



SFCN Corridors of Invasiveness Data Summary Report

Big Cypress National Preserve – North Region, Revised 9/2/2015

Natural Resource Data Series NPS/SFCN/NRDS—2015/970



ON THE COVER

The middle of a cypress dome along the hiking trail north of I-75 at mile marker 70 in northern Big Cypress National Preserve.
Photograph by: Lydia Cuni

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September 2015

U.S. Department of the Interior
National Park Service
Natural Resource Stewardship and Science
Fort Collins, Colorado

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Please cite this publication as:

Shamblin, R. B., and L. M. Cuni. 2015. SFCN corridors of invasiveness data summary report: Big Cypress National Preserve – North Region, Revised 9/2/2015. Natural Resource Data Series NPS/SFCN/NRDS—2015/970. National Park Service, Fort Collins, Colorado.

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Introduction and Methods

This report summarizes the locations surveyed and any new exotic plant species detected while conducting invasive exotic plant “corridors of invasiveness” surveys in Big Cypress National Preserve (BICY) – North Region in 2015 (Figure 1). The South Region of BICY was sampled in 2013 and the results of those surveys are summarized in Shamblin *et al.* (2013).

The basic approach involves scanning major “corridors of invasiveness” for new exotic plant species, e.g., paved and unpaved roads, trails, trail heads, off road vehicle (ORV) trails, boat ramps, campgrounds, and canals. Surveys are conducted while walking or while driving slowly in a vehicle, all-terrain vehicle, airboat, or boat. The high confidence “Field of View” is also recorded (defined as the distance in meters the botanist has high confidence that he or she can view without obtrusive obstructions for the purpose of sighting exotics in the three canopy layers of herb, shrub, and tree). However, any exotics seen outside this field of view are also reported but not used in calculations of percent infested area within the field of view. Sampling is optimized using a two person crew, a trained botanist from the South Florida\Caribbean Network (SFCN) and a certified herbicide applicator from the Exotic Plant Management Team (EPMT). If infestations are small, they are treated immediately by the EPMT crew member. If large, they are quickly reported to park staff and the Exotic Plant Management Team coordinator. Complete methods are described in the protocol “SFCN Early Detection Protocol for Invasive Exotic Plants, Corridors of Invasiveness” (Shamblin *et al.*, 2013).

Surveys were conducted by SFCN botanist Brooke Shamblin, SFCN Biological Technicians Robert Muxo and Raul Urgelles, SFCN GIS Technician Rachel Vargas, Florida International University interns Lydia Cuni, Shea Bruscia and Craig Perry, and EPMT seasonal crew members Chris Muina, Joe Ingram and Mike Berg, between the dates of 2 March 2015 and 2 June 2015. Due to the loss of EPMT lead technician Shane McKinley (who left for another position), most surveys during 2015 did not have the added benefit of treating small infestations. Except for Bear Island campground and Perocchi Grade, the rest of the sites did not receive treatment. The 2015 surveys were done in the northern region of BICY (Figure 1). More specifically, the surveys encompassed an area from the preserve’s northern boundary south to approximately 2 km north of Wagonwheel Road in the west and south from the northern preserve boundary to approximately 1.5 km north of the terminus of 11-Mile Road in the east. Fifteen sites were visited within BICY covering a total distance of 84.37 km. All sites were arrived at by truck and surveyed by truck and on foot (Table 1).

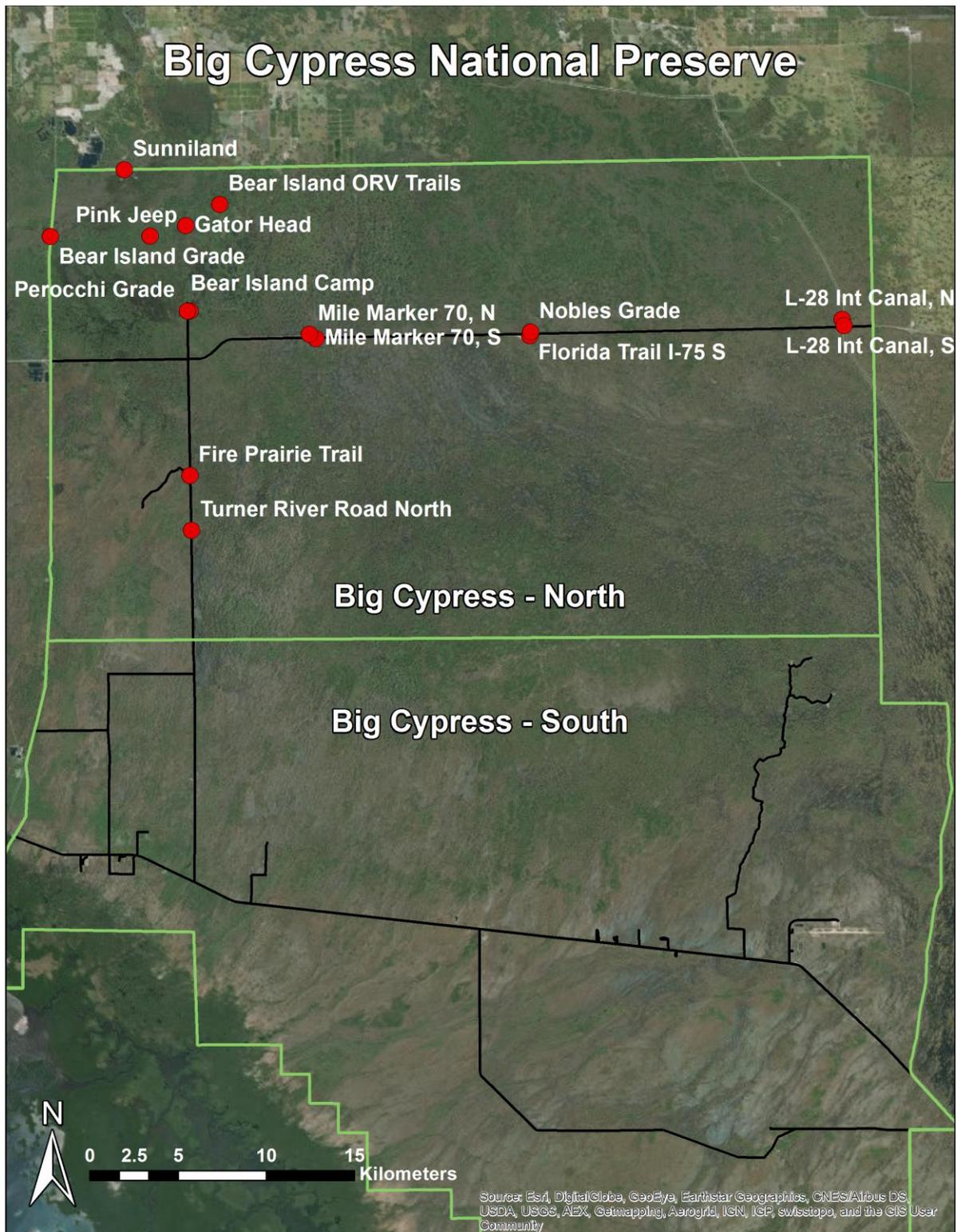


Figure 1. Locations of 2015 surveys. The 2015 surveys were conducted in the Big Cypress-North region of BICY. The sites surveyed consisted of campgrounds, hiking trails, primary ORV trails, and roads. Green boundary shows Big Cypress National Preserve North Survey Area and South Survey Area

Results and Discussion

Summary

There were 31 exotic species encountered during the study. There were no records of new exotic plant species found within the northern region of the preserve. The SFCN referenced the certified species list from NPSpecies as the official list to compare with during the surveys. There were a total of 240 infestations observed during the survey. The exotic species with the highest number of infestations encountered in the northern region of Big Cypress National Preserve were Brazilian pepper (*Schinus terebinthifolius*), cogongrass (*Imperata cylindrica*), Java plum (*Syzygium cumini*), lantana (*Lantana camara*), and valamuerto (*Senna pendula*) (Appendix A). The species with the highest total area of infestation was Brazilian pepper with a total infested area 304,745 m², Burmared (*Neyraudia reynaudiana*) (208,025 m²), cogongrass (156,089 m²), torpedo grass (122,658 m²), and Peruvian primrosewillow (*Ludwigia peruviana*) (105,799 m²) (Appendix A).

A total of 84.37 km were surveyed during the 2015 Corridors of Invasiveness sampling (Table 1). The surveys were conducted both by vehicle and on foot. The sites included roads, improved ORV trails, hiking trails and campground areas. The estimated total area surveyed (taking into account the field of view) was 1,307,088 m² (323 ac). The total area infested within the field of view survey was 252,967 m² (62.5 ac); about 19% of the total area surveyed.

The 2015 surveys were conducted in the northern area of Big Cypress National Preserve (BICY). Although the surveys occurred in northern BICY among such temperate ecosystems as pinelands, cypress swamps, and oak hammocks, most of the exotic species encountered were tropical in origin. Brazilian pepper was the dominant exotic species, which aggressively colonizes disturbed areas, especially along roadsides. Torpedo grass forms large, thick infestations in marsh-like lowlands of old pastures. Java-plum is a fruit tree that produces small, juicy fruits that are bird dispersed. This species appears to be spreading, especially along roadsides and upland communities near wetland edges. Cogongrass has spread throughout Florida by cattle ranching (Dozier et. al 1998). In BICY this species was found to be abundant on occasion along roadsides and in disturbed upland communities such as old cattle pastures. Old and current ORV trails have the potential to act as corridors for exotic plants to reach the interior of the park with the ORV's themselves acting as vectors that may carry seeds along these corridors.

Some corridors within the preserve have a higher concentration of exotic species and can be identified as areas of concern. These areas showing a high concentration of exotic plant species include the trail edges of the Bear Island ORV trails, the Sunniland oil pad edges, the Noble's Grade trail edges and adjacent canal, and the L-28 Interceptor Canal (Figure 2). The L-28 Interceptor Canal is the biggest problem area. On either side of the canal, a berm (1 to 2 m in height) of fill material (shell, rock, sand) is present and is currently infested with a number of exotic plant species, especially Burmared, for the entire length of the canal. These berms of exotic species are located immediately adjacent to the preserve's natural areas and may act as source populations for exotics to reach interior habitats within the preserve.

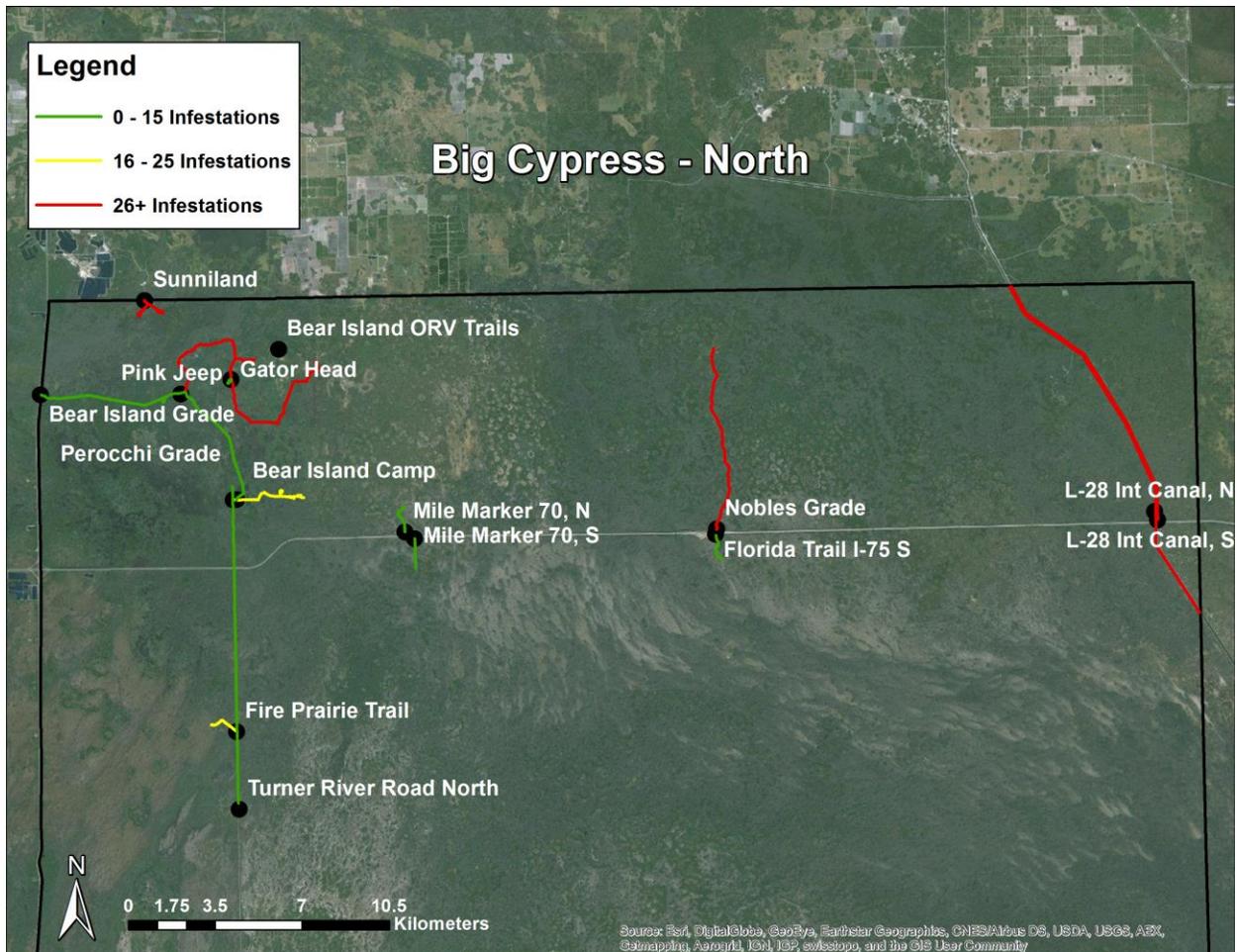


Figure 2. Infestation densities along the corridors sampled in 2015. Tracklines colored in red had the highest number of infestations, while the green lines show areas with the fewest number of infestations.

