

## Willand Pond and Surrounding Property High Water: Summary of Issue

The cities of Dover and Somersworth share shoreline around Willand Pond, a 66 acre body of fresh water, in the northeast section of Dover/south west section of Somersworth. Around the turn of the last century, Willand Pond was the site of a popular recreation area with dance halls and early electric lights accessible by trolley car. Today it is a quiet tree-lined pond squeezed between two highly traveled state routes. The pond is stocked with trout and is surrounded by a trail that follows the northern shoreline jointly developed by both Dover and Somersworth and open to small boats without motors.



The pond, in the Piscataqua watershed, was called Humphrey's Pond in the late 18th century. In the early 20th century Willand Pond housed a Central Park at the end of what is now called Central Avenue. Previously it was called Burgett Park. None of the amenities of the grand park exist today, as they faded with the demise of the trolley cars that made Willand Pond quickly accessible to anyone in neighboring Dover and Somersworth.

In 1904 the western shoreline of the pond, located in Dover was subdivided into camp lots and the area served as a location for seasonal camp development. These camps were converted over time into four season homes, and the area has remained as a residential neighborhood ever since. This area includes Newton, Auburn, Sherman, Lake, Gage and Earl Streets as well as Lakeview Drive.



In the 1950s an automobile race track was developed north of the park, across from Long Hill Road, and behind what is now Midway Buick along Route 108. In the center of the track was also a drive-in movie theater. In the 1970s an apartment complex was developed just north of the pond in Dover. The southern and eastern shores were slowly developed over the same timeframe. Along the south and east shores High Street and Central Avenue were merged via the Weeks Traffic Circle in the 1950s and the circle brought more commercial development along the roadways.

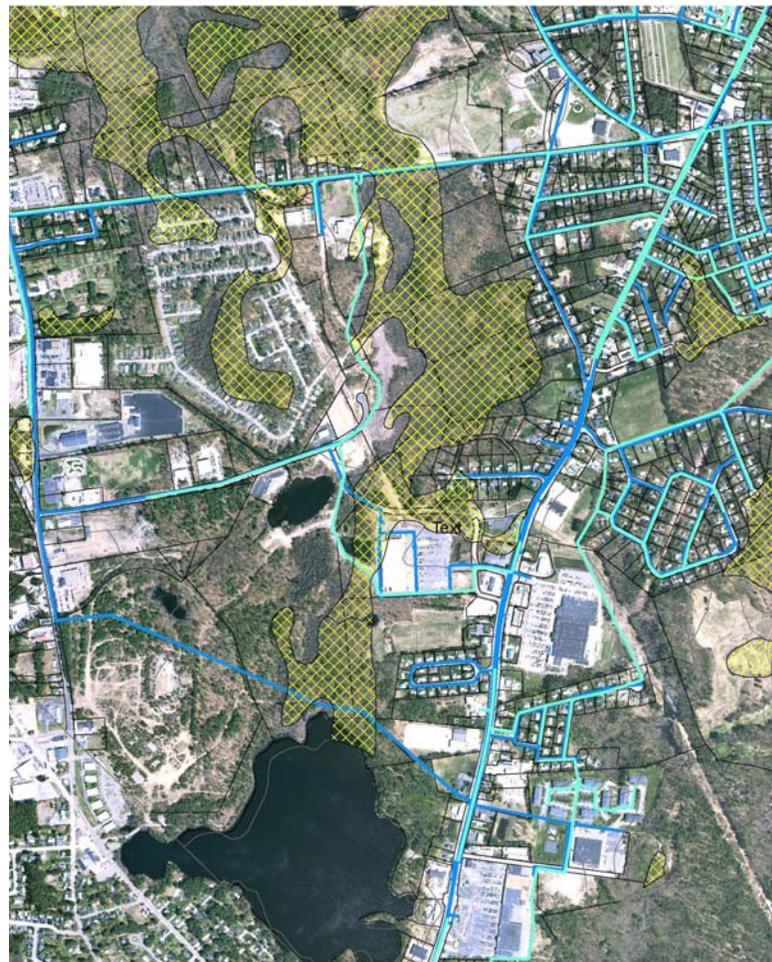
Over the course of the last few decades development has occurred in the area surrounding Willand Pond. This development included a PSNH service center (where the current Yangtze Restaurant is located) adjacent to the pond as well as a shopping center (Tri-City Plaza – Market

