



Florida Department of Environmental Protection

Water Quality Restoration Program

Upper Ocklawaha Basin Meeting

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Water Quality Evaluation

- Calculated long term annual average.
 - Required at least 3 seasons of data for annual average.
 - Long term average calculated from annual averages.
- Extracted data from DEP's Impaired Waters Database.
- ***Draft results*** because last quarter of 2015 data not complete.



Trout Lake Data

- Water quality collected by:
 - SJRWMD at lake center.
 - Trout Lake Nature Center dock.
 - Lake Watch 3 sites at lake center.



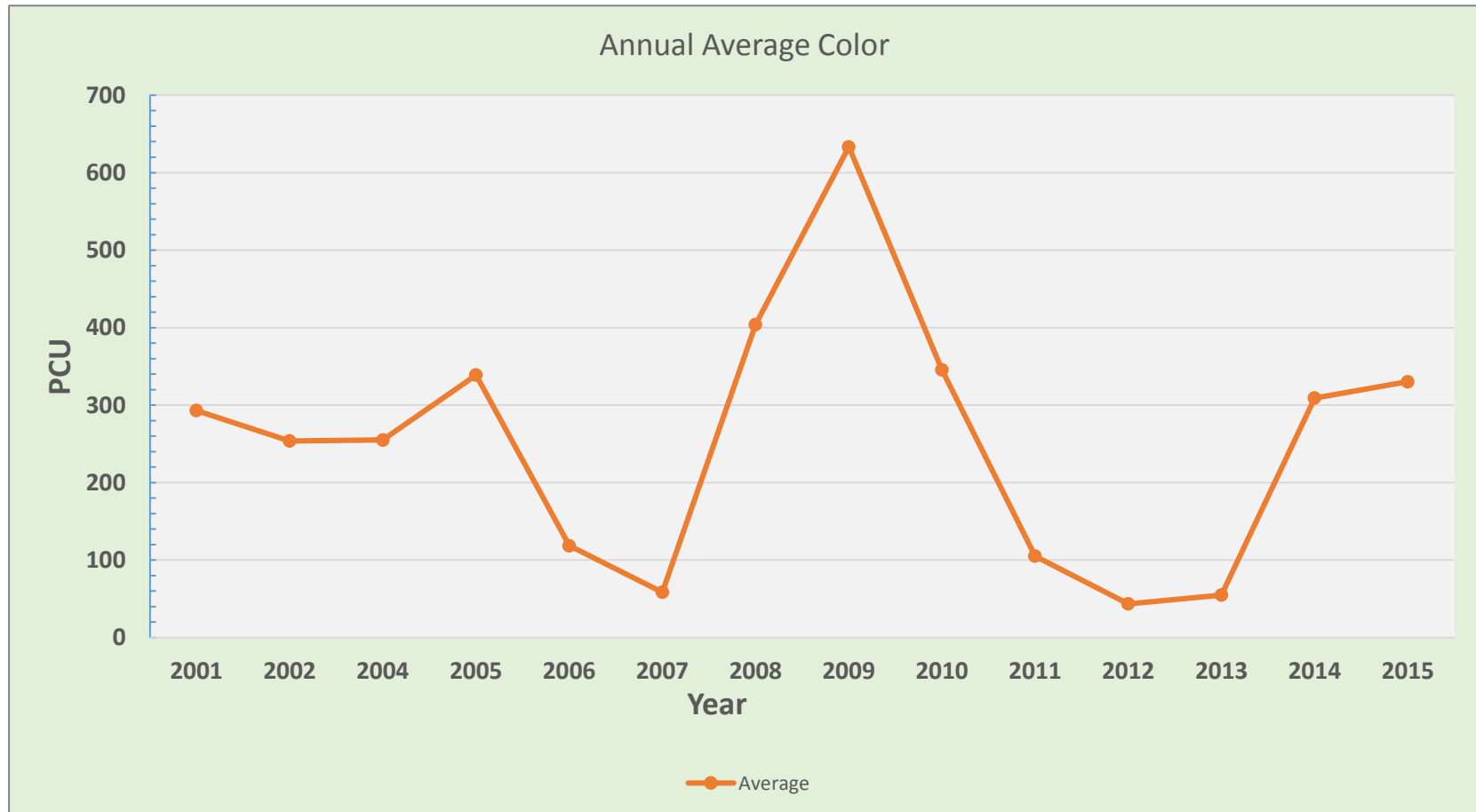
Trout Lake Long-term Average TP

Data Period	TP Concentration mg/L
1991-2000	0.186
2005-2014	0.25
2006-2015**	0.262
TP Target	0.028

