

26. Village of Glenview-Owned Detention Basins (Maps C, D, N, O, and P)

Site #'s: C-5, D-2 & 3, N-3, 4, & 6, O-2 & 4, and P-1

Ownership: Village of Glenview

Overall size: 8.22 acres

Subwatersheds: West Fork and Des Plaines

Existing Ecological Conditions: Nine Village of Glenview-owned dry-bottom detention basins were encountered during the field surveys (Techny Basin, site F-7, is an additional Village-owned detention basin described previously in High Priority Write-up #8). All of the basins are constructed in a similar fashion; the side-slopes and bottom of each basin are primarily mowed turf grass. There is typically at least one inlet and outlet structure. In most cases the outlet is smaller than the inlet and located at approximately the same elevation as the inlet. Presumably, water entering the basin during major rain events is retained for only short periods of time because the release rate is based on diameter of the outlet structure. Small rain events are either absorbed by the basin, or flow directly through the basin with no retention time (also called short circuiting). In cases where a basin holds moisture in the bottom, low quality wetland plants can be found. The following summary includes a short description of each detention basin and provides a photograph of each. The Restoration and Management section provides more detailed information regarding retrofit opportunities that are generally applicable to all the dry-bottom basins observed.

Site C-5 (Pfungsten Road Basins; 1.47 acres)

Two dry-bottom basins are located at site C-5 (Map C). Both basins are found within the West Fork subwatershed. The northern basin is located just west of Pfungsten Road between Harvest Lane and Kiess Drive. The second smaller basin is also located off Pfungsten Road between Lizette Lane and Brett Lane. Both basins are entirely mowed turf grass and present good opportunities to remove turf and naturalize with native plant species to help infiltrate and clean stormwater. In addition, the outlet at the larger northern site is exhibiting mild erosion that will likely get worse with time if not repaired.



Dry-bottom detention basin (site C-5).

Site D-2 (Keenan Lane Basin; 0.27 acre)

This small dry-bottom detention basin at the end of Keenan Lane and west of Maple Leaf Drive (Map D) is located within the West Fork subwatershed. It is constructed similar to other Village-owned dry-bottom basins observed during the survey. The basin is lined with mowed turf grass. Recommendations include naturalizing with native vegetation to improve infiltration and water quality. Naturalizing is also recommended to improve aesthetics due to the basin's location within a residential subdivision.



Dry-bottom detention basin (site D-2).

Site D-3 (Vantage Lane Basin; 0.95 acre)

The Vantage Lane dry-bottom detention basin is relatively large and located within a residential development in the West Fork subwatershed (Map D). Two stormwater inlets drain to the basin, presumably from surrounding residential streets. Excess water leaves the basin through a single outlet. The side-slopes and bottom of the basin are entirely turf grass mowed by the Village of Glenview. This basin presents an excellent larger scale naturalization opportunity within a residential neighborhood that would not only improve water quality but would also improve aesthetics.



Dry-bottom detention basin (site D-3).



Dry-bottom detention basin (site N-3).

Sites N-3 & N-4 (Bette Lane Basins; 1.25 acres)

Two small, dry-bottom detention basins are located off Bette Road in a residential subdivision in the Des Plaines River subwatershed (Map N). The first site (N-3) (0.73 acre) is a typical dry-bottom detention basin with turf-lined slopes, but it does retain some water on the bottom. These conditions provide an excellent opportunity to retrofit the side-slopes and basin bottom to native plants. Naturalizing also will improve aesthetics along this highly visible site.

The second basin (N-4) (0.52 acre) is behind several residential houses and not highly visible. It too is planted to turf grass and does not appear to hold significant amounts of stormwater during rain events. Although naturalizing with native plants is recommended, it is not high priority.



Dry-bottom detention basin (site N-4).



Dry-bottom detention basin (site N-6).

