



## **Appendix A**

### **USACOE Wetland Determination Data Forms**

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E City/County: Santa Rosa Sampling Date: Sep 13, 2011  
 Applicant/Owner: FDOT State: Florida Sampling Point: CP1-A  
 Investigator(s): Todd Campbell Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.) \_\_\_\_\_ Local relief (concave, convex, none): none Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR P Lat: 30°39'4.7" N Long: 86°58'51.1" W Datum: NAD 83  
 Soil Map Unit Name: Bibb/Kriston Association NWI Classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No _____	
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes <u>X</u> No _____		
Remarks:			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1)      _____ Aquatic Fauna (B13) _____ High Water Table (A2)      _____ Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3)      _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2)      _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3)      _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4)      _____ Thin Muck Surface (C7) _____ Iron Deposits (B5)      _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No _____ Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>2 inches</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five Strata) - Use scientific names of plants.**

Sampling Point CP1-A

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Magnolia virginiana</i> (Magnolia, sweetbay)	25	Y	FACW
2. <i>Nyssa biflora</i> (Tupelo, swamp)	25	Y	OBL
3. <i>Pinus elliotii</i> (Pine, slash)	2		FACW
4. <i>Quercus nigra</i> (Oak, water)	2		FAC
5. _____			
6. _____			
	54 = Total Cover		
50 % of total cover: <u>27</u>	20 % of total cover: <u>10.8</u>		

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Magnolia virginiana</i> (Magnolia, sweetbay)	10	Y	FACW
2. <i>Nyssa biflora</i> (Tupelo, swamp)	10	Y	OBL
3. <i>Persea palustris</i> (Bay, swamp)	2		FACW
4. _____			
5. _____			
6. _____			
	22 = Total Cover		
50 % of total cover: <u>11</u>	20 % of total cover: <u>4.4</u>		

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Ilex coriacea</i> (Holly, bay-gall)	10	Y	FACW
2. <i>Myrica cerifera</i> (Bayberry, southern)	10	Y	FAC
3. <i>Vaccinium corymbosum</i> (Blueberry, highbush)	7	Y	FACW
4. <i>Acer rubrum</i> (Maple, red)	2		FAC
5. <i>Ilex vomitoria</i> (Yaupon)	2		FAC
6. _____			
	31 = Total Cover		
50 % of total cover: <u>15.5</u>	20 % of total cover: <u>6.2</u>		

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Osmunda cinnamomea</i> (Fern, cinnamon)	2	Y	FACW
2. <i>Woodwardia areolata</i> (Chainfern, netted)	1	Y	OBL
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	3 = Total Cover		
50 % of total cover: <u>1.5</u>	20 % of total cover: <u>0.6</u>		

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Vitis rotundifolia</i> (Grape, muscadine)	7	Y	FAC
2. <i>Smitax laurifolia</i> (Greenbrier, laurel-leaf)	2	Y	FACW
3. _____			
4. _____			
5. _____			
	9 = Total Cover		
50 % of total cover: <u>4.5</u>	20 % of total cover: <u>1.8</u>		

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 11 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Test is ≤ 3.0<sup>1</sup>

\_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

**SOIL**

Sampling Point: CP1-A

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR6/6				N/A	N/A	Sandy	coarse sand w/ small fragments from upslope deposition
4-6	10YR5/6				N/A	N/A	Sandy	
6-8	10YR6/6				N/A	N/A	Sandy	
8-12+	10YR4/1				N/A	N/A	Sandy	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Gleyed Matrix (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No \_\_\_\_\_

**Remarks:**

Stripping begins below 6 inches due to depositional sediment from adjacent sandhill. Seepage stream wetland by definition.

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E City/County: Santa Rosa Sampling Date: Sep 13, 2011  
 Applicant/Owner: FDOT State: Florida Sampling Point: CP1-B  
 Investigator(s): Todd Campbell/Tim Stuhr Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.) \_\_\_\_\_ Local relief (concave, convex, none): none Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR P Lat: 30°39'4.6" N Long: 86°58'50.4" W Datum: NAD 83  
 Soil Map Unit Name: Bibb-Kinston Association NWI Classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_  
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No ____	<b>Is the Sampled Area within a Wetland?</b> Yes ____ No ____
Hydric Soil Present?	Yes ____ No <u>X</u>	
Wetland Hydrology Present?	Yes ____ No <u>X</u>	
Remarks:		

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes ____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes ____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes ____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes ____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five Strata) - Use scientific names of plants.**

Sampling Point CP1-B

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Magnolia grandiflora (Magnolia, large-flower)</u>	15	Y	FAC
2. <u>Quercus hemispherica (Oak, laurel)</u>	15	Y	UPL
3. <u>Oxydendrum arboreum (Sourwood)</u>	10		NI
4. <u>Ilex opaca (Holly, american)</u>	7		FAC
5. <u>Diospyros virginiana (Persimmon, common)</u>	5		FAC
6. <u>Pinus elliotii (Pine, slash)</u>	5		FACW
	57	= Total Cover	
50 % of total cover: <u>28.5</u>	20 % of total cover: <u>11.4</u>		

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus hemispherica (Oak, laurel)</u>	10	Y	UPL
2. <u>Ilex opaca (Holly, american)</u>	5	Y	FAC
3. <u>Magnolia grandiflora (Magnolia, large-flower)</u>	5	Y	FAC
4. <u>Fagus grandifolia (Beech)</u>	2		FAC
5. _____			
6. _____			
	22	= Total Cover	
50 % of total cover: <u>11</u>	20 % of total cover: <u>4.4</u>		

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ilex glabra (Ink-berry)</u>	40	Y	FACW
2. <u>Ilex vomitoria (Yaupon)</u>	15	Y	FAC
3. <u>Vaccinium elliotii (Blueberry, elliot)</u>	15	Y	FAC
4. <u>Vaccinium corymbosum (Blueberry, highbush)</u>	10		FACW
5. <u>Osmanthus americanus (Devil-wood)</u>	7		FAC
6. <u>Callicarpa americana (Beauty-berry, american)</u>	5		FACU
	97	= Total Cover	
50 % of total cover: <u>48.5</u>	20 % of total cover: <u>19.4</u>		

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	0	= Total Cover	
50 % of total cover: <u>0</u>	20 % of total cover: <u>0</u>		

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vitis rotundifolia (Grape, muscadine)</u>	5	Y	FAC
2. _____			
3. _____			
4. _____			
5. _____			
	5	= Total Cover	
50 % of total cover: <u>2.5</u>	20 % of total cover: <u>1</u>		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 77.8 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 – Rapid Test for Hydrophytic Vegetation

2 – Dominance Test is > 50%

3 – Prevalence Test is ≤ 3.0<sup>1</sup>

       Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E City/County: Santa Rosa Sampling Date: Sep 16, 2011  
 Applicant/Owner: FDOT State: Florida Sampling Point: CP2-A  
 Investigator(s): Todd Campbell / Tim Stuhg Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.) slope Local relief (concave, convex, none): none Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR P Lat: 30°40'10" N Long: 87°19.3" W Datum: \_\_\_\_\_  
 Soil Map Unit Name: Rutlege Loamy Sand NWI Classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_  
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?      Yes <u>X</u> No ____ Hydric Soil Present?                      Yes <u>X</u> No ____ Wetland Hydrology Present?            Yes <u>X</u> No ____	Is the Sampled Area within a Wetland?      Yes ____ No ____
Remarks:	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ____ Surface Water (A1) ____ High Water Table (A2) <u>X</u> Saturation (A3) ____ Water Marks (B1) ____ Sediment Deposits (B2) ____ Drift Deposits (B3) ____ Algal Mat or Crust (B4) ____ Iron Deposits (B5) ____ Inundation Visible on Aerial Imagery (B7) ____ Water-Stained Leaves (B9)	____ Aquatic Fauna (B13) ____ Marl Deposits (B15) (LRR U) ____ Hydrogen Sulfide Odor (C1) <u>X</u> Oxidized Rhizospheres on Living Roots (C3) ____ Presence of Reduced Iron (C4) ____ Recent Iron Reduction in Tilled Soils (C6) ____ Thin Muck Surface (C7) ____ Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> ____ Surface Soil Cracks (B6) ____ Sparsely Vegetated Concave Surface (B8) ____ Drainage Patterns (B10) ____ Moss Trim Lines (B16) ____ Dry-Season Water Table (C2) ____ Crayfish Burrows (C8) ____ Saturation Visible on Aerial Imagery (C9) ____ Geomorphic Position (D2) ____ Shallow Aquitard (D3) <u>X</u> FAC-Neutral Test (D5) ____ Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present?    Yes ____ No <u>X</u> Depth (inches): _____ Water Table Present?      Yes ____ No <u>X</u> Depth (inches): _____ Saturation Present?        Yes <u>X</u> No ____    Depth (inches): <u>12 inches</u> (includes capillary fringe)	Wetland Hydrology Present?      Yes <u>X</u> No ____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five Strata) - Use scientific names of plants.**

Sampling Point CP2-A

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Magnolia virginiana</i> (Magnolia, sweetbay)	25	Y	FACW
2. <i>Cliftonia monophylla</i> (Buckwheat-tree)	15	Y	OBL
3. <i>Cyrilla racemiflora</i> (Cyrilla, swamp)	15	Y	FACW
4. <i>Nyssa biflora</i> (Tupelo, swamp)	15	Y	OBL
5. <i>Persea palustris</i> (Bay, swamp)	10		FACW
6. <i>Pinus elliotii</i> (Pine, slash)	10		FACW
	<u>90</u>	= Total Cover	
50 % of total cover:	<u>45</u>	20 % of total cover:	<u>18</u>

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Magnolia virginiana</i> (Magnolia, sweetbay)	15	Y	FACW
2. <i>Nyssa biflora</i> (Tupelo, swamp)	15	Y	OBL
3. <i>Cyrilla racemiflora</i> (Cyrilla, swamp)	10	Y	FACW
4. <i>Persea palustris</i> (Bay, swamp)	5		FACW
5. _____			
6. _____			
	<u>45</u>	= Total Cover	
50 % of total cover:	<u>22.5</u>	20 % of total cover:	<u>9</u>

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Ilex cassine</i> (Holly, dahoon)	20	Y	FACW
2. <i>Myrica cerifera</i> (Bayberry, southern)	10	Y	FAC
3. <i>Ilex cassine</i> (Holly, dahoon)	5		FACW
4. _____			
5. _____			
6. _____			
	<u>35</u>	= Total Cover	
50 % of total cover:	<u>17.5</u>	20 % of total cover:	<u>7</u>

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Gaylussacia dumosa</i> (Huckleberry, dwarf)	5	Y	FAC
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	<u>5</u>	= Total Cover	
50 % of total cover:	<u>2.5</u>	20 % of total cover:	<u>1</u>

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Smilax laurifolia</i> (Greenbrier, laurel-leaf)	3	Y	FACW
2. <i>Vitis rotundifolia</i> (Grape, muscadine)	3	Y	FAC
3. _____			
4. _____			
5. _____			
	<u>6</u>	= Total Cover	
50 % of total cover:	<u>3</u>	20 % of total cover:	<u>1.2</u>

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 12 (A)

Total Number of Dominant Species Across All Strata: 12 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Test is ≤ 3.0<sup>1</sup>

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (Include photo numbers here or on a separate sheet.)



# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E City/County: Santa Rosa Sampling Date: Sep 16, 2011  
 Applicant/Owner: FDOT State: Florida Sampling Point: CP2-B  
 Investigator(s): Todd Campbell / Tim Stuhr Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.) hill slope Local relief (concave, convex, none): none Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR P Lat: 30°40'10.4" N Long: 87°1'9.7" W Datum: NAD 83  
 Soil Map Unit Name: Rutlege Loamy Sand NWI Classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____ No _____
Hydric Soil Present?	Yes _____ No <u>X</u>		
Wetland Hydrology Present?	Yes _____ No <u>X</u>		
Remarks:			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1)                      _____ Aquatic Fauna (B13) _____ High Water Table (A2)                      _____ Marl Deposits (B15) (LRR U) _____ Saturation (A3)                                      _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1)                                      _____ Oxidized Rhizospheres on Living Roots (C3) _____ Sediment Deposits (B2)                      _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3)                                      _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4)                                      _____ Thin Muck Surface (C7) _____ Iron Deposits (B5)                                      _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five Strata) - Use scientific names of plants.**

Sampling Point CP2-B

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Pinus palustris</i> (Pine, long-leaf)	7	Y	FACU
2. <i>Quercus virginiana</i> (Oak, live)	7	Y	FACU
3. <i>Quercus incana</i> (Oak blue-jack)	7	Y	UPL
4. <i>Quercus laevis</i> (Oak, turkey)	7	Y	UPL
5. <i>Quercus geminata</i> (Oak, sand-live)	7	Y	UPL
6. <i>Quercus margareta</i> (Oak, sand-post)	2		UPL
	37	= Total Cover	
50 % of total cover:	18.5	20 % of total cover:	7.4

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Quercus geminata</i> (Oak, sand-live)	7	Y	UPL
2. <i>Pinus palustris</i> (Pine, long-leaf)	5	Y	FACU
3. <i>Quercus nigra</i> (Oak, water)	5	Y	FAC
4. <i>Quercus hemispherica</i> (Oak, laurel)	5	Y	UPL
5. <i>Persea borbonia</i> (Bay, red)	2		FACW
6.			
	24	= Total Cover	
50 % of total cover:	12	20 % of total cover:	4.8

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Ilex vomitoria</i> (Yaupon)	15	Y	FAC
2. <i>Vaccinium elliotii</i> (Blueberry, elliot)	10	Y	FAC
3. <i>Serenoa repens</i> (Palmetto, saw)	5		FACU
4.			
5.			
6.			
	30	= Total Cover	
50 % of total cover:	15	20 % of total cover:	6

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Pteridium aquilinum</i> (Fern, bracken)	15	Y	FACU
2. <i>Aristida stricta</i> (Grass, pineland three-awn)	10	Y	FAC
3. <i>Pityopsis graminifolia</i> (Aster, golden)	7	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	32	= Total Cover	
50 % of total cover:	16	20 % of total cover:	6.4

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Smilax laurifolia</i> (Greenbrier, laurel-leaf)	3	Y	FACW
2. <i>Vitis rotundifolia</i> (Grape, muscadine)	3	Y	FAC
3.			
4.			
5.			
	6	= Total Cover	
50 % of total cover:	3	20 % of total cover:	1.2

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 16 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>43</u>	x 3 = <u>129</u>
FACU species <u>81</u>	x 4 = <u>324</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>129</u>	(A) <u>463</u> (B)

Prevalence Index = B/A = 3.59

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Test is ≤ 3.0<sup>1</sup>

     Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes      No X

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: CP2-B

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators.)								
Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 6/2				N/A	N/A	Sandy	
3-12+	10YR5/2				N/A	N/A	Sandy	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Gleyed Matrix (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present?      Yes \_\_\_\_\_ No X

**Remarks:**

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E City/County: Santa Rosa Sampling Date: Oct 5, 2011  
 Applicant/Owner: FDOT State: Florida Sampling Point: CP3-A  
 Investigator(s): Todd Campbell / Tim Stuhr Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR P Lat: 30°39'49.3" N Long: 86°59'23" W Datum: NAD 83  
 Soil Map Unit Name: Bibb Kinston Association NWI Classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2)      _____ Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3)      _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1)      _____ Oxidized Rhizospheres on Living Roots (C3) _____ Sediment Deposits (B2)      _____ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3)      _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4)      _____ Thin Muck Surface (C7) _____ Iron Deposits (B5)      _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>2 inches</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>surface</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five Strata) - Use scientific names of plants.**

Sampling Point CP3-A

Tree Stratum (Plot size: \_\_\_\_\_)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Nyssa biflora</i> (Tupelo,swamp)	30	Y	OBL
2. <i>Magnolia virginiana</i> (Magnolia,sweetbay)	15	Y	FACW
3. <i>Chamaecyparis thyoides</i> (Cedar,atlantic white)	10		OBL
4. <i>Pinus elliotii</i> (Pine,slash)	5		FACW
5. _____			
6. _____			
	60	= Total Cover	
50 % of total cover:	30	20 % of total cover:	12

Sapling Stratum (Plot size: \_\_\_\_\_)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Cyrilla racemiflora</i> (Cyrilla,swamp)	10	Y	FACW
2. <i>Magnolia virginiana</i> (Magnolia,sweetbay)	10	Y	FACW
3. <i>Nyssa biflora</i> (Tupelo,swamp)	10	Y	OBL
4. _____			
5. _____			
6. _____			
	30	= Total Cover	
50 % of total cover:	15	20 % of total cover:	6

Shrub Stratum (Plot size: \_\_\_\_\_)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Cyrilla racemiflora</i> (Cyrilla,swamp)	10	Y	FACW
2. <i>Lyonia lucida</i> (Fetter-bush)	5	Y	FACW
3. <i>Magnolia virginiana</i> (Magnolia,sweetbay)	5	Y	FACW
4. _____			
5. _____			
6. _____			
	20	= Total Cover	
50 % of total cover:	10	20 % of total cover:	4

Herb Stratum (Plot size: \_\_\_\_\_)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Sphagnum</i> spp.	30	Y	OBL
2. <i>Carex glaucescens</i> (Sedge,southern waxy)	10	Y	OBL
3. <i>Chasmanthium omithorhynchum</i> (Spikegrass,bird-bill)	10	Y	FACW
4. <i>Dichantheium scabrusculum</i> (Grass,woolly panic)	10	Y	OBL
5. <i>Dulichium arundinaceum</i> (Sedge,three-way)	5		OBL
6. <i>Eriocaulon decangulare</i> (Pipewort,ten-angle)	5		OBL
7. <i>Hypericum galloides</i> (St. john's-wort,bedstraw)	5		OBL
8. _____			
9. _____			
10. _____			
11. _____			
	75	= Total Cover	
50 % of total cover:	37.5	20 % of total cover:	15

Woody Vine Stratum (Plot size: \_\_\_\_\_)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Smilax laurifolia</i> (Greenbrier,laurel-leaf)	2	Y	FACW
2. <i>Smilax walteri</i> (Greenbrier,coral)	2	Y	OBL
3. _____			
4. _____			
5. _____			
	4	= Total Cover	
50 % of total cover:	2	20 % of total cover:	0.8

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 14 (A)

Total Number of Dominant Species Across All Strata: 14 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Test is ≤ 3.0<sup>1</sup>

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

**SOIL**

Sampling Point: CP3-A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			Loc <sup>2</sup>
0-3	10YR2/1				N/A	N/A	Muck	Mucky Mineral
3-7	10YR4/1		10YR5/4	4	C	N/A	Sandy	
7-12	10YR3/1		10YR5/4	4	C	N/A	Sandy	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodles (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Gleyed Matrix (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present?      Yes       No

**Remarks:**

# WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SR 87 Connector PD&E City/County: Santa Rosa Sampling Date: Oct 5, 2011  
 Applicant/Owner: FDOT State: Florida Sampling Point: CP3-B  
 Investigator(s): Todd Campbell / Tim Stuhr Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.) \_\_\_\_\_ Local relief (concave, convex, none): none Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR P Lat: 30°39'49.5" N Long: 86°58'56" W Datum: NAD 83  
 Soil Map Unit Name: Pactolus Loamy Sand NWI Classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?      Yes _____ No <u>X</u> Hydric Soil Present?                      Yes _____ No <u>X</u> Wetland Hydrology Present?            Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland?      Yes _____ No _____
Remarks:	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1)                      _____ Aquatic Fauna (B13) _____ High Water Table (A2)                    _____ Marl Deposits (B15) (LRR U) _____ Saturation (A3)                                _____ Hydrogen Sulfide Odor (C1) _____ Water Marks (B1)                              _____ Oxidized Rhizospheres on Living Roots (C3) _____ Sediment Deposits (B2)                    _____ Presence of Reduced Iron (C4) _____ Drift Deposits (B3)                            _____ Recent Iron Reduction in Tilled Soils (C6) _____ Algal Mat or Crust (B4)                      _____ Thin Muck Surface (C7) _____ Iron Deposits (B5)                            _____ Other (Explain in Remarks) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5) _____ Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present?    Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present?      Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present?        Yes _____ No <u>X</u> Depth (Inches): _____ (includes capillary fringe)	Wetland Hydrology Present?      Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION (Five Strata) - Use scientific names of plants.**

Sampling Point **CP3-B**

Tree Stratum (Plot size: _____)			
	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Quercus virginiana</i> (Oak, live)	10	Y	FACU
2. <i>Quercus hemispherica</i> (Oak, laurel)	10	Y	UPL
3. <i>Quercus nigra</i> (Oak, water)	2		FAC
4. _____			
5. _____			
6. _____			
	22	= Total Cover	
50 % of total cover:	11	20 % of total cover:	4.4

Sapling Stratum (Plot size: _____)			
	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Quercus virginiana</i> (Oak, live)	10	Y	FACU
2. <i>Quercus hemispherica</i> (Oak, laurel)	10	Y	UPL
3. <i>Quercus nigra</i> (Oak, water)	2		FAC
4. _____			
5. _____			
6. _____			
	22	= Total Cover	
50 % of total cover:	11	20 % of total cover:	4.4

Shrub Stratum (Plot size: _____)			
	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Ilex vomitoria</i> (Yaupon)	15	Y	FAC
2. <i>Quercus hemispherica</i> (Oak, laurel)	15	Y	UPL
3. <i>Vaccinium elliotii</i> (Blueberry, elliot)	15	Y	FAC
4. <i>Ilex glabra</i> (Ink-berry)	10		FACW
5. <i>Vaccinium arboreum</i> (Farkleberry)	10		FACU
6. <i>Cliftonia monophylla</i> (Buckwheat-tree)	3		OBL
	68	= Total Cover	
50 % of total cover:	34	20 % of total cover:	13.6

Herb Stratum (Plot size: _____)			
	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Aristida stricta</i> (Grass, pineland three-awn)	15	Y	FAC
2. <i>Pteridium aquilinum</i> (Fern, bracken)	15	Y	FACU
3. <i>Andropogon virginicus</i> (Broom-sedge)	1		FAC
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	31	= Total Cover	
50 % of total cover:	15.5	20 % of total cover:	6.2

Woody Vine Stratum (Plot size: _____)			
	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	0	= Total Cover	
50 % of total cover:	0	20 % of total cover:	0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>3</u>	x 1 = <u>3</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>50</u>	x 3 = <u>150</u>
FACU species <u>80</u>	x 4 = <u>320</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>143</u>	(A) <u>493</u> (B)

Prevalence Index = B/A = 3.45

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Test is ≤ 3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes    No X

Remarks: (Include photo numbers here or on a separate sheet.)