** Incomplete data year

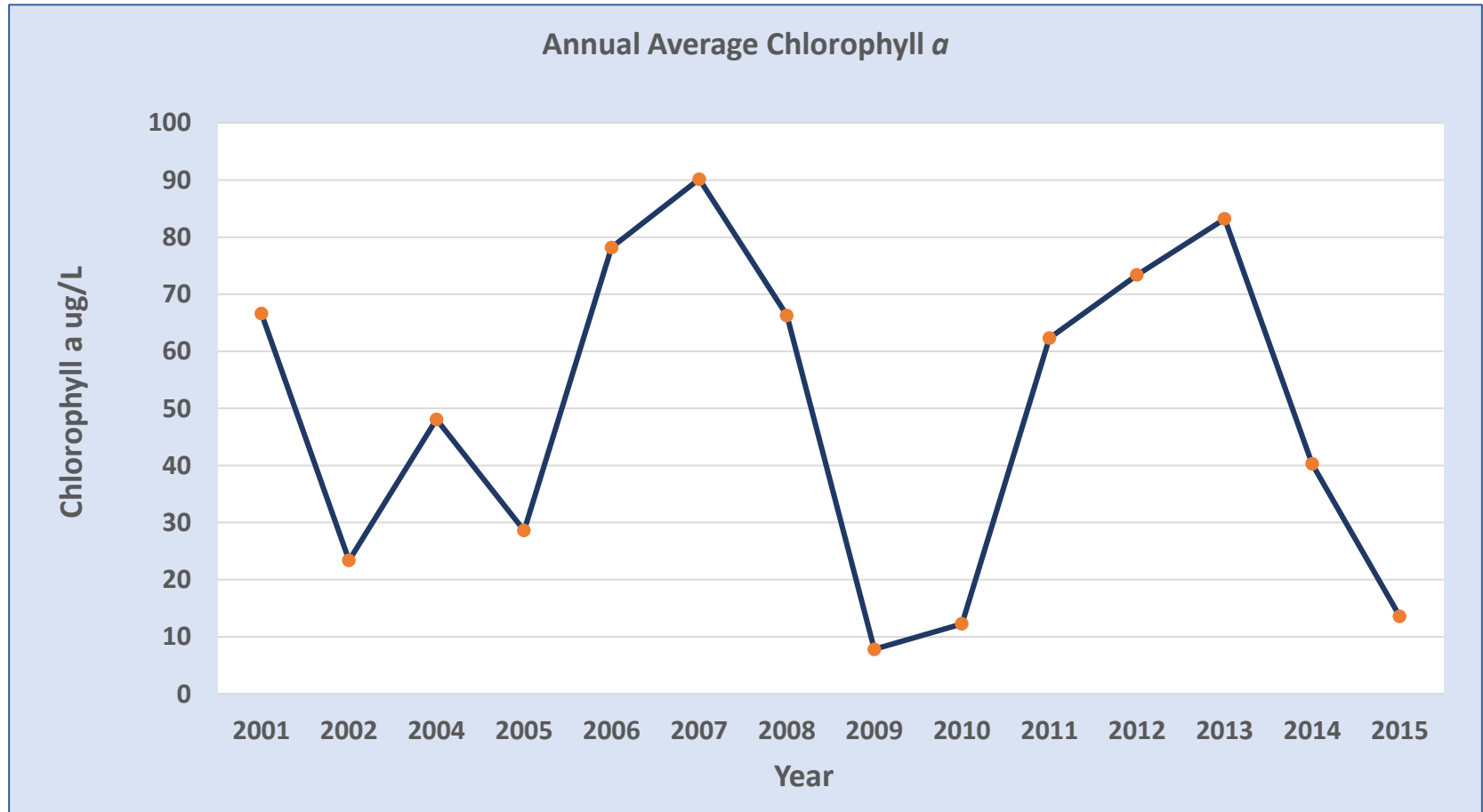


Trout Lake Color



