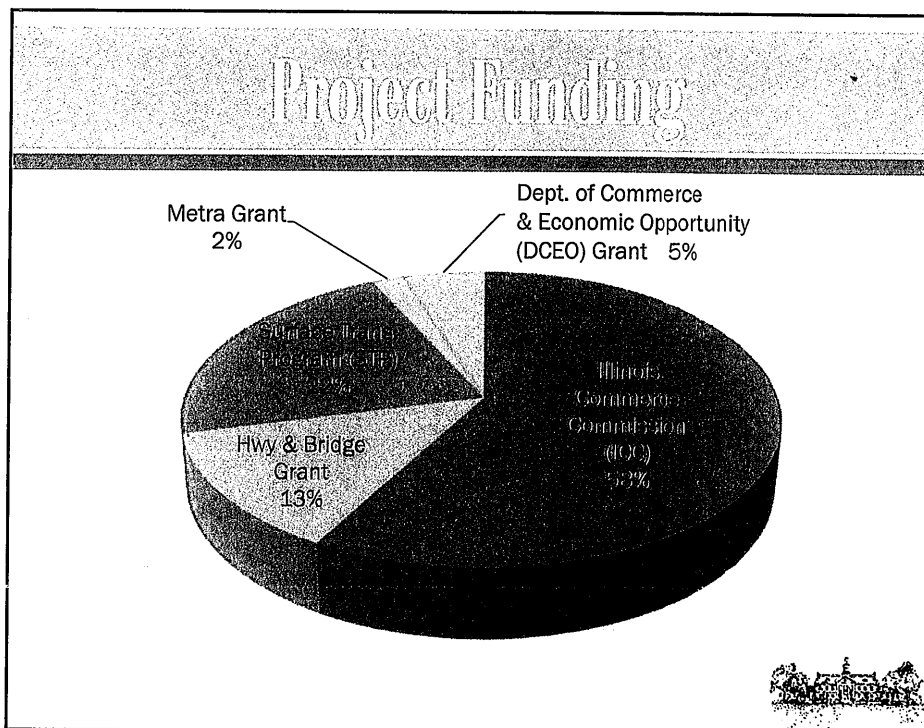
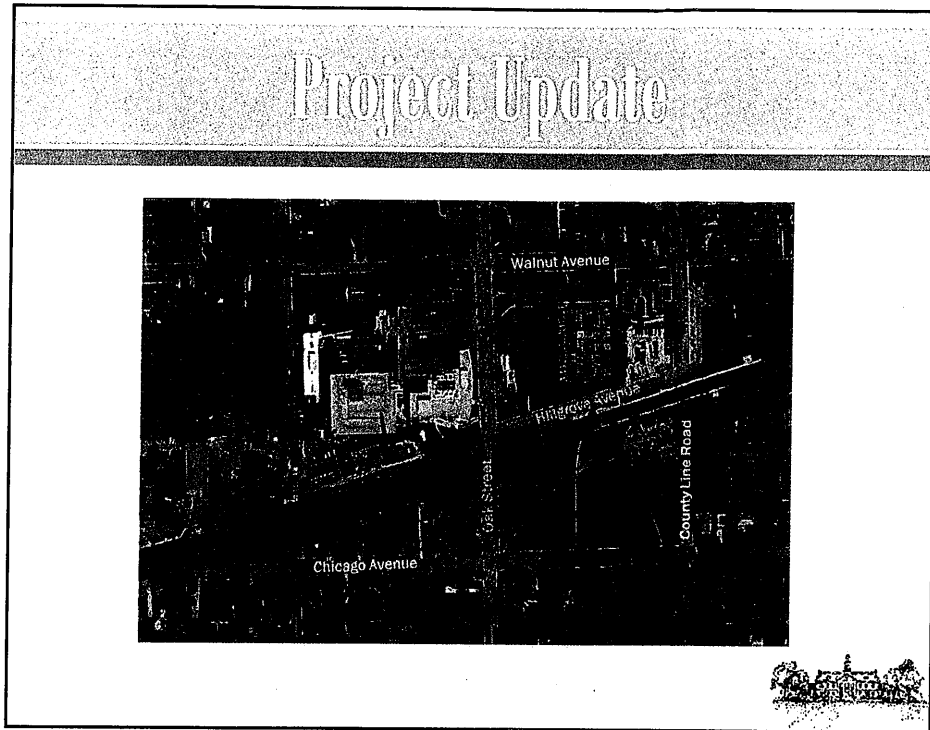
- ☞ Project Update
- ☞ Landscape and Aesthetics Presentation
- ☞ Next Steps
- ☞ Q & A Session



## Project Update — Phase 1

- ☞ Phase 1 is Completed
  - Completed between 2011 and September 2013
  - Environmental clearances (NEPA)
  - Public Input :
    - 5 CWG meetings
      - March, June, & October 2011
      - May & November 2012
    - 2 Public meetings
      - February & October 2011
  - IDOT Coordination to conform to FHWA policies (funding)
  - Traffic Study
  - Design Approval on September 16, 2013





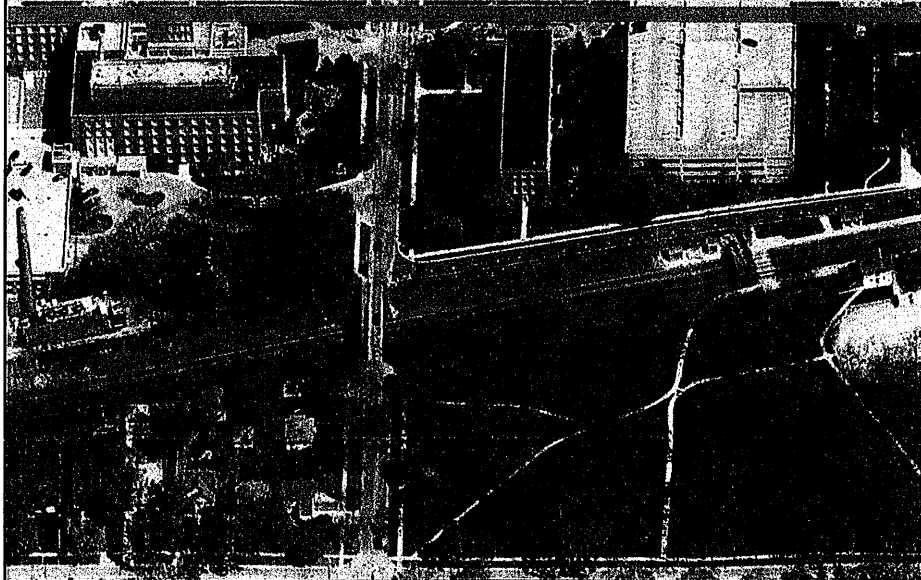
## Project Update — Phase 2

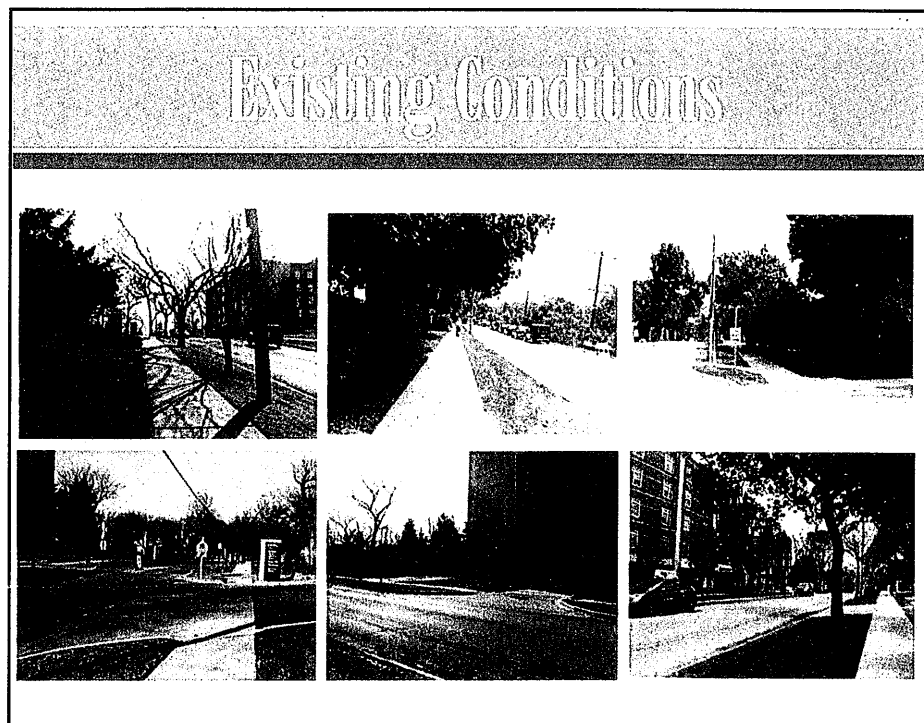
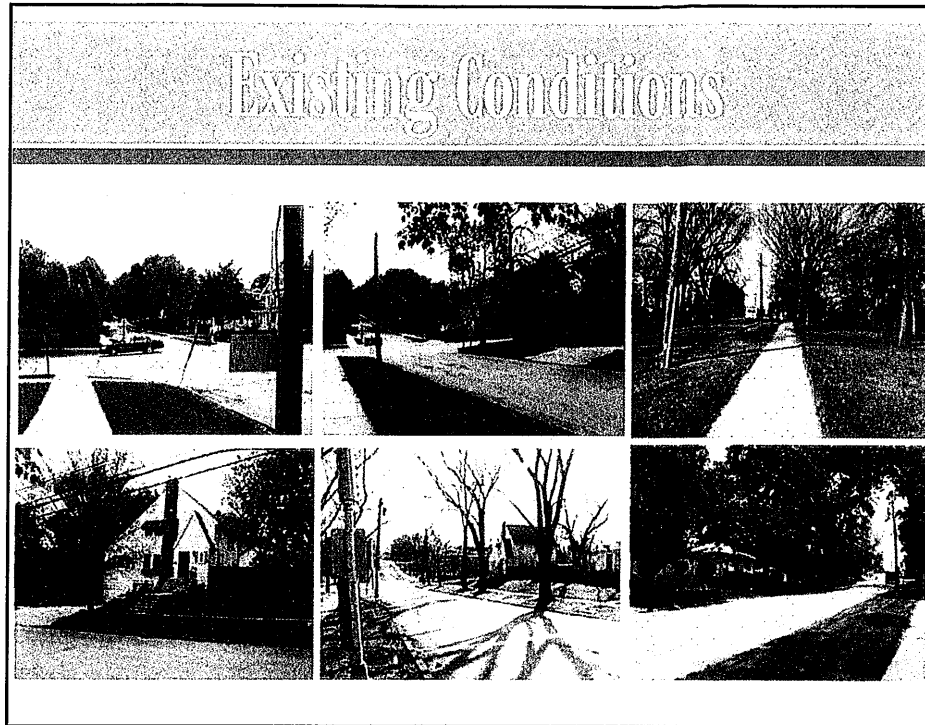
### Current Status

