Park District of Oak Park

Environmental Policy

Approved July 23, 2008
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1. ENVIRONMENTAL POLICY PURPOSE

Oak Park citizens have long recognized the value of health, nature, and diversity. Our community embraces the ideals of its world-acclaimed prairie architects, authors, and our forward-thinking park planners -- marked by the hire of Jens Jensen and the early introduction of arts, nature, and recreation in our parks. By incorporating and maintaining a green approach in the PDOP, we are advancing these ideals in our village.

The primary mission of the Park District is to provide the residents of Oak Park with healthy, safe, and pleasant places for their recreation, in 80 acres of open space containing approximately 2,800 trees.

Open space surrounded by an urban environment is very different from open space, which is part of a much larger, "natural" environment. The impacts of nearby built environment, which include heat patterns and air pollution, together with intense human activity, require that the valuable green space in our community be managed to provide the optimum benefits possible, balancing the needs of the people who use the parks with those of the plant communities which grace them.

In the management of this land, the Park District of Oak Park strives to set a high standard of leadership and competency in the promotion of sound environmental practices and lifestyles. Park and recreation employees, by the very nature of their chosen careers, have an obligation to set an example and assume a leadership position in the development and use of policies, practices, and environmental opportunities which promote a healthy environment. In addition, the District believes that public spaces provide opportunities to promote nature and waste minimization to our citizens.

To accomplish these goals, the PDOP has drafted this Environmental Policy to confirm the District's commitment to the environment and to provide a tool for staff use. This Environmental Policy complements the Mission and Vision Statements of the PDOP and is intended to help the District achieve excellence in programming and operations. The Environmental Policy is broken into three sections: Biodiversity Recommendations and Guidelines, Tree Management Policy, and Guidelines for Green Operations.

2. BIODIVERSITY RECOMMENDATIONS AND GUIDELINES

2.1 Goals

This committee defines biodiversity as a variation of life at all levels of biological organization, promoting species diversity and durable interactions among species and their environment. Our aim is to encourage diversity of life within each park's ecosystem and diversity of ecosystems within the PDOP, with an emphasis on promoting native species.

We strive for the introduction and maintanence of naturalized areas within our parks for their many benefits to all forms of life. By incorporating biodiversity into our park system we can:

- Help resist disease that can blight a monoculture (e.g. Dutch Elm disease on an elm-lined street) and offer greater resilience to harsh weather conditions including drought.
- Sustain the circle of life for plants, animals, insects, and humans.
- Ensure food, water, nutrients, shelter, migration stops, and breeding areas for a wide variety of creatures.
- Provide recreation such as birdwatching, natural gardening, and artistic inspiration.
- Maintain the soil's health and viability.

- Offer educational and restful opportunities for citizens of all ages.
- Encourage scientific thought and appreciation of our environment.
- Furnish an ecosystem link to other natural areas of Oak Park and its surrounding communities.
- Contribute to the aesthetics of Oak Park and support the vision of many of its historic architects and designers.
- Foster a culture of conservation and preservation for future generations.

These values indicate why biological diversity conservation differs from traditional nature conservation. Biological diversity conservation entails a shift from a reactive posture - protecting nature from the impacts of development - to a proactive effort of seeking to meet peoples' needs while ensuring the long-term ecological sustainability of Earth's biotic wealth.

2.2 Planning Considerations

"The **parks and recreation** profession plays a **vital role** in **promoting healthy lifestyles** and providing residents with recreational access to green spaces, clean air, and natural plant and animal communities. Therefore, it is especially important that our operations not adversely impact **natural resources** within our communities, and that ideally, they result in net improvements to local environmental quality."[1]

We recommend that the PDOP consider opportunities for increasing native plant biodiversity when planning changes to parks. When embarking on a park renovation, the park district and its planners should evaluate a park's potential by the following criteria:

- Soil type, erosion, topography
- Sun and shade
- Location strengths/weaknesses – opportunities for a natural area to improve the park site
- Water sources and situations -- dry or damp areas, water retention, and storm runoff
- Aesthetics for human enjoyment
- Satisfaction of Tree Management Policy and Guidelines for Green Operations, including green construction

- Recreation for user enjoyment
- Food sources for wildlife and flora
- Shelter for humans and wildlife
- Types of natural areas that are over/under represented in the community
- Educational opportunities
- Possible community partnerships
- Sustainability

From planning through the installation process, a PDOP **biodiversity review committee** will highlight opportunities for the creation of native plant gardens or naturalized areas and provide input on the ecological appropriateness of proposed plant materials.

During the master planning, the **Greening Task Force** (GTF) will act as this ad hoc review committee, providing:

1) A GTF member or two to be present at the PDOP's focus group for preliminary input.
2) A walk-thru evaluation of the site prior to the first community meeting, offering recommendations for biodiverse areas, trees and plants for consideration, and recycling and green building opportunities which could be applied to the site. Meeting notes from this walk-thru will be provided to that master plan's landscape designer/architects and the PDOP.
3) Input on an as-needed basis to proposed master plans. GTF members may do this at community meetings and/or if called upon for advice from the PDOP.
4) Feedback to the 50-75% construction drawings/planting lists.

Beyond this pilot period, the GTF and PDOP will determine the composition and requirements of a **Greening Advisory Committee** (GAC.) Committee members may be park stewards, employees, and other volunteers - and if possible, should include an arborist, an ecologist, and a PDCC member. This committee would meet once a month and review any issues pertinent to the Environmental Policy. They may revise and update the Biodiversity Recommendations and Guidelines, Tree Management Policy, and Guidelines for Green Operations, consult for park planning, maintain the stewardship program, propose partnership and educational opportunities, help seek grants and funding for greening efforts, and should provide an annual report to the PDOP and park board. This report should summarize the year's efforts, make

future suggestions, and include a tree species audit, to ensure appropriate replanting of tree numbers and types.

We also recommend each **master plan RFP** collect information regarding the applicant's knowledge of and experience in ecology.

2.3 Design Considerations

An overarching consideration is that the final design be manageable by the Park District's resources - staff, outsourcing, and/or volunteers. All areas of management must be defined at the time of planning.

Following are just a few of the issues that should be considered during the design phase:

The **landscape design firms** that the park district chooses to work with should have appropriate knowledge in basic plant ecology and proper planting and maintenance techniques for the area they'll be working in. Such requirements will be outlined in the PDOP's RFP and may vary by site.

Each park will present its own **unique characteristics** to help determine what, if any, natural area(s) will benefit the park and its users. Among the biodiverse prototypes may be woodland areas, prairie swaths, rain gardens, meadows, savannas, and bird and butterfly sanctuaries. A mix of various ecosystems within Oak Park's parks would be ideal.

Using **indigenous (Northeastern Illinois) species** reduces the likelihood of highly competitive invasive species overtaking an area. The widespread introduction of exotic species is a potent threat to biodiversity. When exotic species are introduced to ecosystems and establish self-sustaining populations, the indigenous species in that ecosystem may not survive. The exotic organisms may act as predators, parasites, or simply aggressive species that deprive indigenous species of nutrients, water and light. They become well established and spread quickly, reducing the effective habitat of indigenous species. Indigenous species are also perfectly adapted to the growing conditions of NE Illinois, including its wide temperature swings and rainfall variations.

Biodiverse areas must be **compatible** with the site location and uses of that site.

Maintain an **aesthetic integrity** through all seasons**.** Citizens' appreciation for a biodiverse area may be bolstered by signage, interactive projects, and location maps --especially if site goes through "weedy-looking" or inactive phases.

Educational opportunities regarding the benefits of the natural area should be maximized. Children's or adult classes and could be done in conjunction with a neighboring school and/or Park District programs. Through education and communication, the public learns how to appreciate and care for that natural space. For instance, how letting plant material remain over the winter can greatly benefit wildlife and help the area re-seed. A demonstration area could be incorporated into a biodiverse area's design. Walking trails, boardwalks, bridges, short roped fences, and trail demarcations may be useful in some areas to provide access for citizens to surround themselves in the environment, and to help protect areas from being trampled by park users and activities.

What are the **surrounding land uses** and how will they impact proposed plant selection and design? Consider the presence of a busy street that can produce salt spray in the wintertime, or inflict sound and smog on users.

Anticipate and plan for a site's potential **pest control** requirements, considering built-in, organic solutions.

Provide easy, unobtrusive access for **cleaning and maintaining the site**, which may involve weeding, burning, and tilling.

Does this area get a lot of **water**? Be aware of the soil/moisture needs of the plants to be planted: don't plant dry-soil plants in soil that remains wet, and vice versa. How will we keep new plantings watered? Can irrigation, water runoff, or standing water be used to re-hydrate the site?

Be mindful of **park sightlines and safety** when considering plant height, density, and water features.

Berms might be planted with native grasses that don't need mowing. This would prevent **erosion** that happens when a hillside gets mowed too closely or becomes bare with overuse.

Mix **sunny**, open areas used for recreation with shady areas where humans and fauna can rest. Add plants and trees that suit this type of exposure.

Of fundamental concern are the **basic ecological requirements of a plant species**. If a plant requires "full sun," it should not be planted under trees,

building overhangs, or on the north side of a building. If a tree in its natural setting grows with ample moisture protected from drying winds, it should not be planted on a grassy berm. Site and planting list reviews by the GTF/GAC will help maximize the success of future plantings.

Maintain a **long-term** vision for species health and longevity. Plan and plant for a species' mature size - if the desired height for a shrub is 3 feet, select a shrub whose mature height is 3 feet. If we plant shrubs that naturally grow much taller, be prepared to have to periodically cut the shrubs down to shorter heights – a maintenance headache and unattractive as well. Allowing enough space around plants helps ensure their health. If the plant's mature width will be 4', plant them at least half their final width (2') away from a sidewalk, fence, or wall, and plant them at least 4' apart if in a grouping. When planting large trees near each other, such as a 20' wide tree near a 30' wide tree, add up half their widths and plant them at least 25' apart (10 + 15 = 25.)

Preserving the species mix ("**diversity**") also requires maintenance efforts. The more successful plants need to be kept in bounds so they don't out-compete the less aggressive plants and reduce the diversity in the plantings. It is not unusual in natural areas for just a handful of species to dominate an area on the scales we would be considering. Particular site characteristics – soil structure and fertility, sun aspect, moisture, among others – favor some plants over others. The characteristics of the plants themselves also affect how aggressively they compete for space. On small scales, plantings are not native communities in any sense of the word. Rather they are *gardens*, and have to be treated as such if we want to keep even a fraction of the plants that are originally planted in them.

2.4 Management and Maintenance Recommendations

2.4.a. Park Stewardship

The incorporation of volunteers into the maintenance regime of parks could be a valuable way to expand community involvement while improving the overall condition of the park system. Park stewards fall within two domains:

1. Stewardship of an entire park
2. Stewardship of native plant community reconstructions or native plant gardens within a park

Throughout the greater Chicago metropolitan region there are volunteers dedicated to the ecological management of protected natural lands - the

majority of these volunteers serve within forest preserve districts. They operate under the general organization of the Volunteer Stewardship Network. The VSN is comprised of smaller local groups whose members, with the full sanction of the landowner, generally a forest preserve district, conduct ecological management of native ecosystems (prairie, woodland, savanna, wetland.) This management includes the removal of non-native and/or invasive plant species, application of herbicide and prescribed fire if necessary, and oversight of other volunteers.

