

## 3. Wetland Impacts

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Impacts to wetlands along the alignment of the Wekiva Parkway (SR 429) and the SR 46 Realignment were estimated based on the Preferred Alternative. Detailed information on the Preferred Alternative, and a summary of the previously evaluated viable alternative alignments, is provided in the *Preliminary Engineering Report* (CH2M HILL). All wetland acreage within the planned right-of-way of the Preferred Alternative is considered potentially impacted for the purpose of this PD&E study. Actual impact acres may be reduced from this conservative estimate in the final design, permitting, and construction phases.

Upon submittal of the Environmental Resource Permit (ERP) application, the FDEP/SJRWMD and the USACE will require that a wetlands functional assessment be performed on the proposed impacts and mitigation. The intent of the state assessment method, Uniform Mitigation Assessment Method (UMAM), is to provide a standardized procedure for assessing wetland functions, the degree of functional loss due to an impact, and the amount of mitigation needed to offset those losses (FDEP, 2004).

### 3.1 UMAM Analysis

Three main parameters are assessed under the UMAM protocol. They are 1) location and landscape, 2) water environment, and 3) vegetation and benthic community. Each parameter is given a score between 1 and 10. The final score is a weighted average.

The UMAM analysis scores for the existing conditions of representative wetlands in 2006 are presented in **Table 3-1**. These representative wetlands are typical of wetlands throughout the project study area and were selected for analysis out of the total set of wetlands identified as potentially being impacted by the project. An approximate delineation of each wetland in the study area and the corresponding wetland identification numbers are shown on the project aerials in **Appendix A** of this report.

Wetlands identified within the proposed project corridor are of high to moderate quality. Most of the representative wetlands scored above average to average for wetland assessment functions. The Wekiva River, one of the most notable and unique features in the regional landscape, scored the highest due to its near pristine condition and preserved adjacent uplands for wildlife habitat. Wetlands located within or near State Parks, Preserves, and State Forests scored high due to their location in the landscape and the high quality of their water environment. These wetlands were typically identified in Lake County East and Seminole County. In

areas of Orange County and Lake County West where development pressures are higher in the adjacent uplands and habitats are more fragmented, wetlands scored lower. The UMAM assessment and scoring worksheets, *PART I – Qualitative Description (per Section 62-345.400, F.A.C.) and PART II – Quantification of Assessment Area (per Sections 62-345.500 and .600, F.A.C.)* are presented in **Appendix B**.

TABLE 3-1

UMAM Parameters and Scores for Representative Wetlands of Existing Conditions  
*Wekiva Parkway (SR 429)/SR 46 Realignment PD&E Study in Lake, Orange, and Seminole Counties*

Wetland ID #	Wetland Type / FLUCFCS	Location and Landscape	Water Environment	Vegetation or Benthic Community	Final UMAM
W33-37	Wekiva River – 510, 630, 644	9	10	9	0.93
W24-27 and contiguous swamp outside of ROW	Mixed habitat of marsh, shrub, and swamp 641, 631, 630, 617	8	10	9	0.90
# N/A - outside of Preferred Alternative	Yankee Lake, mixed forested swamp, marsh – 523, 611, 630, 641, 644	7	10	9	0.87
W16	Marsh – 641	8	8	10	0.87
# N/A - outside of Preferred Alternative	Minor spring run, wet prairie – 510, 643	7	10	4	0.70
W48-51	Shrub wetland, marsh – 631, 630, 534, 641, 644	5	7	9	0.70
W55-56	Wet prairie, deep marsh – 643, 644	8	7	4	0.63
# N/A - outside of Preferred Alternative	Marsh – 641	5	7	7	0.63
W42	Lake Sten, marsh – 641	4	7	7	0.60
W2	Shrub wetland – 631	3	7	4	0.47
<b>Average score:</b>					0.73

Wetland ID#: W = wetland

#N/A = preferred alternative is outside of reference wetland

Possible scores for each parameter range from 1 to 10 (highest = best quality).

Total Scores range from 0.0 to 1.0 (highest = best quality).

## 3.2 Impact Assessment

Potential wetland impact acreage was estimated based on the proposed roadway typical sections and preliminary plans for the Preferred Alternative. All wetland acreage within the planned right-of-way of the Preferred Alternative and within pond locations, comprise the estimated impacts for the purpose of this PD&E study. Actual impact acres may be reduced from this conservative estimate in the final design, permitting, and construction phases.

