The Lakes, Princess Anne Plaza, and Windsor Woods Combined Drainage Improvements

Bow Creek Stormwater Park

CIP 7-073

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The Lakes, Princess Anne Plaza, and Windsor Woods are neighborhoods located in what was once the undeveloped headwaters of the Lynnhaven River. According to aerial photos from 1949, the area was originally forest surrounded by farmland. Much of the area has relatively low elevations. Low elevations coupled with increasing sea levels (approximately one-foot over the last 50 years) and the increasing frequency of storms with significant tides and rainfall amounts, has resulted in severe flooding of the neighborhood during extreme events.

Potential solutions include:
- Construction of gates and barriers to minimize tidal flooding
- Construction of stormwater pump stations
- Additional stormwater storage capacity
- Increasing the capacity of the storm drain pipe network

Creating storage to manage rainfall from intense storms is critical to mitigating flooding of homes and streets within these neighborhoods.

The City of Virginia Beach has developed a plan that explores optimization of the approximately 121-acre, City-owned Bow Creek Golf Course (BCGC) for flood mitigation. The vision for the project is to convert the land use from a golf course to a multi-faceted facility that will provide significant stormwater storage to mitigate flooding and restore natural systems while providing active and passive recreational opportunities.

- Existing Bow Creek storage is inadequate
- Limited options available for storage
- To acquire private property is not a practical option; especially since City-owned property in the center of the most flood prone area is available (i.e., Bow Creek Golf Course)
- Off-site storage would result in a significant increase in project cost

- Utilize City-owned property to create storage to help mitigate flooding
- Combine stormwater storage with multi-use park facility
- Provide park facilities to encompass both passive and active recreational opportunities
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Legend:
- Total Inflow Channel Storage (1-2 day Duration)
- Ponds
- Total Inflow Floodplain Storage (2-7 days Duration)
- Island Storage (at 0 ft. above mean high water)

Stormwater Park concept plan with varying levels of stormwater storage.

Bow Creek Stormwater Park Concept
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View from Pro Shop looking northwest

View from Maintenance Sheds looking southeast