

ENVIRONMENTAL MONITORING REPORT

PENNSUCO MITIGATION PROJECT

Miami-Dade County

Township-52-South, Sections-30 and 32, Range 39-East

Township-53-South, Section -16, Range-39-East

Township-53/54-South, Section-6, Range-39-East

Project: C-13604



December 13, 2002

KCI Technologies, Inc.

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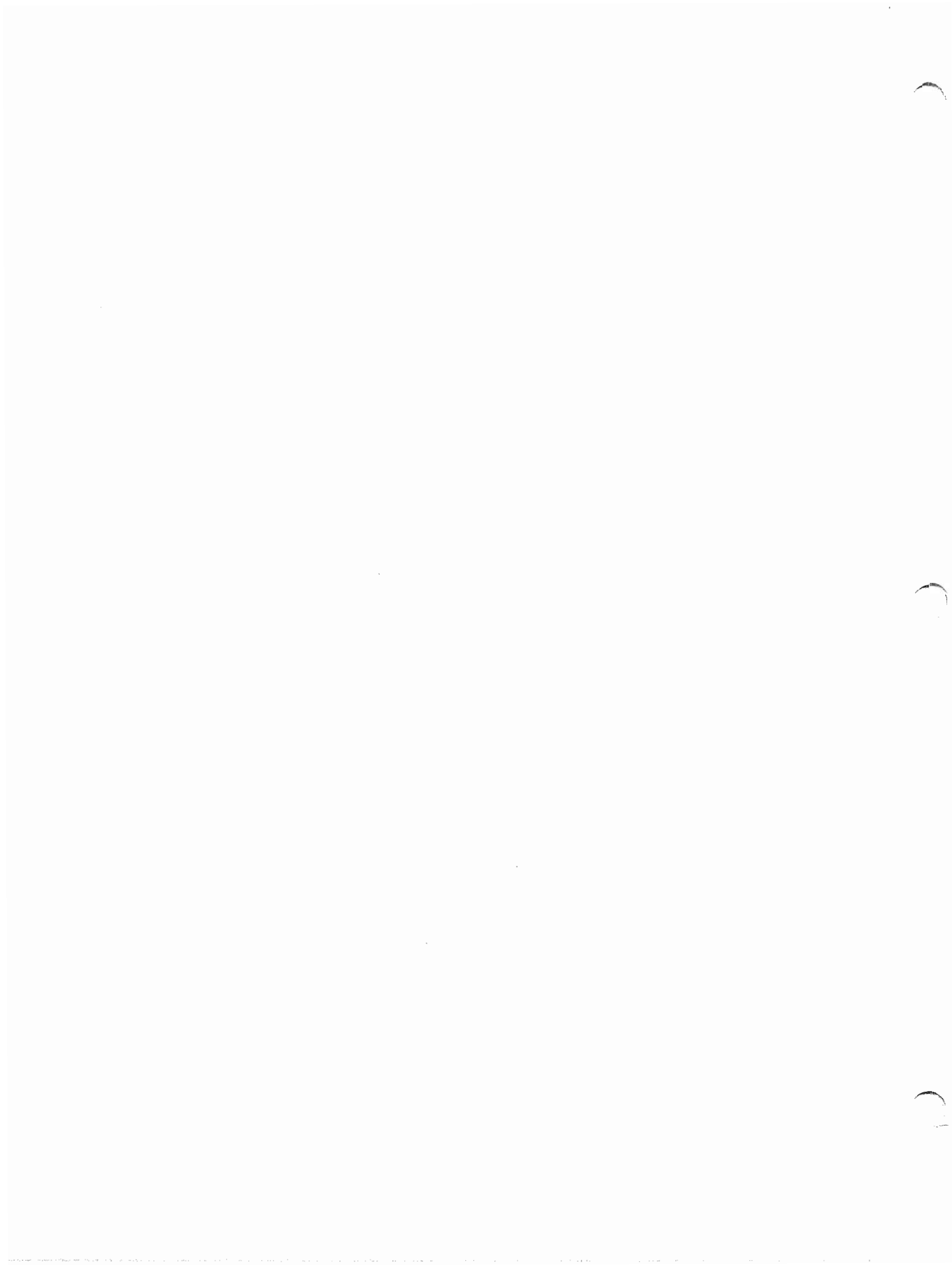
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Excel Spreadsheets of Monitoring Data and Photographs



1.0 Introduction

KCI Technologies, Inc. (KCI) has conducted the initial semi-annual vegetative monitoring and data collection assessment corresponding to the end of the wet season for the Pennsuco Monitoring Mitigation Project, C-13604, administered by the South Florida Water Management District (SFWMD). The monitoring requires qualitative and quantitative assessments to document the success of the vegetative and hydrologic restoration. Restoration success can be gauged by reduction of exotic species and the recruitment of target native species, sawgrass in particular.

2.0 Purpose

The primary purpose of the monitoring program is to identify and describe the elements of the natural system, thus enabling the SFWMD to evaluate the success of exotic plant control activities over a five-year period. The vegetative success criteria outlined in the Draft Pennsuco Memorandum of Agreement (MOA) requires that after five-years: the percent cover of exotic invasive species is no greater than five percent, the percent cover of open water and obligate and facultative wetland woody shrub species is no greater than 20 percent, and the percent cover of native plant herbaceous obligate and facultative wetland species is no less than 80 percent.

3.0 Site Location

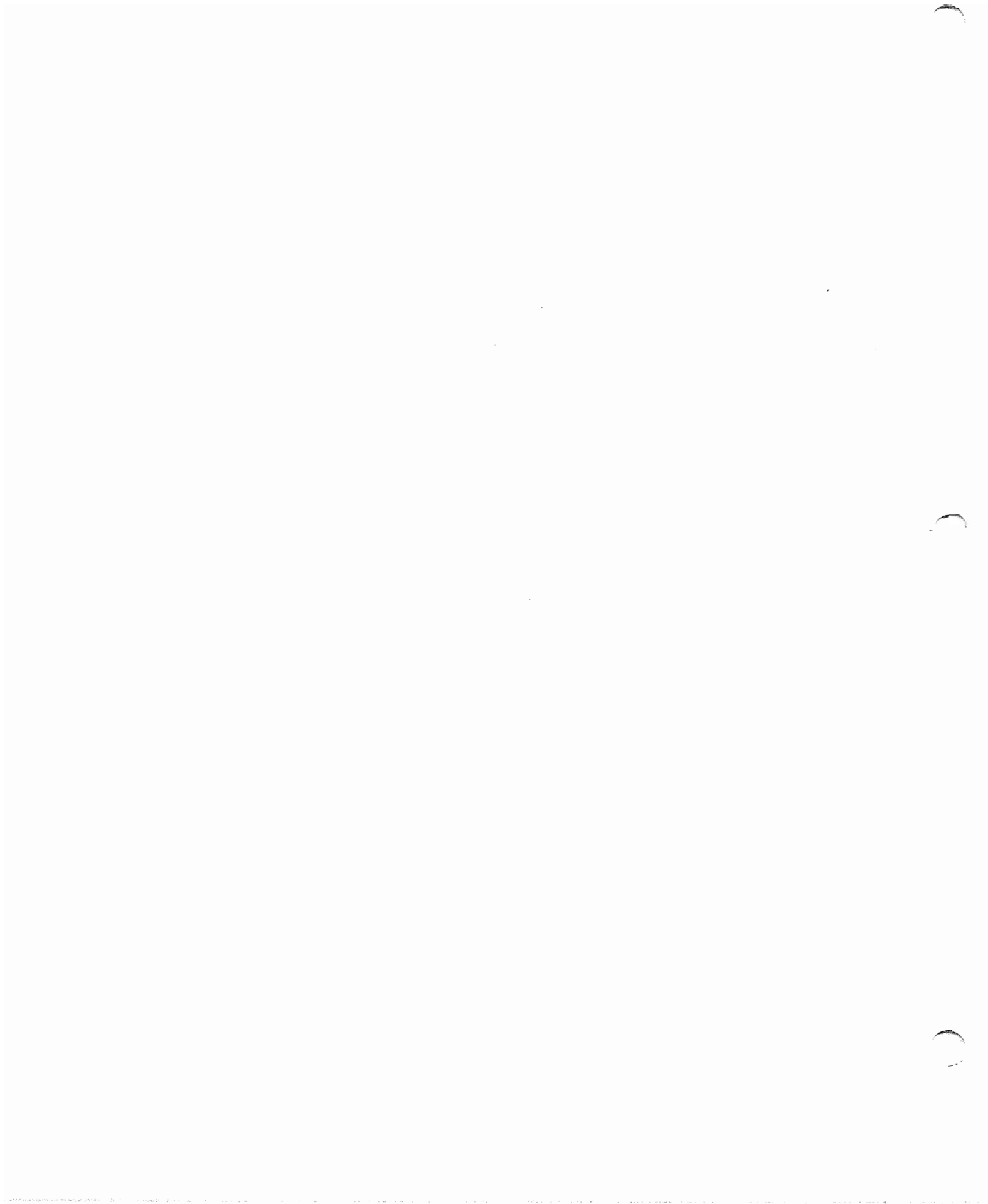
The Pennsuco Mitigation Area is ^{located within} ~~composed of all or part of 11 sections~~ in Cell 26 of the East Coast Buffer and occupies approximately 13,000 acres in Miami-Dade County (Figure 1). The site is bordered on the west and north by Krome Avenue, to the south by the Tamiami Trail (US 41) and to the east by the Dade-Broward Levee. The SFWMD had been conducting invasive species eradication in these areas as a component of its restoration plan. The specific areas being monitored include Section 30, Township 52 South, Range 39 East; Section 5, Township 53 South, Range 39 East; Section 18, Township 53 South, Range 39 East; and Section 6, Township 53 South, Range 39 East.