Park stewards could be solicited from this pool. Locally there is the Des Plaines River Valley Restoration Project. The closest site is Thatcher Woods Forest Preserve at Chicago Ave. and Thatcher Avenue in River Forest. There is both a web site and newsletter for this section of the VSN and several of the stewards live in Oak Park. Potential stewards could also be solicited via local media, existing Park District publications, and local and/or regional organizations such as the Friends of the Oak Park Conservatory, Chicago Botanic Garden, Morton Arboretum, Nature Conservancy, University of Illinois Extension's Master Gardeners, and Chicago Wilderness.

Type #1 Steward Requirements:

1. Basic tree/shrub identification skills.
2. Understanding of relevant Park District policy for the use and maintenance of the park.
3. Basic plant pest identification ability (Asian Long-horn beetle, emerald ash borer, gypsy moth for example.)
4. Submit monthly reports to the GAC.

Term: The term of a steward is indefinite provided she/he continues to meet the requirements. A steward will complete a PDOP application form and necessary background check(s) and follow the PDOP's volunteer criteria.

Park District Support: The Park District will notify the park steward of any changes scheduled for their park (removals, plantings, renovations, etc.) and provide a contact for the steward to notify in the event of issues (down trees, hazard conditions, flagging plantings, etc.)

Type #2 Steward Requirements:

1. Thorough understanding of basic ecological tenets for the management of natural areas. Understanding that there are no 'natural areas' in the Parks, only areas of native plantings. Some are, or may exhibit, the functionality of a natural area.

2. Good plant identification skills.
3. Ability to communicate the what, why, and how of stewardship with the public.
4. Complete understanding and agreement with the long term goal(s) of the natural area.
5. Ability to conduct needed stewardship activities on a regular basis.
6. Submit monthly reports to the GAC.

Term: The term of a steward is indefinite provided she/he continues to meet the requirements. A steward will complete a PDOP application form and necessary background check(s) and follow the PDOP's volunteer criteria.

Park District Support: The Park District will provide stewards with the necessary tools to perform their duties, including: rakes, shovels, garbage bags, identification, basic prescribed burn equipment (rake, flapper, hose), gloves, access to water during planting periods, etc.

2.4.b. Weed Control

Weed control is always an issue in planted areas, especially in the first few years of installation. Since every new planting creates an additional time requirement for weed control [as well as watering and other maintenance], plantings should not be installed before assuring that staff time and resources will be sufficient to maintain them.

Any new plantings - trees, shrubs, herbaceous plants - should be mulched with a biodegradable mulch immediately after installation. In addition to suppressing weeds, mulching conserves soil moisture and moderates soil temperatures throughout the year. As the mulch decomposes over time, it also improves the structure and fertility of the soil. The materials and labor cost of mulching new planting areas should be factored into the initial budget for the project. Maintenance budgets should reflect that even appropriately mulched plantings will still have some degree of weed presence that needs to be addressed.

Mulch should be purchased from sustainable sources. Avoid using painted or Cyprus mulch. Investigate the potential of using local sources such as the existing Village wood chip pile. Mulch should be kept 1-2 inches away from the base of all trees and shrubs to reduce the risk of disease and pest damage to the stems of the plants. Mulching should follow the best-management-practices (Morton Arboretum.)

Supervisors should be mindful of the occasional conflict between maintaining an area for optimal aesthetics and maintaining for wildlife benefit. For example, herbaceous plantings might be cut down in Fall to please the public's sense of aesthetics, but would best be left standing to provide over-wintering habitat for invertebrates and small mammals.

2.4.c. Pest Management and Disease Control

(This section approved by Park Board on April 22, 2010)

It is the policy of the Park District of Oak Park that Integrated Pest Management (IPM) will be used to prevent and control pest problems in all parks and facilities maintained by the District. The principles of IPM require that non-chemical methods of pest control be given preference over chemical controls and the least hazardous chemical controls be given preference over other chemical controls.

The goal of IPM is the reduction of chemical pesticides used in outdoor landscapes and indoor facilities. IPM usually results in a graduated response to any potential problem, with natural control methods being employed first and chemical pesticides used only as a last resort. In the park setting, IPM has become standard practice for many public agencies, which must consider the health of patrons, including young children and people with chemical sensitivities. Instead of relying on pesticides as the first choice for managing pest problems, IPM uses a hierarchy of pest control methods to maintain pest populations at or below levels determined by park management.[2]

IPM Method Hierarchy

1. **Natural controls**: create habitat for natural predators of pest insects. For example, through the use of companion plantings that attract beneficial insects to reduce pest problems in gardens.
2. **Cultural controls**: maintain the site in a way to discourage pests. For example, maintain grass height of 2" or 3" to shade out weeds.
3. **Physical controls**: use controls that physically inhibit pests' ability to inhabit an area by modifying their environment. Examples of physical controls include the use of traps and barriers, temperature controls, controlled burning or hand pulling of weeds.
4. **Biological controls**: use a pest's natural predators or parasites to eliminate or reduce the pest population. For example, a bacterium called milky spore can be used to control Japanese beetle grubs in turf.
5. **Structural controls**: use a whole-systems approach to control pest populations, which may include addressing structural issues in both buildings and landscapes. Examples of structural controls include adopting long-term maintenance practices such as caulking and sealing, and repairing the building or landscape to remove places where pests may breed, such as removing indentations in the earth that cause puddles where mosquitoes may breed.
6. **Least Toxic Chemical controls**: when all other methods have not brought pest populations to tolerable levels, chemical controls that are the least

hazardous to the environment and non-target or beneficial organisms should be considered.

To be effective, IPM requires that a staff member or a contracted employee be knowledgeable in the identification of insect pests and plant diseases, since early recognition of problems is crucial. Monitoring and identification removes the possibility that pesticides will be used when they are not really needed, or that the wrong kind of pesticide will be used. This allows treatments to be small scale and localized. Waiting for a problem to become an infestation requires a more extensive response (i.e. larger quantities of and often more potent pesticides). Natural control methods (companion plantings, soil treatments, natural predators) are normally utilized to maintain a more natural balance of pests and predators, which means that the presence of some pests must be tolerated. In some instances, signage may be necessary to educate park users who see some creatures as pests and are unfamiliar with the workings and benefits of IPM.[1]

Benefits of This Strategy

Protects patrons from possible exposure to pesticides and herbicides.
Reduces workplace safety concerns when reduced quantities of toxic materials are used for maintenance.
Can reduce operational expenses since necessary pesticide applications will be smaller in scale.
Protects both surface and ground water from potential contamination.
Protects wildlife and the habitat they live in from contamination
Can improve the PDOP's public image due to promotion of the voluntary adoption of efforts to reduce pesticide use in the community.

Implementation

Some short-term, non-chemical, weed-reducing solutions include: mechanical removal of weeds by pulling or mowing, inhibiting weed growth via weed trimmer, flaming weeds with a hand-held torch, and applying very hot water or steam to weeds.

Long-term weed control methods include the introduction of predators such as beetles or other plants, landscape modifications to the site such as changes in light, water, topography, plantings, or soil, and laying down cloth to smother the weeds or serve as a barrier.

When a pest problem has been identified as existing and is creating an unacceptable level of environmental, aesthetic or economic damage or creating risk to human health, then treatment options must consider the following criteria.

1. Least hazardous to human health
2. Least disruptive to natural controls

3. Least toxic to non-target organisms
4. Least damaging to the environment
5. Most likely to produce a permanent reduction in habitat conducive to pest populations
6. Cost effectiveness over a reasonable term such as 2 to 5 years

Pesticide Selection

A Signal Word on the pesticide label is required for all registered products, indicating the acute toxicity. The Signal Words and associated toxicity categories are as follows:

Category I	DANGER (Most Toxic)
Category II	WARNING
Category III	CAUTION
Category IV	None required but if used means Caution – least toxic

To ensure the safety of the public and staff, the District will use the following criteria to ensure that the least hazardous pesticide and/or the least hazardous method of control be utilized

1. The District will not use any pesticide classified as acutely toxic by the U.S. EPA. This includes Hazard Category I and Category II, signal words DANGER and WARNING. Currently, only one herbicide has been approved for use in the parks. Glyphosate has been approved for weed control in difficult areas such as fence lines, brick pavers or ball diamond infields.
2. The District will not use any pesticide unless the product has been evaluated by the U.S. EPA and found to include no possible, probable, known, or likely human carcinogens: no reproductive toxicants; no known, probable or suspected endocrine disruptor; and no nervous system toxicants (either cholinesterase inhibitors or listed as neurotoxins by the Toxics Release Inventory.)
3. All ingredients in pesticides used by the District must have a solid half-life of 30 days or less.
4. No high volatility formulations will be used.
5. No “restricted use” pesticides will be used.
6. Preference will always be given to organic herbicides over more toxic chemicals. Products such as acetic acid, sold under the trade name of “Burn Out” or plant oil combinations with a fatty acids base sold as “Scythe” fall into this category.

Pesticide Use
The safety of the public, park district employees, and the environment will be given primary consideration in the selection and use of any pesticide. Park District employees and contracted employees must use, store, handle, or dispose of a pesticide, pesticide rinse, pesticide container, or pesticide application equipment in a manner that:

1. Is consistent with the product labeling, and Illinois Department of Agriculture regulations
2. Does not endanger humans, food, livestock, fish, wildlife, or beneficial insects
3. Does not cause unreasonable adverse effects on the environment
4. Does not direct a pesticide beyond the boundaries of the target treatment site or result in damage to adjacent property.
5. Does not result in pesticide application on any human

Park District employees must not mix or apply pesticides unless they are wearing appropriate protective clothing and they have received proper training in the safe use of the pesticide product. Employees and contracted employees must be licensed as an applicator or operator by the Illinois Department of Agriculture.

Pesticide use notices must be conspicuously posted in one or more locations at the site of the application. It will specify the pest, manner of application, date of application and location. It will contain a caution not to enter the area until the date specified and contact information for the Park District employee who is responsible for investigating complaints and answering questions about the application. Park perimeters will be marked with flags posted around the sprayed area.

Procurement
Any product acquired for pest or disease control must be accompanied by a Material Safety Data Sheet (MSDS). MSDA sheets will be available and accessible for employees and residents to view at any time. Products must be purchased from reputable suppliers in the manufacturers' container. The supplier must be licensed to sell pesticides.

Storage
All pesticides will be stored in a secure manner that does not allow the products to escape the packaging or the storage area and endanger human health, contaminate other products, or harm the environment. Storage will be in compliance with all directions listed on the manufacturer's label and in compliance with all pertinent laws, rules, regulations, and local ordinances. Storage buildings and areas will have equipment to effectively handle any emergencies that might reasonably be expected to occur. Incompatible hazardous substances and pesticides will not be stored in the same area. For instance, fertilizers and pesticides should not be stored in the same room.

Disposal
Disposal of pesticides and fertilizers and their containers will be done in accordance with label instructions and applicable state and federal laws and regulations. All pesticide containers must be triple rinsed immediately when emptied and the rinse water must be added to the sprayer tank for proper disposal.

