Legend
- Potential Bottlenecks
- Proposed Tide Gates
- Proposed Force Main
- Proposed Storage and Pump Station
- Roads
- Potential Port Orange Storage Areas
- Navy Canal Diversion System
  - Create New Ditch
  - Improve Existing Ditch/Culverts
  - Install New Culvert
  - Navy Canal Diversion Structure
  - Navy Canal Storage
During Phase 3, two important modifications were made to this project component including:

1. The pump station was relocated from Centennial Park to property adjacent to SICA Hall and Peterson Court and the tide weir-gate was relocated to Riverside Drive; and

2. The pump station was changed to a pump with force main configuration.

The original (Alternative 1) and modified configured LPGA Canal project components are presented in Figure 3-2. The parameters for the original and modified LPGA Canal components are summarized in Table 3-1.

### Table 3-1 Summary of Project Component Parameters

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Pump Size (cfs)</th>
<th>Force Main Diam/Length (ft/ft)</th>
<th>Proposed Storage (Acres)</th>
<th>Tide Gate Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPGA Canal (original configuration)</td>
<td>600</td>
<td>N/A</td>
<td>N/A</td>
<td>Centennial Park</td>
</tr>
<tr>
<td>LPGA Canal (modified configuration)</td>
<td>500</td>
<td>8/700</td>
<td>22.0</td>
<td>SICA Hall</td>
</tr>
<tr>
<td>Reed Canal (original configuration)</td>
<td>1,125</td>
<td>N/A</td>
<td>4.0</td>
<td>East of Railroad</td>
</tr>
<tr>
<td>Reed Canal (modified configuration)</td>
<td>500</td>
<td>10/1,100</td>
<td>4.0</td>
<td>East of Railroad</td>
</tr>
<tr>
<td>Halifax Canal</td>
<td>300</td>
<td>N/A</td>
<td>8.0</td>
<td>South of Nova Road</td>
</tr>
<tr>
<td>Laurel Creek Area</td>
<td>150</td>
<td>6/8,000</td>
<td>10.6</td>
<td>N/A</td>
</tr>
<tr>
<td>North Street Pond</td>
<td>500</td>
<td>10/6,700</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Samuel Butts Pond</td>
<td>550</td>
<td>10/7,200</td>
<td>31.0 (total)</td>
<td>N/A</td>
</tr>
<tr>
<td>Navy Canal Diversion</td>
<td>N/A</td>
<td>N/A</td>
<td>120</td>
<td>N/A</td>
</tr>
<tr>
<td>Buschman Pond</td>
<td>300</td>
<td>8/4,800</td>
<td>53.5 (total)</td>
<td>North of Nova Road</td>
</tr>
</tbody>
</table>

Note: reported proposed storage includes proposed pond and additional proposed storage in watershed

### 3.2.2 Reed Canal Project Component

The Reed Canal project component was originally configured in the Phase 1 Study as part of Alternative 1. The original configuration included a pond, pump station, and tidal weir-gate located at the CEMEX Site. The pump station was operated in the pump only (no force main) configuration. Specific operational parameters for the Reed Canal component considered as part of Alternative 1 are described in Section 2.

During Phase 3, an important modification was made to this project component to change the pump configuration to a smaller pump with an 10-foot diameter force main. The original (Alternative 1) and modified Reed Canal project components are presented in Figure 3-3. The parameters for the original and modified Reed Canal components are summarized in Table 3-1.
Figure 3-2
Nova Canal Flood Control and Integrated Water Resources Program
LPGA Canal Project Component

Legend
- SICA Hall Parcel
- Proposed Tide Gates
- Proposed Force Main
- Proposed Culvert
- Storage and Pump Station
- Streets

Original Configuration
Pump Station at Centennial Park
Pump back into LPGA Canal

Tide Gate
Original Configuration

SICA Hall

Modified Configuration
New storage facility on closed campus of Holly Hill Middle School (~22 acres);
Gravity connection to LPGA Canal