## **Appendix B**

### **Soil Photographs and Description**

## APPENDIX B – SOIL PHOTOGRAPHS AND DESCRIPTIONS

### I. UPLAND SOIL TYPES

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#### A. 1 - Albany Loamy Sand; 0-5% Slopes



0-3"	A	10YR 3/2 Sand
3"-8"	E1	10YR 3/1 Loamy Sand
8"-12"+	E2	10YR 4/4 Loamy Sand

#### B. 5 - Bonifay Loamy Sand; 0-5% Slopes



0-12"+	A	10YR 5/4 Loamy Sand
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C. 9 - Dothan Fine Sandy Loam; 2-5% Slopes



0-1"	A	10YR 5/2 Sandy Loam
1"-6"	E1	10YR 4/3 Sandy Loam
6"-12"+	E2	10YR 5/6 Sandy Loam

D. 14 - Fuquay Loamy Sand; 0-5% Slopes



0-0.25"	Oi	10YR 2.5/1 Pine Duff
0.25"-6"	A	10YR 3/3 Loamy Sand
6"-12"+	E	10YR 4/4 Loamy Sand

E. 19 - Kalmia Loamy Fine Sand; 2-5% Slopes



0-1"	Oi	10R 2.5/1 Pine Duff
1"-4"	AE1	10YR 7/1 Loamy Fine Sand w/ 10YR 6/2 Loamy Fine Sand
4"-8"	AE2	10YR 5/4 Loamy Fine Sand w/ 10YR 6/4 Loamy Fine Sand
8"-12"+	E	10YR 6/4 Loamy Fine Sand

F. 21 - Lakeland Sand; 0-5% Slopes



0-0.25"	Oi	10R 2.5/1 Pine Duff
0.25"-1.5"	A	10YR 6/4 Loamy Sand
1.5"-5"	AE	10YR 5/4 Loamy Sand
5"-12"+	E	10YR 5/6 Loamy Sand

G. 22 - Lakeland Sand; 5-12% Slopes



0-2"	Oi	10YR 5/3 Leaf Litter Layer
2"-12"+	A	10YR 5/3 Sand

H. 34 - Pactolus Loamy Sand; 0-5% Slopes



0-1"	Oi	10R 2.5/1 Pine Duff
1"-5"	A	10YR 2/1 Loamy Sand
5"-12"+	E	10YR 4/2 Loamy Sand

I. 44 - Troup Loamy Sand; 0-5% Slopes



0-0.5"	Oi	10R 2.5/1 Pine Duff
0.5"-4"	A	10YR 4/3 Loamy Sand
4"-12"+	E	10YR 5/6 Loamy Sand

II. WETLAND SOIL TYPES

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A. 3- Bibb-Kinston Association



0-1.5"	A	5G 5/1 Leaf Litter Layer
1.5"-12"+	C	5G 5/1 Clay

**B. 37 - Rains Fine Sandy Loam**



0-1.5"	Oi	10R 2.5-1 Pine Duff
1.5"-6"	A	10YR 4/1 Sandy Loam
6"-12"+	E	10YR 5/1 Sandy Loam w/ 10YR 5/6 Redox

**C. 40 - Rutledge Loamy Sand**



0-5"	A	10YR 3/2 Muck
5"-12"+	E	10YR 5/1 Loamy Sand w/ 10YR 6/5 Redox



## **Appendix C**

### **UMAM Polygon Evaluation Sheets**



Alignment 1 UMAM Summary Table

Polygon #	Impact Type	FNAI Wetland ID	FLUCFCS Wetland ID	Location & Landscape Support		Water Environment		Community Structure/Vegetation		Assessment Score	Area (ac)	Fl. Unit(s)
				Without	With Project	Without	With	Without	With			
1A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	0	10	0	9	0	0.93	1.72	1.61
1	Shading	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	7	10	9	9	7	0.17	13.85	2.31
2	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	9	0	9	0	8	0	0.87	0.04	0.03
3	Shading	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	8	8	8	7	6	0.07	2.02	0.13
4	Shading	Basin Swamp	617-Mixed Wetland Hardwoods	9	8	9	8	9	6	0.17	4.15	0.69
5	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	8	0	0.83	5.09	4.24
6	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	8	0	8	0	7	0	0.77	2.54	1.95
7	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	3.49	2.56
8	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	7	0	0.80	2.02	1.62
9	Shading	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	8	10	8	8	6	0.17	0.87	0.15
9A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom;and Stream & Lake Swamp	9	0	10	0	8	0	0.90	2.07	1.86
10	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	6	0	7	0	6	0	0.63	2.19	1.39
11	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	6.54	4.80
12	Permanent-Dredge or Fill	Dome Swamp	630-Mixed Forested Wetland	9	0	9	0	8	0	0.87	1.07	0.93
13	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	6	0	7	0	6	0	0.63	0.25	0.16
14	Indirect	Adjacent to Shading Impact		9	8	10	10	9	8	0.07	60.07	4.00
15	Indirect	Adjacent to Direct Impact		8	6	8	4	7	6	0.23	79.33	18.51
<b>Total FL</b>											<b>46.93</b>	

Acreage Totals	
Direct Impacts	27.02
Shading Impacts	20.89
Indirect Impacts	139.40
<b>Total Wetlands</b>	<b>187.31</b>



**Alignment 2 UMAM Summary Table**

Polygon #	Impact Type	FNAI Wetland ID	FLUCFCS Wetland ID	Location & Landscape Support		Water Environment		Community Structure/Vegetation		Assessment Score	Area (ac)	FL Unit(s)
				Without	With Project	Without	With	Without	With			
1A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom, and Stream & Lake Swamp	9	0	10	0	9	0	0.93	1.72	1.61
1	Shading	Bottomland Forest	615-Bottom, and Stream & Lake Swamp	9	7	10	9	9	7	0.17	13.85	2.31
2	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	9	0	9	0	8	0	0.87	0.04	0.03
3	Shading	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	8	8	8	7	6	0.07	2.02	0.13
4	Shading	Basin Swamp	617-Mixed Wetland Hardwoods	9	8	9	8	9	6	0.17	4.15	0.69
5	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	8	0	0.83	5.09	4.24
6	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	8	0	8	0	7	0	0.77	2.54	1.95
7	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	3.49	2.56
8	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	9	0	8	0	7	0	0.80	2.02	1.62
9	Shading	Bottomland Forest	615-Bottom, and Stream & Lake Swamp	9	8	10	8	8	6	0.17	0.87	0.15
9A	Permanent-Dredge or Fill	Bottomland Forest	615-Bottom, and Stream & Lake Swamp	9	0	10	0	8	0	0.90	2.07	1.86
10	Permanent-Dredge or Fill	Basin Swamp	617-Mixed Wetland Hardwoods	6	0	7	0	6	0	0.63	2.19	1.39
11	Permanent-Dredge or Fill	Seepage Slope / Wet Prairie	643-Wet Prairie/Pine Savanna	7	0	8	0	7	0	0.73	6.54	4.80
14	Indirect	Adjacent to Shading Impact		9	8	10	10	9	8	0.07	60.07	4.00
15	Indirect	Adjacent to Direct Impact		8	6	8	4	7	6	0.23	73.94	17.25
<b>Total FL&gt;</b>											<b>44.59</b>	

Acreage Totals	
Direct Impacts	23.68
Shading Impacts	22.91
Indirect Impacts	134.01
<b>Total Wetlands</b>	<b>180.60</b>

**PART II – Quantification of Assessment Area (Impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 1A -Blackwater River Bottomland Forest</b>
Impact or Mitigation <b>Impact (Direct)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Apr-12</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>the impact area is relatively intact on the south side of the river; however, the area on the northern side of the river runs adjacent to the powerline ROW. The ROW area have been cleared of canopy and subcanopy vegetation and some erosion and rutting is present. There are currently no impediments to wildlife species. This polygon will be directly impacted, but a box culvert will be used to facilitate wildlife movement of amphibians, reptiles, and small mammals through the floodplain.</p>	<p>w/o pres or current</p> <p>with</p> <p>9                      0</p>
<p><b>.500(6)(b)Water Environment (n/a for uplands)</b></p> <p>The river appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the river provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the river is currently unobstructed. This polygon is proposed for direct impact; however, box culverts will be used to maintain pre-construction flow regimes through the floodplain.</p>	<p>w/o pres or current</p> <p>with</p> <p>10                      0</p>
<p><b>.500(6)(c)Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been disturbed by tree falls, which typically occurs after storm events, and the northern portion of the floodplain area has been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts will be minimized to the maximum extent practicable.</p>	<p>w/o pres or current</p> <p>with</p> <p>9                      0</p>

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.93	0.00

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For Impact assessment areas
FL = delta x acres = 1.61

Delta = [with-current]
0.93

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E		Application Number		Assessment Area Name or Number Polygon 2	
FLUCCs code 617		Further classification (optional) FNAI - Basin Swamp		Impact or Mitigation Site? Impact (Direct)	Assessment Area Size 0.04
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This is hydrologically connected to the adjacent polygon proposed for shading, Polygon 3. These wetlands connect to the Blackwater River via overland sheet flow.					
Assessment area description This basin wetland is fire suppressed with an appropriate mix of canopy and subcanopy species, but with a shrub layer of woody species that would typically be in coppice if fire regularly maintained this area.					
Significant nearby features Blackwater Heritage Trail			Uniqueness (considering the relative rarity in relation to the regional landscape.) None		
Functions This wetlands provides water filtration, water retention, foraging and habitat for wildlife.			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors: none					
Assessment conducted by: Dan Van Nostrand			Assessment date(s): Oct-11		

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

Site/Project Name <b>SR 87 Connector PD&amp;E</b>		Application Number	Assessment Area Name or Number <b>Polygon 1</b>	
FLUCCs code <b>615</b>	Further classification (optional) <b>FNAI - Bottomland Forest</b>		Impact or Mitigation Site? <b>Impact (Shading)</b>	Assessment Area Size <b>13.85</b>
Basin/Watershed Name/Number <b>Blackwater River</b>	Affected Waterbody (Class) <b>III</b>	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) <b>OFW</b>		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  <b>Wetlands are the floodplain of the Blackwater River, which flows south and west into the Pensacola Bay.</b>				
Assessment area description  <b>The floodplain of the Blackwater River contains a high species diversity of hardwood evergreen and deciduous trees in the canopy and subcanopy. There is limited development consisting of single family homes to the north and institutional and industrial development to the south. There are currently no bridges within this section of the river; however, navigation in this area is prohibited.</b>				
Significant nearby features  <b>State Road 90, Santa Rosa County jail, Milton</b>		Uniqueness (considering the relative rarity in relation to the regional landscape.)  <b>The Blackwater River is a unique landscape feature within northern Santa Rosa County and this section is an Outstanding Florida Waterway with potential Gulf sturgeon habitat.</b>		
Functions  <b>The floodplains are high quality wetlands that collect and convey water to Pensacola Bay. The river is highly utilized by wildlife for cover and foraging. The intact floodplain helps prevent erosion.</b>		Mitigation for previous permit/other historic use  <b>N/A</b>		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  <b>Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river</b>		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  <b>observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. .</b>		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors:  <b>This floodplain area is not proposed for direct impact. There are only minor impacts, primarily from shading, proposed since the area will be bridged.</b>				
Assessment conducted by: <b>Dan Van Nostrand</b>		Assessment date(s): <b>Oct-11</b>		

**PART II – Quantification of Assessment Area (Impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 1 -Blackwater River Bottomland Forest</b>
Impact or Mitigation <b>Impact (Shading)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Oct-11</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<b>.500(6)(a) Location and Landscape Support</b>  w/o pres or current <table border="1"> <tr> <td>9</td> <td>with</td> </tr> <tr> <td></td> <td>7</td> </tr> </table>	9	with		7	<p>the impact area is relatively intact on the south side of the river; however, the area on the northern side of the river runs adjacent to the powerline ROW. The ROW area have been cleared of canopy and subcanopy vegetation and some erosion and rutting is present. There are currently no impediments to wildlife species and spanning this area with a bridge will reduce future negative impact to wildlife movement.</p>
	9	with			
	7				
<b>.500(6)(b)Water Environment (n/a for uplands)</b>  w/o pres or current <table border="1"> <tr> <td>10</td> <td>with</td> </tr> <tr> <td></td> <td>9</td> </tr> </table>	10	with		9	<p>The river appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the river provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the river is currently unobstructed. The use of a bridge will help keep the floodplain vegetation intact to continue to stabilize the soil surface. There will also be stormwater controls on the bridge to collect untreated stormwater and convey it to treatment ponds. The piling supported bridge will not significantly impact the flow of the river.</p>
	10	with			
	9				
<b>.500(6)(c)Community structure</b>  1. Vegetation and/or 2. Benthic Community  w/o pres or current <table border="1"> <tr> <td>9</td> <td>with</td> </tr> <tr> <td></td> <td>7</td> </tr> </table>	9	with		7	<p>The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been disturbed by tree falls, which typically occurs after storm events, and the northern portion of the floodplain area has been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts will be minimized to the maximum extent practicable.</p>
	9	with			
	7				

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

current	with
or w/o pres	
0.93	0.77

If preservation as mitigation,

Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas

FL = delta x acres = 2.31
---------------------------

Delta = [with-current]
0.17

If mitigation

Time lag (t-factor) =
Risk factor =

For mitigation assessment areas

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.)

