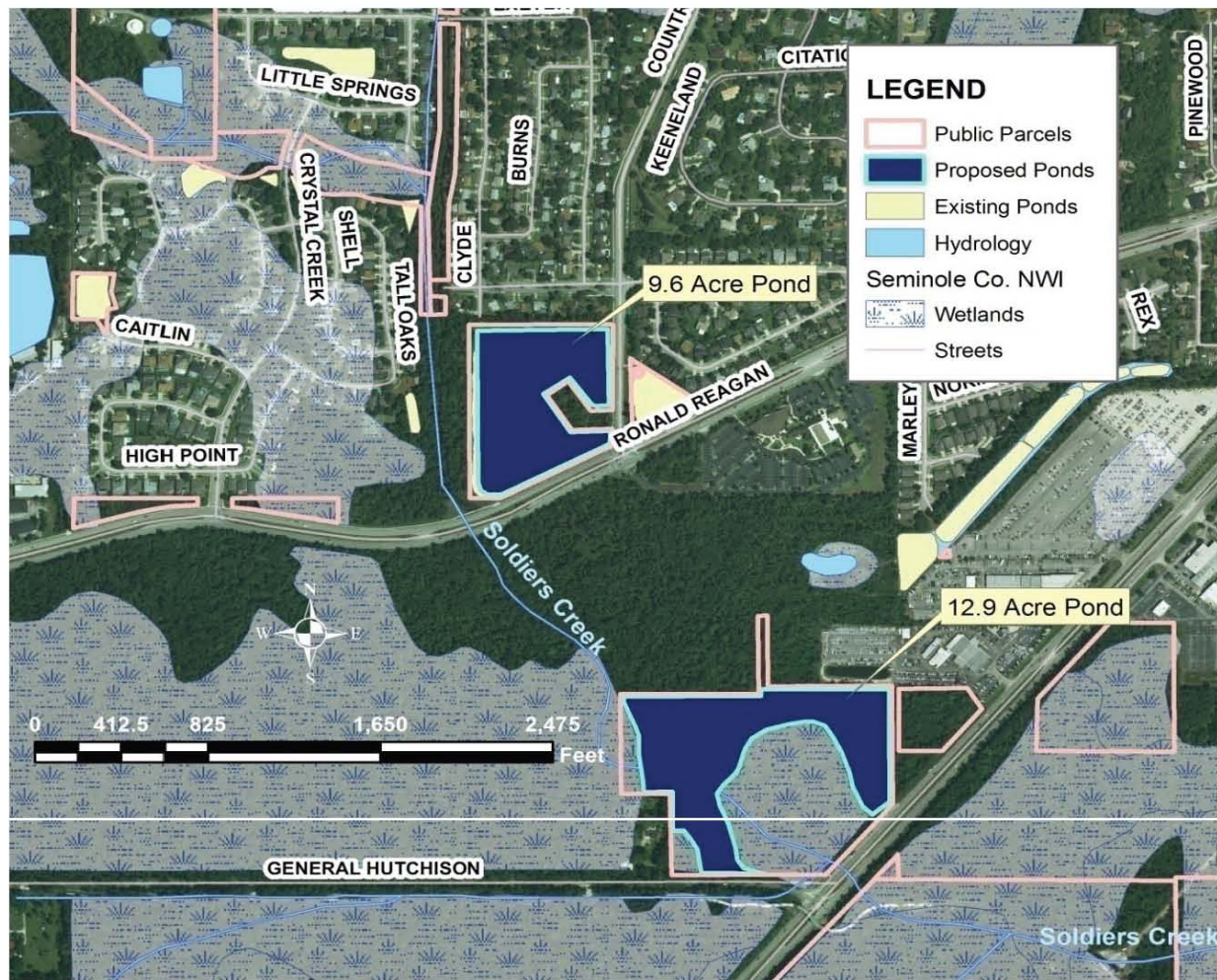


Soldiers Creek Regional Treatment Pond



Project Description: Convert existing 7.5 acre pond on County owned property to 9.6 acre pond. An additional 12.9 acre pond on County owned property downstream is optional to provide a combined 22.5 acres of treatment.

Upstream Tributary Area: 4,698 acres

Affected Jurisdictions (% net TP load): Seminole County (37.3%), City of Lake Mary (40.1%), City of Sanford (0.2%), FDOT (0.4%)

Receiving Water Bodies: Soldiers Creek, Lake Jesup

Proposed Treatment Type: Wet Detention

Available Land for Treatment: 11.6 acre for 9.6 ac pond; 25.3 ac for 12.9 ac pond

Verified Water Quality Impairment: Lake Jesup (nutrients and unionized ammonia)

Draft Verified Water Quality Impairment: None

Existing Net TP Load (lbs/yr): 1,559

Range of Estimated Total TP Reduction¹ (lbs/yr): 20 to 626 (9.6 acre pond)/59 to 739 (22.5 acre treatment train)

Range of Estimated County TP Reduction¹ (lbs/yr): 8 to 233 (9.6 acre pond)/22 to 275 (22.5 acre treatment train)

Estimated Conceptual Capital Cost: \$1,060,000/ \$2,57,3000

Benefit Cost Ratio (\$/lb TP removed): \$3,947 per lb to \$108 per lb / \$3,258 per lb to \$261 per lb (based on total estimated TP reduction)

Notes: Also provides treatment for agricultural and natural/wetland upstream areas (22.1% of net TP load)

1 - TP Reduction was calculated using two different methods. The first value was obtained using the Walker method (Walker, W. W., Jr. (1981). "Empirical methods for predicting eutrophication in impoundments; Report 1, Phase 1: Data base development," Technical Report E-81-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS., NTIS No. AD A101 553.). The second value was obtained using the methodology to estimate TP removal for wet detention as presented in the "Evaluation of Current Stormwater Design Criteria in the State of Florida" (Harper, 2007) prepared for FDEP.