Site N-6 (Neil Basin; 0.73 acre): This highly visible dry-bottom detention basin is located just south of Glen Grove School off Glenview Road in the Des Plaines River subwatershed. (Map N). The basin is covered with mowed turf grass along the slopes and a mix of turf and spike rush on the bottom. One inlet is present on the west end. Water leaves the basin through an outlet on the west end of the basin. Based on the dominance of turf and rush at the bottom of the basin, it does not appear to retain much water during rain events, rather it short circuits from the inlet directly to the outlet. Retrofitting the basin with native plants and potentially restricting the outlet size to detain water are potential opportunities.

Site O-2 (Highland Basin; 0.64 acre)

The Highland dry-bottom detention basin is adjacent to a cul-de-sac at the north end of Highland Lane and located within the West Fork subwatershed (Map O). A wood fence separates the site from East Lake Avenue to the north. This low visibility basin is lined with turf grass on the side-slopes and bottom. This is a lower priority site for naturalization because of its low visibility, although benefits of naturalizing the basin with native plants would be improved water quality and infiltration capabilities.



Dry-bottom detention basin (site O-2).

Site O-4 (Lindenwood Lane Basin; 1.40 acres)

The Lindenwood dry-bottom detention basin is located within the West Fork subwatershed (Map O). This basin presents the best opportunity to retrofit an existing dry-bottom detention basin. Like



Dry-bottom detention basin (site O-4).

most dry-bottom basins observed in Glenview, this basin is entirely turf grass along the side-slopes, but retains significant wetness on the bottom. This wetness appears to be the result of a continuous flow of water that enters the basin through an inlet on the south side, and runs through a concrete channel directly to the outlet on the north side of the basin. Cracks in the concrete channel are likely creating wet conditions that support a variety of low-quality wetland plants. The recommended retrofit includes naturalizing the slopes and bottom to native vegetation, supplementing the bottom of the basin with native plant plugs or interseeding,

and removing the concrete channel so that water entering the basin is more able to disperse and infiltrate. A second but more complex option is to create a wet-bottom basin by changing the elevation and size of the outlet structure. The resulting shallow pond/wetland would increase retention time, and could be planted with native emergent plants to improve water quality.

Site P-1 (Shermer Rd Basin: 1.51 acres)

The Shermer Road dry-bottom detention basin is located behind the police station and adjacent to the Village Capital Projects office (Map P). The basin is located within the West Fork subwatershed. It appears to be relatively new construction, built to capture runoff from the police station parking lot and other adjacent areas through six inlet/outlet structures. The basin itself is planted to turf grass on the slopes and bottom. This site presents an excellent opportunity to retrofit an existing dry-bottom detention basin using native plants. It is also a highly visible area, located adjacent to Village buildings/offices. In addition, debris is accumulating in at least one inlet/outlet structure and should be removed to avoid flooding issues.



Dry-bottom detention basin (site P-1).

Restoration and Management Recommendations:

Stormwater basins are the most common stormwater management Best Management Practice (BMP) used in developed areas to control sediment, flooding, and water quality. However, older basins and those not properly constructed do little if anything to mitigate the problems that stormwater presents. Stormwater runoff from urban areas that is not properly detained and treated can have negative impacts to downstream water quality by causing flooding, pollutant loading, sedimentation, and stream channel degradation and instability. Dry-bottom detention basins planted to turf grass offer little to no detention time and do little to improve the quality of stormwater or the rate at which it is released into stormsewers and receiving streams.

The same general retrofits are recommended for all Village-owned, dry-bottom detention basins. These retrofits include:

- Replace turf grass, with native vegetation for improved buffer filtration, wildlife habitat, and bank stabilization. Turf grass on side-slopes should be replaced with a mesic to dry-mesic prairie mix; the bottom of the basin should be planted to wet-mesic prairie or wet prairie mix depending on the moisture content. Basins that are retrofitted to hold water can be planted along the edges with native emergent plants.
- Convert dry-bottom basins to wet or wetland-bottom basins by raising the elevation and reducing size of the outlet structure. Restrictors can be installed on existing outlets to increase detention time and help infiltrate water.
- Remove concrete and other low flow channels to allow water to spread out and be filtered by native vegetation.
- Repair erosion or other problems associated with inlets and outlets.