Secondary impacts to wetlands that remain after project completion are determined on a project by project basis during the permitting process. For example, some permit reviewers consider all wetlands and natural surface waters that are within 25 feet of the proposed right-of-way limits to be secondarily impacted.

Cumulative impacts are considered unacceptable when the proposed project, considered in conjunction with past, present, and future activities, would then result in a violation of state water quality standards or significant adverse impacts to functions of wetlands or other surface waters within the same drainage basin, when considering the basin as a whole. When mitigation of a project's adverse impacts occurs within the same basin as the project, cumulative impacts are presumed to be adequately addressed (SJRWMD, 2006).

### 3.2.1 Direct Impacts

All wetlands and natural surface waters (i.e., river, lakes, spring runs) that are within the Preferred Alternative proposed right-of-way are estimated to cover 77 acres. Man-made surface waters (excavated ponds - 534 FLUCFCS) cover 20 acres of the Preferred Alternative proposed right-of-way. Mitigation for excavated ponds typically is not required, unless they are used by listed wildlife species.

A summary of the potential direct impacts to wetlands and surface waters is provided in **Table 3-2**. A detailed list of the estimated impacts for each wetland, general habitat type (forested, shrub, herbaceous, and surface water) within the Preferred Alternative is presented in **Table C-1** of **Appendix C**.

### 3.2.2 Secondary Impacts

Secondary impacts refer to indirect effects from project activities on the remaining wetlands in the project area. SJRWMD *Applicant's Handbook: Management and Storage of Surface Waters*, Section 12.2.7 (SJRWMD 2006) provides guidelines for assessing secondary impacts to water resources. An ERP applicant must provide reasonable assurance that the project:

1. will not cause violations of water quality standards or wetland functions (can include increased pollutants from stormwater runoff, increase threat to wildlife of collision with vehicles). If an undisturbed buffer of 25 feet remains between the roadway and the wetland, these secondary impacts will not be considered adverse; provided that the uplands are not being used by listed species for nesting, denning or critically important feeding habitat.
2. will not adversely impact the ecological value of uplands to aquatic or wetland dependent listed wildlife species for nesting, denning or critically important feeding habitat (requires coordination with Florida Fish and Wildlife Conservation Commission (FWC) and U.S. Fish and Wildlife Service (FWS));
3. or closely linked activities, will not adversely impact significant historical and archaeological resources;

4. additional phases or expansion will not result in violations of water quality standards or wetland functions. These additional phases would be those that are dependent on the proposed project completion and intended use (i.e., additional phases would not happen if not for the proposed project). An example would be a road spur built to serve a specific future development.

TABLE 3-2

Summary of Potential Direct Impacts to Wetlands and Natural Surface Waters within the Preferred Alternative Right-of-Way *Wekiva Parkway (SR 429)/SR 46 Realignment PD&E Study in Lake, Orange, and Seminole Counties*

County	Section	Preferred Alternative Segments	Wetland ID #	Direct* Impact (acres)
Orange	Wekiva Parkway OOCEA	Kelly Park Road Interchange Alternative and Alignment	W1 – W8	2.94
Orange	Wekiva Parkway OOCEA	Orange County Alternative 1 Alignment (east of Plymouth Sorrento Rd)	-	0.00
Orange	Wekiva Parkway OOCEA	Systems Interchange Alternative 1	W9	0.34
Orange	SR 46 Realignment OOCEA	Lake County West Alternative 1 (northwest to Lake County line)	W58 – W59A	1.68
			<b>OOCEA Total</b>	<b>4.96</b>
Lake West	SR 46 Reconstruction FDOT	SR 46/US 441 Interchange Modification Alt. 2 (at-grade intersection of SR 46 and US 441)	-	0.00
Lake West	SR 46 Reconstruction FDOT	SR 46 North Widening Alternative	W48 – W53	10.66
Lake West	SR 46 Realignment FDOT	Lake County West Alternative 1 (southeast to Orange County line)	W54 – W57	1.52
Lake East	Wekiva Parkway FDOT	Neighborhood Lakes Alignment Alt. 1 (western alignment)	W10 – W15	13.17
Lake East	Wekiva Parkway FDOT	South Alignment Alternative 2 (red alignment) with Service Road	W16 – W34	18.10
Lake East	CR 46A Realignment FDOT	Alternative 1A, with SR 46 widening to the south	W60 – W61	1.87
Seminole	Wekiva Parkway FDOT	SR 46 Corridor North Widening Alt. from Wekiva River east to near Orange Avenue	W35 – W40A	5.16
Seminole	Wekiva Parkway FDOT	SR 417/I-4 Interchange Modification Alternative, with Connection Alignment Alt. B	W41 – W47	34.39
Seminole	SR 46 Reconstruction FDOT	Widen to Six Lanes from Wekiva Parkway to the SR 46/I-4 Interchange	W62 – W64	7.73
			<b>FDOT Total</b>	<b>92.60</b>
			<b>GRAND TOTAL</b>	<b>97.56</b>