Bear Gully Canal Regional Treatment Pond



Project Description: Convert existing 14.7 acre borrow pit to 16.2 acre off-line pond to accept discharge from Bear Gully Canal tributary. County currently has a drainage easement over the existing borrow pit.

Upstream Tributary Area: 1,098 acres

Affected Jurisdictions (% net TP load): Seminole County (64.5%), FDOT (3.1%), Turnpike Authority (13%)

Receiving Water Bodies: Bear Gully Canal, Lake Jesup

Proposed Treatment Type: Wet Detention

Available Land for Treatment: 20.4 acres

Verified Water Quality Impairment: Lake Jesup (nutrients and unionized ammonia)

Draft Verified Water Quality Impairment: none

Existing Net TP Load (lbs/yr): 432

Range of Estimated Total TP Reduction¹ (lbs/yr): 82 to 238

Range of Estimated County TP Reduction¹ (lbs/yr): 53 to 154

Estimated Conceptual Capital Cost: \$1,830,000

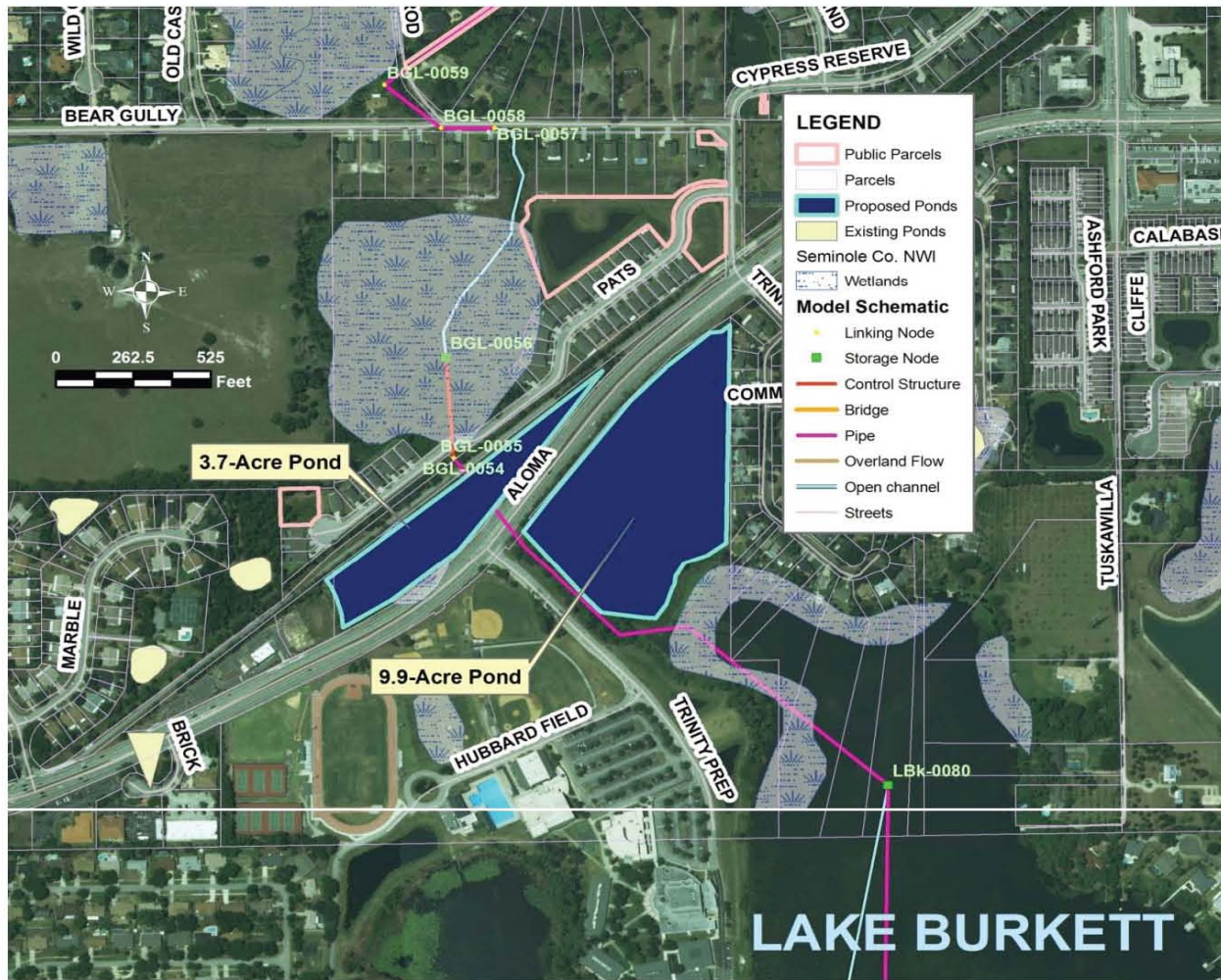
Benefit Cost Ratio (\$/lb TP removed): \$1,689 per lb to \$579 per lb (based on total estimated TP reduction)

