Initial Field Survey of Sandalhaven Creek Crossing Wetland Planting on August 19, 2026

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1) Introduction

A qualitative field survey was conducted of the wetland planting at the Sandalhaven Creek Crossing on August 19, 2026. The objective of the survey was to assess the initial survival and performance of the twelve plant species that were planted on July 7, 2026. Figure 1 shows the final planting design.

2) Results

Survey results are summarized for each species in the following sections.

a) Alligator Flag (*Thalia geniculata*)

The condition of the alligator flag bare root plants at planting was poor. Three (3) alligator flag were planted in the lower portion of the low marsh habitat (Figure 1). All three plants were healthy, producing new leaves, and were growing in standing water when surveyed (Figure 2).

b) Coastal Spikerush (*Eleocharis cellulosa*)

The condition of the coastal spikerush bare root plants at planting was poor. Approximately 30 clumps (4 to 6 plants per clump) were planted in the open water habitat. The spikerush were planted in standing water within the existing vegetation (a dense stand of softstem bulrush and smartweed) on the north and south sides of the crossing (Figure 1). The high creek water level and dense vegetation present on August 19 precluded the direct visual survey of this species.

c) Duck Potato (*Sagittaria lancifolia*)

The condition of the duck potato bare root plants at planting was good. Approximately 125 duck potato were planted at the upper part of the low marsh habitat (Figure 1). The field survey found poor survival north of the crossing, but good survival south of the crossing. Plants planted under partial shade appeared to be more vigorous. Many of the duck potato planted south of the crossing were vigorous and producing much new foliage (Figures 3 and 4). One plant was observed to be flowering.

d) Fakahatchee Grass (*Tripsacum dactyloides)*

The fakahatchee grass plants arrived in 1-gallon plastic pots and were in good condition when planted. Five plants were planted in the upland habitat (Figure 1). All plants were in good condition when surveyed (Figure 5).

e) Golden Canna (*Canna flacida*)

Golden canna arrived as small seedlings grown in soil-filled planting trays with cells approximately 2 by 3 inches and were in good condition when planted. Approximately 125 seedlings were planted in the lower portion of the high marsh habitat (Figure 1). Survival was high and the plant condition was good with plants producing many new leaves (Figures 6 and 7). Although most plants were growing above the current creek water level, some were inundated.

f) Leather Fern (*Acrostichum danaeifolium*)

Leather fern arrived in 5-gallon plastic pots and were in good condition when planted. Five ferns were planted in the high marsh habitat (Figure 1). All five plants were vigorous producing much new foliage when surveyed (Figure 8). Some plants were growing above the current creek water level, while others were inundated.

g) Sea Grape (*Coccoloba uvifera*)

Sea grape arrived in 1-gallon plastic pots and were in good condition when planted. Three were planted in the upland habitat north of the creek crowing (Figure 1). All plants were healthy and producing new leaves when surveyed (Figure 9).

h) Soft Rush (*Juncus effusus*)

The condition of the soft rush bare root plants at planting was poor. They were planted in clumps of 3 to 5 plants in approximately 30 locations in the upper portion of the high marsh habitat (Figure 1). Survival was poor and few plants had any visible green leaves (Figures 10 and 11).

i) Softstem Bulrush (*Scirpus validus* (syn. *Schoenopiectus tabernaemontani*))

The condition of the soft rush bare root plants at planting was poor. The 5 plants were planted in a single clump in the open water habitat south of the creek crossing (Figure 1). The high creek water level on August 19 precluded a direct visual survey of this species. It should be noted that a pre-existing dense population of bulrush is present north and south of the crossing. When this wetland planting was originally designed in late 2025, no or few bulrush were seen in the area.

j) Virginia Blue Flag Iris (*Iris virginica* (syn. *Iris savannarum*))

