

## **ADDITIONAL TREE CARE PRACTICES**

Additional tree care practices are performed to promote tree health and longevity, and maintain quality trees in the parkway. As mentioned in Chapter 3, the most visible tree diseases, tree disorders, insect and other pests are monitored or noted by the Forestry Division. Control measures are taken whenever appropriate. To effectively manage all of these tree problems, staff takes a common sense approach and utilizes the *International Society of Arboriculture Best Management Practices: Integrated Pest Management (2016)*. This involves managing pests and their damage at levels tolerable to the area. First, the level or magnitude of the problem is measured and the subsequent threat to the tree's health and longevity is evaluated. Often, it is not necessary to treat the tree with chemicals, but instead the providing of a healthy environment is all that is required for trees to protect themselves. Generally, proper watering, mulching with organic material, and light fertilization have been the most environmental and cost effective methods used to reduce stress and increase tree vigor. Should a treatment be required, the least toxic material is chosen. Staff always takes into consideration if the treatment has pesticide residues, if it adversely affects the wildlife of the area, if it destroys beneficial insects as well as the pest, and if it negatively affects the health and safety of the public.

### **Tree Disease and Disorders**

In addition to infectious diseases such as Dutch elm disease (discussed in Chapter 3), Forestry Staff monitors trees for other diseases or disorders. Any appropriate control measures are taken as needed. The following are some of the more common diseases and disorders which may be present: anthracnose, apple scab, ash decline, blights, cankers, fungus rots and decays, leaf spots, rusts, verticillium wilt, wetwood, air pollution, animal related injuries, chlorosis, construction related injuries, drought, girdling roots, mechanical injuries by lawn mowers, pesticide injury, salt injury, scorch, soil related problems, weather related injuries such as lightning or hail, and winter injury.

### **Insect and Other Pest Populations**

Insect and other pest populations which affect trees are monitored or noted, and any appropriate control measures are taken as needed. The following are some of the more common insects and other pests: aphids, beetles, borers, bugs such as ash plant or boxelder or honeylocust plant, cankerworm, carpenter ants, caterpillar eastern tent, cicadas, earwigs, galls such as ash flower or hackberry or maple bladder or oak, leafhoppers, leafminers, mites, sawflies, scales, and wasps.

The following paragraphs discuss those insect pests that have been the most numerous over the past four decades and include any brief treatment notes.

### Ash/lilac Borer

Clearwing borers comprise one of the most damaging groups of insect pests that attack shade trees and shrubs. Included in this group of insects are the ash/lilac borer, oak borer, peach tree borer, dogwood borer, and rhododendron borer. It is the larval stage of the clearwing, and not the adult moth, which causes damage. The larvae burrow beneath the bark where they feed and tunnel, weakening limbs and trunks and destroying tissues that transport food and water throughout the tree. Severely affected trees may die. In Downers Grove, ash/lilac borers have been found in ash tree species that have been stressed in some fashion including drought or construction activities. In recent years, the number of ash/lilac borers has been relatively low due to the decline in ash tree numbers as Emerald Ash Borer infestations have increased.

### Cottony Maple Scale

The cottony maple scale is one of the largest and most conspicuous of the many scale insects that attack ornamental trees in the United States. The favored host of this insect is silver maple, though it also infests other maples, ash, dogwood, linden, oak, apple, elm, sycamore, willow, and honeylocust. The mass of white frothy fibers, which appears on the twigs of infested plants in late May or early June, contains many hundreds of eggs. After the eggs hatch in late June or early July, the pale yellow-green nymphs migrate to the under surface of the leaves and begin to feed. Frequently feeding results in the secretion of a clear sticky substance called honeydew, which may drip from the tree. A fungus may colonize the honeydew resulting in a black sooty appearance on the leaves and stems. Heavy populations of scale may cause dieback of twigs and branches, and reduce the vigor of the tree. A number of natural enemies regulate the population of this species and include many wasp and fly parasites, various lady beetles, and even English sparrows. Infestations are usually cyclic.

### Honeylocust Plant Bug

Honeylocust plant bug is a common pest. The plant bug overwinters as an egg under the bark of two to three year old twigs. Just as honeylocust trees are breaking bud, the eggs hatch and tiny green immature bugs (nymphs) emerge and become active. Plant bugs have piercing-sucking mouthparts and insert their mouthparts into the tender foliage to feed. Feeding damage to the foliage results in distortion of new leaflets, chlorosis, and death of leaf tissue. When populations are very high, complete defoliation may occur. With only one generation per year, the insect is gone by mid July. Honeylocust will continue to put on new foliage throughout the season as long as conditions are favorable for growth, and by the end of July, most trees will have regained their normal appearance. Another small insect called a honeylocust leaf hopper can also be found on honeylocust at the same time with honeylocust plant bug. The biology of the two insects are very similar and cause similar injury due to sap sucking. During most years, honeylocust plant bug

populations are high in isolated spots within Downers Grove particularly on streets with monoculture honeylocust plantings. Spot spray treatments were made in 1992 and 1993. In 1995, honeylocust plant bug populations were unexpectedly high all over the Village and many honeylocust trees had little or no foliage in June. Because of the high number of honeylocust trees and the quantity of material needed to spray them all, it was not practical to treat and subsequently no sprays were applied. Trees that had been bare or had very sparse foliage did recover and develop new leaves by the end of July. The following year, there were very few honeylocust tree mortalities. In 1996 and 1997, bug populations were observed to be normal to low. In the years since, honeylocust plant bug populations have been very high in isolated spots though not as severe as 1995. With annual honeylocust tree mortalities still very low, trees will be monitored to see if a spray application is warranted should the bug populations severely stress honeylocust trees. The best course of action includes mulching, light fertilization, and good soil water management.

#### Eastern Tent Caterpillar

The eastern tent caterpillar is a native defoliator of deciduous trees in the United States. Its favorite hosts are crabapple, apple, and cherry, but occasionally it can be found on ash, maple, oak, peach and plum. Larvae hatch from eggs in the spring when new leaves begin to unfold. The young caterpillars quickly gather at a major branch fork or crotch and begin to build a web. From these webs, they go forth to feed on the new foliage. When populations are high, complete defoliation of the tree may occur. After adults emerge from cocoons, egg masses are laid on twigs. Damage can be reduced on small trees by getting rid of the egg masses during the winter or by clipping and destroying the tents and their occupants when temperatures are cool or during inclement weather. Larvae do not venture out of their tents to feed during inclement weather. Every spring, crabapple trees are inspected and any reachable tents destroyed as they are discovered. Caterpillar populations have been very low in the last decade.

## European Gypsy Moth

European Gypsy Moth (hereafter referred to as gypsy moth) is monitored in Illinois by the Illinois Department of Agriculture in cooperation with the USDA Animal and Plant Health Inspection Service, and the USDA Forest Service. The gypsy moth caterpillars are non-native leaf-feeding insects that cause defoliation to many varieties of trees, resulting in millions of dollars in damage to trees. A quarantine area has been established to include all locations where gypsy moth is established in the eastern United States. The quarantine has regulations that work to slow the spread of gypsy moths to adjacent areas. These regulations require inspection and certification of nursery stock, outdoor equipment and articles prior to their movement out of the quarantine area. By mid 2007, four counties in Illinois (Lake, McHenry, Cook and DuPage) were added to the list of national areas under quarantine for gypsy moth. Additional counties in the US are added on an annual basis, including several in Illinois in 2017 – see North America quarantine map at:

[http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/gypsy\\_moth/downloads/gypmoth.pdf](http://www.aphis.usda.gov/plant_health/plant_pest_info/gypsy_moth/downloads/gypmoth.pdf)

Gypsy moth is the most important insect pest of forest and shade trees in the eastern United States. The larval or caterpillar stage frequently strips entire trees and even forests of their leaves over wide areas. When deciduous trees are stripped of their foliage, many species will try to re-leaf (grow new leaves) during the hot, dry midsummer. Consecutive years of severe defoliation can weaken trees, leaving them more susceptible to other stresses, such as drought, disease, and other lethal-insect pests such as borers. Trees that are already weakened may be killed and evergreen plants may not survive the first year's defoliation. Oak trees are most vulnerable to gypsy moth devastation, though caterpillars have been found to feed on leaves of more than 500 species of trees and shrubs.

Gypsy moth caterpillars can also be a significant nuisance when populations are high. They have a tendency to congregate on the sides of homes and other structures, as well as produce large quantities of frass (fecal pellets), which fall from tree canopies onto yards and patios below. Some people may experience discomfort when they contact the many hairs covering the body of caterpillars.

The gypsy moth survives the winter in the form of eggs laid in masses with as many as 1,000 eggs or more per mass. Eggs hatch in April or early May into tiny (about 1/4 inch long), black, hairy caterpillars. Newly hatched caterpillars climb into tree canopies and begin feeding. If their first tree is not to their liking, they will produce a silken thread, which carries them like a balloon on wind currents to more suitable hosts. The caterpillars continue feeding throughout the rest of the



spring, undergoing five to six molts (instars). The first three caterpillar instars have black heads and generally black bodies. By the fourth instar, the caterpillars are about one inch long, have mottled brown heads, bodies covered with black and brown hairs, and a series of five pairs of blue spots followed by six pairs of red spots on the tops of the bodies. The greatest feeding damage is done by older caterpillars during the last two weeks of June, sometimes making it appear as if trees are stripped of leaves practically overnight. After they have completed feeding in late June or early July, caterpillars enter the pupal stage from which adult moths emerge after 10 to 14 days. Adult moths do not feed. The brownish male moth flies about during the day in search of females with which to mate. Whitish females do not fly, but attract males to them by means of a chemical 'perfume', or pheromone. Each adult female produces only one egg mass which can be attached to trees, rocks, houses, lawn furniture, and just about any other convenient object. The egg mass is covered with tan or buff-colored hairs. Egg masses deposited during mid- to late July will hatch the following spring, completing the life cycle.

In the early 1980's, gypsy moth was found in Downers Grove. A 1985 article by Paul Appelt published in the Journal of Arboriculture vol.11(8) details that gypsy moths were discovered in Downers Grove and confirmed through trapping in 1981. An eradication program was begun in 1982 which included two aerial sprays of the bacterial insecticide *Bacillus thuringiensis kurstaki* (BTK) sprayed over 800 acres plus mass trapping of the same 800 acres at the rate of 3 traps per acre. A spray and trap program was repeated in 1983 along with a new inspection program of new residents to the Village. If a new resident had moved from a generally gypsy moth infested area of the United States, outdoor articles were inspected in search of egg masses. Because only one gypsy moth was trapped in 1984, the program was deemed successful and no more spraying was required.

In May of 2001, gypsy moth caterpillars were once again found in the Village, this time in the 5600 block of Dunham Road. Within weeks, gypsy moth caterpillars were discovered in over 482 acres. To monitor gypsy moth levels throughout northern Illinois including Downers Grove, the Illinois Department of Agriculture (IDA) sets out gypsy moth traps and counts the number of catches. Trap information is plotted annually and then gypsy moth treatment maps are prepared listing the locations and the number of acres to be treated with either BTK or pheromone flakes as part of the Slow the Spread (STS) program. From 2002 to 2005, Downers Grove was annually included in the areas selected for gypsy moth treatment by IDA and the STS program. Copies of the applicable maps for Downers Grove are kept in the forestry office for each year that treatment occurred.

The following table lists by year the number of acres treated by the STS Program with either BTK or pheromone flakes, and the number of informative letters mailed to Village residents describing gypsy moth and the treatment activities. Various press releases were printed as well as a cable TV

program presentation was developed in May 2002.

Year	2 aerial applications of BTK	1 application pheromone flakes	Letters Mailed
1982	800 acres	None	-
1983	50 acres	None	-
2002	1582 acres	None	4800
2003	317 acres	750 acres	2926
2004	92 acres	None	250
2005	None	2460 acres	5613
2006	None	None	-

Since 2006, Downers Grove has not been included in any treatment plan by IDA or the STS program for gypsy moth has continued to advance westward across the state of Illinois. In April 2007, McHenry, Cook and DuPage Counties in Illinois were added to the Federal quarantine which already included Lake County. Unfortunately, additional counties in Illinois were added to the Federal quarantine in 2017.

As gypsy moth may now be a permanent pest in Downers Grove, staff will be informing residents as to how to care for their trees and any treatment options. In order to monitor gypsy moth levels or find new infestations, burlap bands are annually put up on oaks throughout Downers Grove and checked throughout the early summer for gypsy moth caterpillars.

Toward evening, the gypsy moth caterpillars come out of hiding and migrate up the trees to feed. The slightly ruffled and loose burlap band provides a temporary hiding place. Caterpillars congregate between the folds and also between the burlap and the tree trunk. Bands are checked every 1 to 2 days, numbers counted and then any caterpillars are either crushed or swept into soapy water buckets.



In that so many gypsy moths were found in the Village along with numerous resident complaints in 2008, the Village contracted for aerial spraying of the center of the Village to suppress gypsy moth in 2009. Notices were put in newsletters, and information was posted on the website at [www.downers.us](http://www.downers.us) including a map of the spray area. A copy of the aerial spraying specification is at the end of this chapter. The following table lists information about acres and total costs for the aerial spraying.

Date	Contractor	Quantity	Product	Rate	Total Cost
May 21, 2009	Hendrickson Flying	1386 Acres	BtK	\$43.55/acre	\$60,360.30
June 3, 2009	Hendrickson Flying	1386 Acres	BtK	\$43.55/acre	\$60,360.60

Since 2009, only a small number of gypsy moths have been found in the Village. Small annual eradication sprays to an isolated area have occurred, and so far the infestation seems to be contained as of 2019.

### Emerald Ash Borer

The Emerald Ash Borer (EAB) is an exotic beetle from Asia. It was first discovered in the United States in 2002 in southeast Michigan. Since that time, this destructive beetle has also been found in numerous states including Illinois, Indiana, Ohio, and Wisconsin. Larvae of EAB beetles bore into native American ash trees and feed in the phloem and outer sapwood. This feeding produces galleries that eventually girdle and kill branches and entire trees. Evidence suggests that EAB had been established in Michigan for at least 6 to 10 years prior to being identified in 2002. Millions of ash trees are dead or dying from this pest, and millions have been removed in hopes of containing EAB infestations.

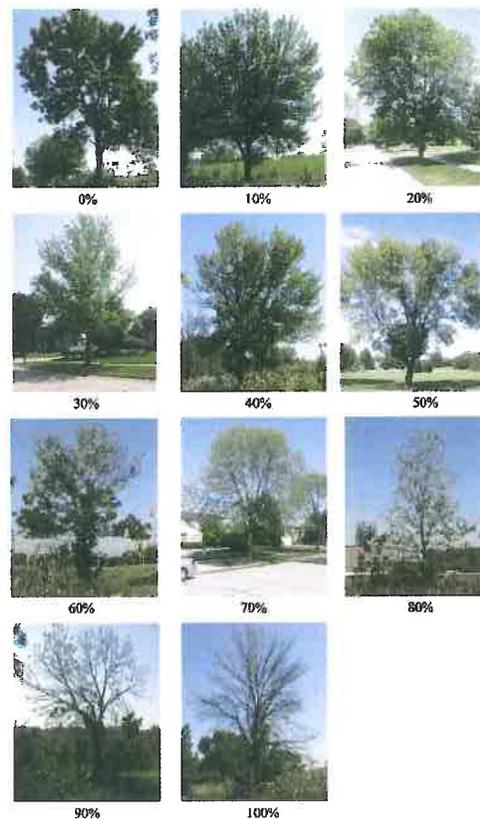


The EAB adult is a dark green metallic beetle only about ½” in length. EAB adult beetles emerge from infested trees beginning in mid-May, peaking in late June, and continue emerging until late July. Emerging adults make distinctive small D-shaped exit holes on the branches and trunk. EAB beetles feed on ash foliage causing irregularly shaped patches along leaf margins and minor feeding damage. Female EAB beetles lay numerous eggs on the bark of branches and trunks from late May through July with hatching occurring in about one week. Larvae tunnel into the cambium area between the inner bark and outer ring of wood, feed on phloem and outer sapwood, and produce serpentine galleries (tunnels). It is this larval stage that does the major damage by disrupting the flow of water and nutrients to the tree. Feeding is complete in autumn and larvae overwinter in shallow chambers. The following April, larvae begin pupation and then new adults start to emerge in May, starting the lifecycle over again.