Appendix A provides a summary of all the exotic species detected, with the exception of the Percent Infested in Field of View column, which is a within the field of view calculation. It includes whether or not they are new to the park list; the number of infestations; minimum, maximum, and total size of infestations; and percent infested within field of view (i.e., total area of species/total area surveyed within the high confidence field of view). A table of all species encountered, their waypoints, and UTM coordinates can be found in Appendix B. Maps showing tracklines of the corridors travelled with associated waypoints can be found in Appendix C. In addition to the written report, shapefiles of waypoints, tracklines, field of view, and infested areas are included on the Integration of Resource Management Applications (IRMA) website (Figure 3).

Table 1. Total distance surveyed.

| Site Name | Length (km) | # of Infestations |
|--------------------------|--------------|-------------------|
| Bear Island Grade | 5.99 | 8 |
| Bear Island Campground | 4.20 | 15 |
| Bear Island ORV Trails | 13.01 | 27 |
| Fire Prairie Trail | 1.27 | 18 |
| Florida Trail I-75 South | 1.13 | 2 |
| Gator Head Campground | 0.46 | 0 |
| L-28 Interceptor Canal | 27.30 | 70 |
| Mile Marker 70 North | 1.23 | 2 |
| Mile Marker 70 South | 1.21 | 10 |
| Noble's Grade | 7.82 | 38 |
| Perocchi Grade | 5.33 | 5 |
| Pink Jeep Campground | 0.38 | 9 |
| Sunniland | 2.26 | 26 |
| Turner River Road North | 12.78 | 10 |
| Totals | 84.37 | 240 |



Figure 3. Map showing an example of the field of view and the infested areas along a section of Noble's Grade. These shapefiles, along with waypoint and trackline shapefiles, are included as shapefiles on the IRMA website.

Discussion by Site

Bear Island Campground – This campground is located at the northern terminus of Turner River Road and is situated within pine and cypress habitat. We worked this area with a seasonal crew from the EPMT and targeted Brazilian pepper within the campsites (Figure 4). There is a large earleaf acacia (*Acacia auriculiformis*) in one of the campsites (GPS mark 8) that was not treated because someone was camping in that particular campsite. There are also some large individuals of Java-plum (*Syzygium cumini*) in the forested area at the junction of the Bear Island campground road and Perocchi Grade.



Figure 4. At Bear Island Campground, the SFCN botanist scouted ahead of the EPMT crew and flagged infestations within the individual campsites.

Gator Head Campground – This site is a small campground encircling an old borrow pit right off the Ridge trail. There were no exotic plants found during the survey here.

Perocchi Grade – SFCN also worked with the EPMT crew in this area. There are a few sour orange trees in the upland oak hammock habitats, but they were not treated due to the possible historical value of this species and popularity among visitors. There is also a large stand of cogongrass (*Imperata cylindrica*) which was treated (Figure 5), however, due to the obstinate nature of this species, follow-up treatment is recommended for this infestation.



Figure 5. Cogongrass infestation along Perocchi grade, before (top) and after (bottom) treatment by EPMT crew.

Bear Island Grade – The sides of this road are populated by St. Augustine grass (*Stenotaphrum secundatum*), however, these infestations appear to be restricted to the roadside edges. Woman’s tongue (*Albizia lebbek*) was treated along this road (Figure 6). There are a couple of patches of Brazilian pepper along this road, but except for these few species, this road has low exotic plant cover.



Figure 6. EPMT Crew Member Chris Muina treats *Albizia lebbek* found along Bear Island Grade. St. Augustine grass can be seen in the foreground and forms a continuous infestation along the edges of the road.

MM 70 South Access Area – Five species of exotic plants were recorded along this road (Figure 7). There were ten infestations, but all the infestations were small with only one or two individual plants comprising the infestations. Near the trailhead there are a few old closed ORV trails. These trails all had small infestations of Bermuda grass (*Cynodon dactylon*).



Figure 7. Deer spotted along the road at Mile Marker 70 south. Five species of exotic plants were identified along this road.

Fire Prairie Trail – This trail is a raised road that begins in cypress forest and then emerges into the more open and grass-like prairie habitat. Brazilian pepper (*Schinus terebinthifolius*) and jaragua grass (*Hyparrhenia rufa*) were the main exotic species found along this trail. Brazilian pepper was found at the edges of the road mostly in the forested cypress component of the trail. Jaragua grass appears to be a light demanding species and is found in the trail as it emerges into the open prairie. At this time jaragua grass appears to be restricted to the middle part of the trail itself between the tire ruts. The survey crew did take some time to pull out some caesarweed (*Urena lobata*) along the trail edge.

Florida Trail I-75 South – The Florida Trail south of I-75 winds through cypress and prairie habitats. This trail also serves as an ORV trail so the trail itself is rutted (Figure 8). The only exotic plant found along this trail was Bermuda grass, and in all instances the grass was growing within the rutted trail.



Figure 8. The Florida trail south from I-75 is also used as an ORV trail. The grass growing in the trail is the exotic Bermuda grass.

Turner River Road North – This road was surveyed from a point approximately 2 km north of Wagonwheel road to this road’s northern terminus at Bear Island. The southern half of this road was surveyed during 2013 and the results of this survey were summarized in Shamblin *et al.* (2013). Brazilian pepper is by far the main invader here with scattered infestations along the edges of the entire roadway. Sometimes the invasions appeared on both sides of the roadway. Adjacent to the roadway is a canal that runs the length of the road. This canal in many areas is choked with hydrilla (*Hydrilla verticillata*).

Bear Island ORV Trails – This survey area is comprised of the Hardrock trail, Ridge trail, Windmill trail, and the Harold Strand trail. Collectively we are calling these the Bear Island ORV trails. The Windmill trail is an unimproved ORV trail and is deeply rutted in some areas. SFCN only surveyed a short distance before calling off the survey here due to the rough nature of the trail. The Harold Strand trail is improved until its junction with the Windmill trail, where the survey was terminated. Again, Brazilian pepper is the major invader along these trails, especially along the Hardrock trail. There are large infestations of torpedo grass (*Panicum repens*) growing in marsh habitat along the Harold Strand trail (Figure 9). This marsh habitat appears to have been disturbed in the past as evidence of old fence lines is visible.



Figure 9. Large infestation of torpedo grass on the Harold Strand trail within the Bear Island Unit ORV Trails.

Noble's Grade/Florida Trail I-75 North – Noble's Grade is an improved road that runs north from I-75 to the northern park boundary. Fifteen species of exotic plants were recorded during the survey of this area. Much of this area was old cattle fields so the area is very disturbed. Because of this many exotics have established themselves, especially Brazilian pepper which has invaded the roadsides for most of the length of the road. Adjacent to Noble's Grade is a small canal which is home to a number of aquatic pest plants which have choked the canal in many areas (Figure 10). The problem species include hydrilla, water hyacinth (*Eichhornia crassipes*), water lettuce (*Pistia stratiotes*), and water spangles (*Salvinia minima*). Currently, the hydrilla, water hyacinth, and water lettuce are contained within the canal and do not pose an immediate threat to the surrounding ecosystem. The water spangles, on the other hand, is infesting an area within a cypress forest where there is a culvert that moves water from the canal to the natural area. The water spangles have escaped the canal and are now established within the cypress forest. This infestation should be monitored to prevent possible spread into nearby cypress swamps.



Figure 10. Hydrilla (top) and water-hyacinth (bottom) are two of the aquatic pest plants currently dominating the canal along Noble's Grade.

MM 70 North Access Area – This trail is only accessible by foot with the trailhead beginning at I-75 at mile marker 70 and running north from there. This trail winds through pristine pine, cypress, and prairie habitat. The only exotics encountered were Brazilian pepper at the trailhead and Bermuda grass in an old ORV rut in the middle of the prairie habitat, approximately 1 km from the trailhead (Figure 11).



Figure 11. SFCN botanist inspects an old ORV trail along the hiking trail at Mile Marker 70 North access area for the presence of Bermuda grass, a common inhabitant of old ORV ruts.

Sunniland – This site is located at the northwest corner of the preserve and contains two oilfield pads. Seven species of exotic plants were identified here. The major invader at this site is the South American shrub valamuerto (*Senna pendula* var. *glabrata*) which grows profusely around the length of the pads (Figure 12). Also common at the oil pad edges is the Peruvian primrosewillow (*Ludwigia peruviana*).



Figure 12. At the Sunniland site, valamuerto (*Senna pendula* var. *glabrata*) was found in abundance at the oil pad–marsh interface.

L-28 Interceptor Canal – This site runs along a large canal in the northeastern part of the preserve. Fifteen species of exotic plants were recorded along this canal corridor (Figure 13). Both roadsides of this canal contain heavy infestations of Burmared, Brazilian pepper, cogongrass, Java-plum, and white leadtree (*Leucaena leucocephala*). The infestations along the roadsides occur on a berm, probably created when the canal was dredged. The entire length of the canal roadside had a non-native plant composition. The canal edge was home to non-native vegetation such as Peruvian primrosewillow and torpedo grass.



Figure 13. The L-28 Interceptor canal showing the roadside berm in which many exotic plants have established including cogongrass in front of the shrubby Brazilian pepper, backed by the taller Java-plum trees.

Pink Jeep Campground – A small campground containing a total of 9 sites located off Bear Island Grade near the intersection with Perocchi Grade. Seven species of exotic plants were found in the campground, including the fruit trees sour orange and guava (Figure 14). The fruit trees were not treated due to historical value and popularity with visitors. Brazilian pepper and caesarweed are both well-established here and some of the Brazilian pepper was treated.



Figure 14. SFCN Botanist next to a sour orange tree growing in Pink Jeep Campground.

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Appendix A. Species Infestation Table

| Species Name | Common Name | New to Park | Number of Infestations | Minimum Size (m ²) | Maximum Size (m ²) | Total Area (m ²) | Percent Infested in Field of View |
|---------------------------------|----------------------------|-------------|------------------------|--------------------------------|--------------------------------|------------------------------|-----------------------------------|
| <i>Acacia auriculiformis</i> | Earleaf Acacia | No | 1 | 25 | 25 | 25 | 0.00191 |
| <i>Albizia lebbek</i> | Woman's Tongue | No | 1 | 42 | 42 | 42 | 0.00322 |
| <i>Asclepias curassavica</i> | Scarlet Milkweed | No | 2 | 1 | 4 | 5 | 0.00008 |
| <i>Blechnum pyramidatum</i> | Browne's Blechnum | No | 1 | 1 | 1 | 1 | 0.00008 |
| <i>Casuarina equisetifolia</i> | Australian Pine | No | 3 | 50 | 225 | 375 | 0.01045 |
| <i>Citrus sinensis</i> | Sweet Orange | No | 3 | 4 | 97 | 176 | 0.01001 |
| <i>Crotolaria spectabilis</i> | Showy Rattlebox | No | 6 | 1 | 25 | 45 | 0.00326 |
| <i>Cynodon dactylon</i> | Bermudagrass | No | 8 | 1 | 25 | 119 | 0.00910 |
| <i>Eichhornia crassipes</i> | Common Water-Hyacinth | No | 1 | 141 | 141 | 141 | 0.00298 |
| <i>Hydrilla verticillata</i> | Waterhyme | No | 2 | 647 | 2,007 | 2,654 | Outside FOV |
| <i>Hyparrhenia rufa</i> | Jaragua | No | 2 | 1 | 4 | 5 | 0.00033 |
| <i>Imperata cylindrica</i> | Cogongrass | No | 25 | 1 | 95,753 | 156,089 | 5.31642 |
| <i>Lantana camara</i> | Lantana | No | 20 | 1 | 2,113 | 2,860 | 0.18840 |
| <i>Leucaena leucocephala</i> | White Lead Tree | No | 5 | 4 | 1,344 | 1,643 | 0.04302 |
| <i>Ludwigia peruviana</i> | Peruvian Primrosewillow | No | 10 | 2 | 53,273 | 105,799 | 1.21167 |
| <i>Macroptilium lathyroides</i> | Wild Bushbean | No | 4 | 1 | 600 | 624 | 0.00341 |
| <i>Melaleuca quinquenervia</i> | Punktree | No | 1 | 9 | 9 | 9 | 0.00069 |
| <i>Neyraudia reynaudiana</i> | Burmareed | No | 7 | 4 | 131,474 | 208,025 | 5.06053 |
| <i>Panicum repens</i> | Torpedo Grass | No | 12 | 51 | 53,273 | 122,658 | 1.25359 |
| <i>Pistia stratiotes</i> | Water Lettuce | No | 3 | 4 | 813 | 842 | 0.01723 |
| <i>Psidium guajava</i> | Guava | No | 12 | 1 | 262 | 675 | 0.03664 |
| <i>Richardia grandiflora</i> | Largeflower Mexican Clover | No | 1 | 1 | 1 | 1 | 0.00008 |
| <i>Salvinia minima</i> | Water Spangles | No | 1 | 244 | 244 | 244 | 0.00967 |
| <i>Schinus terebinthifolius</i> | Brazilian Pepper | No | 55 | 1 | 131,474 | 304,745 | 5.31103 |
| <i>Senna pendula</i> | Valamuerto | No | 13 | 1 | 172 | 324 | 0.00967 |
| <i>Sorghum halapense</i> | Johnsongrass | No | 1 | 25 | 25 | 25 | 0.00075 |
| <i>Sphagneticola trilobata</i> | Creeping Oxeye | No | 1 | 9 | 9 | 9 | 0.00069 |