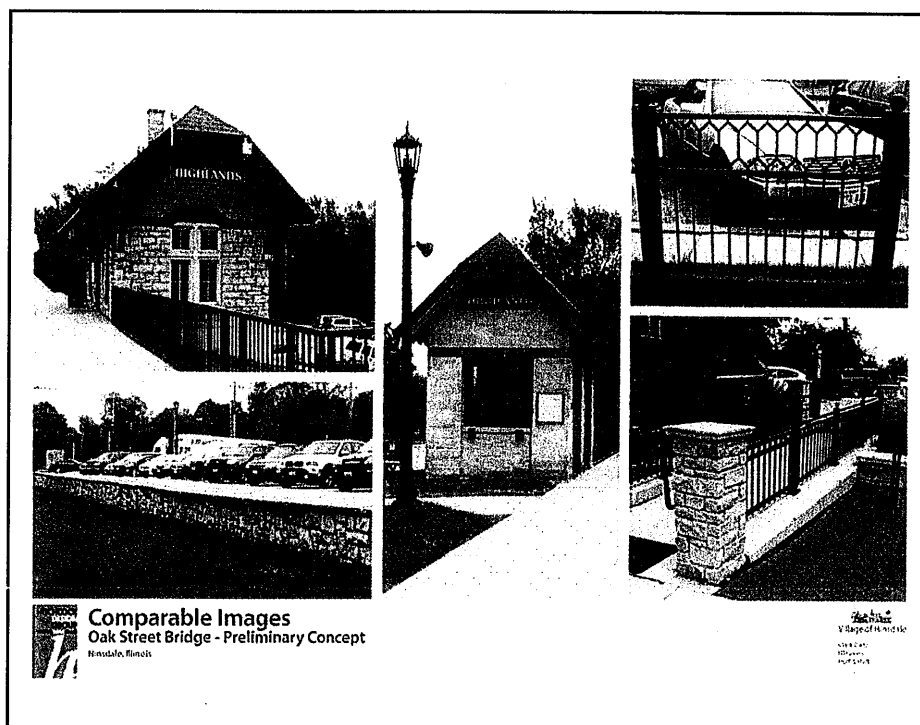
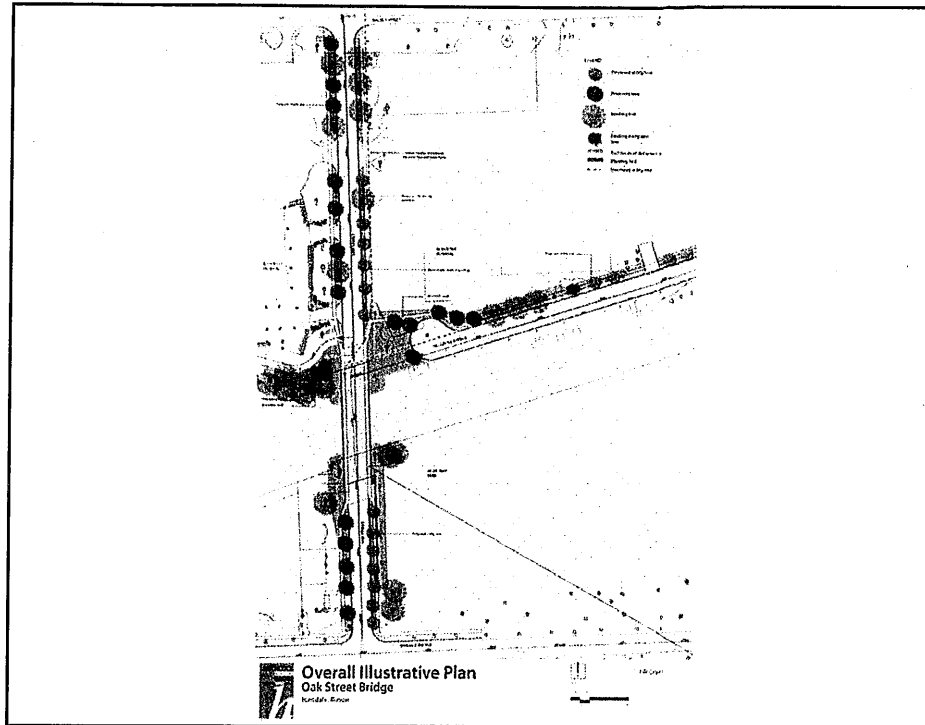
- Progress submittal – January 2014
- Next progress submittal – June 2014
- Landscaping Plan
- Hospital Coordination

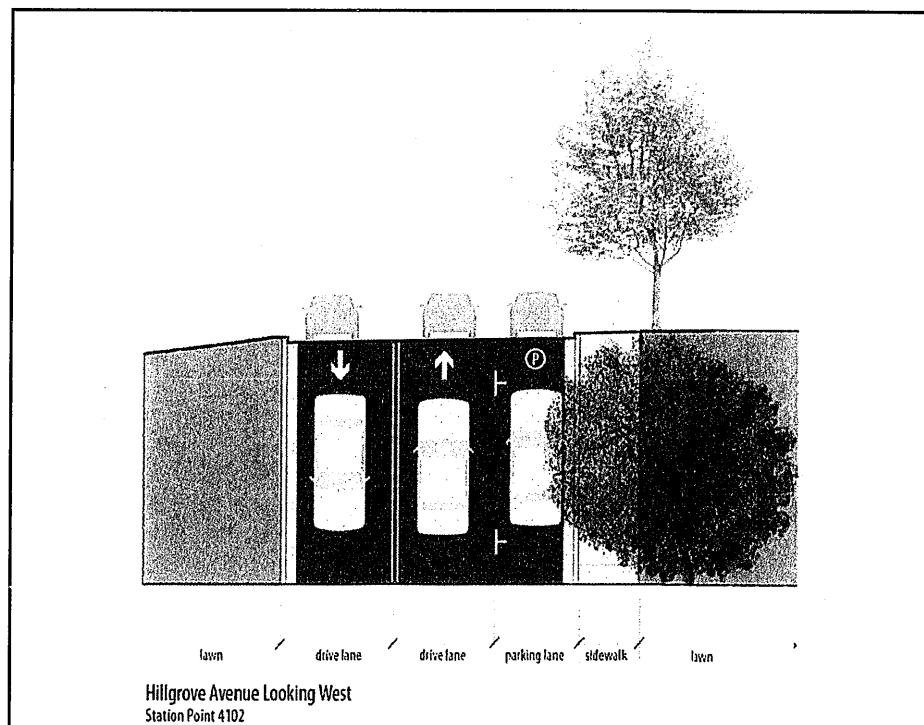
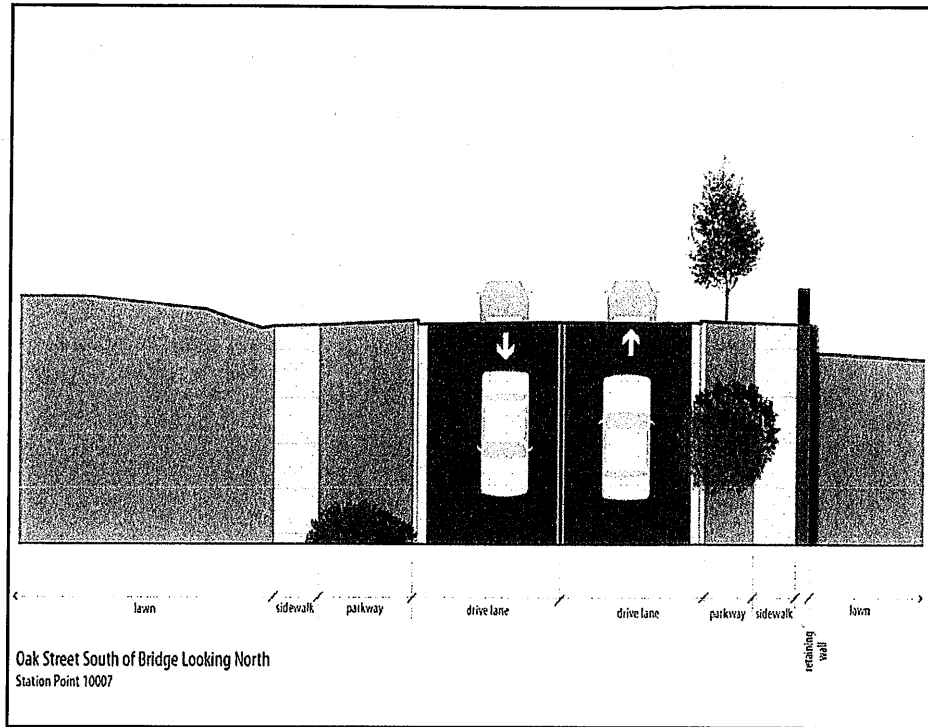


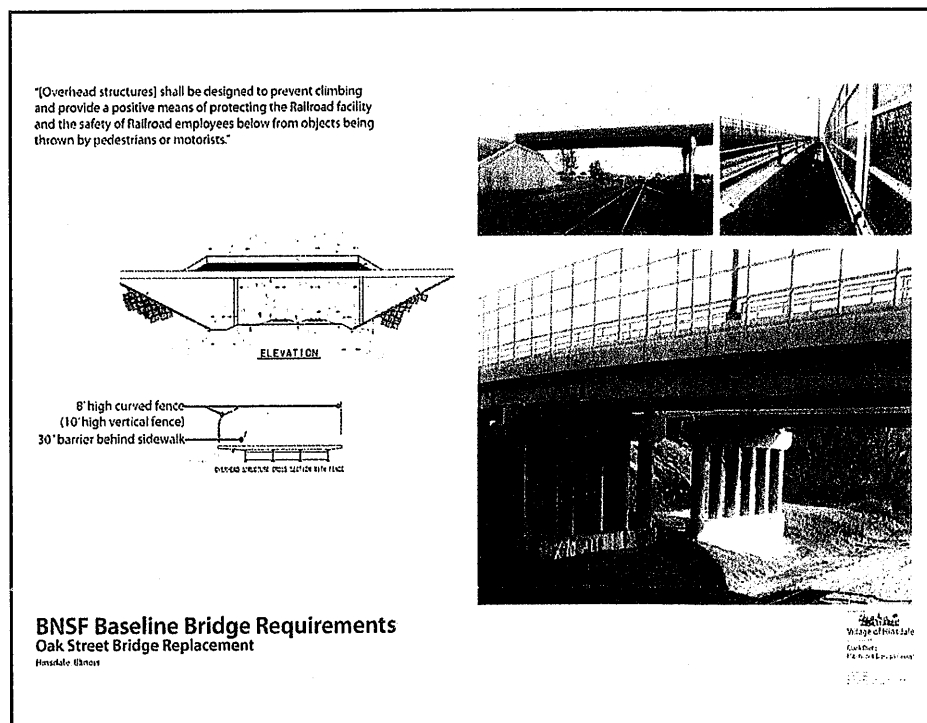
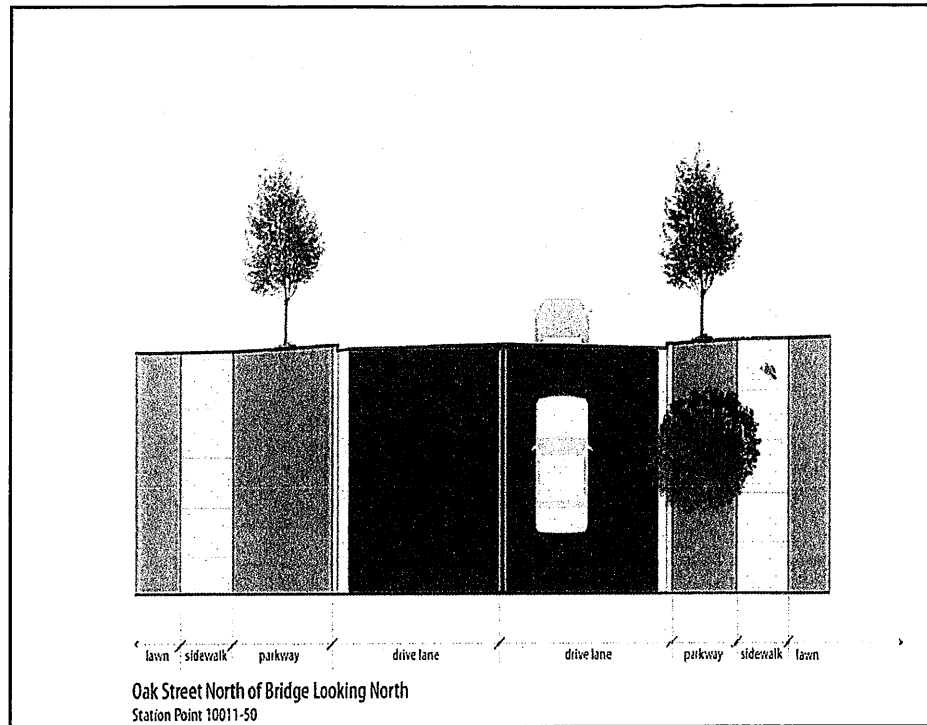
## Landscape and Aesthetics

