Appendix B

UMAM Assessment and Scoring Worksheets
### PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

**Site/Project Name**
SR 429 Wekiva Parkway / SR 46 Realignment

**Application Number**
W33, 33A, 34, 35, 36, 37 - Wekiva River - Lake and Seminole Counties

<table>
<thead>
<tr>
<th>FLUCs code</th>
<th>Further classification (optional)</th>
<th>Impact or Mitigation Site?</th>
</tr>
</thead>
<tbody>
<tr>
<td>510 - Streams and Waterways</td>
<td>R2UBH - Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded</td>
<td>Impact - shading by bridge and some temporary disturbance</td>
</tr>
<tr>
<td>630 - Wetland Forested Mixed</td>
<td>644 - Floating Aquatics</td>
<td></td>
</tr>
<tr>
<td>510 - Streams and Waterways</td>
<td>R2UBH - Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded</td>
<td></td>
</tr>
</tbody>
</table>

**Assessment Area Name or Number**
- Wekiva River - Lake and Seminole Counties

**Assessment Area Size**
6.5 acres

<table>
<thead>
<tr>
<th>Basin/Watershed Name/Number</th>
<th>Affected Waterbody (Class)</th>
<th>Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)</th>
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</thead>
<tbody>
<tr>
<td>Upper St. John's River basin</td>
<td>Class III</td>
<td>OFW, AP, WSR, Wekiva River Protection Act</td>
</tr>
<tr>
<td>03080101</td>
<td></td>
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</table>

### Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands
See Part II of report

**Assessment area description**
The Wekiva River is one of the few remaining near-pristine riverine systems in central Florida. Its headwaters begin at the confluence of Wekiwa Spring Run and Rock Spring Run. The Wekiva is a major tributary of the St. Johns River. Waters forming the upper reaches of the Wekiva River arise from both the Floridan aquifer in the form of clear, natural springs and from drainage of approximately 130 miles of watershed. The Little Wekiva River and Blackwater Creek are two major tributaries of the Wekiva. Blackwater Creek drains an additional 126 square miles of watershed into the lower reaches of the Wekiva, just upstream of the St. Johns River.

**Significant nearby features**
- Wekiva Springs State Park, Lower Wekiva River Preserve State Park, Rock Springs Run State Park, Seminole State Forest, Black Bear Wilderness Preserve, Blackwater Creek, St. John's River, SR 46, Interstate 4, City of Orlando

**Uniqueness (considering the relative rarity in relation to the regional landscape.)**
The Wekiva River is one of the few remaining near-pristine riverine systems in central Florida. The springheads at Wekiwa Spring and Rock Springs are two of only a few areas in central Florida where the limestone rock of the Floridan Aquifer can be observed at the surface.

**Functions**
Wildlife habitat, ecological preserve, water supply, recreation.

**Mitigation for previous permit/other historic use**
No previous permit or mitigation requirements.

**Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )**
- Florida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes

**Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)**
- Bluenose shiner (SSC), American alligator (SSC), limpkin (SSC), little blue heron (SSC), snowy egret (SSC), tricolored heron (SSC), white ibis (SSC), Southeastern American kestrel (T), bald eagle (E), least tern (T), Florida black bear (T), cardinal flower (T), hand fern (E).

**Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):**
No species observed immediately adjacent to assessment area (SR 46 existing bridge).

**Additional relevant factors:**
Impact to the Wekiva River is anticipated only from bridge widening. This will cause additional shading of the river channel under and adjacent to bridge. Impact will be only a slight increase from existing bridge. This impact will be minimized by lengthening the bridge span. Portions of the forested floodplain under the widened bridge deck will be permanently devoid of tall trees.

**Assessment conducted by:**
CH2MILL Biologist: Steve Eakin

**Assessment date(s):**
January 2007

Form 62-345.900(1), F.A.C. [ effective date ]
## PART I – Qualitative Description

### (See Section 62-345.400, F.A.C.)

<table>
<thead>
<tr>
<th>Site/Project Name</th>
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<tbody>
<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
<td>W24, W25, W26, W27 and contiguous swamp outside of ROW- Lake County</td>
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<table>
<thead>
<tr>
<th>FLUCPs code</th>
<th>Further classification (optional)</th>
<th>Impact or Mitigation Site?</th>
<th>Assessment Area Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>641 - Freshwater Marshes</td>
<td>PFO1/3C - Palustrine, Forested, Broad-Leaved Deciduous, Broad-Leaved Evergreen, Seasonally Flooded; PEM1F - Palustrine, Emergent, Persistent, Semipermanently Flooded; PSS6/7 Palustrine, Shrub</td>
<td>Impact along road/ reference wetlands</td>
<td>0.97 acres Shrub and 0.56 acres Marsh. Forested areas are outside of ROW</td>
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</table>

<table>
<thead>
<tr>
<th>Basin/Watershed Name/Number</th>
<th>Affected Waterbody (Class)</th>
<th>Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)</th>
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<tbody>
<tr>
<td>Upper St. Johns 03080101</td>
<td>Class III</td>
<td>No OFW</td>
</tr>
</tbody>
</table>

### Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

See Part II of report

### Assessment area description

A wetland mosaic, dominated by mixed wetland tree species and pockets of emergent aquatic vegetation. Dominant species include *Acer rubrum*, *Liquidambar styraciflua*, *Magnolia virginiana*, *Persea palustris*, *Panicum hemitomon*, *Cephalanthus occidentalis*, and *Pontederia cordata*. The wetland is located approximately 250 feet to the south of SR 46 in the Rock Springs Run State Preserve.

### Significant nearby features

SR 46, Rock Springs Run Preserve, Wekiva Springs State Park, Seminole State Forest, Wekiva River, City of Orlando

### Uniqueness (considering the relative rarity in relation to the regional landscape.)

Not Unique

### Functions

Wildlife habitat, water quality improvements, CO2 sequestration

Mitigation for previous permit/other historic use

No previous permit or mitigation requirements. Landuse surrounding wetland is currently being mowed and maintained as improved pasture.

### Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)

Florida black bear, raccoon, Eastern cottontail, wading birds, sandhill cranes, woodstorks, red winged blackbird, turkey, nine-banded armadillo, bald eagle, red-shouldered hawk, white tailed deer, common urban avian species such as the Northern cardinal, mockingbird, piliated woodpecker, red-headed woodpecker, red-bellied woodpecker, downy woodpecker, tufted titmouse, American crow, migratory song birds, frogs.

Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E), Florida Black bear (T)

### Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Rooting from wild pigs, pig seen adjacent to wetland, northern cardinal, American crows, green tree frog.

### Additional relevant factors:

Wetland is in an important wildlife corridor connecting Wekiva Springs State Park to the South and Seminole State Forest and the Ocala National Forest to the North.

### Assessment conducted by:

CH2MILL Biologist: Steve Eakin

Assessment date(s): January 2007
## PART I – Qualitative Description

### Site/Project Name
- SR 429 Wekiva Parkway / SR 46 Realignment

### Application Number
- Application Number

### Assessment Area Name or Number
- Yankee Lake - Seminole County

### FLCCs code
- 523 - Lakes >10 acres, < 100 acres
- 611 Bay Swamps
- 630 Wetland Forested Mixed
- 641 Freshwater Marshes
- 644 Emergent Aquatic Vegetation

### Further classification (optional)
- L1UBH - Lacustrine, Limnetic, Unconsolidated bottom, Permanently flooded
- PFO6F - Palustrine, Forested, Deciduous, Semipermanently flooded
- PFO6C - Palustrine, Forested, Deciduous, Seasonally flooded
- PEM1F - Palustrine, Emergent, Persistent, Semipermanently flooded

### Impact or Mitigation Site?
- Reference Wetlands

### Assessment Area Size
- between 50-100 acres

### Basin/Watershed Name/Number
- Upper St. Johns 03080101

### Affected Waterbody (Class)
- Class III

### Special Classification
- No OFW

### Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

See Part II of report

### Assessment area description
Yankee Lake is a lake/wetland complex comprised of open water, freshwater marshes, and forested wetlands, located north of SR 46 and east of the Wekiva River in Seminole County Florida. The wetland is bordered by SR 46 to the south and Yankee Lakes Regional Wastewater Treatment Facility Property on the West and North sides. Low Density, single family residential housing borders the wetland to the east.

### Significant nearby features
- Yankee Lakes Regional Wastewater Facility, Wekiva Springs State Park, Lower Wekiva River Preserve State Park, Rock Springs Run State Park, Seminole State Forest, Black Bear Wilderness Preserve, Blackwater Creek, St. John's River, SR 46, Interstate 4, City of Orlando

### Uniqueness (considering the relative rarity in relation to the regional landscape.)
The Yankee Lake wetland is not unique in the regional landscape.

### Functions
- Flood water mitigation, water quality improvements, wildlife habitat, CO2 sequestration, aesthetics

### Mitigation for previous permit/other historic use
- No previous permit or mitigation requirements. Landuse surrounding Yankee Lake is used as spray field application for the Yankee Lakes Regional Wastewater Treatment Facility and low density, single family residential housing.

### Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )
- Florida black bear, raccoon, wading birds, resident and migratory avian species, turkey, raptors, nine-banded armadillo, white tailed deer, frogs, snakes, American alligator, freshwater fishes, gopher tortoises and cohabitary species

### Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
- Gopher tortoise (SSC), Eastern indigo snake (T), Gopher Frog (SSC), American alligator (SSC), Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E), Florida mouse (SSC), Sherman's fox squirrel (SSC), Florida Black bear (T)

### Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):
- Approximately 7-10 wood ducks observed on multiple occasions, red-shouldered hawk, Great horned owl, coral snake, green tree frogs (calls)

### Additional relevant factors:
Proximity of Wastewater spray field and RIBs (Rapid Infiltration Basins) may affect water levels and water quality in Yankee Lake although no signs of eutrophication or impact were observed.

### Assessment conducted by:
- CH2MHILL Biologist: Steve Eakin

### Assessment date(s):
- January 2007

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Form 62-345.900(1), F.A.C.  [ effective date ]
### PART I – Qualitative Description

(See Section 62-345.400, F.A.C.)

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<td>W16 - Lake County</td>
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<th>Further classification (optional)</th>
<th>Impact or Mitigation Site?</th>
<th>Assessment Area Size</th>
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<tbody>
<tr>
<td>641 - Freshwater Marsh</td>
<td>PEMH - Palustrine, Emergent, Persistent, Permanently flooded</td>
<td>Impact to marsh along existing road</td>
<td>0.4 ac (5.3 ac marsh)</td>
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<table>
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<tr>
<th>Basin/Watershed Name/Number</th>
<th>Affected Waterbody (Class)</th>
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</thead>
<tbody>
<tr>
<td>Upper St. Johns 03080101</td>
<td>Class III</td>
<td>No OFW</td>
</tr>
</tbody>
</table>

### Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

See Part II of report

### Assessment area description

Wetland is a freshwater marsh dominated by *Nymphae odorata* and *Panicum hemitomon*. The center of the wetland is the deepest and contains floating aquatic vegetation. The wetland is bordered by SR 46 immediately to the north, Rock Springs Run State Preserve to the east and south, and the undeveloped Neighborhood Lakes parcel to the west.

### Significant nearby features

SR 46, wildlife crossing under SR 46, Rock Springs Run State Preserve, Wekiva Springs State Park, Lower Wekiva River Preserve State Park, Seminole State Forest, City of Orlando

### Uniqueness (considering the relative rarity in relation to the regional landscape.)

Not Unique

### Functions

Water quality improvements, floodwater attenuation, wildlife habitat, CO2 sequestration

### Mitigation for previous permit/other historic use

No previous permit or mitigation requirements.

### Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)

Florida black bear, raccoon, Eastern cottontail, wading birds, red winged blackbird, turkey, nine-banded armadillo, bald eagle, red-shouldered hawk, white tailed deer, scrub jays, burrowing owls, common urban avian species such as the Northern cardinal, mockingbird, piliated woodpecker, red-headed woodpecker, red-bellied woodpecker, downy woodpecker, tufted titmouse, American crow, migratory song birds, frogs, gopher tortoises and cohabitary species, other various herpetological species.

### Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)

Gopher tortoise (SSC), Eastern indigo snake (T), Gopher Frog (SSC), Florida Scrub Jay (T), Florida Burrowing Owl (SSC), Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E), Florida mouse (SSC), Sherman's fox squirrel (SSC), Florida Black bear

### Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Nearby Scrub Jay colonies are documented and tracked by Wekiva River State Park staff. None were observed at the time of the survey but they are known to exist in close proximity to the wetland. Burrowing Owls were observed on the adjacent Neighborhood Lakes parcel and have previously been documented.

### Additional relevant factors:

Wetland is near one of two wildlife underpasses that connect Rock Springs Run State Preserve / Wekiva Springs State Park on the south side of SR 46 and Seminole State Forest on the north side of SR 46.

### Assessment conducted by:

CH2MHILL Biologist: Steve Eakin

### Assessment date(s):

January 2007
**PART I – Qualitative Description**  
*(See Section 62-345.400, F.A.C.)*

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<th>Site/Project Name</th>
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<tbody>
<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
<td>a spring run north of Boch Road - Orange County</td>
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<th>Further classification (optional)</th>
<th>Impact or Mitigation Site?</th>
<th>Assessment Area Size</th>
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<tbody>
<tr>
<td>510 - Streams and Waterways (minor springs)</td>
<td>Wet Prairies 643 - PEM1 - Palustrine, Emergent, Persistent, Saturated</td>
<td>Reference Wetlands</td>
<td>&lt;10 ac</td>
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<th>Basin/Watershed Name/Number</th>
<th>Affected Waterbody (Class)</th>
<th>Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)</th>
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</thead>
<tbody>
<tr>
<td>Upper St. Johns 03080101</td>
<td>Class III</td>
<td>No OFW</td>
</tr>
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</table>

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

See Part II of report

Assessment area description

A wet prairie wetland associated with a seasonally flowing minor spring run. The wetland is dominated by *Sambucus canadensis*, *Ludwigia peruviana*, and *Osmunda cinnamomea*. Land use surrounding the wetland and spring run include low density, single family residential dwellings and improved pastures.

**Significant nearby features**

SR 437, Lake Lucie, Rock Springs Run Preserve, Wekiva Springs State Park, Seminole State Forest, Wekiva River, City of Orlando

**Uniqueness** (considering the relative rarity in relation to the regional landscape.)

Somewhat unique. Three other minor spring runs occur within close proximity to WO45.

**Functions**

Wildlife habitat and source of fresh water.

Mitigation for previous permit/other historic use

No previous permit or mitigation requirements.

**Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)**

Florida black bear, raccoon, Eastern cottontail, wading birds, sandhill cranes, woodstorks, red winged blackbird, turkey, nine-banded armadillo, bald eagle, red-shouldered hawk, white tailed deer, common urban avian species such as the Northern cardinal, mockingbird, pileated woodpecker, red-headed woodpecker, red-bellied woodpecker, downy woodpecker, tufted-titmouse, American crow, migratory song birds, frogs, gopher tortoises and cohabitory species, other various herpetological species.

**Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)**

Gopher tortoise (SSC), Eastern indigo snake (T), Gopher Frog (SSC), Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E), Florida Black bear (T)

**Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):**

none observed

**Additional relevant factors:**

Assessment conducted by:

CH2MILL Biologist: Steve Eakin

Assessment date(s):

January 2007
### PART I – Qualitative Description
*(See Section 62-345.400, F.A.C.)*

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<th>Site/Project Name</th>
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<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
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<td>W48, W49, W50, W51, Lake County</td>
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<tr>
<th>FLUCs code</th>
<th>Further classification (optional)</th>
<th>Impact or Mitigation Site?</th>
<th>Assessment Area Size</th>
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<tbody>
<tr>
<td></td>
<td>PFO6C - Palustrine, Forested, Deciduous, Seasonally Flooded</td>
<td>Impact to shrubby wetland and marsh along existing roadway</td>
<td>&lt;10 along roadway (a 65 acre wetland)</td>
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<tr>
<td></td>
<td>PEM1G - Palustrine, Emergent, Persistent, Intermittently Flooded</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PSS1 - Palustrine Scrub-Shrub, Broad-Leaved Deciduous, Various Water Regimes</td>
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Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

See Part II of report

Assessment area description

A wetland mosaic, dominated by mixed wetland tree, shrub, and emergent species. Dominant species include *Acer rubrum*, *Liquidambar styaciflua*, *Salix caroliniana*, *Cephalanthus occidentalis*, *Panicum hemitomon*, and *Pontedaria cordata*. The wetland is bisected by the existing SR 46 near the junction with US 441. Land use surrounding the wetland includes single family and multiple dwelling condominiums.

Significant nearby features

SR 46, US 441, Town of Mt. Dora, Rock Springs Run Preserve, Wekiva Springs State Park, Seminole State Forest, Wekiva River, City of Orlando

Uniqueness (considering the relative rarity in relation to the regional landscape.)

Not Unique

Functions

Wildlife habitat, water quality improvements, storm water attenuation, CO2 sequestration, some recreation.

Mitigation for previous permit/other historic use

No previous permit or mitigation requirements.

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)

Raccoon, Eastern cottontail, wading birds, sandhill cranes, woodstorks, red winged blackbird, turkey, nine-banded armadillo, bald eagle, red-shouldered hawk, common urban avian species such as the Northern cardinal, mockingbird, piliated woodpecker, red-headed woodpecker, red-bellied woodpecker, downy woodpecker, tufted-titmouse, American crow, migratory song birds, frogs, fishes.

Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E)

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Fish observed breaking the surface of the open water areas.

Additional relevant factors:

Wetland was previously impacted from the construction of SR 46. The wetland is still connected hydrologically but impacts to wildlife increased from vehicles and development of the surrounding uplands.

Assessment conducted by:

CH2MILL Biologist: Steve Eakin

Assessment date(s):

January 2007
## PART I – Qualitative Description

(See Section 62-345.400, F.A.C.)