In the Chicagoland area, Downers Grove is not alone in having had so many ash trees. Previous to EAB, both green and white ash have been durable, low cost trees which have performed well in all types of soil and landscape conditions. In a few sections of the Village, entire street blocks consisted of all ash trees which were planted in the 1970’s. Starting in the 1980’s, several cultivars of White Ash were widely planted due to rapid growth, pleasing form and beautiful fall color.

Forestry staff has taken a proactive, methodical, and measured approach to slow the spread of EAB in Downers Grove. Village ash trees are being annually inspected and monitored for this beetle pest. In the last decade, ash trees have been reduced to less than 10% of the total parkway tree population.

An important strategy in containing the spread of EAB is the removal of potentially infested, poor health or suspect trees. Once in full leaf, ash trees are annually reviewed and rated by the amount of canopy dieback. The pictures to the right illustrate the canopy dieback rating system with 0% for no dieback, and then increments of 10 up to 100% where the entire tree is dead. This information is then recorded on the computer inventory and trees sorted by their rating. Forestry staff is aggressively reviewing those with ratings of 50% or greater and removing ash trees as appropriate. This also includes removing those ash trees that have continual branch breakage, are misshapen or have poor form, have severe structural defects such as decay or cracks, or are otherwise unhealthy. If suitable space is available, replacement plantings are scheduled with a diverse variety of tree species.



The following table highlights the treatments over the years.

Forestry staff is continually reviewing ash trees, revising treatment applications and removing any ash trees as needed. A table lists the inventory numbers and the number of ash trees removed since 2006 (the year EAB was first discovered in Illinois). EAB was found and confirmed in Downers Grove in 2011, and ash tree removals have increased ever since. Chapter 6 discusses removal activities. Staff is continually reviewing budget options including grants (see Chapter 1 for reference to a 2011 grant) and revising treatment programs. A copy of the EAB treatment specifications are at the end of the chapter.

## EAB Preventative Treatments

Date	Company	Service	Tree #	Total Contractual Cost
April 29, 2008	Forestry crew	Soil drench	31	
Sept 22, 2008	Spring Green	Soil injection	378	\$3,510.00
Sept 24, 2008	Spring Green	Soil injection	137	
Oct 24, 2008	TruGreen	Trunk injection	15	\$1,575.00
April 29, 2009	Spring Green	Soil injection	137	\$1,440.00
May 11, 2009	Forestry crew	Soil drench	31	
Sept 22, 2009	Spring Green	Soil injection	673	\$6,057.00
April/May 2010	Emerald Tree Care	Soil&trunk injection	313	\$14,114.12
April 22, 2010	B Haney & Sons	Soil injection	1003	\$9,464.00
May 14, 2010	Forestry crew	Soil drench	31	
April 25, 2011	Emerald Tree Care	Soil injection	981	\$8,541.68
May/June 2011	Emerald Tree Care	Soil&trunk injection	293	\$13,096.30
June 1, 2011	Forestry crew	Soil drench	30	
June 14, 2011	TruGreen	Trunk injection	151	\$6,825.13
April 20, 2012	Emerald Tree Care	Soil drench	951	\$8,865.00
April/May 2012	Emerald Tree Care	Soil&trunk injection	290	\$13,702.44
May 10, 2012	Emerald Tree Care	Soil drench	366	\$6,500.34
June 4, 2012	Forestry crew	Soil drench	57	
June 9, 2012	Forestry crew	Soil drench	186	
June 12, 2012	TruGreen	Trunk injection	105	\$5,248.00
August 3, 2012	Emerald Tree Care	Soil drench	143	\$6,990.00
October 31, 2012	Emerald Tree Care	Soil drench	214	\$3,449.60
April 26, 2013	Emerald Tree Care	Soil drench	933	\$8,990.79
April/June 2013	Emerald Tree Care	Soil&trunk injection	289	\$14,353.02
May 6, 2013	Emerald Tree Care	Soil drench	388	\$6,576.78
June 5, 2013	TruGreen	Trunk injection	144	\$7,939.80
June 11, 2013	Emerald Tree Care	Soil drench	417	\$5,856.48
June 14, 2013	Forestry crew	Soil drench	39	
June 15, 2013	Forestry crew	Soil drench	136	
July 10, 2013	Emerald Tree Care	Soil drench	460	\$6,329.82
July 11, 2013	Forestry crew	Soil drench	21	
July 12, 2013	Emerald Tree Care	Soil drench	3	

**EAB Preventative Treatments - cont.**

<b>Date</b>	<b>Company</b>	<b>Service</b>	<b>Tree #</b>	<b>Total Contractual Cost</b>
May 1, 2014	Emerald Tree Care	Soil drench	2179	\$31,469.55
May/June 2014	Emerald Tree Care	Soil&trunk injection	286	\$14,161.00
June 18, 2014	TruGreen	Trunk injection	99	\$4,970.43
June 25, 2014	Forestry crew	Soil drench	102	
July 15, 2014	TruGreen	Trunk injection	4	\$206.54
May 1, 2015	Emerald Tree Care	Soil drench	1932	\$29,293.77
May/June 2015	Emerald Tree Care	Soil drench	284	\$14,734.20
June 9, 2015	Forestry crew	Soil drench	40	
June 10, 2015	TruGreen	Trunk injection	118	\$6,672.14
May 1, 2016	Emerald Tree Care	Soil drench	1540	\$23,345.59
May 4, 2016	Forestry crew	Soil drench	38	
June 18, 2016	Emerald Tree Care	Trunk injection	293	\$16,006.40
June 26, 2016	TruGreen	Trunk injection	103	\$5,805.60
June 1, 2017	Forestry crew	Soil drench	83	
June 16, 2017	Kinnucan	Trunk injection	113	\$6,497.30
June 20, 2017	TruGreen	Soil drench	1044	\$13,578.00
June 21, 2017	Steve Piper and Sons	Trunk injection	307	\$10,788.09
June 5, 2018	Kinnucan	Trunk injection	107	\$6,428.50
June 10, 2018	TruGreen	Soil drench	893	\$12,201.80
June 15, 2018	Steve Piper and Sons	Trunk injection	144	\$4,601.07
July 10, 2018	Forestry crew	Soil drench	18	
Sept 30, 2018	Steve Piper and Sons	Trunk injection	12	\$454.11
May 16, 2019	Kinnucan	Trunk injection	104	\$6,342.50
June 12, 2019	TruGreen	Soil drench	851	\$11,750.16
June 15, 2019	Steve Piper and Sons	Trunk injection	298	\$12,004.61

**ASH TREE INVENTORY NUMBERS**

TREE SPECIES	May 2006	Dec 2006	Dec 2007	Dec 2008	Dec 2009	Dec 2010	Dec 2011	Dec 2012	Dec 2013	Dec 2014	Dec 2015
Ash, Blue	7	7	7	7	7	7	6	6	5	5	5
Ash, European	8	8	7	7	7	7	7	7	6	6	4
Ash, Green	3394	3338	3283	3102	3050	2938	2865	2677	2387	1978	1468
Ash, White	1116	1107	1092	1076	1066	1055	1036	1014	989	962	924
Total Ash	4525	4460	4389	4192	4130	4007	3914	3704	3387	2951	2401
Difference from previous Ash Reduction Total		-65	-71	-197	-62	-123	-93	-210	-317	-436	-550
Total Inventory	23760	23598	23574	23270	23480	23317	23286	23270	23253	23071	22994
Ash % of Total	19.04%	18.90%	18.62%	18.01%	17.59%	17.18%	16.81%	15.92%	14.57%	12.79%	10.44%

TREE SPECIES	May 2016	Dec 2016	Dec 2017	Dec 2018	Dec 2019
Ash, Blue	5	5	5	5	5
Ash, European	3	3	3	3	3
Ash, Green	1318	1080	848	755	692
Ash, White	905	884	851	840	803
Total Ash	2231	1972	1707	1603	1503
Difference from previous Ash Reduction Total		-170	-265	-104	-100
Total Inventory	23102	22894	22913	22793	22660
Ash % of Total	9.66%	8.61%	7.45%	7.03%	6.63%

### Asian Longhorn Beetle

In 1998, Forestry staff visited sites in Chicago infested with Asian longhorn beetles to see firsthand the insect and the devastation. Since then, staff has followed up on any possible Asian longhorn beetle sightings in Downers Grove. To date, none have been found in the Village. Earlier in 2008, Chicago officials declared the city free of Asian longhorn beetles. Several websites contain more information including <http://www.uvm.edu/albeetle/>.

### Bees and Wasps

Bees and wasps are dealt with on a case by case basis in that they are beneficial insects but some individuals of the public may be allergic to bee or wasp sting bites. The most common complaints come in late summer and fall when wasp nests are built in trees. If requested by the public, these nests are treated to kill the wasps, and the hive is cut out of the tree at a later time.

At times, bees form swarms as they move to a new location. Various beekeepers are contacted to remove swarms. More information can be found at the Cook-DuPage Beekeepers Association website <http://www.cookdupagebeekeepers.com/>

### Periodical Cicada

Every year, periodical cicadas emerge somewhere in eastern North America. Entomologists have mapped the locations and named each periodical cicada brood. The northern Illinois brood (Marlatt's XIII) has a reputation for the largest emergence of periodical cicadas covering northern Illinois and parts of surrounding states.

Periodical cicadas emerge in the Chicagoland area in late May to early June every 17 years. Periodical cicadas feed for years as nymphs on the sap of roots of trees and shrubs. In 2003 again there was an unusual emergence pattern that started in 1969, when part of the northern Illinois



brood emerged after 13 years in northeastern Illinois instead of 17 years. Since then, this group of cicadas has emerged every 17 years, as they have in 1986 and again in 2003. Downers Grove experienced some periodical cicada emergence in 2003. In 2007, northeastern Illinois including Downers Grove experienced a large emergence of the northern Illinois brood that last emerged in 1990.

Periodical cicadas are flying insects of the genus *Magicicada* and are close relatives of leafhoppers and treehoppers. Adult periodical cicadas tend to be large (most are 25-50mm), with prominent red wide-set eyes, short antennae, and clear wings held roof-like

over the abdomen. Periodical cicadas are probably best known for their conspicuous acoustic songs which the males make using special structures found on the abdomen.

Periodical cicadas spend 17 years underground feeding on tree root sap. Starting the end of May of the 17<sup>th</sup> year, brown immature periodical cicadas will emerge from the soil, and climb up the sides of houses, trees, or other plants. Shortly thereafter, the skin splits down the back and a pale adult emerges leaving an empty brown shell (shown in the picture to the right). After drying a while, the body darkens and the orange-veined clear wings become functional. Adults, which may live up to 6 weeks, climb or fly up into tree tops, and males begin singing to attract females. Since



the abdomen of a male periodical cicada is hollow and acts as a resonating chamber, the song of an individual male is loud, and large choruses can be virtually deafening. After mating, females lay eggs into small branches by making slits into the branches. Numerous egg-laying slits may cause branch dieback or breakage on some plants which may cause brown leaves to appear at tree crown and shrub edges. However, the plant damage caused by previous periodical cicada egg-laying activities was noted to be minor in Downers Grove. Research by Dr. Fred Miller at the Morton Arboretum found that most trees and shrubs recovered in a 2 to 3 year time period.

In 2003 and 2007, tree planting activities progressed as scheduled. The 2007 cicada emergence occurred predominantly in Downers Grove Village limits north of 63<sup>rd</sup> Street. After adult cicada activities concluded, twig damage was observed to be the most severe on young maple trees more than any other tree genera. Similar to previous cicada emergences and observed twig damage, trees affected by the 2007 cicada emergence recovered with very few mortalities (some of which were more related to heat and lack of rainfall).

In 2020, cicadas are expected to emerge in Downers Grove in a small number. The next significant emergence of the northern Illinois brood will occur in 2024.

## **Fertilizing**

Fertilization of various parkway trees may be required to provide essential elements for growth and health.

The main objectives of tree fertilization include:

- 1) to increase the size and growth of trees
- 2) to maintain the healthy appearance and vigor of mature trees
- 3) to rescue declining trees
- 4) to cure specific nutrient deficiencies

In order to avoid using fertilizers to excess, each tree is evaluated and all affecting conditions assessed before a fertilizer is applied using criteria described in the *International Society of Arboriculture Best Management Practices: Tree and Shrub Fertilization (20013)* and the *ANSI A300 (Part 2) – 2011 Soil Management*. Nitrogen is the element most frequently in short supply for optimum tree growth. The deficiency or sufficiency of nutrients in the soil is strongly influenced by soil factors such as textures and pH. Urban soils, especially in newer subdivisions, tend to be alkaline which causes various nutrients to be in forms unavailable to plants. Fertilizers which contain sulfur can help lower soil pH, increase soil acidity, and increase the availability of various nutrients which the tree may be lacking.

Every year, various trees are fertilized which may have been showing signs of stress or low vigor in previous years. Most of the applied fertilizers have contained nitrogen. On occasion, the fertilizers have contained sulfur to acidify. A door hanger is left indicating the tree was treated (see *Your parkway tree has been fertilized* door hanger).

Various parkway trees are part of an ongoing experimental fertilizing project with the Morton Arboretum research staff. Pin oak and red maple which naturally grow in acidic soils develop a condition called chlorosis (low chlorophyll development causing yellow leaves) when they are planted in alkaline soils. These experimental fertilizing treatments help acidify the soil as well as supply nutrients which are unavailable in alkaline soil conditions.

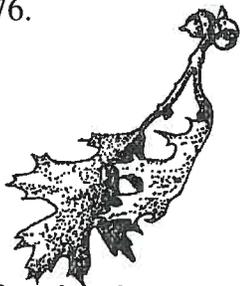
## Fertilized Tree Door Hanger

### Your Parkway Tree Has Been Fertilized

To promote establishment and healthy growth, fertilizer has been applied around the base of your parkway tree. To ensure maximum benefits from the fertilizer, your assistance is very important. Here are some ways you can help:

- Water the tree when rainfall is low or soil becomes dry.
- Refrain from the use of any additional fertilizers in the vicinity for this growing season.

If you have any questions or concerns, please call the Forestry Division at 434-5475 or 434-5476.



Public Works Department  
Forestry Division

801 Burlington Avenue • Downers Grove, IL 60515

### Water Conservation Ordinance

The Village's Water Conservation Ordinance, established in 1989, regulates the day and time for outdoor water usage between May 15 and September 15 each year.

The day residents are permitted to use outdoor water is based on an even/odd system. The last digit of an address determines the day. If an address ends in an even number, the resident can water on even calendar days; if the address ends in an odd number, the resident can water on odd calendar days.

Outdoor water usage is not permitted between 11 am and 4 pm on any day for any address. Watering at this time is inefficient and wasteful due to evaporation. In addition, this five-hour period allows the water tanks to refill, preparing for the heavy demand for water in the evening.

Dividing outdoor water usage by this even/odd system decreases the demand for water and, under normal conditions, will maintain adequate water pressure for the health and safety of the residents. If the Village is not able to maintain adequate water pressure with the even/odd restrictions, an Emergency Water Ban can be declared.

The Emergency Water Ban has three phases of additional restrictions. Phase I prohibits the use of automatic sprinkler devices and systems, bans the filling of swimming pools, and bans the washing of automobiles. Phase II prohibits the use of hoses. Phase III prohibits the outdoor use of water altogether.