The condition of the Virginia blue flag iris bare root plants at planting was good. Approximately 125 plants were planted in the upper portion of the high marsh habitat (Figure 1). Although the leaves present at planting were in poor condition, new leaves were sprouting from underground tubers (Figures 12 and 13). There appeared to be more iris surviving on the north side of the creek crossing compared to the south side.

k) Wax Myrtle (*Myrica cerifera*)

The wax myrtle plants arrived in 1 gallon plastic pots and were in fair condition when planted. Five plants were planted in the upland habitat north of the creek crossing (Figure 1). The two wax myrtle planted on the east side of the creek were in good condition (Figure 14), but the three planted on the west side could not be found due to the dense and tall weed growth.

l) White Water Lily (*Nymphaea odarata*)

The condition of the white water lily bare root plants at planting was good. Three plants were planted on the north side of the crossing in the open water habitat (Figure 1). The floating leaves of several plants were visible when surveyed (Figure 15).

3) Discussion and Recommendations

Although the initial survival and performance of most species was good, several species showed poor survival. In particular, the low survival of soft rush and probably coastal spikerush are a concern. Two factors contribute to the poor performance of these two species. First, condition of plant material received from the nursery was poor. Second, the long holding period before planting (3 weeks) undoubtedly had a negative impact on the plant quality of these and other species.

Weed competition is a serious issue at the Sandalhaven Creek Crossing. Site preparation included mechanical and chemical weed control measures that produced good initial results. However, weed growth following planting soon became serious. Two weed species are of primary concern, torpedo grass (*Panicum repens*) and a species of morning glory (*Ipomoea spp.*). Torpedo grass reproduces and spreads via underground rhizomes. These rhizomes can be difficult to kill with chemicals and once an area is treated, plants can re-establish from rhizomes growing outside the treatment boundary. This morning glory species is a prolific seed producer and many seedlings were observed to have germinated shortly after planting. Chemical weed control was again conducted at the site on August 19, 2026, approximately 6 weeks after planting. It is recommended that mechanical and/or chemical weed control measures be applied throughout the rest of the 2026 growing season to enhance the probability of successful wetland plant establishment. Many of the species planted are winter dormant and will resprout in the spring of 2027. Additional weed control measures may be needed in 2027.

Elevated salinity levels in surface water may adversely affect the wetland planting at the Sandalhaven Creek Crossing. Salinity in the creek reached a maximum of 17 ppt in November of 2024 and decreased to 0 ppt by July 2026. However, the salinity rose to 2 ppt on August 19, 2026. This rise in salinity could be associated with inflows from the Sandalhaven Estates pond

and/or leaching of residual salt held in adjacent soils. Although a salinity of 2 ppt is unlikely to kill wetland plants, it may reduce growth making plants more susceptible to weed competition.

It is recommended that periodic monitoring of survival and performance of this planting be continued through the end of the 2027 growing season. Seasonally variable water levels may affect plant performance. In addition, weed competition may continue to be a factor. An ideal outcome for the planting would be that as the wetland plants grow and spread, they eventually outcompete the weeds by forming dense stands.