Basket) on High Street, located in Somersworth, during the 1970's and 1980's. In the 1990's, the Weeks Traffic Circle was reconfigured into a four way intersection and new development began to occur along Route 108, located in Dover and Somersworth. Additional development has followed in 2000 with new retail and commercial properties extending from the area of the current Yangtze Restaurant to the current Home Depot location in Somersworth and the area to the North of the Weeks' Crossing intersection in Dover. In 2001 the Indian Brook Commons shopping plaza was developed along the southern shore replacing much of the former PSNH building and adding new parking areas in Dover. In 2003 the Home Depot was constructed north of the pond, and a Target was constructed on an adjacent parcel in 2006 in Somersworth.

The development that has occurred around Willand Pond has included the development of impervious surfaces. The Indian Brook Commons development was required to install a storm water system below its parking lot to mitigate the effects the impervious surface might have on increasing surface water. Home Depot and Target also installed similar storm water mitigation systems.

The soils surrounding Willand Pond are sandy and conducive to saturation and storm water infiltration. Strafford County Soils maps indicate that in the late 1950s an area of hydric soil was documented to the north of the pond, along Peter's Marsh Brook. This brook drains towards the Salmon Falls River, and at one time appears to have acted as an outlet from the pond allowing water to drain from the pond naturally.

Also north of the pond there is a smaller drainage pond, known as Stackpole Pond. The wetlands that surround the remains of Peter's Marsh Brook drain into Stackpole Pond and this pond in turn drains back into Peter's Marsh Brook to the northeast of Home Depot. Sometime between the 1950s when the soils mapping was completed and the year 2000 when the photos above were taken, part of the land north of the pond appears to have been filled in. This area includes the hydric soils contained around Peter's Marsh Brook.



Hydric Soils\*  
 SEWER  
 WATER

\*Hydric soils delineation source - SSSC 1973. Major fieldwork done in the period 1956-1967.

Additionally, the installation of a sanitary sewer line as well as the installation of a water line in Somersworth have intersected the former path of the brook. Surface water apparently leaves the pond, through the wetland to the north, and appears to be redirected and/or impounded where the sanitary sewer line crosses the hydric soils. The elevation change between the area south of the sewer line and the area north of the sewer line is approximately three to five feet. If one travels this area it is clear that soils had been disturbed at one time and placed across the marsh area.

In 2003 when the Home Depot was constructed the developers apparently worked within an already filled area and used it to construct the necessary retention pond for the project. This pond receives storm water run off from the Home Depot parking lot and allows it, over time, to merge in with the natural runoff in the Peter's Marsh Brook area flowing towards the Salmon Falls River.



During the site review approval process Home Depot, the City of Somersworth designed and engineered a future connector road to be built alongside Home Depot to connect routes 108 and Route 9. This road follows the waterline that was installed in the 1970s. Construction of this road is scheduled to begin construction in 2007 and is expected to incorporate culverts which will potentially allow for increase in surface flow of water from the upstream wetlands to the continuation of the brook.

Also constructed in the area north of Willand Pond and adjacent to Home Depot is the Target store storm water detention pond. The storm water pond is located behind the Midway Park neighborhood and appears to be above and adjacent to the hydric soils area. This pond collects water and detains it with overflow entering the wetlands surrounding the remains of Peter's Marsh Brook. The discharge from this pond appears to collect in the area upstream of the Home Depot and the sanitary sewer line crossing.

In the absence of any scientific data or more definitive hydrological study, it appears the above significant rain events this area has experienced over the past three years coupled with apparent manmade changes affecting the natural contours of the wetlands and an outflow tributary has caused the level of Willand Pond to rise. This may be contributing to a high water table in areas of permeable soil that surround the pond. A more detailed survey and hydrologic study of the area will be necessary to determine the exact nature of the problem, the likely cause and any recommended actions.

The cities of Dover and Somersworth have been aware of the pond and its rising water level and have worked jointly to review the situation and oversee the necessary studies jointly, possibly with the assistance of the regional planning commission. In April of 2007, the Somersworth Conservation Commission chair, Frank Richardson, conducted a fly over of the area documenting the development and vegetation of the area. The photographs acquired will be utilized in the future studies and analysis.