Notes: Also provides treatment for agricultural and natural/wetland upstream areas (19.3% of net TP load)

¹ - TP Reduction was calculated using two different methods. The first value was obtained using the Walker method (Walker, W. W., Jr. (1981). "Empirical methods for predicting eutrophication in impoundments; Report 1, Phase 1: Data base development," Technical Report E-81-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS., NTIS No. AD A101 553.).

The second value was obtained using the methodology to estimate TP removal for wet detention as presented in the "Evaluation of Current Stormwater Design Criteria in the State of Florida" (Harper, 2007) prepared for FDEP.

Bear Gully Lake Regional Treatment Pond



Project Description: Construct 3.7 ac on-line pond upstream of Bear Gully Lake on FDOT-owned property OR construct 9.9 ac off-line pond downstream of Lake Burkett.

Upstream Tributary Area: 1,499 acres

Affected Jurisdictions (% net TP load): Seminole County (11.6%), Orange County (62.3%), FDOT (1.3%), OCEA (2.6%), Turnpike Authority (1.8%)

Receiving Water Bodies: Bear Gully Lake, Lake Jesup

Proposed Treatment Type: Wet Detention

Available Land for Treatment: 4.9 acres for 3.7 ac pond (owned by FDOT); 11.7 ac for 9.9 ac pond (owned by Trinity Preparatory)

Verified Water Quality Impairment: Lake Jesup (nutrients and unionized ammonia)

Draft Verified Water Quality Impairment: none

Existing Net TP Load (lbs/yr): 693

Range of Estimated Total TP Reduction¹ (lbs/yr): 6 to 278 (3.7 acre pond)/23 to 342 (9.9 acre pond)

Range of Estimated County TP Reduction¹ (lbs/yr): 1 to 32 (3.7 acre pond)/3 to 40 (9.9 acre pond)

Estimated Conceptual Capital Cost: \$381,000 / \$1,847,000 (includes land acquisition)

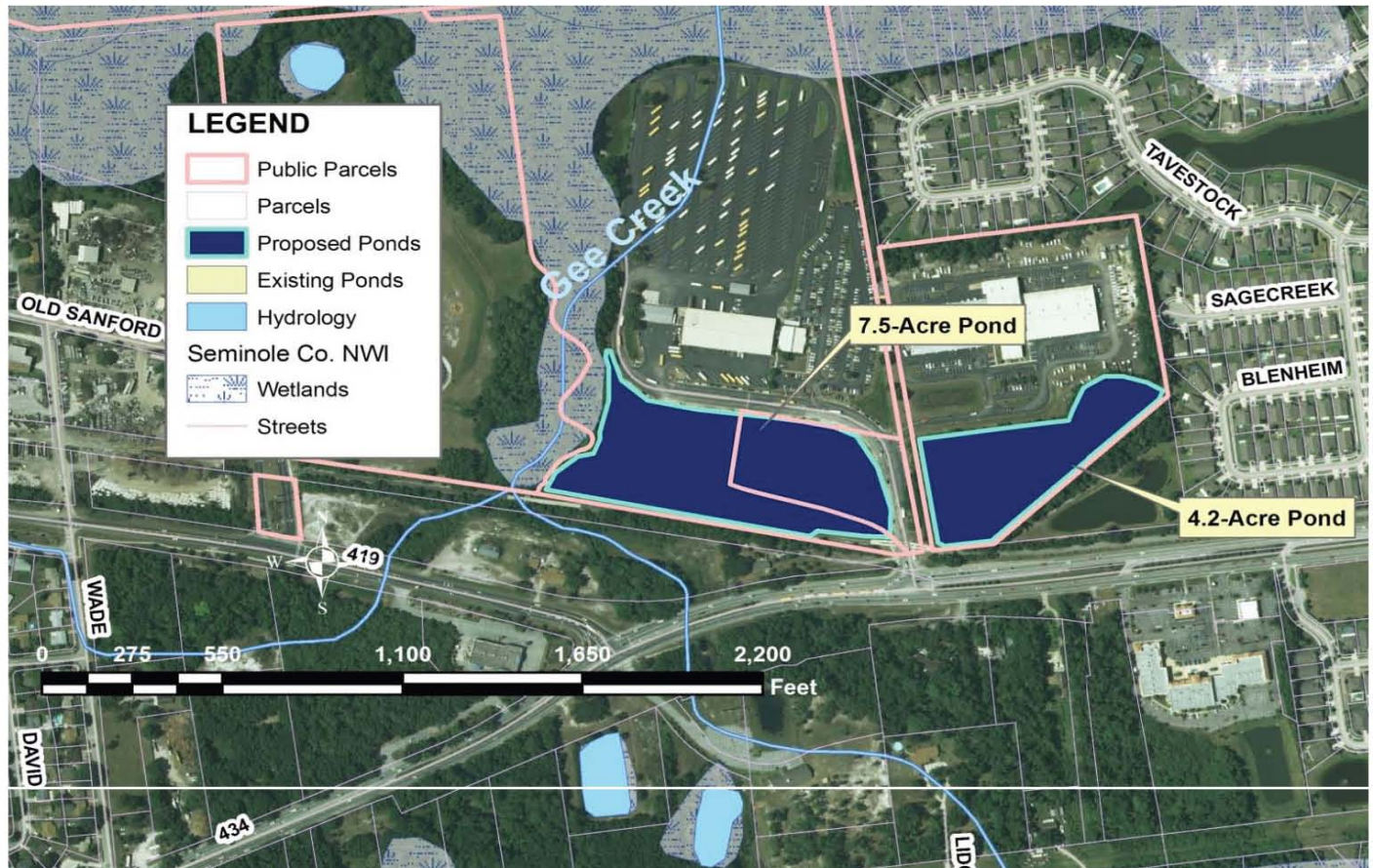
Benefit Cost Ratio (\$/lb TP removed): \$4,811 per lb to \$104 per lb / \$4,811 per lb to \$322 per lb (based on total estimated TP reduction)

