

Newnans Lake Improvement Initiative

Water Quality Improvement of Little Hatchet Creek & Gum Root Swamp Investigation

Lead Project Managers:

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Collaborators:

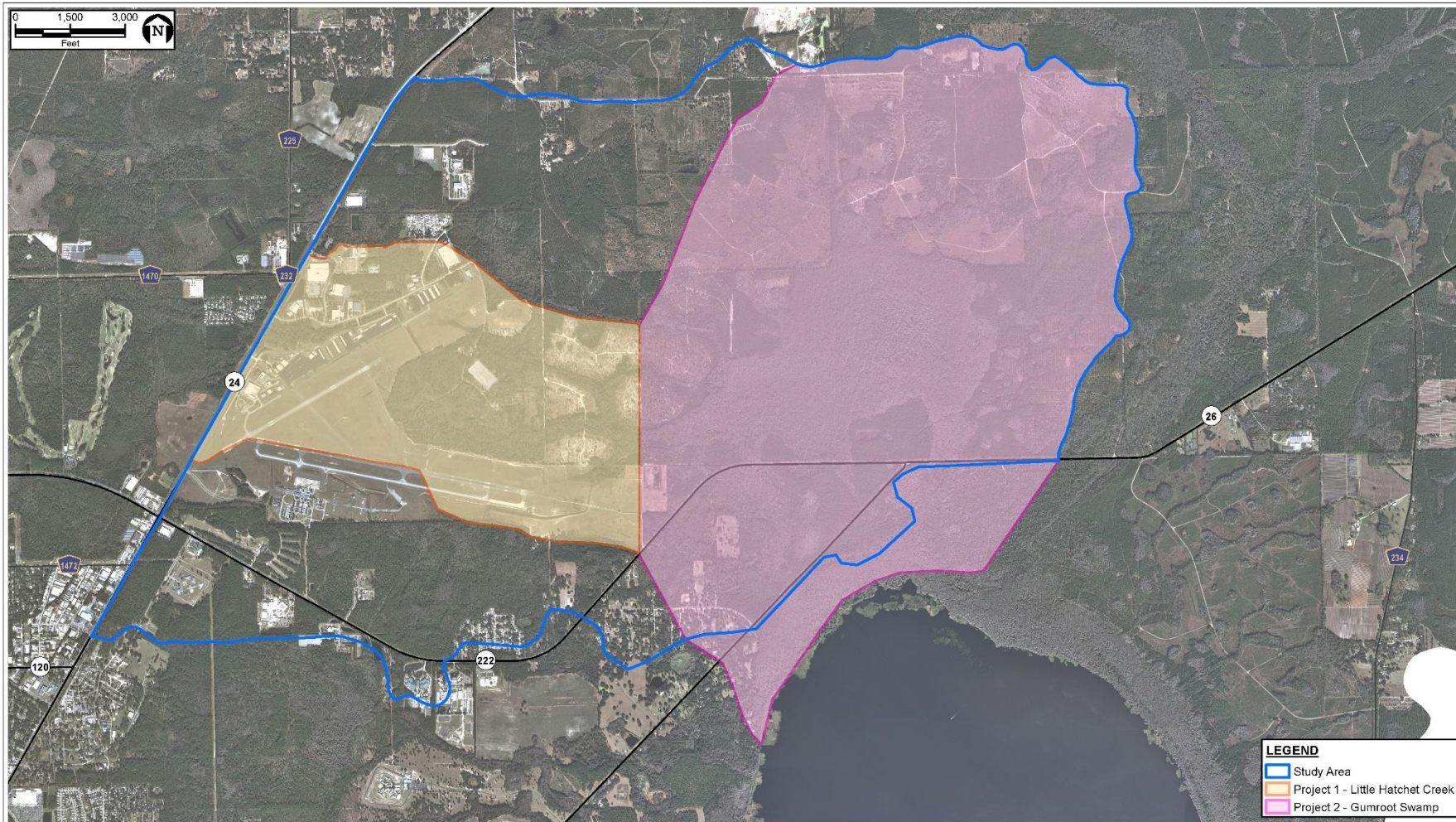
Todd Osborne, Ph.D. (UF)

Mark Clark, Ph.D. (UF)

Kevin Grace (DBE)

NLII: Two Projects

- ◉ Water Quality Improvement of Little Hatchet Creek
- ◉ Water Quality Improvement of Gum Root Swamp



PROJECTS
LITTLE HATCHET CREEK - GUM ROOT SWAMP

Sources: Alachua County, 2016; FDOT, 2014, 2016; ECT, 2017.