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<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
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<td>W55, W56 - Lake County</td>
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<th>Further classification (optional)</th>
<th>Impact or Mitigation Site?</th>
<th>Assessment Area Size</th>
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</thead>
<tbody>
<tr>
<td>643 - Wet Prairie</td>
<td>PEM, and PUBH - Palustrine, Unconsolidated bottom, Permanently flooded</td>
<td>Impact to marsh along existing road</td>
<td>1.5 ac impact (5 ac wetland)</td>
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<tr>
<td>644 - Emergent Aquatic Vegetation</td>
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<td>No OFW</td>
</tr>
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### Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

See Part II of report

### Assessment area description

A wetland, dominated by emergent aquatic vegetation within the central, deeper water portion and surrounded by wet prairie. Vegetation includes: *Nymphae odorata*, *Cephalanthus occidentalis*, and *Panicum hemitomon*. The wetland is located to the south of SR 46 and west of CR 437 in Lake County, FL. The wetland is located on undeveloped private property used for pine plantation and ATVs.

### Significant nearby features

Sorrento Cemetery, SR 46, CR 437, Wolf Sink Preserve, U.S. 441, City of Mt. Dora, Rock Springs Run Preserve, Wekiva Springs State Park, Seminole State Forest, City of Orlando

### Uniqueness

Uniqueness (considering the relative rarity in relation to the regional landscape.)

Not Unique

### Functions

Wildlife habitat, water quality improvements, C02 sequestration, recreation

Mitigation for previous permit/other historic use

No previous permit or mitigation requirements.

### Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)

- Raccoon, Eastern cottontail, wading birds, red winged blackbird, turkey, nine-banded armadillo, bald eagle, red-shouldered hawk, white tailed deer, common urban avian species such as the Northern cardinal, mockingbird, pileated woodpecker, red-headed woodpecker, red-bellied woodpecker, downy woodpecker, tufted-titmouse, American crow, migratory song birds, frogs, wetland fishes, gopher tortoises and cohabitory species, other various herpetological species.

### Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):


### Additional relevant factors:

Wetland is both spring fed from a surface water spring entering the wetland from the south and fed from groundwater. When the wetland was first observed (2003) no surface water was present and the wetland appeared to be ephemeral. The wetland appears to have remained inundated since that time with seasonal rainfall returning to average conditions. The wetland is impacted from heavy ATV usage.

### Assessment conducted by:

CH2MILL Biologist: Steve Eakin

Assessment date(s):

January 2007

Form 62-345.900(1), F.A.C. [effective date]
## PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

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</tr>
</thead>
<tbody>
<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
<td></td>
<td>small isolated wetland outside ROW - Orange County</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLUCs code</th>
<th>Further classification (optional)</th>
<th>Impact or Mitigation Site?</th>
<th>Assessment Area Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>641 - Freshwater Marsh</td>
<td>PEM1G - Palustrine, Emergent, Persistent, Intermittently flooded</td>
<td>Reference Wetland</td>
<td>&lt; 0.3 ac</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basin/Watershed Name/Number</th>
<th>Affected Waterbody (Class)</th>
<th>Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper St. Johns 03080101</td>
<td>Class III</td>
<td>No OFW</td>
</tr>
</tbody>
</table>

### Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

See Part II of report

### Assessment area description

Wetland is a small isolated freshwater marsh dominated by *Salix caroliniana, Ludwigia peruviana, Typha sp.* and *Cephalanthus occidentalis*. The wetland is surrounded by pine plantation and improved pasture.

### Significant nearby features

SR 435, SR 46, Rock Springs Run State Preserve, Wekiva Springs State Park, Lower Wekiva River Preserve State Park, Seminole State Forest, City of Orlando

### Uniqueness

(considering the relative rarity in relation to the regional landscape.)

Not Unique

### Functions

Water quality improvements, wildlife habitat, CO2 sequestration

Mitigation for previous permit/other historic use

No previous permit or mitigation requirements.

### Anticipated Wildlife Utilization Based on Literature Review

List of species that are representative of the assessment area and reasonably expected to be found

Florida black bear, raccoon, Eastern cottontail, wading birds, red winged blackbird, turkey, nine-banded armadillo, bald eagle, red-shouldered hawk, white tailed deer, common urban avian species such as the Northern cardinal, mockingbird, pileated woodpecker, red-headed woodpecker, red-bellied woodpecker, downy woodpecker, tufted-titmouse, American crow, migratory song birds, frogs, wetland fishes, gopher tortoises and cohabitory species, other various herpetological species.

### Anticipated Utilization by Listed Species

Type of use, and intensity of use of the assessment area

Gopher tortoise (SSC), Eastern indigo snake (T), Gopher Frog (SSC), Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E), Florida mouse (SSC), Sherman's fox squirrel (SSC), Florida Black bear (T)

### Observed Evidence of Wildlife Utilization

List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.:

None observed but gopher tortoise burrows located in close proximity to the wetland.

### Additional relevant factors:

Assessment conducted by:

CH2MILL Biologist: Steve Eakin

Assessment date(s):

January 2007
**PART I – Qualitative Description**

(See Section 62-345.400, F.A.C.)

<table>
<thead>
<tr>
<th>Site/Project Name</th>
<th>Application Number</th>
<th>Assessment Area Name or Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
<td></td>
<td>W42 - Lake Sten - Seminole County</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLUCCs code</th>
<th>Further classification (optional)</th>
<th>Impact or Mitigation Site?</th>
<th>Assessment Area Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>641 - Freshwater Marsh, Lake Sten</td>
<td>PUBH - Palustrine, Unconsolidated bottom, Permanently flooded</td>
<td>Impact</td>
<td>11 ac impact to 15 ac wetland</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basin/Watershed Name/Number</th>
<th>Affected Waterbody (Class)</th>
<th>Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper St. Johns 03080101</td>
<td>Class III</td>
<td>No OFW</td>
</tr>
</tbody>
</table>

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

See Part II of report

**Assessment area description**

Lake Sten (FLUCFCS 644). A wetland, dominated by emergent aquatic vegetation, located to the northwest of the I-4 / SR 417 interchange, North of Orlando in Seminole County Florida. The wetland is bordered by International Parkway to the north and west. The littoral zone of the wetland is dominated by spatterdock (*Nuphar lutea*), American water lily (*Nymphae odorata*), and maidencane (*Panicum hemitomon*). An invasive exotic, primrose willow (*Ludwigia peruviana*) is established on the southwestern edge along International Parkway. Lake Sten is typical of these 644 wetland types, which lack a canopy or shrub layer and are often deep (2 – 4 feet) near the center. Cattle were observed within the wetland and adjacent uplands on the northeastern shore. Emergent vegetation within the littoral fringe of the wetland's northeastern shore is absent due the grazing of the cattle.