Notes: Also provides treatment for agricultural and natural/wetland upstream areas (20.4% of net TP load)

¹ - TP Reduction was calculated using two different methods. The first value was obtained using the Walker method (Walker, W. W., Jr. (1981). "Empirical methods for predicting eutrophication in impoundments; Report 1, Phase 1: Data base development," Technical Report E-81-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS., NTIS No. AD A101 553.).

The second value was obtained using the methodology to estimate TP removal for wet detention as presented in the "Evaluation of Current Stormwater Design Criteria in the State of Florida" (Harper, 2007) prepared for FDEP.

Gee Creek Regional Treatment Pond



Project Description: Construct 11.7-ac off-line pond on County-owned (school board) land to treat Gee Creek outflow before discharging into Lake Jesup.

Upstream Tributary Area: 9,622 acres

Affected Jurisdictions (% net TP load): Seminole County (8.2 %), Alatomonte Springs (1.8 %), Casselberry (27.9 %), Longwood (12.8 %), Winter Springs (24.4 %), FDOT (2.7 %)

Receiving Water Bodies: Gee Creek, Lake Jesup

Proposed Treatment Type: Wet Detention

Available Land for Treatment: 53.6 acres

Verified Water Quality Impairment: Lake Jesup (nutrients and unionized ammonia)

Draft Verified Water Quality Impairment: none

Existing Net TP Load (lbs/yr): 2,939

Range of Estimated Total TP Reduction¹ (lbs/yr): 74 to 1,175

Range of Estimated County TP Reduction¹ (lbs/yr): 6 to 97

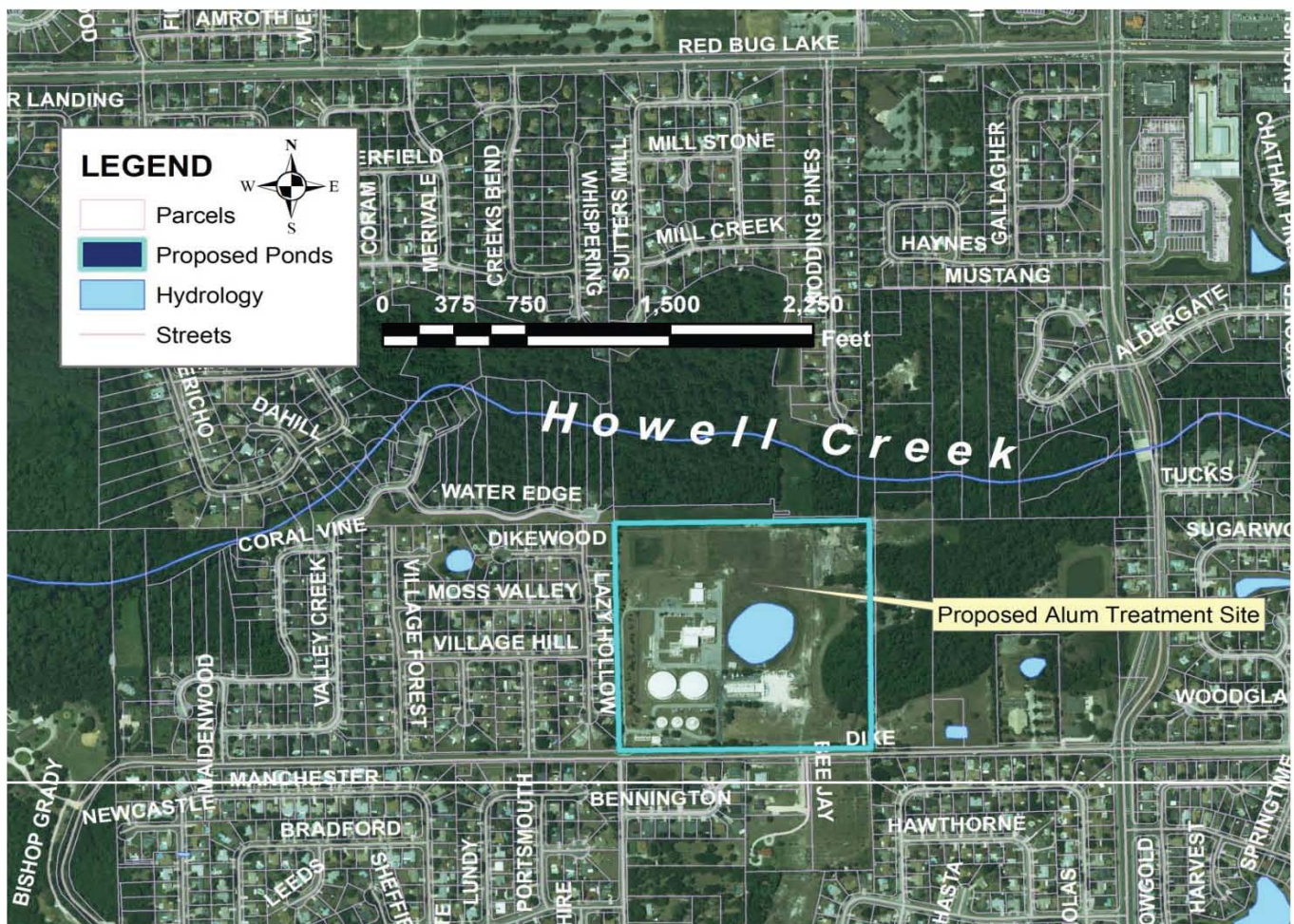
Estimated Conceptual Capital Cost: \$3,539,000 (includes land acquisition)