| Species Name | Common Name | New to Park | Number of Infestations | Minimum Size (m ²) | Maximum Size (m ²) | Total Area (m ²) | Percent Infested in Field of View |
|--------------------------------|---------------------|-------------|------------------------|--------------------------------|--------------------------------|------------------------------|-----------------------------------|
| <i>Sporobolus indicus</i> | Smutgrass | No | 4 | 25 | 400 | 625 | 0.02688 |
| <i>Stenotaphrum secundatum</i> | St. Augustine Grass | No | 4 | 25 | 2,123 | 4,397 | 0.20698 |
| <i>Syzygium cumini</i> | Java Plum | No | 24 | 1 | 6,000 | 6,577 | 0.50372 |
| <i>Urena lobata</i> | Caesar Weed | No | 6 | 1 | 3,677 | 3,717 | 0.10891 |

Appendix B. Species Waypoint Table

Note: All GPS points are provided in NAD83 and UTM Zone 17 North.

Appendix B-1

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|------------------|----------|----------------------|--------------------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Schinus terebinthifolius</i> | Bear Island Camp | 001 | 7 x 7 | | 6-10 | 2895780 | 475662 | 5 | N | 10 | S | Yes | garlon |
| <i>Schinus terebinthifolius</i> | Bear Island Camp | 002 | 5 x 5 | | 1 | 2895777 | 475654 | 5 | N | 10 | S | Yes | garlon |
| <i>Schinus terebinthifolius</i> | Bear Island Camp | 003 | 20 x 20 | | 11-15 | 2895764 | 475767 | 5 | N | 10 | S | Yes | garlon |
| <i>Schinus terebinthifolius</i> | Bear Island Camp | 004 | 20 x 20 | | 11-15 | 2895783 | 475796 | 5 | N | 10 | S | Yes | garlon |
| <i>Schinus terebinthifolius</i> | Bear Island Camp | 005 | 5 x 30 | | 6-10 | 2895804 | 475891 | 5 | N | 10 | S | Yes | garlon |
| <i>Schinus terebinthifolius</i> | Bear Island Camp | 006 | 5 x 30 | | 6-10 | 2895750 | 476096 | 5 | N | 10 | S | Yes | garlon |
| <i>Panicum repens</i> | Bear Island Camp | 007 | 15 x 10 | | > 15 | 2895829 | 475994 | 5 | N | 10 | S | No | |
| <i>Acacia auriculiformis</i> | Bear Island Camp | 008 | 5 x 5 | | 1 | 2896042 | 475304 | 10 | N | 10 | S | No | |
| <i>Schinus terebinthifolius</i> | Bear Island Camp | 009 | 2 x 2 | scattered | 2-5 | 2895818 | 474931 | 10 | N | 10 | S | Yes | garlon |
| <i>Syzygium cumini</i> | Bear Island Camp | 010 | 2 x 2 | | 1 | 2895666 | 473988 | 5 | N | 5 | S | Yes | garlon |
| <i>Syzygium cumini</i> | Bear Island Camp | 011 | 5 x 5 | | 1 | 2895663 | 473856 | 5 | N | 5 | S | Yes | garlon |
| <i>Syzygium cumini</i> | Bear Island Camp | 012 | 2 x 2 | | 1 | 2895661 | 473773 | 5 | N | 5 | S | Yes | garlon |
| <i>Syzygium cumini</i> | Bear Island Camp | 013 | 5 x 5 | | 1 | 2895654 | 473612 | 5 | N | 5 | S | Yes | garlon |
| <i>Syzygium cumini</i> | Bear Island Camp | 014 | 3 x 3 | | 1 | 2895652 | 473561 | 5 | N | 5 | S | Yes | garlon |
| <i>Panicum repens</i> | Perocchi Grade | 016 | 5 x 10 | | > 15 | 2897506 | 473321 | 5 | E | 5 | W | No | |
| <i>Stenotaphrum secundatum</i> | Perocchi Grade | 017 | 5 x 50 | all along roadside | > 15 | 2897690 | 473283 | 5 | E | 5 | W | No | |
| <i>Imperata cylindrica</i> | Perocchi Grade | 018 | 5 x 100 | along roadside | > 15 | 2899303 | 471928 | 5 | E | 5 | W | Yes | glyphosate |
| <i>Citrus sinensis</i> | Perocchi Grade | 019 | 2 x 2 | | 1 | 2899534 | 471789 | 5 | E | 5 | W | No | |

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|--------------------------|----------|----------------------|---------------------------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Citrus sinensis</i> | Perocchi Grade | 020 | 10 x 10 | | 2-5 | 2899631 | 471730 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Bear Island Grade | 021 | 50 x 5 | | 11-15 | 2900008 | 471388 | 5 | N | 5 | S | No | |
| <i>Stenotaphrum secundatum</i> | Bear Island Grade | 022 | 5 x 1000 | along entire roadway edge | > 15 | 2899963 | 471249 | 5 | N | 5 | S | No | |
| <i>Schinus terebinthifolius</i> | Bear Island Grade | 023 | 10 x 10 | | 2-5 | 2899925 | 470886 | 5 | N | 5 | S | No | |
| <i>Ludwigia peruviana</i> | Mile Marker 70 S S | 026 | 1 x 2 | | 1 | 2894097 | 480646 | 10 | E | 10 | W | No | |
| <i>Cynodon dactylon</i> | Mile Marker 70 S | 027 | 2 x 2 | | 6-10 | 2894024 | 480661 | 10 | E | 10 | W | No | |
| <i>Cynodon dactylon</i> | Mile Marker 70 S | 028 | 1 x 1 | | 2-5 | 2893974 | 480664 | 10 | E | 10 | W | No | |
| <i>Lantana camara</i> | Mile Marker 70 S | 029 | 5 x 1 | | 2-5 | 2893966 | 480655 | 10 | E | 10 | W | No | |
| <i>Cynodon dactylon</i> | Mile Marker 70 S | 030 | 5 x 5 | | > 15 | 2893923 | 480661 | 10 | E | 10 | W | No | |
| <i>Schinus terebinthifolius</i> | Mile Marker 70 S | 031 | 2 x 2 | | 2-5 | 2893763 | 480659 | 10 | E | 10 | W | No | |
| <i>Schinus terebinthifolius</i> | Mile Marker 70 S | 032 | 1 x 5 | | 2-5 | 2893616 | 480666 | 10 | E | 10 | W | No | |
| <i>Lantana camara</i> | Mile Marker 70 S | 033 | 2 x 2 | | 1 | 2893162 | 480681 | 10 | E | 10 | W | No | |
| <i>Sphagneticola trilobata</i> | Mile Marker 70 S | 034 | 3 x 3 | | 11-15 | 2892981 | 480678 | 10 | E | 10 | W | No | |
| <i>Schinus terebinthifolius</i> | Mile Marker 70 S | 035 | 2 x 7 | | 6-10 | 2892946 | 480676 | 10 | E | 10 | W | No | |
| <i>Cynodon dactylon</i> | Florida Trail I-75 South | 038 | 5 x 3 | | > 15 | 2893979 | 492884 | 10 | E | 10 | W | No | |
| <i>Cynodon dactylon</i> | Florida Trail I-75 South | 039 | 5 x 5 | | > 15 | 2893645 | 492798 | 10 | E | 10 | W | No | |
| <i>Schinus terebinthifolius</i> | Fire Prairie Road | 041 | 5 x 2 | | 2-5 | 2886335 | 473488 | 10 | N | 10 | S | No | |
| <i>Lantana camara</i> | Fire Prairie Road | 041 | 2 x 2 | | 2-5 | 2886335 | 473488 | 10 | N | 10 | S | No | |
| <i>Schinus terebinthifolius</i> | Fire Prairie Road | 042 | 5 x 3 | | 1 | 2886403 | 473385 | 10 | N | 10 | S | No | |

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|-------------------------|----------|----------------------|--------------------------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Schinus terebinthifolius</i> | Fire Prairie Road | 043 | 5 x 3 | | 2-5 | 2886417 | 473361 | 10 | N | 10 | S | No | |
| <i>Lantana camara</i> | Fire Prairie Road | 043 | 5 x 2 | | 2-5 | 2886417 | 473361 | 10 | N | 10 | S | No | |
| <i>Lantana camara</i> | Fire Prairie Road | 044 | 2 x 2 | | 2-5 | 2886496 | 473260 | 10 | N | 10 | S | No | |
| <i>Schinus terebinthifolius</i> | Fire Prairie Road | 045 | 2 x 2 | | 1 | 2886544 | 473196 | 10 | N | 10 | S | No | |
| <i>Schinus terebinthifolius</i> | Fire Prairie Road | 046 | 2 x 2 | | 2-5 | 2886586 | 473155 | 10 | N | 10 | S | No | |
| <i>Urena lobata</i> | Fire Prairie Road | 046 | 1 x 1 | | 1 | 2886586 | 473155 | 10 | N | 10 | S | Yes | pulled |
| <i>Schinus terebinthifolius</i> | Fire Prairie Road | 047 | 5 x 2 | | 2-5 | 2886627 | 473093 | 10 | N | 10 | S | No | |
| <i>Urena lobata</i> | Fire Prairie Road | 047 | 1 x 1 | | 1 | 2886627 | 473093 | 10 | N | 10 | S | Yes | pulled |
| <i>Imperata cylindrica</i> | Fire Prairie Road | 048 | 2 x 2 | | 6-10 | 2886680 | 473032 | 10 | N | 10 | S | Yes | pulled |
| <i>Schinus terebinthifolius</i> | Fire Prairie Road | 049 | 5 x 2 | scattered along road | 1 | 2886730 | 472964 | 10 | N | 10 | S | Yes | pulled |
| <i>Lantana camara</i> | Fire Prairie Road | 049 | 2 x 2 | | 1 | 2886730 | 472964 | 10 | N | 10 | S | Yes | pulled |
| <i>Imperata cylindrica</i> | Fire Prairie Road | 050 | 5 x 2 | | > 15 | 2886770 | 472853 | 10 | N | 10 | S | No | |
| <i>Ludwigia peruviana</i> | Fire Prairie Road | 051 | 2 x 2 | | 1 | 2886649 | 472719 | 10 | N | 10 | S | No | |
| <i>Cynodon dactylon</i> | Fire Prairie Road | 052 | 2 x 2 | | > 15 | 2886603 | 472465 | 10 | N | 10 | S | No | |
| <i>Schinus terebinthifolius</i> | Turner River Road North | 054 | 5 x 5 | scattered along roadside | 2-5 | 2886378 | 473496 | 10 | E | 10 | W | No | |
| <i>Hydrilla verticillata</i> | Turner River Road North | 055 | x | choking canal | > 15 | 2886728 | 473492 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | Turner River Road North | 056 | 5 x 100 | along both roadsides | > 15 | 2888409 | 473460 | 10 | E | 10 | W | No | |