**Significant nearby features**


**Uniqueness (considering the relative rarity in relation to the regional landscape.)**

The Lake Sten wetland is not unique in the regional landscape.

**Functions**

Flood water mitigation, water quality improvements, wildlife habitat, CO2 sequestration, aesthetics

**Mitigation for previous permit/other historic use**

No previous permit or mitigation requirements. Landuse surrounding Lake Sten has historically and is currently being used for cattle grazing and citrus farming.

**Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)**

Raccoon, Eastern cottontail, wading birds, red winged blackbird, turkey, nine-banded armadillo, bald eagle, red-shouldered hawk, white tailed deer, common urban avian species such as the Northern cardinal, mockingbird, pileated woodpecker, red-headed woodpecker, red-bellied woodpecker, downy woodpecker, tufted-tilmouse, American crow, migratory song birds, frogs, wetland fishes, gopher tortoises and cohabitary species, other various herpetological species.

**Gopher tortoise (SSC), Eastern indigo snake (T), Gopher Frog (SSC), American alligator (SSC), Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E), Florida mouse (SSC). Sherman's fox squirrel (SSC), Florida Black bear (T)**

**Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):**

Raccoon tracks. Approximately 7 active Gopher Tortoise (SSC) burrows were observed within a 16 acre upland parcel immediately south of Lake Sten. The gopher tortoise is commensal with the listed species Indigo snake, gopher frog, and the Florida mouse.

**Additional relevant factors:**

**Assessment conducted by:**

CH2MHILL Biologist: Steve Eakin

**Assessment date(s):**

January 2007

Form 62-345.900(1), F.A.C.  [ effective date ]
### PART I – Qualitative Description

(See Section 62-345.400, F.A.C.)

<table>
<thead>
<tr>
<th>Site/Project Name</th>
<th>Application Number</th>
<th>Assessment Area Name or Number</th>
<th>FLUCCs code</th>
<th>Further classification (optional)</th>
<th>Impact or Mitigation Site?</th>
<th>Assessment Area Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
<td></td>
<td>W2 - Orange County</td>
<td>631 - Wetland Shrub</td>
<td>PSS1 - Palustrine Scrub-Shrub</td>
<td>Impact</td>
<td>&lt;0.2 ac of a 0.7 ac wetland</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basin/Watershed Name/Number</th>
<th>Affected Waterbody (Class)</th>
<th>Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)</th>
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</thead>
<tbody>
<tr>
<td>Upper St. Johns 03080101</td>
<td>Class III</td>
<td>No OFW</td>
</tr>
</tbody>
</table>

**Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands**

See Part II of report

**Assessment area description**

Wetland is a small isolated shrub wetland dominated by *Ludwigia peruviana*, *Salix caroliniana*, and *Cephalanthus occidentalis*. Surrounding land use includes property currently owned by Orange County. Signs indicate that the property is potentially hazardous but the cause was not listed. Evidence of earth moving and terracing of the slopes was present at the time of the survey. West of the wetland is a high density single family residential development and golf course. Other surrounding areas are moderate density single family residential homes and commercial plant nurseries.

**Significant nearby features**

SR 435, SR 46, Rock Springs Run State Preserve, Wekiva Springs State Park, Lower Wekiva River Preserve State Park, Seminole State Forest, City of Orlando

**Uniqueness** (considering the relative rarity in relation to the regional landscape.)

Not Unique

**Functions**

Water quality improvements, wildlife habitat, C02 sequestration

Mitigation for previous permit/other historic use

**Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)**

- Florida black bear, raccoon, Eastern cottontail, wading birds, red winged blackbird, turkey, nine-banded armadillo, bald eagle, red-shouldered hawk, white tailed deer, common urban avian species such as the Northern cardinal, mockingbird, piliated woodpecker, red-headed woodpecker, red-bellied woodpecker, downy woodpecker, tufted titmouse, American crow, migratory song birds, frogs, wetland fishes, gopher tortoises and cohabitory species, other various herpetological species.

**Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)**

- Gopher tortoise (SSC), Eastern indigo snake (T), Gopher Frog (SSC), Little Blue Heron (SSC), Snowy egret (SSC), Tricolored heron (SSC), Sandhill crane (T), Bald eagle (T), Wood stork (E), Florida mouse (SSC), Sherman's fox squirrel (SSC), Florida Black bear (T)

**Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):**

None observed but gopher tortoise burrows located in close proximity to the wetland.

**Additional relevant factors:**

Assessment conducted by: CH2MILL Biologist: Steve Eakin

Assessment date(s): January 2007
Adjacent wildlife habitats outside of assessment area include State Parks, State Preserves, State Forests, the St. John's River and land use types common to developing urban areas. These include residential areas, medium volume roadways, commercial areas, and other natural vegetation communities. The natural areas, particularly the State Parks and Preserves, provide excellent support for expected species. Wildlife access to habitats is not limited other than in areas that have been developed into residential areas along the river. The majority of the Wekiva River floodplain has been preserved. Surrounding uplands have been impacted by development and access to these areas outside of the Parks and Preserves has been reduced.

Aquatic environment appropriate for spring run river and associated wetland floodplain. Assessment area hydroperiod appropriate and not impacted by berms, levees, ditches, or nearby stormwater retention ponds. The Wekiva River is directly connect to the nearby St. John's River and Blackwater River downstream. Water inputs from groundwater, rainfall and incidental amounts of runoff from some impervious surfaces. Water quality appears to be unimpacted by surrounding land use. Floodplain wetland capable of providing flood water attenuation and water quality improvements.