4.0 Methodology

The monitoring was conducted along four one-mile transects as identified in Figure 1 of the SFWMD Statement of Work or as adjusted by SFWMD staff at the field visit prior to the initiation of work. Three of the four transects are located adjacent to Krome Avenue (A, C, D) and were directly accessible. The remaining transect (B) is located one mile east of Krome Avenue (Figure 2, Table 1). Global Positioning System (GPS) was used to identify the two end points of each transect. The points were permanently marked by installing a 10-foot length of 3-inch PVC pipe, painted fluorescent orange, at each location. GPS and/or compass bearings were then used to identify data collection stations along each transect.

Table 1 Transect End Points

Transect	Latitude	Longitude
Begin "A"	25° 53' 12.76"	80° 29' 03.33"
End "A"	25° 53' 12.69"	80° 28' 04.91"
Begin "B"	25° 51' 20.39"	80° 28' 01.70"
End "B"	25° 51' 19.15"	80° 27' 03.30"
Begin "C"	25° 49' 48.07"	80° 28' 55.38"
End "C"	25° 49' 48.00"	80° 27' 57.00"
Begin "D"	25° 46' 40.00"	80° 28' 52.00"
End "D"	25° 46' 47.93"	80° 27' 55.87"



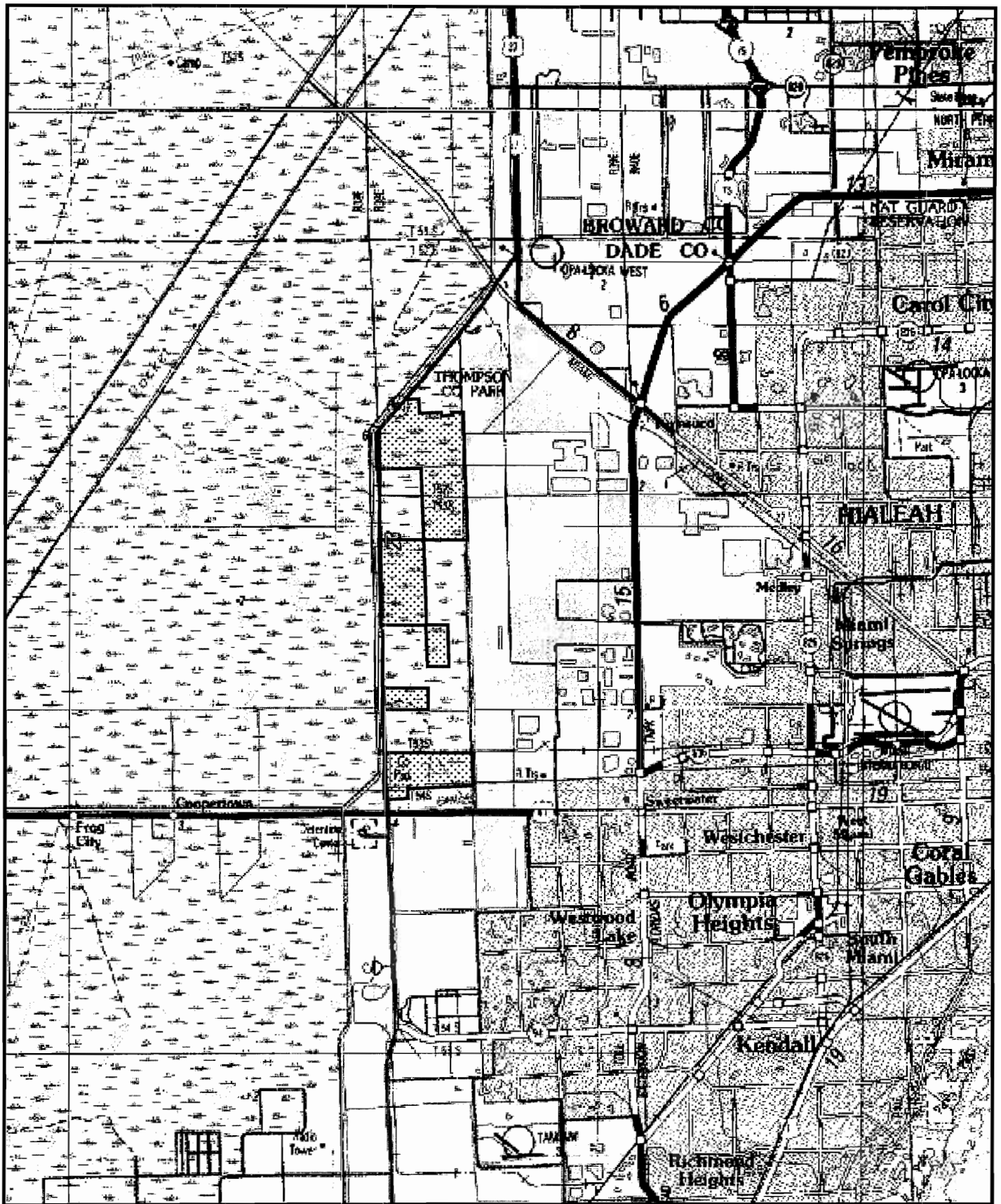
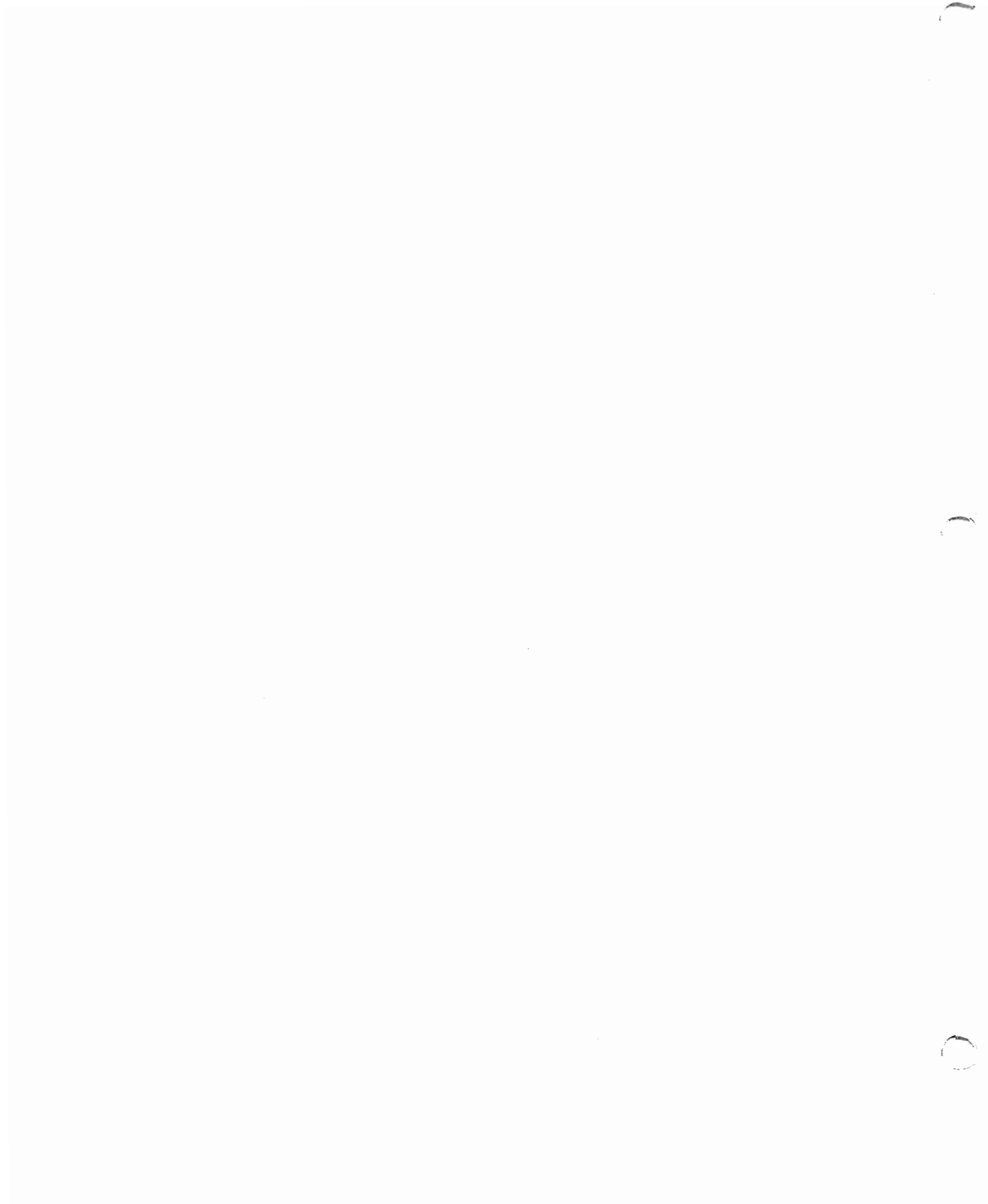