\*Impact amounts are estimated based on full extent of the Preferred Alternative right-of-way. Impacts may be minimized further in final design and permitting phases.

Note: OOCEA is the Orlando-Orange County Expressway Authority; FDOT is the Florida Department of Transportation

Secondary impacts to water quality are not expected with this project because the stormwater treatment system will be designed to satisfy current stormwater management criteria, including special basin criteria. Rather, water quality treatment will be improved over the existing conditions along some portions of the project in Lake and Seminole Counties which follow the existing SR 46 alignment and were constructed primarily before drainage criteria were developed.

The current threat to wildlife from conflicts with vehicles will be reduced through the proposed construction of long bridge spans in areas of high wildlife use, plus fencing to keep wildlife off the road and directed toward the bridged underpasses. Preservation of upland and wetland habitats in the project area will serve to offset unavoidable secondary impacts to uplands used by listed species. These and other wildlife habitat impact minimizing measures are described in the updated final *Endangered Species Biological Assessment* (CH2M HILL, June 2010) prepared for this PD&E Study.

Impacts to any potentially significant historical and archaeological resources have been avoided and/or minimized through evaluation of several viable alternative alignments and with the selection of the Preferred Alternative. Historical and archaeological resources in the project area are described in the updated final *Cultural Resource Assessment Survey* (May 2010) prepared by Janus Research and Archaeological Consultants, Inc. for this PD&E Study.

The Wekiva Parkway is referred to as the missing link in the Western Beltway (SR 429), and no additional phases of the Western Beltway are anticipated. Other secondary impacts that may occur with this project include shading of wetlands under bridges, an increase in sunlight reaching a wetland because the adjacent tree canopy has been removed, or road noise and debris causing habitat disruption in adjacent wetlands.

Shading from bridge spans may be expected with this project at the marsh wetland on the Neighborhood Lakes property and at the Wekiva River. The Wekiva River expressway and service road bridges will be constructed at the location of the existing SR 46 bridge crossing, so the impacts from this project will be from the increased width of the proposed bridges. However, the effects of shading from the wider bridge crossing will be reduced by the increased height of the proposed bridges, which will allow more light to reach the vegetation within the river channel.

Secondary impacts to forested wetlands from removal of existing tree canopy will result in a change of sunlight for adjacent wetlands. These types of impacts will occur where forested wetlands are immediately adjacent to the existing SR 46 right-of-way. Forested wetlands that have the potential to be impacted in areas of Seminole and Lake Counties were previously described.

In some locations secondary impacts will be avoided. Wherever possible, a setback will be provided between a proposed stormwater treatment pond and a wetland,

per the provision in the SJRWMD *Applicant's Handbook* 12.2.7(a) that states: "Secondary impacts to the habitat functions of wetlands associated with adjacent upland activities will not be considered adverse if buffers, with a minimum width of 15 feet and an average of 25 feet, are provided abutting those wetlands."

Setbacks may not always be possible along the proposed roadway, such as where insufficient right-of-way is available. When setbacks are not practicable, additional mitigation acreage may be required to offset secondary impacts. The amount of mitigation acreage required for the secondary impact is determined during the permitting process.

### 3.2.3 Cumulative Impacts

Mitigation for cumulative impacts is determined during the permitting process. Guidelines are presented in the SJRWMD *Applicant's Handbook* subsections 12.1.1(c), 12.1.1(g), 12.2.2, and 12.2.8(b), (SJRWMD, 2006). An applicant must provide reasonable assurances that the project will not cause unacceptable cumulative impacts on wetlands within the same drainage basin by identifying "past, present, and reasonably expected future applications with like impacts". Per the *Applicant's Handbook*, mitigation which offsets a project's adverse impacts within the same basin as the project is presumed not to cause unacceptable cumulative impacts. Therefore, no cumulative impacts associated with this proposed project are anticipated because the proposed mitigation is within the same ERP Basin as the impacts. Also, no additional phases of the Western Beltway (SR 429) are anticipated.

