

5. North Navy Ditch (Map F)

Site number: F-4

Ownership: Village of Glenview

Overall size: 7.95 acres

Subwatershed: West Fork of North Branch of Chicago River

Mapped Land Cover on Site:

River/Stream/Ditch (0.10 acre): North Navy Ditch extends east to the West Fork from Old Willow Road. A low spillway at its midpoint diverts flows northward (north-south segment) to the West Fork during low flows. During high flows, water tops the spillway and flows directly east (east-west segment) to the West Fork.

Unassociated Woody Growth (7.65 acres): Much of the stream banks along North Navy Ditch are dominated by young woody growth. However, selective clearing, brushing, and native seeding and planting occurred in 2002 and 2003, primarily along the east-west segment that extends from John's Drive to the West Fork.



North Navy Ditch facing west near confluence with West Fork.

Emergent/Marsh (0.20 acre): A small pocket of native emergent vegetation is located on the downstream end of the spillway. This likely formed as a result of high flows scouring the channel bottom to create the depression that remains inundated even when the channel downstream is dry.

Existing Ecological Conditions: North Navy Ditch extends east to the West Fork from John's Drive (south of the Metra Station). It is partially blocked at its midpoint by a low spillway that diverts low flows northward via the north-south segment to the West Fork above Techny Basin. During high flows, much of the water in North Navy Ditch flows over the spillway directly east via the east-west segment to the West Fork.

North Navy Ditch flows primarily through developed areas before entering the West Fork where it is bordered by open space; Valley Lo Golf Course to the north and Loyola Academy Parcel to the south. A narrow strip of unmanaged unassociated woody growth is found along much of the Ditch. Common species include invasive understory trees, shrubs, and herbaceous



The eastern half of North Navy Ditch, facing east toward West Fork from rock spillway. Planted with native species in 2003 & 2004. Note *Lobelia cardinalis* in bloom in 2004 on left side of photo.

plants such as box elder, buckthorn, garlic mustard, and teasel. The east-west segment of North Navy Ditch was however selectively brushed and seeded with native plants in 2002 and 2003. This segment maintains much high species diversity that the north-south segment that has not been managed. Comprehensive vegetation monitoring along the managed east-west segment was conducted by MWH Americas, Inc. in 2003. Floristic quality analysis revealed general success of the restoration effort and a plant community of at least marginal ecological quality. In addition, one small depressional area classified as emergent/marsh is located on the downstream end of the spillway and within the restoration area. This area contains several emergent plant species.



Unassociated woody growth on North-South segment of North Navy Ditch.

Very little erosion is present along the banks of the east-west segment of North Navy Ditch. Brushing and native plant installation along the east-west segment appears to have increased the stability of the banks. The diversion spillway is likely helping protect against severe bank erosion along the north-south segment by reducing flows during significant rain events but some moderate erosion is present. In addition, debris blockages are absent or not problematic throughout the channel, further increasing stream stability.

Restoration and Management Recommendations: The Village has conducted successful management along the east-west segment. Similar restoration work is recommended for the banks of the north-south segment. The current hydrologic pattern whereby low flows travel north toward the West Fork should be maintained to protect higher quality plantings and non-eroded banks east of the spillway. Long term management is recommended along the east-west segment downstream from the spillway to maintain the status of work completed in previous years. This management is likely to include additional selective brushing and supplementing the slopes with additional native seed and plant species. All segments of North Navy Ditch would also benefit from the installation of artificial riffles constructed of natural rock. Artificial riffles greatly increase oxygen levels for aquatic fauna such as fish and macroinvertebrates and also provide habitat. Restoring the riparian and in-stream habitat along North Navy Ditch will benefit water quality, improve wildlife habitat, and create more functional greenways that connect other open spaces.