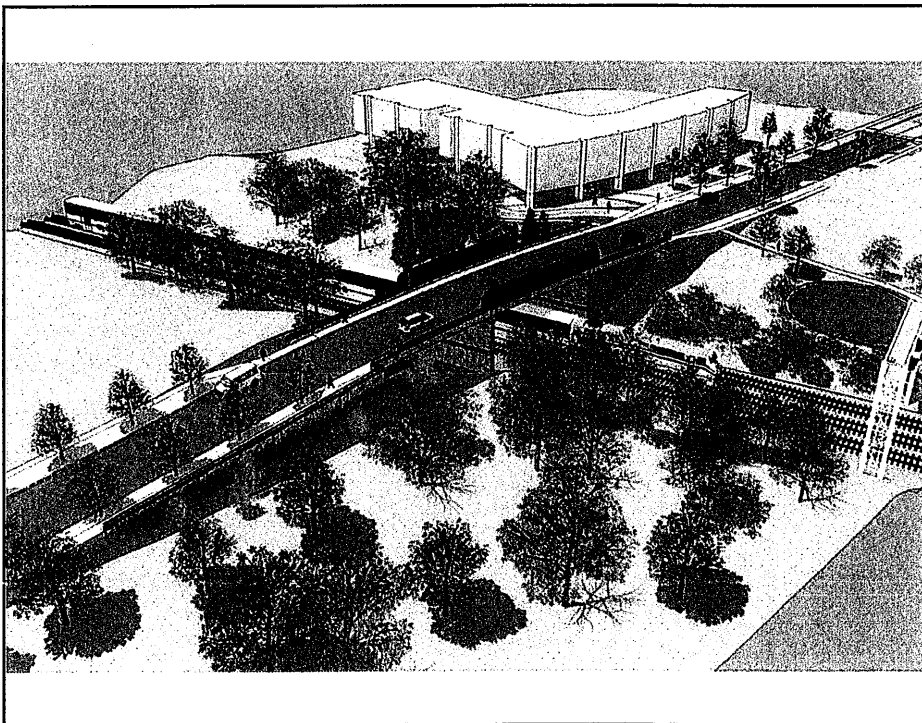
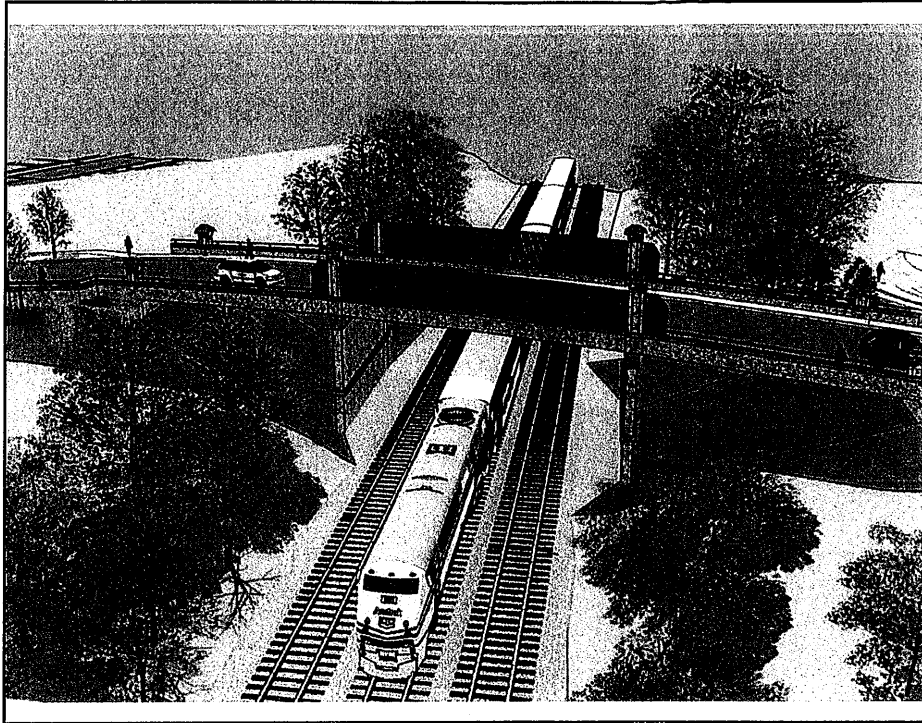


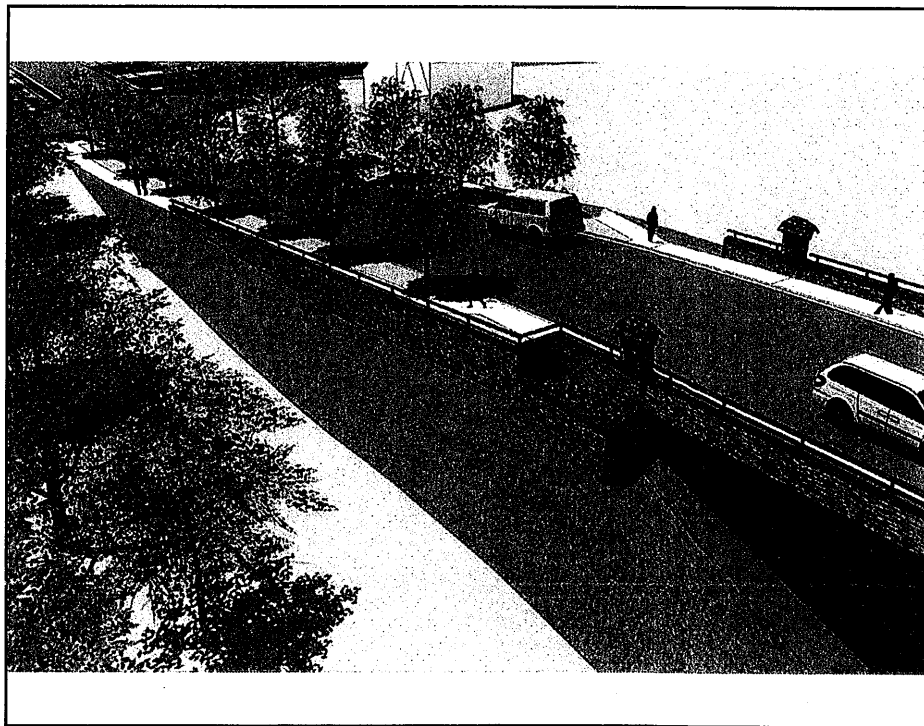
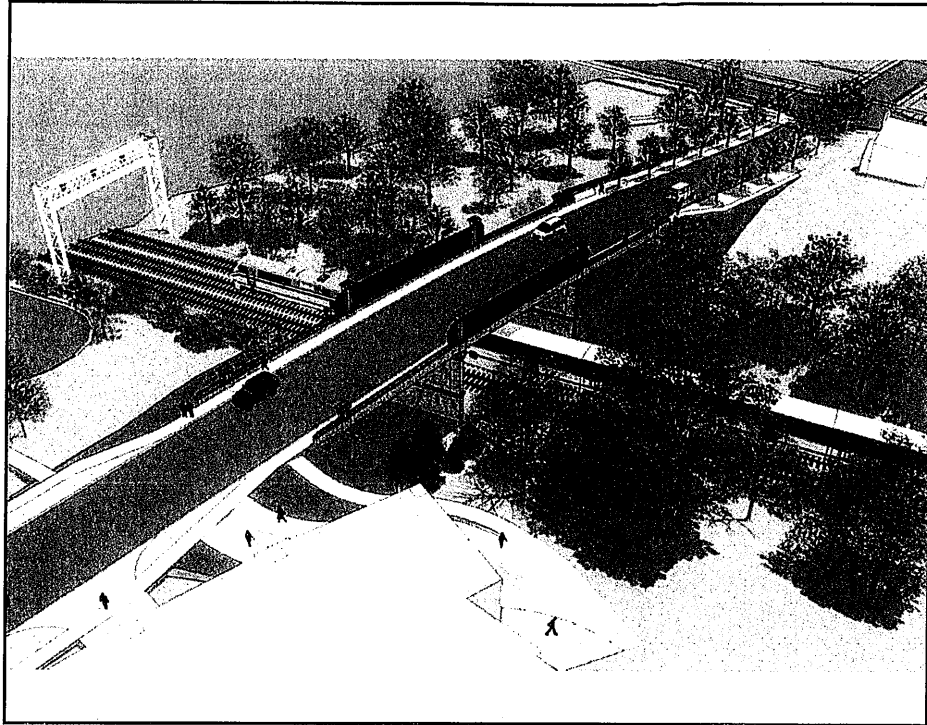