Spills
Appropriate cleanup supplies and equipment shall be maintained to handle pesticide and fertilizer spills incurred by Park District employees. All hazardous materials spills or releases will be disposed of according to the appropriate state agency's directives.

Pesticide Use by Outside Groups on Park District Property
Any pesticide application done on Park District property by commercial pesticide applicators will be performed under contract with the Park District of Oak Park. Contractors must comply with the Park District's Integrated Pest Management Policy. Contractors must acquire a pesticide application permit from the Superintendent of Buildings and Grounds prior to the application of a pesticide or herbicide. After the proper permit is acquired, the contractor must be accompanied by a District employee who will monitor for proper application.

Record Keeping
The Park District will keep records of all pest control measures, pesticides used, and amounts and locations of treatments. Pesticide use records, pesticide Material Safety Data Sheets, pesticide product labels, and available manufacturer information about inert ingredients will be kept on file with the Superintendant of Buildings and Grounds. Additionally, records of all pest control actions are to be maintained including information on the number of pests or other indicators of pest activity that can verify the need for action. These records will be made available upon request to staff and the general public during normal operating hours and will be kept for at least five years.

Training
Training is a critical component of a successful IPM program and the Park District will encourage training for employees in all aspects of IPM including pest identification. New methods for natural, cultural, physical and biological control will be learned and transmitted to employees.

Role of Greening Advisory Committee (GAC)
The GAC will monitor and evaluate the use of IPM on an annual basis to determine the program's overall effectiveness in managing pest populations. This assessment will include an evaluation of all chemical applications, as well as any new information on the hazards of chemical controls. The objective is to improve

the system and eliminate any ineffective and unnecessary treatments. The GAC will ensure that outside contractors are informed of their obligation to comply with the District's IPM program. The GAC will be responsible for keeping the public informed of the District's IPM program and the methods of implementation. The GAC will respond to requests for information from the public or direct them to an appropriate member of the staff.

Definitions

Broadcast – the application of granular formulated pesticides to broad expanses of surfaces. An example includes application of pesticides to lawns.

Pests – any unwanted insects, plants, fungi or rodents.

Pesticide – any substance or mixture of substances designed or intended for use to prevent, destroy, repel or mitigate pests, or to be used as a plant growth regulator. Pesticides include, but are not limited to, insecticides, herbicides, fungicides, baits or traps and certain pest-specific compounds of biological origin aimed at disrupting the life cycle of the pest.

References

2. Integrated Pest Management for Park Districts, Safer Pest Control Project

2.5 Citizen Involvement and Education

Educating the citizens who use the parks helps them further appreciate the different ways these spaces contribute to the community. There is a need to educate the public about how to appreciate and care for park land. Environmentally literate citizens take better care of open space and support district goals and initiatives.

Environmental education and interpretation are proactive approaches to protecting natural resources and park property, including natural areas. Park districts can use this approach to gain community support for conservation issues such as caring for parks, protecting native landscapes, and conserving resources.

Although commonly interchanged, **environmental interpretation** and **environmental education** are different methodologies. Environmental interpretation occurs when a person learns information about nature or the

environment in a quick, entertaining manner. Interpretation can excite people, get people thinking and broaden their horizons. Environmental education takes time and well-thought-out communication. Environmental education provides in-depth information about a specific topic in a sequential manner over an extended period of time. Environmental interpretation acts as a springboard whereas environmental education acts as the swimming pool. Although different, both methods can help the community develop understanding, appreciation and care for the natural environment.

Providing effective environmental education and interpretation to the park staff and community residents will not only **help protect natural resources** and open space but also **save park districts money** by affecting politicians', policy makers', and citizens' attitudes about fertilizer, water use, and mowing in open/play spaces, tolerance of "nuisance" pests, and the understanding of their own role in maintaining parks and open spaces. Effective environmental education includes face-to-face interpretation, articles and news reports, and well-written signage delivered regularly and often. Signage and activities that give hands-on experiences are most effective.[1]

Strategies to Provide Environmental Education and Interpretation:

- Interactive, hands-on activities are the most effective type of program for delivering a district's environmental or conservation message. Work with local recreational groups, provide environmental-themed classes for kids through adult, set up restoration workdays, provide tours, start a youth conservation club with local residents or schools.

- Promote the park's conservation efforts and solicit volunteers at local events, such as "A Day in Our Village."

- Combine a steward's work day with public education around the biodiversity in the park.

- Add Park District programs such as prairie gardening, creating a rain garden, attracting butterflies to your yard, bird sheltering, etc.

- Identify significant trees, biodiverse areas, and list advantages of biodiversity with park maps and signage.

- Develop a brochure that specifically promotes the PDOP's natural areas and distribute within the parks, schools, libraries, village hall.

Benefits of these strategies:

- Introduces current **non-users and partnerships** to the parks and diversifies community recreation opportunities.

- **Encourages positive environmental actions** within the community.

- Changes citizens' **environmental attitudes** i.e. support of natural area projects.

- **Promotes community environmental responsibility** i.e. lowers organization energy bills, reduces vandalism, yields more community recycling in parks.

- **Fosters support** of environmentally conscious **land use policies**.

- Serves as a catalyst for **volunteer restoration work/person power**.

- Gains **citizen appreciation** for PDOP's efforts.

- Offers stronger **grant opportunities and eligibility with diverse partnerships,** such as: Illinois Department of Natural Resources http://www.dnr.state.il.us/orep/c2000/grants/default.asp and North American Association of Environmental Education http://eelink.net/grants-eespecificresources.html.

2.6 Summary of Recommendations

- Continue to consider the feasibility of adding biodiverse areas to Oak Park's parks.

- Involve the GTF/GAC early in the master planning process to assess a park area and if/how a biodiverse area could contribute to the site.

- Contract landscape designers with sufficient knowledge of native plants and healthy planting techniques. Use local genetic stock and seed whenever possible. Specify these elements in the PDOP's RFPs.

- Tap the GTF/GAC to review and comment on planting lists and proposed site plans.

- Initiate a stewardship program to monitor and maintain biodiverse areas within the parks. Tap into volunteer networks (scouts, schools,

Audubon, Chicago Wilderness, Nature Conservancy) to recruit for area maintenance and create demonstration opportunities.

- Promote the PDOP's natural areas and green efforts on Earth Day and at A Day In Our Village and other community events.

- Educate current members of the park district on the areas and plans for maintenance.

- Phase in classes for all age groups that showcase the PDOP's natural areas.

- Post educational signage in the park's natural areas.

- Use the park newsletter and website to educate the public on what's happening/how to utilize and appreciate the park's biodiverse areas and encourage volunteers.

- Publish literature (a one-page map/fact sheet?) for each of the park's natural areas.

- Establish environmental partnerships with the area's schools and other organizations and seek new grant opportunities.

- Continue to follow IPM, using pesticides and herbicides as a last resort.

3. TREE MANAGEMENT POLICY

3.1 Introduction

A reading of the natural history of Oak Park provides us with insights into why our village and park trees are so central to life in our community. The geological formation left as the glaciers retreated came to be known as Oak Ridge because its tree population was **primarily oak trees**. The ridge that runs diagonally through the village from the northeast to the southwest is a section of the continental divide where several species of oaks took hold and thrived. Joseph Kettlestrings, the first European settler of Oak Ridge chose this area in 1835 because of these beautiful native oaks. The cabin he built was on land that is now part of **Scoville Park**. A plaque stands in the southwest corner of that park to commemorate our first settler. Newspaper articles from the 1850s and 1860s show that residents of Chicago were moving to Oak Park (renamed

by the Postal Service since there already was an Oak Ridge Post Office in Illinois) because they appreciated the vast population of trees in the area.

The village was incorporated in 1902 and by 1912, Oak Park residents voted to establish a **Park District** governed by a board of commissioners. One of the board's first actions was to hire internationally known landscape architect **Jens Jensen** to design new parks. Jensen was instructed that his work should preserve the original oak groves and subordinate all play areas to the preservation of trees and shrubs. Jensen's design created large open meadows with forested areas at the edge of the meadows, which had gathering spaces, seating groups and flower gardens. His goal was to connect people to their natural heritage. Some remnants of his design work remain in Rehm Park, Ridgeland Common, Scoville Park and more completely in Taylor Park.
As the village grew, other tree species were introduced, some of which were not well suited to this region or to populated areas. As early as 1934, trees such as **poplars, box elders and cottonwoods** were deemed undesirable because they are prone to breaking or are messy in the landscape. And so with labor provided by the WPA, 700 of these trees were removed and several thousand **elm trees** were used as replacements. The American Elm was highly prized because it grew quickly to a large tree with beautiful arching limbs that provided shade for homes and streets and was thought to be long-lived. A short 21 years later in 1955, the first case of the **Dutch Elm disease** was discovered in Oak Park. Over the next 50 years, both the Village and the Park District struggled to contain and control this devastating disease. Many trees were lost and in response to these losses, the Park District found ways to replace the lost elms, to diversify the number of tree species and to add additional trees beyond replacement numbers.

In 1969, a Park Board commissioner proposed a plan that would allow individuals to pay for the purchase and installation of new trees in our parks. In June 1970, the **Memorial Trust Fund** was established to encourage residents to purchase trees as memorials for family members or friends. It continues to exist today as another source of new trees for our parks. Beginning in 2005, residents could adopt existing trees or memorialize family and friends through the purchase of park benches as well as trees. In fact, the practice of honoring a loved one with a living memorial had started some years prior to 1970. The oldest memorial tree in our parks was planted in 1937 in Scoville Park and was donated by the Garden Club of Oak Park and River Forest. Another of these memorial trees, a red oak, was purchased for Ernest Hemingway by his sister and planted in Scoville Park in 1987. To date, 500 new trees have been added to our parks through the Memorial Tree program.

In 1972 the Oak Park River Forest Community Foundation initiated a program to help keep our parks and village green. It established the **Presidential Walk** in Lindberg Park with the planting of 17 sugar maples, one for each of the 17 former Oak Park village presidents. This tradition continues with a new tree planted as each village president ends his or her term in office.

The Park District continued to demonstrate the extent to which it values its trees when in 2005, the Memorial Trust Committee commissioned Natural Path, an urban forestry consulting company specializing in risk management, to inventory all of the trees on Park District property. This **inventory** identified the species, location, size and condition of each tree. It also gave recommendations for the removal of some trees whose conditions presented a hazard.

3.2 Goals

Our primary goal is to manage our trees by maintaining, preserving, conserving, and improving the existing tree population in our parks.

This Tree Management Policy is intended to facilitate the park district's mission, recognizing the immense value of its trees, which provide residents and visitors to our village with beauty, shade, cooling and enhanced air quality, as well as reduction of storm water run-off and atmospheric carbon dioxide.

3.3 Programs and Policies

Trees are the only asset in our park system that increase in value with age as other infrastructure components lose value with age. Fundamental to the Park District's tree management policy is the setting of specific strategies to enhance the long-term value of our trees and the tree inventory is the basis for developing these strategies.