Modified Configuration
Pump Station and Force Main to Halifax River;
Outfall along Peterson Ct (Length = ~650 ft)

Original Configuration
Pump Station at Centennial Park
Pump back into LPGA Canal

Tide Gate
Modified Configuration

0 1,000 2,000 Feet
0 500 1,000 Feet

East Volusia Water Authority (EVWRA)

07-28-10

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Figure 3-3
Nova Canal Flood Control and Integrated Water Resources Program
Reed Canal Project Component

UPDATED

0 400 800 200 Feet
3.2.3 Halifax Canal Project Component

The Halifax Canal project component was originally configured in the Phase 1 Study as part of Alternative 1. The original configuration included a pond, pump station, and tide weir-gate located on property south of Nova Road. The pump station was operated in the pump only (no force main) configuration. Specific operational parameters for the Halifax Canal component considered as part of Alternative 1 are described in Section 2.

During Phase 3, it was determined that this property was no longer available, flood reduction benefits were greater at the Buschman Park location (e.g., to address Dunlawton Avenue flooding), and this project component was eliminated. The original (Alternative 1) Halifax Canal project component is presented in Figure 3-4. The parameters for the original Halifax Canal components are summarized in Table 3-1.

3.2.4 Laurel Creek Area Project Component

The Laurel Creek project component includes a 150-cfs pump station, an 8,000-foot force main (6-foot diameter) along Division Street to the Halifax River, and a 10.6-acre pond. These elements are intended to complement proposed improvements in this area by the City of Ormond Beach. City improvements include better connection of existing surface water bodies (borrow ponds) and additional storage. The parameters for this component are summarized in Table 3-1. The layout for this component is shown in Figure 3-5.

3.2.5 North Street Pond Project Component

The North Street Pond project component includes a 500-cfs pump station, a 6,700-foot force main (10-foot diameter) along Fairview Avenue to the Halifax River, and draws from the recently constructed 9-acre North Street pond. Improved connection from Nova Canal to the North Street Pond is also considered in this component. These elements are intended to complement the improvements by the City of Daytona Beach in the area. The parameters for this component are summarized in Table 3-1. The layout for this component is shown in Figure 3-6.

3.2.6 Samuel Butts Pond Project Component

The Samuel Butts Pond project component includes an existing 19-acre pond, a 550-cfs pump station, a 7,200-foot force main (10-foot diameter) from the existing pond along Niles Street and Wilder Boulevard to the Halifax River, a 9-acre pond on school property, and a 22-acre pond along the golf course. Improved connection from the Nova Canal to the Samuel Butts Pond is also considered in this component. These elements are intended to complement existing and proposed improvements by the City of Daytona Beach in the area. The parameters for this component are summarized in Table 3-1. The layout for this component is shown in Figure 3-7.
Laurel Creek Project Component
Construction of new 10.6-acre storage facility and pump station

Alternate pump station location

Force Main along Division St (~8000 ft)

Legend
- Borrow Pit Gravity Connections
- Channels
- Proposed Force Main
- Storage and Pump Station
- Streets

Figure 3-5  East Volusia Drainage Water Authority
(FVDWA)  Laurel Creek Project Component

Laurel Creek Project Component
1,200
2,400
0
600
Feet

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Legend
- Proposed Force Main
- Storage and Pump Station
- Proposed Culvert
- Streets

Upgrade culverts from Nova Canal to North Street Pond and tie into pond
Force Main to Halifax River Outfall along Fairview Ave (~6700 ft)
Existing 9-acre North Street Pond
Upgrade culverts from Nova Canal to North Street Pond and tie into pond
Pump Station @ NE corner of pond

Figure 3-6
Nova Canal Flood Control and Integrated Water Resources Program
North Street Pond Project Component

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East Volusia Regional Water Authority (EVRWA)
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