Benefit Cost Ratio (\$/lb TP removed): \$2,437 per lb to \$152 per lb (based on total estimated TP reduction)

Notes: Also provides treatment for agricultural and wetland upstream areas (22.2% of net TP load)

1 - TP Reduction was calculated using two different methods. The first value was obtained using the Walker method (Walker, W. W., Jr. (1981). "Empirical methods for predicting eutrophication in impoundments; Report 1, Phase 1: Data base development," Technical Report E-81-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS., NTIS No. AD A101 553.). The second value was obtained using the methodology to estimate TP removal for wet detention as presented in the "Evaluation of Current Stormwater Design Criteria in the State of Florida" (Harper, 2007) prepared for FDEP.

Howell Creek Alum Facility



Project Description: Alum chemical treatment at County Water Treatment Plant south of Howell Creek, just downstream of Lake Howell.

Upstream Tributary Area: 391 acres (Lake Howell surface area)

Affected Jurisdictions (% net TP load): Seminole County, Orange County, City of Orlando

Receiving Water Bodies: Howell Creek, Lake Jesup

Proposed Treatment Type: Non-Contributing Subbasin

Available Land for Treatment: 279 acres

Verified Water Quality Impairment: None

Draft Verified Water Quality Impairment: Howell Creek below Lake Howel (fecal coliform)

Estimated Total TP Reduction (lbs/yr): 1,856

Estimated Conceptual Cost¹: \$603,000

Benefit Cost Ratio (\$/lb TP removed): \$47 per lb TP

Notes:

¹ - Conceptual capital costs were estimated based on values for construction cost per acre treated and O&M cost per acre treated presented in "Alum Treatment of Stormwater: An Innovative BMP for Urban Runoff Problems" (Harper et. al., 1999).

Little Lake Georgia



Project Description: Non-contributing area within the Howell Creek Subbasin.

Upstream Tributary Area: 279 acres

Affected Jurisdictions (% net TP load): Seminole County (21.3%), Orange County (35.1%), OCEA (4.9%); Also includes loading from natural/wetland upstream areas (38.7% of net TP load)

Receiving Water Bodies: Little Lake Georgia & Lake Georgia

Proposed Treatment Type: Non-Contributing Subbasin

Available Land for Treatment: 279 acres

Verified Water Quality Impairment: None

Draft Verified Water Quality Impairment: Lake Georgia (Nutrients (TSI))