To achieve our goals, the Park District will:

- Use the **tree inventory** created by Natural Path in 2005 to establish the priorities of tree management. This inventory provides a current evaluation for the health of each tree and makes recommendations for the removal of hazardous trees. These recommendations should be followed. Review and update the tree inventory by the Greening Task Force to ensure the continuing right balance among species.

- Link the Park District's management policy to the community through **education** and through **volunteer stewardship programs**, which in turn will heighten awareness of the benefits of trees. A tree walk, developed for each of our parks, will further acquaint residents with the beauty and environmental benefit of our trees. **Partnerships** with elementary schools that border our parks, especially focusing on Arbor Day activities will also further our educational goals.

- Preserve and protect native trees, historic trees and trees significant to wildlife. These trees can be marked with a **label** that provides species name, approximate age and reason for significance.

- Expand and publicize the **Memorial Tree program** by providing informational brochures to the visitor centers, funeral homes and in "Welcome to Oak Park" packets.

- Develop a **tree stewardship program** by enlisting volunteers to monitor newly planted trees, provide timely watering and scout for insect and disease problems. The volunteers will also provide post-storm assessments of tree damage and downed branches. They will work under the leadership of the park's Steward (refer to 2.4.a.).

- Develop a **budget** for tree maintenance and tree planting which shows a per capita expenditure for trees and their maintenance. This will facilitate comparisons with other park districts of similar size. Annual funds allocation will ensure a regular schedule of maintenance and provide for a minimum of 15 additional trees each year. The annual addition of new trees to our parks ensures that as trees age and decline, others are growing to mature heights and beauty.

- Require all tree care contractors to be licensed **arborists**. In all future training or hiring considerations, it should be a priority to have a Certified Arborist on staff.

- Incorporate into Director's **monthly report** to the Board, activities relating to the management of trees.

3.4 Management and Maintenance Recommendations

In a forest, a fallen tree remains where it came to rest, providing nurture for communities of creatures until, after years, it rots back into the soil. In an

urban park, a large fallen tree blocks a path or lands across an athletic field; it must be removed promptly or, preferably, have been replaced before age or other damage caused it to fall. In order to maximize the health and life of park trees, they must be inspected regularly, pruned appropriately for the growth pattern of the species, and replaced at the end of their life span, giving attention to the varieties of other trees in the vicinity. We have all seen the devastation that occurs when a deadly disease strikes and too many of the trees in an area are vulnerable.

Residents who use our park system draw a wide range of aesthetic and health benefits from our park's trees. A healthy tree population in our parks is as critical as safe playground equipment and well-maintained athletic fields.

This section of the Tree Management Policy lists steps to be taken for effective management:

- Commission Natural Path, or some other urban forestry consultant firm, to update the **tree inventory** every five years. This will act as a guidepost when setting annual goals for the removal and addition of trees, provide current data on high-risk trees and set the priorities for their pruning and removal.

- Expand the current **tree stock** through tree longevity and large species plantings. Consistent annual additions of trees are important to maintain a perpetual canopy. Tree planting must become a major component of the Park's Tree Management Plan.

- A **tree protection protocol** (see Appendix C and D) will be provided to contractors who bid on park projects. Trees that are injured or killed during construction projects must be replaced on a diameter inch-for-inch basis with nursery grown trees 3" in diameter. For example, 10- 3" diameter trees must replace a damaged tree that is 30" in diameter. Replacement tree species must grow as tall at maturity and have a similar life span as the tree removed. Tree replacement should occur within the same park location when practical. If this is not feasible, replacement trees can be planted in other parks within the system with the approval of the Superintendent of Buildings and Grounds. Replacement trees should comply with the American Standard for Nursery Stock requirements in ANSI Z60.1 in regard to quality, size, genus and species.

- Provide a **tree care protocol** to all contractors performing work within our Parks. Tree protection specifications are found in Appendix D.

- Evaluate high-risk trees using the **Hazards Rating Form** (Appendix E) developed by the International Society of Arboriculture, which evaluates trees characteristics, health, site conditions and defects to reach an objective rating.

- Park District staff should be trained in tree **monitoring** techniques and assist in the risk management process. A **tree hazard checklist** includes the following considerations:

  Are there large dead branches?
  Are detached branches hanging in the tree?
  Are there cavities or rotten wood along the trunk or in major branches?
  Are there fungi present at the base of the tree?
  Are there cracks or splits in the trunk or where branches are attached?
  Has the trunk developed a strong lean?
  Have roots been broken off, injured or damaged by lowering the soil level, installing pavement, repairing sidewalks or digging trenches?
  Have the leaves prematurely developed an unusual color or size?
  Has the tree been topped, heavily pruned or lost its leader?
  Are there visible signs of insect or disease damage?

- **Remove trees** or mark high-risk trees for careful monitoring in accordance with objective tree removal criteria. These include recommendations resulting from the tree inventory, staff recommendations when evaluating storm damage, community-driven park renovations or redesigns, as well as trees that are deemed invasive and are detrimental to the native eco-system.

- Maintain a 5-year **cyclic pruning** program. Each tree in the system will receive a class 'A' pruning once within each five-year cycle. Class A pruning is defined as: dead and damaged branches 1/2" in diameter or larger; interior thinning of water shoots, crossing and interfering 1/2" and larger; 13 ½' clearance over street and 8' over sidewalk; 2 – 4' structure and or line clearance. The benefits that accrue from this practice are that every tree is inspected regularly and the condition ratings of many trees may be upgraded simply by pruning. This will also result in fewer service requests and less storm damage. Management will shift from reactive to proactive; reducing the amount of time and money spent maintaining trees since problems will be addressed before they become serious. This practice of cyclic pruning will

demonstrate reasonable care on the part of the Park District in maintaining our tree stock.

- **Do not allow** the following practices: topping trees, excessive thinning of the tree crown and removing lower limbs higher than 7 feet above ground level (unless this is necessary for the passage of large vehicles such as fire or garbage trucks.)

3.5 Planting Program

The primary goal of the Park District's planting program is to establish new sites where additional trees may be added to our park system and to set a numerical goal for the next ten years. This can be done with the aid of the tree inventory. Such a goal will enable the Park District to establish an annual goal for additional trees beyond replacement needs.

3.5.a. Tree Choice

- Choose trees from the Recommended Tree List in Appendix A. The Park District will give preference to native trees and shrubs when adding new plants to our parks. Native trees have the advantage of being adapted to Midwest conditions: they are vigorous and hardy, enabling them to survive cold winters and hot dry summers. Once established, native trees are better able to resist insects and diseases and provide a hospitable environment for native birds and insects.
- Avoid the use of trees listed in Appendix B
- Avoid monocultures by creating a balance among species with no more than 8% of total the population in one species.
- Select trees for a specific site after consideration of the tree's mature size, life span, texture, form and both leaf and bark color.
- Strive for multi-aged stands of trees, which will disperse maintenance costs resulting in a more predictable distribution of maintenance expenses each year. Slower growing but longer living trees are important.
- Select trees for a particular site after evaluation of the site in relation to drainage, sun exposure and wind characteristics as well as overhead lines, underground pipes and cables, and nearness to property lines and buildings. A standard distance of 30 to 50 feet from buildings and property lines should be maintained.

3.5.b. Timing of Planting

- When a tree is planted is as important as how it is planted. Some trees such as bitternut hickory, tulip tree, tupelo and sassafras should always be planted in the spring and others such as birch, magnolia and redbud have a better survival rate if planted in the spring. In general, spring planting is preferable because the tree has a longer time to establish new roots before winter.

3.5.c. Methods of Planting

- Observe proper planting practices. Dig the planting hole 2 to 3 times wider than the root ball or container and only as deep as the root ball. The planting hole should be saucer shaped, not a deep hole. The root ball should be planted several inches above grade in order to avoid planting too deeply. Backfill the hole gently with the same un-amended soil that was removed from the hole.

3.5.d. Establishment

- Water the tree thoroughly when planted and during the growing season provide 1 inch of water weekly either through rainfall, 'gator' watering bags or hand watering.
- Mulch immediately with a 4 inch layer of composted organic material around the base of the tree and evenly extended outward for a radius of 18 inches. Mulch should never touch the trunk.

3.6 Summary

The Park District of Oak Park, from its elected governing board and its managers to each individual staff member, acknowledges the primacy of trees in creating a healthy environment for recreation within Oak Park. This Tree Management Policy serves as our guide to protect this valuable resource.

4. GUIDELINES FOR GREEN OPERATIONS

4.1 Goals

Purchase and Use of Environmentally Safe and Sensitive Products -
Purchase products for use in facility and park operations to minimize negative

environmental impacts, taking into consideration the effects of product production, use, safety, storage, disposal and cost.

Wise Use and Protection of Air, Water, Soil and Wildlife - Actively seek and implement ways to conserve and protect water and soil, enhance air quality, limit the production and release of damaging pollutants, and protect plant and animal life.

Wise Use of Energy Resources - Actively seek and implement ways to conserve energy resources and investigate methods of applying alternative energy technologies. Record energy use levels (cu/ft gas, kilowatts electricity.)

Reduction and Handling of Waste - Reduce waste production, reuse and recycle materials from facility and park operations, and handle hazardous and all other wastes according to lawful and safe procedures.

Open Space Planning and Preservation - During the Master Planning Process, encourage the use of appropriate native species in appropriate areas, which minimize resource needs.

Environmental Education and Interpretation - Provide education and interpretation opportunities for staff and the public which increase appreciation for the natural world and promote environmentally-conscious lifestyles, emphasizing selective consumption and low-impact resource use.

4.2 Suggested Green Actions

4.2.a. Purchase and Use of Environmentally Safe and Sensitive Products

The production, use and disposal of many office, recreation and maintenance products contributes significantly to the pollution of the air, water and soil and the destruction of natural communities of plants and animals. Educated product selection in the workplace can reduce the production of pollutants, save energy, and reduce water consumption.

- Purchase products with recycled content, especially high-percentage post-consumer recycled content, wherever possible for use in recreation programs, offices, and park maintenance and development projects.

- Encourage the conservative use of paper and wood in place of plastics and other non-biodegradable and non-renewable products.

- Eliminate the use of styrofoam products by staff, concessionaires and park/facility users. Include this specification in bidding documents.

- Minimize the use of petroleum-based products such as inks, stains and plastics. Require printing contractors to use soy-based inks in printed material.

- Reduce the use of disposable products by staff, concessionaires and park/facility users.

- Encourage the use of electronic mail resources such as phone or computer message systems in place of paper memos.

- Inventory all hazardous materials including cleaners, paints, solvents, sealants, wood preservatives, and office products, and investigate environmentally sensitive alternatives.

- Avoid the use of chlorine-bleached paper products.

- Reduce indoor air pollutants such as fluorocarbons from spray cans and fumes from cleaning solutions, sealants and paints by using less harmful alternatives.

- Continue the use of integrated pest management for all facilities.

- Avoid using products harvested from endangered natural communities, such as the rainforest.

- Develop an agency environmental policy statement for use in bidding documents.

4.2.b. Wise Use and Protection of Air, Water, Soil and Wildlife

All life on earth is dependent upon clean and reliable sources of air, water and soil. Our goal is to conserve and protect water and soil, enhance air quality, limit the production and release of pollutants, and protect workers and wildlife.