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 2 - Basin Swamp</b>
Impact or Mitigation <b>Impact (Direct)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Oct-11</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>This is a geographically isolated wetland that has unlimited wildlife access and still provides the functions to wildlife and downstream wetlands that it would provide in optimal condition. The fire suppressed understory slightly limits the wildlife utilization of this wetland system.</p> <p>w/o pres or current      with</p> <p>9                              0</p>
<p><b>.500(6)(b) Water Environment (n/a for uplands)</b></p> <p>This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses.</p> <p>w/o pres or current      with</p> <p>9                              0</p>
<p><b>.500(6)(c) Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>The canopy of this wetland is appropriate; however the groundcover should be diverse but is not due to the fire suppressed shrub and sub-canopy.</p> <p>w/o pres or current      with</p> <p>8                              0</p>

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

current or w/o pres	with
0.87	0.00

If preservation as mitigation,

Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas

FL = delta x acres = 0.03
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Delta = [with-current]
0.87

If mitigation

Time lag (t-factor) =
Risk factor =

For mitigation assessment areas

RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Section 62-345.400, F.A.C.)**

Site/Project Name SR 87 Connector PD&E		Application Number	Assessment Area Name or Number Polygon 3	
FLUCCs code 643	Further classification (optional) Seepage Slope / Wet Prairie		Impact or Mitigation Site? Impact (Direct)	Assessment Area Size 2.02
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This seepage slope/wet prairie (ss/wp) grades into a deeper basin swamp wetland. The general water flow is to the south and west towards the Blackwater River and eventually the Pensacola Bay.				
Assessment area description The ss/wp is fire suppressed and has a dense canopy of pine and bay trees. There are portions of the wetland with a more open canopy that have allowed the growth of a diverse herbaceous groundcover.				
Significant nearby features Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A		Uniqueness (considering the relative rarity in relation to the regional landscape.) None		
Functions This wetlands provides water filtration, water retention, foraging and habitat for wildlife.		Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors:  Located within Flatwoods Salamander critical habitat unit.				
Assessment conducted by: Dan Van Nostrand		Assessment date(s): Oct-11		

**PART II – Quantification of Assessment Area (Impact or mitigation)**  
 (See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 3 - SS/WP</b>
Impact or Mitigation <b>Impact (Shading)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Oct-11</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support  w/o pres or current <table border="1"> <tr> <td>9</td> <td>with</td> </tr> <tr> <td></td> <td>8</td> </tr> </table>	9	with		8	This wetland polygon borders deeper basin swamp wetland polygons and provides a buffer to the deeper wetlands. There is little development surrounding this polygon so access to wildlife is not limited. This wetland is not fragmented and still provides water filtration and retention benefits to downstream receiving waterways, such as Clear Creek and Blackwater River. This wetland polygon is within the proposed Corridor 1 and Corridor 2 alignments and is proposed for a shading impact.
	9	with			
	8				
.500(6)(b) Water Environment (n/a for uplands)  w/o pres or current <table border="1"> <tr> <td>8</td> <td>with</td> </tr> <tr> <td></td> <td>8</td> </tr> </table>	8	with		8	This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for direct impact by Corridor 1 or Corridor 2. a bridge will be used to traverse this wetland area which will prevent damming and subsequent ponding of water, which would alter the wetlands outside of the corridor areas.
8	with				
	8				
.500(6)(c) Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <table border="1"> <tr> <td>7</td> <td>with</td> </tr> <tr> <td></td> <td>6</td> </tr> </table>	7	with		6	The canopy in this wetland has approximately 100 trees per acre which is too dense for a typical seepage slope / wet prairie; however, there is substantial groundcover vegetation including wiregrass throughout the polygon. Typically, fires would manage these wetlands creating an open canopy and sub-canopy and encouraging growth of a diverse pyrogenic herbaceous groundcover. Approximately 20% of this wetland system has been opened up by tree falls and powerline ROWs. These opened areas had the greatest diversity and contained threatened / endangered plant species. This polygon is proposed for a shading impact by either Corridor 1 or Corridor 2. Bridging the wetland will shade the corridor area, but allow for light penetration to maintain an appropriate groundcover once the shrub layer is removed.
7	with				
	6				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.80	0.73

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.13

Delta = [with-current]
0.07

If mitigation:
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E		Application Number	Assessment Area Name or Number Polygon 4	
FLUCCs code 617	Further classification (optional) Basin Swamp		Impact or Mitigation Site? Impact (Direct)	Assessment Area Size 4.15
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This is an interior, deeper wetland that is buffered on either side by seepage slope / wet prairie. The wetlands convey water to the south towards the Blackwater River via overland sheetflow.				
Assessment area description This basin wetland is fire suppressed with an appropriate mix of canopy and subcanopy species, but with a shrub layer of woody species that would typically be in coppice if fire regularly maintained this area.				
Significant nearby features Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A		Uniqueness (considering the relative rarity in relation to the regional landscape.) None		
Functions This wetlands provides water filtration, water retention, foraging and habitat for wildlife.		Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors: none				
Assessment conducted by: Dan Van Nostrand		Assessment date(s): Oct-11		

**PART II – Quantification of Assessment Area (Impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 4 - Basin Swamp</b>
Impact or Mitigation <b>Impact (Shading)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Oct-11</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>w/o pres or current      with</p> <p>9                              8</p>	<p>This wetland polygon is buffered by adjacent seepage slope/wet prairie and is undeveloped along its entire boundary. There is no limit to wildlife utilization and the wetland provides optimal function to downstream aquatic environments. There are no impediments downstream of this polygon and water flows via overland sheetflow to the Blackwater River an OFW. This area is proposed for a shading by either Corridor 1 or Corridor 2. Flow characteristics will be maintained by using bridge spans.</p>
<p><b>.500(6)(b) Water Environment (n/a for uplands)</b></p> <p>w/o pres or current      with</p> <p>9                              8</p>	<p>This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for direct impact by Corridor 1 or Corridor 2. This wetland polygon will be bridged by corridors 1 and 2, which will help to maintain the hydrology and flow regime of this wetland.</p>
<p><b>.500(6)(c) Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>9                              6</p>	<p>The canopy of this wetland is appropriate with a mix of cypress, tupelo, and large slash pine. The shrub layer is comprised primarily of myrtle-leaf holly and large titi. The groundcover is extremely diverse with wiregrass, beakrush, yellow-eyed grass, hatpins, and pitcher plants (including parrot pitcher plants and white-topped pitcher plants). Trees in the canopy may be impacted by the bridge construction, but the groundcover will stay intact.</p>

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.90	0.73

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.69

Delta = [with-current]
0.17

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E		Application Number	Assessment Area Name or Number Polygon 5	
FLUCCs code 643	Further classification (optional) Seepage Slope / Wet Prairie		Impact or Mitigation Site? Impact (Direct)	Assessment Area Size 5.09
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This seepage slope/wet prairie (ss/wp) grades into a deeper basin swamp wetland. The general water flow is to the south and west towards the Blackwater River and eventually the Pensacola Bay.				
Assessment area description The ss/wp is fire suppressed and has a dense canopy of pine and bay trees.				
Significant nearby features Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A		Uniqueness (considering the relative rarity in relation to the regional landscape.) None		
Functions This wetlands provides water filtration, water retention, foraging and habitat for wildlife.		Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors:  Located within Flatwoods Salamander critical habitat unit.				
Assessment conducted by: Dan Van Nostrand		Assessment date(s): Oct-11		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 5 - SS/WP</b>
Impact or Mitigation <b>Impact (Direct)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Oct-11</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>w/o pres or current      with</p> <p>9                      0</p>	<p>This wetland polygon is adjacent to undeveloped land to the north, south, east, and west. There is no direct limitation to wildlife movement to and from this polygon; however, Munson Highway is located in close proximity to the western boundary. This wetland is connected to the Clear Creek system primarily through a drainage ditch.</p>
<p><b>.500(6)(b) Water Environment (n/a for uplands)</b></p> <p>w/o pres or current      with</p> <p>8                      0</p>	<p>This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for direct impact by Corridor 1 or Corridor 2. Culverts or elevated roadways will be placed at appropriate sections of this or the adjacent basin swamp polygon to prevent damming and subsequent ponding of water, which would alter the wetlands outside of the corridor areas.</p>
<p><b>.500(6)(c) Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>8                      0</p>	<p>The canopy in this wetland has approximately 80-100 trees per acre which is too dense for a typical seepage slope / wet prairie. The dense canopy and fire-suppressed shrub layer have shaded out the typically diverse groundcover vegetation. Typically, fires would manage these wetlands creating an open canopy and sub-canopy and encouraging growth of a diverse pyrogenic herbaceous groundcover. This polygon is proposed for direct impact by either Corridor 1 or Corridor 2.</p>

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.83	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 4.24

Delta = [with-current]
0.83

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E		Application Number	Assessment Area Name or Number Polygon 6	
FLUCCs code 617	Further classification (optional) Basin Swamp		Impact or Mitigation Site? Impact (Direct)	Assessment Area Size 2.54
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This is an interior, deeper wetland that is buffered on either side by seepage slope / wet prairie. The wetlands convey water to the south towards the Blackwater River via overland sheetflow.				
Assessment area description This basin wetland is fire suppressed with an appropriate mix of canopy and subcanopy species, but with a shrub layer of woody species that would typically be in coppice if fire regularly maintained this area. The polygon is also bisected by an east-west running powerline ROW.				
Significant nearby features Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A, and Munson Highway		Uniqueness (considering the relative rarity in relation to the regional landscape.) None		
Functions This wetlands provides water filtration, water retention, foraging and habitat for wildlife.		Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors:  none				
Assessment conducted by: Dan Van Nostrand		Assessment date(s): Oct-11		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 6 - Basin Swamp</b>
Impact or Mitigation <b>Impact (Direct)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Oct-11</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>w/o pres or current      with</p> <p>8      0</p>	<p>This wetland polygon is buffered by adjacent seepage slope/wet prairie and is undeveloped along 75% of its boundary. There are partial limitations to wildlife utilization due to the proximity of residential development. The habitat value has been slightly altered by the powerline ROW; however, there are no impediments downstream of this polygon and water flows via overland sheet flow to the Blackwater River an OFW. This area is proposed for impact by either Corridor 1 or Corridor 2. Flow characteristics will be maintained using culverts beneath the roadway.</p>
<p><b>.500(6)(b)Water Environment (n/a for uplands)</b></p> <p>w/o pres or current      with</p> <p>8      0</p>	<p>This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for direct impact by Corridor 1 or Corridor 2. Culverts or elevated roadways will be placed at appropriate sections of this or the adjacent basin swamp polygon to prevent damming and subsequent ponding of water, which would alter the wetlands outside of the corridor areas. Approximately 1/3 of the this polygon has been disturbed as a powerline ROW.</p>
<p><b>.500(6)(c)Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>7      0</p>	<p>The canopy within the non-disturbed portion of this polygon are appropriate; however, approximately 1/3 of the polygon area is maintained as a powerline easement and there is no canopy due to continual maintenance. Further, there is rutting within the power line where vegetation is not growing.</p>