TREE CITY USA

Downers Grove has received  
*Tree City USA* recognition each year since 1984.

Printed On Recycled Paper

## **Mulching**

The mulching of trees with organic materials such as wood chips is encouraged for all trees within the Village of Downers Grove.

Organic mulches include wood chips, bark, pine needles, chopped corncobs and peanut hulls. Though inorganic mulches such as crushed stone are also used, organic mulches have the advantage of adding organic matter to the soil as they decompose, enhancing soil fertility and aeration. A layer of mulch reduces water evaporation from the soil, minimizes weed competition, reduces soil erosion, improves soil aeration, moderates soil temperatures, and adds a neat, finished appearance to the planting. Research conducted by the Morton Arboretum staff has found that trees with wood chip mulch developed more of a crown and root system than unmulched trees planted in the same area at the same time.

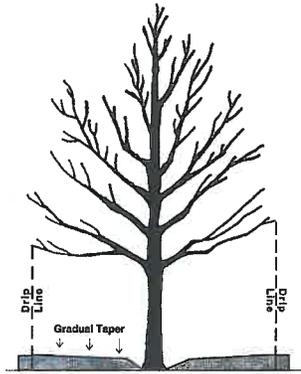
Newly planted trees are all mulched with wood chips at the time of planting. Throughout the year, as staff is available, various parkway trees receive a new application of wood chips. Generally this occurs for parkway trees located along parks or opposite residences where there was mulch previously or bare soil. The following table lists the quantities mulched annually for the most recent 10 years.

Mulching postcards are mailed as additional care information, or doorhangers are distributed when incorrect mulching practices are noticed (see *Mulching* postcard and *Mulching* door hanger). Residents who have had a parkway tree planted in the last 2 years are mailed the postcard in the spring.

Tree quantities mulched with wood chips

<u>Fiscal</u> <u>Year</u>	<u>Quantity</u>
2010	844
2011	784
2012	805
2013	700
2014	504
2015	696
2016	685
2017	356
2018	677
2019	383

## Mulching Postcard



One of the simplest, least expensive and most beneficial care practices for a tree is mulching. A 3- to 4-inch layer of an organic mulch such as woodchips around the trunk can enhance root growth, condition the soil with additional organic matter, moderate soil temperatures, maintain moisture, and reduce competition from weeds and grass. Mulch can be applied any time of year. When adding new mulch to an area where mulch is already present, check the depth first. Do not add more mulch if it is already 4 inches deep. Instead, rake the existing mulch to refresh the appearance. Avoid placing mulch against

the tree trunk for this can lead to disease and decay problems. If mulch is already piled against the trunk, pull it back several inches so that the base of the trunk is exposed. The size of the area being mulched should extend out to a tree's drip line when possible. Every day of the year, the Village has free woodchips available at a pickup site. This site is located on the north side of Curtiss St. at the intersection with Katrine St. and is open daily from 7:30am to 3:00pm. Residents are welcome to take the amounts they need using their own transport.

# Proper Mulching Doorhanger

## *Proper Mulching Techniques*

The use of mulch is advised in the Urban Environment. Using proper mulching techniques, we all can improve tree health and vigor, reduce yard waste, and recycle essential plant nutrients. *However, improper application of mulch can be detrimental to tree health.*

Mulch should be a coarse mixture of landscape waste. While wood chips are excellent mulch materials by themselves, they can be improved by adding small quantities of composted grass clippings and leaves. Grass clippings alone do not make good mulching materials as they are slow to decompose.

Rocks and pebbles are not suitable for mulching materials. While rocks and pebbles may look good around the base of a tree, they provide no nutrient benefits and actually are a detriment to the tree. Rocks and pebbles can compact the soil, which reduces aeration and soil water content.

Landscape mats and plastic sheets under the mulch are also detrimental to trees. All mats placed under mulch eliminate the soil/mulch zone activity. It is only when the soil and mulch come into contact that the decay of the mulch materials is recycled into the soil. Plastic barriers can smother roots and, if left at the base of the tree, can girdle and kill the tree many years down the road.

(OVER)

Village of Downers Grove Forestry Division  
5101 Walnut Ave. Downers Grove, IL 60515

## Mulching the Natural and Beneficial Way

Using the information from the front of the card, we can improve the Urban Forest.

Mulch made of natural organic materials should be applied around the base of trees out to the drip line (farthest reach of the branches). Even on the largest of trees a small 2 to 3 foot mulch ring provides the benefit of protecting the trunk and buttress roots from mower/string trimmer damage. The mulch should be applied in a layer 3 to 4 inches thick. Care should be taken that mulch is not in direct contact with the trunk. Trunk bark can be affected by the microbe activity in the mulch and can be harmed if kept moist by the mulch.

A proper mulch ring can:

- Reduce soil temperature extremes
- Increase soil moisture retention
- Increase soil nutrient content
- Reduce draught stress
- Eliminate mower/trimmer damage

The Village of Downers Grove provides free wood chips to residents at the Village Pick-Up Station. The Pick-Up Station is located near the Belmont train station. It is on Curtiss St. west of Belmont at the intersection of Curtiss and Katrine. The Pick-Up Station is a serve yourself facility open from 7:30am to 3:00pm daily.

If you have any questions please contact

---

At 434-\_\_\_\_\_

Front

Back

## Protection

Protection of all parkway trees in Downers Grove is required when any sort of construction activity is nearby and the tree is to remain in the landscape.

Trees can be damaged or killed by a wide variety of construction activities. Obvious injuries include broken branches or torn bark. The worst damage often remains hidden underground. Roots are one of the most vital parts of a tree and may spread a distance much greater than the height of the tree. In terms of depth, most of the root system can be found in the upper 12 inches of soil. Damage to the root system can occur from soil compaction, a change in soil grade, or root severing and removal. Tree instability and death can result from root death or the inability to absorb oxygen, water or nutrients. In order to maintain a tree within a construction area, the part of the root system closest to the tree called the critical root zone must be protected from construction damage.

Two important documents for definitions and procedures include the *International Society of Arboriculture Best Management Practices: Managing Trees During Construction (2016)* and the *ANSI A300 (Part 5) – 2012 Management of Trees and Shrubs During Site Planning, Site Development, and Construction*. The critical root zone for trees is best defined as: “the critical root zone is the minimum volume of roots necessary for maintenance of tree health and stability”.

The minimum size of the critical root zone for each individual tree depends on the tree species, tree health, structural integrity, tree age and longevity. In general, the larger diameter trees will have larger critical root zones. For each construction project, the proper approach is to evaluate each tree, determine the health condition and start with a measurement of the critical root zone, for example - 1 foot radius for every inch in stem diameter. A circle can be drawn around each tree and then the shape is altered to accommodate the environmental conditions and yet keep enough roots undisturbed to maintain tree health and stability. For the trees in the parkway areas, this means changing the shape to a rectangle because of adjacent streets, driveways and public sidewalks. If trees are unhealthy, have structural problems, will have too much root disturbance especially close to the stem, or will lose many roots overall, then tree removal may be a better option than trying to protect the tree. In that the shape of parkway tree critical root zones become rectangles, a table has been developed to quickly determine the area needed around each parkway tree and is listed below:

<u>Parkway Tree diameter at 4.5'</u>	<u>Width from street to property (minimum curb to sidewalk)</u>	<u>Length along street (minimum)</u>	<u>Depth</u>
0 - 12.0 inches	10.0 feet	10 feet	4 feet
12.1 – 24.0 inches	10.0 feet	20 feet	4 feet
24.1 or more inches	10.0 feet	30 feet	4 feet

Protection of viable public parkway trees is required during all construction activities and includes fencing of the critical root zone. The following sheet, Forestry Division's Tree Protection Requirements handout, summarizes the required tree protection listed in the above table and in Municipal Code 24-7. The type of fencing required is a 6 foot chainlink fence. As stated in



Municipal Code 24-7 and 24-8, restitution for public tree damage and noncompliance shall be determined using the Tree Appraisal methods described in Chapter 8 of this manual. If tree protection fences are not maintained or if trees are damaged, Municipal Code 24-8 also includes additional fines that increase with each offense. Fines for the first offense are \$500, the second offense \$1000, and third and subsequent offenses are \$2500 in addition to fees for lost tree value.

Besides codes in Chapter 24, money is collected through the permit process which helps ensure tree protection measures are followed. Municipal Code 19-28 (which lists bonds and fees for right-of-way items) does have provisions for parkway trees when a right-of-way permit is obtained. All parkway trees at a construction site are bonded and the dollar amounts are the appraised tree value. If the construction project requires removal of a public parkway tree, the permittee must pay the appraised tree value. If tree damage occurs or if fences are not maintained, in addition to fines and fees for lost tree value and noncompliance, new permit applications can be denied or bond refunds can be withheld until all tree protection measures are rectified. All money collected for approved tree removals as well as fines for unauthorized tree damage are put into accounts set aside for tree plantings throughout the Village.

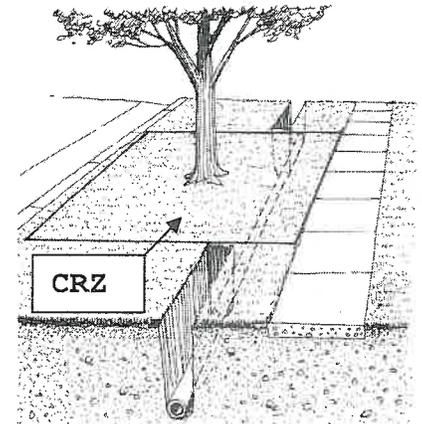
Tree protection procedures are incorporated into Village capital projects and other permits. Directional boring or augering is required for the installation or replacement of underground utilities in areas with viable trees. To restrict soil compaction or disturbance around a tree, fences are required. When root damage is unavoidable (ex. sidewalk installation and curb replacement), root pruning is required. This procedure cuts the roots cleanly at the disturbance limits or work area perimeter instead of allowing the excavating equipment to catch onto and tear the roots, which often results in root damage beyond the area of disturbance. Unless noted otherwise, root management practices shall be consistent with the guidelines outlined in *ANSI A300 (Part 8) – 2013 Root Management*.



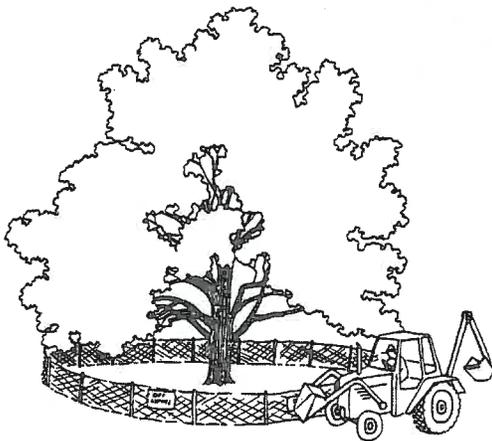
# Downers Grove Parkway Tree Protection Requirements

Municipal Codes regarding trees, including tree protection requirements for public parkway trees, are located in Chapter 24 of the Downers Grove Municipal Code <http://www.downers.us/govt/municipal-code>. Parkway tree protection shall involve avoiding damage to both the above ground tree trunk, including the branches, and the below ground root system. Roots are the most vital part of a tree with the majority of nutrient and water absorbing roots in the upper 18 to 24 inches of soil. Tree roots must be protected from severing or changes in their soil environment (such as compaction or grade changes) to prevent irreversible tree decline or death in the coming years.

The Critical Root Zone, or CRZ, is the area immediately surrounding a tree that needs to be protected from damage. The size of this area, measured from the center of the tree, is ideally a circle with a radius of one foot for each inch of trunk diameter. The depth of the CRZ extends to 4 feet below the natural ground surface level. In a municipal parkway setting with utilities and paved or concrete surfaces, the CRZ cannot always be the ideal size. Instead, the CRZ has been adjusted to form a rectangle around the parkway tree trunk with the minimum dimensions listed in the following table. At a minimum, the listed CRZ shall be fenced with a 6 foot high temporary chain link construction fence secured to metal posts spaced no further than 10 feet apart. Whenever possible, the entire parkway shall be fenced in except where access has been permitted. Any exceptions shall be noted on the drawings submitted for a given permit.



Parkway Tree diameter at 4.5'	Width from street to property (minimum curb to sidewalk)	Length along street (minimum)	Depth
0 - 12.0 inches	10.0 feet	10 feet	4 feet
12.1 - 24.0 inches	10.0 feet	20 feet	4 feet
24.1 or more inches	10.0 feet	30 feet	4 feet



For public parkway trees, roots located within the determined CRZ shall be protected from compaction, severing, and the storage of materials or equipment. Utilities must be augered underneath the tree as shown above. In cases when severing of roots within a portion of the CRZ may be unavoidable (ex. sidewalk installation, curb replacement, water main or sanitary main disconnects in the parkway), subject to the approval of the Village Forester, the smallest possible area shall be disturbed and sharp clean cuts shall be made on root ends to promote wound closure and root regeneration. All CRZ fencing shall be a 6 foot high temporary chain link construction fence secured to metal posts spaced no further than 10 feet apart, and shall be maintained daily in good condition. Any exceptions to the fence dimensions or parkway position shall be noted on the permit.

In addition to fines and citations that may be assessed for violations of any Chapter 24 municipal code (such as not maintaining fencing around the CRZ or unauthorized removal of parkway trees), violators may be subject to the following provisions:

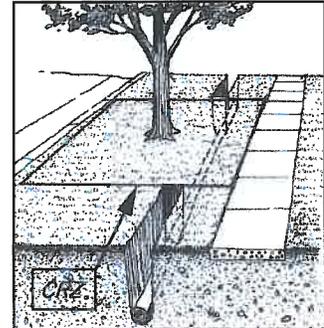
- issuance of an invoice for the monetary loss in tree value or partial value due to damage to either the above ground or below ground portions of the parkway tree, or unauthorized tree removal.
- forfeiture of bonds issued for the work should funds be sufficient to cover tree values and fines.
- costs of repairs, such as pruning or cabling, or costs for removal of the damaged parkway tree along with the stump if the tree cannot remain in the right-of-way.
- fines of \$500 for the 1<sup>st</sup> offense; \$1,000 for the 2<sup>nd</sup> offense; \$2,500 for 3<sup>rd</sup> and subsequent offenses.
- each day during which a violation continues shall be construed as a separate and distinct offense.

For more information, contact the Forestry Division at 630-434-5475 or 630-434-5476.

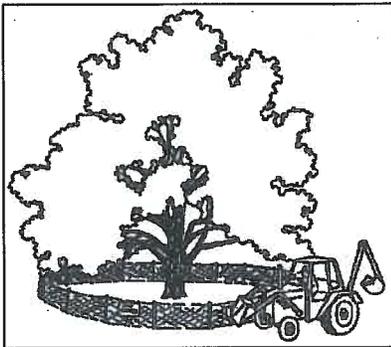


Municipal Codes regarding trees, including tree protection requirements for public parkway trees, are located in Chapter 24 of the Downers Grove Municipal Code <http://www.downers.us/code/chapters/24> . Parkway tree protection shall involve avoiding damage to both the above ground tree trunk, including the branches, and the below ground root system. Roots are the most vital part of a tree with the majority of nutrient and water absorbing roots in the upper 18 to 24 inches of soil. Tree roots must be protected from severing or changes in their soil environment (such as compaction or grade changes) to prevent irreversible tree decline or death in the coming years.

The Critical Root Zone, or CRZ, is the area immediately surrounding a tree that needs to be protected from damage. The size of this area, measured from the center of the tree, is ideally a circle with a radius of one foot for each inch of trunk diameter. The depth of the CRZ extends to 4 feet below the natural ground surface level. In a municipal parkway setting with utilities and paved or concrete surfaces, the CRZ cannot always be the ideal size. Instead, the CRZ has been adjusted to form a rectangle around the parkway tree trunk with the minimum dimensions listed in the following table. At a minimum, the listed CRZ shall be fenced with a 6 foot high temporary chain link construction fence secured to metal posts spaced no further than 10 feet apart. Whenever possible, the entire parkway shall be fenced in except where access has been permitted. Any exceptions shall be noted on the drawings submitted for a given permit.