- Incorporate environmental impact considerations in the design process of facilities and parks.

- Consider the use of permeable paving materials.

- Practice soil management and appropriate landscaping to prevent erosion.

- Reduce vehicle emissions through regularly scheduled tune-ups and other applicable vehicle maintenance. Investigate the purchase of alternative-fuel vehicles when possible.

- Identify sources of indoor air pollution and implement a prevention program.

- Develop a program to monitor and remove or manage asbestos.

- Conduct an inventory of toxic air emissions and implement an action plan to reduce emission levels.

- When renovating, retrofit all facilities with water conservation hardware, and develop a leak detection and correction program.

- Develop a water conservation plan for swimming pools, skating rinks and other special facilities.

- Use drought resistant and preferably native species for landscaping, where applicable. Consider channeling rainwater runoff into planted areas.

- Investigate alternative snowmelt products, using those that have the least impact upon the surrounding soil, water and plant life. Reduce the use of road salt, and use sand as a substitute where feasible. Top priority for snowmelt would be the perimeter of the park and main cut-thru paths. For ecological reasons, snowmelt use in the interior of the parks will be limited to the areas where it's absolutely necessary.

- Continue the use of a comprehensive integrated pest management program for park grounds, including selection of plant species, preventative maintenance, early detection of problems, natural control methods, and minimized use of pesticides.

- Discourage the release of balloons in parks.

4.2.c. Wise Use of Energy Resources

Implement strategies to conserve energy and seek alternative energy sources. Careful conservation of energy resources will minimize pollution while prolonging the lifespan of non-renewable resources until alternative and less harmful energy technologies are readily available.

- Conduct energy audits and retrofit buildings with energy saving devices.

- Plant shade trees near buildings to reduce energy consumption due to summer air conditioning.

- Plant evergreens and shrubs as windbreaks along building foundations and walls to reduce energy consumption due to heating.

- Design and build energy efficient buildings, giving consideration to insulation and energy-efficient appliances and evaluating the use of alternative, renewable technologies such as solar and wind energy.

- Improve the efficiency of existing lighting by retrofitting outdoor and indoor lighting with energy efficient bulbs and requiring all new lighting to be energy efficient. Investigate the use of dimmers and timers where appropriate for new and retrofitted facilities.

- Consider solar light fixtures in parks and parking lots and as exterior building lighting.

- Properly maintain refrigerators and air conditioners for more energy efficient cooling.

- Establish minimum and maximum thermostat temperature settings for all facilities, and reduce heating and cooling usage when buildings are unoccupied, utilizing energy management systems.

- Insulate hot water heaters and pipes and set thermostats at energy efficient temperatures.

- Consider alternative fuels such as propane and natural gas and alternative energy technologies such as electrically powered vehicles.

- Maintain vehicles to reduce fuel consumption and implement energy saving fleet operation procedures.

- Support the use of transportation alternatives such as bicycles, mass transit, carpooling and walking and provide incentives for staff and park/facility users.

4.2.d. Reduction and Handling of Waste

Americans produce over 154 million tons of garbage every year. Much of this material could have been reused, recycled or reduced at the source. Simple steps taken at the Park District to eliminate waste in the work place, reuse materials when possible, and recycle discards can result in measurable waste reduction.

- For appropriate locations and events, develop and implement an in-house and parks recycling program including metals, glass, plastics, paper, and other recyclables. Investigate the use of devices, such as plastic shredders, to minimize volume.

- Require all renters of PDOP facilities to use recycling containers during events. Notify affiliate organizations of recycling goals by placing a statement in the affiliate agreement, encouraging the affiliates to partner with PDOP in recycling during games and events.

- Monitor waste and recycling collection to help ensure success of the recycling program. Research revenue sources for recycled materials.

- Investigate source reduction of waste, including purchasing in bulk, minimizing packaging, reducing excess use of paper, and choosing reusable and recyclable products.

- Reduce paper use by sharing subscriptions, making double-sided copies mandatory, reducing junk mail, using memo routing slips and keeping mailing lists current.

- Investigate ways to reuse office, recreation program, and maintenance/construction materials that are typically discarded.

- Compost or otherwise reuse all suitable landscape waste.

- Recycle batteries, ink cartridges, antifreeze, motor oil, Freon and other automotive by-products.

- Continue to train staff in the proper handling, use, storage and disposal of hazardous materials.

4.2.e. Open Space Planning and Preservation

Proper stewardship of our very limited open space in Oak Park is especially essential to the mission of the Park District.

- Utilize native species for park landscaping where appropriate.

- Eliminate or control exotic and invasive plant and animal species that inhibit ecological diversity and integrity.

- Abide by existing laws to protect rare, threatened and endangered plant and animal species.

- Develop a tree planting and replacement policy.

- Identify heritage trees in park property.

4.2.f. Environmental Education and Interpretation

PDOP desires to share its expertise on environmental issues with its customers. Outreach efforts can help educate the public on issues that can become part of an overall environmental lifestyle.

- Organize an environmental committee consisting of agency staff from all facilities and/or departments.

- Involve agency staff in an environmental education program that explains the commitment of the agency to the environment, provides information about environmentally conscious lifestyle and workplace choices and habits, and stresses the need for staff input and involvement.

- Develop and implement an energy awareness program for employees and park/facility users.

- Develop and implement a water conservation education program for employees and park/facility users.

- Ensure that contractors and vendors comply with the agency's adopted environmental policies. Include specifications in bidding documents and contracts.

- Promote leisure activities that minimize environmental impact and energy use.

- Develop outreach materials to inform the public about the agency's environmental efforts.

- Include environmental lifestyle information in materials distributed to the public.

- Develop and present public programs which enhance the public's relationship with the natural world and teach environmentally responsible lifestyles.

- Interpret the natural resources specific to the community via programs, presentations, signage or brochures.

- Use Earth Day as a vehicle to educate the public about the environment.

- Work with other community agencies and organizations to develop and enhance a strong environmental ethic.

5. CONTRIBUTORS

This policy is the combined work of Park District staff members and private citizens who had the knowledge and dedication to bring it to fruition. Park District Director Gary Balling established the Park District of Oak Park's Greening Task Force in October, 2007. Oak Park resident Beth Burdin chairs the Task Force and its members are Josephine Bellalta, Douglas Chien, Bob Egan, Michael Grandy, Sandy Lentz, Linda Peterson, Charles Ruedebusch, John Seaton, Diane Stanke, Ginger Vanderveer and Henrietta Yardley. Each of these individuals brought to their work, a sincere desire to protect and care for our environment. Others who nurtured the project through their expert help and advice are: Mark Duntemann, Frank Lipo, Carol Yetkin and Julie Samuels. Thank you to each for their many insights and countless hours of 'extra work.'

References: 1. Illinois Parks and Recreation Association, "Model Environmental Policy and Toolkit," January, 2006. 2. Integrated Pest Management for Park Districts, Safer Pest Control Project.

APPENDIX A: List of Recommended Trees and Shrubs Native to the Midwest

Large Trees over 40 feet

Acer nigrum Black Maple
Acer saccharum Sugar Maple
Betula nigra River Birch
Carya cordiformis Bitternut Hickory
Carya ovata Shagbark Hickory
Celtis occidentalis Hackberry
Cladrastis kentukea
(C. lutea) Yellowwood
Diospyros virginiana Persimmon
Gleditsia triacanthos Honey Locust
Gymnocladus dioicus Kentucky Coffeetree
Juglans nigra Black Walnut
Liquidambar styraciflua Sweet Gum
Liriodendron tulipifera Tulip-Tree
Magnolia acuminata Cucumber Magnolia
Nyssa sylvatica Tupelo, Black Gum
Pinus strobus Eastern White Pine
Platanus occidentalis Sycamore, American Planetree
Quercus alba White Oak
Quercus bicolor Swamp White Oak
Quercus macrocarpa Bur Oak
Quercus muhlenbergii Chinkapin Oak
Quercus rubra Northern Red Oak
Taxodium distichum Bald Cypress
Tilia americana American Linden, Basswood
Thuja occidentalis Eastern Arborvitae

Intermediate-Sized Trees – 25 to 40 feet

Aesculus glabra Ohio Buckeye
Carpinus caroliniana American Hornbeam
Ostrya virginiana Ironwood, Hophornbeam
Sassafras albidum Sassafras

Small Ornamental Trees – 15 to 25 feet
Aesculus pavia Red Buckeye
Amelanchier laevis Allegheny Serviceberry
Asimina triloba Pawpaw
Cercis canadensis Eastern Redbud
Cornus alternifolia Pagoda Dogwood
Crataegus crus-galli Cockspur Hawthorn
Crataegus viridis Green Hawthorn
Ptelea trifoliata Wafer Ash

Large Deciduous Shrubs – over 8 feet
Amorpha fruticosa Indigo-Bush
Aronia prunifolia Purple Chokeberry
Cephalanthus occidentalis Buttonbush
Cornus amomum Silky Dogwood
Cornus racemosa Gray Dogwood
Cornus stolonifera
(Cornus sericea) Red-Osier Dogwood
Hamamelis virginiana Common Witch hazel
Rhus glabra Smooth Sumac
Rhus typhina Staghorn Sumac
Salix humilis Prairie Willow
Sambucus canadensis Common Elderberry
Staphylea trifolia American Bladdernut
Viburnum lentago Nannyberry Viburnum
Viburnum prunifolium Blackhaw Viburnum
Viburnum trilobum American Cranberry-bush Viburnum

Intermediate-sized Deciduous Shrubs – 5 to 6 feet
Aronia melanocarpa Black Chokeberry
Corylus americana American Hazelnut
Dirca palustris Leatherwood
Ilex verticillata Winterberry
Lindera benzoin Spicebush
Physocarpus opulifolius Common Ninebark
Symphoricarpos albus Snowberry

Viburnum acerifolium Maple-leaved Arrowwood Viburnum

Low-growing Deciduous Shrubs Under 5 Feet

Amorpha canescens Leadplant
Ceanothus americanus New Jersey Tea
Comptonia peregrina Sweet-fern
Diervilla lonicera Bush Honeysuckle
Hydrantea arborescens Smooth Hydrangea
Hypericum prolificum Shrubby St. John's Wort
Potentilla fruticosa Shrubby Cinquefoil
Rhus aromatica Fragrant Sumac
Ribes americana Wild Black Currant
Rosa carolina Pasture Rose, Carolina Rose
Rosa setigera Prairie Rose
Spiraea alba Meadowsweet
Symphoricarpos orbiculatus Coralberry

APPENDIX B: Trees and shrubs to avoid

Acer ginnala Amur Maple
Acer negundo Boxelder
Acer platanoides Norway Maple
Ailanthus altissima Tree of Heaven
Ampelopsis brevipedunculata Porcelain Vine
Berberis thunbergii Japanese Barberry
Celastrus orbiculatus Oriental Bittersweet
Elaeagnus umbellata Autumn-olive
Euonymus alatus Burning Bush
Ligustrum vulgare European Privet
Lonicera japonica Japanese Honeysuckle
Lonicera maackii Amur Honeysuckle
Morus alba White Mulberry
Phellodendron amurense Amur Corktree
Rhamnus cathartica Common Buckthorn
Rhamnus frangula Glossy Buckthorn
Robinia pseudoacacia Black Locust
Rosa multiflora Multiflora Rose
Toxicodendron radicans Poison Ivy
Ulmus pumila Siberian Elm

Viburnum opulus European Cranberry-bush

APPENDIX C: Park District of Oak Park Standard Specification for Tree and Landscape Protection

1.01 DESCRIPTION

A. General

1. The Contractor is responsible for ensuring the ongoing protection of all landscaped areas within the scope of work, including adjacent areas that may be impacted including access and egress routes. Existing landscaping including trees, shrubs, lawns, planting beds, etc. shall be adequately protected by the Contractor so as to avoid destruction and/or damage as a result of operations by the Contractor.