Vegetation community: Littoral zone dominated by various floating aquatics and emergent vegetation. Forested floodplain wetland is diverse and dominated by Taxodium distichum, Acer rubrum, Magnolia virginiana, Persea palustris, Juniperus virginiana, and Sabal palmetto. Fire suppression is evident as are some effects of logging in the past.
PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

<table>
<thead>
<tr>
<th>Site/Project Name</th>
<th>Application Number</th>
<th>Assessment Area Name or Number</th>
<th>Impact or Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
<td></td>
<td>W24, W25, W26, W27 and contiguous swamp outside of ROW Lake County</td>
<td>Impact to shrubby wetland and marsh along existing road/ part outside ROW is Reference Wetlands</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessment conducted by</th>
<th>Assessment date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH2M HILL Biologist Steve Eakin</td>
<td>January 2007</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scoring Guidance</th>
<th>Optimal (10)</th>
<th>Moderate (7)</th>
<th>Minimal (4)</th>
<th>Not Present (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed</td>
<td>Condition is optimal and fully supports wetland/surface water functions</td>
<td>Condition is less than optimal, but sufficient to maintain most wetland/surface water functions</td>
<td>Minimal level of support of wetland/surface water functions</td>
<td>Condition is insufficient to provide wetland/surface water functions</td>
</tr>
</tbody>
</table>

| .500(6)(a) Location and Landscape Support | 
|-----------------|-----------------|
| w/o pres or current | with |
| 8 | 8 |

| .500(6)(b) Water Environment (n/a for uplands) | 
|-----------------|-----------------|
| w/o pres or current | with |
| 10 | 10 |

| .500(6)(c) Community structure | 
|-----------------|-----------------|
| w/o pres or current | with |
| 9 | 9 |

**Score = sum of above scores/30** *(if uplands, divide by 20)*

| If preservation as mitigation, | 
|-------------------------------|----------------|
| Preservation adjustment factor = N/A | Adjusted mitigation delta = N/A |

<table>
<thead>
<tr>
<th>For impact assessment areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL = delta x acres =</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time lag (t-factor) = N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For mitigation assessment areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFG = delta/(t-factor x risk)</td>
</tr>
</tbody>
</table>

Form 62-345.900(2). F.A.C.  [effective date]
Adjacent wildlife habitats outside of assessment area include State Parks, State Preserves, State Forests, the Wekiva River, and land use types common to areas developing from rural to urban. These include a Regional Wastewater Treatment Plant, residential areas, medium volume roadways, commercial areas (nurseries), and other natural vegetation communities. The natural areas, particularly the State Parks and Preserves, provide excellent support for expected species but access to these areas is somewhat limited from the east, west, and southern sides of the lake/wetland complex. The remaining upland areas continue to be developed outside of the Regional Wastewater Treatment Plant property.

**Vegetation community:** The vegetation community has canopy, subcanopy, shrub, and herbaceous strata present where appropriate. Some impacts form human disturbance to the plant communities within the forested portions of the wetland was observed. Dominant species include *Taxodium distichum, Liquidambar styraciflua, Magnolia virginiana, Acer rubrum, Persea palustris, Panicum hemitomon, Nymphae odorata, Pontedaria cordata, Typha sp., Cephalanthus occidentalis, and Myrica cerifera*.

### Scoring Guidance

The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Optimal (10)</th>
<th>Moderate (7)</th>
<th>Minimal (4)</th>
<th>Not Present (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location and Landscape Support</td>
<td>Condition is optimal and fully supports wetland/surface water functions</td>
<td>Condition is less than optimal, but sufficient to maintain most wetland/surface water functions</td>
<td>Minimal level of support of wetland/surface water functions</td>
<td>Condition is insufficient to provide wetland/surface water functions</td>
</tr>
<tr>
<td>Water Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**.500(6)(a) Location and Landscape Support**

<table>
<thead>
<tr>
<th>w/o pres or current</th>
<th>with</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

**.500(6)(b) Water Environment**

<table>
<thead>
<tr>
<th>w/o pres or current</th>
<th>with</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

**.500(6)(c) Community structure**

1. Vegetation and/or
2. Benthic Community

<table>
<thead>
<tr>
<th>w/o pres or current</th>
<th>with</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Score = sum of above scores/30  (if uplands, divide by 20)

If preservation as mitigation, Preservation adjustment factor = N/A

Adjusted mitigation delta = N/A

For impact assessment areas

\[
FL = \text{delta} \times \text{acres} =\]

If mitigation

\[
\text{Time lag (t-factor)} = \text{N/A} \]

\[
\text{Risk factor} = \text{N/A} \]

For mitigation assessment areas

\[
\text{RFG} = \frac{\text{delta}}{(t\text{-factor} \times \text{risk})} \]

Form 62-345.900(2). F.A.C.  [effective date]
### Scoring Guidance

The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Optimal (10)</th>
<th>Moderate (7)</th>
<th>Minimal (4)</th>
<th>Not Present (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.500(6)(a) Location and Landscape Support</td>
<td>Condition is optimal and fully supports wetland/surface water functions</td>
<td>Condition is less than optimal, but sufficient to maintain most wetland/surface water functions</td>
<td>Minimal level of support of wetland/surface water functions</td>
<td>Condition is insufficient to provide wetland/surface water functions</td>
</tr>
<tr>
<td>w/o pres or current</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.500(6)(b) Water Environment (n/a for uplands)</td>
<td>Aquatic environment appropriate for the emergent marsh wetland. Assessment area hydroperiod appropriate and not impacted by berms, levees, ditches, or nearby stormwater retention ponds. Water inputs from groundwater, rainfall, and some roadway runoff. Water quality appears to be unimpacted by surrounding land use.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/o pres or current</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.500(6)(c) Community structure</td>
<td>Vegetation community: The vegetation community was appropriate for the wetland type. The north side of the wetland was previously permanently impacted from the construction of SR 46. Dominant species include Nymphae odorata, Panicum hemitomon, Baccharis sp., and Cephalanthus occidentalis.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Vegetation and/or 2. Benthic Community</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/o pres or current</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
\text{Score} = \frac{\text{sum of above scores}}{30} \quad \text{if uplands, divide by 20}
\]

\[
\text{If preservation as mitigation,}
\]

- Preservation adjustment factor = N/A
- Adjusted mitigation delta = N/A

\[
\text{For impact assessment areas}
\]

\[
\text{FL} = \delta \times \text{acres} = \delta 
\]

\[
\text{If mitigation}
\]

- Time lag (t-factor) = N/A
- Risk factor = N/A

\[
\text{Risk factor} = \frac{\text{delta}}{\text{t-factor} \times \text{risk}}
\]

\[
\text{For mitigation assessment areas}
\]

\[
\text{RFG} = \frac{\delta}{\text{t-factor} \times \text{risk}}
\]

---

Form 62-345.900(2), F.A.C. [effective date]
### Part II – Quantification of Assessment Area (impact or mitigation)

(See Sections 62-345.500 and .600, F.A.C.)