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|-------------------------|----------|----------------------|------------------------------------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Schinus terebinthifolius</i> | Turner River Road North | 057 | 5 x 50 | infestations on both sides of road | > 15 | 2891979 | 473396 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | Turner River Road North | 058 | 2 x 5 | | > 15 | 2893990 | 473359 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | Turner River Road North | 059 | 5 x 5 | | > 15 | 2894193 | 473356 | 10 | E | 10 | W | No | |
| <i>Pistia stratiotes</i> | Turner River Road North | 060 | 2 x 2 | | 6-10 | 2894781 | 473346 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | Turner River Road North | 061 | 3 x 3 | | 1 | 2895170 | 473336 | 10 | E | 10 | W | No | |
| <i>Schinus terebinthifolius</i> | Hardrock Trail | 062 | 20 x 5 | | 2-5 | 2900013 | 471392 | 5 | N | 5 | S | No | |
| <i>Neyraudia reynaudiana</i> | Hardrock Trail | 063 | 2 x 2 | | 1 | 2901332 | 471180 | 5 | N | 5 | S | No | |
| <i>Schinus terebinthifolius</i> | Hardrock Trail | 063 | 7 x 7 | | 2-5 | 2901332 | 471180 | 5 | N | 5 | S | No | |
| <i>Schinus terebinthifolius</i> | Ridge Trail | 064 | 20 x 20 | | 6-10 | 2898788 | 474062 | 5 | N | 5 | S | No | |
| <i>Syzygium cumini</i> | Harold Strand Trail | 065 | 5 x 5 | | 2-5 | 2899125 | 475366 | 5 | N | 5 | S | No | |
| <i>Schinus terebinthifolius</i> | Harold Strand Trail | 065 | 5 x 20 | | 6-10 | 2899125 | 475366 | 5 | N | 5 | S | No | |
| <i>Imperata cylindrica</i> | Harold Strand Trail | 066 | 5 x 2 | | > 15 | 2899438 | 475398 | 5 | N | 5 | S | No | |
| <i>Panicum repens</i> | Harold Strand Trail | 067 | 50 x 50 | | > 15 | 2899877 | 475579 | 5 | N | 5 | S | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 070 | 5 x 2 | | 2-5 | 2894745 | 492842 | 5 | E | 5 | W | No | |
| <i>Hydrilla verticillata</i> | Nobles Grade | 071 | 100 x 10 | all along canal | > 15 | 2895807 | 493267 | 5 | E | 5 | W | No | |
| <i>Panicum repens</i> | Nobles Grade | 072 | 50 x 10 | along edge of canal | > 15 | 2896199 | 493316 | 5 | E | 5 | W | No | |

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|--------------|----------|----------------------|----------------|-----------|----------|---------|-------------------|---|---|---|---------|--------------|
| <i>Schinus terebinthifolius</i> | Nobles Grade | 073 | 5 x 3 | | 2-5 | 2896904 | 493315 | 5 | E | 5 | W | No | |
| <i>Imperata cylindrica</i> | Nobles Grade | 074 | 3 x 20 | | > 15 | 2897162 | 493171 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 074 | 5 x 2 | | 2-5 | 2897162 | 493171 | 5 | E | 5 | W | No | |
| <i>Eichhornia crassipes</i> | Nobles Grade | 075 | 7 x 20 | | > 15 | 2897208 | 493155 | 5 | E | 5 | W | No | |
| <i>Pistia stratiotes</i> | Nobles Grade | 076 | 5 x 5 | | > 15 | 2897690 | 493122 | 5 | E | 5 | W | No | |
| <i>Imperata cylindrica</i> | Nobles Grade | 077 | 5 x 5 | | > 15 | 2897810 | 493067 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 078 | 5 x 5 | | 2-5 | 2898332 | 493040 | 5 | E | 5 | W | No | |
| <i>Imperata cylindrica</i> | Nobles Grade | 079 | 10 x 50 | | > 15 | 2898352 | 493039 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 079 | 5 x 5 | big one | 1 | 2898352 | 493039 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 080 | 20 x 20 | | > 15 | 2898730 | 492906 | 5 | E | 5 | W | No | |
| <i>Crotalaria spectabilis</i> | Nobles Grade | 081 | 1 x 1 | | 1 | 2898778 | 492890 | 5 | E | 5 | W | Yes | pulled |
| <i>Crotalaria spectabilis</i> | Nobles Grade | 082 | 2 x 2 | | > 15 | 2898981 | 492814 | 5 | E | 5 | W | Yes | pulled |
| <i>Lantana camara</i> | Nobles Grade | 083 | 1 x 1 | | 1 | 2899122 | 492717 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 083 | 10 x 50 | | > 15 | 2899122 | 492717 | 5 | E | 5 | W | No | |
| <i>Imperata cylindrica</i> | Nobles Grade | 083 | 1 x 1 | | 2-5 | 2899122 | 492717 | 5 | E | 5 | W | No | |
| <i>Crotalaria spectabilis</i> | Nobles Grade | 084 | 5 x 2 | | 6-10 | 2899298 | 492624 | 5 | E | 5 | W | No | |
| <i>Salvinia minima</i> | Nobles Grade | 084 | 5 x 50 | covering canal | > 15 | 2899298 | 492624 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 084 | 10 x 50 | | > 15 | 2899298 | 492624 | 5 | E | 5 | W | No | |
| <i>Crotalaria spectabilis</i> | Nobles Grade | 085 | 2 x 2 | | 1 | 2899826 | 492619 | 5 | E | 5 | W | No | |

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|------------------|----------|----------------------|------------------|-----------|----------|---------|-------------------|---|---|---|---------|--------------|
| <i>Asclepias curassavica</i> | Nobles Grade | 085 | 1 x 1 | | 2-5 | 2899826 | 492619 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 085 | 100 x 10 | huge infestation | > 15 | 2899826 | 492619 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 086 | 10 x 10 | | 6-10 | 2900689 | 492840 | 5 | E | 5 | W | No | |
| <i>Pistia stratiotes</i> | Nobles Grade | 086 | 100 x 10 | all along canal | > 15 | 2900689 | 492840 | 5 | E | 5 | W | No | |
| <i>Syzygium cumini</i> | Nobles Grade | 087 | 2 x 2 | | 1 | 2900833 | 492757 | 5 | E | 5 | W | No | |
| <i>Crotalaria spectabilis</i> | Nobles Grade | 088 | 5 x 5 | | 2-5 | 2901325 | 492628 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 088 | 10 x 50 | | > 15 | 2901325 | 492628 | 5 | E | 5 | W | No | |
| <i>Neyraudia reynaudiana</i> | Nobles Grade | 089 | 10 x 5 | various clumps | > 15 | 2901414 | 492622 | 5 | E | 5 | W | No | |
| <i>Sporobolus indicus</i> | Nobles Grade | 090 | 10 x 10 | | > 15 | 2901572 | 492673 | 5 | E | 5 | W | No | |
| <i>Macroptilium lathyroides</i> | Nobles Grade | 091 | 1 x 1 | | 1 | 2901676 | 492681 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 091 | 10 x 100 | | > 15 | 2901676 | 492681 | 5 | E | 5 | W | No | |
| <i>Sporobolus indicus</i> | Nobles Grade | 091 | 10 x 10 | along road | > 15 | 2901676 | 492681 | 5 | E | 5 | W | No | |
| <i>Asclepias curassavica</i> | Nobles Grade | 092 | 2 x 2 | | 2-5 | 2894637 | 492892 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 093 | 10 x 10 | | 2-5 | 2894663 | 492888 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Nobles Grade | 094 | 20 x 20 | | > 15 | 2894635 | 492993 | 5 | E | 5 | W | No | |
| <i>Stenotaphrum secundatum</i> | Nobles Grade | 094 | 5 x 5 | | > 15 | 2894635 | 492993 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Mile Marker 70 N | 095 | 5 x 5 | | 2-5 | 2894365 | 480255 | 5 | E | 5 | W | No | |
| <i>Cynodon dactylon</i> | Mile Marker 70 N | 096 | 5 x 5 | | > 15 | 2895361 | 480242 | 5 | E | 5 | W | No | |
| <i>Senna pendula</i> | Sunniland | 098 | 2 x 2 | | 2-5 | 2903564 | 469909 | 5 | E | 5 | W | No | |

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|-----------|----------|----------------------|---------|-----------|----------|---------|-------------------|---|---|---|---------|--------------|
| <i>Blechnum pyramidatum</i> | Sunniland | 098 | 1 x 1 | | 1 | 2903564 | 469909 | 5 | E | 5 | W | No | |
| <i>Senna pendula</i> | Sunniland | 099 | 2 x 2 | | 2-5 | 2903462 | 469839 | 5 | E | 5 | W | No | |
| <i>Senna pendula</i> | Sunniland | 100 | 2 x 2 | | 1 | 2903440 | 469819 | 5 | E | 5 | W | No | |
| <i>Senna pendula</i> | Sunniland | 101 | 2 x 2 | | 1 | 2903362 | 469749 | 5 | E | 5 | W | No | |
| <i>Ludwigia peruviana</i> | Sunniland | 101 | 2 x 2 | | 1 | 2903362 | 469749 | 5 | E | 5 | W | No | |
| <i>Panicum repens</i> | Sunniland | 102 | 2 x 50 | | > 15 | 2903278 | 469672 | 5 | E | 5 | W | No | |
| <i>Senna pendula</i> | Sunniland | 103 | 5 x 50 | | > 15 | 2903237 | 469637 | 5 | E | 5 | W | No | |
| <i>Lantana camara</i> | Sunniland | 104 | 20 x 20 | | > 15 | 2903246 | 469606 | 5 | E | 5 | W | No | |
| <i>Senna pendula</i> | Sunniland | 104 | 5 x 5 | | 2-5 | 2903246 | 469606 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Sunniland | 104 | 20 x 20 | | 2-5 | 2903246 | 469606 | 5 | E | 5 | W | No | |
| <i>Psidium guajava</i> | Sunniland | 105 | 5 x 5 | | 1 | 2903202 | 469567 | 5 | E | 5 | W | No | |
| <i>Lantana camara</i> | Sunniland | 106 | 3 x 3 | | 2-5 | 2903246 | 469646 | 5 | E | 5 | W | No | |
| <i>Senna pendula</i> | Sunniland | 107 | 2 x 3 | | 1 | 2903285 | 469682 | 5 | E | 5 | W | No | |
| <i>Ludwigia peruviana</i> | Sunniland | 107 | 2 x 10 | | 11-15 | 2903285 | 469682 | 5 | E | 5 | W | No | |
| <i>Ludwigia peruviana</i> | Sunniland | 108 | 2 x 50 | | > 15 | 2903492 | 469867 | 5 | E | 5 | W | No | |
| <i>Senna pendula</i> | Sunniland | 108 | 2 x 2 | | 1 | 2903492 | 469867 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Sunniland | 109 | 1 x 1 | | 1 | 2903521 | 469895 | 5 | E | 5 | W | No | |
| <i>Senna pendula</i> | Sunniland | 110 | 2 x 2 | | 1 | 2903526 | 469972 | 5 | E | 5 | W | No | |
| <i>Senna pendula</i> | Sunniland | 111 | 2 x 5 | | 2-5 | 2903480 | 470040 | 5 | N | 5 | S | No | |
| <i>Ludwigia peruviana</i> | Sunniland | 112 | 2 x 2 | | 1 | 2903348 | 470251 | 5 | N | 5 | S | No | |
| <i>Senna pendula</i> | Sunniland | 113 | 1 x 1 | | 1 | 2903184 | 470474 | 5 | N | 5 | S | No | |
| <i>Senna pendula</i> | Sunniland | 114 | 2 x 2 | | 1 | 2903262 | 470389 | 5 | N | 5 | S | No | |

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|------------------------------|----------|----------------------|-----------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Ludwigia peruviana</i> | Sunniland | 115 | 2 x 50 | | > 15 | 2903355 | 470246 | 5 | N | 5 | S | No | |
| <i>Schinus terebinthifolius</i> | Sunniland | 116 | 2 x 2 | | 1 | 2903500 | 470015 | 5 | N | 5 | S | No | |
| <i>Senna pendula</i> | Sunniland | 117 | 2 x 2 | | 1 | 2903555 | 469929 | 5 | N | 5 | S | No | |
| <i>Neyraudia reynaudiana</i> | L-28 Interceptor Canal | 118 | 100 x 10 | | > 15 | 2895044 | 510511 | 10 | E | 10 | W | No | |
| <i>Schinus terebinthifolius</i> | L-28 Interceptor Canal | 118 | 10 x 40 | | 6-10 | 2895044 | 510511 | 10 | E | 10 | W | No | |
| <i>Lantana camara</i> | L-28 Interceptor Canal | 118 | 5 x 5 | | 2-5 | 2895044 | 510511 | 10 | E | 10 | W | No | |
| <i>Psidium guajava</i> | L-28 Interceptor Canal | 118 | 1 x 1 | | 1 | 2895044 | 510511 | 10 | E | 10 | W | No | |
| <i>Psidium guajava</i> | L-28 Interceptor Canal | 119 | 5 x 5 | | 2-5 | 2895256 | 510520 | 10 | E | 10 | W | No | |
| <i>Schinus terebinthifolius</i> | L-28 Interceptor Canal | 119 | 5 x 10 | | 2-5 | 2895256 | 510520 | 10 | E | 10 | W | No | |
| <i>Neyraudia reynaudiana</i> | L-28 Interceptor Canal | 119 | 5 x 5 | | 2-5 | 2895256 | 510520 | 10 | E | 10 | W | No | |
| <i>Lantana camara</i> | L-28 Interceptor Canal | 119 | 5 x 5 | | 2-5 | 2895256 | 510520 | 10 | E | 10 | W | No | |
| <i>Schinus terebinthifolius</i> | L-28 Interceptor Canal | 120 | 11500 x 10 | | > 15 | 2895390 | 510516 | 10 | E | 10 | W | No | |
| <i>Neyraudia reynaudiana</i> | L-28 Interceptor Canal | 120 | 11500 x 5 | | > 15 | 2895390 | 510516 | 10 | E | 10 | W | No | |
| <i>Panicum repens</i> | L-28 Interceptor Canal | 121 | 11500 x 2 | east side | > 15 | 2895986 | 510517 | 10 | E | 10 | W | No | |