2. Before beginning work, the contractor will be required to meet with the Park District Superintendent at the site to review all work procedures, access routes, storage areas, and tree and landscape protection measures.

3. Any proposed changes to agreed-upon work procedures, access routes, storage areas, and/or tree and landscape protection measures must be

reviewed and approved y the Park District Superintendent prior to implementation of any proposed changes.

1.02 SUMMARY

A. This section includes the protection and trimming of existing trees that interfere with, or are affected by, execution of the Work, whether temporary or permanent construction.

B. Related Sections include the following:
   1. Section 02110 Demolition and Removal
   2. Section 02300 Earthwork
   3. Section 02950 Plantings

C. Protected Tree: Any tree that the Landscape Architect and Owner have designated to remain in healthy condition after construction is complete.

D. Root Zone: The ground area surrounding each tree containing its root system, defined by a radius equal to the trunk diameter at breast height (dbh) in inches multiplied by 1.5 feet per inch. For example, a 10-inch dbh tree would have a root zone extending 15 feet from the trunk in all directions and/or equal to the tree's canopy drip-line, whichever is greater.

E. Protected Root Zone (PRZ): The part of the Root Zone of a Protected Tree, which must be protected from construction damage. The Protected Root Zone for other existing plants may be indicated on the Tree Protection, Relocation & Removal Plan.

F. Tree Protection, Relocation & Removal Plan: A plan that identifies areas of plant preservation and methods of protection within the Protected Root Zones. The methods consist of fencing.

G. Compaction: Increased soil density. This results in death of existing roots and/or greater difficulty for new roots to develop. Damage may be caused by many agents, including the use of heavy equipment, concentrated foot traffic, and storage of heavy materials under or around trees.

H. Damage: Shall include any of the prohibited practices listed below and as determined solely by the Landscape Architect and Owner.

I. Prohibited Practices: Shall include, but are not limited to:

1. Breaking of branches, scraping of bark, or unauthorized cutting. Nailing or bolting into trees or using trees as temporary support in any way (including cabling around any part of the tree).

    a. Unauthorized filling, excavating, trenching, or use of augers within Protected Root Zones.
    b. Compaction of or driving over Protected Root Zones.
    c. Storage of any materials or vehicles within Protected Root Zones.
    d. Dumping of construction waste or materials within Protected Root Zones.
    e. Disposal of liquid waste or contaminants in an area, which may impact protected trees or their Protected Root Zones.
    f. Unauthorized removal or relocation of Protected Trees.

g. Removal of tree protection barricades or construction fencing prior to completion of project.
h. Any other practices listed on the Tree Protection, Relocation & Removal Plan.

1.03 QUALITY ASSURANCE

A. Preconstruction Conference: The Park District Superintendent and/or Landscape Architect may call a preconstruction conference to review project requirements, including tree protection and trimming, and tree relocation prior to start of construction.

B. Before tree protection and root pruning operations begin, Contractor will meet with Owner's representative to review tree protection and pruning procedures and responsibilities.

C. Trees to be protected shall be identified with surveyor's flagging tape placed around the tree trunks at eye level and approved by the Landscape Architect or Owner prior to the start of construction operations.

D. On-going Site Inspection
1. The Landscape Architect or Owner will monitor the construction site throughout the construction process. Violations and damages will be handled according to specifications in this Section and shown on Tree Protection, Relocation & Removal Plan.
2. The Landscape Architect will notify the Owner of any breach of the contract of the Tree Protection, Relocation & Removal Plan . At this time the contractor will stop and/or correct whatever practice led to the breach.
3. If a breach of contract occurs, damages will be assessed according to the Liquidated Damages noted on the Tree Protection, Relocation & Removal Plan.

4. The Contractor shall immediately contact the Owner's representative should protected trees be compromised in violation of agreed upon specifications. Failure to communicate promptly could result in damages of up to 100% of the appraised value

4. TREE AND LANDSCAPE PROTECTION ZONES

A. General

1. The location, limits and extent of tree and/or landscape protection zones are to be determined in the field by the Park District Superintendent prior to any work being performed.
2. See PDOP Standard Drawing L1.01 "Tree Protection Details" for required limits of protection and construction and installation details.
3. Driving, parking, dumping, stockpiling and/or storage of vehicles, equipment, supplies, materials, debris, spoils, waste or washout water within tree and/or landscape protection zones is strictly prohibited.
4. All underground utilities, drain and/or irrigation lines are to be routed outside the landscape protection zone. If underground lines must traverse the protection area, they shall be tunneled or bored below the root zones.

B. Tree and Landscape Protection Fencing

1. Tree and/or landscape protection zones are to be enclosed by 4' high (minimum), 11-guage, galvanized 2-inch, chain link fabric fencing secured to steel posts on max. 8 ft. spacing (see PDOP Standard Drawing L1.01 "Tree Protection Details").
2. All tree and landscape protection fencing must be in place prior to any work being performed on site, including delivery of materials or supplies, vehicular traffic, installation of security fencing, etc.
3. Tree and landscape protection fencing is to be maintained intact, by the Contractor, throughout

the duration of the work and until all site work has been completed. Fences may NOT be relocated or removed without the written permission of the Park District Superintendent.

C.Temporary Access Over Root Zones

1. Where temporary haul or access routes must pass over the root area of trees to be retained, a 6-inch thick "access route" of an approved cushioning material shall be put in place to protect the root zones.

3. The Park District Superintendent prior to any work being performed must approve the location and route of the temporary "access route".
4. The "access route" material shall be replenished as necessary to maintain a uniform 6-inch depth. Failure to maintain the depth of cushioning material will be considered a violation of the contract and may result in the assessment of fines and/or damages.
5. Vehicular traffic must be confined to the defined "access route;" failure to confine vehicular access to the defined "access route" will be considered a violation of the contract and may result in the assessment of fines and/or damages.

1.05 TREE AND LANDSCAPE DAMAGE

A. General

1. Trees, shrubs, lawns and/or other landscaping destroyed or damaged by the actions of the Contractor or any of the Contractor's subcontractors or agents shall be replaced or restored to its previous condition, including repair of ruts, new topsoil and re-grading, at the sole expense of the Contractor, to the standards of work set forth in these specifications and to the satisfaction of the Park District. All disturbed lawn areas are to be repaired with sod.

2. Failure to comply with any of the provisions set forth in this specification by the Contractor or any of the Contractor's subcontractors or agents, whether resulting in obvious landscape damage or not, will be considered a violation of the Contractor's Contract with the Park District.
3. Examples of landscape violations include, but are not limited to:
    a. Failure to erect and/or maintain landscape protection fencing.
    b. Storage or dumping of materials, equipment or debris within landscape protection zones.
    c. Driving and/or parking on non-paved surfaces, particularly under trees and/or on lawn areas.
    d. Damage to trees, shrubs, lawns, planting beds and other landscape elements caused by the action, or consequence of an action, by the Contractor or any of the Contractor's subcontractors or agents.
    e. Pruning of trees, branches, limbs or other woody material by any personnel other than a Certified Arborist.

4. Fines
    a. The Park District may assess fines against the Contractor in response to a documented violation.
    b. Generally, fines are assessed at $500.00 per violation per day.

    c. Violations, which are ongoing, will be fined at a rate of $500.00 per violation per day until resolved to the satisfaction of the Park District.

5. Damage Liability

a. When damage to Park District property has been documented, the Park District may assess monetary damages against the Contractor in an amount which represents the estimated cost to the Park District, as determined by the Park District, to repair, replace or otherwise remediate damage done to Park District property by the Contractor. This assessment is in addition to any fines assessed for the same violation.

B. Damage or Injury to Trees

1. Damage or injury to trees includes, but is not be limited to: breakage, gouging, stripping, skinning, inappropriate pruning or cutting to bark, limbs, branches, trunks and/or roots, and/or compaction, dumping or flooding of roots or root zones.
2. Fines and Damages
   a. Lethal damage: The Contractor will be required to replace inch per caliper inch of trunk diameter, measured one foot above ground line, for any tree removed without authorization or damaged to such an extent that it must be removed. Replacement trees are to be planted in the same park when practical. If this is not feasible, replacement trees can be planted in other parks within the system with the approval of the Superintendent of Buildings and Grounds. Replacement trees should comply with the American Standard for Nursery Stock requirements in ANSI Z60.1 in regard to quality, size, genus and species.
   b. Non-lethal damage: Contractor will be charged the sum of $150.00 per square inch of surface area damaged or injured.
   c. The Park District Superintendent will make the final determination as to the extent of any damage, square inches of injury and whether the damage is extensive enough to require the removal of the damaged tree.

2. PRODUCTS

2.01 MATERIALS

A. Provide 4’ high, 11-guage, galvanized 2-inch, chain link fabric fencing.
B. 6’ (six foot) high steel T-post.

3. EXECUTION

3.01 TREE AND LANDSCAPE PROTECTION ZONES

A. General
    1. The location, limits and extent of tree and/or landscape protection zones are to be determined in the field by the Park District Superintendent prior to any work being performed.
    2. All tree and landscape protection zones must be identified and all fencing or other approved measures in place prior to any project-related activity being performed on site, including delivery of materials or supplies, vehicular traffic, installation of security fencing, etc., and must be maintained intact throughout the duration of the work.

3.02 PREPARATION

A. Temporary Fencing: Install 4’ high (minimum), 11-guage, galvanized 2-inch, chain link fabric fencing around Protected Root Zones where indicated on plans to protect remaining trees and vegetation from construction damage. Maintain temporary fence and remove when construction is complete.
    1. Provide access for landscape maintenance equipment.

B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Keep Protected Root Zones free of pooling, eroding, or excessive wetting caused by dewatering operations.

C. Do not store construction materials, debris, or excavated material inside Protected Root Zones. Do not permit vehicles or persistent foot traffic within Protected Root Zones; prevent soil compaction over root systems.

D. Maintain fence enclosed Protected Root Zones in pre-construction condition and free of weeds and trash.

E. Do not allow fires within protected root zones.

F. Tree Relocation: Remove trees from locations within the project limits and replant these trees at other locations within the project limits as shown on the plans. See Section 3.07.

3.03 EXCAVATION

A. Install shoring or other protective support systems to minimize sloping or benching of excavations adjacent to Protected Root Zones.

B. Do not excavate within Protected Root Zones, unless otherwise indicated.

C. Where utility trenches or pavement sub bases are required within Protected Root Zones the Owner should be consulted. Tunneling under or around roots by drilling, auger boring, pipe jacking, or digging by hand may be required.