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.77	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 1.95

Delta = [with-current]
0.77

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E		Application Number	Assessment Area Name or Number Polygon 7	
FLUCCs code 643	Further classification (optional) Seepage Slope / Wet Prairie		Impact or Mitigation Site? Impact (Direct)	Assessment Area Size 3.49
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This polygon is adjacent to residential development, Munson Highway, and the powerline . Due to the adjacent development ditches have been excavated through the wetlands. Water flows from the wetlands through the ditches west towards Clear Creek.				
Assessment area description This SSWP has been affected by the adjacent residential development and the powerline ROW. The polygon has been ditched which changes the outflow of the water; however, the maintenance within the powerline ROW has increased species diversity in the groundcover.				
Significant nearby features Blackwater Heritage Trail, Frosted Flatwoods Salamander Critical Habitat Unit RFS2 Subunit A, and Munson Highway		Uniqueness (considering the relative rarity in relation to the regional landscape.) None		
Functions This wetlands provides water filtration, water retention, foraging and habitat for wildlife.		Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) observed threatened plants species such as sundews, pitcher plants. There is anticipated utilization by black bear and the river is listed as critical habitat for the Gulf sturgeon. Further, there is an historic Flatwoods salamander with critical habitat in the vicinity of this wetland.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors:  none				
Assessment conducted by: Dan Van Nostrand		Assessment date(s): Oct-11		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 7 - Seepage Slope/Wet Prairie</b>
Impact or Mitigation <b>Impact (Direct)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Oct-11</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>This wetland polygon is adjacent to undeveloped land to the north, south, east, and west. There is no direct limitation to wildlife movement to and from this polygon; however, Munson Highway is located in close proximity to the western boundary. This wetland is connected to the Clear Creek system primarily through a drainage ditch.</p> <p>w/o pres or current      with</p> <p>7                              0</p>
<p><b>.500(6)(b) Water Environment (n/a for uplands)</b></p> <p>This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for a direct impact by Corridor 1 or Corridor 2.</p> <p>w/o pres or current      with</p> <p>8                              0</p>
<p><b>.500(6)(c) Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>The canopy within the non-disturbed portion of this polygon are appropriate; however, approximately 1/2 of the polygon area is maintained as a powerline easement and there is no canopy due to continual maintenance. This area is proposed for a direct impact by either corridor 1 or Corridor 2.</p> <p>w/o pres or current      with</p> <p>7                              0</p>

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.73	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 2.56

Delta = [with-current]
0.73

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E		Application Number		Assessment Area Name or Number Polygon 8	
FLUCCs code 643		Further classification (optional) Seepage Slope / Wet Prairie		Impact or Mitigation Site? Impact (Direct)	Assessment Area Size 2.02
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III		Special Classification (i.e OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This polygon is to the west of Munson Highway and directly borders the floodplain of Clear Creek. There are no obstructions to water flow from this wetland, to the floodplain, and eventually to Pensacola Bay.					
Assessment area description This SSWP is surrounded by undeveloped land, but has been partially impacted by mechanical clearing along the powerline ROW. The mechanical clearing has mimicked fire and increased plant diversity in the groundcover. The remainder of this polygon is fire suppressed with a dense pine canopy.					
Significant nearby features Munson Highway, Clear Creek.			Uniqueness (considering the relative rarity in relation to the regional landscape.) None		
Functions This wetlands provides water filtration, water retention, foraging , habitat for wildlife, and creek buffer.			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) observed threatened plant species such as sundews, pitcher plants. There is anticipated utilization by black bear		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:  none					
Assessment conducted by: Dan Van Nostrand			Assessment date(s): Sep-12		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 8 - Seepage Slope/Wet Prairie</b>
Impact or Mitigation <b>Impact (Direct)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Sep-12</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>w/o pres or current      with</p> <p>9                              0</p>	<p>This wetland polygon is adjacent to undeveloped land to the north, south, east, and west. It buffers the floodplain of Clear Creek. There is no direct limitation to wildlife movement to and from this polygon; however, Munson Highway is located in close proximity to the eastern boundary. This wetland borders the floodplain bottomland forest associated with Clear Creek and provides direct water input to the creek system and eventually Blackwater River (OFW) and Pensacola Bay. There are no barriers to the movement of water into the creek system. This wetland is proposed for a direct impact for the Clear Creek bridge approaches. The open water portion of the stream will be bridged.</p>
<p><b>.500(6)(b) Water Environment (n/a for uplands)</b></p> <p>w/o pres or current      with</p> <p>8                              0</p>	<p>This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for a direct impact by Corridor 1 or Corridor 2.</p>
<p><b>.500(6)(c) Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>7                              0</p>	<p>The canopy within the non-disturbed portion of this polygon are appropriate; however, approximately 1/2 of the polygon area is maintained as a powerline easement and there is no canopy due to continual maintenance. This area is proposed for a direct impact for the bridge approach.</p>

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

current	with
0.8	0.00

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 1.62

Delta = [with-current]
0.80

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E		Application Number	Assessment Area Name or Number Polygon 9	
FLUCCs code 615	Further classification (optional) Bottomland Forest		Impact or Mitigation Site? Impact (Shading)	Assessment Area Size 0.87
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This polygon includes Clear Creek and the Clear Creek floodplain and is therefore directly connected via surface flow to the Blackwater River further downstream.				
Assessment area description This floodplain/bottomland forest is relatively intact even though it is adjacent to residential development and the powerline ROW. The canopy is a mixture of hardwood evergreens and deciduous trees. The understory is diverse and contains threatened endangered plant species.				
Significant nearby features Munson Highway, Clear Creek		Uniqueness (considering the relative rarity in relation to the regional landscape.) Blackwater Stream (Clear Creek) bisects the floodplain/bottomland forest.		
Functions The floodplains are high quality wetlands that collect and convey water to Pensacola Bay. The creek is highly utilized by wildlife for cover and foraging. The intact floodplain helps prevent erosion, regulate water temperature, and maintain in-creek habitats.		Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) The floodplain/bottomland forest is diverse and contains many state threatened plant species such as sundews, pitcher plants, bluestem, meadow beauty, and yellow-eyed grass. There is anticipated utilization by black bear. Clear Creek is not listed as Critical Habitat for the Gulf sturgeon or the reticulated Flatwoods salamander.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors:  none				
Assessment conducted by: Dan Van Nostrand		Assessment date(s): Sep-12		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 9 - Clear Creek Floodplain/Bottomland Forest</b>
Impact or Mitigation <b>Impact (Shading)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Sep-12</b>

<b>Scoring Guidance</b> 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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<b>Optimal (10)</b>	<b>Moderate(7)</b>	<b>Minimal (4)</b>	<b>Not Present (0)</b>
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>w/o pres or current      with</p> <table border="1"> <tr> <td>9</td> <td>8</td> </tr> </table>	9	8	<p>The floodplain bottomland forest is bordered on the west by low density residential development and agriculture and by undeveloped land to the north, south, and east. There is little impediment to wildlife movement into this polygon. The wetland directly supports and maintains the water quality, temperature, and structure of Clear Creek. There are no impediments to water flow between the floodplain and the creek. This area is proposed for a shading Impact since a bridge will be constructed over the floodplain and the creek. There are no anticipated significant impacts with bridge construction.</p>
9	8		
<p><b>.500(6)(b)Water Environment (n/a for uplands)</b></p> <p>w/o pres or current      with</p> <table border="1"> <tr> <td>10</td> <td>8</td> </tr> </table>	10	8	<p>The creek appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the creek provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the creek is currently unobstructed. The use of a bridge will help keep the floodplain vegetation intact to continue to stabilize the soil surface. There will also be stormwater controls on the bridge to collect untreated stormwater and convey it to treatment ponds. The piling supported bridge will not significantly impact the flow of the river.</p>
10	8		
<p><b>.500(6)(c)Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <table border="1"> <tr> <td>8</td> <td>6</td> </tr> </table>	8	6	<p>The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts will be minimized to the maximum extent practicable.</p>
8	6		

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.90	0.73

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.15

Delta = [with-current]
0.17

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E		Application Number		Assessment Area Name or Number Polygon 9A	
FLUCCs code 615		Further classification (optional) Bottomland Forest		Impact or Mitigation Site? Impact (Direct)	
Assessment Area Size 2.07		Basin/Watershed Name/Number Blackwater River		Affected Waterbody (Class) III	
		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)		N/A	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This polygon includes the Clear Creek floodplain and is therefore directly connected via surface flow to the Blackwater River further downstream.					
Assessment area description This floodplain/bottomland forest is relatively intact even though it is adjacent to residential development and the powerline ROW. The canopy is a mixture of hardwood evergreens and deciduous trees. The understory is diverse and contains threatened endangered plant species.					
Significant nearby features Munson Highway, Clear Creek			Uniqueness (considering the relative rarity in relation to the regional landscape.) Blackwater Stream (Clear Creek) bisects the floodplain/bottomland forest.		
Functions The floodplains are high quality wetlands that collect and convey water to Pensacola Bay. The creek is highly utilized by wildlife for cover and foraging. The intact floodplain helps prevent erosion, regulate water temperature, and maintain in-creek habitats.			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) The floodplain/bottomland forest is diverse and contains many state threatened plant species such as sundews, pitcher plants, bluestem, meadow beauty, and yellow-eyed grass. There is anticipated utilization by black bear. Clear Creek is not listed as Critical Habitat for the Gulf sturgeon or the reticulated Flatwoods salamander.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):					
Additional relevant factors:  none					
Assessment conducted by: Dan Van Nostrand			Assessment date(s): Sep-12		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 9 - Clear Creek Floodplain/Bottomland Forest</b>
Impact or Mitigation <b>Impact (Direct)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Sep-12</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>w/o pres or current      with</p> <p>9                              0</p>	<p>The floodplain bottomland forest is bordered on the west by low density residential development and agriculture and by undeveloped land to the north, south, and east. There is little impediment to wildlife movement into this polygon. The wetland directly supports and maintains the water quality, temperature, and structure of Clear Creek. There are no impediments to water flow between the floodplain and the creek. This area is proposed for a direct impact for the bridge approaches; however, the open water portion of the creek will be bridged.</p>
<p><b>.500(6)(b)Water Environment (n/a for uplands)</b></p> <p>w/o pres or current      with</p> <p>10                              0</p>	<p>The creek appears to have excellent water quality, appropriate water inputs, and evidence of a typical flooding regime. The floodplain wetlands adjacent to the creek provide adequate water filtration and stabilize the soil to prevent erosion. The water flow in the creek is currently unobstructed. The use of a bridge over the open water portion of the creek will minimize upstream flooding. This floodplain/bottomland forest polygon is proposed for direct impact for the bridge approaches.</p>
<p><b>.500(6)(c)Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>8                              0</p>	<p>The floodplain area has a high diversity of canopy and subcanopy species. Portions of the polygon have been cleared and maintained as a powerline ROW. ERC located several threatened/endangered plant species in the groundcover. The development plan will take the threatened species locations into account and any impacts will be minimized to the maximum extent practicable. This polygon is proposed for a direct impact for the bridge approaches.</p>