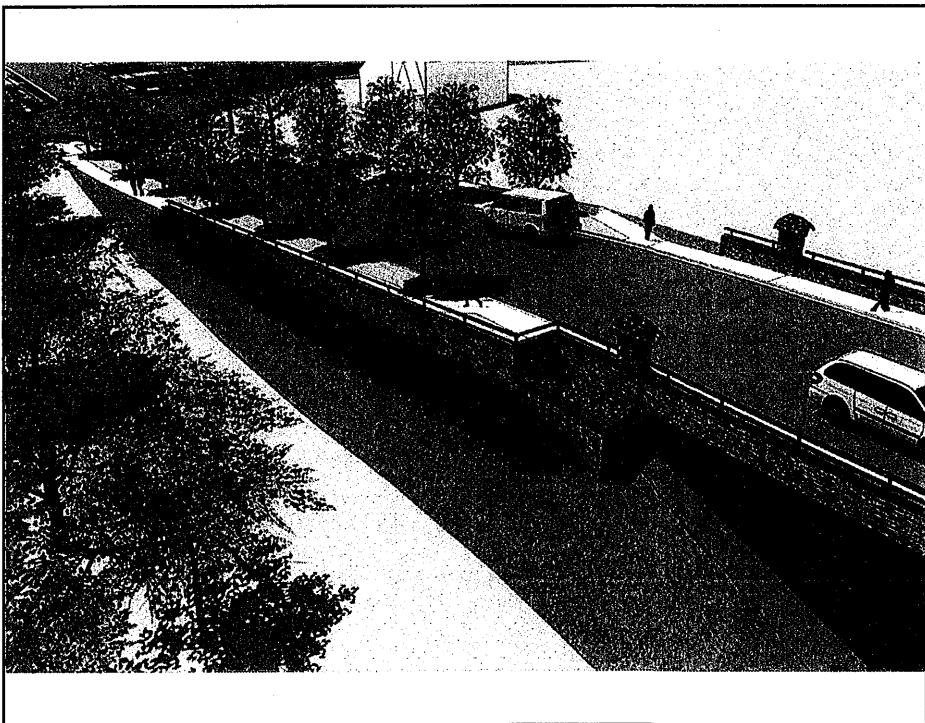
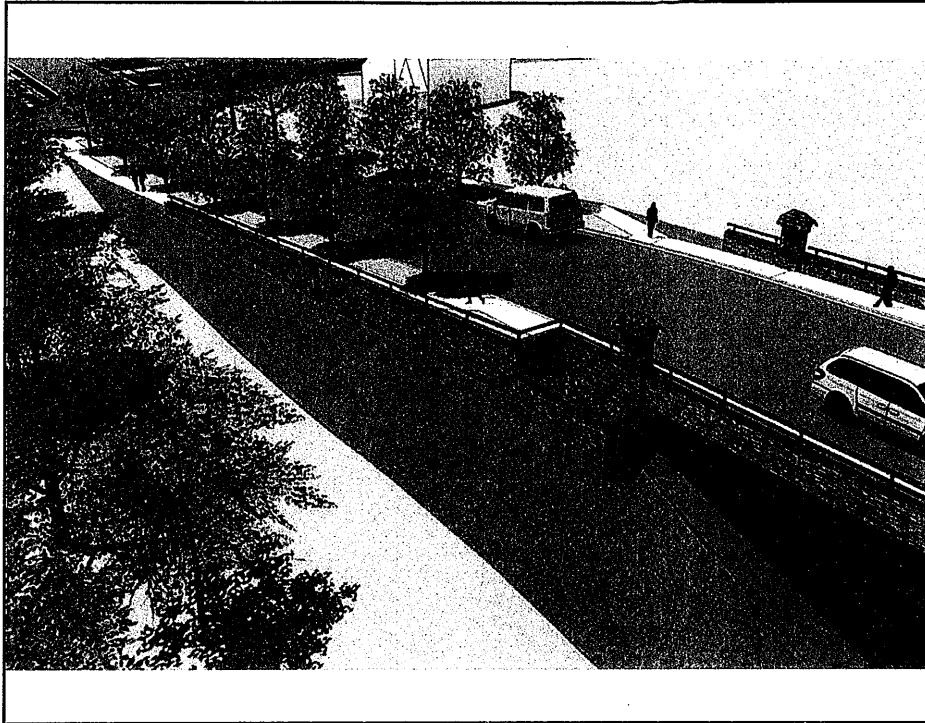


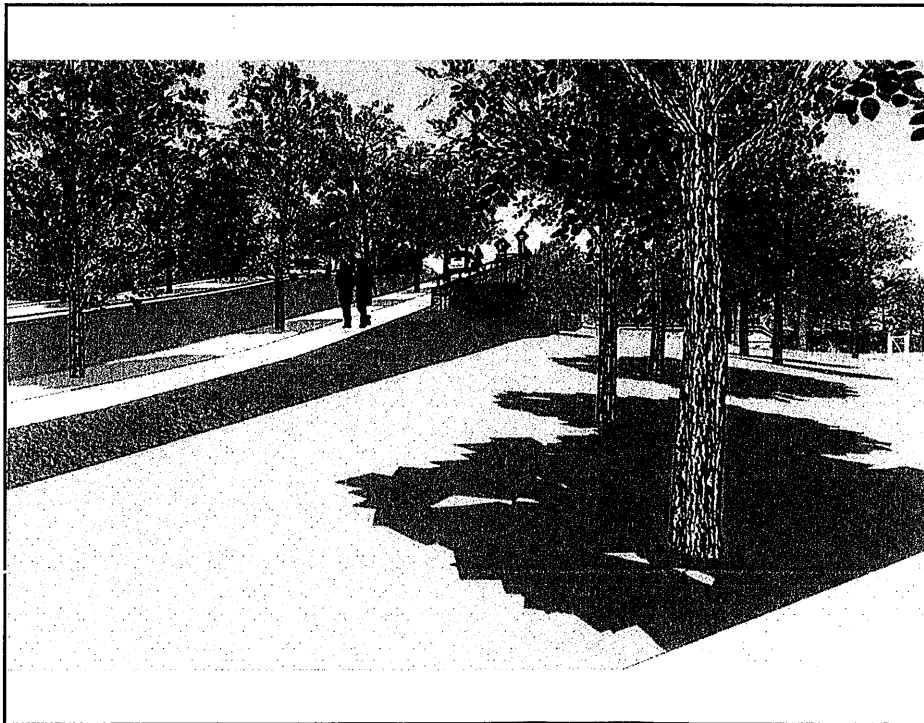
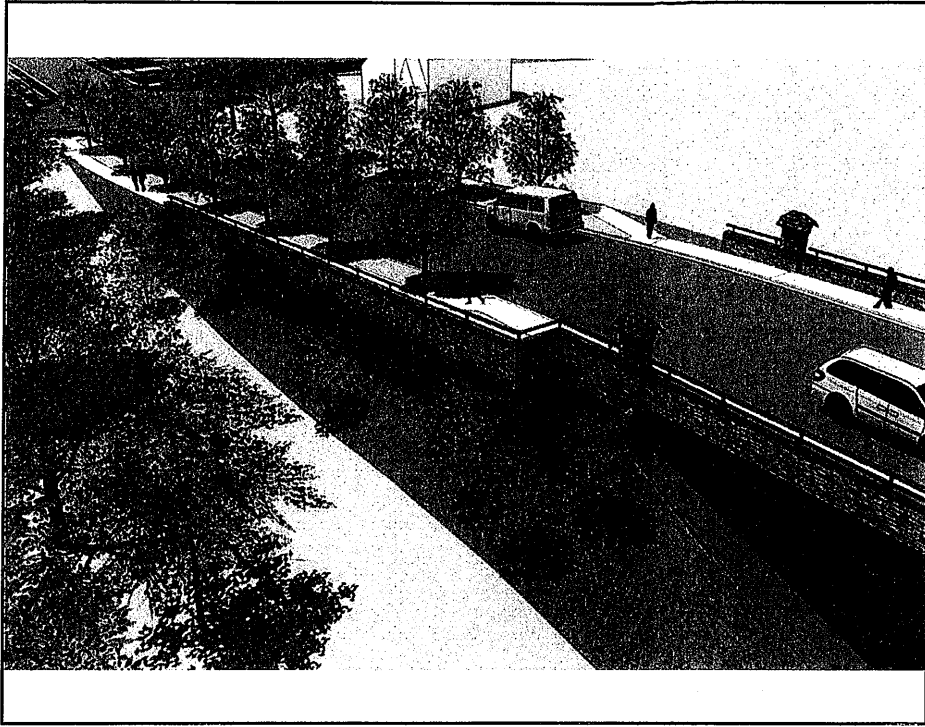


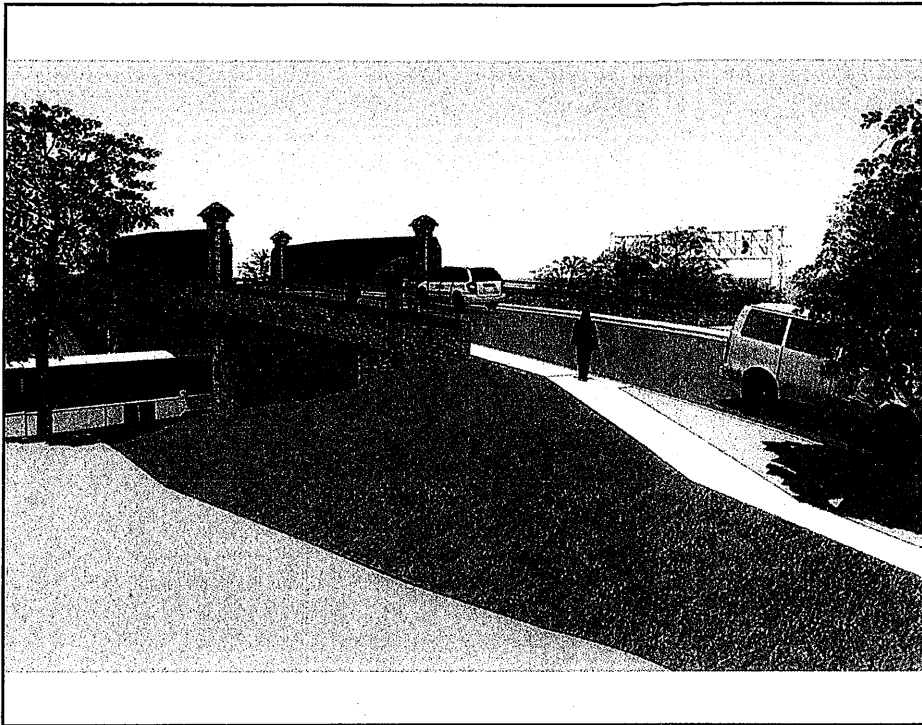












## Next Steps

### Remaining Work

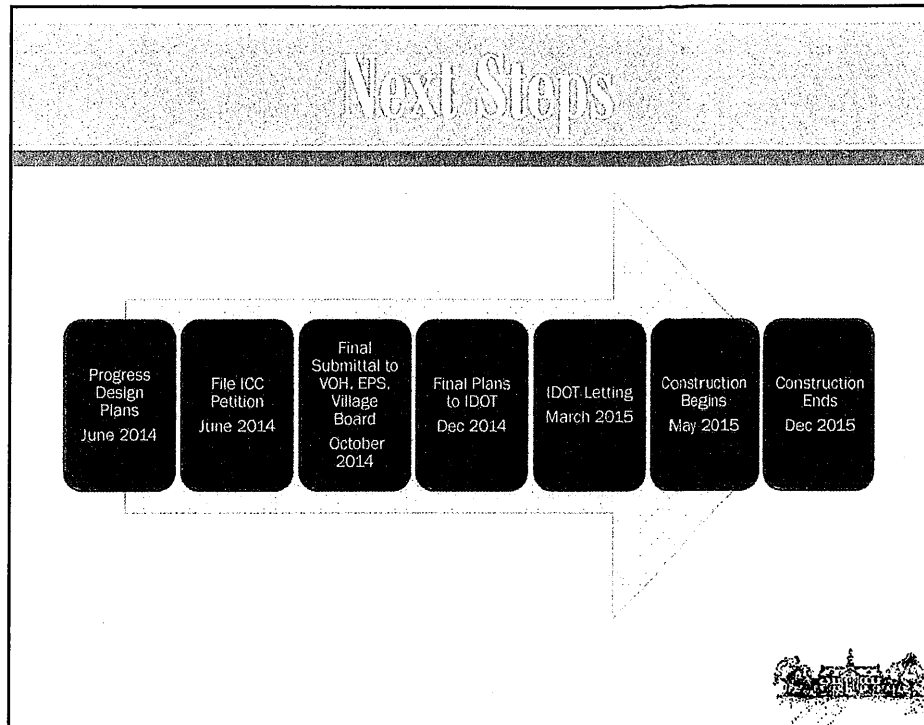
- IDOT Coordination
- ROW / Easement Coordination
- Hospital Coordination
- Railroad (BNSF) Coordination
- Illinois Commerce Commission (ICC) Approval
- Utility Coordination
  - ComEd, AT&T, Comcast, Nicor, MCI (Verizon)
- Complete Design Plans & Specifications

