

# Brookside Glen Basin Fact Sheet



*It is the mission of the Frankfort Square Park District to provide accessible, nondiscriminatory recreational services, facilities, and open space in an environmentally conscious, fiscally responsible manner.*

## **Why are those ponds there anyway?**

The five “*ponds*” located in the Brookside Glen subdivision west of 80<sup>th</sup> Avenue are actually not ponds at all, but shallow bottom detention basins. They were created to prevent flooding of homes by slowing the rate of runoff from the Brookside Glen development.

## **How do they work?**

When land is altered to build homes and other development, the natural system of trees, plants, and even agricultural crops, is disrupted. Relatively spongy porous soil is replaced with harder nonporous surfaces such as streets, sidewalks, driveways, and lawns over compacted soils. As a result, less rainwater is soaked up, and the remaining water seeks its lowest level.

The basins provide a place for the water to go, preventing it from entering area homes and basements. The basins then act as a holding area where the water can be slowly released downstream.

## **Do they serve any other purpose?**

While protecting homes from flooding is the primary function of the basins, they also improve the quality of the storm water that enters the Hickory Creek Watershed.

Increased development causes a faster rate of water runoff, which in turn increases the amount of pollution carried within the storm water, including sediment, and phosphorus and nitrogen from fertilizers; salts, oil and grease from roads and parking surfaces; even bacteria from pet waste.

These pollutants, which are a direct result of common outdoor human activities in the neighborhood, degrade water quality, limit the habitat for wildlife in streams, and are harmful to the watershed at large.

## **Who built the detention basins?**

The developer of the Brookside Glen subdivision was required to provide compensatory water storage facilities as outlined by the Army Corp of Engineers. The basins in Brookside Glen were designed by Branecki-Virgilio & Associates, and approved by the Village of Tinley Park’s engineering firm, Robinson Engineering.

## **Why don’t these basins look like the ponds you typically see at a golf course? What’s with all of the tall vegetation around them?**

The creation of vegetated buffers or “no-mow” zones around the basin, as well as the establishment of wetland vegetation within the basins, help to prevent erosion, improve water quality by filtering pollutants in storm water run off, and create wildlife habitat. These types of plantings also help to reduce algae growth within the basins and minimize the need for fertilizer, herbicide and irrigation.



This native landscaping design was approved by the Village of Tinley Park, and installed originally by JF New & Associates. These *Best Management Practices* (BMP’s) are supported

by the Clean Water Act, Environmental Protection Agency, Illinois Department of Natural Resources, Will/South Cook Soil & Water Conservation District, Chicago Wilderness, and the Village of Tinley Park. The Park District was and is supportive of the naturalized detention basins.



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### **Who owns these basins?**

The Frankfort Square Park District received ownership of the five shallow bottom detention basins with native buffers in 2001. The Park District is maintaining the basins as they were originally designed, and will continue to do so. In the fall of 2009, Chris King, Engineer for the Village of Tinley Park confirmed all detention basins were operating correctly.

### **How are they being maintained?**

Specially trained and licensed park staff use *Best Management Practices* for native buffer areas, which is very different than traditional landscaping with turf grass. A 15-25 foot “no-mow” and “chemical free” zone is maintained around the basin’s edge. When needed (typically once a year) this zone is burned, or mowed if burning is not possible. It is also inspected for invasive species such as Teasel, Canadian Thistle, Purple Loosestrife, and Phragmites. The invasive species are selectively removed by hand, or if necessary, with applications of appropriate herbicides. The area may also be over seeded and planted with native seed mixes and plugs.

### **Why do these basins have water lilies?**

Just as deep rooted native plants were installed in the “no-mow” buffers, a variety of wetland vegetation was also installed by J.F.New & Associates, including White Water Lilies (*Nyphaea odorata*).

Wetland vegetation filters sediment by slowing down storm water as it enters the basin. The plant itself cleanses the water by taking up and processing pollutants. This reduction of pollutants, as well as the shade provided by the leaves of the lilies, minimizes the growth of algae.

### **Why are there so many water lilies?**

The white water lilies are ideally suited for this shallow bottom detention environment, and have flourished accordingly. Excess fertilizer from neighborhood lawns are a major factor as well.

### **Don’t so many Water Lilies create a breeding ground for mosquitoes?**

Actually, no. What might appear at first glance to be stagnant water among the lilies, is in fact a healthy ecosystem teeming with life in a constant battle for survival. Mature mosquitoes are food for birds, dragonflies and damselflies, all of which are plentiful around the basins. The mosquito larvae are a food source for the dragonfly and damselfly larvae, and for fish as well.

Although not designed at a depth that support fish year round, the basins, including the water lilies, are a haven for many different types of mammals, reptiles, amphibians, birds, and beneficial insects that are constantly under pressure from development. The habitat that is created sustains a food web, including both predators and prey.