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|------------------------------|---------------------------|----------|----------------------|------------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Ludwigia peruviana</i> | L-28 Interceptor Canal | 121 | 11000 x 2 | east side | > 15 | 2895986 | 510517 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | L-28 Interceptor Canal | 122 | 10 x 3 | | > 15 | 2896283 | 510436 | 10 | E | 10 | W | No | |
| <i>Leucaena leucocephala</i> | L-28 Interceptor Canal | 122 | 50 x 30 | | > 15 | 2896283 | 510436 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | L-28 Interceptor Canal | 123 | 70 x 5 | | > 15 | 2898334 | 509482 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | L-28 Interceptor Canal | 124 | 20 x 2 | east side | > 15 | 2898564 | 509371 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | L-28 Interceptor Canal | 125 | 7 x 2 | east side | > 15 | 2899271 | 508964 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | L-28 Interceptor Canal | 126 | 11000 x 15 | both sides | > 15 | 2899340 | 508921 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 127 | 3 x 3 | | 2-5 | 2900227 | 508363 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 128 | 5 x 5 | | 2-5 | 2901016 | 507869 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 129 | 5 x 5 | | 2-5 | 2901106 | 507811 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 130 | 10 x 10 | | 2-5 | 2901207 | 507748 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 131 | 10 x 10 | | 2-5 | 2901289 | 507698 | 10 | E | 10 | W | No | |
| <i>Lantana camara</i> | L-28 Interceptor Canal | 131 | 1 x 1 | | 1 | 2901289 | 507698 | 10 | E | 10 | W | No | |

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|---------------------------|----------|----------------------|-------------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 132 | 600 x 10 | | 6-10 | 2901335 | 507670 | 10 | E | 10 | W | No | |
| <i>Casuarina equisetifolia</i> | L-28 Interceptor Canal | 132 | 15 x 15 | outside FOV | 6-10 | 2901335 | 507670 | 10 | E | 10 | W | No | |
| <i>Lantana camara</i> | L-28 Interceptor Canal | 132 | 5 x 5 | | 2-5 | 2901335 | 507670 | 10 | E | 10 | W | No | |
| <i>Cynodon dactylon</i> | L-28 Interceptor Canal | 133 | 10 x 2 | ORV rut | 11-15 | 2902065 | 506751 | 10 | E | 10 | W | No | |
| <i>Macroptilium lathyroides</i> | L-28 Interceptor Canal | 133 | 10 x 2 | | 6-10 | 2902065 | 506751 | 10 | E | 10 | W | No | |
| <i>Lantana camara</i> | L-28 Interceptor Canal | 133 | 5 x 5 | | 2-5 | 2902065 | 506751 | 10 | E | 10 | W | No | |
| <i>Psidium guajava</i> | L-28 Interceptor Canal | 134 | 10 x 2 | | 2-5 | 2902706 | 505833 | 10 | E | 10 | W | No | |
| <i>Leucaena leucocephala</i> | L-28 Interceptor Canal | 135 | 50 x 5 | | > 15 | 2903642 | 504959 | 10 | E | 10 | W | No | |
| <i>Neyraudia reynaudiana</i> | L-28 Interceptor Canal | 138 | 11500 x 10 | | > 15 | 2894894 | 510606 | 10 | E | 10 | W | No | |
| <i>Schinus terebinthifolius</i> | L-28 Interceptor Canal | 138 | 11500 x 10 | | > 15 | 2894894 | 510606 | 10 | E | 10 | W | No | |
| <i>Ludwigia peruviana</i> | L-28 Interceptor Canal | 138 | 11000 x 3 | west side | > 15 | 2894894 | 510606 | 10 | E | 10 | W | No | |
| <i>Panicum repens</i> | L-28 Interceptor Canal | 138 | 11500 x 3 | west side | > 15 | 2894894 | 510606 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | L-28 Interceptor Canal | 139 | 7 x 3 | | > 15 | 2894965 | 510590 | 10 | E | 10 | W | No | |

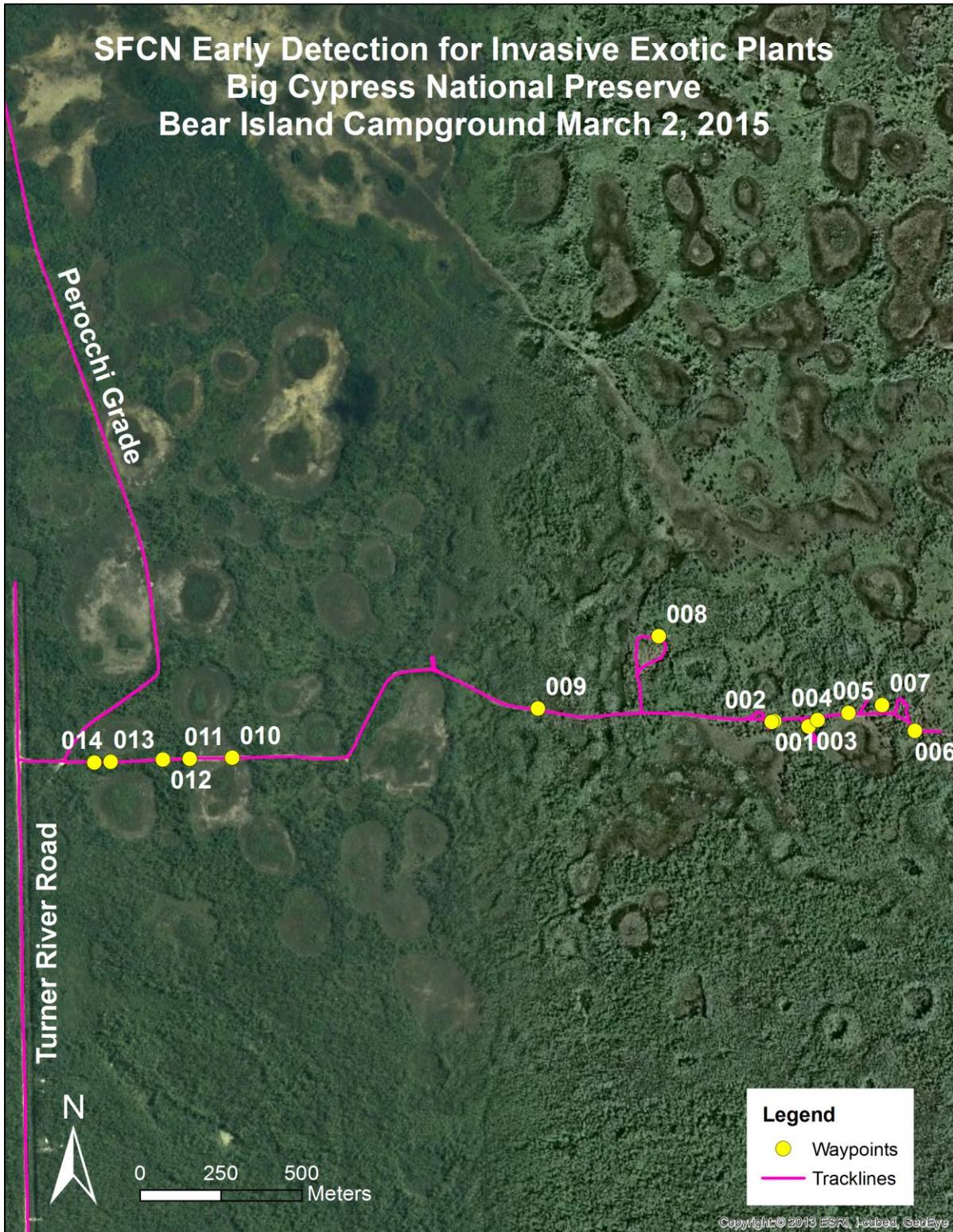
| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|---------------------------|----------|----------------------|------------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Lantana camara</i> | L-28 Interceptor Canal | 140 | 2 x 2 | | 1 | 2895176 | 510590 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | L-28 Interceptor Canal | 140 | 10 x 3 | west side | > 15 | 2895176 | 510590 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | L-28 Interceptor Canal | 141 | 11000 x 5 | both sides | > 15 | 2895335 | 510590 | 10 | E | 10 | W | No | |
| <i>Leucaena leucocephala</i> | L-28 Interceptor Canal | 142 | 5 x 3 | west side | 2-5 | 2895913 | 510588 | 10 | E | 10 | W | No | |
| <i>Leucaena leucocephala</i> | L-28 Interceptor Canal | 143 | 2 x 2 | west side | 2-5 | 2897107 | 510133 | 10 | E | 10 | W | No | |
| <i>Psidium guajava</i> | L-28 Interceptor Canal | 144 | 1 x 1 | | 1 | 2899484 | 508912 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 145 | 5 x 5 | | 1 | 2899907 | 508645 | 10 | E | 10 | W | No | |
| <i>Psidium guajava</i> | L-28 Interceptor Canal | 146 | 2 x 2 | | 1 | 2900448 | 508326 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 147 | 10 x 10 | | 2-5 | 2901242 | 507808 | 10 | E | 10 | W | No | |
| <i>Macroptilium lathyroides</i> | L-28 Interceptor Canal | 147 | 600 x 1 | | > 15 | 2901242 | 507808 | 10 | E | 10 | W | No | |
| <i>Psidium guajava</i> | L-28 Interceptor Canal | 148 | 5 x 5 | | 2-5 | 2901415 | 507700 | 10 | E | 10 | W | No | |
| <i>Psidium guajava</i> | L-28 Interceptor Canal | 149 | 100 x 5 | both sides | > 15 | 2901853 | 507174 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 149 | 2 x 2 | | 1 | 2901853 | 507174 | 10 | E | 10 | W | No | |