D. All digging within drip-line shall be done by hand, except for pavement and curb excavation. For pavement and curb excavation, the Contractor shall dig to within 18" laterally of the desired limit of excavation. The remaining lateral 18" shall be dug by hand.

3.04 TREE AND LANDSCAPE PROTECTION FENCING

A. See PDOP (Park District of Oak Park) Standard Drawing L1.01 "Tree Protection Details" for layout and installation

B. Materials

1. Fabric: To be 4' high (minimum), 11-guage, galvanized 2-inch, chain link fabric fencing, securely fastened to posts with durable ties.
2. Posts: 6 ft long steel T post, to be installed on maximum 8 ft. spacing, driven 2 feet into the ground; final orientation to be straight and plumb.

C. Fencing is to completely enclose all protected zones.

D. Fencing is to be maintained intact at all times. Fencing will not be considered intact if fabric is missing, torn, or no longer attached to posts, posts are bent, broken, missing or otherwise non-functional, or if any other circumstances are present which compromise the integrity of the protection zone.

3.05 TEMPORARY ACCESS OVER ROOT ZONES

A. Approved temporary haul or access routes are to be constructed of a 6-inch thick layer of an approved

cushioning material, such as shredded mulch or non-limestone gravel.

B. The Park District Superintendent prior to any work being performed must approve the material, location and route of the temporary "access route".

C. Delivery of the cushioning material to the "access route" location and installation of the cushioning material must be done either by hand or with small bobcat-type machines to prevent compaction of the root zones.

D. The cushioning material shall be replenished as necessary to maintain a uniform 6-inch depth.

E. Removal of the cushioning material must be done either by hand or with small bobcat-type machines. All of the material must be completely removed. Where small machinery is used to remove the bulk of the material, removal of material in contact with the soil surface must be done by hand, and in such a way as to minimize disturbance of the soil surface and prevent damage to surface or feeder roots.

3.06 TREE AND LANDSCAPE PROTECTION DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES

A. General
   1. The Contractor is required to meet with the Park District Superintendent at the site prior to beginning work to review all work procedures, access and haul routes, and tree and landscape protection measures.
   2. The Park District Superintendent shall be on site during all operations within protection zones. 24-

hour notice must be given to Park District Superintendent, requesting his presence for work scheduled within the tree protection zone.

3. Work determined to have occurred within protection zones without the presence and approval of the Park District Superintendent will be considered a violation of the Contractor's Contract with the Park District.
4. Any damage to trees due to the Contractor's activities shall be reported to the Park District Superintendent within 6 hours so that proper remedial action can be taken.

B. Staging and Work Activities

1. No grade changes, including cutting (soil removal) or filling (deposition of soil) will be allowed within tree protection zones or on the root zones of trees.
2. Demolition, removal, repair, construction or other work on structures or underground features within protection zones shall be accomplished using the smallest equipment possible, operated from outside the protection zone.
3. Temporary vehicle clearance:
    a. Where temporary clearance is needed for access, tree branches shall be tied back to hold them clear of the clearance zone. Tie backs shall be done in such a manner as to prevent any cracking or breakage of branches or skinning of bark.
    b. The Park District Superintendent must approve all tree pruning required for clearance during construction. All pruning is to be performed by a Certified Arborist.

4. Chemical treatments

a. All herbicides, insecticides, pesticides or other chemicals proposed for use on the project site must be safe for use around trees, not easily transported by water, labeled for the use intended and approved for use by the Park District Superintendent.
b. All chemicals used on the project site must be used and disposed of according to the labeled directions. Landscape damage resulting from improper use or disposal will be considered a violation of the Contractor's Contract.

5. Spoil from trenches, basements, or other excavations shall not be placed within tree protection zones, either temporarily or permanently.

6. No burn piles or debris pits shall be placed within tree protection zones. No ashes, debris, or garbage may be dumped or buried within the tree protection zone.

C.Tree Removals

1. All trees to be removed from within the project area shall be removed by a qualified tree contractor.
2. Trees shall be cut near ground level and the stump ground out to a clear depth of eighteen inches below grade, or as otherwise specified.
3. Trees to be removed from project areas not within tree protection zones must be felled and removed in such a way as to avoid damage to trees(s) and under story to remain.
    a. Tree(s) to be removed which have branches extending into the canopy of tree(s) to remain must be removed in a manner that causes no damage to the branches, limbs,

trunk or bark of trees(s) and under story to remain.

b. Trees to be removed shall be felled so as to fall away from tree protection zones and to avoid pulling and breaking of roots of trees to remain. If roots are entwined, the Park District Superintendent may require first severing the major woody root mass before extracting the trees. This may be accomplished by cutting through the roots by hand, with a vibrating knife, rock saw, narrow trencher with sharp blades, or other root-pruning equipment as approved by the Park District Superintendent.

c. Extraction of downed trees within protection areas shall occur by lifting the material out either by hand or with equipment staged outside the tree protection zone. Dragging or skidding across the ground will not be permitted.

D. Pruning

1. A Certified Arborist shall perform all pruning.
2. Standards
    a. All pruning shall be in accordance with the Tree Pruning Guidelines (International Society of Arboriculture) and/or the ANSI A300 Pruning Standard (American National Standard for Tree Care Operations) and adhere to the most recent edition of ANSI Z133.1
    b. Guidelines:
        1. Interior branches shall not be stripped out.
        2. Pruning cuts larger than 4 inches in diameter, except to remove dead wood, shall be avoided.
        3. Pruning cuts that expose heartwood shall be avoided whenever possible.

4. No more than 20 percent of the foliage shall be removed within any single tree.

3. Root Pruning

a. Any grading, construction, demolition, or other below-ground work which may reasonably be expected to encounter tree roots must be monitored by the Park District Superintendent.

b. All root pruning is to be performed by a Certified Arborist.

c. Before grading, excavation or trenching for project work adjacent to tree protection zones, trees shall be root pruned to a depth of 24 inches as follows:

1. A 24" deep trench shall be manually dug one (1) foot outside the tree protection zone perimeter.
2. As roots are exposed, they shall be cleanly cut with a hand saw, vibrating knife, rock saw, narrow trencher with sharp blades, or other root-pruning equipment approved by the Park District Superintendent.

d. Any roots damaged during grading or construction shall be exposed to sound tissue and cut cleanly with a saw.

E. Brush Removal

1. Any brush clearing required within the tree protection zone shall be accomplished with hand-operated equipment.
2. Removal of all downed brush within protection areas shall occur by lifting the material out either by hand or with equipment staged outside the tree protection zone. Dragging or skidding across the ground will not be permitted.
3. Where approved by the Park District Superintendent, brush removed from the project site may be chipped and chips spread underneath trees within the tree protection zone to a maximum depth of 6 inches, leaving the trunks clear of mulch.

3.07 TREE RELOCATION

A. Digging of Trees:
   1. Trees shall not be dug until the Contractor is ready to transport them from their original locations to the site of the new locations.
   2. The maximum time lapse between digging and replanting shall be four (4) hours.
   3. Trees over 4 inch diameter (caliper) shall be dug carefully with 90" minimum size tree spade, avoiding injury to the tree or damage of the roots, particular attention shall be given to fibrous roots.
   4. Immediately after digging, roots shall be protected against drying out and freezing.
   5. The size of the tree space shall meet horticultural arborist nursery standards in regard to caliper of tree and size of root ball.
   6. Trees being moved from original location directly to new location do not have to be wrapped in burlap and twine.
   7. Trees shall be dug only when the air temperatures exceed 35 degrees Fahrenheit.

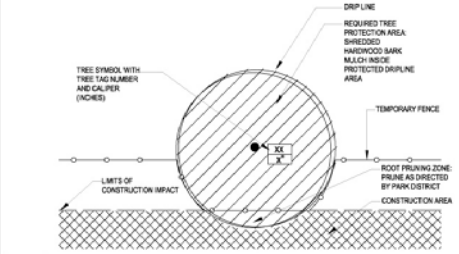
3.08 CLEAN-UP AND DISPOSAL

A. General

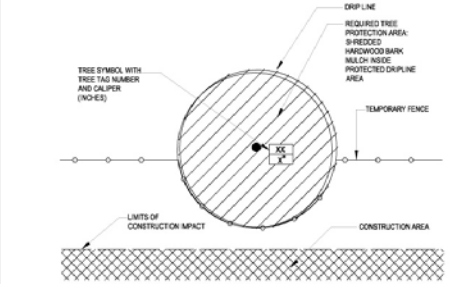
1. Upon completion of work, the Contractor is responsible for ensuring that all landscaped areas within the scope of work, including adjacent areas that may have been impacted, are clean and free of trash or debris.
2. All landscaped areas are to be restored to their previous condition, to the satisfaction of the Park District.
3. All excess material, debris and/or waste generated by the Contractor's operations is to be disposed of properly, off Park District property, by the Contractor.

END OF Park District of Oak Park STANDARD SPECIFICATION

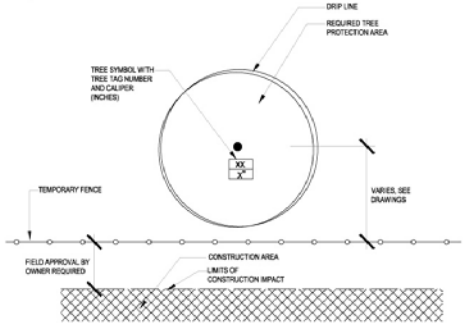
APPENDIX D: Tree Protection Details



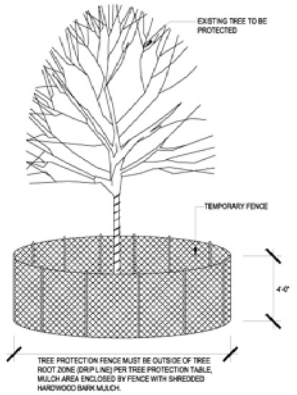
1 FENCE INTERSECTS TREE DRIPLINE ROOT PRUNING REQUIRED
L1.01 **SCALE: Not to Scale**



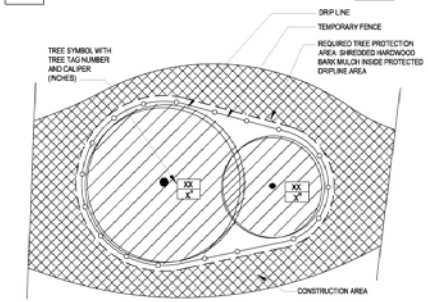
2 FENCE INTERSECTS TREE DRIPLINE NO ROOT PRUNING REQUIRED
L1.01 **SCALE: Not to Scale**



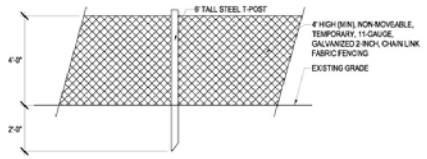
3 TYPICAL TEMPORARY FENCE FOR TREE AND BARK PROTECTION
L1.01 **SCALE: Not to Scale**