<u>PARKWAY TREE DIAMETER AT 4.5'</u>	<u>WIDTH FROM STREET TO PROPERTY (MINIMUM CURB TO SIDEWALK)</u>	<u>LENGTH ALONG STREET (MINIMUM)</u>	<u>DEPTH</u>
0-12.0 INCHES	10.0 FEET	10 FEET	4 FEET
12.1-24.0 INCHES	10.0 FEET	20 FEET	4 FEET
24.1 OR MORE INCHES	10.0 FEET	30 FEET	4 FEET



For public parkway trees, roots located within the determined CRZ shall be protected from compaction, severing, and the storage of materials or equipment. Utilities must be augered underneath the tree as shown above. In cases when severing of roots within a portion of the CRZ may be unavoidable (ex. sidewalk installation, curb replacement, water main or sanitary main disconnects in the parkway), subject to the approval of the Village Forester, the smallest possible area shall be disturbed and sharp clean cuts shall be made on root ends to promote wound closure and root regeneration. All CRZ fencing shall be a 6 foot high temporary chain link construction fence secured to metal posts spaced no further than 10 feet apart, and shall be maintained daily in good condition. Any exceptions to the fence dimensions or parkway position shall be noted on the permit.

In addition to fines and citations that may be assessed for violations of any Chapter 24 municipal code (such as not maintaining fencing around the CRZ or unauthorized removal of parkway trees), violators may be subject to the following provisions:

- issuance of an invoice for the monetary loss in tree value or partial value due to damage to either the above ground or below ground portions of the parkway tree, or unauthorized tree removal.
- forfeiture of bonds issued for the work should funds be sufficient to cover tree values and fines.
- costs of repairs, such as pruning or cabling, or costs for removal of the damaged parkway tree along with the stump if the tree cannot remain in the right-of-way.
- fines of \$500 for the 1st offense; \$1,000 for the 2nd offense; \$2,500 for 3rd and subsequent offenses.
- each day during which a violation continues shall be construed as a separate and distinct offense.

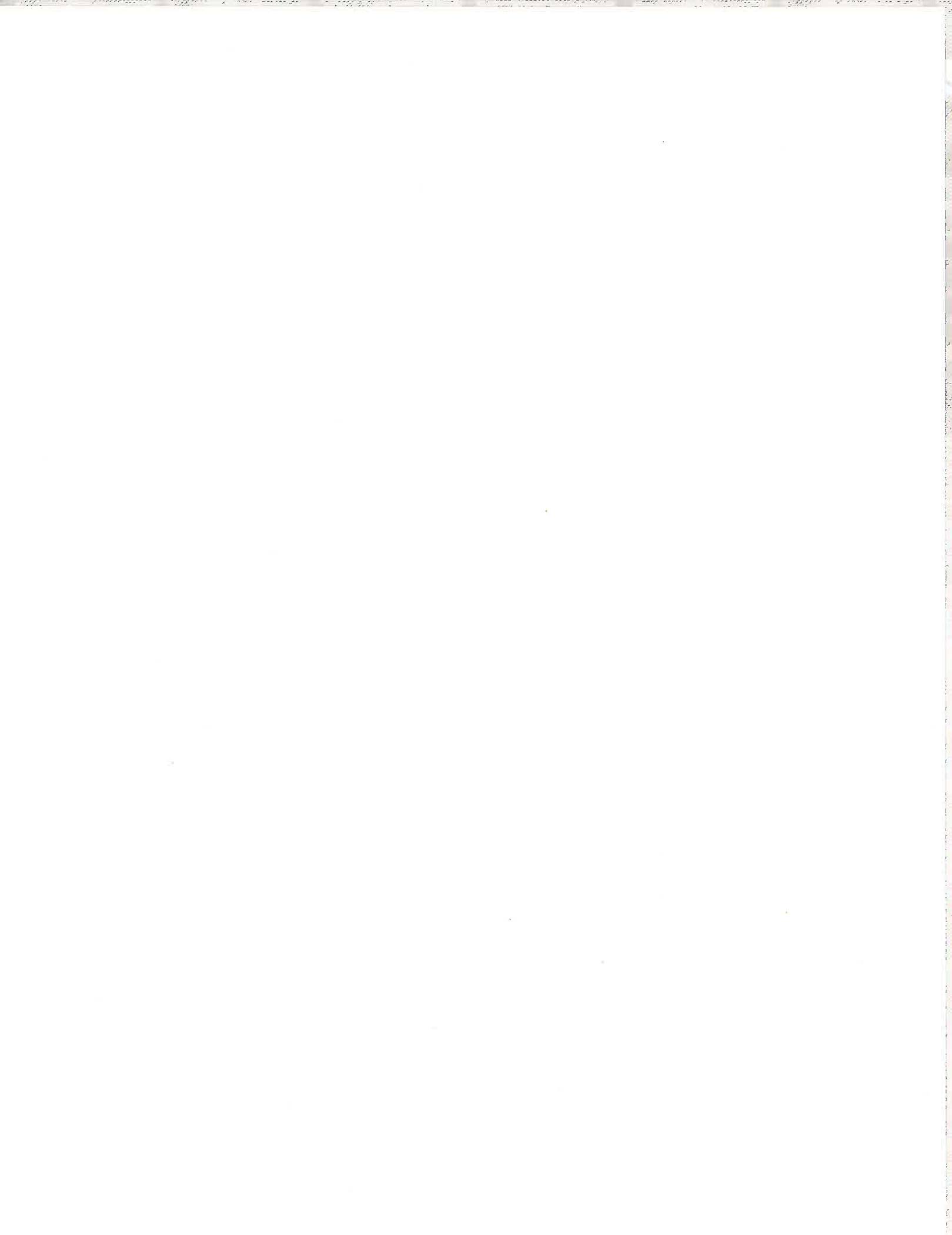
For more information, contact the Forestry Division at 630-434-5475 or 630-434-5476.



N.T.S.	DATE	REVISIONS	DRAWN BY	APPVD BY	STANDARD DETAIL
	02/20/07	////	J.M.L.	M.D.M.	<b>PARKWAY TREE PROTECTION REQUIREMENTS</b>
	03/25/11	////	S.A.V.	A.J.S.	
	03/01/15	////	S.A.V.	A.J.S.	
	01/01/17	////	N.R.H.	J.M.W.	
DRAWING NO. TRE-01					
I:\LIBRARY\DETAILS\TREES\TRE-01					

## Structure Support

The installation of artificial supports may be required to prevent such injuries as crotch splitting and branch breakage. Tree support systems adhere to the *International Society of Arboriculture Best Management Practices: Tree Support Systems (2014)* and the *ANSI A300 (Part 3) – 2013 Supplemental Support Systems*. Tree supports of two types: rigid and flexible bracing. Rigid bracing involves the use of bolts and threaded rods for supporting weak or split crotches, long cracks in trunk or branches, and cavities. Flexible bracing involves the installation of wire cable high in the tree to reduce the load on weak crotches and long arching limbs without hindering the normal branch sway. As new supports are installed as well as existing ones discovered (records were not kept previous to 1990), these will be recorded on the tree inventory and regularly inspected.



## Watering

The adequate watering of trees is encouraged, especially during drought, to maintain tree health and promote growth. Depending on soil texture, daily temperatures, and rainfall amounts, 1-3 inches of water per week should keep a tree growing. A little over 5 gallons per square yard is 1 inch of water.

During times when parkway trees require watering, the Forestry Division waters the trees in most critical need. These are usually newly planted trees by parks or opposite residences. Large tanks (capacity greater than 1000 gallons) are placed on the Village 5-ton trucks, and trees are watered with hoses from these tanks. Because it can be towed by a 1-ton truck, the hydroseeder is also used (filled with water only). More than 300 trees are currently on the watering list which is annually updated. The table to the right lists the number of times trees on this list were watered between May and September each year. With the drought in 2005, some newly planted trees were watered twice a week.



Year	Waterings
2000	8
2001	10
2002	11
2003	1
2004	3
2005	24
2006	7
2007	11
2008	7
2009	8
2010	6
2011	7
2012	16
2013	11
2014	4
2015	9
2016	8
2017	13
2018	2
2019	2

During dry times when residential parkway trees need additional water, the Forestry Division requests resident assistance by distributing a watering door hanger (see *Watering door hanger*). A postcard advising residents of the need to water young parkway trees has also been effective (see *Please water postcard*).

Because of the heat and concrete in the downtown, staff typically has to water the trees planted in the sidewalk treegrates several times throughout the summer. This is done with the large water tank or several smaller ones (300 to 500 gallon capacity), or the hydroseeder (filled with water only). The table lists the number of times trees in grates were watered between May and September each year.



<b>Year</b>	<b>Waterings</b>
2000	17
2001	18
2002	10
2003	4
2004	10
2005	13
2006	7
2007	12
2008	8
2009	5
2010	4
2011	1
2012	6
2013	6
2014	1
2015	1
2016	1
2017	1
2018	6
2019	2

Starting in 2000, Treegator slow release watering bags have been used in various locations to help establish newly planted trees. Each Treegator holds 20 gallons of water and small holes at the bottom of the bag allow the water to flow out slowly to the soil around the stem. One significant and visible location where many have been used is Fairview Avenue from 63<sup>rd</sup> to 75<sup>th</sup>. After 172 trees were planted in the fall of 1999 and spring 2000, Treegators were put on all and then filled with water throughout the summer for several years. Survival continues to be excellent along Fairview Avenue as many trees have out-grown the Treegators. Whenever small trees are planted along non-residential areas, Treegators are put on each tree and the locations are added to a watering list. Trees on these lists then have the Treegators filled with water as needed throughout the summer for several years.

Since 2001, the doorhanger for newly planted trees has a special offer whereby residents can pick up a Treegator for each new parkway tree. A postcard is also sent out to residents who had parkway trees planted in the last few years (see *Watering with treegator* postcard). The tables below list the number of Treegators distributed annually.

<u>Year</u>	<u>Quantity</u>
2001	87
2002	30
2003	5
2004	140
2005	540
2006	205
2007	180
2008	60
2009	103
2010	140

<u>Year</u>	<u>Quantity</u>
2011	50
2012	560
2013	280
2014	150
2015	320
2016	350
2017	360
2018	290
2019	320
2020	

In 2005 and 2012, the Chicagoland area experienced drought conditions. Press releases and postcards about caring for trees during the drought were essential (see *Drought survival tips for trees* postcard). By mid-summer, all addresses which had a tree planted in the last 10 years were mailed this postcard. The number of Tregator bags picked up and used dramatically increased (as shown in previous tables). So far, low numbers of drought related mortalities of young trees have been observed.

Picture of several trees along 67<sup>th</sup> Street with Tregators.



Starting in 2013, a contractual agreement was developed for the filling of Tregators in select areas. This contractual service is very beneficial and effective. Depending on need, the agreement is renewed or extended. A table on the following pages lists the costs per year.

### Contractual Tree Watering Cost History

Year	Contractor	Number Trees with Treegators	Timeframe	Type of Contract	Cost Each Watering	Number of Waterings	TOTAL
2013	Competitive Lawn	104	May 20 to Oct 4	Quote	\$345.00	14	\$4,830.00
2014	Competitive Lawn	108	May 19 to Oct 3	Quote	\$480.00	13	\$6,240.00
2015	Competitive Lawn	115	May 18 to Oct 2	Quote	\$489.00	9	\$4,401.00
2016	Competitive Lawn	117	Jun 16 to Sep 9	Quote	\$489.00	13	\$6,357.00
2017	Competitive Lawn	125	June 15 - Sep 7	Quote	\$496.00	12.2	\$6,031.00
2018	Competitive Lawn	125	June 7 - Aug 23	Quote	\$496.00	11.0	\$5,456.00
2019	none	0					\$0.00

# Watering Doorhanger

## Protecting an Investment

While surveying trees in your neighborhood the Forestry Division noticed the parkway tree in front of your home has a water deficiency.

Trees are a very valuable asset to the community and to the individual homeowner. A community with a well-stocked, diverse, and healthy urban forest is a highly desirable community to live in. The property values in these communities are very high. Even though a tree is small when newly planted, it is a guaranteed growth investment if proper care is taken into consideration.

The Forestry Division plants over 300 trees annually. These trees are all investments for the future. As the tree grows so does its value as part of the landscape. This is directly related to property value and the sale value of a house. To keep your value growing please consider the following:

- Provide slow deep watering 1-2 times per week, or when the soil gets dry.
- Mulch around the base of the tree with natural, organic materials.
- Avoid using weed killer or fertilizer in the immediate vicinity of the tree. Fertilizer will only increase the problems in water-stressed trees.

By following these guidelines you will protect your investment for the future.

Watering restrictions and information on mulching are on the back of this card.

Village of Downers Grove Forestry Division  
5101 Walnut Ave. Downers Grove, IL 60515

## Mulching an Investment

Mulch made of natural organic materials should be applied around the base of trees out to the drip line (farthest reach of the branches). Even on the largest of trees a small 2 to 3 foot mulch ring provides the benefit of protecting the trunk and buttress roots from mower/string trimmer damage. The mulch should be applied in a layer 3 to 4 inches thick. Care should be taken that mulch is not in direct contact with the trunk. Trunk bark is not used to the microbe activity in the mulch and can be harmed if kept moist by the mulch.

The Village of Downers Grove provides free wood chips to residents at the Village Pick-Up Station. The Pick-Up Station is located near the Belmont train station. It is on Curtiss St. west of Belmont at the intersection of Curtiss and Katrine. The Pick-Up Station is a serve yourself facility that is open dawn to dusk daily.

## Watering Restrictions

The Village has a Water Conservation Ordinance in effect from May 15 – September 15. Water use is permitted on an even/odd system. Even numbered houses are permitted to water on even numbered days; odd numbered houses can water on odd numbered days. Outdoor water use is prohibited 11am to 4pm and also 11pm to 4am. These time periods allow the water towers to refill. Dividing outdoor water usage by this even/odd system decreases the demand for water and, under normal conditions, will maintain adequate water pressure for the health and safety of the residents.

If you have any questions please contact

At 434-\_\_\_\_\_

Front

Back

## Please Water Postcard

### *Water is Essential*

As the summer heat continues to increase and rainfall becomes intermittent, please include watering of the young parkway tree in your outside landscape maintenance activities. When the soil around the tree becomes dry, apply enough water to thoroughly moisten the soil during the time periods allowed for outside water use. Free TreeGator® slow release watering bags are available to assist with watering. A layer of mulch, such as wood chips, around the tree will help conserve soil moisture and protect the tree stem from lawn mowers or string trimmers. Adequate watering will help ensure healthy and vigorous trees in Downers Grove.



Any questions, please contact the Forestry Division office at 630-434-5475 or e-mail: [kvonderheide@downers.us](mailto:kvonderheide@downers.us).

## It's A New Parkway Tree!

### How To Care For The

- Provide slow watering twice a week.
- Mulch with natural materials.
- Protect from mower or string trimmer damage.
- Avoid using weed killer near the tree and do not fertilize the tree for one year.

For further information please contact:

Village of Downers Grove  
Forestry Division

434-5475 or 434-5476



Village of Downers Grove  
Public Works  
5101 Walnut Avenue  
Downers Grove, IL  
60515

## CARE FOR NEWLY PLANTED TREES

The transplanting procedure is traumatic to a tree, and many trees will demonstrate symptoms of shock. To reduce the likelihood of shock symptoms such as withered leaves, dead branches and reduced growth, the Forestry Division suggests the following:

**Nothing has a greater impact on new tree survival than adequate watering.**

**Watering** Adequate watering is especially important during the first 2 years following transplant. Slow and thorough watering around the tree stem is essential. In normal weather the tree should be watered every 4-7 days. When the weather turns hot and dry, the tree should be watered every 3-4 days. Be aware that the Village has a Water Conservation Ordinance in effect from May 15 -September 15.