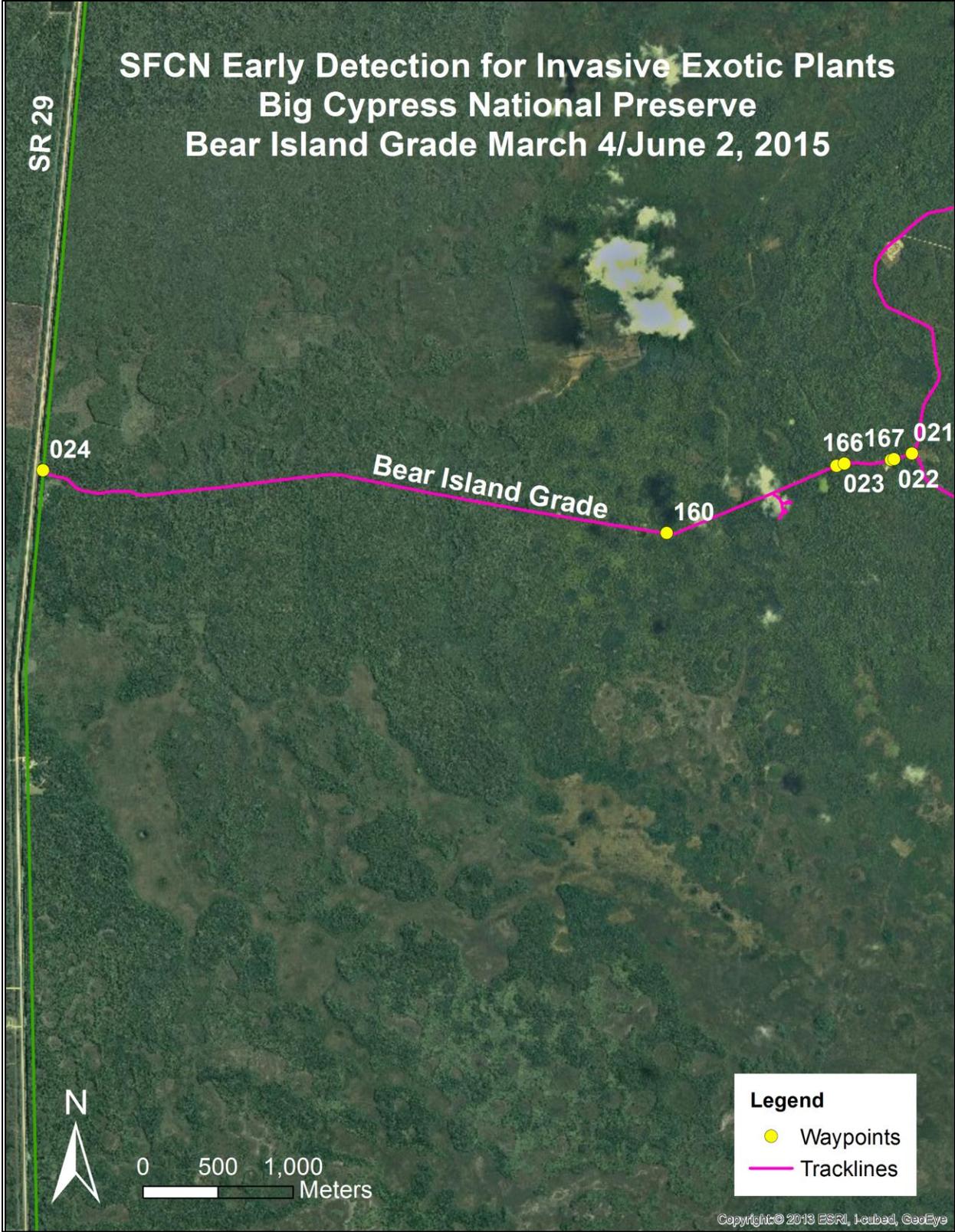
| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|---------------------------|----------|----------------------|------------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Lantana camara</i> | L-28 Interceptor Canal | 150 | 5 x 5 | | 2-5 | 2902199 | 506681 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 150 | 5 x 5 | | 2-5 | 2902199 | 506681 | 10 | E | 10 | W | No | |
| <i>Psidium guajava</i> | L-28 Interceptor Canal | 150 | 5 x 5 | | 2-5 | 2902199 | 506681 | 10 | E | 10 | W | No | |
| <i>Lantana camara</i> | L-28 Interceptor Canal | 151 | 100 x 2 | | > 15 | 2902966 | 505594 | 10 | E | 10 | W | No | |
| <i>Panicum repens</i> | L-28 Interceptor Canal | 153 | 4000 x 2 | east side | > 15 | 2894988 | 510519 | 10 | E | 10 | W | No | |
| <i>Lantana camara</i> | L-28 Interceptor Canal | 153 | 5 x 5 | | 2-5 | 2894988 | 510519 | 10 | E | 10 | W | No | |
| <i>Neyraudia reynaudiana</i> | L-28 Interceptor Canal | 153 | 4000 x 5 | | > 15 | 2894988 | 510519 | 10 | E | 10 | W | No | |
| <i>Schinus terebinthifolius</i> | L-28 Interceptor Canal | 153 | 4000 x 10 | | > 15 | 2894988 | 510519 | 10 | E | 10 | W | No | |
| <i>Ludwigia peruviana</i> | L-28 Interceptor Canal | 153 | 1000 x 2 | east side | > 15 | 2894988 | 510519 | 10 | E | 10 | W | No | |
| <i>Imperata cylindrica</i> | L-28 Interceptor Canal | 154 | 1000 x 3 | both sides | > 15 | 2894686 | 510517 | 10 | E | 10 | W | No | |
| <i>Melaleuca quinquenervia</i> | L-28 Interceptor Canal | 154 | 3 x 3 | | 1 | 2894686 | 510517 | 10 | E | 10 | W | No | |
| <i>Syzygium cumini</i> | L-28 Interceptor Canal | 155 | 5 x 5 | | 2-5 | 2893534 | 510731 | 10 | E | 10 | W | No | |
| <i>Sorghum halapense</i> | L-28 Interceptor Canal | 156 | 5 x 5 | east side | 2-5 | 2893428 | 510799 | 10 | E | 10 | W | No | |

| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|------------------------|----------|----------------------|--------------------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Casuarina equisetifolia</i> | L-28 Interceptor Canal | 157 | 10 x 10 | | 6-10 | 2891351 | 512157 | 10 | E | 10 | W | No | |
| <i>Sporobolus indicus</i> | L-28 Interceptor Canal | 158 | 5 x 5 | east side | 6-10 | 2891156 | 512282 | 10 | E | 10 | W | No | |
| <i>Albizia lebeck</i> | Bear Island Grade | 160 | 10 x 5 | | 2-5 | 2899475 | 469753 | 10 | N | 10 | S | Yes | garlon |
| <i>Schinus terebinthifolius</i> | Pink Jeep Camp | 161 | 5 x 2 | | 2-5 | 2899742 | 470453 | 10 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Pink Jeep Camp | 162 | 3 x 3 | | 2-5 | 2899633 | 470528 | 10 | E | 5 | W | No | |
| <i>Urena lobata</i> | Pink Jeep Camp | 162 | 2 x 2 | | 2-5 | 2899633 | 470528 | 10 | E | 5 | W | No | |
| <i>Stenotaphrum secundatum</i> | Pink Jeep Camp | 163 | 10 x 10 | campsite #7 | 2-5 | 2899600 | 470514 | 10 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Pink Jeep Camp | 163 | 5 x 2 | campsite #7 | 2-5 | 2899600 | 470514 | 10 | E | 5 | W | Yes | garlon |
| <i>Citrus sinensis</i> | Pink Jeep Camp | 163 | 15 x 5 | campsite #7 | 2-5 | 2899600 | 470514 | 10 | E | 5 | W | No | |
| <i>Urena lobata</i> | Pink Jeep Camp | 163 | 5 x 5 | campsite #7 | 2-5 | 2899600 | 470514 | 10 | E | 5 | W | No | |
| <i>Richardia grandiflora</i> | Pink Jeep Camp | 164 | 1 x 1 | | 2-5 | 2899685 | 470554 | 10 | E | 5 | W | No | |
| <i>Psidium guajava</i> | Pink Jeep Camp | 165 | 5 x 5 | | 1 | 2899744 | 470458 | 10 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Bear Island Grade | 166 | 10 x 5 | | 2-5 | 2899940 | 470936 | 10 | N | 10 | S | No | |
| <i>Psidium guajava</i> | Bear Island Grade | 166 | 1 x 1 | | 1 | 2899940 | 470936 | 10 | N | 10 | S | No | |
| <i>Leucaena leucocephala</i> | Bear Island Grade | 167 | 10 x 3 | north side of road | 2-5 | 2899970 | 471268 | 10 | N | 10 | S | No | |
| <i>Macroptilium lathyroides</i> | Bear Island Grade | 167 | 2 x 2 | | 2-5 | 2899970 | 471268 | 10 | N | 10 | S | No | |
| <i>Schinus terebinthifolius</i> | Windmill Trail | 168 | 850 x 5 | | > 15 | 2901350 | 473417 | 5 | N | 5 | S | No | |
| <i>Lantana camara</i> | Windmill Trail | 168 | 2 x 2 | | 1 | 2901350 | 473417 | 5 | N | 5 | S | No | |

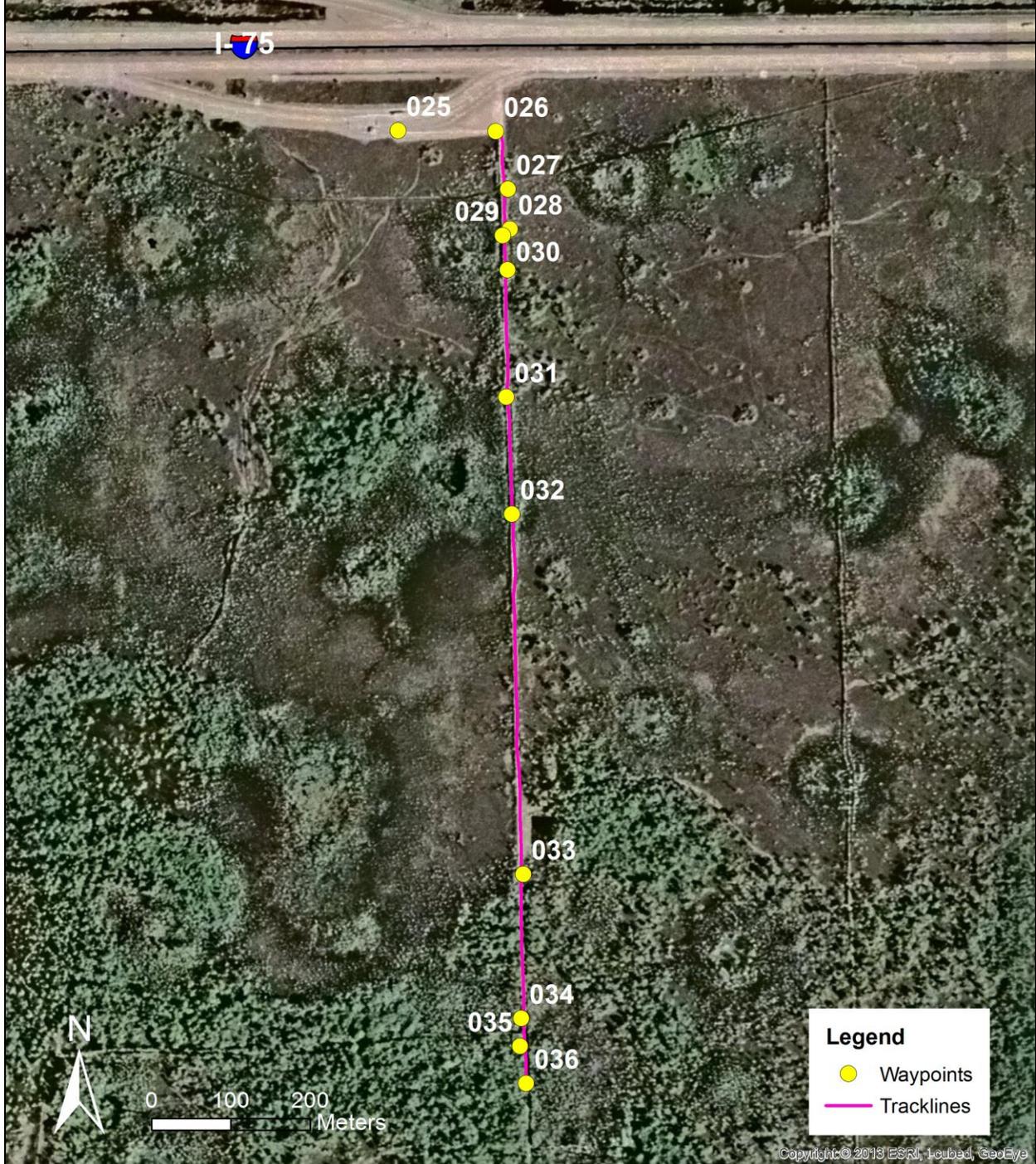
| Species | Site | Waypoint | Infestation Size (m) | Comment | Abundance | Northing | Easting | Field of View (m) | | | | Treated | Treated With |
|---------------------------------|---------------------|----------|----------------------|-------------------|-----------|----------|---------|-------------------|---|----|---|---------|--------------|
| <i>Panicum repens</i> | Windmill Trail | 169 | 20 x 20 | | > 15 | 2901324 | 473573 | 5 | N | 20 | S | No | |
| <i>Urena lobata</i> | Windmill Trail | 170 | 850 x 5 | | > 15 | 2901292 | 473897 | 5 | N | 20 | S | No | |
| <i>Panicum repens</i> | Windmill Trail | 170 | 20 x 20 | | > 15 | 2901292 | 473897 | 5 | N | 20 | S | No | |
| <i>Lantana camara</i> | Harold Strand Trail | 172 | 3000 x 5 | | > 15 | 2898778 | 475154 | 5 | E | 5 | W | No | |
| <i>Syzygium cumini</i> | Harold Strand Trail | 173 | 1 x 1 | east side of road | 1 | 2899110 | 475346 | 5 | E | 5 | W | Yes | garlon |
| <i>Schinus terebinthifolius</i> | Harold Strand Trail | 173 | 5 x 5 | | 2-5 | 2899110 | 475346 | 5 | E | 5 | W | Yes | garlon |
| <i>Syzygium cumini</i> | Harold Strand Trail | 173 | 3 x 2 | west side of road | 1 | 2899110 | 475346 | 5 | E | 5 | W | Yes | garlon |
| <i>Syzygium cumini</i> | Harold Strand Trail | 173 | 3 x 3 | east side of road | 1 | 2899110 | 475346 | 5 | E | 5 | W | Yes | garlon |
| <i>Crotalaria spectabilis</i> | Harold Strand Trail | 174 | 1 x 1 | | 1 | 2899224 | 475383 | 5 | E | 5 | W | No | |
| <i>Schinus terebinthifolius</i> | Harold Strand Trail | 174 | 3000 x 5 | | > 15 | 2899224 | 475383 | 5 | E | 5 | W | No | |
| <i>Imperata cylindrica</i> | Harold Strand Trail | 175 | 7 x 2 | | 2-5 | 2899446 | 475403 | 5 | E | 5 | W | Yes | glyphosate |
| <i>Syzygium cumini</i> | Harold Strand Trail | 176 | 3 x 3 | | 1 | 2899847 | 475568 | 5 | E | 5 | W | Yes | garlon |
| <i>Panicum repens</i> | Harold Strand Trail | 176 | 20 x 20 | | > 15 | 2899847 | 475568 | 5 | E | 5 | W | No | |
| <i>Syzygium cumini</i> | Harold Strand Trail | 176 | 3 x 3 | | 1 | 2899847 | 475568 | 5 | E | 5 | W | Yes | garlon |
| <i>Urena lobata</i> | Harold Strand Trail | 176 | 3 x 3 | | > 15 | 2899847 | 475568 | 5 | E | 5 | W | No | |
| <i>Panicum repens</i> | Harold Strand Trail | 177 | 100 x 20 | | > 15 | 2900725 | 476442 | 5 | E | 20 | W | No | |
| <i>Sporobolus indicus</i> | Harold Strand Trail | 178 | 20 x 20 | | > 15 | 2900964 | 476767 | 5 | E | 20 | W | No | |
| <i>Casuarina equisetifolia</i> | Bear Island Grade | 181 | 5 x 10 | | 2-5 | 2895656 | 473402 | 5 | N | 5 | S | Yes | garlon |