Figure 1. Location Map

 Restoration Area



10000 0 10000 20000 Feet



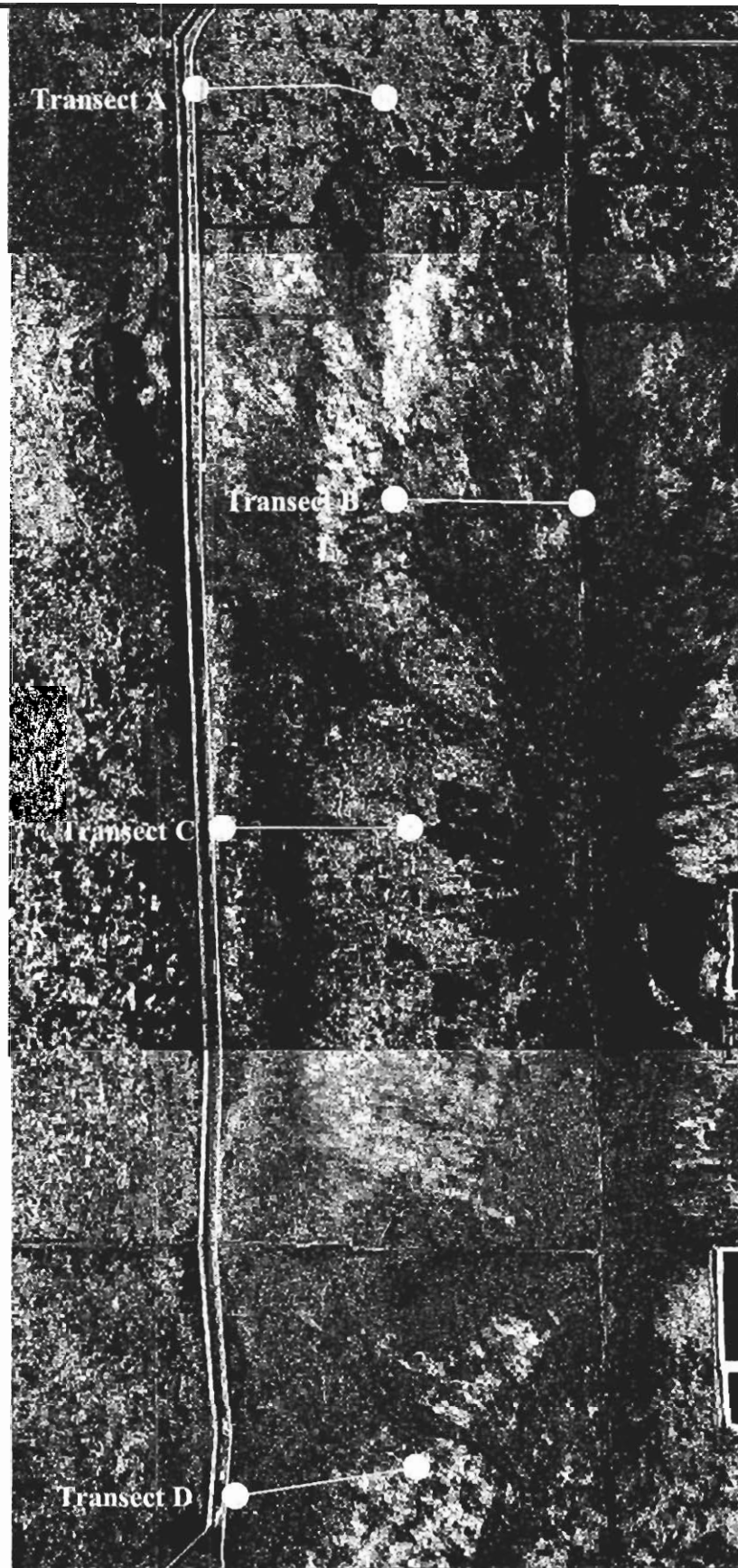
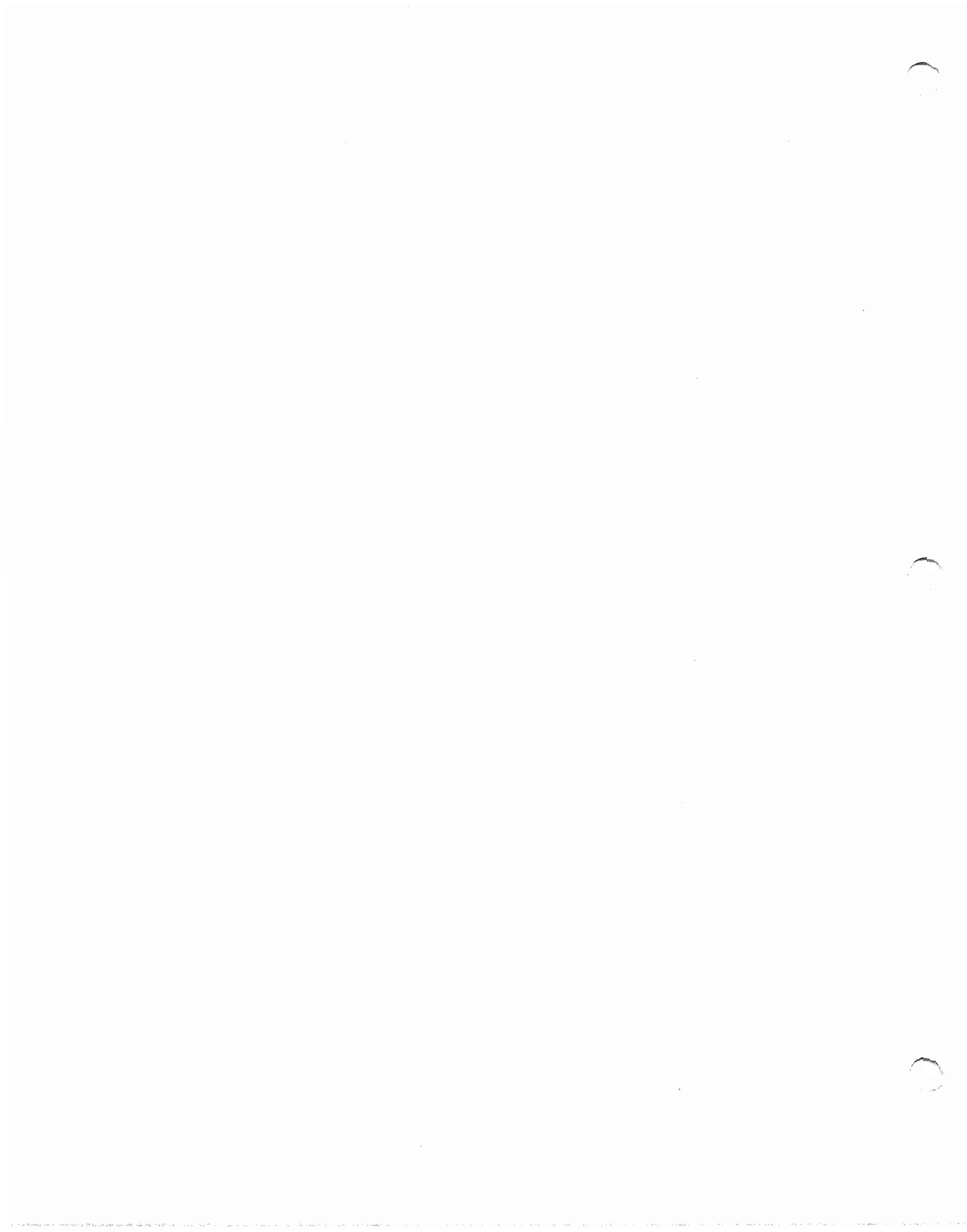