### Project Aesthetics, Public Input Meetings

- CWG Design Meeting #2 - April 2014
- Public Meeting for Final Design - November 2014


### Construction

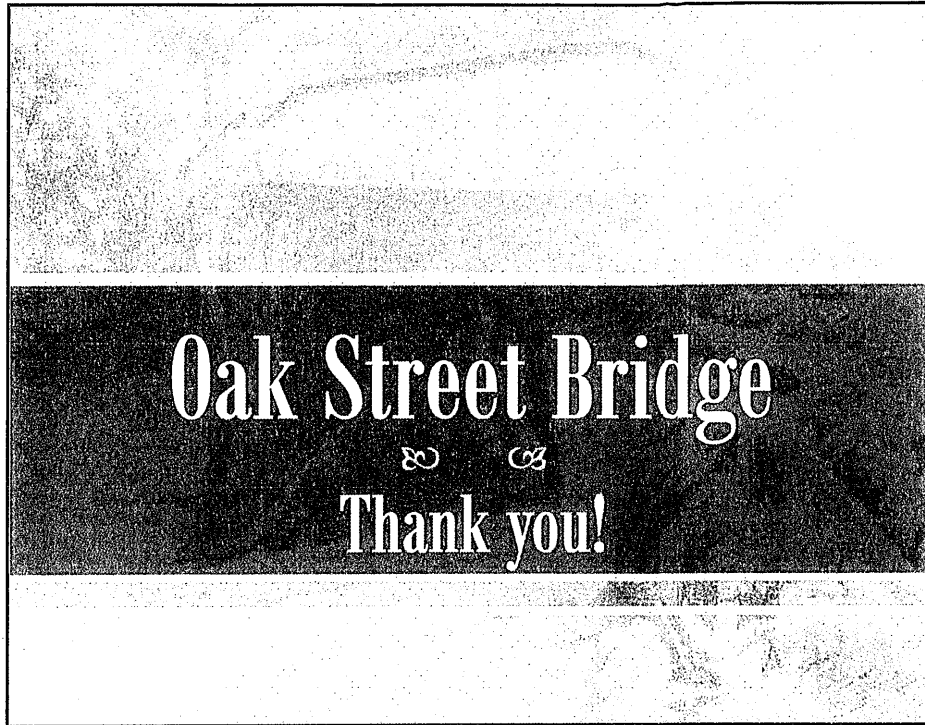




## Q&A Session

- ☞ Project Exhibits
- ☞ Contact Information
  - [oakstreetbridge@hrgreen.com](mailto:oakstreetbridge@hrgreen.com)
  - Village of Hinsdale
    - (630) 789-7030
  - HR Green
    - (815) 385-1778
- ☞ Public Comments





DATE: February 10, 2014

4A

# REQUEST FOR BOARD ACTION


<b>AGENDA</b>	<b>ORIGINATING</b>
<b>SECTION NUMBER</b> EPS Consent Agenda	<b>DEPARTMENT</b> Community Development
<b>ITEM</b> Alley Vacation Request – 228 S. Bruner St	<b>APPROVAL</b> Dan Deeter Village Engineer

Attached please find an ordinance vacating a portion of a public alley adjacent to 228 S. Bruner Street. The resident at 228 S. Bruner Street has expressed interest in purchasing this portion of the alley. Staff has reviewed the infrastructure requirements for this alley. There are no current infrastructure conflicts on this alley. The alley has previously had vacations approved and is therefore not a through-alley right-of-way. Staff recommends approval of the vacation.

Also included is the appraisal report establishing a fair market value for the vacated property. The appraisal established the value of the property at approximately \$25.50 per square foot. The property to be vacated contains an area of 375 square feet. The total appraised value of the property is \$9,600.

A plat of vacation will be prepared upon approval of this request for recording at DuPage County. To allow for potential future utility use of the alley, the plat of vacation will include a utility and drainage easement across the vacated area.

**MOTION: To Recommend Adoption of an Ordinance Vacating Half of a Public Alley Right-of-Way Situated West and Adjoining 228 S. Bruner Street at a Purchase Price of \$9,600.**

<b>APPROVAL</b> 	<b>APPROVAL</b>	<b>APPROVAL</b>	<b>APPROVAL</b>	<b>MANAGER'S APPROVAL</b>
<b>COMMITTEE ACTION:</b>				
<b>BOARD ACTION:</b>				

## VILLAGE OF HINSDALE

ORDINANCE NO. \_\_\_\_\_

### **AN ORDINANCE AUTHORIZING THE VACATION OF A CERTAIN PORTION OF AN UNIMPROVED ALLEY SITUATED WEST OF AND ADJOINING 228 S. BRUNER STREET IN THE VILLAGE OF HINSDALE, DUPAGE AND COOK COUNTIES, ILLINOIS**

**WHEREAS**, the Village of Hinsdale, DuPage and Cook Counties, Illinois (the "Village") is a duly authorized and existing municipal corporation created under the provisions of the laws of the State of Illinois and under the provisions of the Illinois Municipal Code, as from time to time supplemented and amended; and

**WHEREAS**, the property owner of 228 S. Bruner Street, Hinsdale, Illinois, which property is identified by permanent index number ("P.I.N.") 09-11-221-011, has requested that a certain portion of an alley, as more fully described below, be vacated in order to be developed and maintained by said property owner; and

**WHEREAS**, Section 11-91-1 of the Illinois Municipal Code, 65 ILCS 5/11-91-1 *et seq.* (2007) (the "Code"), authorizes the Village to determine whether or not the public interest is served by vacating an alley, or part thereof, within its corporate boundaries, by an ordinance duly adopted by the affirmative vote of three-fourths of the trustees then holding office; and

**WHEREAS**, the Code further provides that upon vacation of an alley, or any part thereof, by the Village, title to the vacated property vest in the then owner or owners of land abutting thereon; and

**WHEREAS**, the Village President and Board of Trustees of the Village of Hinsdale (the "Corporate Authorities") have determined that the relief to the public from the further burden and responsibility of maintaining a certain portion of the alley, as more fully described below, and to return said portion to the tax rolls for the benefit of all taxing bodies is in the public interest.

**NOW THEREFORE, BE IT ORDAINED** by the President and Board of Trustees of the Village of Hinsdale, DuPage and Cook Counties, State of Illinois, as follows:

**Section 1. Recitals Incorporated.** The above recitals and findings are incorporated herein and made a part hereof.

**Section 2. Vacation of Unimproved Alley.** Pursuant to the terms of this Ordinance, the Village shall vacate a 7.5' x 50' portion of the unimproved alley

situated west of and adjoining 228 S. Bruner Street, Hinsdale, Illinois (the "Subject Property"), legally described, as follows:

Lots 41 and 42 in the Resubdivision of Block 11 of Stough's Second Addition to the Town of Hinsdale in Section 11, Township 38 North, Range 11, East of the Third Principal Meridian, in DuPage County, Illinois

P.I.N. 09-11-221-011

**Section 3. Plat of Vacation Approved.** The Plat of Vacation, a copy of which is attached hereto as Exhibit A and made a part hereof, is approved.

**Section 4. Conditions of Vacation.** The Subject Property is vacated subject to any existing easement of public record for any public or private utility for the maintenance, renewal and construction or reconstruction of public and private utilities and that the Village reserves unto itself as a corporate municipality and to any public utility, its successors or assigns, the right to maintain and relocate any respective facilities in, under, across and along those parts of the public alley as herein vacated, with the right of access thereto at all times for any and all such purposes as may be reasonably required for the construction, maintenance and efficient operation of said equipment pursuant to any existing easement of public record.

**Section 5. Payment of Consideration and Title to Vacated Property.** Upon the vacation of the Subject Property, title thereto shall be acquired by and vest to the property owner of 228 S. Bruner Street, Hinsdale, Illinois upon the payment of nine thousand, six hundred dollars (\$9,600.00) to the Village by the property owner as fair market value for the Subject Property. The vacation of the Subject Property, and the recording of the Plat of Vacation, shall not be effective until said payment is received pursuant to Section 11-91-1 of the Code, 65 ILCS 5/11-91-1.

**Section 6. Execution of Documents.** The Village President, Village Clerk and all other officials are hereby authorized to take any and all action and execute any and all documents required to implement said vacation and record this Ordinance and the Plat of Vacation with the applicable county recorder of deeds upon the payment of the consideration set forth in Section 5 of this Ordinance.

**Section 7. Severability and Repeal of Inconsistent Ordinances.** If any section, paragraph, clause or provision of this Ordinance shall be held invalid, the invalidity thereof shall not affect any of the other provisions of this Ordinance. All ordinances in conflict herewith are hereby repealed to the extent of such conflict.

**Section 8. Effective Date.** This Ordinance shall be in full force and effect from and after its passage, approval, and publication in pamphlet form in the manner provided by law.