Appendix C. Waypoint and Trackline Maps





SFCN Early Detection for Invasive Exotic Plants
Big Cypress National Preserve
MM 70 South Access Area March 13, 2015



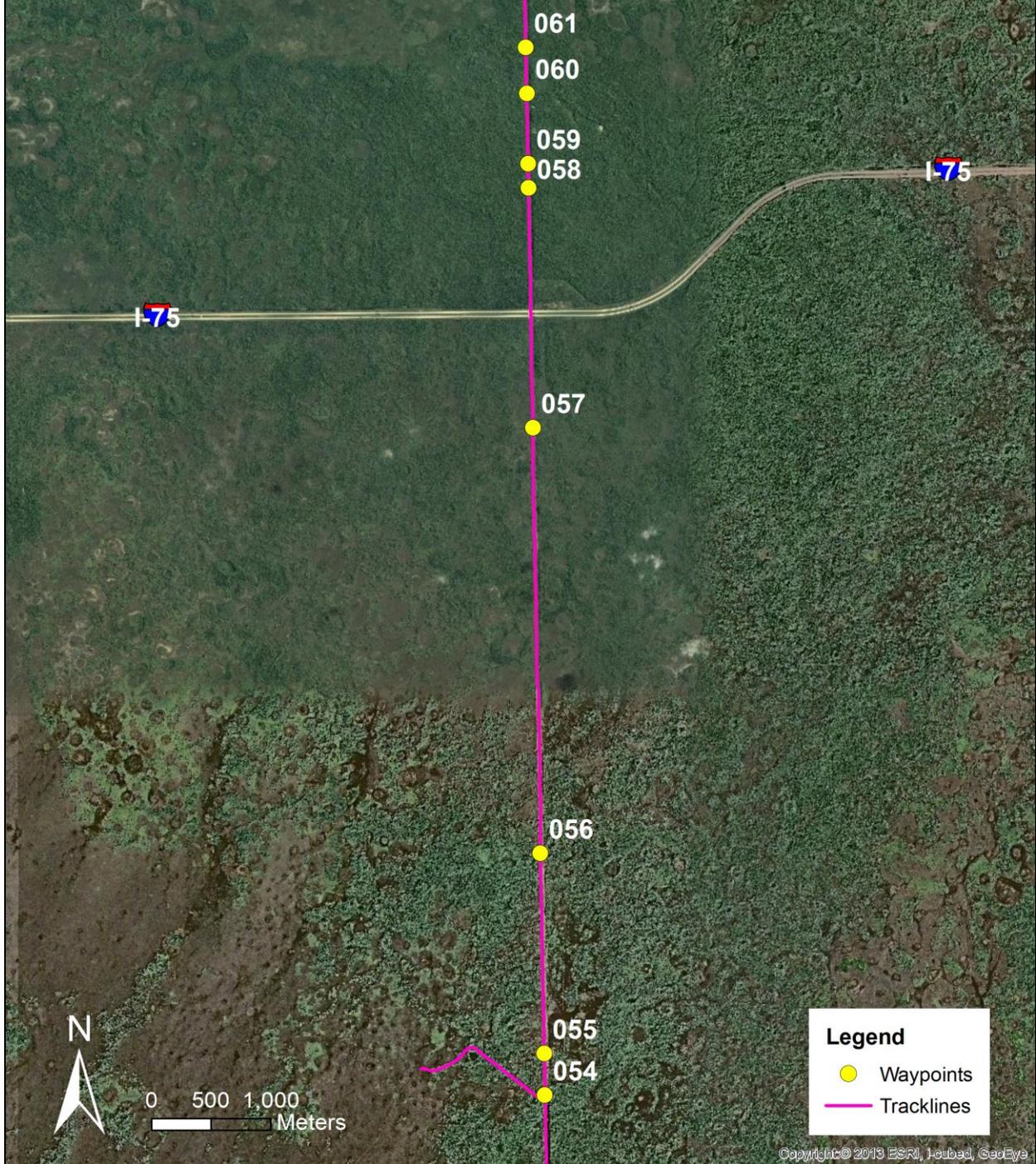
**SFCN Early Detection for Invasive Exotic Plants
Big Cypress National Preserve
Florida Trail I-75 South March 13, 2015**



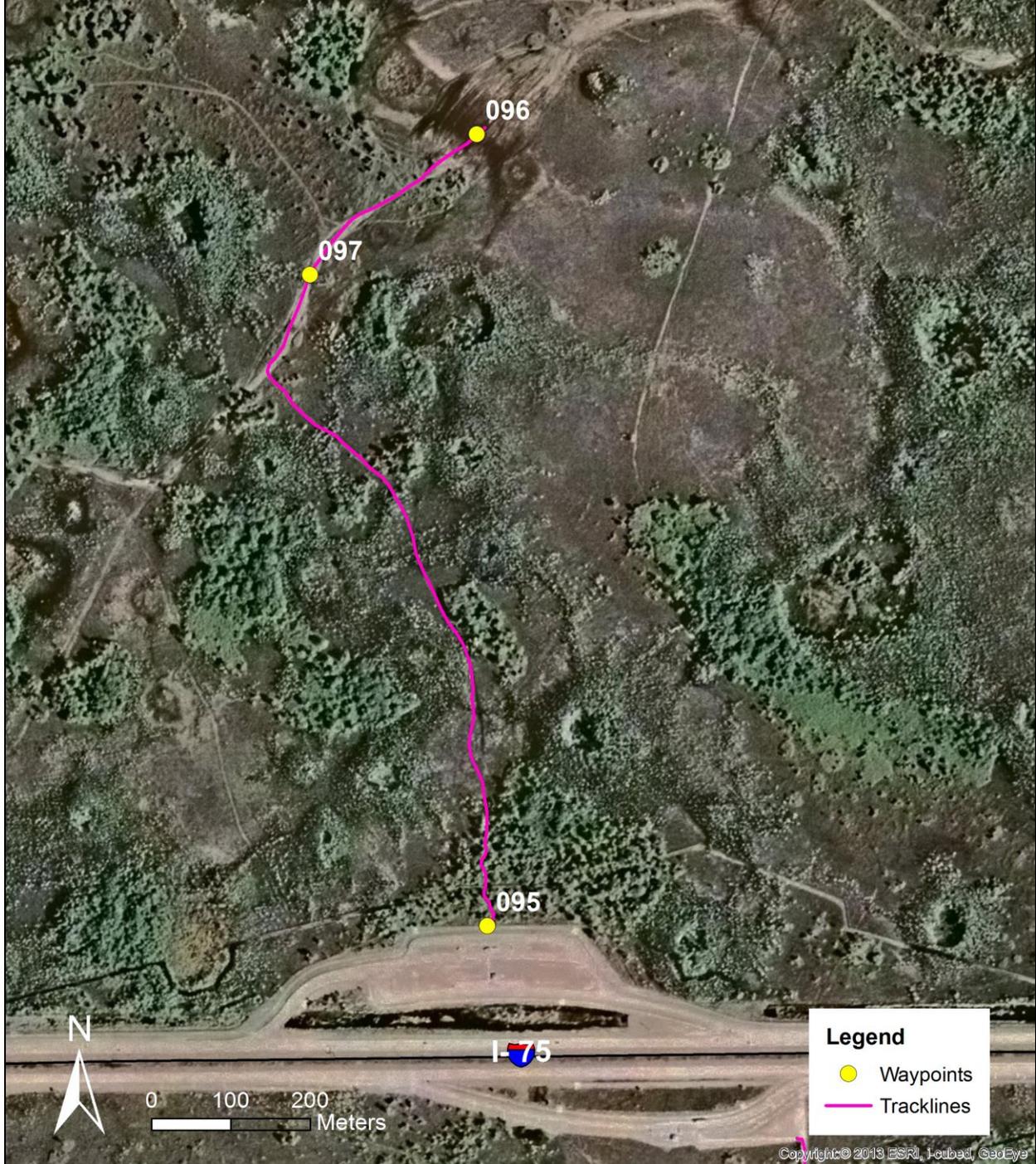
SFCN Early Detection for Invasive Exotic Plants
Big Cypress National Preserve
Fire Prairie Trail March 26, 2015



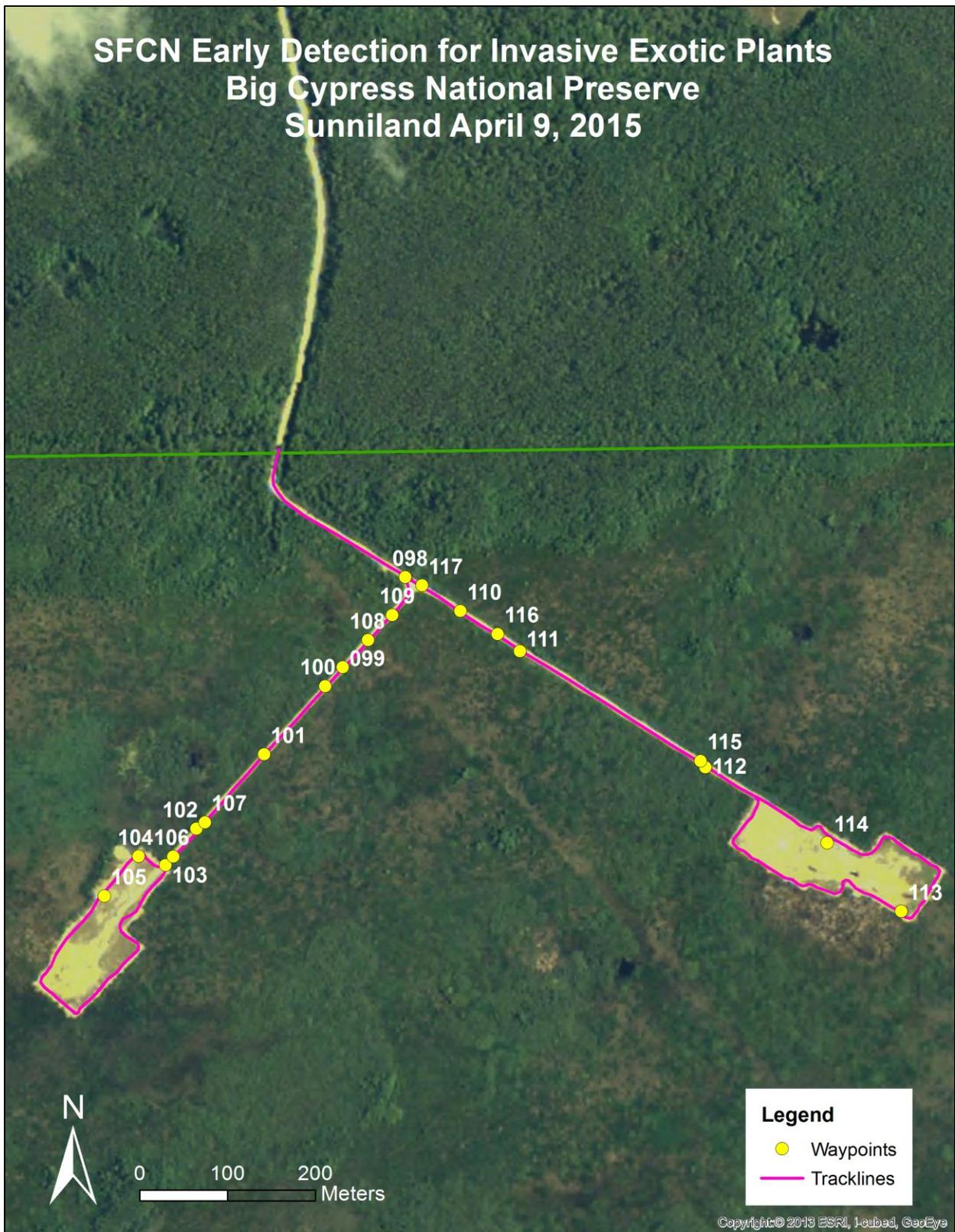
SFCN Early Detection for Invasive Exotic Plants
Big Cypress National Preserve
Turner River Road March 26, 2015