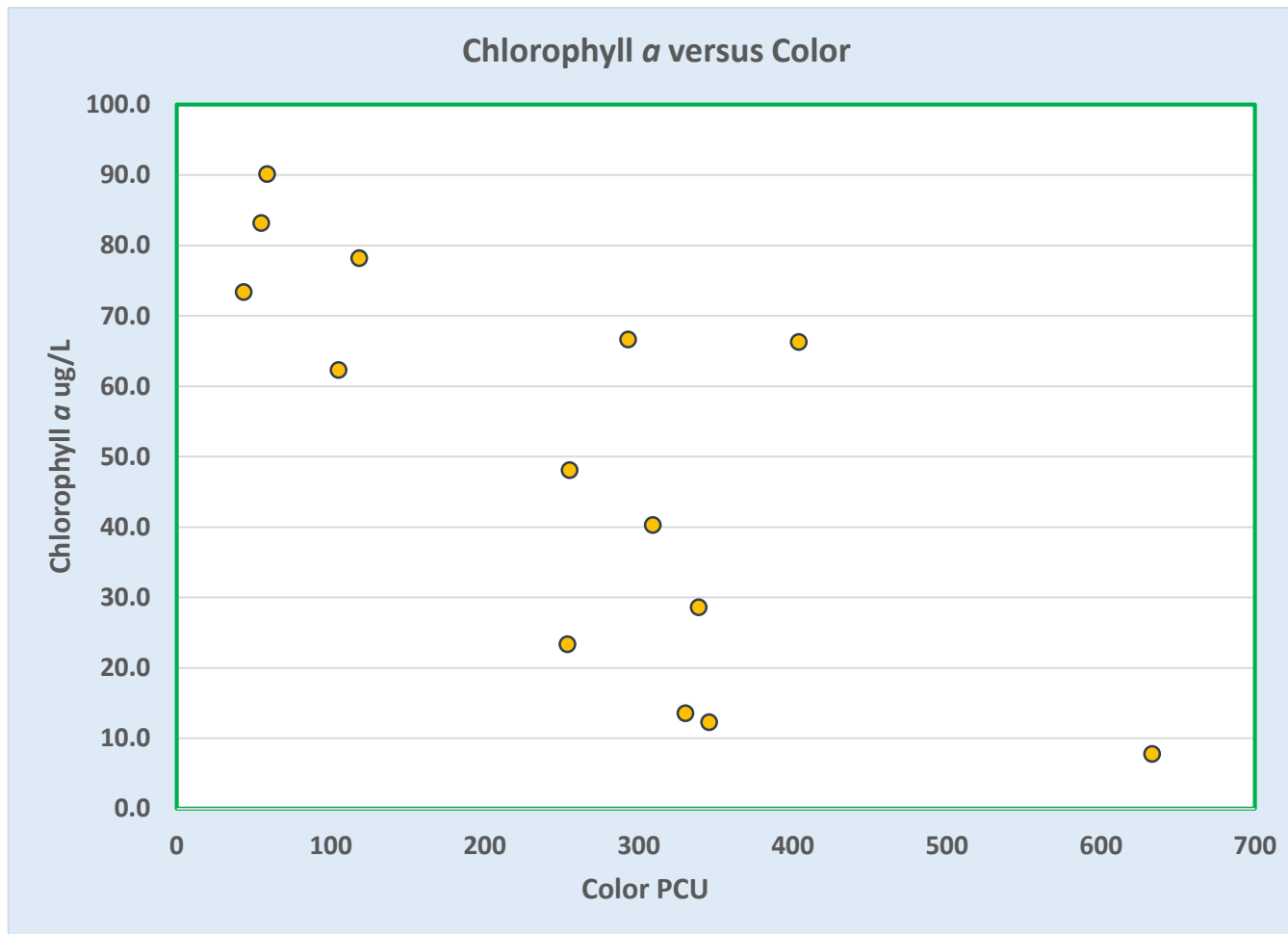


Trout Lake Chlorophyll *a*



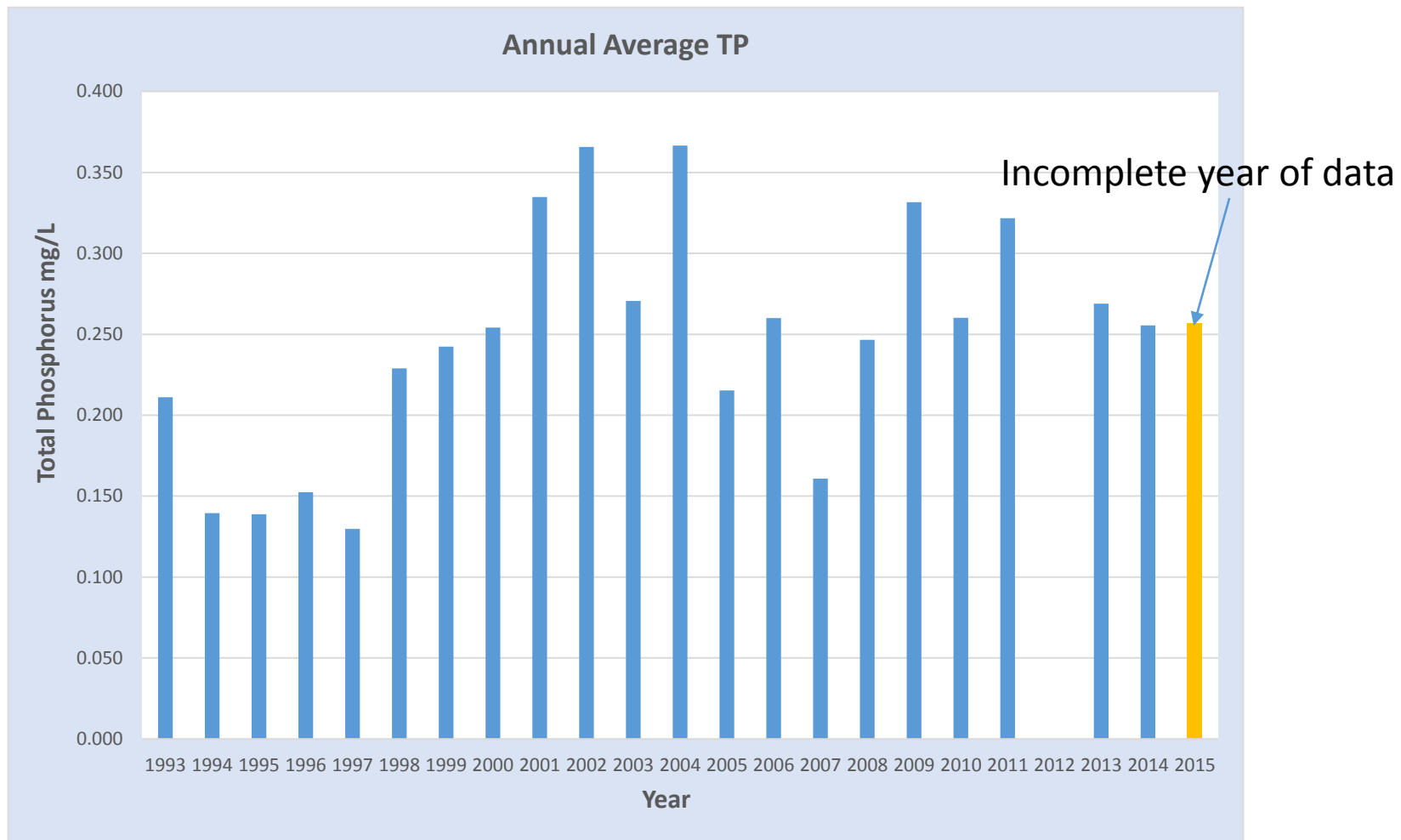