PASSED this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

AYES:

NAYES:

ABSENT:

APPROVED this \_\_\_\_\_ day of \_\_\_\_\_, 2014

\_\_\_\_\_  
Thomas Cauley, Village President

ATTEST:

\_\_\_\_\_  
Christine Bruton, Village Clerk

**APPRAISAL REPORT**

A 7.5' X 50' PORTION OF THE UNIMPROVED  
ALLEY SITUATED WEST AND ADJOINING  
228 SOUTH BRUNER STREET  
HINSDALE, ILLINOIS

Prepared For

Mr. Dan Deeter  
Village of Hinsdale  
19 East Chicago Avenue  
Hinsdale, Illinois 60521

Prepared By

C.A. Benson & Associates, Inc.  
419 North La Grange Road  
La Grange Park, Illinois 60526

**C.A. BENSON & ASSOCIATES, INC.**  
**419 North La Grange Road - La Grange Park, IL 60526**  
**P.O. Box 157 - La Grange, IL 60525**  
**(708) 352-6056 Fax (708) 352-6070**

January 15, 2014

Mr. Dan Deeter  
Village of Hinsdale  
19 East Chicago Avenue  
Hinsdale, IL 60521

Re: Appraisal of a 7.5' x 50' portion of unimproved  
alley situated west and adjoining 228 South Bruner  
Street, Hinsdale, Illinois

Dear Mr. Deeter:

In accordance with your request, I have inspected the above captioned property and analyzed all pertinent factors relative to it in order to estimate its "as is" market value of the fee simple interest. The property was inspected on January 9, 2014, which is the effective date of this valuation.

The property consists of a 7.5' by 50' portion of unimproved alley located west and adjoining 228 South Bruner Street, Hinsdale, Illinois. It contains 375 square feet and is zoned R-4, Single-Family Residential.

Based on this analysis, it is my opinion that the "as is" Market Value of the subject property as of January 9, 2014 was

<p><b>NINE-THOUSAND SIX-HUNDRED DOLLARS</b> <b>(\$9,600)</b></p>
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This Appraisal Report is intended to comply with the reporting requirements set forth under Standards Rule 2-2(b) of the Uniform Standards of Professional Appraisal Practice. As such, it presents discussions of the data, reasoning and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning and analyses is retained in the appraiser's file. The depth of discussion contained in this report is specific to the needs of the client and for the intended use stated below. The appraiser is not responsible for unauthorized use of this report.

# C.A. Benson & Associates, Inc.

## **PURPOSE OF THE APPRAISAL:**

The purpose of this appraisal is to provide my best estimate of the market value of the subject real property as of the effective date. *Market Value* is defined by the federal financial institutions regulatory agencies as follows:

*Market Value* means the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. Buyer and seller are typically motivated;
2. Both parties are well informed or well advised, and acting in what they consider their own best interests;
3. A reasonable time is allowed for exposure in the open market;
4. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

(Source: Office of the Comptroller of the Currency under 12 CFR, Part 34, Subpart C-Appraisals, 34.42 Definitions (f))

**INTENDED USE:** The function of this appraisal is to assist the Village of Hinsdale with a possible sale of the subject.

**INTENDED USER:** The intended user of this appraisal report is the Village of Hinsdale.

**INTEREST VALUED:** Fee simple

**DATE OF INSPECTION:** January 9, 2014

**EFFECTIVE DATE OF VALUE:** January 9, 2014

**DATE OF REPORT:** January 15, 2014

**APPRAISAL DEVELOPMENT AND REPORTING PROCESS:** In preparing this appraisal, I have

- Inspected the subject property;
- Examined the Sidwell Plat Book to obtain the size of the subject;
- Reviewed Public Records, Flood Hazard Rate Map and pertinent real estate tax and zoning information.
- Gathered and confirmed information on comparable sales;
- Applied the Sales Comparison Approach to Value to arrive at an indicated value.

This Appraisal Report is a recapitulation of my data, analyses and conclusions. Supporting documentation is retained in my file.

**COMPETENCY OF THE APPRAISER:** The appraiser has the appropriate knowledge and experience to complete this assignment competently as illustrated by the Qualifications of the Appraiser statement contained within this report.

# C.A. Benson & Associates, Inc.

## DESCRIPTION OF REAL ESTATE APPRAISED:

The subject property is situated in the Village of Hinsdale, approximately 20-miles southwest of the City of Chicago's Central Business District. Hinsdale is bordered by Oak Brook to the north, Burr Ridge to the south, Western Springs to the east and Clarendon Hills to the west.

Hinsdale is a residential community that has a population of 16,834 residents as of the 2010 census and an average family income of \$150,024 (2009). Over the past 12 months, the average sale price of a single-family residence in Hinsdale was \$1,076,154, which is an 18% increase over the prior 12 month average sale price of \$912,601. This is a significant increase and is reflective of improving market conditions.

Hinsdale is a substantially built-up community and is one of the communities in the Southern DuPage County suburbs, which include Burr Ridge, Clarendon Hills, Darien, Downers Grove, Glen Ellyn, Lisle, Naperville, Oak Brook, Oakbrook Terrace, Warrenville, Westmont, Wheaton, Willowbrook, Winfield and Woodridge. The majority of these are mid-aged to older established communities that have reached maturity. Redevelopment of new single-family residences is occurring in Hinsdale, Clarendon Hills and Downers Grove on sites where older residences have been demolished. The overall composition of the area provides most amenities such as adequate employee base, established commercial/residential areas and municipal services, educational facilities, etc. The area hospitals include Good Samaritan, La Grange Community and Hinsdale. Hinsdale has a thriving central business district and the Oak Brook Center and Yorktown Center regional shopping malls are in nearby driving distance.

The major transportation systems include the North-South Tollway (I-355), the Tri-State Tollway (I-294) and the East-West Tollway (I-88). In addition, the Metra Commuter Trains and Pace Buses service Hinsdale.

More specifically, the subject property is located in the southwest section of Hinsdale. The immediate area is approximately 98% built-up with single-family residences of varying architectural designs in the range of 0 to 80+ years. The price range varies from \$350,000 for smaller existing single-family residences to in excess of \$1,500,000 for new custom two story residences. Many of the older, smaller residences have been torn down and redeveloped with large custom single-family residences. The immediate occupancy of the neighborhood consists of professionals, executives and white-collar workers. Maintenance level is good and there were no adverse conditions noted on the date of inspection.

Overall, the community of Hinsdale and the subject neighborhood are stable without any land changes anticipated with the exception of residential development of new single residents on lots that were previously improved with older homes. The strengths of the community include the viable central business district, the good community services, ample shopping, proximity to major transportation systems and the historically strong demand for residential, retail and office properties.

The subject property is the east 7.5' of a 15' wide unimproved alley. It has a width of 50', which is equal to the width of the adjoining residence located at 228 South Bruner Street. It is rectangular in shape and has a calculated area of 375 square feet. It is in an R-4, Single Family Residence District which requires a minimum lot area of 10,000 square feet and 70 or 80 feet of street frontage depending on whether the site is an interior or corner parcel. The subject property is not buildable and would be of use only to the adjoining property owner. It is in a zone "X" area of minimal flooding activity per FEMA Map #17043C0903H, dated December 16, 2004.

# C.A. Benson & Associates, Inc.

## **ESTIMATE OF EXPOSURE TIME:**

The subject property is a 7.5' x 50' section of an unimproved alley, which can only be sold to the adjoining property owner. As such, estimating a marketing time is futile as a potential sale is reliant on the adjoining property owner's willingness to buy the property. The typical marketing time for area buildable sites and single-family residences is 3 to 9 months.

## **PERMANENT INDEX NUMBER:**

The subject is a section of unimproved alley, which has no permanent index number.

**TOTAL 2012 ASSESSED VALUE:** Not assessed

## **THREE-YEAR PROPERTY HISTORY:**

According to FIRREA and the Uniform Standards of Professional Practice of the Appraisal Foundation, I am required to report and analyze any sale transactions involving the subject property during the past three years or any listing or pending sale transaction involving the subject property.

The subject is part of an unimproved alley under ownership by the Village of Hinsdale. This appraisal will be used as an estimate of market value for a possible sale of the property.

## **HIGHEST AND BEST USE ANALYSIS:**

The subject consists of a 7.5' x 50', rectangular shaped portion of unimproved alley. It cannot be developed by itself and has value only to the adjoining property owner. It is my opinion that the highest and best use of the subject property is in conjunction with the adjoining residential property.

## **SUMMARY OF ANALYSIS AND VALUATION:**

As indicated, the Sales Comparison Approach to Value will only be used.

## **SALES COMPARISON APPROACH TO VALUE AS IMPROVED:**

**Definition:** A set of procedures in which a value indication is derived by comparing the property being appraised to similar properties that have been sold recently, then applying appropriate units of comparison, and making adjustments to the sale prices of the comparables based on the elements of comparison.\*

\*Source: Page 255, *The Dictionary of Real Estate Appraisal*, Appraisal Institute, Fourth Edition.

# C.A. Benson & Associates, Inc.

## SALES COMPARISON APPROACH TO VALUE - Continued

In order to estimate the market value of the subject property by the Sales Comparison Approach, I have analyzed the following sales.

1. **722 South Bruner Street, Hinsdale** was reported sold in June 2013 for \$455,100. This is a 65 foot by 124.3 foot parcel zoned R-4, containing 8,080 square feet. The sales price was equal to \$56.32 per square foot.
2. **211 South Thurlow Street, Hinsdale** was reported sold in August 2013 for \$400,000. This is a 50 foot by 133 foot parcel zoned R-4, containing 6,650 square feet. The sales price was equal to \$60.15 per square foot.
3. **411 South Adams Street, Hinsdale** was reported sold in November 2013 for \$425,000. This is a 59 foot by 125 foot parcel zoned R-4, containing 7,375 square feet. The sale price was equal to \$57.63 per square foot.
4. **211 South Monroe Street, Hinsdale** was reported sold in December 2013 for \$349,000. This is a 50 foot by 133.5 foot parcel zoned R-4, containing 6,675 square feet. The sale price was equal to \$52.28 per square foot.

### Commentary

The above sales were all improved with older smaller single-family residences and the sale prices were reflective of land value. Since their acquisitions, one of the existing residences has been demolished and the others will most likely be demolished. They sold from \$52.28 to \$60.15 per square foot and averaged \$56.60 per square foot for a buildable site.

The subject consists of a 375 square foot unimproved alley that is not buildable and can only be sold to an adjoining property owner. Historical comparisons of varying size sites indicated that additional rear site area above the standard size lot contributes at a rate of 45% of the base lot. For this analysis, 45% of the \$56.60 average value of a buildable site or \$25.47 per square foot, rounded to \$25.50 per square foot is indicated.

# C.A. Benson & Associates, Inc.

## SALES COMPARISON APPROACH TO VALUE - Continued

Based on the above analysis, it is my opinion that \$25.50 per square foot is indicated for the subject property.

375 square feet @ \$25.50 per square foot = \$9,562

**INDICATED VALUE BY THE SALES COMPARISON APPROACH: \$9,600**

### COMMENT AND FINAL VALUE CONCLUSION:

Based on the sales data analyzed in this report, it is my opinion that the "as is" fee simple market value of the subject property as of January 9, 2014 was

<p><b>NINE-THOUSAND SIX-HUNDRED DOLLARS</b> <b>(\$9,600)</b></p>
--

Respectfully submitted,

C.A. BENSON & ASSOCIATES, INC.