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

current or w/o pres	with
0.90	0.00

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 1.86

Delta = [with-current]
0.90

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E		Application Number		Assessment Area Name or Number Polygon 10	
FLUCCs code 617		Further classification (optional) FNAI - Basin Swamp		Impact or Mitigation Site? Impact (Direct)	Assessment Area Size 2.19
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III		Special Classification (i.e OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This is an interior, deeper wetland that is buffered on either side by seepage slope / wet prairie. The wetlands convey water to the south towards the Blackwater River via overland sheetflow.					
Assessment area description This basin wetland is fire suppressed within half of the area and the other half has been cleared, but with a shrub layer of woody species that would typically be in coppice if fire regularly maintained this area. The polygon is also bisected by an east-west running powerline ROW.					
Significant nearby features None			Uniqueness (considering the relative rarity in relation to the regional landscape.) None		
Functions This wetlands provides water filtration, water retention, foraging and habitat for wildlife.			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) While topped pitcher plant was observed in this wetland and it is anticipated that other threatened plant species would be present with periodic fire. This area is also most likely used by the black bear population in the vicinity.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None during field surveys					
Additional relevant factors: none					
Assessment conducted by: Dan Van Nostrand			Assessment date(s): Oct-11		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name  SR 87 PD&E	Application Number	Assessment Area Name or Number  Polygon 10 - Basin Swamp
Impact or Mitigation  Impact (Direct)	Assessment conducted by:  Daniel Van Nostrand	Assessment date:  Oct-11

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	This wetland polygon is bordered by undeveloped land to the west and north, agricultural lands and powerline ROW to the south and agricultural lands to the east. Portions of this polygon have been cleared which decrease their value for wildlife utilization. The proximal residential development and adjacent agricultural lands somewhat limit the wildlife movement to and from this polygon. The adjacent wet prairie / seepage slope has been ditched, which affects the localized water flow to and from the basin swamp. This area is proposed for a direct impact by either alternative 1 or alternative 2.	
	w/o pres or current 6	with 0

.500(6)(b)Water Environment (n/a for uplands)	This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice and because the canopy and subcanopy have been cleared within the powerline ROW and agricultural area. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for direct impact by alternative 1 or alternative 2. Culverts or elevated roadways will be placed at appropriate sections of this or the adjacent basin swamp polygon to prevent damming and subsequent ponding of water, which would alter the wetlands outside of the corridor areas.	
	w/o pres or current 7	with 0

.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	The majority of this basin swamp polygon has been disturbed by clearing either for agricultural operations or for powerline ROW maintenance. The cleared portions lack the appropriate canopy, but have diverse groundcover due to the light penetration to the ground. Typical basin swamps would have diverse canopies and varied groundcover in gaps between canopy. This polygon is proposed for direct impact by either alternative 1 or alternative 2.	
	w/o pres or current 6	with 0

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.63	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 1.39

Delta = [with-current]
0.63

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E		Application Number		Assessment Area Name or Number Polygon 11	
FLUCCs code 643		Further classification (optional) FNAI - Seepage Slope / Wet Prairie		Impact or Mitigation Site? Impact (Direct)	Assessment Area Size 6.54
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands The seepage slope / wet prairie drains southeast toward the Blackwater River via overland sheetflow and through a confined ditch that appears to be excavated through the adjacent agricultural field.					
Assessment area description The ss/wp is fire suppressed and has a dense canopy of pine and bay trees and the remainder has been maintained as a powerline ROW and agricultural field.					
Significant nearby features None			Uniqueness (considering the relative rarity in relation to the regional landscape.) None		
Functions This wetlands provides water filtration, water retention, foraging and habitat for wildlife.			Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) White topped pitcher plant was observed in this wetland and it is anticipated that other threatened plant species would be present with periodic fire. This area is also most likely used by the black bear population in the vicinity.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None during field surveys					
Additional relevant factors: none					
Assessment conducted by: Dan Van Nostrand			Assessment date(s): Oct-11		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name  SR 87 PD&E	Application Number	Assessment Area Name or Number Polygon 11 - Seepage Slope/Wet Prairie
Impact or Mitigation  Impact (Direct)	Assessment conducted by:  Danlel Van Nostrand	Assessment date:  Oct-11

<b>Scoring Guidance</b> 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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Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current      with</p> <p>7                              0</p>	<p>This wetland polygon is adjacent to undeveloped land to the north, east, and west and is bordered by the powerline ROW and an agricultural field to the south. There is minor limitation to wildlife movement to and from this polygon due to the agricultural land. This wetland is connected south through wetlands and a confined ditch through the agricultural land. This wetland is proposed for direct impact by either alternative 1 or alternative 2.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current      with</p> <p>8                              0</p>	<p>This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for a direct impact by alternative 1 or alternative 2.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>7                              0</p>	<p>The canopy within the non-disturbed portion of this polygon are appropriate; however, approximately 1/2 of the polygon area is maintained as a powerline easement and there is no canopy due to continual maintenance. This area is proposed for a direct impact by either alternative 1 or alternative 2.</p>

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
0.73                              0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 4.80

Delta = [with-current]
0.73

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E - Alternative 1 only		Application Number		Assessment Area Name or Number Polygon 12	
FLUCCs code 630		Further classification (optional) FNAI - Dome Swamp		Impact or Mitigation Site? Impact (Direct)	
Assessment Area Size 1.07		Basin/Watershed Name/Number Blackwater River		Affected Waterbody (Class) III	
Special Classification (i.e OFW, AP, other local/state/federal designation of importance) N/A		Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  This is an isolated wetland system that is surrounded by well drained sandhill uplands.			
Assessment area description  This dome swamp wetland is fire suppressed on the exterior with an appropriate mix of canopy and subcanopy species in the center. If fire periodically burned this wetland, the out rim would contain more herbaceous species than the current woody coverage.					
Significant nearby features  SR 87 North			Uniqueness (considering the relative rarity in relation to the regional landscape.)  None		
Functions  This wetlands provides water filtration, water retention, foraging and habitat for wildlife.			Mitigation for previous permit/other historic use  N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  No threatened or endangered species were observed in this polygon area, but it is anticipated that a similar plant composition to the other basin wetlands would exist with more frequent fires.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None during field survey					
Additional relevant factors:  none					
Assessment conducted by: Dan Van Nostrand			Assessment date(s): Oct-11		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E - Alternative 1 only</b>	Application Number	Assessment Area Name or Number <b>Polygon 12 - Dome Swamp</b>
Impact or Mitigation <b>Impact (Direct)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Oct-11</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>w/o pres or current      with</p> <p>9                              0</p>	<p>This is a geographically isolated wetland that has unlimited wildlife access to the east, south, and west and still provides the functions to wildlife and downstream wetlands that it would provide in optimal condition. The fire suppressed understory slightly limits the wildlife utilization of this wetland system; however it is suitable habitat for many breeding amphibians and reptiles since there is evidence that it fill with water ephemerally and does not contain fish. This wetland is proposed for direct impact by alternative 1.</p>
<p><b>.500(6)(b)Water Environment (n/a for uplands)</b></p> <p>w/o pres or current      with</p> <p>9                              0</p>	<p>This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod that is suitable for many species that require ephemeral ponds as a component of their life cycles. The wetland lacks community zonation along the ecotone adjacent to the upland because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. This wetland is proposed for direct impact by alternative 1.</p>
<p><b>.500(6)(c)Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>8                              0</p>	<p>The canopy of this wetland is appropriate; however the groundcover should be diverse along the ecotone but is not due to the fire suppressed shrub and sub-canopy. This polygon is proposed for direct impact by alternative 1.</p>

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

current or w/o pres	with
0.87	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.93

Delta = [with-current]
0.87

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E - Alternative 1 only		Application Number		Assessment Area Name or Number Polygon 13	
FLUCCs code 643		Further classification (optional) Seepage Slope / Wet Prairie		Impact or Mitigation Site? Impact (Direct)	Assessment Area Size 0.25
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  This seepage slope / wet prairie polygon is bisected by a dirt road and connected under the road via a culvert; however, the wetland is isolated.					
Assessment area description  The ss/wp is fire suppressed, has been bisected by a dirt road, and has been cleared.					
Significant nearby features  SR 87 North			Uniqueness (considering the relative rarity in relation to the regional landscape.)  None		
Functions  This wetlands provides water filtration, water retention, foraging and habitat for wildlife.			Mitigation for previous permit/other historic use  N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Black bear, deer, armadillo, amphibians, birds, reptiles, small mammals, invertebrates within the river			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  No T&E plant species were observed within this wetland; however, with appropriate management it is expected that there would be higher species diversity.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None during field survey					
Additional relevant factors:  none					
Assessment conducted by: Dan Van Nostrand			Assessment date(s): Oct-11		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E - Alternative 1 only</b>	Application Number	Assessment Area Name or Number <b>Polygon 13 - Seepage Slope/Wet Prairie</b>
Impact or Mitigation <b>Impact (Direct)</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Oct-11</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is Insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>w/o pres or current      with</p> <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	<p>This wetland polygon is adjacent to undeveloped land and low density residential development. There is minor limitation to wildlife movement to and from this polygon due to the residential land. This wetland is isolated and has been cut in half by Oakland Drive, a dirt road. There is a culvert beneath the road; however it has impacted the normal flow patten within the wetland. This wetland is proposed for direct impact by alternative 1..</p>
6	0		
<p><b>.500(6)(b)Water Environment (n/a for uplands)</b></p> <p>w/o pres or current      with</p> <table border="1"> <tr> <td>7</td> <td>0</td> </tr> </table>	7	0	<p>This wetland has appropriate hydrophytic vegetation and appears to support the appropriate hydroperiod. The wetland lacks community zonation because the fire regime is not adequate to maintain the subcanopy and shrub strata woody species as coppice. There is no evidence of siltation in this wetland from surrounding land uses. There are hydric soils present. This area is proposed for a direct impact by alternative 1.</p>
7	0		
<p><b>.500(6)(c)Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	<p>The canopy within the non-disturbed portion of this polygon are appropriate; however, approximately 1/2 of the polygon area has been cleared and there is no canopy due to continual maintenance. This area is proposed for a direct impact by either alternative 1.</p>
6	0		

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.63	0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 0.16

Delta = [with-current]
0.63

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name SR 87 Connector PD&E - Alternative 1 only		Application Number	Assessment Area Name or Number Polygon 14	
FLUCCs code 643	Further classification (optional) Seepage Slope / Wet Prairie		Impact or Mitigation Site? Secondary and Cumulative Impacts adjacent to shading impacts	Assessment Area Size 60.07
Basin/Watershed Name/Number Blackwater River	Affected Waterbody (Class) III	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) N/A		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetlands within this secondary and cumulative impact polygon are adjacent to the proposed bridges on the Blackwater River, Clear Creek, and the reticulated Flatwoods salamander critical habitat area. All wetlands directly connect to either the Blackwater River or Clear Creek via surface water sheet flow.				
Assessment area description These wetlands are similar in habitat quality to impact polygons 1, 3, 4, 8, and 9. The wetlands areas contain Bottomland Hardwood and Wet Prairie habitats.				
Significant nearby features Blackwater River, Coldwater Creek, RFS2 Critical Habitat, Munson Highway, Blackwater Heritage Trail		Uniqueness (considering the relative rarity in relation to the regional landscape.)		
Functions Water filtration, sediment stabilization, wildlife habitat, river and creek buffer		Mitigation for previous permit/other historic use N/A		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Migratory birds, small-medium-large mammals, reptiles, amphibians		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) many threatened plant species ( sundews, pitcher plants, lily, etc.), Flatwoods salamander, black bear.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None during field survey				
Additional relevant factors:				
Assessment conducted by: Daniel Van Nostrand		Assessment date(s): Sep-12		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
 (See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 14 - S/C Impacts (shading)</b>
Impact or Mitigation <b>Secondary and Cumulative Impacts Shading</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Sep-12</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>w/o pres or current      with</p> <p>9                              8</p>	<p>This secondary and cumulative wetland polygon is adjacent to proposed shading impacts from the bridges over the Blackwater River, Clear Creek, and the RFS2 Critical Habitat unit. There is minor limitation to wildlife movement to and from this polygon due to the residential land. Due to the minimization of impacts by bridging there will be minor impacts to the location and landscape support.</p>
<p><b>.500(6)(b) Water Environment (n/a for uplands)</b></p> <p>w/o pres or current      with</p> <p>10                              10</p>	<p>Due to the minimization of impacts by bridging these wetlands and collecting stormwater, there will be no impacts to wetlands outside of the direct bridge footprint.</p>
<p><b>.500(6)(c) Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>9                              8</p>	<p>There will be minor secondary and cumulative impacts to vegetation outside of the bridge footprint during the construction process; however, it is anticipated that the wetlands in these polygons will regenerate with native, wetland vegetation soon after the construction occurs.</p>