Figure 2. Transect Locations



A total of 30 data collection stations, each measuring 4 square meters, were established at approximately equally spaced intervals of 176 feet along each transect. Collection stations at the end points of each transect were established three meters from the point marker. At each data collection point, the center of a four-meter square grid was marked by placing a 5-foot length of white 3/4-inch PVC pipe in the substrate. Where feasible, a 4-meter square portable PVC frame with 4 individual 1-meter cells was utilized to estimate percent coverage; otherwise, visual assessments were made by assessing the area 1-meter in each direction from the central point of the collection station. Percent coverage was estimated in each of four layers, described as follows:

1. **Submerged Aquatics** – Herbaceous plants occurring below water surface.
2. **Herbaceous** – Non-woody plants occurring at or above the water surface and woody plants less than one meter in height
3. **Sapling/Vine** – Woody plants one to three meters in height and woody vines.
4. **Overstory** – Woody plants greater than three meters in height.

Coverage was documented at each of the 120 collection stations as a percent coverage with the total percent not exceeding 100 percent/layer. All species found were documented by scientific and common name, and entered onto field forms. Water level and/or soil saturation, observed aquatic macrofauna, wildlife utilization, and/or indicators of wildlife (i.e. tracks, scat, etc.) were recorded at data collection stations 7, 14, 21, and 28 of each transect. Observations also focused on whether saw-grass and punk trees were either alive or dead, due to eradication efforts. This distinction was not made for other vegetative types because of the significantly lower percentage of other vegetation present.

Photographs of the collection station were taken for reference from an elevated position. If an overstory was present, a photo from the center of the point was taken looking up from a position one meter above the surface. Panoramic photos were taken from each transect end point to qualitatively document the existing vegetation along the transect. Each panoramic photo included the end point of each transect with the 3-inch PVC pipe shown for reference.

Data for each transect was organized into spreadsheets and correlated with photographic references for each collection station. Summary percent coverages by species were calculated for each layer by dividing the area occupied by each individual species in the transect by the total area surveyed in the transect. This procedure is outlined in the following:

CT = Percentage of coverage by species per collection station

CA = Total area sampled per collection point (4 square meters)

PC = Total area covered by species per collection station (CT*CA)

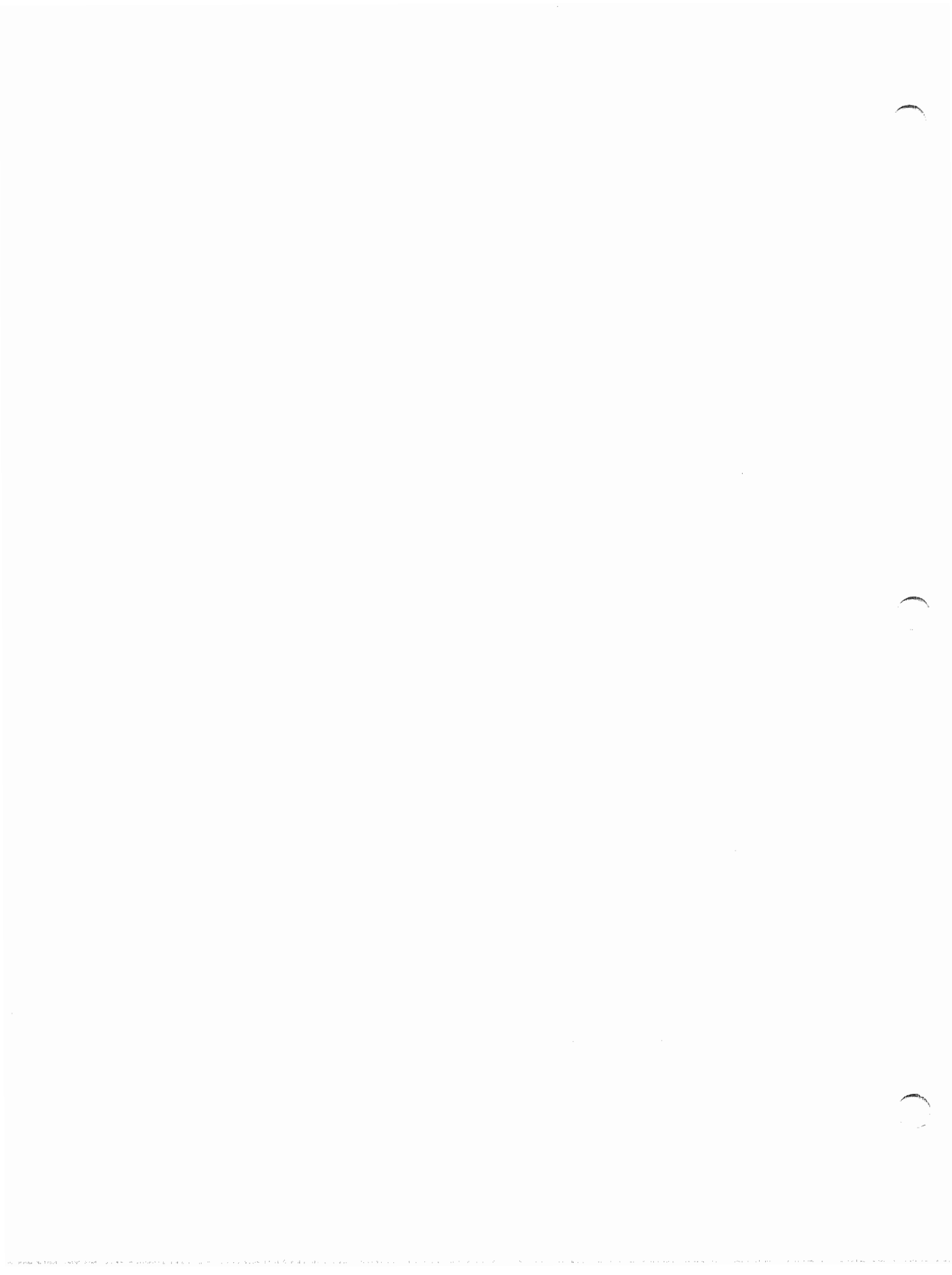
TA = Total area sampled in transect (30 collection points x 4 square meters = 120 square meters)