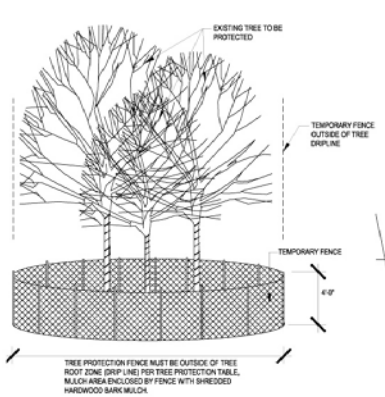
4 TREE PROTECTION ENTIRELY WITHIN CONSTRUCTION AREA
L1.01 **SCALE: Not to Scale**



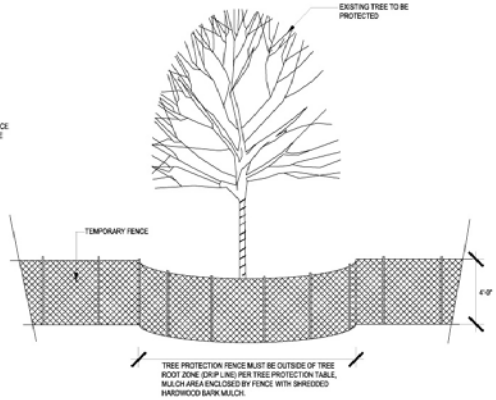
5 FENCE ENTIRELY WITHIN CONSTRUCTION AREA
L1.01 **SCALE: Not to Scale**



6 TYPICAL TREE PROTECTION FENCE
L1.01 **SCALE: Not to Scale**



7 GROUP TREE PROTECTION ENTIRELY WITHIN CONSTRUCTION AREA
L1.01 **SCALE: Not to Scale**



8 FENCE INTERSECTS TREE DRIPLINE NO ROOT PRUNING REQUIRED
L1.01 **SCALE: Not to Scale**

TREE PROTECTION	MEASURED TREE CALIPER	RADIUS OF TREE PROTECTION FENCE AT EDGE OF DRIP LINE	MULCH RADIUS UNDER ENTIRE DRIP LINE
PROTECTED PARK AREA	VARIES	NONE, TREE PROTECTED BY TEMPORARY FENCE AT PROTECTION LIMITS	NONE
TREE WITH DRIP LINE INTERSECTING THE TEMPORARY FENCE	0 CM -20.3 CM (0-8")	MINIMUM 2.44M (8') OR AS APPROVED BY PARK DISTRICT	YES
TREE WITH DRIP LINE INTERSECTING THE TEMPORARY FENCE	>20.3 CM-63.5 CM (>8"-25")	0.304M (1') RADIUS FENCE FOR EACH 2.54CM (1") CALIPER OR AS APPROVED BY SUPERINTENDENT	YES
TREE WITH DRIP LINE INTERSECTING THE TEMPORARY FENCE	>63.5 CM (>25")	MINIMUM 2.44 (8') OR AS APPROVED BY PARK DISTRICT	YES
TREE WITH DRIP LINE INTERSECTING THE TEMPORARY FENCE, ROOTPRUNED	0 CM -20.3 CM (0-8")	MINIMUM 2.44M (8') OR AS APPROVED BY PARK DISTRICT	YES
TREE WITH DRIP LINE INTERSECTING THE TEMPORARY FENCE, ROOTPRUNED	>20.3 CM-63.5 CM (>8"-25")	0.304M (1') RADIUS FENCE FOR EACH 2.54CM (1") CALIPER OR AS APPROVED BY SUPERINTENDENT	YES
TREE WITH DRIP LINE INTERSECTING THE TEMPORARY FENCE, ROOTPRUNED	>63.5 CM (>25")	MINIMUM 2.44 (8') OR AS APPROVED BY PARK DISTRICT	YES
TREE TO BE RELOCATED	0 CM -20.3 CM (0-8")	NONE, TREE PROTECTED BY TEMPORARY FENCE AT PROTECTION LIMITS	YES, IF PROTECTED
TREE TO BE REMOVED	>63.5 CM (>25")	TREES MUST BE REMOVED PRIOR TO START OF CONSTRUCTION	NONE

9 TREE PROTECTION NOTES AND TABLE
L1.01 **SCALE: Not to Scale**

PARK DISTRICT OF OAK PARK

KEY SECTION (NOT TO SCALE)

KEY PLAN (NOT TO SCALE)

TREE PROTECTION DETAILS

PARK DISTRICT OF OAK PARK

REVISIONS		
NO.	DATE	DESCRIPTION
	2/13/08	PRELIM REVIEW

REVIEWED	
DRAWN BY:	AM
CHECKED BY:	JB
SCALE:	N.T.S.
DATE:	2-6-08

SIGNED: DATE: 4/30/08

LICENSE EXPIRES: 08/31/09

L1.01

Drawing No.

APPENDIX E: Hazards Rating Form

A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas

TREE HAZARD EVALUATION FORM 2nd Edition

Site/Address: _____

Map/Location: _____

Owner: public _____ private _____ unknown _____ other _____

Date: _____ Inspector: _____

Date of last inspection: _____

HAZARD RATING:

_____ + _____ + _____ = _____

Failure Potential + Size of part + Target Rating = Hazard Rating

_____ Immediate action needed

_____ Needs further inspection

_____ Dead tree

TREE CHARACTERISTICS

Tree #: _____ **Species:** _____

DBH: _____ **# of trunks:** _____ **Height:** _____ **Spread:** _____

Form: ☐ generally symmetric ☐ minor asymmetry ☐ major asymmetry ☐ stump sprout ☐ stag-headed

Crown class: ☐ dominant ☐ co-dominant ☐ intermediate ☐ suppressed

Live crown ratio: _____ % **Age class:** ☐ young ☐ semi-mature ☐ mature ☐ over-mature/senescent

Pruning history: ☐ crown cleaned ☐ excessively thinned ☐ topped ☐ crown raised ☐ pollarded ☐ crown reduced ☐ flush cuts ☐ cabled/braced ☐ none ☐ multiple pruning events Approx. dates: _____

Special Value: ☐ specimen ☐ heritage/historic ☐ wildlife ☐ unusual ☐ street tree ☐ screen ☐ shade ☐ indigenous ☐ protected by gov. agency

TREE HEALTH

Foliage color: ☐ normal ☐ chlorotic ☐ necrotic **Epicormics?** Y N

Foliage density: ☐ normal ☐ sparse **Leaf size:** ☐ normal ☐ small

Annual shoot growth: ☐ excellent ☐ average ☐ poor **Twig Dieback?** Y N

Woundwood development: ☐ excellent ☐ average ☐ poor ☐ none

Vigor class: ☐ excellent ☐ average ☐ fair ☐ poor

Growth obstructions:

☐ stakes ☐ wire/ties ☐ signs ☐ cables

☐ curb/pavement ☐ guards

☐ other _____

Major pests/diseases: _____

SITE CONDITIONS

Site Character: ☐ residence ☐ commercial ☐ industrial ☐ park ☐ open space ☐ natural ☐ woodland\forest

Landscape type: ☐ parkway ☐ raised bed ☐ container ☐ mound ☐ lawn ☐ shrub border ☐ wind break

Irrigation: ☐ none ☐ adequate ☐ inadequate ☐ excessive ☐ trunk wettled

Recent site disturbance? Y N ☐ construction ☐ soil disturbance ☐ grade change ☐ line clearing ☐ site clearing

% dripline paved: 0% 10-25% 25-50% 50-75% 75-100% **Pavement lifted?** Y N

% dripline w/ fill soil: 0% 10-25% 25-50% 50-75% 75-100%

% dripline grade lowered: 0% 10-25% 25-50% 50-75% 75-100%

Soil problems: ☐ drainage ☐ shallow ☐ compacted ☐ droughty ☐ saline ☐ alkaline ☐ acidic ☐ small volume ☐ disease center ☐ history of fail ☐ clay ☐ expansive ☐ slope _____ ° aspect: _____

Obstructions: ☐ lights ☐ signage ☐ line-of-sight ☐ view ☐ overhead lines ☐ underground utilities ☐ traffic ☐ adjacent veg. ☐ _____

Exposure to wind: ☐ single tree ☐ below canopy ☐ above canopy ☐ recently exposed ☐ windward, canopy edge ☐ area prone to windthrow

Prevailing wind direction: _____ Occurrence of snow/ice storms ☐ never ☐ seldom ☐ regularly

TARGET

Use Under Tree: ☐ building ☐ parking ☐ traffic ☐ pedestrian ☐ recreation ☐ landscape ☐ hardscape ☐ small features ☐ utility lines

Can target be moved? Y N **Can use be restricted?** Y N

Occupancy: ☐ occasional use ☐ intermittent use ☐ frequent use ☐ constant use

TREE DEFECTS

ROOT DEFECTS:

Suspect root rot: Y N Mushroom/conk/bracket present: Y N ID: _____

Exposed roots: ☐ severe ☐ moderate ☐ low Undermined: ☐ severe ☐ moderate ☐ low

Root pruned: _____ distance from trunk Root area affected: _____% Buttress wounded: Y N When: _____

Restricted root area: ☐ severe ☐ moderate ☐ low Potential for root failure: ☐ severe ☐ moderate ☐ low

LEAN: _____ deg. from vertical ☐ natural ☐ unnatural ☐ self-corrected Soil heaving: Y N

Decay in plane of lean: Y N Roots broken Y N Soil cracking: Y N

Compounding factors: _____ Lean severity: ☐ severe ☐ moderate ☐ low

CROWN DEFECTS: Indicate presence of individual defects and rate their severity (s = severe, m = moderate, l = low)

DEFECT	ROOT CROWN	TRUNK	SCAFFOLDS	BRANCHES
Poor taper				
Bow, sweep				
Codominants/forks				
Multiple attachments				
Included bark				
Excessive end weight				
Cracks/splits				
Hangers				
Girdling				
Wounds/seam				
Decay				
Cavity				
Conks/mushrooms/bracket				
Bleeding/sap flow				
Loose/cracked bark				
Nesting hole/bee hive				
Deadwood/stubs				
Borers/termites/ants				
Cankers/galls/burls				
Previous failure				

HAZARD RATING

Tree part most likely to fail: _____

Inspection period: _____ annual _____ biannual _____ other _____

Failure Potential + Size of Part + Target Rating = Hazard Rating

_____ + _____ + _____ = _____

Failure potential: 1 - low; 2 - medium; 3 - high; 4 - severe

Size of part: 1 - <6″ (15 cm); 2 - 6-18″ (15-45 cm); 3 - 18-30″ (45-75 cm); 4 - >30″ (75 cm)

Target rating: 1 - occasional use; 2 intermittent use; 3 - frequent use; 4 - constant use

HAZARD ABATEMENT

Prune: ☐ remove defective part ☐ reduce end weight ☐ crown clean ☐ thin ☐ raise canopy ☐ crown reduce ☐ restructure ☐ shape

Cable/Brace: _____ Inspect further: ☐ root crown ☐ decay ☐ aerial ☐ monitor

Remove tree: Y N Replace? Y N Move target: Y N Other: _____

Effect on adjacent trees: ☐ none ☐ evaluate

Notification: ☐ owner ☐ manager ☐ governing agency Date: _____

COMMENTS