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WQ Improvement of Little Hatchet Creek (LHC)

CONCEPTUAL DESIGN ALTERNATIVES

Alternatives Considered

◎ Proposed alternatives:

1. Hardening Creek
2. Widening Creek
3. Widening Creek + Weirs





FIGURE 1.
EXISTING STREAM PROFILE
MAXIMUM VELOCITIES
LITTLE HATCHET CREEK

Source: FDOT, 2014, 2016; ECT, 2017.

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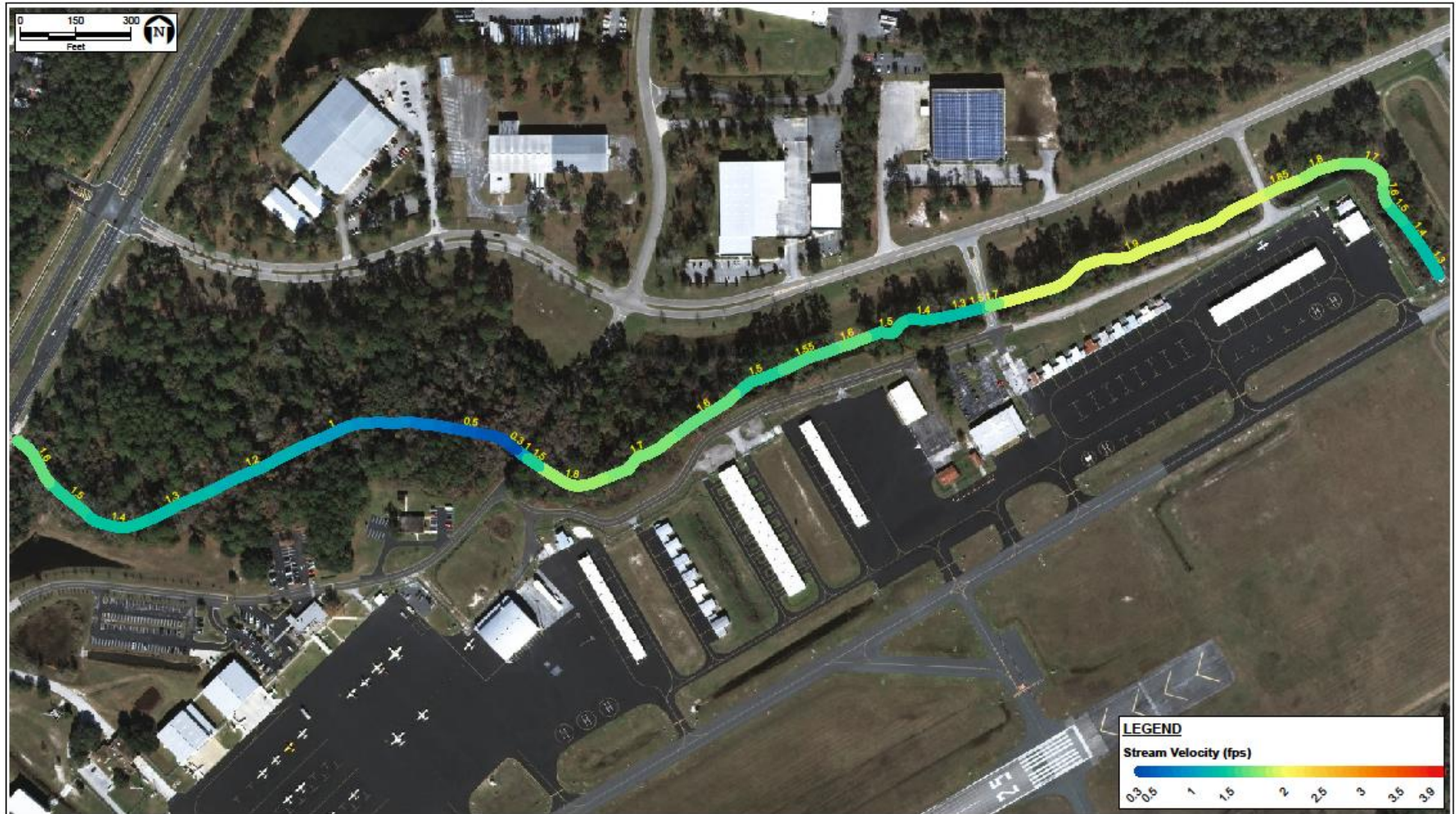


FIGURE 2.
PROPOSED STREAM PROFILE
MAXIMUM VELOCITIES WITH WEIRS
LITTLE HATCHET CREEK

Source: FDOT, 2014, 2016, ECT, 2017.