TC = Total coverage by species per transect

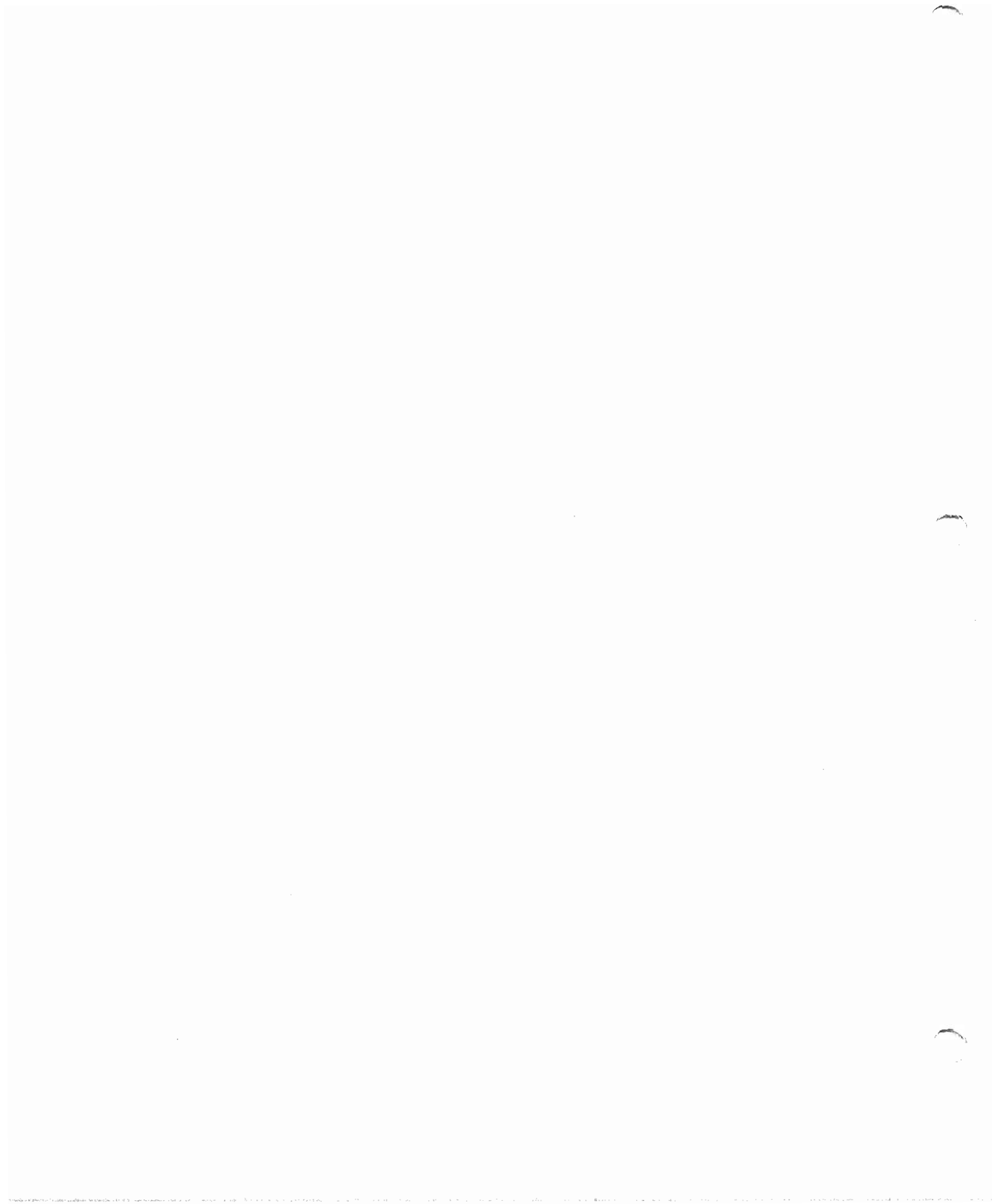
$TC = PC/TA$

5.0 Results

The collected data was incorporated into individual spreadsheets for presentation. A narrative describing each transect followed by summary data and individual data is presented in the following section.