Existing Net TP Load (lbs/yr): 111

Estimated Total TP Reduction (lbs/yr): 111

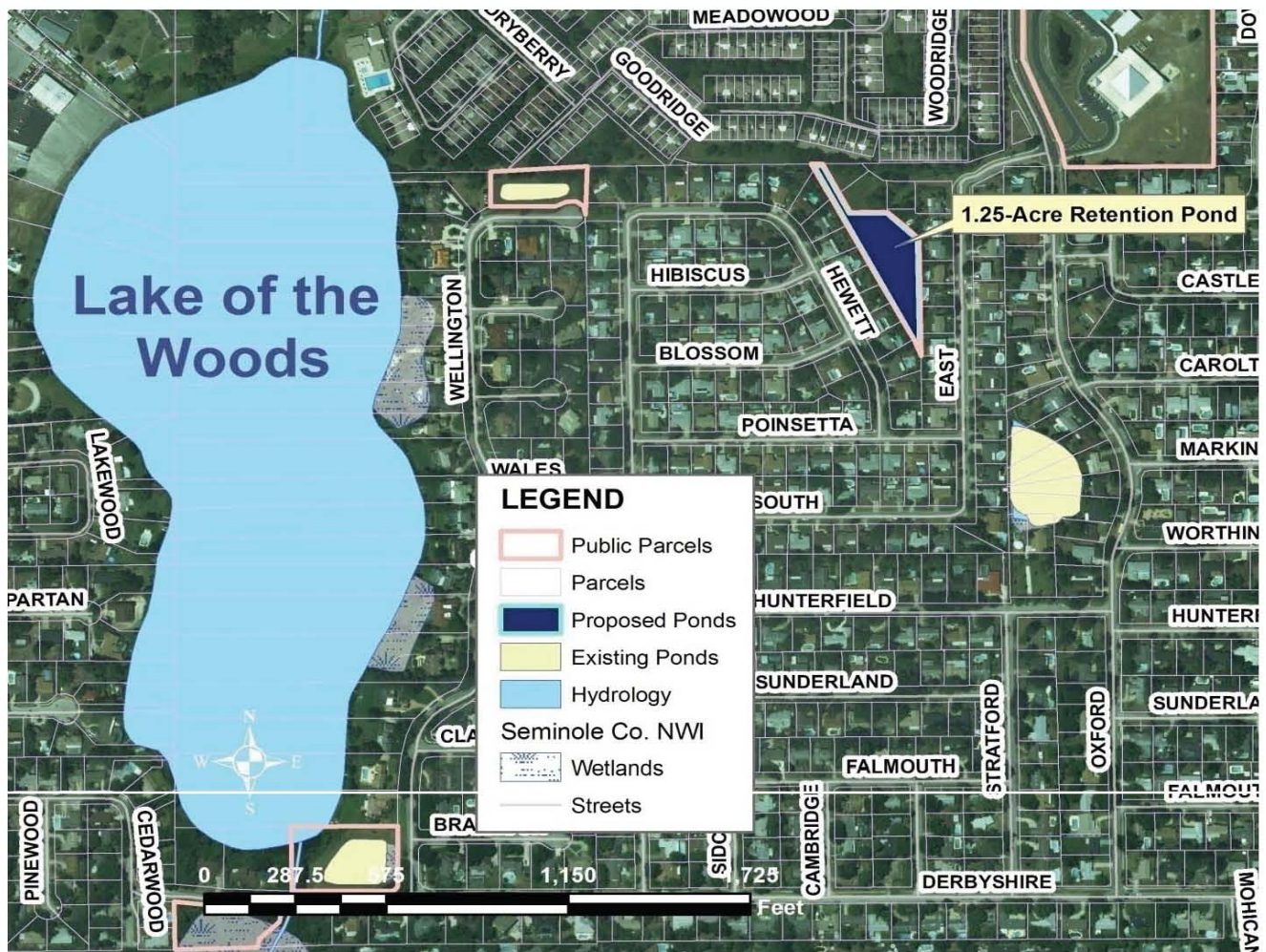
Estimated County TP Reduction (lbs/yr): 24

Estimated Conceptual Cost: \$0

Benefit Cost Ratio (\$/lb TP removed): \$0/lb TP

Notes: This area was originally included as part of FDEP's TMDL pollutant model. Further investigation of topographic contour data, hydraulic and hydrologic information indicates that it is a land locked subbasin. Examination of the groundwater contours of the surficial aquifer were also reviewed and indicated that groundwater generally flows towards the Little Econlockhatchee River.

Northgate Subdivision Retention Pond



Project Description: Construct 1.25-ac off-line retention area on County property to capture and treat runoff from Northgate Subdivision.

Upstream Tributary Area: 55 acres

Affected Jurisdictions: Seminole County

Receiving Water Bodies: Lake of the Woods

Proposed Treatment Type: Retention

Available Land for Treatment: 1.4 acres

Verified Water Quality Impairment: Lake Jesup (nutrients and unionized ammonia)

Draft Verified Water Quality Impairment: Lake of the Woods (nutrients (TSI))