<table>
<thead>
<tr>
<th>Site/Project Name</th>
<th>Application Number</th>
<th>Assessment Area Name or Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
<td></td>
<td>a spring run north of Boch Road - Orange County</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact or Mitigation</th>
<th>Reference Wetlands</th>
<th>Assessment conducted by:</th>
<th>Assessment date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CH2M HILL Biologist Steve Eakin</td>
<td>January 2007</td>
</tr>
</tbody>
</table>

#### Scoring Guidance

<table>
<thead>
<tr>
<th>Optimal (10)</th>
<th>Moderate(7)</th>
<th>Minimal (4)</th>
<th>Not Present (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition is optimal and fully supports wetland/surface water functions</td>
<td>Condition is less than optimal, but sufficient to maintain most wetland/surface water functions</td>
<td>Minimal level of support of wetland/surface water functions</td>
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</tbody>
</table>

#### .500(6)(a) Location and Landscape Support

<table>
<thead>
<tr>
<th>w/o pres or current</th>
<th>with</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

#### .500(6)(b) Water Environment (n/a for uplands)

<table>
<thead>
<tr>
<th>w/o pres or current</th>
<th>with</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

#### .500(6)(c) Community structure

**Vegetation community**: The vegetation community is not diverse and was dominated by two wetland shrub species, *Sambucus canadensis* and the invasive *Ludwigia peruviana*. The canopy and subcanopy strata were notably absent from the wetland. Some remnant tree snags were present and indicate that at one time, the wetland area was likely forested. Areas immediately adjacent to and within the boundary of the wetland are regularly cleared, mowed, and maintained. The herbaceous layer of the wetland was sparse due to the dense shrub layer.

<table>
<thead>
<tr>
<th>w/o pres or current</th>
<th>with</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Score = sum of above scores/30  (if uplands, divide by 20)  

If preservation as mitigation,  
Preservation adjustment factor = N/A  
Adjusted mitigation delta = N/A  

For impact assessment areas  
FL = delta x acres =  

If mitigation  
Time lag (t-factor) = N/A  
Risk factor = N/A  

For mitigation assessment areas  
RFG = delta/(t-factor x risk)  

Form 62-345.900(2). F.A.C. [effective date]
**PART II – Quantification of Assessment Area (impact or mitigation)**

(See Sections 62-345.500 and .600, F.A.C.)

<table>
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<tr>
<th>Site/Project Name</th>
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<th>Assessment Area Name or Number</th>
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</thead>
<tbody>
<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
<td></td>
<td>W48, W49, W50, W51 - Lake County</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact or Mitigation</th>
<th>Assessment conducted by</th>
<th>Assessment date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact to shrubby wetland and marsh along existing road</td>
<td>CH2M HILL Biologist Steve Eakin</td>
<td>January 2007</td>
</tr>
</tbody>
</table>

### Scoring Guidance

The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed.

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<tr>
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<tr>
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<td><strong>Condition is optimal and fully supports wetland/surface water functions</strong></td>
<td><strong>Condition is less than optimal, but sufficient to maintain most wetland/surface water functions</strong></td>
<td><strong>Minimal level of support of wetland/surface water functions</strong></td>
<td><strong>Condition is insufficient to provide wetland/surface water functions</strong></td>
</tr>
</tbody>
</table>

### .500(6)(a) Location and Landscape Support

- **w/o pres or current with**
  - 5

### .500(6)(b) Water Environment (n/a for uplands)

- **w/o pres or current with**
  - 7

### .500(6)(c) Community structure

#### Vegetation community

- The vegetation community was appropriate for the wetland types observed. Shrub and herbaceous layer were not diverse but typical of wetlands surveyed throughout the study area. The shrub layer was dominated by *Salix caroliniana*, *Myrica cerifera*, *Acer rubrum*, and *Baccharis sp.* The herbaceous layer was dominated by *Panicum hemitomon* and *Nymphae odorata*. Some disturbance to the vegetation community was observed within the SR 46 ROW from routine maintenance and along the wetland boundary near residential areas.

### Formulae

- **Score** = sum of above scores/30  (if uplands, divide by 20)
- **If preservation as mitigation,**
  - Preservation adjustment factor = N/A
  - Adjusted mitigation delta = N/A
- **For impact assessment areas**
  - FL = delta x acres =
- **If mitigation**
  - Time lag (t-factor) = N/A
  - Risk factor = N/A
- **For mitigation assessment areas**
  - RFG = delta/(t-factor x risk)

Form 62-345.900(2). F.A.C.  [effective date]
PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

<table>
<thead>
<tr>
<th>Site/Project Name</th>
<th>Application Number</th>
<th>Assessment Area Name or Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
<td></td>
<td>W55, W56 Lake County</td>
</tr>
</tbody>
</table>

Impact or Mitigation

Impact to marsh along existing road

Assessment conducted by:

CH2M HILL Biologist Steve Eakin

Assessment date:

January 2007

### Scoring Guidance

<table>
<thead>
<tr>
<th>Optimal (10)</th>
<th>Moderate (7)</th>
<th>Minimal (4)</th>
<th>Not Present (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition is optimal and fully supports wetland/surface water functions</td>
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</table>

### .500(6)(a) Location and Landscape Support

w/o pres or current with

8

### .500(6)(b) Water Environment

w/o pres or current with

7

### .500(6)(c) Community structure

1. Vegetation and/or
2. Benthic Community

w/o pres or current with

4

### Vegetation community:

The vegetation community was heavily impacted from ATV use appropriate for the wetland types observed. Canopy and shrub layer were appropriately absent from the wetland type and the herbaceous layer was sparse due to impacts. The herbaceous layer was dominated by *Panicum hemitomon*.

### Aquatic environment somewhat appropriate for the wet prairie and emergent vegetation wetland type observed.

The wetland is fed by a small ephemeral spring to the south which had been impacted from ATV use. The wetland is fed by groundwater and rainfall and susceptible to any regional groundwater impacts. On several occasions the wetland was observed to be dry during the dry season. Assessment area hydroperiod seems appropriate and not impacted by berms, levees, ditches, or nearby stormwater retention ponds.