**Please see the end of this brochure for the Water Conservation Ordinance and a Special Offer to assist you in Watering the new tree.**

**Mulching** Natural materials such as wood chips are the most beneficial. These retain soil moisture, regulate soil temperature extremes, and add organic matter. Stone can compact the soil and does not provide nutrients. Plastic weed barriers can smother the roots and can do more harm than good.

**Pruning** Village crews will prune the tree when the one-year inspection occurs. It is best to wait one year to prune the tree so that enough foliage growth occurs to facilitate root growth.

**Fertilization** Fertilization of new trees is discouraged. The new tree needs to establish a new root system. Fertilizers that contain Nitrogen may cause excessive top growth before enough new roots have grown.

**Other Harmful Practices** Lawn mowers and string trimmers need to be kept away from the bark of the tree trunk. Repetitive damage to the tree trunk bark can lead to tree death. Careful application of lawn weed treatments in the vicinity of the new tree is essential to avoid spray drift which can cause severe damage to tree foliage.

## Water Conservation Ordinance

Be aware that the Village has a Water Conservation Ordinance in effect from May 15 to September 15. Water use is permitted on an even/odd system. Even numbered houses are permitted to water on even numbered days; odd numbered houses can water on odd numbered days. Outdoor water use is prohibited 11am to 4pm and also 11pm to 4am. These time periods allow the water towers to refill. Dividing outdoor water usage by this even/odd system decreases the demand for water and, under normal conditions, will maintain adequate water pressure for the health and safety of the residents.

Village of Downers Grove  
Public Works Facility  
5101 Walnut Ave.  
Downers Grove, IL 60515



## Special Offer



The Forestry Division has TreeGator® slow release watering bags available. A TreeGator® is a 20-gallon plastic reservoir that attaches around the trunk of the tree. The TreeGator® is quickly and easily filled twice a week with a garden hose, and the small holes in the bottom allow water to trickle out slowly. This encourages deep root growth.

Not only is the TreeGator® an excellent source for water, but it also prevents small animals from gnawing at the trunk of the new tree.

The Village has successfully used TreeGators® on the new plantings along Fairview Avenue south of 63<sup>rd</sup> Street, and in the Downtown Business District.

**If you are interested in using a TreeGator® on your new parkway tree, the Village Public Works Department has them available at no cost to you. You may have 1 TreeGator® for each new tree planted in the parkway. Simply bring this brochure to the Public Works Facility for your free TreeGator®.**

## Watering Postcard With TreeGator® Information

The warm summer weather is here!!! Please do not overlook the young parkway tree planted in recent years.

Transplanted trees often lose up to 90% of their original roots in the transplant process. Watering 2 times per week will greatly help your tree's health, vigor, and appearance. The Forestry Division is pleased to offer **FREE TreeGator® slow release watering bags** to all residents with recent parkway tree plantings. Each TreeGator® is easy to set-up and quickly fill with water. A free TreeGator® can be picked up from the Public Works Facility at the corner of Curtiss and Walnut, or one can be dropped off by calling 630-434-5475.

Trees that have water stress die from the top down. To keep the tree healthy, please make sure that it is watered 2 times every week (or more when it gets hot!). Mulch, such as wood chips, also helps retain soil moisture. Please follow all outdoor watering restrictions during May 15 to September 15. Any questions, please contact the Forestry Division office at 630-434-5475 or e-mail: [kvonderheide@downers.us](mailto:kvonderheide@downers.us).

## Drought Survival Postcard

### *Drought Survival Tips for Trees*

As the Chicagoland area experiences drought conditions, please water the young parkway tree during the time-periods outdoor water use is allowed. Wilting, drooping or browning leaves are signs of serious drought stress. Trees can survive drought if water is applied slowly around the stem so the water percolates down into the soil. Thoroughly moistening the soil twice a week is more efficient than several light waterings. For parkway trees with stems less than 4" in diameter, TreeGator bags are available from Public Works. For larger trees, letting a hose trickle around the base of the tree until the ground is moist is also effective. A layer of mulch, such as wood chips, around trees will help conserve soil moisture.



Kerstin G. von der Heide  
Village Forester  
434-5475

## Wound Inspection and Cleaning

When trees become damaged by auto accidents, vandalism or natural causes, wounds are inspected and cleaned of any loose debris as soon as possible after the damage occurs.

A healthy, vigorous tree will be able to contain or "wall off" infection and decay, and grow callus tissue to close the wound area rapidly. Maintaining tree vigor, which includes wise fertilization and adequate watering, is the most effective measure an arborist can take to treat a wound. Any loose bark is removed with a clean sharp tool, a procedure called bark tracing or wound tracing, which causes the wound to look better and limits protective cover for insects. The final shape of the wound area is irrelevant though the size should not be made any larger than the original wound.

Wound dressings such as pruning paint, were once thought to accelerate wound closure, protect against insects and diseases, and reduce decay. Research has found otherwise. Other than for very specific uses to limit disease spread, wound dressings are primarily used for cosmetic purposes.

Cavities or hollows are extreme cases of tree wounds. Past practices involved removing the decayed wood and filling the cavity with various rigid fillers. More current research shows that filling cavities may do more harm than good. Further, decay usually develops in the interface between filler and tree. In addition, the fill material does not strengthen and support the tree as much as new callus growth that develops around and over the wound. Various insect sprays can be used to limit insect activity within the hollow area. Periodic inspections should be made to monitor the size of the cavity, and check for insect and decay activity. Once the cavity becomes severe, the tree should be removed for safety. When tree conditions are found which should be regularly checked, these will be noted on the tree inventory and inspection lists shall be generated periodically.

One of the most common types of damage occurs as a result of lawn mower and string trimmer activities. When this type of damage is noticed, a door hanger is left informing the resident of the damage and ways to avoid any more damage (see *Mower or string trimmer damage door hanger*).

Tree damage from car accidents or construction activities is assessed, and the responsible party is billed restitution using the guidelines in Chapter 8 Tree Appraisal.

# Mower-Trimmer Doorhanger

## Mower and String Trimmer Damage

While surveying parkway trees in your neighborhood, the Forestry Division noticed an injury at the base of your parkway tree. Most injuries of this type are the result of being hit by a lawn mower or string trimmer.

To prevent any further damage, and help speed recovery, follow these steps:

- Keep grass away from the tree by mulching around the trunk with natural materials such as wood chips, shredded bark, or leaves.
- Provide slow deep watering when the soil becomes dry.
- Avoid using weed killer or fertilizer on the lawn surrounding the tree.

Repetitive injuries such as mower/trimmer damage can eventually girdle a tree. Girdling occurs when the bark has either been removed or damaged all the way around a tree. The layer of cells just inside the bark transports water, food, and nutrients. The death of these cells will cause the death of a tree.

Village of Downers Grove Public Works  
Forestry Division  
5101 Walnut Ave. Downers Grove, IL  
60515

Front

## Mulching the Natural and Beneficial Way

The easiest, most beneficial way to prevent mower/trimmer damage is to mulch around the affected tree.

Mulch made of natural organic materials should be applied around the base of trees out to the drip line (farthest reach of the branches). Even on the largest of trees a small 2 to 3 foot mulch ring provides the benefit of protecting the trunk and buttress roots from mower/string trimmer damage. The mulch should be applied in a layer 3 to 4 inches thick. Care should be taken that mulch is not in direct contact with the trunk. Trunk bark can be affected by the microbe activity in the mulch and can be harmed if kept moist by the mulch.

A proper mulch ring can:

- Reduce soil temperature extremes
- Increase soil moisture retention
- Increase soil nutrient content
- Reduce draught stress
- Eliminate mower/trimmer damage

The Village of Downers Grove provides free wood chips to residents at the Village Pick-Up Station. The Pick-Up Station is located near the Belmont train station. It is on Curtiss St. west of Belmont at the intersection of Curtiss and Katrine. The Pick-Up Station is a serve yourself facility open from 7:30am to 3:00pm daily.

If you have any questions please contact

---

At 434-\_\_\_\_\_

Back

# **CONTRACTUAL SPECIFICATIONS**

---

Gypsy Moth Aerial Spraying  
EAB Treatment 2017-19

# **QUOTATIONS**

---

Tree Watering



### III. DETAIL SPECIFICATIONS

**A. Sealed Proposal**

The Village of Downers Grove, an Illinois Municipal Corporation (hereinafter referred to as the "Village"), will receive sealed proposals from Contractors for the aerial spraying of biological insecticide for gypsy moth control identified in the solicitation. Proposals must be received by the date and time specified.

**B. Informational Pre-Proposal Conference:**

For the purpose of familiarizing proposers with the project, answering questions, and issuing addenda as needed for clarification of the proposal documents, an informational pre-proposal conference shall be held at the Downers Grove Public Works Facility, 5101 Walnut Avenue, Downers Grove, Illinois 60515, (630) 434-5460. Date and time of the meeting are listed on the cover sheet. Attendance is not required.

**C. Objective**

This contract is for the aerial spraying of BTK (*Bacillus thuringiensis kurstaki*) over sections of the Village for the control of gypsy moth. The specifications contained herein detail these spraying activities.

**D. Qualifications of Contractors**

The Contractor shall be required before the award of any contract to show to the complete satisfaction of the Village Forester that it has the necessary facilities, ability, and resources to provide the services specified herein in a satisfactory manner. The Contractor shall be required to give past history and references in order to satisfy the Village Forester in regard to the Contractor's qualifications. The Village Forester shall make reasonable investigations deemed necessary and proper to determine the ability of the Contractor to perform the work. The Village Forester reserves the right to reject any proposal if the evidence submitted by, or investigation of, the Contractor fails to satisfy the Village Forester that the Contractor is properly qualified to carry out the obligations of the contract and to complete the work described herein. Evaluation of the Contractor's qualifications shall include:

1. The ability, capacity, skill, and resources to perform the work or provide the service required
2. The ability of the Contractor to perform the work or provide the service promptly or within the time specified, without delay or interference
3. The character, integrity, reputation, judgment, experience, and efficiency of the Contractor
4. The quality of performance of previous aerial spraying services
5. The previous or existing compliance by the Contractor with laws and ordinances relating to the contract or service
6. The sufficiency of the financial resources and the ability of the Contractor to perform the contract or provide the service
7. The quality, availability and adaptability of the supplies, or contractual services to the particular use required
8. The number and scope of conditions attached to the proposal.

**E. Proposer Investigations**

Before submitting a proposal, each Contractor shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the Village Forester upon which the Contractor will rely. If the Contractor receives an award as a result of its proposal submission, failure to have made such investigations and examinations will in no way relieve the Contractor from its obligations to comply in every detail with all provisions and requirements of the contract documents, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the Contractor for additional compensation.

**F. Quantities**

Whenever a proposal is sought seeking a source of supply for items or services, the quantities shall be construed as estimates for the purpose of obtaining unit prices unless otherwise stated. The Village reserves the right to increase or decrease the stated quantities.

**G. Proposal Review and Award of Contract:**

The Village Forester, along with the Public Works Director and Assistant Director, shall review and evaluate all proposals submitted in response to this RFP. This includes reviewing each proposal for compliance with the minimum proposal requirements of the RFP. Failure to comply with any mandatory requirements may disqualify a proposal.

Proposals will then be evaluated and rated in accordance with the evaluation criteria. These evaluation criteria include:

- Conformance to Requirements. Degree to which proposal meets technical needs of the Village. Exceptions will detract from overall rating.
- Clarity of Proposal. Degree to which proposal clearly and concisely follows the Request for Proposal. Answers must include and correspond to questions.
- Service. How the Contractor proposes to deliver service.
- References. Discussions with the Proposer's existing and any former clients.
- Costs. The cost of spraying.

The Village reserves the right to conduct pre-award discussions and/or pre-contract negotiations with any or all responsive and responsible Contractors who submit proposals determined to be reasonably acceptable of being selected for award. Contractors shall be accorded fair and equal treatment with respect to any opportunity for discussion and revision of proposals and such revisions may be permitted after submission of proposals and prior to award of a contract.

The Village may conduct negotiations with the top Contractor(s) if required to determine the acceptability of the proposal in regards to specifications, terms and conditions and cost; therefore, the proposal(s) submitted should contain the vendor's most favorable terms and conditions as well as cost with detailed specifications as proposed, since the selection and award may be made without discussion.

The Village will select the highest rated, fully qualified and best suited Contractor for the aerial spraying of BTK for gypsy moth control. Should the first selected Contractor be unable to fulfill the terms of the contract, the Village reserves the right to enter into a contract with the 2nd selected Contractor. If the Village does not find that any Contractor's solution(s) meet the needs and requirements, the Village is not obligated to enter into agreement for spraying. A contract recommendation report will be prepared for the Village Manager, Legal and Finance Personnel, who in turn will submit the recommendation to the Village Council for approval and contract award.

**H. Contract Term**

The contract term shall be from award through July 1, 2009.