Existing Net TP Load (lbs/yr): 10

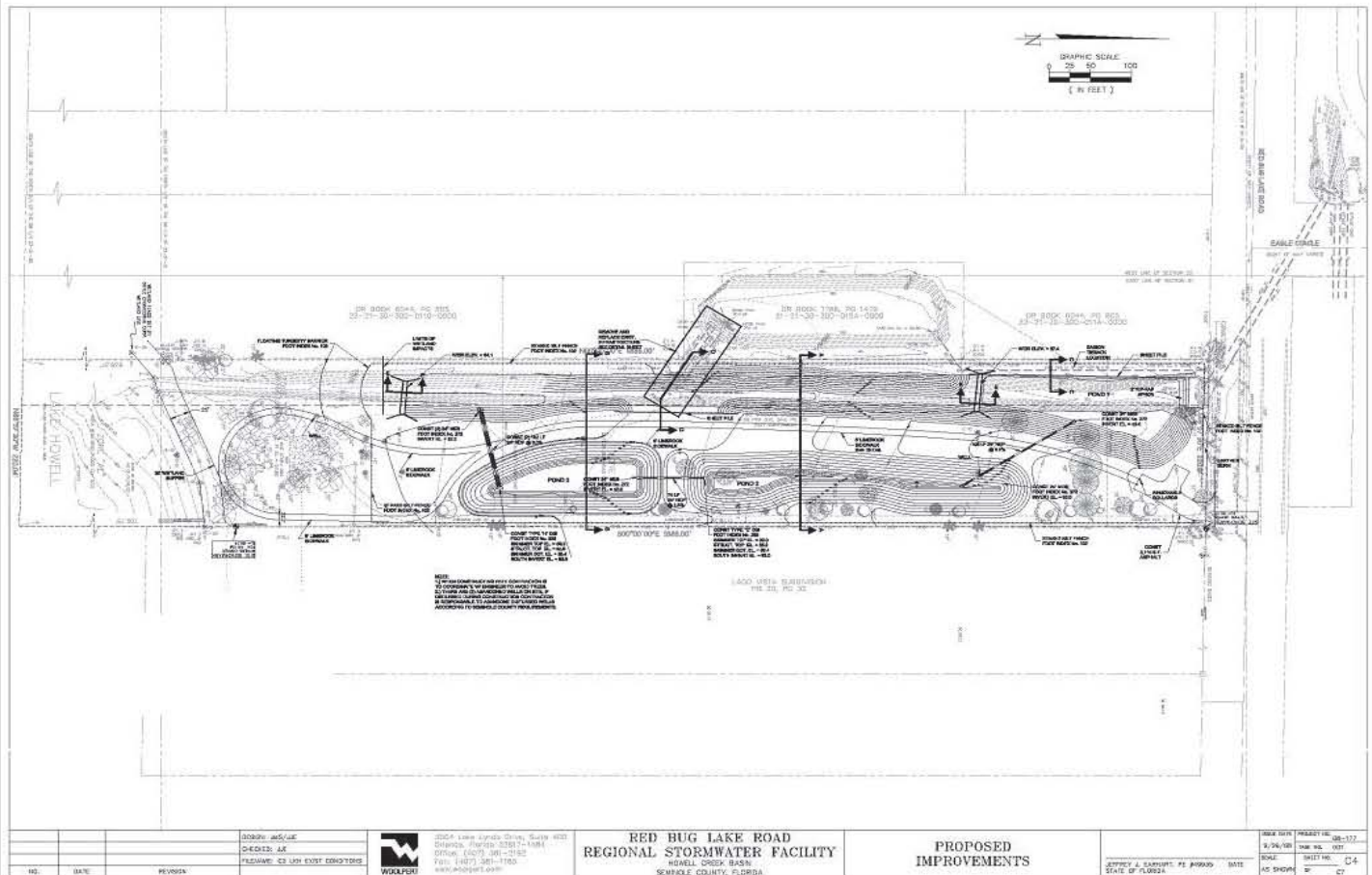
Estimated Total TP Reduction (lbs/yr): 10

Estimated County TP Reduction (lbs/yr): 10

Estimated Conceptual Cost: \$79,000

Benefit Cost Ratio (\$/lb TP removed): \$700 per lb

Red Bug Lake Road Regional Stormwater Facility



Project Description: Construct wet detention treatment train (wet detention) on County easement upstream of Lake Howell to capture and treat runoff from Deer Run Subdivision (project already under design).

Upstream Tributary Area: 1,163 acres

Affected Jurisdictions (% net TP load): Seminole County (52.4%), Casselberry (38%), FDOT (0.1%)

Receiving Water Bodies: Lake Howell, Lake Jesup

Proposed Treatment Type: Wet Detention

Available Land for Treatment: 6 acres

Verified Water Quality Impairment: Lake Jesup (nutrients and unionized ammonia)

Draft Verified Water Quality Impairment: Lake Howell (nutrients (historic TSI))