MONITORING DATA FALL 2002



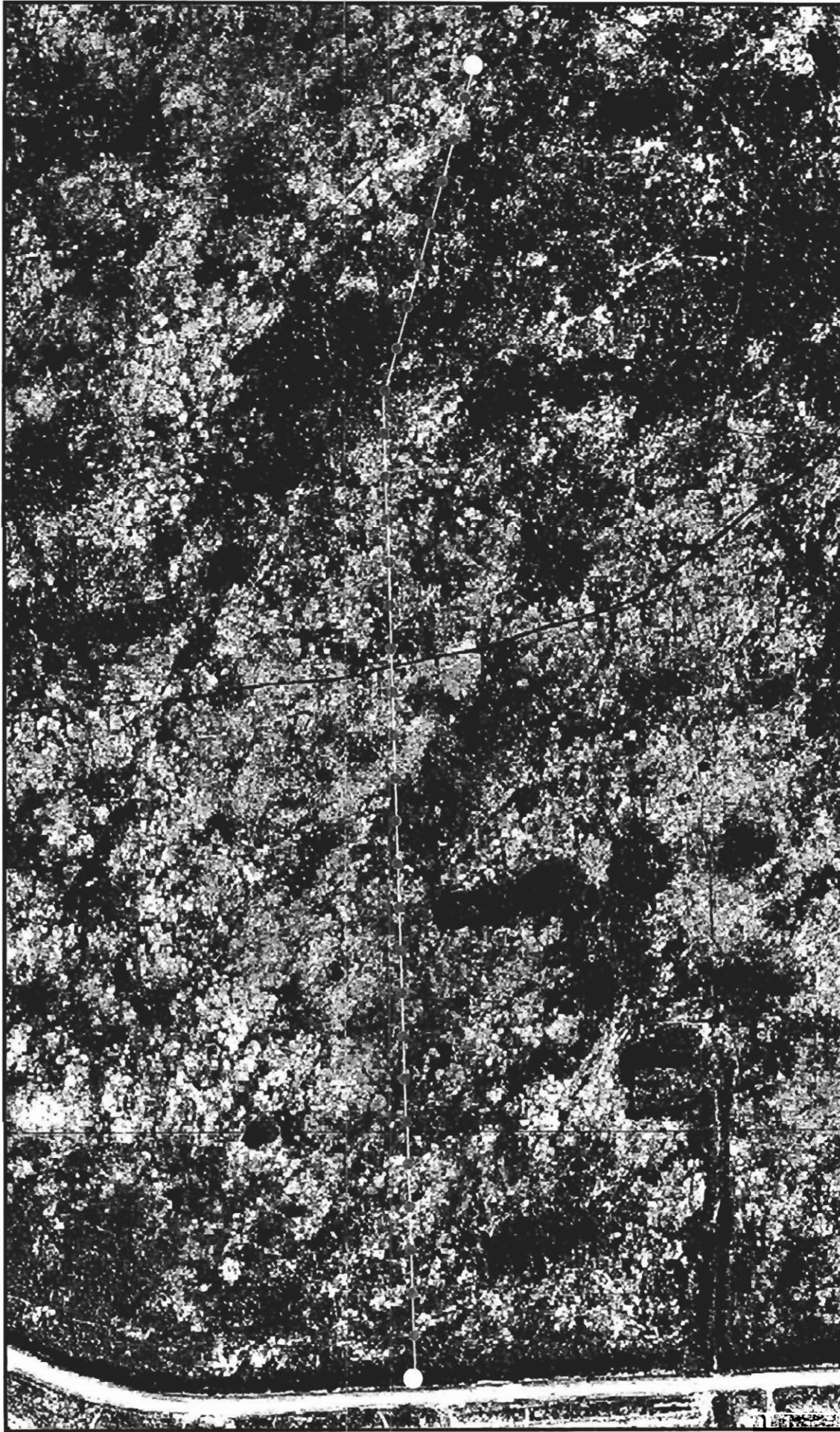
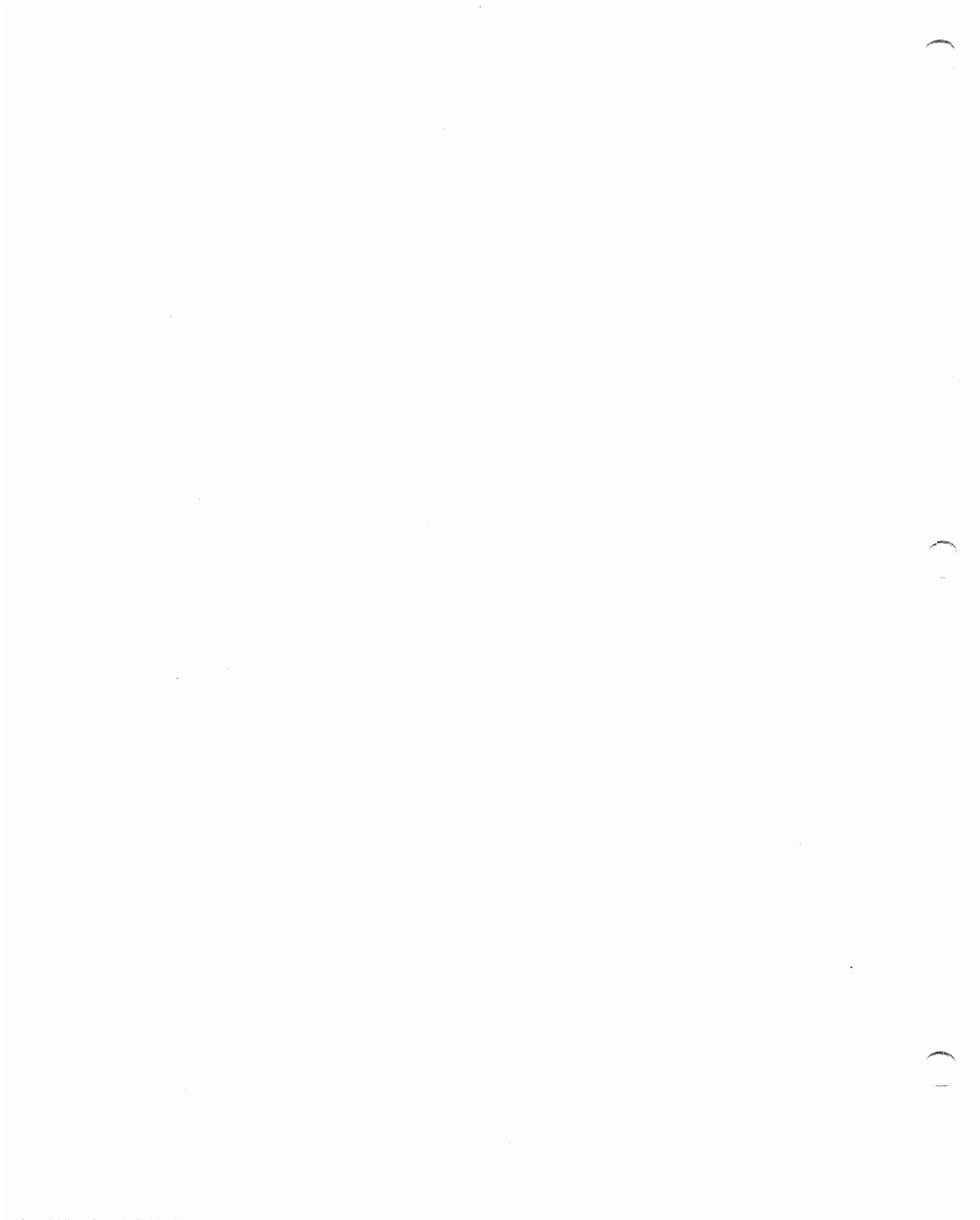


Figure 3. Transect A

- End Points of Segment
- Data Collection Locations

N

300 0 300 Feet



TRANSECT A

Narrative

Transect A is located in Section 30, Township 52, Range 39 (Cell 26 – Pennsuco Exotic Treatment Area). It starts on the levee at Krome Avenue with point A1 (GPS Coordinates Latitude 25° 53' 12.76", Longitude 80° 29' 03.33") and continues east one mile to point A30 (GPS coordinates Latitude 25° 53' 12.69", Longitude 80° 28' 04.91"), which is west of the Dade-Broward Levee (Figure 3). Two community types were identified for transect A. Point A1 represents an upland levee community dominated by punk tree (*Melaleuca quinquenervia*), yellowtops (*Flaveria linearis*) and an unknown plant (UK 9) belonging to the Malvaceae family. Points A2 through A30 represent a wet prairie community type dominated by saw-grass (*Cladium jamaicense*). Photo points 23 and 24, though dominated by saw-grass, have punk tree saplings visible in all directions outside of the grid. Additionally, one to several punk tree seedlings, totaling less than one percent of the vegetative coverage, were observed at photopoints 2, 5, 9, 10, 20, and 22. These sightings seem to correlate to photopoints that have an average of 75 percent open water and sparse vegetation due to either natural conditions or herbicides. The appearance of the exotic and invasive punk tree vegetation indicates a shift in the community types from saw-grass in the area.

Water depths ranged from 4.5 to 6.5 inches at the four photopoint locations (A7, A14, A21, and A28). A few one to two-centimeter fry were observed at photopoints A21 and A28. No other macrofauna or indicators of wildlife were noted.

Much of the saw-grass and punk tree vegetative communities were dead due to enhancement efforts, which called for the eradication of exotic and invasive species. Control efforts focused primarily on punk trees, and consisted of herbicidal treatment and a physical removal program, followed by a controlled burn.

In summary, the percent vegetative coverage, by layer, for this transect identified:

- Zero percent vegetative coverage in the submerged aquatics layer.
- In the herbaceous species layer, 17 percent live saw-grass, 36 percent dead saw-grass, and one percent yellowtops.
- In the sapling/vine layer, four percent live punk trees.
- In the overstory layer, two percent dead punk trees.