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.93	0.87

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = 4.00

Delta = [with-current]
0.07

If mitigation
Time lag (t-factor) =
Risk factor =

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

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

Site/Project Name <b>SR 87 Connector PD&amp;E</b>		Application Number	Assessment Area Name or Number <b>Polygon 15</b>	
FLUCCs code <b>643, 617, &amp; 630</b>	Further classification (optional) <b>Seepage Slope / Wet Prairie, Basin Swamp, and Dome Swamp</b>		Impact or Mitigation Site? <b>Secondary &amp; Cumulative adjacent to direct impacts</b>	Assessment Area Size <b>Alt. 1 = 79.33 &amp; Alt. 2 = 73.94</b>
Basin/Watershed Name/Number <b>Blackwater River</b>	Affected Waterbody (Class) <b>III</b>	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) <b>N/A</b>		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands <b>Wetlands within this secondary and cumulative impact polygon are adjacent to the proposed direct wetland impacts within the corridor areas. All wetlands directly connect to either the Blackwater River or Clear Creek via surface water sheet flow or through ditches.</b>				
Assessment area description <b>These wetlands are similar in habitat quality to impact polygons 2, 5, 6, 7, 10, 11, 12 and 13. The wetlands areas contain seepage slopes/wet prairies, basin swamps, and dome swamps.</b>				
Significant nearby features <b>SR 87 North, Munson Highway, Blackwater River, Coldwater Creek, RFS2 Critical Habitat, Munson Highway, Blackwater Heritage Trail</b>		Uniqueness (considering the relative rarity in relation to the regional landscape.)		
Functions <b>Water filtration, sediment stabilization, wildlife habitat, river and creek buffer</b>		Mitigation for previous permit/other historic use <b>N/A</b>		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) <b>Migratory birds, small-medium-large mammals, reptiles, amphibians</b>		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) <b>many threatened plant species ( sundews, pitcher plants, lily, etc.) and black bear.</b>		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): <b>None during field survey</b>				
Additional relevant factors:				
Assessment conducted by: <b>Daniel Van Nostrand</b>		Assessment date(s): <b>Sep-12</b>		

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

Site/Project Name <b>SR 87 Connector PD&amp;E</b>	Application Number	Assessment Area Name or Number <b>Polygon 15 - S/C Impacts</b>
Impact or Mitigation <b>Secondary and Cumulative Impacts Adjacent to Direct Impact Areas</b>	Assessment conducted by: <b>Daniel Van Nostrand</b>	Assessment date: <b>Sep-12</b>

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p><b>.500(6)(a) Location and Landscape Support</b></p> <p>w/o pres or current      with</p> <p>8                                  6</p>	<p>This secondary and cumulative wetland polygon is adjacent to proposed direct impacts from the proposed corridor alternatives. The new roadway will limit wildlife movement within the general vicinity cause more likelihood of vehicular deaths to wildlife. Further, water flows may be altered due to required water collection and conveyance for roadway features changing inputs downstream.</p>
<p><b>.500(6)(b) Water Environment (n/a for uplands)</b></p> <p>w/o pres or current      with</p> <p>8                                  4</p>	<p>Due to the proposed project impacts, flow between wetlands on either side of the proposed corridor will be altered from its current state.</p>
<p><b>.500(6)(c) Community structure</b></p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>7                                  6</p>	<p>There will be only minor impacts to the vegetative structure of the wetlands in the secondary and cumulative impact polygons during construction. Following construction it is anticipated that any disturbed vegetation will regenerate with native wetland vegetation; however, a new roadway introduces a vector for the dispersal of invasive plant species.</p>

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.77	0.53

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = Alt. 1: 18.51 & Alt. 2: 17.25

Delta = [with-current]
0.23

If mitigation
Time lag (t-factor) =
Risk factor =

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



## **Appendix D**

### **Wetland Polygon Photographs**



**Appendix D – Wetland/UMAM Polygon Photographs**

**A. Alignments 1 and 2**

**1. Polygon 1A & 1 – Bottomland Forest (FLUFCS 615)**



## 2. Polygon 2 – Basin Swamp (FLUFCS 617)



## 3. Polygon 3 – Seepage Slope / Wet Prairie (FLUFCS 643)





#### 4. Polygon 4 – Basin Swamp (FLUFCS 617)





### 5. Polygon 5 – Seepage Slope / Wet Prairie (FLUFCS 643)





## 6. Polygon 6 – Basin Swamp (FLUFCS 617)



### 7. Polygon 7 – Seepage Slope / Wet Prairie (FLUFCS 643)



### 8. Polygon 8 – Seepage Slope / Wet Prairie (FLUFCS 643)





### 9. Polygon 9 – Bottomland Forest (FLUFCS 615)





### 10. Polygon 10 – Basin Swamp (FLUFCS 617)





**11. Polygon 11 – Seepage Slope / Wet Prairie (FLUFCS 643)**





## B. Alignment 1 Only

### 1. Polygon 12 – Dome Swamp (FLUFCS 630)





## 2. Polygon 13 – Seepage Slope / Wet Prairie (FLUFCS 643)





## **Appendix E**

### **FDEP State Lands Determination**



# Florida Department of Environmental Protection

Marjory Stoneman Douglas Building  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3900

Rick Scott  
Governor

Jennifer Carroll  
Lt. Governor

Herchel T. Vinyard, Jr.  
Secretary

October 11, 2011

Mr. Dan Van Nostrand  
Senior Project Manager  
Ecological Resource Consultants, Inc.  
Corporate Office Panama City Beach  
100 Amar Place  
Panama City Beach, Florida 32413

Dear Mr. Nostrand:

Examination of the information you furnished on September 28, indicates that submerged lands lying below the mean high water line of Clear Creek in Section 24, Township 2 North, Range 28 West and the Blackwater River in Section 19, Township 2 North, Range 27 West are state owned.

The conclusions stated herein are based on a review of records currently available within the Department of Environmental Protection as supplemented, in some cases, by information furnished by the requesting party. Additional records will be reviewed if provided.

If you have questions regarding this determination, please contact Sandra Harris, Planning Manager, at the above address, mail stop No. 108 or by telephone at (850) 245-2788.

Sincerely,

 Terry E. Wilkinson, Chief  
Bureau of Survey of Mapping  
Division of State Lands