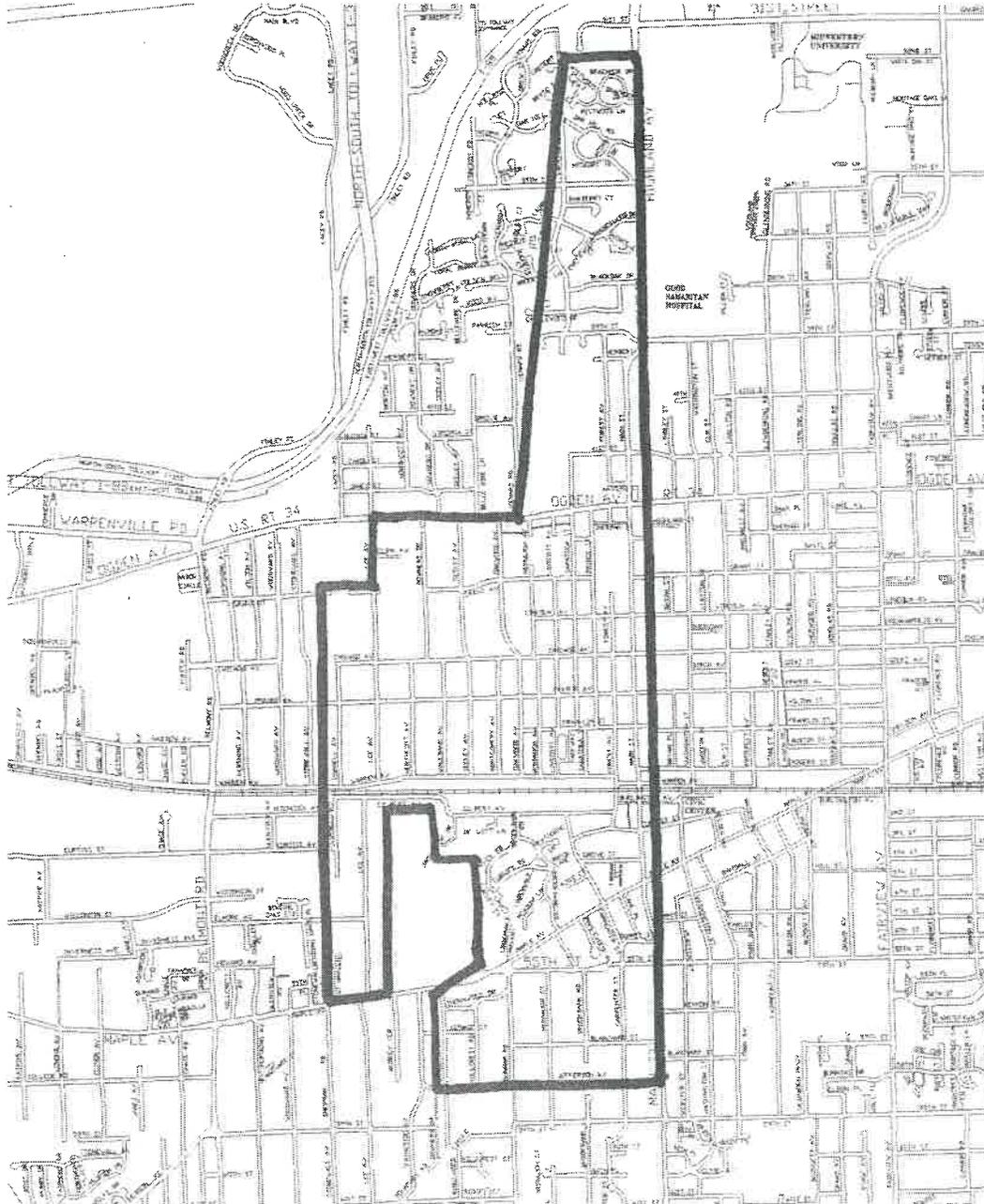
**I. Aerial Spraying Specifications**

1. The Contractor shall provide the appropriate number of helicopter aircraft to treat the area outlined in Section J – Map of Area. Each spraying helicopter aircraft shall have an insecticide dispersal system that has been thoroughly cleaned. All tanks, hoses, pumps, and nozzles shall be in good condition and shall not have any leaks.
2. The Contractor shall be certified by the Federal Aviation Administration (FAA), and shall comply with all FAA regulations and applicable regulations of the State of Illinois in which operations are to be conducted.
3. The Contractor shall coordinate all operations with the FAA including the filing of a “congested area flight plan”. An FAA approved copy shall be provided to the Village prior to undertaking any aerial applications.
4. The Contractor shall coordinate with and obtain from all appropriate local, regional, state, and federal agencies, including without limitation the Illinois and United States Departments of Agriculture, all necessary and required approvals prior to undertaking any aerial application as required under all relevant local, regional, state, or federal ordinances, statutes, and regulations. A copy of any such approval obtained from any appropriate local, regional, state, and federal agency shall be provided to the Village prior to undertaking any aerial application.
5. The Contractor shall perform a pre-application reconnaissance flight over the spray zone.
6. The Contractor shall supply all personnel including but not limited to a qualified commercial pilot for each spraying helicopter aircraft, representatives at each airport the Contractor is using, personnel to move and load the BTK insecticide from storage site to loading site, and ground crew as necessary for fueling.
7. The Contractor shall coordinate with and assist all appropriate local, regional, state, and federal agencies with all required public notifications. The Contractor shall coordinate with the Village Forester as to the spray application dates and any backup dates in case of inclement weather.
8. The Contractor shall supply three (3) copies of the specific BTK (*Bacillus thuringiensis kurstaki*) biological insecticide product MSDS (Material Safety Data Sheet) form to the Village Forester no less than four (4) weeks prior to the first application spray date.

9. The Contractor shall perform two (2) helicopter aircraft spray applications, with seven (7) to ten (10) days between applications to the map area shown in Section J – Map of Area.
10. The first spray application is anticipated to be the week of May 18, 2009, depending on gypsy moth caterpillar development and weather conditions.
11. The Contractor shall apply BTK (*Bacillus thuringiensis kurstaki*) biological insecticide at the recommended rate, altitude, and appropriate spray pattern to achieve maximum coverage.
12. In that several grade schools are located within the spray area, spraying shall occur between 8:30 a.m. and 2:30 p.m. as much as practically possible.
13. Once spraying has started on a given day, all spraying activities are to be completed in one (1) day unless unforeseen weather conditions interfere.

**J. Map of Area**

The map depicts the 1,400 acres for the aerial spray application. The Contractor shall meet with the Village Forester to review a more detailed aerial photography map and to discuss flight plans. Various Village maps can be found at the Village's website at <http://www.downers.us/page/view/196>



**K. Costs and Basis of Payment**

The Contractor affirms and states that the prices submitted herein constitute the total cost to the Village for all work involved in the respective items. This cost also includes all insurance, royalties, transportation charges, use of all tools and equipment, superintendence, overhead expense, inspection costs, all profits and all other work, services and conditions necessarily involved in the work to be done in accordance with the requirements of the Contract Documents considered severally and collectively.

The Contractor shall be paid for the work described herein on a per acre basis. In no case shall payment be made for work that does not meet these specifications. The contract unit prices shall remain firm for the contract term, or until all spraying activities are complete.

**L. Questions during the Proposal Process**

All questions shall be directed to:

Theresa H. Tarka, Purchasing Department,  
Phone (630) 434-5530 and FAX (630) 434-5571

**M. Proposal Form Submission:**

Each proposer shall submit the original and two copies of the proposal in a sealed envelope no later than the time and date specified on the cover sheet. Proposals received after the specified time shall be rejected and returned to the proposer unopened. Each proposal shall contain:

1. Unit prices and extensions for the exact quantities listed
2. Four (4) municipal references who can attest to the Contractor's ability to fulfill this type of contract within the last 5 years. List specific individuals and the municipality on the reference sheet including their office address and phone number.
3. Applicable insurance information supplied and forms completed.
4. Signature block completed.
5. For this particular contract, it is the opinion of the Village that Apprentice and Training Certificates and Buy America Certificates are not applicable, and can remain blank.
6. Completed Suspension or Debarment Certificate, and Campaign Disclosure Certificate
7. Attach a description of the process and method for providing aerial spraying.

**IV. PROPOSAL AND CONTRACT FORM  
GYPSY MOTH AERIAL SPRAYING**

The undersigned Contractor offers to provide to the Village of Downers Grove, an Illinois municipal corporation, Gypsy Moth Aerial Spraying services conforming to the terms and conditions set forth herein.

Aerial BTK spray price per acre (unit price) \$ \_\_\_\_\_

Cost of 1 complete spray of 1,400 acres (calculated extension) \$ \_\_\_\_\_

Total cost for 2 complete aerial sprays  
of 1,400 acres (sum total overall) \$ \_\_\_\_\_

Name of specific BTK product \_\_\_\_\_

Number of helicopter aircraft to be used per spray event \_\_\_\_\_

Attach process description and method for providing aerial spraying for gypsy moth control. Include previous experience and examples from other municipalities where practical.

Village of Downers Grove

**IV. PROPOSAL/CONTRACT FORM**

**\*\*\*THIS PROPOSAL, WHEN ACCEPTED AND SIGNED BY AN AUTHORIZED SIGNATORY OF THE VILLAGE OF DOWNERS GROVE, SHALL BECOME A CONTRACT BINDING UPON BOTH PARTIES.**

**Entire Block Must Be Completed When A Submitted Bid Is To Be Considered For Award**

**PROPOSER:**

_____	Date: _____
Company Name	_____
_____	Email Address
Street Address of Company	_____
_____	Contact Name (Print)
City, State, Zip	_____
_____	24-Hour Telephone
Business Phone	_____
_____	Signature of Officer, Partner or Sole Proprietor
Fax	_____
_____	Print Name & Title
ATTEST: If a Corporation	
_____	
Signature of Corporation Secretary	

**VILLAGE OF DOWNERS GROVE:**

_____	ATTEST:
Authorized Signature	_____
_____	Signature of Village Clerk
Title	_____
_____	Date
Date	_____

In compliance with the specifications, the above-signed offers and agrees, if this Proposal is accepted within 90 calendar days from the date of opening, to furnish any or all of the services upon which prices are quoted, at the price set opposite each item, delivered at the designated point within the time specified above.

### **III. DETAIL SPECIFICATIONS**

#### **A. Competitive Sealed Proposal**

The Village of Downers Grove, an Illinois municipal corporation (hereinafter referred to as the "Village"), will receive sealed proposals from Contractors for the application of insecticidal treatments for the control of Emerald Ash Borer (EAB) identified in the solicitation. Proposals must be received by the date and time specified.

#### **B. Informational Pre-proposal Conference**

For the purpose of familiarizing proposers with the project, answering questions, and issuing addenda as needed for clarification of the proposal documents, an informational pre-proposal conference shall be held at the Downers Grove Civic Center, 801 Burlington Avenue, Downers Grove, Illinois 60515, (630) 434-5500. Date and time of the meeting are listed on the cover sheet.

#### **C. Objective**

This contract is for the application of insecticidal treatments to manage the spread and negative impact of EAB within the incorporated limits of Downers Grove. The specifications contained herein detail how treatment activities shall occur for parkway trees along public streets.

#### **D. Qualifications of Contractors**

The Contractor shall be required before the award of any contract to show to the complete satisfaction of the Village Forester that it has the necessary facilities, ability, and resources to provide the services specified herein in a satisfactory manner. The Contractor shall be required to give past history and references in order to satisfy the Village Forester in regard to the Contractor's qualifications. The Village Forester shall make reasonable investigations deemed necessary and proper to determine the ability of the Contractor to perform the work. The Village Forester reserves the right to reject any proposal if the evidence submitted by, or investigation of, the Contractor fails to satisfy the Village Forester that the Contractor is properly qualified to carry out the obligations of the contract and to complete the work described herein. In addition to those requirements set forth in Terms and Conditions above, evaluation of the Contractor's qualifications shall include:

1. The ability, capacity, skill, and resources to perform the work or provide the service required
2. The ability of the Contractor to perform the work or provide the service promptly or within the time specified, without delay or interference
3. The character, integrity, reputation, judgement, experience, and efficiency of the Contractor
4. The quality of performance of previous treatment contracts or services. The Contractor shall have been actively engaged in the ornamental pest management industry for a period of at least three (3) years. At least three (3) municipal or other governmental references must be for similar EAB treatment contracts successfully completed with each contract for more than 200 trees annually.
5. The previous or existing compliance by the Contractor with laws and ordinances relating to the contract or service

6. The sufficiency of the financial resources and the ability of the Contractor to perform the contract or provide the service
7. The quality, availability and adaptability of the supplies, or contractual services to the particular use required
8. The number and scope of conditions attached to the proposal.

**E. Proposer Investigations**

Before submitting a proposal, each Contractor shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the Village Forester upon which the Contractor will rely. If the Contractor receives an award as a result of its proposal submission, failure to have made such investigations and examinations will in no way relieve the Contractor from its obligations to comply in every detail with all provisions and requirements of the contract documents, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the Contractor for additional compensation.

**F. Quantities**

Whenever a proposal is sought for services, the quantities shall be construed as estimates for the purpose of obtaining unit prices unless otherwise stated. The Village reserves the right to increase or decrease the stated quantities. Depending upon budget, the Village Forester may increase or decrease the number of trees in all or part of Group 1 Ash, Group 2 Ash or Group 3 Ash in order to meet forestry goals.

**G. Proposal Review and Award of Contract**

The Village shall review and evaluate all proposals submitted in response to this RFP. This includes reviewing each proposal for compliance with the minimum proposal requirements of the RFP. Failure to comply with any mandatory requirements may disqualify a proposal.

Proposals will then be evaluated and rated in accordance with the evaluation criteria. These evaluation criteria include:

- Conformance to Requirements. Degree to which proposal meets technical needs of the Village. Exceptions will detract from overall rating.
- Clarity of Proposal. Degree to which proposal clearly and concisely follows the Request for Proposal. Answers must include and correspond to questions.
- Service. How the Contractor proposes to deliver service.
- References. Discussions with the Proposer's existing and any former clients.
- Costs. The cost of treatments.

The Village reserves the right to conduct pre-award discussions and/or pre-contract negotiations with any or all responsive and responsible Contractors who submit proposals determined to be reasonably acceptable of being selected for award. Contractors shall be accorded fair and equal treatment with respect to any opportunity for discussion and revision of proposals and such revisions may be permitted after submission of proposals and prior to award of a contract.

The Village may conduct negotiations with the top Contractor(s) if required to determine the acceptability of the proposal in regards to specifications, terms and conditions and cost; therefore, the proposal(s) submitted should contain the vendor's most favorable terms and conditions as well as cost with detailed specifications as proposed, since the selection and award may be made without discussion.

The Village will select the highest rated, fully qualified and best suited Contractor for each specific EAB insecticidal treatment application (Group 1, Group 2 or Group 3). Should the first selected Contractor be unable to fulfill the terms of the contract, the Village reserves the right to enter into a contract with the 2nd selected Contractor. If the Village does not find that any Contractor's solution(s) meet the needs and requirements, the Village is not obligated to enter into agreement for treatment. A contract recommendation report will be prepared for the Village Manager, Legal and Finance Personnel, who in turn will submit the recommendation to the Village Council for approval and contract award.

**H. Term of Contract**

In accordance with terms mentioned in Section 27.1 above, the contract term shall be three (3) complete calendar years starting April 1 of 2017 and ending December 31 of 2019.

**I. Insecticidal Treatment Specifications**

The Contractor shall provide sufficient EAB insecticides, appropriate equipment and personnel for the project. The Contractor shall provide tree insecticide application services for EAB control as described herein and in accordance with the terms and conditions of this specification. The Contractor must include, as part of the work under this contract, the movement and transportation of equipment and supplies to and from the work sites.

**1. Group 1 Ash – Basal System Soil Drench**

- a. Group 1 Ash trees are composed of clustered or dense ash plantings. Actual addresses and tree listings will be provided to the awarded Contractor. The number of Group 1 Ash trees is 1,058 with a cumulative trunk diameter of 18,600”.
- b. The Contractor must ensure proper identification of ash trees along the street, and that trees and addresses on the supplied list correspond to trees and addresses found along the street.
- c. Each tree shall be measured at a point 4.5 feet above ground or Diameter at Breast Height (DBH) on the uphill side of the tree.
- d. The Insecticide will be Rainbow Treecare Xytect 75 WSP at a rate of rate of one (1) packet (1.6 oz) for every 24 inches of cumulative trunk diameter for trees under 15” DBH and one (1) packet (1.6 oz) for every 12 inches of cumulative trunk diameter for trees over 15” DBH, or Quali-Pro Imidacloprid 2F at a rate of 0.2 fluid ounces per inch of trunk diameter for trees under 15” DBH and 0.4 fluid ounces per inch of trunk diameter for trees over 15” DBH. The Village Forester shall approve any and all alternative products proposed.
- e. The dosage shall be the highest possible as listed on the label based on DBH.
- f. All Group 1 Ash shall also receive, in addition to the imidacloprid product in the mixture, fertilizer (18-3-6 Classic liquid fertilizer with 50% slow release nitrogen plus micronutrients manufactured by Growth Products) and soil amendment (Essential Plus

1-0-1 Natural Organic Soil Amendment and Root Stimulator with 21 L-Amino Acids manufactured by Growth Products). The Village Forester shall approve any and all products proposed.

- g. The soil drench mixture shall be the appropriate amount of imidacloprid product, 1.5 gallons of 18-3-6 Classic slow release fertilizer, and 64 ounces of Essential 1-0-1 per 100 gallons of water.
- h. The Contractor shall dispense the proper amount of solution evenly around the base of the tree. The Contractor shall uniformly apply the dosage in no less than 10 gallons of water per 1,000 square feet.
- i. In no case shall material be allowed to puddle and run off-site. Any appearance of treatment solution moving from the site shall halt the treatment. Treated areas shall be monitored until all liquid chemical is absorbed by the soil.
- j. All soil drench equipment must be approved by Village Forester prior to commencing work.