History has shown that transportation improvement projects usually have cumulative effects in terms of new residential and commercial development occurring near the new roadway. Some of the changes in land use patterns, population density, and growth rate are projected to occur in the study area irrespective of this roadway project. As stated in the *Wekiva Parkway and Protection Act*, the intent of this project is to complete the Western Beltway around the greater Orlando metropolitan area in an environmentally compatible manner while limiting local access interchanges so as not to encourage development of adjacent areas.

The portion of the Wekiva Parkway (SR 429) in Orange County will be a limited access expressway on new alignment. The new roadway will cross rural residential and agricultural land uses that are steadily being developed today. It is expected that the new local access interchange at Kelly Park Road will contribute to the local area commercial and/or residential development. However, the *Wekiva Parkway and Protection Act* requires local governments to prepare plans for the interchanges areas to control development. Very few wetlands would be impacted by the project in Orange County. Increased development potentially will have a greater affect on the agriculture and natural upland land uses in the area, rather than on the few wetlands in the local area.

The Lake County portions of this project are referred to as “East” (toward the Wekiva River) and “West” (toward US 441). In Lake County West, SR 46 would be reconstructed and widened from the SR 46/US 441 interchange to east of Round Lake Road where it would turn to the southeast on a new alignment to the proposed systems interchange connection with Wekiva Parkway (SR 429). In Lake County East, most of the improvements will be a limited access expressway partially on new alignment and partially following the existing SR 46 corridor. A two-lane, non-tolled service road would be constructed on the north side of the expressway, within the 300-foot limited access expressway right-of-way from the Neighborhood Lakes interchange to east of the Wekiva River.

Prior to revising the concept to a tolled expressway with a non-tolled service road for local access, the Preferred Alternative included three full interchanges for local access between Neighborhood Lakes and the Wekiva River. The three full interchange concept was selected from the Viable Alternatives as the Preferred Alternative at the request of FDEP; this was done in order to completely eliminate the existing at-grade sections of SR 46 in the vicinity of the wildlife corridor west of Wekiva River Road to reduce the potential for vehicle-wildlife conflicts. Under the current concept, both the expressway and the parallel service road will be bridged for 4,000 feet through this area to eliminate any at-grade sections of roadway and enhance the existing wildlife corridor. In addition to enhancing the wildlife corridor, the current concept would have 3.72 acres less impact to wetlands than the previous concept.

The cumulative effects of this Wekiva Parkway project will be greatly minimized by removing the option of future development of parcels along the roadway, as is the case with the recently acquired Neighborhood Lakes property. That land was planned to be developed as a residential community and, with a Wekiva Parkway interchange at the north end of the parcel, it surely would have been developed. Now it will be approximately 1,440 acres of conservation land directly contiguous to the state reserve land.

The majority of the Seminole County portion of this project will be widening of the existing SR 46 corridor for a limited access expressway with frontage roads. This section of existing SR 46, particularly on the south side, has been almost fully developed in urban and residential lane uses; therefore, little opportunity for increased cumulative impacts is anticipated. A portion of the roadway through Seminole County will be on new alignment from SR 46 southeast to the existing SR 417/I-4 interchange. However, most of that area has already been developed in urban and residential land uses, except for some small parcels of pasture and remnant citrus groves. It is likely that parcels which are currently undeveloped in this section of Seminole County will be developed by the time Wekiva Parkway construction activities begin.

The Wekiva Parkway will be a major transportation facility and the proposed improvements are consistent with the regional plans of the affected communities. Regional development is expected to continue in most of the study area regardless of whether or not the Wekiva Parkway is built. However, the proposed roadway improvements will allow safer east-west travel between Lake and Seminole Counties, enhance wildlife habitat connectivity between state conservation lands, and lessen traffic pressure on local roads.

This project will result in an improvement to the existing water quality treatment conditions in some areas where the original state and county road construction occurred prior to SJRWMD jurisdiction over water quality, water quantity, and flood protection. Best management practices will be implemented within the project limits to offer treatment and attenuation that replace the existing no-treatment or attenuation conditions. No future direct wetland impacts or water quality impacts are foreseeable for this project.