Pennsuco Monitoring Project - Summary Sheet

TRANSECT

"A"

Total Length

5280'

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0.00%	
Bladderwort	<i>Utricularia foliosa</i>	0.00%	
Bladderwort	<i>Utricularia purpurea</i>	0.00%	
Ludwigia	<i>Ludwigia repens</i>	0.00%	
Open/Void	N/A	100.00%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	17.17%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	35.60%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0.47%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0.00%	
Southern Swamp Lily	<i>Crinum americanum</i>	0.33%	
Pickernelweed	<i>Pontederia lanceolata</i>	0.00%	
Yellowtops	<i>Flaveria linearis</i>	0.80%	
Arrowhead	<i>Sagittaria graminea</i>	0.13%	
Floating-Heart	<i>Nymphoides aquatica</i>	0.27%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0.33%	
Cattail	<i>Typha latifolia</i>	0.00%	
Button Bush	<i>Cephalanthus occidentalis</i>	0.00%	
Maiden-Cane	<i>Panicum hemitomum</i>	0.00%	
Shield Fern	<i>Thelypteris kunthii</i>	0.00%	
Swamp Fern	<i>Blechnum serrulatum</i>	0.00%	
Elm	<i>Trema micrantha</i>	0.00%	
UK9	<i>Malvaceae</i>	0.17%	
Open Water/Mud/Void	N/A	44.73%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	4.03%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0.00%	
Elm	<i>Trema micrantha</i>	0.00%	
TBD		0.00%	
Open/Void		95.97%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0.00%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	1.67%	
Golden Fig	<i>Ficus Aurea</i>	0.00%	
Open/Void		98.33%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

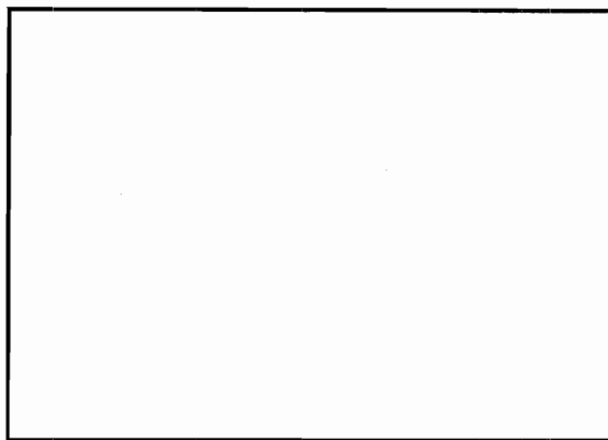
11/9/02

2003

0+00 Panoramic - Looking east



A transect



52+78 Panoramic - Looking West



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-1

STATION

0+00

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	24%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	5%	
Open Water/Mud/Void	N/A	71%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	50%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		50%	
TOTAL		100%	0%

NOTES: Levee position adjacent to Krome Ave.

Water Level / Soil Moisture

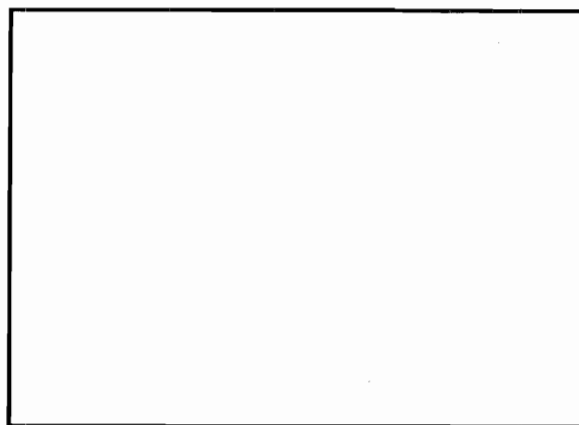
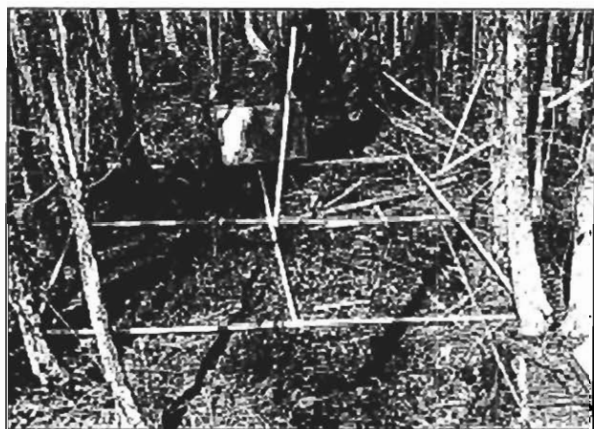
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

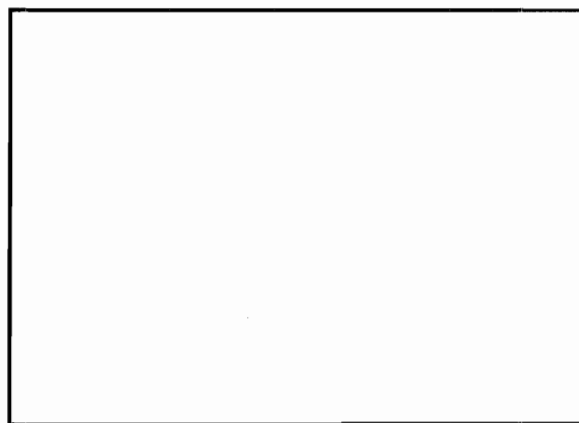
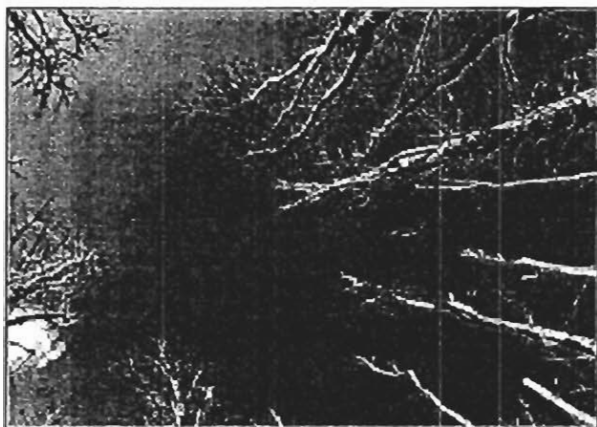
2003

GROUND



A1

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-2

STATION

1+82

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	25%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	75%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		99%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

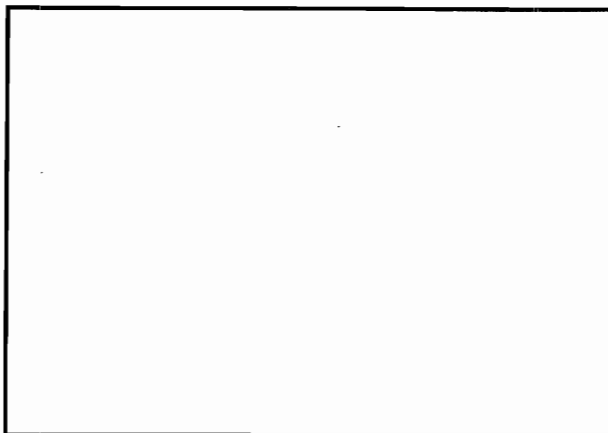
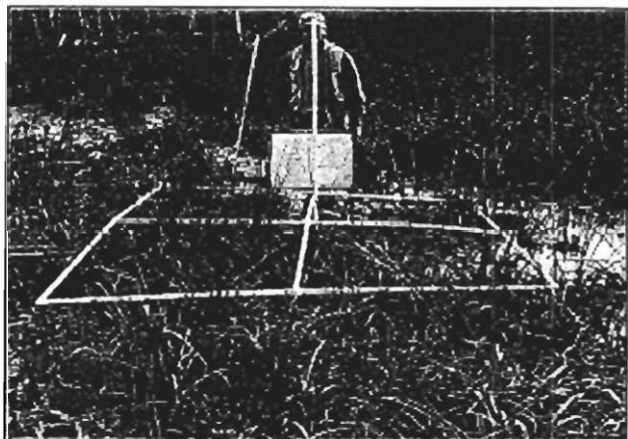
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