Chlorophyll *a* versus Color





Trout Lake Total Phosphorus





Palatlakaha Data

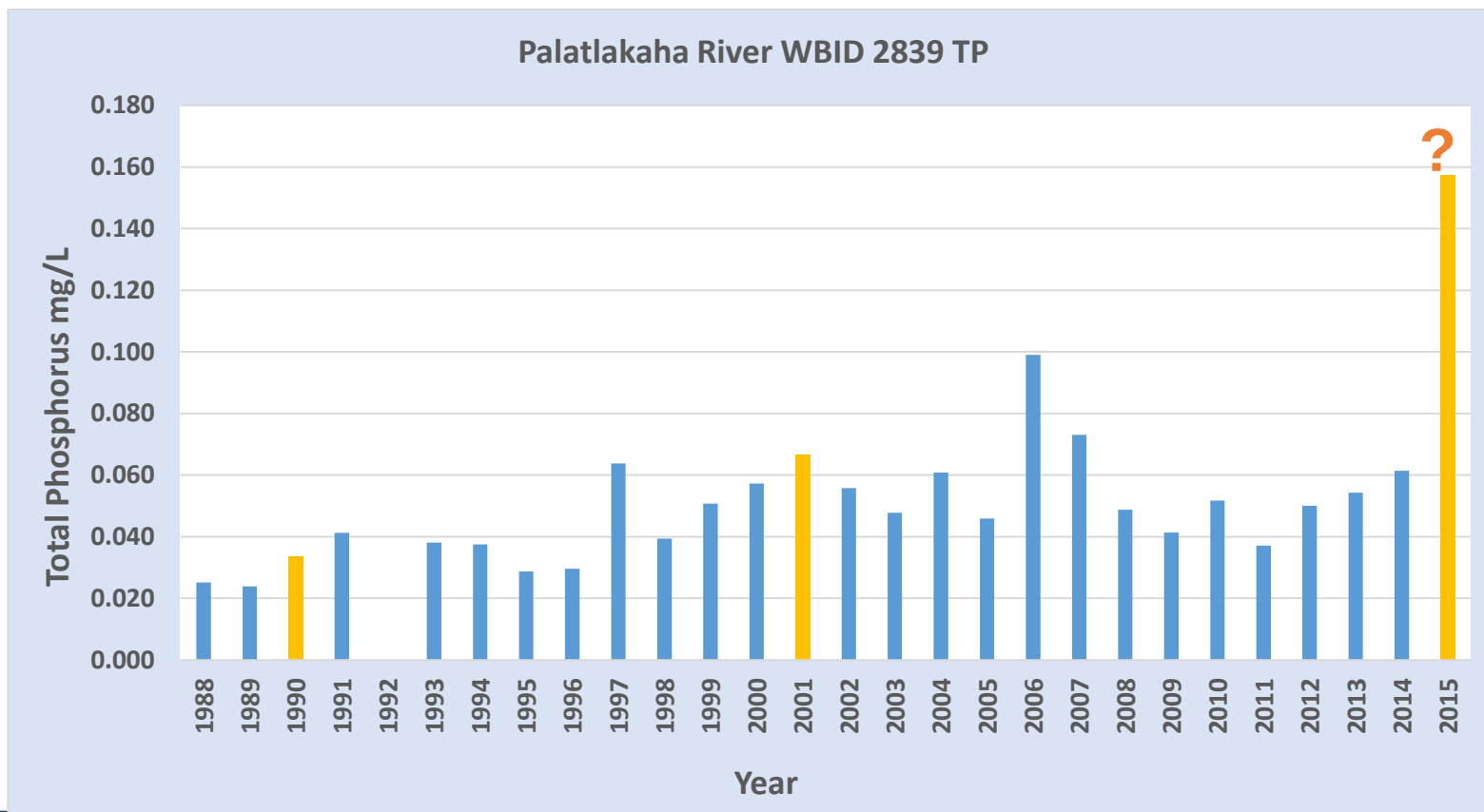
- Composited multiple sampling sites within WBID 2839.
- SJRWMD and Lake County are sampling agencies.