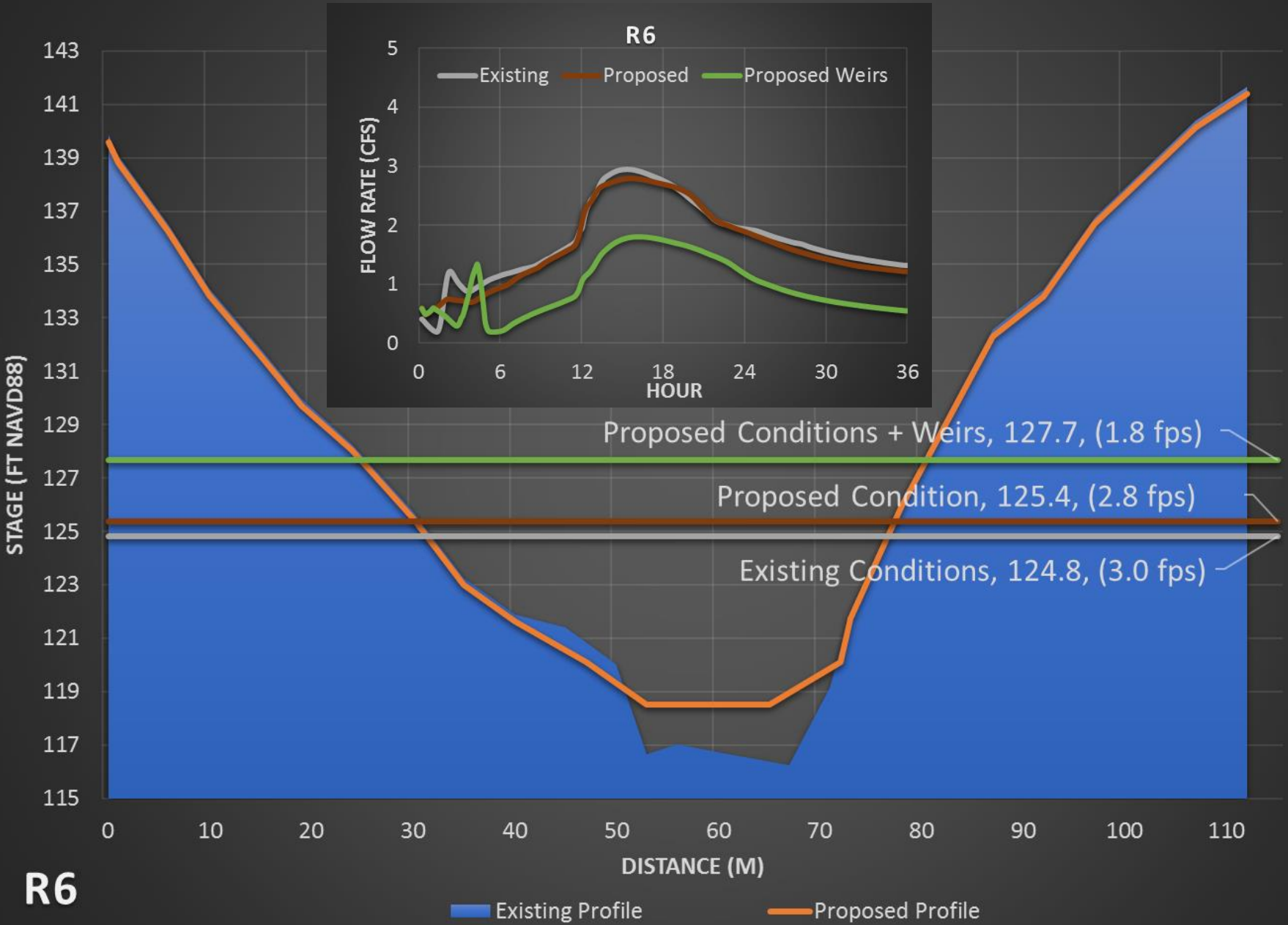
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FIGURE 2.
PROPOSED STREAM PROFILE
MAXIMUM VELOCITIES WITH WEIRS
LITTLE HATCHET CREEK

Source: FDOT, 2014, 2016, ECT, 2017.