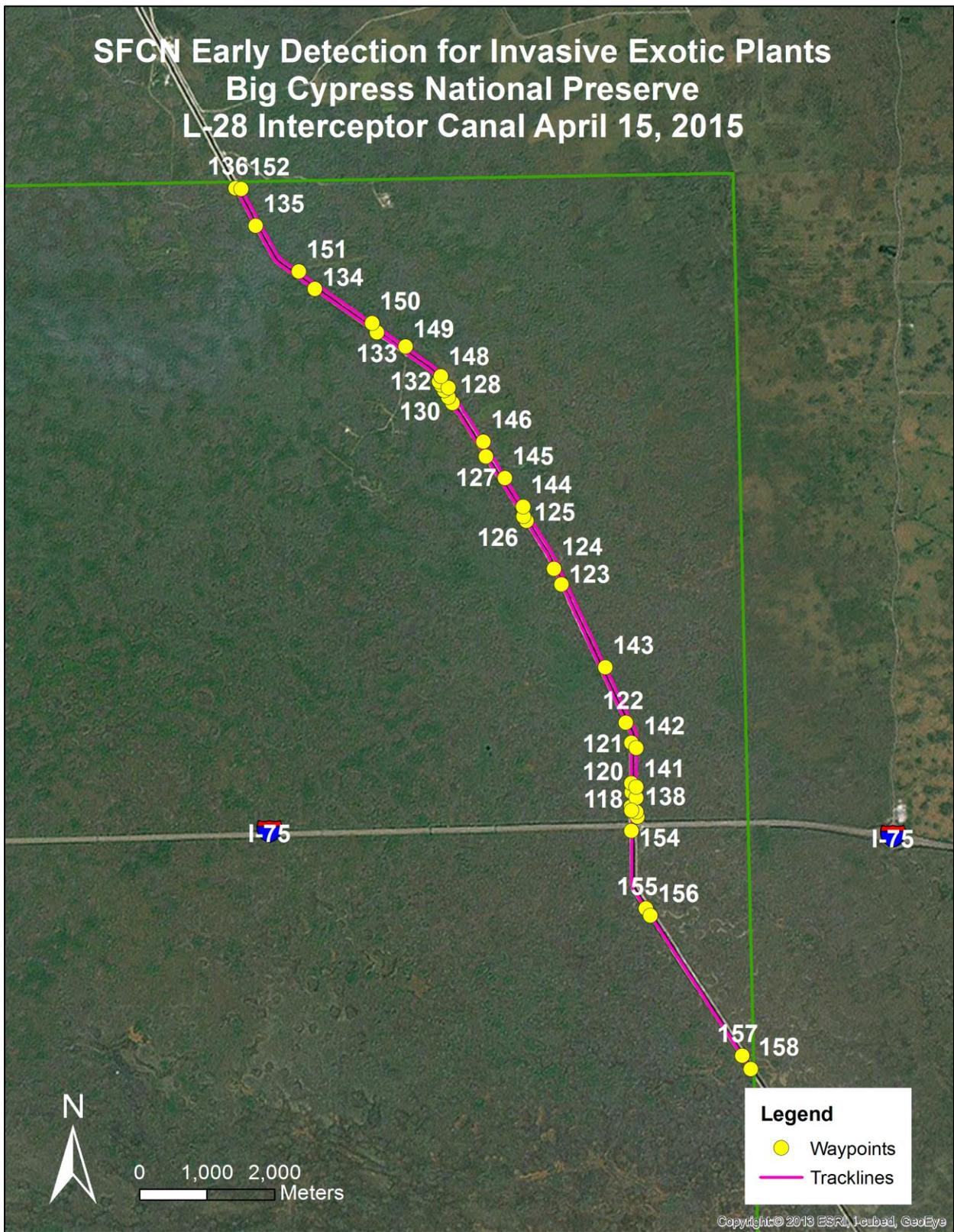
**SFCN Early Detection for Invasive Exotic Plants
Big Cypress National Preserve
MM 70 North Access Area April 9, 2015**



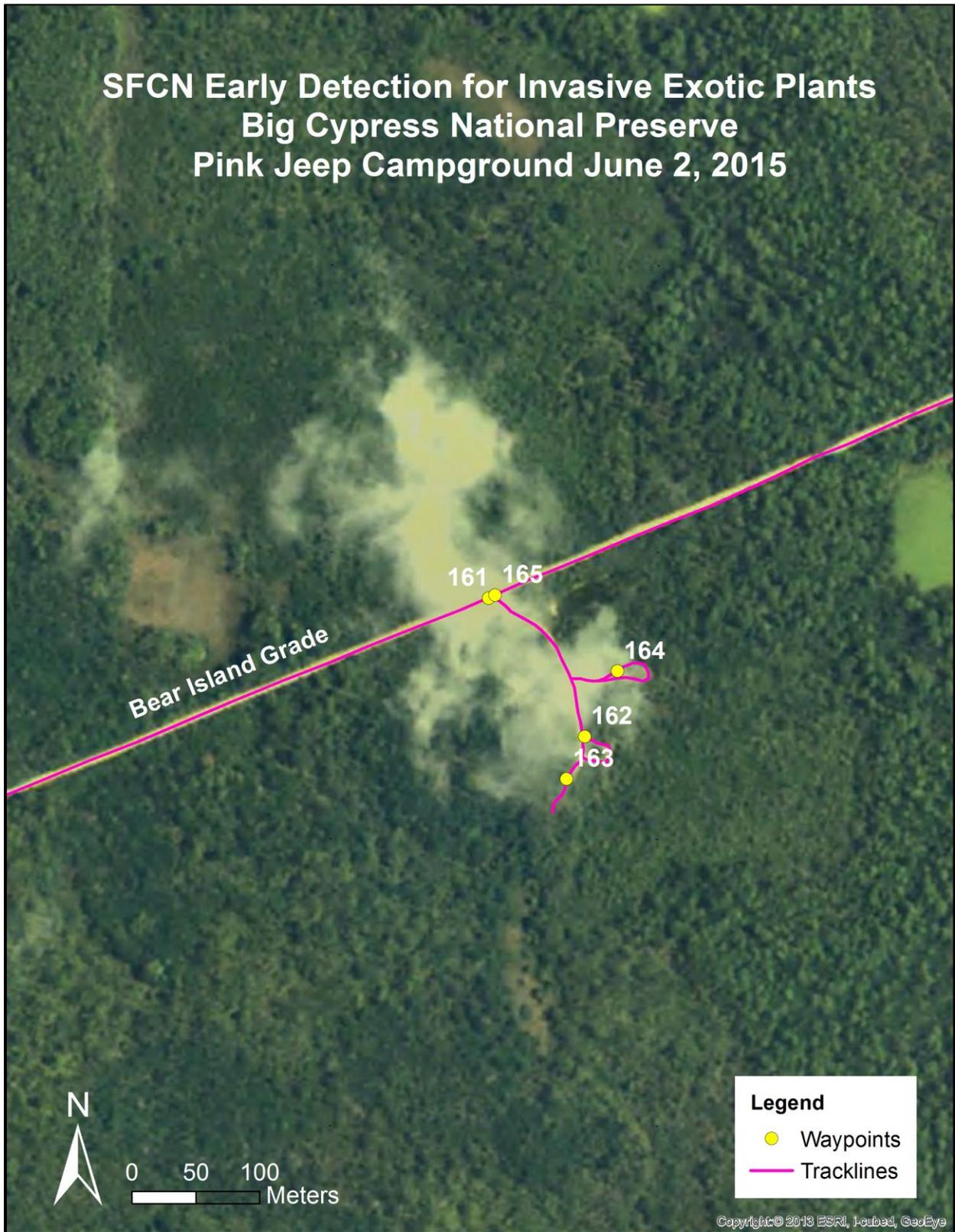
**SFCN Early Detection for Invasive Exotic Plants
Big Cypress National Preserve
Sunniland April 9, 2015**



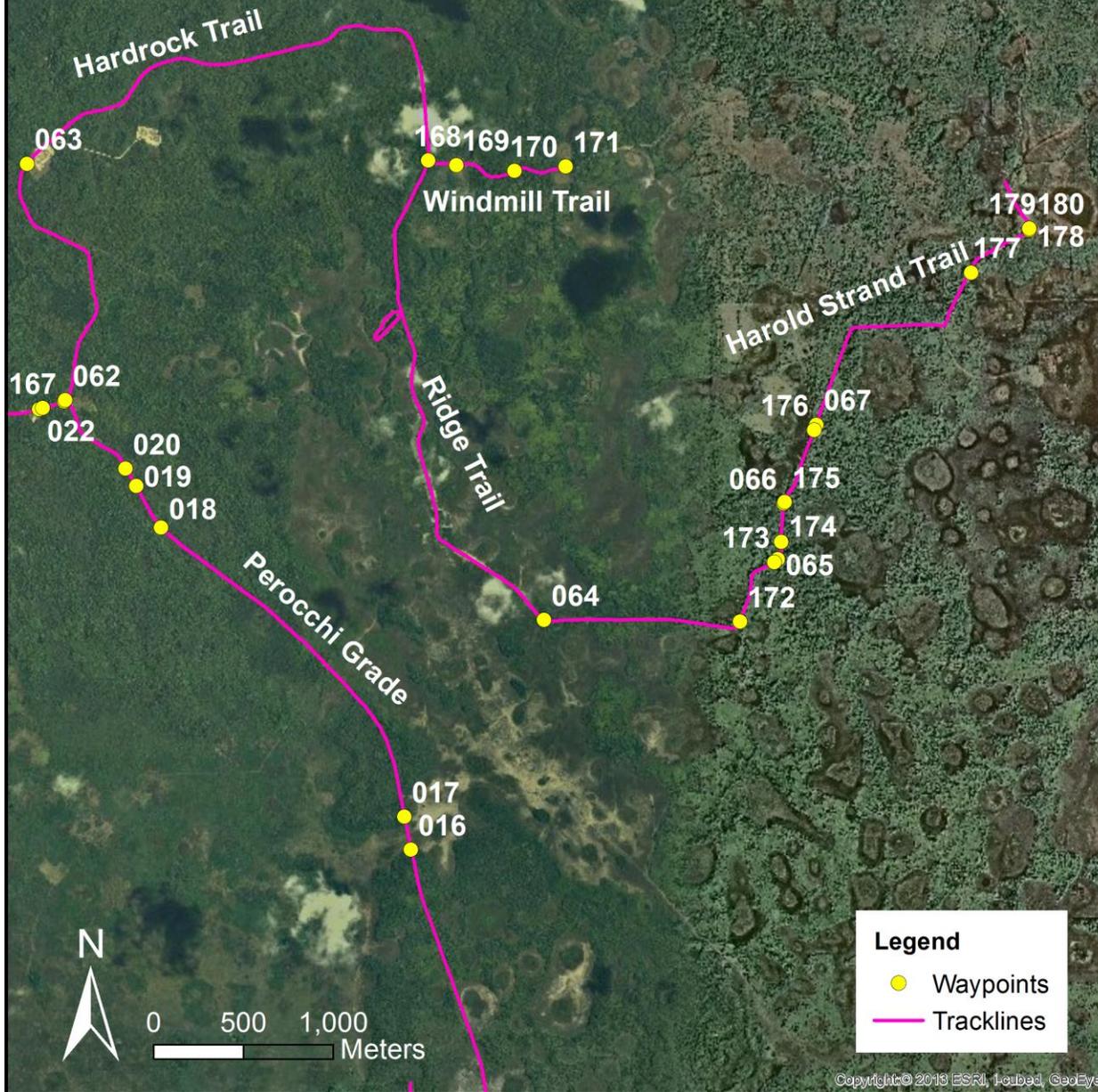
SFCN Early Detection for Invasive Exotic Plants Big Cypress National Preserve L-28 Interceptor Canal April 15, 2015



**SFCN Early Detection for Invasive Exotic Plants
Big Cypress National Preserve
Pink Jeep Campground June 2, 2015**



SFCN Early Detection for Invasive Exotic Plants
Big Cypress National Preserve
Bear Island ORV Trails March 26/June 2, 2015



The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

NPS 176/129647, September 2015

National Park Service
U.S. Department of the Interior



Natural Resource Stewardship and Science

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