Charles A. Benson, Jr., SRA  
Illinois State Certified General Real Estate Appraiser  
License #553.000387 (Exp. 9/30/15)

# **C.A. Benson & Associates, Inc.**

## **ASSUMPTIONS AND LIMITING CONDITIONS**

1. This Appraisal Report is intended to comply with the reporting requirements set forth under Standard Rule 2-2(b) of the Uniform Standards of Professional Appraisal Practice. It might not include full discussions of the data, reasoning, and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning and analyses is retained in the appraiser's file. The information contained in this report is specific to the needs of the client and for the intended use stated in this report. The appraiser is not responsible for unauthorized use of this report.
2. No responsibility is assumed for legal or title considerations. Title to the property is assumed to be good and marketable unless otherwise stated in this report.
3. The property is appraised free and clear of any or all liens and encumbrances unless otherwise stated in this report.
4. Responsible ownership and competent property management are assumed unless otherwise stated in this report.
5. The information furnished by others is believed to be reliable. However, no warranty is given for its accuracy.
6. All engineering is assumed to be correct. Any plot plans and illustrative material in this report are included only to assist the reader in visualizing the property.
7. It is assumed that there are no hidden or unapparent conditions of the property, subsoil or structures that render it more or less valuable. No responsibility is assumed for such conditions or for arranging for engineering studies that may be required to discover them.
8. It is assumed that there is full compliance with all applicable federal, state and local environmental regulations and laws unless otherwise stated in this report.
9. It is assumed that all applicable zoning and use regulations and restrictions have been complied with, unless a non-conformity has been stated, defined and considered in this appraisal report.
10. It is assumed that all required licenses, certificates of occupancy or other legislative or administrative authority from any local, state or national governmental or private entity or organization have been or can be obtained or renewed for any use on which the value estimates contained in this report are based.
11. Any sketch in this report may show approximate dimensions and is included to assist the reader in visualizing the property. Maps and exhibits found in this report are provided for reader reference purposes only. No guarantee as to accuracy is expressed or implied unless otherwise stated in this report. No survey has been made for the purpose of this report.

# C.A. Benson & Associates, Inc.

## ASSUMPTIONS AND LIMITING CONDITIONS - Continued

12. It is assumed that the utilization of the land and improvements is within the boundaries or property lines of the property described and that there is no encroachment or trespass unless otherwise stated in this report.

13. The appraiser is not qualified to detect hazardous waste and/or toxic materials. Any comment by the appraiser that might suggest the possibility of the presence of such substances should not be taken as confirmation of the presence of hazardous waste and/or toxic materials. Such determination would require investigation by a qualified expert in the field of environmental assessment. The presence of substances such as asbestos, urea-formaldehyde foam insulation, or other potentially hazardous materials may affect the value of the property. The appraiser's value estimate is predicated on the assumption that there is no such material on or in the property that would cause a loss in value unless otherwise stated in this report. No responsibility is assumed for any environmental conditions or for any expertise or engineering knowledge required to discover them. The appraiser's descriptions and resulting comments are the result of the routine observations made during the appraisal process.

14. Unless otherwise stated in this report, the subject property is appraised without a specific compliance survey having been conducted to determine if the property is or is not in conformance with the requirements of the Americans with Disabilities Act. The presence of architectural and communications barriers that are structural in nature that would restrict access by disabled individuals may adversely affect the property's value, marketability or utility.

15. Any proposed improvements are assumed to be completed in a good workmanlike manner in accordance with the submitted plans and specifications.

16. The distribution, if any, of the total valuation in this report between land and improvements applies only under the stated program of utilization. The separate allocations for land and buildings must not be used in conjunction with any other appraisal and are invalid if so used.

17. Possession of this report, or a copy thereof, does not carry with it the right of publication. It may not be used for any purpose by any person other than the party to whom it is addressed without the written consent of the appraiser, and in any event, only with proper written qualification and only in its entirety.

18. Neither all nor any part of the contents of this report (especially any conclusions as to value, the identity of the appraiser, or the firm with which the appraiser is connected) shall be disseminated to the public through advertising, public relations, news sales, or other media without prior written consent and approval of the appraiser.

# C.A. Benson & Associates, Inc.

## CERTIFICATION

I certify that, to the best of my knowledge and belief....

- the statements of fact contained in this report are true and correct.
- the reported analyses, opinion, and conclusions are limited only by the reported assumptions and limiting conditions, are my personal, impartial, and unbiased professional analyses.
- I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- my engagement in this assignment was not contingent upon developing or reporting predetermined results.
- my compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- my analyses, opinions and conclusions were developed, and this report has been prepared in conformity with the *Uniform Standards of Professional Appraisal Practice*.
- I have made a personal inspection of the property that is the subject of this report.
- no one provided significant professional assistance to the person signing this certification.
- the reported analyses, opinions and conclusions were developed, and this report has been prepared in conformity with the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute.
- the use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.



Charles A. Benson, Jr., SRA  
Illinois State Certified General Real Estate Appraiser  
License #553.000387 (9/30/15)

# C.A. Benson & Associates, Inc.

## QUALIFICATIONS OF CHARLES A. BENSON, JR.

### EDUCATION

University of Wisconsin, Madison, B.B.A., 1974  
Majored in Real Estate and Urban Land Economics

### APPRAISAL COURSES SUCCESSFULLY COMPLETED

S.R.E.A. Courses 101 (1972), 201 (1976), 202 (1989)  
A.I.R.E.A. Course VIII (1978)  
Standards of Professional Practice - Parts A & B, Appraisal Institute 1998  
USPAP Update – 2012-2013

### SEMINARS

Residential Design and Functional Utility; Subdivision Analysis; Rates, Ratios & Reasonableness; Valuation Under Federal Lending Regulations; Appraisal of Retail Properties; Industrial Valuation: Conditions of the Chicago Real Estate Market, 2012; Fair Lending and the Appraiser; Valuation of Detrimental Conditions in Real Estate; Partial Interest Valuation – Undivided; Forecasting Revenue; Illinois Appraiser's Update – 2004 thru 2013; Professionals Guide to the Uniform Residential Appraisal Report; Appraisal Challenges: Declining Markets and Sales Concessions; The Discounted Cash Flow Model: Concepts, Issues and Applications.

### EXPERIENCE

Actively engaged in the real estate appraisal business since 1975; has made appraisal of thousands of properties of various types including single family residences, apartment buildings, commercial, industrial, special use properties and vacant land.

### CLIENTS

Appraisal clients include: Inland Bank, American Metro Bank, First National Bank of LaGrange, Highland Community Bank, Cathay Bank, Pacific Global Bank, Suburban Bank & Trust, United Trust Bank, The Village of Hinsdale, attorneys, individuals, corporations and others.

Qualified as an expert witness for the Circuit Court of Cook County and the Circuit Court of DuPage County.

### AFFILIATIONS

- The Appraisal Institute - Received SRA designation in April 1988.
- Holds State of Illinois Real Estate Managing Broker's License #471.011778.
- Member of the Mainstreet Organization of Realtors.
- State Certified General Real Estate Appraiser, State of Illinois, License No. 553.000387.

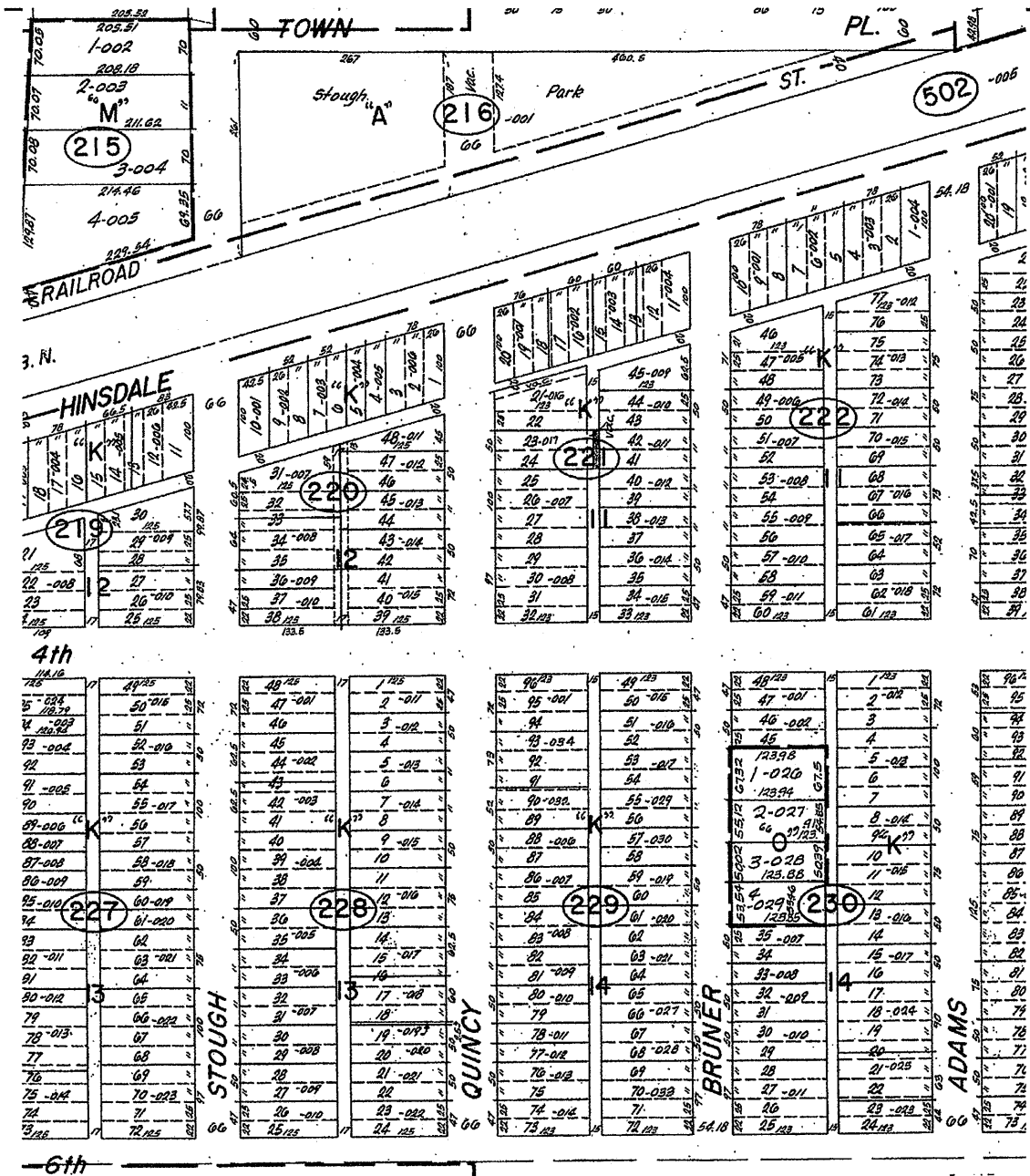
# C.A. Benson & Associates, Inc.