Find out more about mosquitoes and where they breed: [www.extension.entm.purdue.edu/mosquito\\_tool/index.html](http://www.extension.entm.purdue.edu/mosquito_tool/index.html)

### **Won’t the the lilies detract from my home value?**

Naturalized detention basins are very different from manicured golf course ponds. If your expectations are the latter, the look of the basins will probably never be pleasing to you. However, many potential buyers may find this natural setting highly desirable.

It is important to remember their purpose and why they look the way they do. The basins in Brookside Glen were designed and created to prevent the flooding of homes and improve the quality of the storm water that enters the Hickory Creek Watershed. Perhaps it will



never be the type of landscaping that you would choose for your own yard, but in an open space environment of the parks, it is perfectly appropriate.

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## **Even though the lilies serve a purpose, aren't there just too many? I really don't like how they look.**

Some residents of Brookside Glen have expressed concern about the aesthetics of the basins, especially the water lilies. While the water lilies are native to Illinois and beneficial to the ecosystem of the basin, the Park District has respected and tried to address the concerns of residents. To that end, the Park District has taken several measures to limit and reduce the number of water lilies in the Brookside Glen detention basins.

## **So what has been done so far?**

During the 2008 growing season, mechanical removal was conducted by park staff, with limited results. Chemical applications were then applied, utilizing the services of contractor Autumn Blaze. To further these efforts, park staff received training and licensing from the Illinois Department of Agriculture for application of aquatic chemicals.

During 2009, park staff administered chemical applications following the accepted *Integrated Pest Management* (IPM) philosophy. With IPM, the lowest levels of EPA approved chemical application should be applied first, followed by higher rates when necessary. The plant's life cycle during the growing season dictates when these chemicals should be applied.

## **So what happens next?**

The Park District has requested proposals for lily pad treatment from three different outside maintenance companies, and is considering the feasibility of such outsourcing in its annual budgetary planning. Staff has also been directed to draft policy for native area management that could be implemented throughout the district that would directly relate to residents' concerns.

## **Will it ever be open water?**

For almost half the year, it is, but some residents would like to see 100% eradication of the lily pads. However, total elimination of native aquatic plants from a site should never be the goal of a management plan, due to the benefits of aquatic vegetation in a body of water.

Although no one can predict nature, the consequence of a large reduction in lilies may be an increase in the amount of algae. The nutrients that come into the basins with the runoff from homeowners lawns will continue. The nitrogen and phosphorous not processed by the water lilies will instead be utilized by other aquatic vegetation. Without the shading from the lily leaves, blooms of algae are likely, and one resident concern may be traded for another.

Prairie Park  
Frankfort, IL  
July 25, 2009



## **Isn't it a lot to think about?**

As the Park District goes forward in addressing the lily pads and creating policy for all of its bodies of water, many things need to be considered. Long and short term costs, ability to duplicate these efforts as the Park District owns and maintains 23 basins, preservation of natural systems, and long term health of the area.

As stated before, these detention basins drain directly into the Hickory Creek Watershed, whose aquifer provides the Village of Frankfort's drinking water supply. This water supply serves the majority of Frankfort Square Park District residents.

Due to their design, the only designated purpose for the detention basins in Brookside Glen besides flood control, is wildlife viewing and habitat, which they provide. Other than for aesthetics, there is no *ecological* reason to manage for water lilies.



**Where can I learn more?**

The Park District’s actions in its natural areas, including the Brookside Glen detention basins, are founded on professional researched based approaches, supported by experts in the field. Professional resources the district has utilized to develop best management practices in this area include:

*University of Illinois Extension Educator* - George F. Czapar, PhD  
 Integrated Pest Management BMP Water Quality Coordinator

*Professional Contractors:* LRMG, who completed the Park District’s Native Management Plan and Tree Survey, Autumn Blaze, Arbor Care, JF New & Associates, Homer Tree Service, Tall Grass Restoration, and Wiley Tree Care.

*Letters of support for this type of management* include Will/South Cook Soil & Water Conservation District, the Village of Tinley Park, the Village of Frankfort, and the Illinois Department of Natural Resources.



A copy of the *Frankfort Square Park District’s Native Area Management Report* is available for viewing by residents at the Community Center located at 7540 West Braemar Lane.

The Frankfort Square Park District encourages all community input. Please contact us at [www.fspd.org](http://www.fspd.org) .

**EPA publications of interest include:**

- <http://www.epa.state.il.us/water/conservation/lake-notes/home-yard.pdf>
- <http://www.epa.state.il.us/water/conservation/lake-notes/shoreline-buffer.pdf>
- <http://www.epa.state.il.us/water/conservation/lake-notes/stormwater-detention-ponds.pdf>
- <http://www.epa.state.il.us/water/conservation/lake-notes/fertilizers-pesticides.pdf>