Score = sum of above scores/30   (if uplands, divide by 20)

If preservation as mitigation,

Preservation adjustment factor = N/A

Adjusted mitigation delta = N/A

For impact assessment areas

\[ FL = \text{delta} \times \text{acres} \]

If mitigation

Time lag (t-factor) = N/A

Risk factor = N/A

For mitigation assessment areas

\[ RFG = \text{delta}/(t\text{-factor} \times \text{risk}) \]

Form 62-345.900(2). F.A.C. [effective date]
**PART II – Quantification of Assessment Area (impact or mitigation)**

*(See Sections 62-345.500 and .600, F.A.C.)*

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<tr>
<th>Site/Project Name</th>
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</tr>
</thead>
<tbody>
<tr>
<td>SR 429 Wekiva Parkway / SR 46 Realignment</td>
<td></td>
<td>small isolated wetland outside ROW - Orange County</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impact or Mitigation</th>
<th>Assessment conducted by</th>
<th>Assessment date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Wetland</td>
<td>CH2M HILL Biologist Steve Eakin</td>
<td>January 2007</td>
</tr>
</tbody>
</table>

### Scoring Guidance

<table>
<thead>
<tr>
<th>Optimal (10)</th>
<th>Moderate(7)</th>
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</table>

#### .500(6)(a) Location and Landscape Support

- Adjacent wildlife habitats outside of assessment area moderate to poor quality and include mixed hardwood and conifer forest parcels, pine plantations, mixed rangeland and utility corridors. Other land uses include sparse single family residential dwellings, commercial (nurseries) properties, and a medium use roadway (CR 435). Wildlife access is somewhat limited from the east by CR 435 and to the north by residential and commercial properties. The majority of the surrounding uplands are pine plantation which at times may undergo intense management periods reducing wildlife access and habitat with those areas.

<table>
<thead>
<tr>
<th>w/o pres or current</th>
<th>with</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

#### .500(6)(b) Water Environment (n/a for uplands)

- Aquatic environment is somewhat appropriate for the shrub vegetation wetland type observed. The wetland is isolated within the watershed and inputs are from groundwater and rainfall. The water environment is highly susceptible to changes in land uses and management practices in the surrounding uplands. The wetland hydroperiod was appropriate for the wetland type.

<table>
<thead>
<tr>
<th>w/o pres or current</th>
<th>with</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

#### .500(6)(c) Community structure

1. Vegetation and/or
2. Benthic Community

- **Vegetation community**: The vegetation community was very low in diversity and comprised only of a shrub layer. The wetland was dominated by *Salix caroliniana, Myrica cerifera* and *Ludwigia peruviana*. The wetland appears to be prone to a fluctuating water table which has selected for shrub species and kept a canopy and notable herbaceous layer from being developed.

<table>
<thead>
<tr>
<th>w/o pres or current</th>
<th>with</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

### Scoring Calculation

- Score = sum of above scores/30 (if uplands, divide by 20)
- If preservation as mitigation,
  - Preservation adjustment factor = N/A
  - Adjusted mitigation delta = N/A
- For impact assessment areas
  - FL = delta x acres =

### Time-lag (t-factor) and Risk factor

- Delta = [with-current]
- If mitigation
  - Time lag (t-factor) = N/A
  - Risk factor = N/A
- For mitigation assessment areas
  - RFG = delta/(t-factor x risk)

Form 62-345.900(2). F.A.C.  [effective date]
PART II – Quantification of Assessment Area (impact or mitigation)
(See Sections 62-345.500 and .600, F.A.C.)

<table>
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<th>Assessment Area Name or Number</th>
<th>Impact or Mitigation</th>
<th>Assessment conducted by:</th>
<th>Assessment date:</th>
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### Scoring Guidance

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<tr>
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### Scoring

- **.500(6)(a) Location and Landscape Support**
  - w/o pres or current with
    - 4

- **.500(6)(b) Water Environment (n/a for uplands)**
  - w/o pres or current with
    - 7

- **.500(6)(c) Community structure**
  - 1. Vegetation and/or Benthic Community
    - w/o pres or current with
      - 7

### Scoring Table

<table>
<thead>
<tr>
<th>Score = sum of above scores/30 (if uplands, divide by 20)</th>
<th>If preservation as mitigation, preservation adjustment factor = N/A</th>
<th>For impact assessment areas FL = delta x acres =</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6</td>
<td>Adjusted mitigation delta = N/A</td>
<td></td>
</tr>
</tbody>
</table>

### Delta = [with-current]

- **Time lag (t-factor) = N/A**
- **Risk factor = N/A**

### Formulas

- RFG = delta/(t-factor x risk)
PART II – Quantification of Assessment Area (impact or mitigation)  
(See Sections 62-345.500 and .600, F.A.C.)

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<td></td>
<td>W2</td>
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Impact or Mitigation: Impact  
Assessment conducted by: CH2M HILL Biologist Steve Eakin  
Assessment date: January 2007

Scoring Guidance

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.500(6)(a) Location and Landscape Support

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
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</tbody>
</table>

.500(6)(b) Water Environment (n/a for uplands)

<table>
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<tbody>
<tr>
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<td></td>
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.500(6)(c) Community structure

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<th>1. Vegetation and/or 2. Benthic Community</th>
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<th>with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal level of support of wetland/surface water functions</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Vegetation community: The vegetation community was very low in diversity and comprised only of a shrub layer. The wetland was dominated by *Salix caroliniana* and *Ludwigia peruviana*. It is undetermined whether the wetland type, shape, and size were changed from previous land uses (mining). Earth surrounding the wetland appears to have been moved at some point.

Score = sum of above scores/30  
If preservation as mitigation,  
Preservation adjustment factor = N/A  
Adjusted mitigation delta = N/A  
For impact assessment areas  
FL = delta x acres =

If mitigation  
Time lag (t-factor) = N/A  
Risk factor = N/A  
For mitigation assessment areas  
RFG = delta/(t-factor x risk)

Delta = [with-current]

Form 62-345.900(2). F.A.C. [effective date]