Station Name	Station Number	Agency
Palatlakaha R Hawthorne BR	PALATRHAWBR	Lake County
Palatlakaha R @ SR50	PLRV50	Lake County
Palatlakaha R @ SR19	PLRV19	Lake County
Palatlakaha R @ Bridges R	PLRVBRIDRD	Lake County
Palatlakaha River at SR48	PRVR	SJRWMD



Palatlakaha River Total Phosphorus

- Annual Averages.
- Orange bars only 3 quarters of data.
- 2015 data set not complete. First quarter levels ? higher than historical record.





Project Requests

- DEP received information from jurisdiction highlighted in orange.
- Apopka
- Clermont
- Eustis
- Florida Department of Agriculture and Consumer Services (FDACS)
- Florida Department of Transportation (FDOT)
- Fruitland Park
- Groveland
- Lady Lake
- Lake County



Project Requests

- Lake County Water Authority (LCWA)
- Leesburg
- Marion County
- Mount Dora
- Ocoee
- Orange County
- St. Johns River Water Management District (SJRWMD)
- Tavares
- Umatilla



Projects Completed During the Reporting Period

Entity	Project Name	Project Description	Project Status
Eustis	Ferran Park Parking Lot	Parking lot constructed along with its drainage.	Completed 2016
Eustis	Sewer line Replacement	Project will replace all damaged sewer lines along Idlewilde Drive, Lakeshore Drive, Mary Street removing TN seepage upstream from Lake Eustis.	Completed 2016
Lake County	Year 2015/16 Catch Basin & Pipe Cleaning	Lake County pro-actively cleans stormwater manholes and pipes to remove accumulated sediments and nutrients to reduce discharge to receiving water bodies.	Completed
Lake County	Aquatic Vegetation Harvesting- Dead River and Hollondel Ponds	Chemical treatment with physical harvesting and removal of excessive aquatic plants at Dead River and Hollondel ponds. 150+ cubic yards of plant material harvested and removed from ponds. Nutrient load within plant matter physically removed from the system.	Completed
FDACS	Agricultural Best Management Practice (BMP) Enrollment Through June 2016	Agricultural acreage covered by a BMP Notice of Intent (NOI) increased by 1,322.87 acres during the reporting period.	Ongoing



Projects Added During the Reporting Period

Entity	Project Name	Project Description	Project Status
Eustis	Trout Lake Hybrid Wetland Treatment	The facility will treat Trout Lake water, Trout Lake will be able to meet the phosphorus TMDL target and reduce pollutant loadings to Lake Eustis.	Under construction
Eustis	Ardice Avenue - Kurt & Ruleme Improvements	The storm piping along Ardice Avenue- Kurt & Ruleme Street will be constructed and routed to a storm water pond in which the City will maintain.	Design phase
Eustis	Sewer Master Lift Station Upgrade	The upgrade will include addition of the bar screen, fixture replacement and coating.	Envisioned, but not funded
Eustis	Florida Food Products (FFP) Inc. for the City to Provide Sewage Treatment Services	In an attempt to decrease FFP spray field burden, FFP has petitioned the city to accept some of their excess process waters for treatment. In the spirit of being a "good neighbor," the City's Wastewater Department has accepted FFP discharge waters in an increasing step-feed manner for testing, analysis and treatment viability.	Ongoing
Lake County	Magnolia Lane Water Quality Retrofit	Installation of pipe, manholes and next generation baffle box with media filtration on existing outfall within portion of Springs subdivision. Will retrofit treatment onto an approximate 18 acre basin.	In permitting