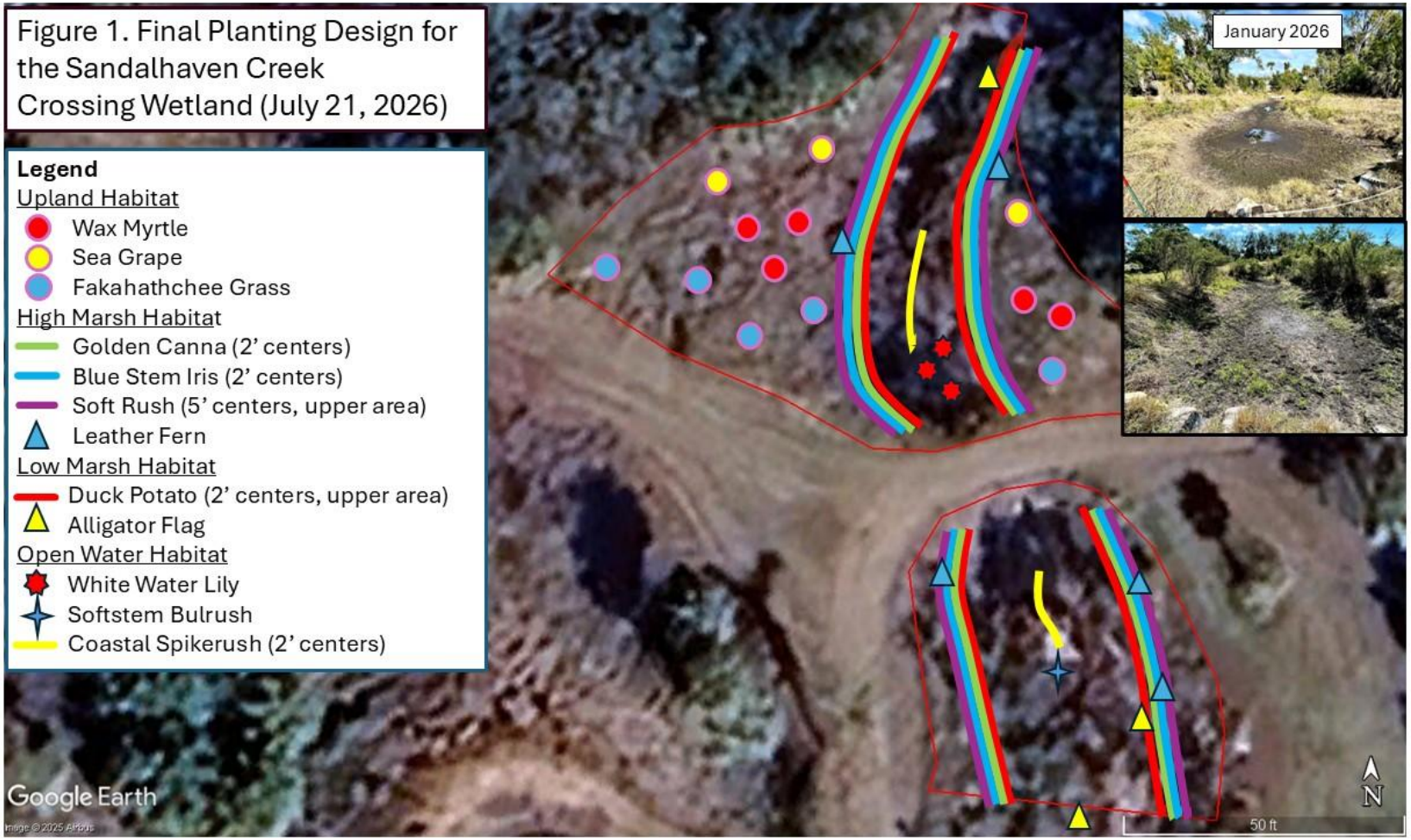
Figure 1. Final Planting Design for the Sandalhaven Creek Crossing Wetland (July 21, 2026)
Legend
Upland Habitat
Wax Myrtle
Sea Grape
Fakahathchee Grass
High Marsh Habitat
Golden Canna (2' centers)
Blue Stem Iris (2' centers)
Soft Rush (5' centers, upper area)
Leather Fern
Low Marsh Habitat
Duck Potato (2' centers, upper area)
Alligator Flag
Open Water Habitat
White Water Lily
Softstem Bulrush
Coastal Spikerush (2' centers)
January 2026
Google Earth
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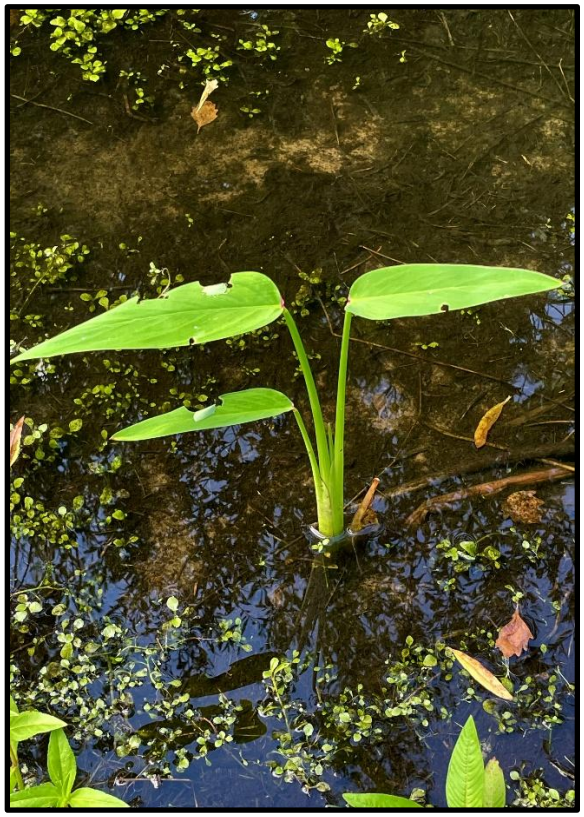