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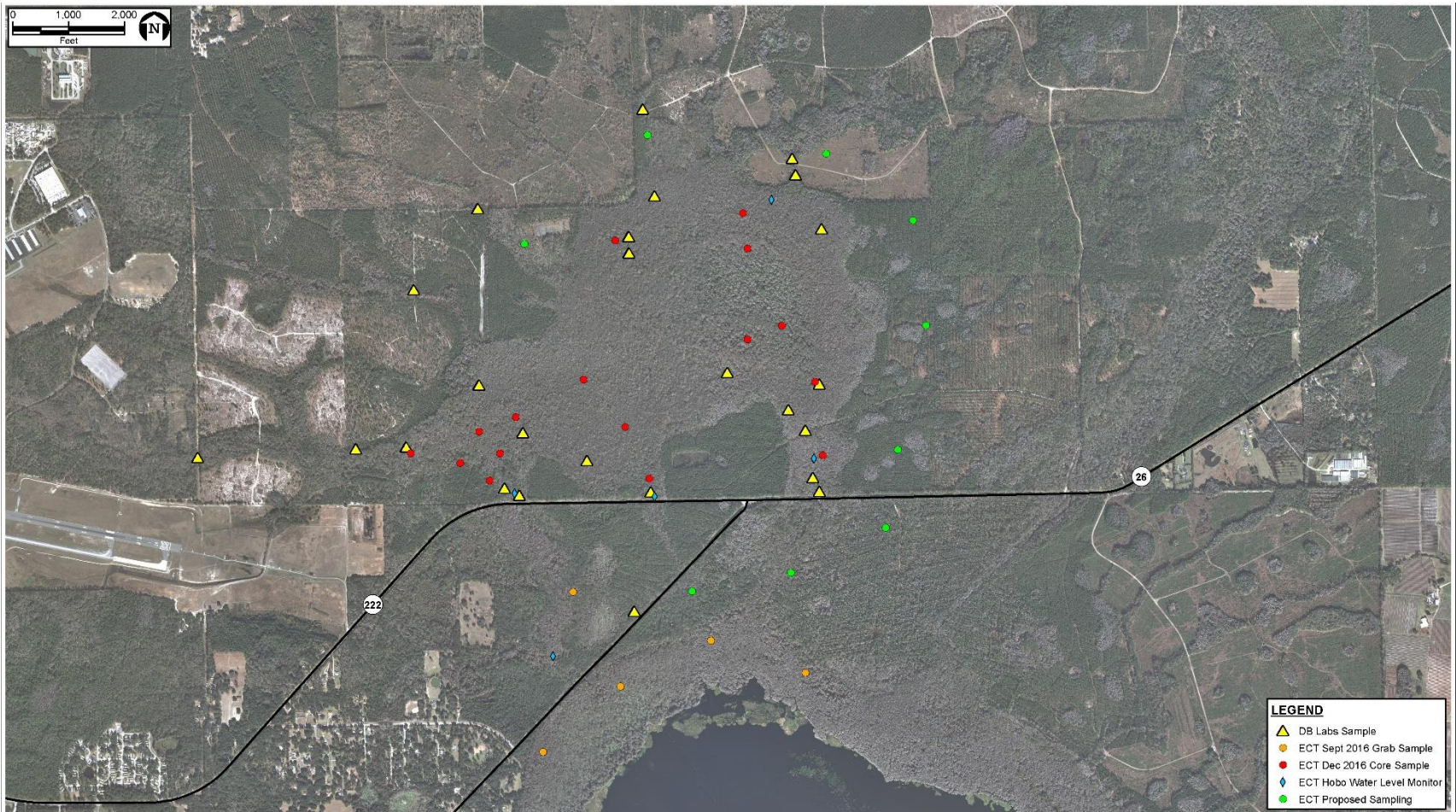
WQ Improvement of Gum Root Swamp (GRS)

FIELD SAMPLING & LABORATORY ANALYSIS

Purpose of Sampling

- ◉ Spatial Characterization of Nutrients
- ◉ Nutrient Cycling Dynamics within GRS
 - If/when GRS is Source or Sink
 - Exposed Hawthorn Flux Rate
- ◉ Spatial Extent of Hawthorn Impact
- ◉ Water Balance
 - Primary flow paths in and out of GRS

Sampling Locations



SAMPLING LOCATIONS
LITTLE HATCHET CREEK - GUM ROOT SWAMP

Sources: Alachua County, 2016; FDOT, 2014, 2016; ECT, 2017.

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Thank You

- ◉ Questions?

- ◉ Contact Information

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