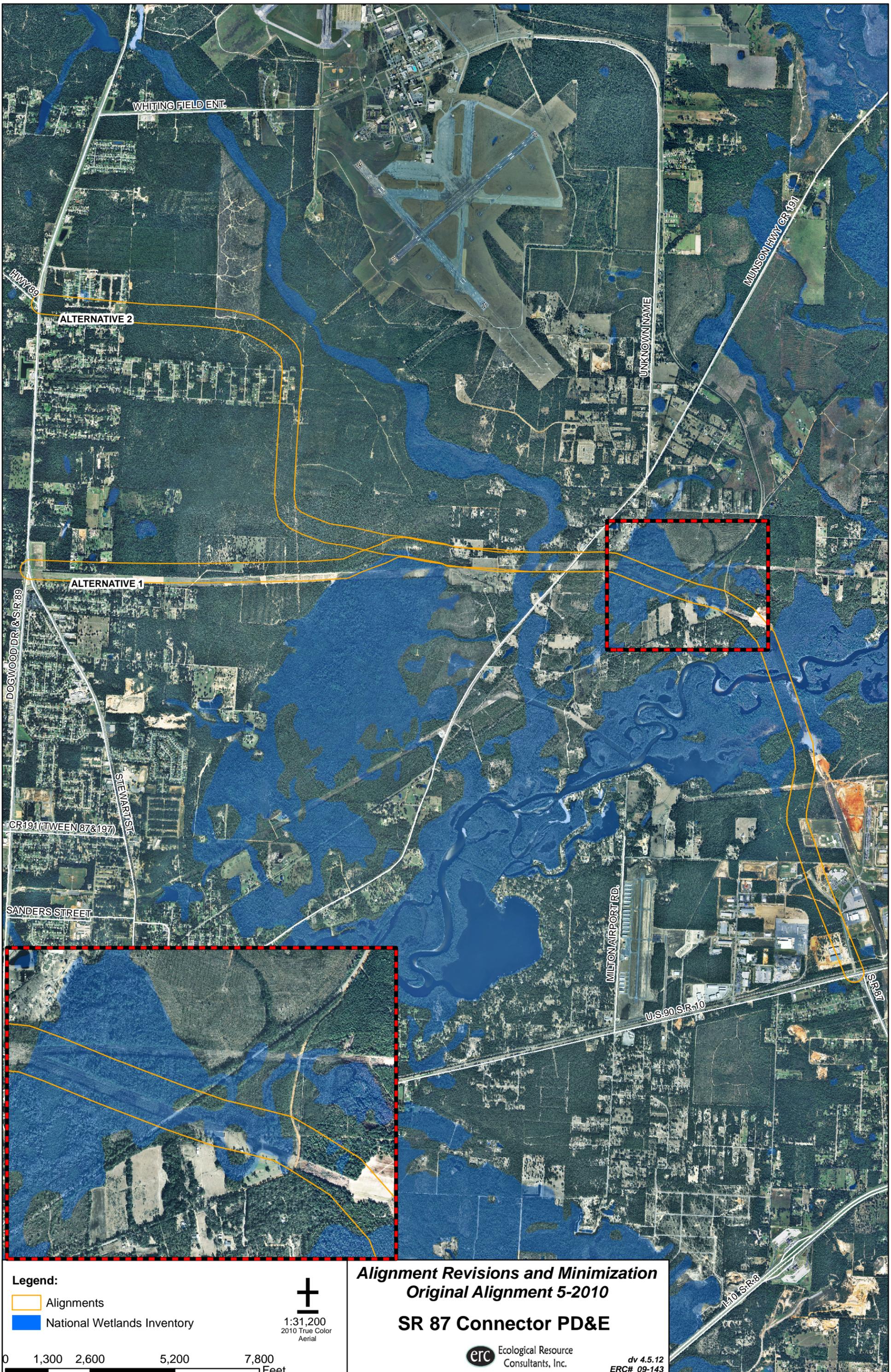
TEW/sh

F:\TITLE\SANDRA\2011-04\ClearCreek&BlackwaterRiver.doc



## **Appendix F**

### **Alignment Revisions and Minimization**



**Legend:**

- Alignments
- National Wetlands Inventory



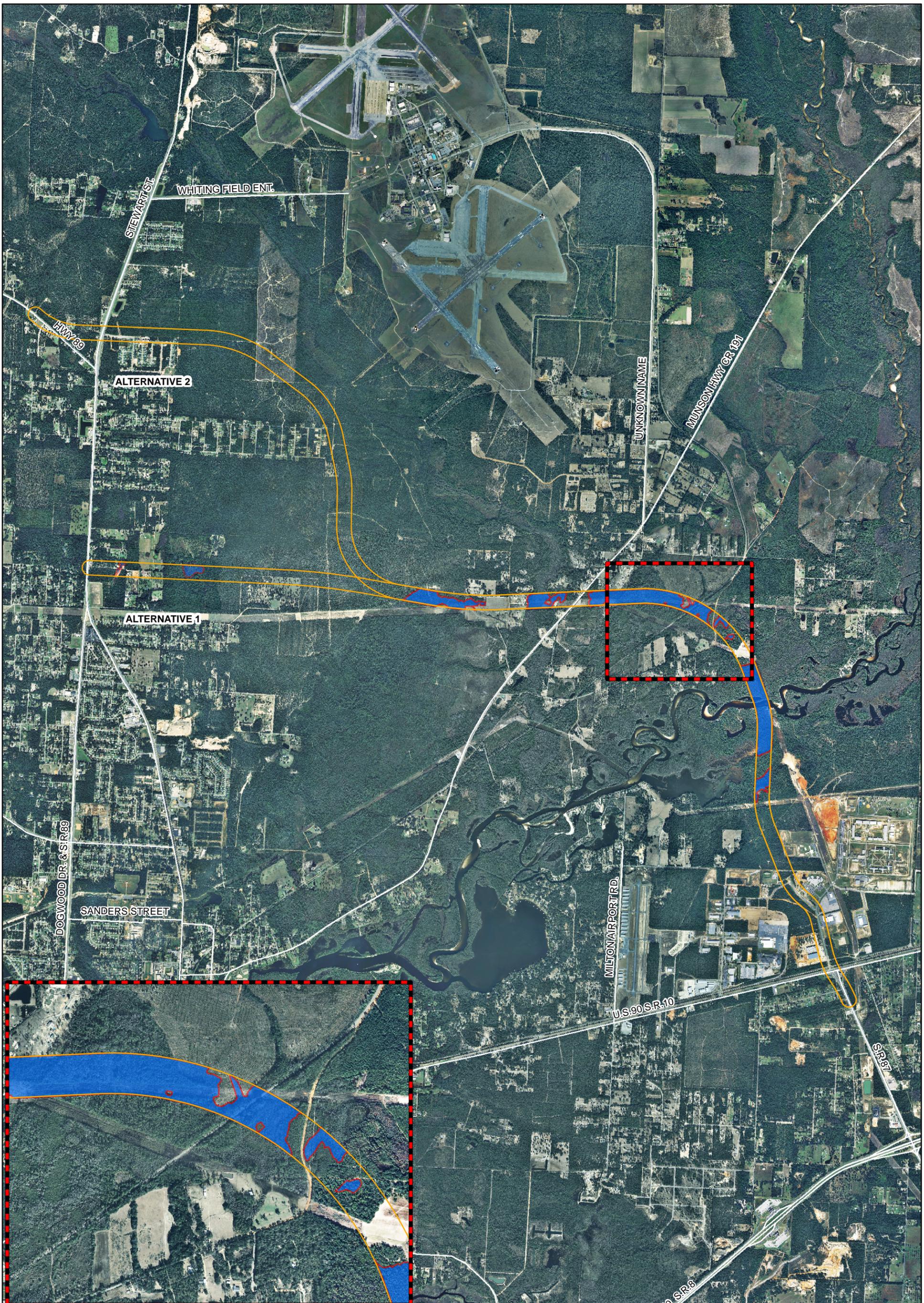
1:31,200  
2010 True Color  
Aerial



**Alignment Revisions and Minimization  
Original Alignment 5-2010  
SR 87 Connector PD&E**

**erc** Ecological Resource  
Consultants, Inc.

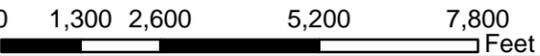
dv 4.5.12  
ERC# 09-143



**Legend:**

- Alignments
- ERC Delineated Wetlands

Total Potential Wetland Involvement 129 (+/-) Acres



1:36,000  
2010 True Color  
Aerial

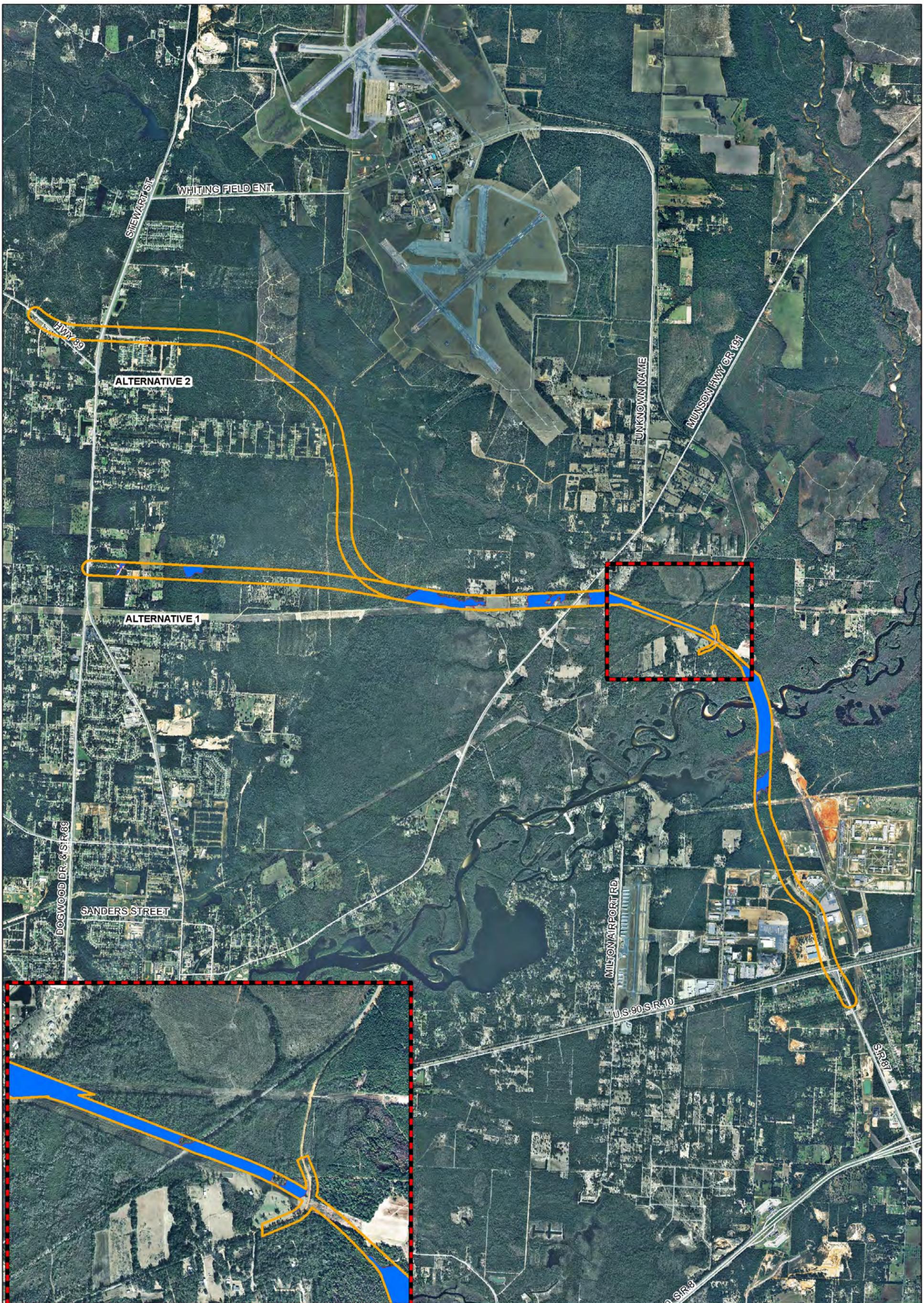
**Alignment Revisions and Minimization  
Revised Alignment 9-2011**

**SR 87 Connector PD&E**

Ecological Resource  
Consultants, Inc.

dv 4.5.12  
ERC# 09-143

UNKNOWN NAME



**Legend:**

- Alignments
- ERC Delineated Wetlands

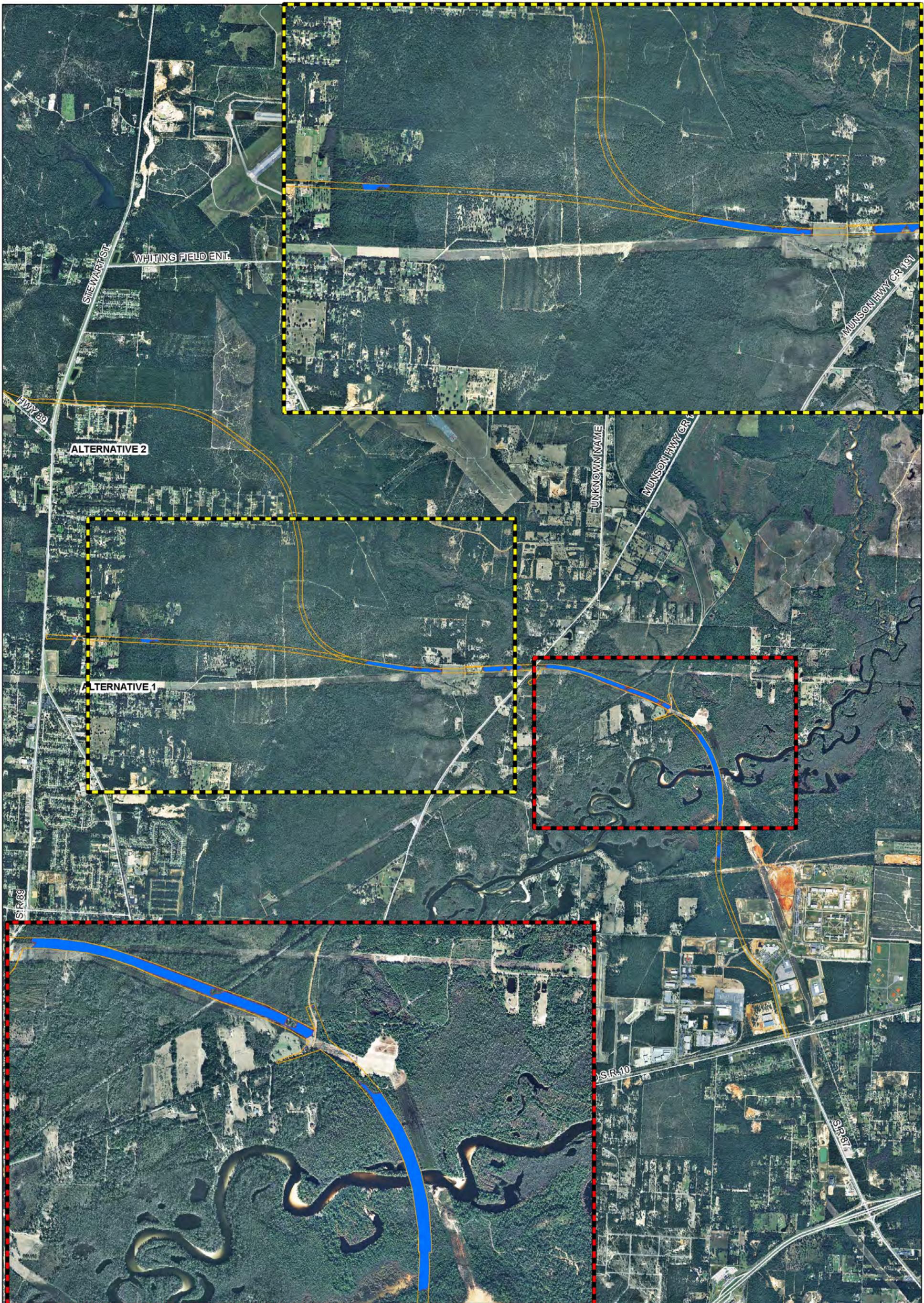
Total Potential Wetland Involvement 100 (+/-) Acres

0 1,300 2,600 5,200 7,800 Feet

N  
1:36,000  
2010 True Color  
Aerial

**Alignment Revisions and Minimization  
Current Alignment 12-2011  
SR 87 Connector PD&E**

UNKNOWN NAME



**Legend:**

- Alignments
- ERC Delineated Wetlands

Total Potential Wetland Involvement 46 (+/-) Acres

0 1,300 2,600 5,200 7,800 Feet



**Alignment Revisions and Minimization  
Current Alignment 8-2012**

**SR 87 Connector PD&E**

**erc** Ecological Resource  
Consultants, Inc.

dv 9.5.12  
ERC# 09-143