Existing Net TP Load (lbs/yr): 205

Range of Estimated Total TP Reduction¹ (lbs/yr): 3 to 85

Range of Estimated County TP Reduction¹ (lbs/yr): 2 to 44

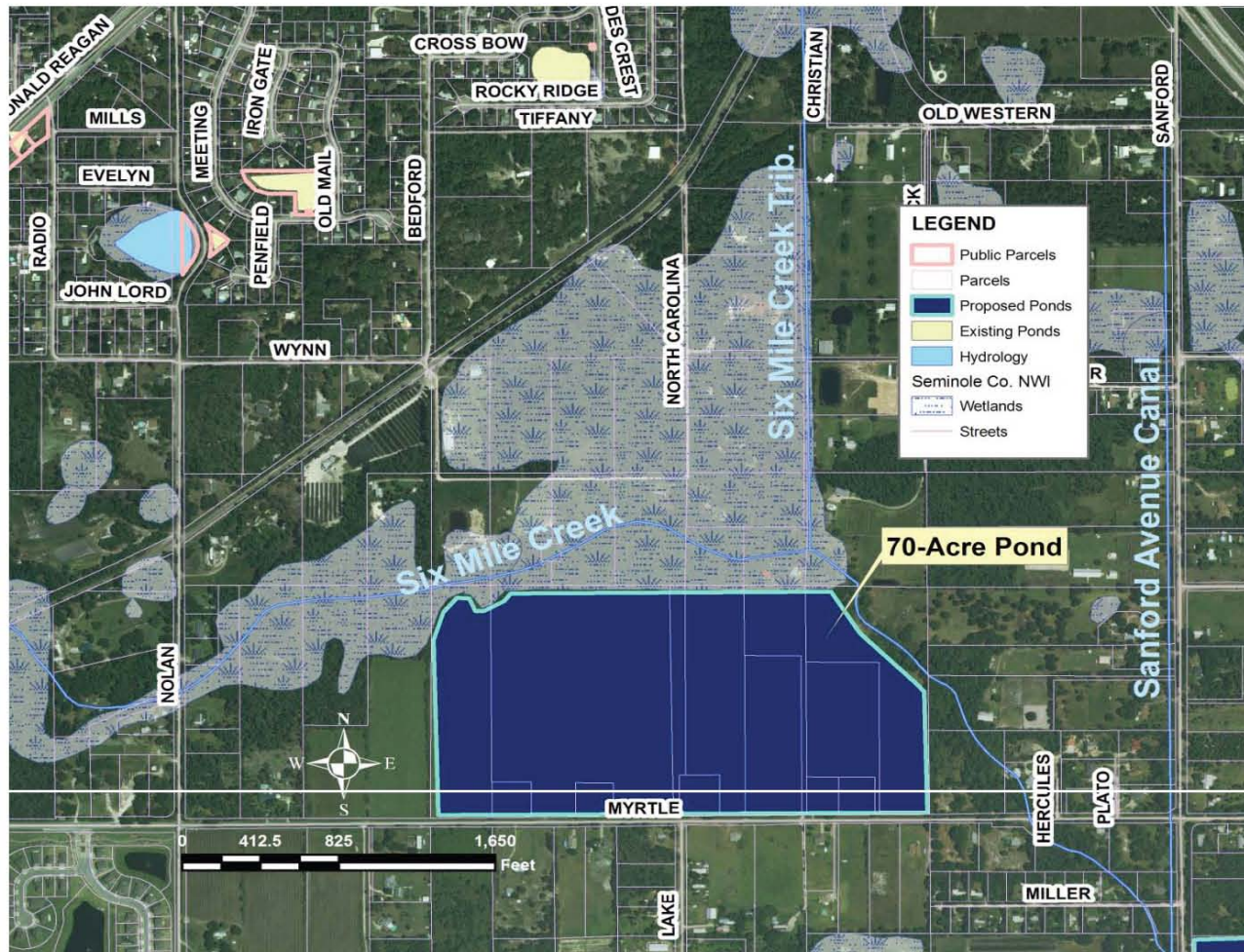
Estimated Conceptual Cost: \$450,000

Benefit Cost Ratio (\$/lb TP removed): \$9,775 per lb to \$331 per lb

Notes: Also provides treatment for natural /wetland upstream areas (10% of net TP load)

1 - TP Reduction was calculated using two different methods. The first value was obtained using the Walker method (Walker, W. W., Jr. (1981). "Empirical methods for predicting eutrophication in impoundments; Report 1, Phase 1: Data base development," Technical Report E-81-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS., NTIS No. AD A101 553.). The second value was obtained using the methodology to estimate TP removal for wet detention as presented in the "Evaluation of Current Stormwater Design Criteria in the State of Florida" (Harper, 2007) prepared for FDEP.

Six Mile Creek Regional Treatment Pond



Project Description: Construct 70-ac off-line pond to treat Six Mile Creek outflow before discharging into Lake Jesup.

Upstream Tributary Area: 5,272 acres

Affected Jurisdictions (% net TP load): Seminole County (26.2%), Lake Mary (8.5%), Sanford (37.9%), FDOT (2.0%), Turnpike Authority (5.6%)

Receiving Water Bodies: Six Mile Creek, Lake Jesup

Proposed Treatment Type: Wet Detention

Available Land for Treatment: 72.5 acres (private property)

Verified Water Quality Impairment: Lake Jesup (nutrients and unionized ammonia)

Draft Verified Water Quality Impairment: none

Existing Net TP Load (lbs/yr): 1,741

Range of Estimated Total TP Reduction¹ (lbs/yr): 331 to 961

Range of Estimated County TP Reduction¹ (lbs/yr): 87 to 252

Estimated Conceptual Capital Cost: \$12,572,000 (includes land acquisition)

Benefit Cost Ratio (\$/lb TP removed): \$8,343 per lb to \$802 per lb (based on total estimated TP reduction)

Notes: Also provides treatment for agricultural and natural/wetland upstream areas (19.9% of net TP load)

¹ - TP Reduction was calculated using two different methods. The first value was obtained using the Walker method (Walker, W. W., Jr. (1981). "Empirical methods for predicting eutrophication in impoundments; Report 1, Phase 1: Data base development," Technical Report E-81-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS., NTIS No. AD A101 553.).

The second value was obtained using the methodology to estimate TP removal for wet detention as presented in the "Evaluation of Current Stormwater Design Criteria in the State of Florida" (Harper, 2007) prepared for FDEP.