## **2. Group 2 Ash – Trunk Injection**

- a. Group 2 Ash trees are ash trees located throughout the Village which have had limited canopy dieback to date, and have been treated with a variety of products over the years. Actual addresses and tree listings will be provided to the awarded Contractor. The total number of Group 2 Ash trees is 578, with only 289 trees with a cumulative trunk diameter of 5,440” to be treated annually.
- b. The Contractor must ensure proper identification of ash trees along the street, and that trees and addresses on the supplied list correspond to trees and addresses found along the street.
- c. Each tree shall be measured at a point 4.5 ft above ground or Diameter at Breast Height (DBH) on the uphill side of the tree.
- d. The Insecticide will be Boxer Insecticide-Miticide manufactured by Arbor Systems. The Village Forester shall approve any and all alternative products proposed.
- e. The dosage shall be the highest possible as listed on the label based on DBH.
- f. Application shall be with the Direct-Inject QC Tree Injection device system manufactured by Arbor Systems with a Wedge Tip, the WedgeChek Punch and WedgeCheks.
- g. Injection holes shall be spaced at intervals around the trunk circumference measured within 12” of the ground.
- h. The Contractor shall make the injection holes by inserting the WedgeChek Punch into the appropriate bark area and removing bark cores for the injection holes. The Contractor shall avoid damaging the xylem tissue (sapwood) with the WedgeChek Punch.
- i. The Contractor shall insert a WedgeChek into the site where the bark core has been removed, and then insert the Wedge Tip through the WedgeChek until resistance felt of the tip meeting sapwood. The tip is not to be forced into the sapwood. Thick barked trees require a longer injection tip.
- j. The Contractor shall inject Boxer Insecticide-Miticide with the injector device according to manufacturer’s instructions, and shall continue to work around the circumference of the tree.
- k. Application equipment must remain in optimal operating condition per manufacturer specifications at all times and must immediately be repaired or replaced if determined to

not be performing properly. If application equipment is determined to be performing below the manufacturer's specifications and the Contractor fails to repair or replace equipment before continuing work, the Contractor shall be required to return and re-inject all trees injected with the under-performing equipment.

### **3. Group 3 Ash – Trunk Injection**

- a. Group 3 Ash trees are white ash trees located throughout the Village that have been treated with TREE-age every other year more than once. Actual addresses and tree listings will be provided to the awarded Contractor. The total number of Group 3 Ash trees is 220, with only 110 trees with a cumulative trunk diameter of 1,500" to be treated annually.
- b. The Contractor must ensure proper identification of ash trees along the street, and that trees and addresses on the supplied list correspond to trees and addresses found along the street.
- c. Each tree shall be measured at a point 4.5 ft above ground or Diameter at Breast Height (DBH) on the uphill side of the tree.
- d. The Insecticide will be TREE-age with 4.0% emamectin benzoate manufactured by Syngenta. The Village Forester shall approve any and all alternative products proposed.
- e. The dosage shall be the highest possible as listed on the label based on DBH.
- f. Application shall be with the Arborjet Tree I.V. System, Arborjet QUIK-jet System, or Arborjet Air Hydraulic System. All systems shall utilize #3 Arborplugs (9/32") manufactured by Arborjet. These #3 Arborplugs will remain in the tree after injection.
- g. Injection holes shall be spaced at 6" intervals around the trunk circumference measured within 3" or 10" off the ground depending on when the last injection occurred. All Group 3 Ash trees have received at least 2 injections in the last 4 years. Future injection holes shall be at a height of 3" or 10" depending. For trees under 8 inches in diameter, holes shall spiral around the stem in staggered positions so as not to be at the same height. The Village Forester shall inform the awarded Contractor of the appropriate height.
- h. The Contractor shall drill through the bark then 5/8" to 1-5/8" into the sapwood with the appropriate sized drill bit. The Contractor shall select tree trunk sites associated with stem growth and sapwood that is intact and healthy so that the injection system applies material directly into the xylem and not into the cambium. Injured areas or areas with decay shall be avoided.
- i. Application equipment must be capable of injecting a metered dose, and the system must be closed, preventing the loss of dose through individual injector failure.
- j. Application equipment must remain in optimal operating condition per manufacturer specifications at all times and must immediately be repaired or replaced if determined to not be performing properly. If application equipment is determined to be performing below the manufacturer's specifications and the Contractor fails to repair or replace equipment before continuing work, the Contractor shall be required to return and re-inject all trees injected with the under-performing equipment.

### **J. Trade Name**

In cases where an item is identified by a manufacturers name, trade name, catalog number, or reference, it is understood that the Contractor proposes to furnish the item so identified and does not propose to furnish an "equal" unless the proposed "equal" is definitely indicated

therein by the Contractor. Reference to a specific manufacturer, trade name or catalog is intended to be descriptive but not restrictive and only to indicate to the prospective Contractor articles that will be satisfactory. The Village Forester reserves the right to approve as an equal, or to reject as not being an equal, any article the Contractor proposes to furnish which contains major or minor variations from specification requirements but which may comply substantially therewith. If alternate product other than the product listed is proposed the Contractor must submit the alternate with their proposal.

**K. Material Specifications**

The Contractor shall supply the Village Forester with the most current Label and Safety Data Sheet (SDS) available for the proposed products. The Contractor is responsible for following the Label and SDS requirements for protective equipment and safe chemical handling. The Contractor must meet OSHA and any other federal, state and local safety requirements. The Contractor will be held responsible for any damage to personnel, Village facilities, chemicals and equipment for these specifications to ensure product safety. The Contractor must ensure that all necessary protective equipment is considered incidental to the contract.

**L. Proof of Purchase**

Prior to starting the project, the Contractor shall be required to show proof of purchase of specified products.

**M. Expiration Dates of Product/ Supplies**

Any required product and/or supplies that have expiration dates must have at least nine (9) months of shelf life before the expiration date. Failure to comply with this requirement may result in rejection of any product and/or supplies to be used. If the product is rejected, the Contractor shall be responsible for replacement within forty eight (48) hours.

**N. Water Access**

The Village will make one designated hydrant with a meter available to fill-up with water at the Public Works facility. A hydrant authorization form shall be completed and a one-time current administrative fee shall be paid by the Contractor before any water is obtained (the fee in 2017 is \$31.00). The Contractor shall be required to fill out the water usage sheets with each fill-up and check-in with the Public Works front office. The Contractor shall supply the appropriate hose and hydrant wrench to attach to the designated hydrant meter (meter has male threaded 2" standard hydrant connection). Under no circumstances shall the Contractor wash or rinse any equipment, containers, tools or any other equipment at the designated hydrant site.

**O. Spills**

The Contractor is solely responsible for any and all spills or leaks prior to and during unloading or transporting of their product. The Contractor hereby agrees to reasonably evacuate and warn those persons that may be affected by the spill and must clean up such spills or leaks to the satisfaction of the Village and in a manner that complies with applicable federal, state and local laws and regulations. The Contractor is responsible for any costs associated with spill clean-ups.

**P. Clean Up**

The Contractor shall, during the progress of the work, remove and dispose of all materials and the resultant dirt and debris on a daily basis and keep the work site(s) and adjacent premises in a clean condition satisfactory to the Village. Upon completion of work, the Contractor must remove all materials, tools and machinery and restore the site to the same general condition that existed prior to the commencement of its operation. The Contractor shall be required to remove all product containers after a service is completed and prior to leaving the work site, and properly dispose of all product containers.

**Q. Unauthorized Product Application**

The Contractor must ensure proper identification of trees. The Contractor must not apply any unauthorized product materials or make unscheduled applications. If the Contractor does apply unauthorized product materials, or make unscheduled applications, the Contractor is responsible for all damages and replacement and/or clean-up of all damaged areas, plants, flowers, etc. caused by such unauthorized application or unscheduled application.

**R. Treatment Area**

The treatment area is within the incorporated limits of Downers Grove. Various Village maps can be found at the Village's website at <http://www.downers.us>. Group 1, Group 2 and Group 3 Ash trees are located throughout the Village, and maps shall be furnished to the awarded Contractor(s).

**S. Illinois Department of Agriculture Pesticide License and Regulations**

The Contractor shall supply proof that all equipment operators have the appropriate State of Illinois Department of Agriculture Pesticide licenses and that they are properly trained to apply the insecticide treatment. The Contractor must possess valid Illinois Pesticide Applicators licenses and be authorized to purchase the items needed to perform EAB control at the time the proposal is submitted. Copies of all certifications and licenses are required. The Contractor shall keep records of all pesticide applications in accordance with laws and regulations of the Illinois Pesticide Act including but not limited to the EPA registration number and either the brand name or product name of the pesticide, the date and amount applied, and the location at which the pesticide was mixed and or loaded into the application equipment.

**T. Application Times and Completion Timeframes**

Application treatment shall commence at the direction of the Village Forester and shall continue until the Contractor is directed to cease treatment applications. Weather and soil conditions shall be monitored by the Contractor to ensure optimal uptake. Once treatments have begun, the Contractor shall work successive workdays as weather allows until all applications have been completed. The Contractor shall contact the Village Forester every day of application. Applications are expected to occur during the appropriate times using the following guide:

- Group 1 Ash trees – April May
- Group 2 Ash trees – May June
- Group 3 Ash trees – June July

**U. Report Form Submission**

The Village will provide the "Ash Tree Checklist" report form for Group 1 Ash, Group 2 Ash, or Group 3 Ash to the awarded Contractor. The Contractor shall be responsible to submit this "Ash Tree Checklist" report form to list, at a minimum, the tree diameter and date each tree was treated. The submitted report form will be inspected for compliance with the specifications. Report forms will then be used to verify and approve payment for services.

**V. Contractor Personnel and Equipment**

The Contractor shall supply all material, equipment and personnel necessary to complete the work specified. The Contractor shall rent equipment as needed to cover any equipment breakdowns that would cause this contract to not be completed in the allotted time period. All vehicles and equipment shall have the Contractor's name in a visible location.

The Contractor shall employ only competent and efficient employees. All employees and supervisors shall wear uniforms or apparel clearly displaying the company name for ease of identification. Whenever, in the opinion of the Village Forester, any employee is careless, incompetent, obstructs the progress of the work, acts contrary to instructions or conducts themselves improperly, the Contractor will, upon the request of the Village Forester, remove the employee from the work and will not employ such employee again for the work under this Contract. The Contractor then must provide replacement staff satisfactory to the Village Forester or other Village representative in a timely manner and at no additional cost to the Village. The day-to-day supervision and control of the Contractor's employees is the responsibility solely of the Contractor.

**W. Work Crew Supervision**

The Contractor shall provide qualified supervision of each crew at all times while working under this contract. Each supervisor shall be fluent in English and be authorized by the Contractor to accept and act upon all directives issued by the Village Forester or other Village representative.

**X. Workdays, Working Hours, and After Hours Contact**

The Contractor shall schedule work between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, unless authorized by the Village Forester or other Village representative.

The Contractor shall supply a contact phone number which shall be more than just an answering machine in case an emergency situation arises which needs to be discussed.

**Y. Public Convenience and Traffic Control**

All work performed under this contract will be so conducted as to cause a minimum of dust, noise and inconvenience to the normal activities where the work is performed. The Contractor shall conduct its operations in a manner that will not interrupt pedestrian or vehicle traffic except as approved by the Village. The work area shall be confined to the smallest area possible to allow maximum use of the street or sidewalk and to minimize any hazard to traffic or pedestrians.

**Z. Inspection of Work**

All work shall be completed to the satisfaction of the Village Forester or Forestry representative and same shall resolve any questions as to proper procedures or quality of workmanship.

**AA. Unsatisfactory Work**

If, at any time during the contract, the service performed or work done by the Contractor is considered by the Village to create a condition that threatens the health, safety, or welfare of the community, the Contractor shall, on being notified either by written or oral notice, immediately correct such deficient service or work. In the event the Contractor fails, after notice, to correct the deficient service or work immediately, the Village shall have the right to order correction of the deficiency by separate contract or with its own resources at the expense of the Contractor. The Village reserves the right to terminate the whole or any part of this contract in the event the awarded Contractor fails to perform any of the provisions of this contract.

**AB. Costs and Basis of Payment**

The Contractor affirms and states that the prices submitted herein constitute the total cost to the Village for all work involved in the respective items. This cost also includes all insurance, bonds, royalties, transportation charges, use of all tools and equipment, superintendence, overhead expense, inspection costs, all profits and all other work, services and conditions necessarily involved in the work to be done in accordance with the requirements of the Contract Documents considered severally and collectively.

The Contractor shall be paid for the work described herein on a per tree DBH inch basis depending on the proposal. The contract unit prices shall remain firm for the contract term.

The Contractor shall send all invoices to the Village Forester. The Village will pay the Contractor after receipt of a correct invoice for reasonable work allocable to the contract or after the date of acceptance of work that meets the contract requirements, whichever occurs later.

**AC. Questions during the Proposal Process**

All questions shall be directed to:

Theresa H. Tarka, Purchasing Department, (630) 434-5530 and FAX (630) 434-5571.

**AD. Proposal Form Submission**

Each proposer shall submit the original and two copies of the proposal in a sealed envelope no later than the time and date specified on the cover sheet. Proposals received after the specified time shall be rejected and returned to the proposer unopened. Each proposal shall contain:

1. Prices for Group 1 Ash and Group 2 Ash and Group 3 Ash.
2. A listing of the equipment operators with pesticide licenses

3. At least three (3) municipal or other governmental references who can attest to the Contractor's previous satisfactory performance with similar EAB treatment contracts for more than 200 trees annually. Include names, addresses and phone numbers.
4. Applicable insurance information supplied and forms completed.
5. Completed Suspension or Debarment Certificate, and Campaign Disclosure Certificate.
6. Signature block completed including an after-hours phone number (24 hour contact) other than an answering machine.
7. Description of how the service is to be provided. Include previous experience and examples from other municipalities where practical.

**IV. PROPOSAL EAB TREATMENT**

The undersigned Contractor offers to provide to the Village of Downers Grove, an Illinois municipal corporation, EAB treatment services conforming to the terms and conditions set forth herein.

**A. Group 1 Ash Trees – Basal System Soil Drench**

The number of Group 1 Ash trees is 1,058 with a cumulative trunk diameter of 18,600”. The soil drench mixture shall be the appropriate amounts of imidacloprid product, 18-3-6 Classic slow release fertilizer, and Essential 1-0-1. The Village Forester shall approve any and all alternative products proposed.

Group 1	Estimated Quantities	Unit Price per inch	Extension
Prices for 2017	18,600 inches		
Prices for 2018	18,600 inches		
Prices for 2019	18,600 inches		
<b>TOTAL for 3 years</b>			

Proposed Products \_\_\_\_\_  
 Proposed Rates \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Proposed Products \_\_\_\_\_  
 Proposed Rates \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Attach all pertinent labels and SDS sheets

**B. Group 2 Ash Trees – Trunk Injection**

The total number of Group 2 Ash trees is 578, with only 289 trees with a cumulative trunk diameter of 5,440” to be treated annually. The trunk injection product will be Boxer Insecticide-Miticide, and the Village Forester shall approve any and all alternative products proposed.

<b>Group 2</b>	<b>Estimated Quantities</b>	<b>Unit Price per inch</b>	<b>Extension</b>
Prices for 2017	5,440 inches		
Prices for 2018	5,440 inches		
Prices for 2019	5,440 inches		
<b>TOTAL for 3 years</b>			

Proposed Product \_\_\_\_\_  
Proposed Rate \_\_\_\_\_

Proposed Product \_\_\_\_\_  
Proposed Rate \_\_\_\_\_

Proposed Product \_\_\_\_\_  
Proposed Rate \_\_\_\_\_

Attach all pertinent labels and SDS sheets

**C. Group 3 Ash – Trunk Injection**

The total number of Group 3 Ash trees is 220, with only 110 trees with a cumulative trunk diameter of 1,500” to be treated annually. The Insecticide will be TREE-age with 4.0% emamectin benzoate manufactured by Syngenta, and the Village Forester shall approve any and all alternative products proposed.