## **ADDENDUM**

### **Sidwell Map**

# C.A. Benson & Associates, Inc.


## SIDWELL MAP (Subject Shaded in Red)



DATE: February 10, 2014

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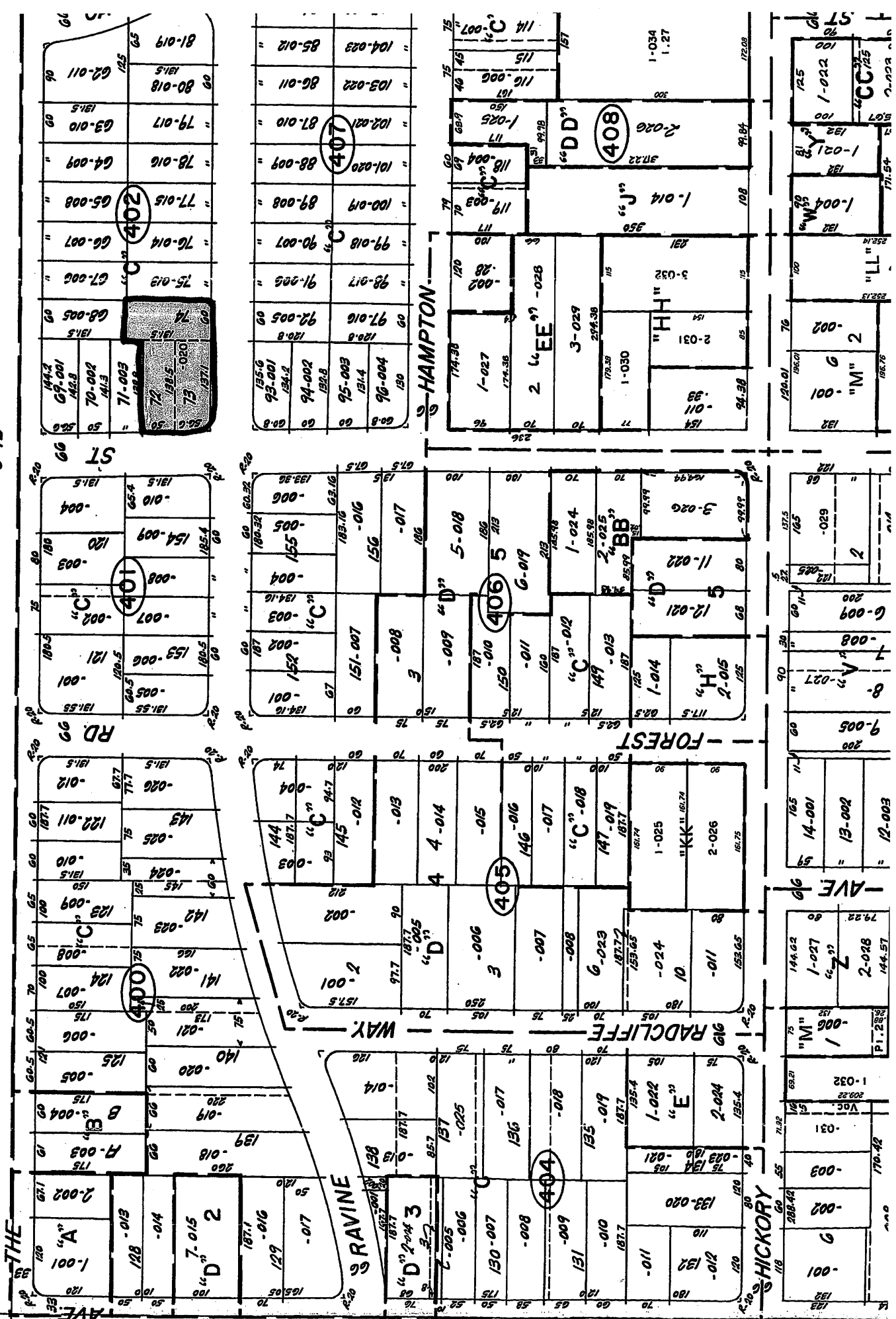
### REQUEST FOR BOARD ACTION

<b>AGENDA SECTION NUMBER</b>		<b>ORIGINATING DEPARTMENT</b> Community Development		
<b>ITEM</b> Plat of Consolidation – 311 Ravine Road – Patten Subdivison		<b>APPROVAL</b> Daniel Deeter Village Engineer		
<p>Staff has received a request from Stephen Ryd, on behalf of Garrett and Amber Patten, to consolidate the three lots at 311 Ravine Road. The subject properties currently exist as three separate lots with a single residence and the petitioner is proposing to consolidate them into one single lot of record. The applicant intends to eventually demolish the existing home and then rebuild, but needs to consolidate the lots first. The consolidation of the property would result in a single lot totaling approximately 22,471 square feet, as presented on the attached plat. Attached please find the reduced plat of consolidation as well as the Sidwell map identifying the areas to be consolidated.</p> <p>The subject property is currently zoned R-4, Single-Family residential. The existing zoning district requires a minimum lot size of 10,000 square feet. The applicant is not proposing to change the size or dimensions of the lots, but is simply looking to consolidate the three lots into one lot of record. As such, there are no bulk standards being affected by the consolidation and staff respectfully requests the following motion.</p> <p><b>MOTION: To approve “A Resolution Approving and Accepting A Plat of Consolidation To Consolidate The Properties Commonly Known As 311 Ravine Road In The Village of Hinsdale, County of DuPage”.</b></p>				
<b>APPROVAL</b> 	<b>APPROVAL</b>	<b>APPROVAL</b>	<b>APPROVAL</b>	<b>MANAGER'S APPROVAL</b>
<b>COMMITTEE ACTION:</b>				
<b>BOARD ACTION:</b>				



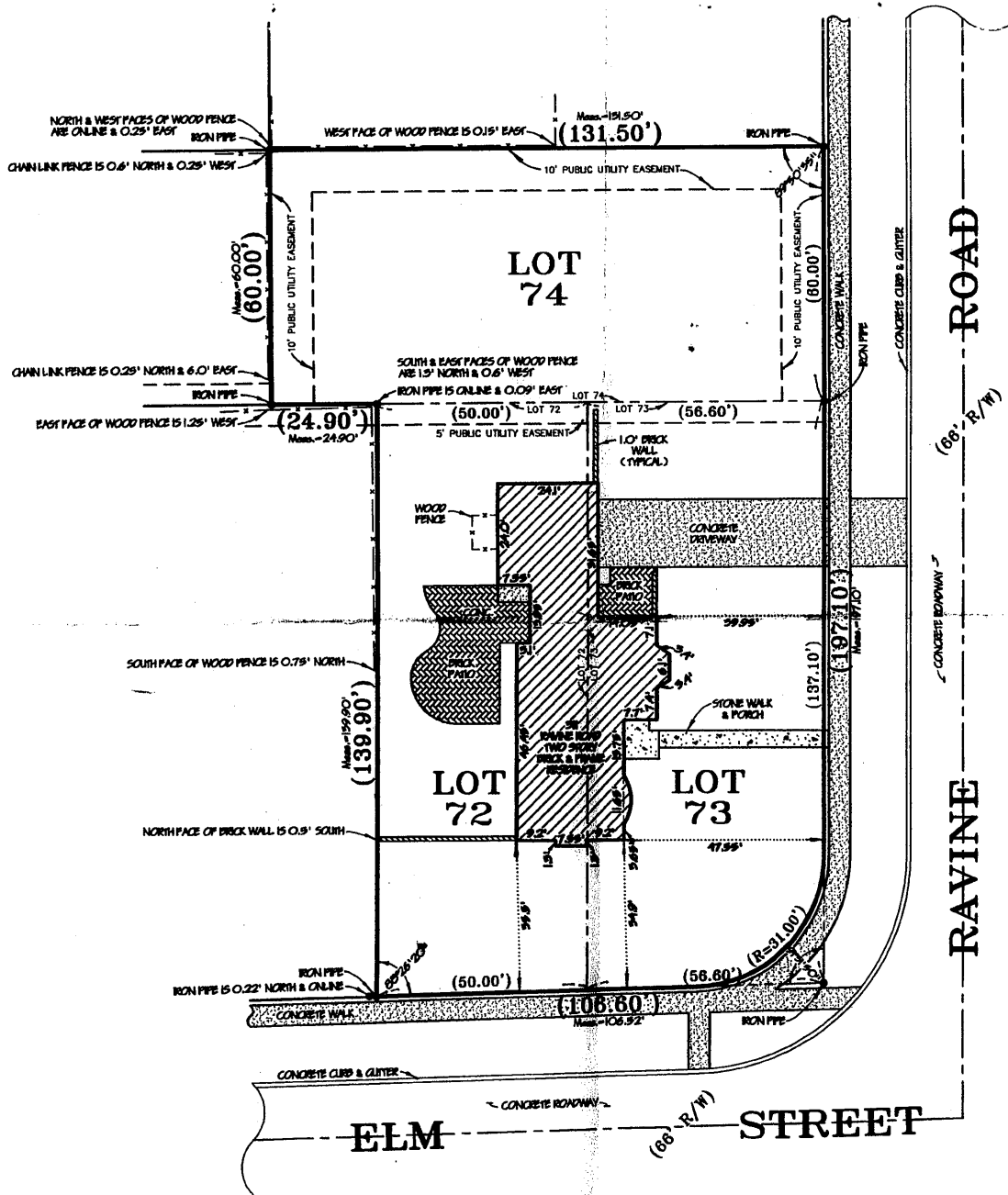
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9-1B



# PLAT OF SURVEY

LOTS 72, 73 AND 74 IN THOS. S. COUSIN'S SUBDIVISION, BEING A SUBDIVISION IN THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 1, TOWNSHIP 38 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED APRIL 12, 1924 AS DOCUMENT 176286, IN DU PAGE COUNTY, ILLINOIS.



STATE OF ILLINOIS) ss  
COUNTY OF DU PAGE)

THIS IS TO CERTIFY THAT I, ALLEN D. CARRADUS, A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF ILLINOIS, HAVE SURVEYED THE PROPERTY AS DESCRIBED HEREON AND THAT THE ANNEXED PLAT IS A CORRECT AND TRUE REPRESENTATION THEREOF, AND THAT THE PROFESSIONAL SERVICE COMPOSED TO THE CURRENT ILLINOIS MERRILL STANDARDS FOR A BOUNDARY SURVEY.

SIGNED AND SEALED AT WHEATON, ILLINOIS THIS 29th DAY OF JULY, A.D. 2012.  
BY *Allen D. Carradus* ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-2551.  
MY LICENSE EXPIRES NOVEMBER 30, 2015.

## NOTES

1. All distances shown herein are to find and defined parts thereof connected to the 1/4 section shown along corner lines on the measurements unless otherwise noted.
2. Compare the Land Description, Exhibit, Lines, and Easements on shown herein with just filed, the latest Plat of the Commission.
3. Consult local authorities for additional notices and regulations not shown herein.
4. Compare all survey points and report any discrepancies immediately.
5. Consult utility companies and municipalities prior to the start of any construction.
6. Distances to and along buildings and other structures measurements.
7. Do Not Assume distances from stated measurements made herein.

**ALLEN D. CARRADUS** AND ASSOCIATES

Residential & Commercial Land Surveying Services  
106 W. LIBERTY DRIVE, WHEATON, ILLINOIS 60187  
(630) 582-0416 (FAX) 652-7682

PREPARED FOR: **ARNSTEIN & LEHR, LLP.**

DRAWN BY: CJS DATE OF FIELD WORK: 06/29/13 SCALE: 1"=20' PLAT - PAGE: 48-00 PROJECT NO.: 25148