Figure 2. Alligator flag showing new leaf growth. (8/19/26)

Figures 3 and 4. Duck potato showing significant new leaf growth. (8/19/26)

Figure 5. Fakahatchee grass showing new leaf growth. (8/19/26)

Figures 6 and 7. Golden canna showing significant new leaf growth. Note plants growing in and above the water. (8/19/26)

Figure 8. Vigorous leather fern growing in water. (8/19/26)

Figure 9. Sea grape showing new leaf growth. (8/19/26)

Figures 10 and 11. Dead and dying soft rush. (8/19/26)

Figures 12 and 13. Blue flag iris showing new leaf growth. (8/19/26)

Figure 14. Wax myrtle showing new leaf growth. (8/19/26)

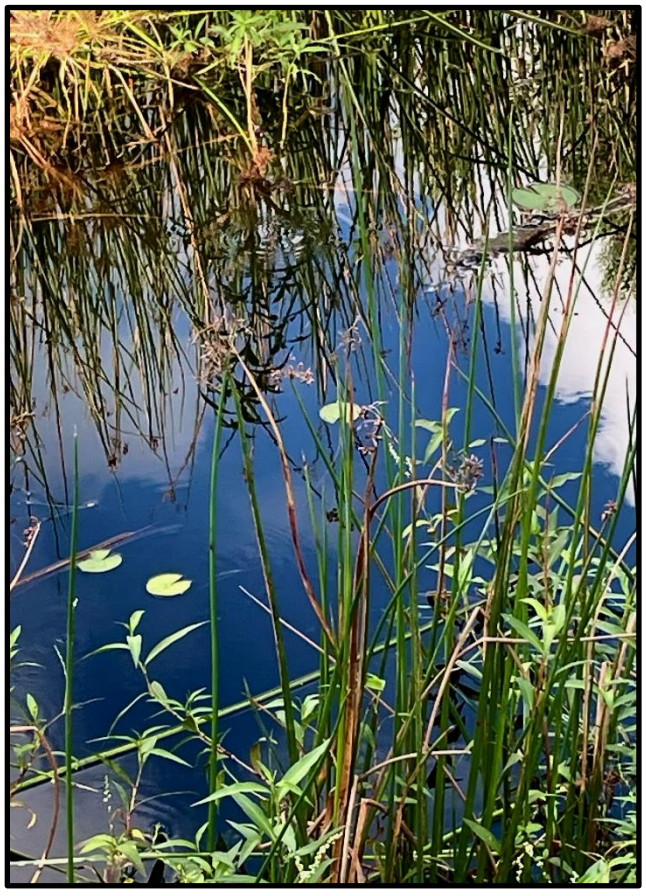

Figure 15. White water lily showing new leaf growth. (8/19/26)