<b>Group 3</b>	<b>Estimated Quantities</b>	<b>Unit Price per inch</b>	<b>Extension</b>
Prices for 2017	1,500 inches		
Prices for 2018	1,500 inches		
Prices for 2019	1,500 inches		
<b>TOTAL for 3 years</b>			

Proposed Product \_\_\_\_\_  
 Proposed Rate \_\_\_\_\_

Proposed Product \_\_\_\_\_  
 Proposed Rate \_\_\_\_\_

Proposed Product \_\_\_\_\_  
 Proposed Rate \_\_\_\_\_

Attach all pertinent labels and SDS sheets

**D. Phone Numbers**

Name and phone number of 24- hour contact \_\_\_\_\_  
\_\_\_\_\_

**E. Personnel**

Licensed equipment operators who shall be present each workday:

Name and license # \_\_\_\_\_

Name and license # \_\_\_\_\_

Name and license # \_\_\_\_\_

**F. Description of service**

Attach a description of how the EAB treatment service is to be provided. Include previous experience and examples from other municipalities where practical.

**MUNICIPAL REFERENCE LIST**

Municipality: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone # \_\_\_\_\_  
Forestry Contact Name \_\_\_\_\_  
Year of the treatment contract \_\_\_\_\_ # of trees \_\_\_\_\_

Municipality \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone # \_\_\_\_\_  
Forestry Contact Name \_\_\_\_\_  
Year of the treatment contract \_\_\_\_\_ # of trees \_\_\_\_\_

Municipality: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone # \_\_\_\_\_  
Forestry Contact Name \_\_\_\_\_  
Year of the treatment contract \_\_\_\_\_ # of trees \_\_\_\_\_

Municipality \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone # \_\_\_\_\_  
Forestry Contact Name \_\_\_\_\_  
Year of the treatment contract \_\_\_\_\_ # of trees \_\_\_\_\_

Municipality: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone # \_\_\_\_\_  
Forestry Contact Name \_\_\_\_\_  
Year of the treatment contract \_\_\_\_\_ # of trees \_\_\_\_\_

Municipality \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone # \_\_\_\_\_  
Forestry Contact Name \_\_\_\_\_  
Year of the treatment contract \_\_\_\_\_ # of trees \_\_\_\_\_

Municipality: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone # \_\_\_\_\_  
Forestry Contact Name \_\_\_\_\_  
Year of the treatment contract \_\_\_\_\_ # of trees \_\_\_\_\_





## Watering Quotation Request

The Village of Downers Grove Forestry and Grounds Division is requesting quotations on watering activities which involves filling Treegators on various trees during the summer per the following specifications.

### **Qualifications of Contractors**

The Contractor shall be required before the award of any contract to show to the complete satisfaction of the Village Forester that it has the necessary facilities, ability, and resources to provide the services specified herein in a satisfactory manner. The Contractor shall be required to give past history and references in order to satisfy the Village Forester in regard to the Contractor's qualifications. The Village Forester shall make reasonable investigations deemed necessary and proper to determine the ability of the Contractor to perform the work. The Village Forester reserves the right to reject any quotation if the evidence submitted by, or investigation of, the Contractor fails to satisfy the Village Forester that the Contractor is properly qualified to carry out the obligations of the contract and to complete the work described herein. Evaluation of the Contractor's qualifications shall include:

1. The ability, capacity, skill, and resources to perform the work or provide the service required
2. The ability of the Contractor to perform the work or provide the service promptly or within the time specified, without delay or interference
3. The character, integrity, reputation, judgement, experience, and efficiency of the Contractor
4. The quality of performance of previous contracts or services with the Village and other municipalities within the last five (5) years. The Contractor must provide a list of three (3) references of jobs successfully completed for similar contracts.

### **Quotation Review and Award of Contract**

The Village shall review and evaluate all quotations submitted. This includes reviewing each quotation for conformance to requirements, references, and cost. The Village will select the most qualified and best suited Contractors for watering activities. Depending on what is the most advantageous to the Village, more than one Contractor may be selected.

### **Insurance Requirements**

1. Prior to starting the work, Contractor and any Subcontractors shall procure, maintain and pay for such insurance as will protect against claims for bodily injury or death, or for damage to property, including loss of use, which may arise out of operations by the Contractor or Subcontractor or any Sub-Sub Contractor or by anyone employed by any of them, or by anyone for whose acts any of them may be liable. Such insurance shall not be less than the greater of coverages and limits of liability specified below or any coverages and limits of liability specified in the Contract Documents or coverages and limits required by law unless otherwise agreed to by the Village.

Workers Compensation	\$500,000	Statutory
----------------------	-----------	-----------

Village of Downers Grove

Employers Liability	\$1,000,000	Each Accident
	\$1,000,000	Disease Policy Limit
	\$1,000,000	Disease Each Employee
Comprehensive General Liability	\$2,000,000	Each Occurrence
	\$2,000,000	Aggregate
		<i>(Applicable on a Per Project Basis)</i>
Commercial Automobile Liability	\$1,000,000	Each Accident
Umbrella Liability (pursuant to section 5 below)	\$ 5,000,000	

2. Commercial General Liability Insurance required under this paragraph shall be written on an occurrence form and shall include coverage for Products/Completed Operations, Personal Injury with Employment Exclusion (if any) deleted, Blanket XCU and Blanket Contractual Liability insurance applicable to defense and indemnity obligations and other contractual indemnity assumed under the Contract Documents. The limit must be on a "Per Project Basis".
3. Comprehensive Automobile Liability Insurance required under this paragraph shall include coverage for all owned, hired and non-owned automobiles.
4. Workers Compensation coverage shall include a waiver of subrogation against the Village.
5. Comprehensive General Liability, Employers Liability and Commercial Automobile Liability Insurance may be arranged under single policies for full minimum limits required, or by a combination of underlying policies with the balance provided by Umbrella and/or Excess Liability policies.
6. Contractor and all Subcontractors shall have their respective Comprehensive General Liability (including products/completed operations coverage), Employers Liability, Commercial Automobile Liability, and Umbrella/Excess Liability policies endorsed to add the "Village of Downers Grove, its officers, officials, employees and volunteers" as "additional insureds" with respect to liability arising out of operations performed; claims for bodily injury or death brought against the Village by any Contractor or Subcontractor employees, or the employees of Subcontractor's subcontractors of any tier, however caused, related to the performance of operations under the Contract Documents. Such insurance afforded to the Village shall be endorsed to provide that the insurance provided under each policy shall be *Primary and Non-Contributory*.
7. Contractor and all Subcontractors shall maintain in effect all insurance coverages required by the Contract Documents at their sole expense and with insurance carriers

## Village of Downers Grove

licensed to do business in the State of Illinois and having a current A. M. Best rating of no less than A- VIII. In the event that the Contractor or any Subcontractor fails to procure or maintain any insurance required by the Contract Documents, the Village may, at its option, purchase such coverage and deduct the cost thereof from any monies due to the Contractor or Subcontractor, or withhold funds in an amount sufficient to protect the Village, or terminate this Contract pursuant to its terms.

8. All insurance policies shall contain a provision that coverages and limits afforded hereunder shall not be canceled, materially changed, non-renewed or restrictive modifications added, without thirty (30) days prior written notice to the Village. Renewal certificates shall be provided to the Village not less than five (5) days prior to the expiration date of any of the required policies. All Certificates of Insurance shall be in a form acceptable to Village and shall provide satisfactory evidence of compliance with all insurance requirements. The Village shall not be obligated to review such certificates or other evidence of insurance, or to advise Contractor or Subcontractor of any deficiencies in such documents, and receipt thereof shall not relieve the Contractor or Subcontractor from, nor be deemed a waiver of the right to enforce the terms of the obligations hereunder. The Village shall have the right to examine any policy required and evidenced on the Certificate of Insurance.
9. Any deductibles or self-insured retentions shall be the sole responsibility of the Insured. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Village, its officers, officials, employees and volunteers; or the Proposer shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

### **Watering Personnel and Equipment Requirements**

The Contractor shall supply the necessary personnel and equipment to fill approximately 125 Tregators. The Contractor shall have a minimum 500 gallon truck or trailer-mounted tank (1000 gallon capacity preferred) with an attached pump. Also attached to the tank shall be sufficient hose to reach trees and maneuver around parked cars at the Belmont lots (50' minimum).

### **Trees for Watering**

Approximately 125 tree locations are shown on the attached map. Trees located in the north areas of Woodcreek, Centre Circle, Brook Dr, Butterfield frontage, Opus Pl and 31<sup>st</sup> St are all parkway trees. Trees located at the Belmont train track underpass are on Village property and may be located behind parked cars. A complete tree list and submission form shall be supplied to the awarded Contractor.

## Village of Downers Grove

### **Watering Procedures**

On Wednesday of each selected week, the Contractor shall fill approximately 125 Treegators on parkway trees and public trees located on the attached map. Each tree shall have a Village supplied Treegator which holds 20 gallons. The Contractor shall lift each Treegator and quickly wet the area around the stem, and then fill each Treegator to capacity and proceed to the next listed location. When working around parked cars, the Contractor shall take extreme care to not hit any cars with hoses or water spray. When working along streets, the Contractor shall be observant of moving traffic. Watering is to begin by 7:00am and be finished by 5:00pm. The Village shall supply a water fill-up source located at the Public Works facility.

Of note – Village experience with Treegators has found that sediment from Village owned water tanks plugs the Treegator's small holes in a short period of time - to compensate, pencil size holes have been punched into the Treegator bottom to facilitate draining. These Treegators drain faster than normal – though Village experience has still been excellent provided the water flow from the hole is directed back around the tree rootball.

### **Water Access**

The Village shall make one designated hydrant with a meter available to fill-up with water at the Public Works facility. A hydrant authorization form shall be completed and a one-time administrative fee of \$31.00 shall be paid by the Contractor before any water is obtained. The Contractor shall be required to fill out water usage sheets with each fill-up and check-in with the Public Works front office. The Contractor shall not be charged for water usage. The Contractor shall supply the appropriate hose and hydrant wrench to attach to the designated hydrant meter (meter has male threaded 2" standard hydrant connection). Under no circumstances shall the Contractor wash or rinse any equipment, containers, tools or any other equipment at the designated hydrant site.

### **Report Submission**

The Contractor shall submit the supplied watering form by fax or email by the close of each business day or prior to the start of the next work day. Watered trees shall be noted on the form and the Contractor shall note any damaged or defective bags. Treegators with large slits, damaged zippers, those that spray water away from the tree or that have not drained from the previous fill-ups are to be reported.

### **Calendar and Estimated Number of Weeks and Weather**

Watering activities are estimated to occur during 13 weeks of the 20 week timeframe of May 16, 2017, to the week of September 30, 2017. The number of weeks shall be construed as estimates for the purpose of obtaining unit prices unless otherwise stated. The Village reserves the right to increase or decrease the stated quantities. Depending upon budget, the Village Forester may increase or decrease the number of weeks in order to meet forestry goals.

If by chance, natural rainfalls of up to an inch or more occur in the 72 hours prior to a scheduled watering, the Village Forester will cancel the watering activities for that given week. The Contractor and Village Forester will communicate weekly about watering activities and needs.

**Additional Watering Locations**

The Village may have additional tree/vegetation watering needs beyond the 125 Tregators previously mentioned. The Contractor may be asked to water such additional locations based on the hourly rate quoted by the Contractor. The hourly rate is to begin when the Contractor arrives at the Public Works Facility and fills up with water. Additional watering locations may be site specific and any details will be discussed with the Contractor.

**Term of Contract**

The contract term for 2017 is to be from May 1 to October 30. This Contract may be extended no more than twice for subsequent annual periods (two annual extensions) by mutual agreement of both parties, providing such agreement complies with Village purchasing policies and the availability of funds.

**Termination of Contract**

The Village reserves the right to terminate the whole or any part of this Contract, upon written notice to the Contractor, for any reason and/or in the event that sufficient funds to complete the Contract are not appropriated by the Village.

**Contractor Personnel and Equipment**

The Contractor shall supply all material, equipment and personnel necessary to complete the work specified. The Contractor shall rent equipment as needed to cover any equipment breakdowns that would cause this contract to not be completed in the allotted time period. All vehicles and equipment needs to have the Contractor's name in a visible location.

The Contractor will employ only competent and efficient employees. Whenever, in the opinion of the Village Forester, any employee is careless, incompetent, obstructs the progress of the work, acts contrary to instructions or conducts themselves improperly, the Contractor will, upon the request of the Village Forester, remove the employee from the work and will not employ such employee again for the work under this Contract. The Contractor then must provide replacement staff satisfactory to the Village Forester or other Village representative in a timely manner and at no additional cost to the Village. The day-to-day supervision and control of the Contractor's employees is the responsibility solely of the Contractor.

**Work Crew Supervision**

The Contractor shall provide qualified supervision of each crew at all times while working under this contract. Each supervisor shall be fluent in English and be authorized by the Contractor to accept and act upon all directives issued by the Village Forester or other Village representative.

**Public Convenience and Traffic Control**

All worked performed under this contract will be so conducted as to cause a minimum of dust, noise and inconvenience to the normal activities where the work is performed. The Contractor shall conduct its operations in a manner that will not interrupt pedestrian or vehicle traffic except as approved by the Village. The work area shall be confined to the smallest area possible to allow maximum use of the street or sidewalk and to minimize any hazard to traffic, cars or pedestrians.

**Inspection of Work**

All work shall be completed to the satisfaction of the Village Forester or Forestry representative and same shall resolve any questions as to proper procedures or quality of workmanship.

**Unsatisfactory Work**

If, at any time during the contract, the service performed or work done by the Contractor is considered by the Village to create a condition that threatens the health, safety, or welfare of the community, the Contractor shall, on being notified either by written or oral notice, immediately correct such deficient service or work. In the event the Contractor fails, after notice, to correct the deficient service or work immediately, the Village shall have the right to order correction of the deficiency by separate contract or with its own resources at the expense of the Contractor. The Village reserves the right to terminate the whole or any part of this contract in the event the awarded Contractor fails to perform any of the provisions of this contract.

**Prevailing Wage Act**

This contract is not subject to the Prevailing Wage Act.

**Costs and Basis of Payment**

The Contractor shall be paid for the work described herein on a per watering basis depending on the quotation. The quoted unit prices shall remain firm for the contract term.

The Awarded Contractor shall send all invoices to the Village Forester. The Village will pay the Contractor after receipt of a correct invoice for reasonable work allocable to the contract or after the date of acceptance of work that meets the contract requirements, whichever occurs later.

Village of Downers Grove

**Contractor Name and Information:**

Company Name: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Address: \_\_\_\_\_

Office Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Name and phone number of 24- hour contact \_\_\_\_\_  
\_\_\_\_\_

Number of Days Quotes Are Good For: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Quotation Prices and Equipment**

Price for filling up 125 Tregators = \$ \_\_\_\_\_ per time

**Total** for filling 125 Tregators for estimated 13 weeks = \$ \_\_\_\_\_

Price for additional watering on a per hour basis = \$ \_\_\_\_\_ per hour

List the number of personnel, the tank size and equipment to be used for watering

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Village of Downers Grove

**Insurance**

Are you willing to comply with the Village's preceding insurance requirements within 13 days of the award of the contract? \_\_\_\_\_

Insurer's Name \_\_\_\_\_

Agent \_\_\_\_\_

Street Address \_\_\_\_\_

City, State, Zip Code \_\_\_\_\_

Telephone Number \_\_\_\_\_

**Municipal Reference List**

Municipality: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone # \_\_\_\_\_

Contact Name \_\_\_\_\_

Year of the contract \_\_\_\_\_

Municipality \_\_\_\_\_

Address: \_\_\_\_\_

Telephone # \_\_\_\_\_

Contact Name \_\_\_\_\_

Year of the contract \_\_\_\_\_

Municipality: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone # \_\_\_\_\_

Contact Name \_\_\_\_\_

Year of the contract \_\_\_\_\_

**Quotation Submittal**

Quotes are due by Friday March 31, 2017

Please submit pages 7 and 8

Please fax or e-mail quotations to:

Kerstin G. von der Heide, Village Forester  
5101 Walnut Avenue, Downers Grove, IL 60515  
Office 630-434-5475 Fax 630-434-5495  
E-mail kvonderheide@downers.us

Tregator Filling 2017