Projects Added During the Reporting Period

Entity	Project Name	Project Description	Project Status
Lake County	Lake Emma Road & Lake Emma Estates Water Quality Retrofit	Installation of three next generation nutrient baffle boxes on existing outfalls from Lake Emma Road and Lake Emma Estates subdivision.	Design phase
Lake County	Harris Road Water Quality Retrofit	Installation of swales with ditch blocks and replacement of existing outfall with next generation nutrient removal baffle box.	Envisioned (conceptual), but not funded
Lake County	Fiscal Year 2017 Catch Basin & Pipe Cleaning	Lake County pro-actively cleans stormwater manholes and pipes to remove accumulated sediments and nutrients to reduce discharge to receiving water bodies.	Planned and funded
Lake County	Country Club Drive Water Quality Retrofit	Installation of multiple nutrient removal baffle box type structures on existing direct stormwater discharges to Little Lake Harris.	Envisioned (conceptual), but not funded
Tavares	City of Tavares Downtown Community Redevelopment Area (CRA) Area A Stormwater Improvements Treatment Pond	This project proposes construction of a stormwater interceptor which will divert stormwater from the City's Downtown Community Redevelopment Area (CRA) into a new wet detention pond, thereby eliminating several direct outfalls into Lake Dora. The water quality benefits to Lake Dora include sediment/TP/TN loading reductions.	Started



Projects Added During the Reporting Period

Entity	Project Name	Project Description	Project Status
LCWA	Lake Denham Muck Farm Buyout	Purchase 563 acre Lake Denham Muck Farm to eliminate the estimated 1100 lbs/yr TP loading.	Start date of 2017
Ocoee	Ocoee Crown Point Subdivision	Project Includes the construction of new roadways and stormwater management, and approximately 300 homes along the southeast shoreline of Lake Apopka. No stormwater management prior in natural state.	Estimated completion date 8/1/2016 - 8/2016
Ocoee	Renaissance Charter School	Project consists of constructing a Charter School, roads, parking, and stormwater management system	Estimated completion date: 6/1/2016
Ocoee	Arbors at Crown Point Subdivision	Project Includes the construction of new roadways and stormwater management, and approximately 240 homes within the Lake Apopka Basin. No stormwater management prior in natural state.	Estimated completion date: 6/1/2016 - 6/1/2017
Ocoee	Crown Pointe Cove Subdivision	Project Includes the construction of new roadways and stormwater management, and approximately 44 homes within the Lake Apopka Basin. No stormwater management prior in natural state.	Estimated completion date: 11/1/2015 - 8/1/2016
Ocoee	Eagles Creek Subdivision	Project Includes the construction of new roadways and stormwater management, and approximately 253 homes along the southeast shoreline of Lake Apopka. No stormwater management prior in natural state.	Future



Loading Reduction Tables

- Separated septic systems loading from urban, but
 - Septic system part of overall reduction over 10 years.
 - DEP management decision.
- Proposed adjustment to education credit.
 - Extend credit to Lake County for city jurisdictions without FYN components.
 - No duplication of credit for the same area.



Project Credits

- Project credits added for FDOT.
- Credits updated through August 16, 2016.
- Added education and outreach project.
 - Credits by jurisdiction and basin.
 - Some jurisdictions will have multiple education projects.
- Street sweeping and cleanout credits.
 - Project credits by jurisdiction and basin.



Questions?