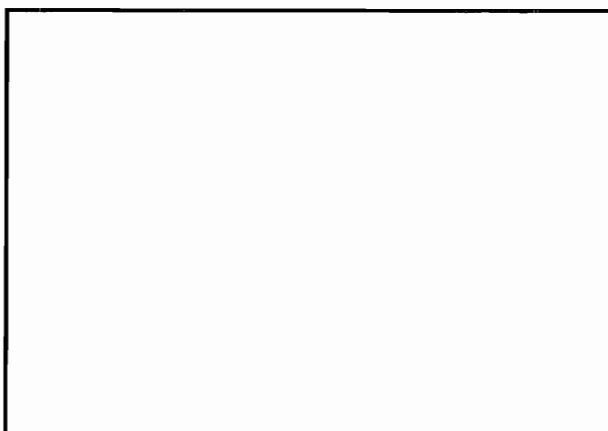
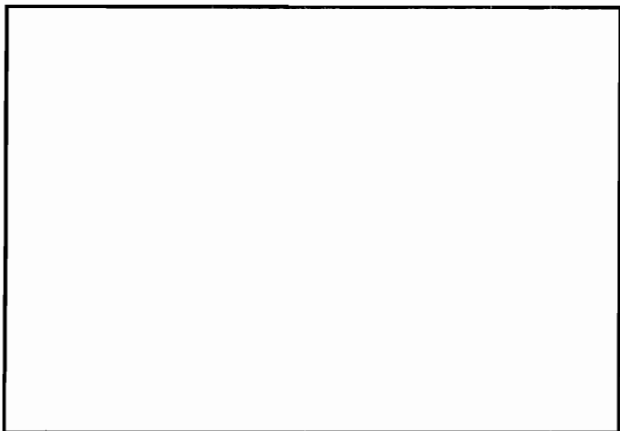
2003

GROUND



A2

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-3

STATION

3+64

SUBMERGED AQUATICS

		11/9/02	2003
Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	80%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	20%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

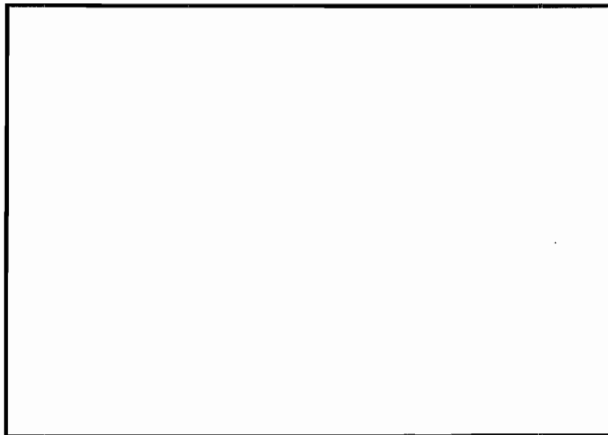
A Harvest
has a lot of
dead grasses
over spray!

saw grass is dead
why? no water
drown

11/9/02

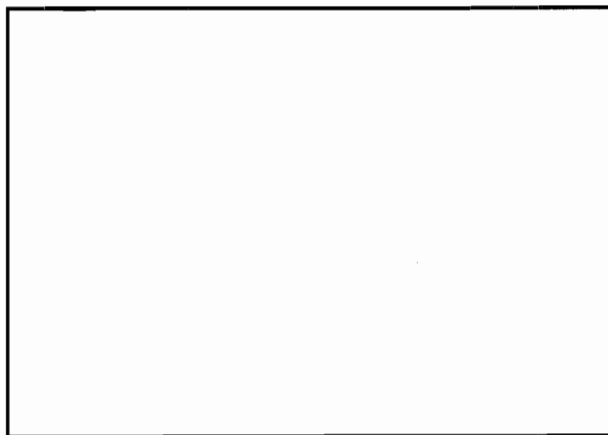
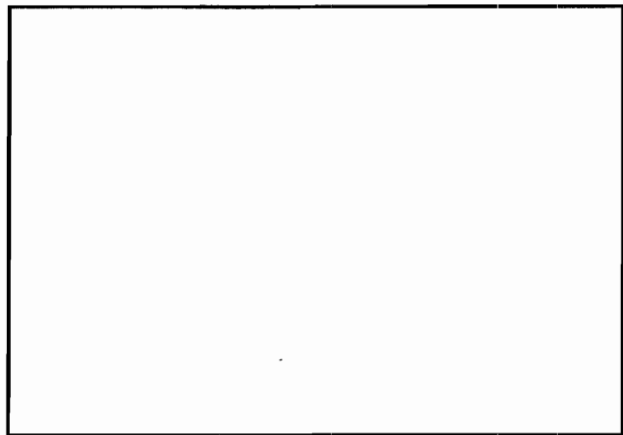
2003

GROUND



A3

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-4

STATION

5+46

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	60%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	40%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

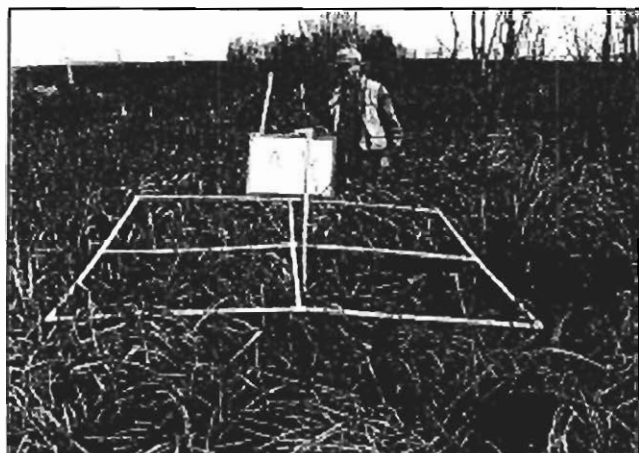
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

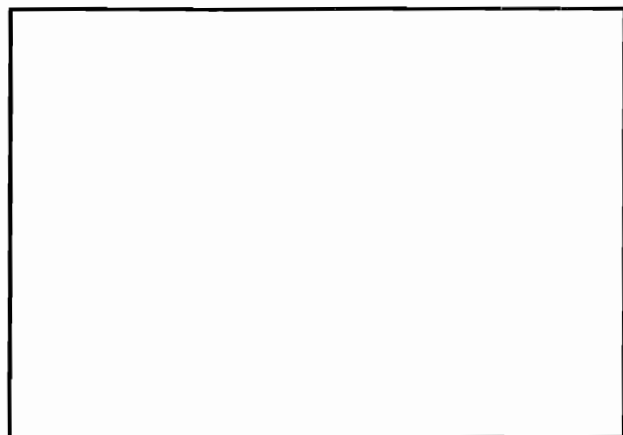
GROUND

11/9/02

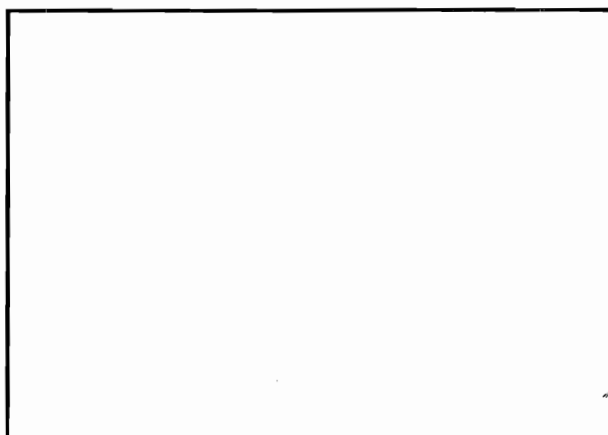
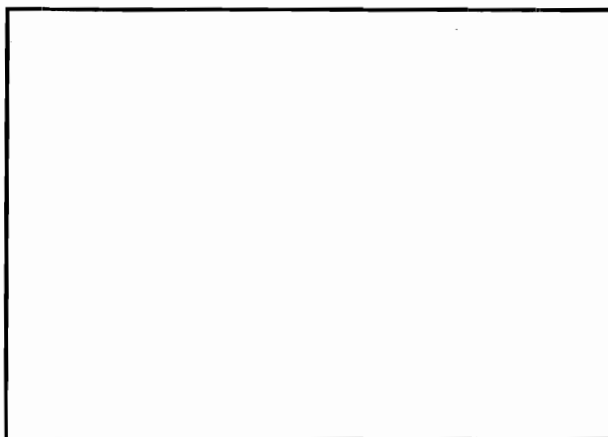


A4

CANOPY



2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-5

STATION

7+28

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	10%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	89%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

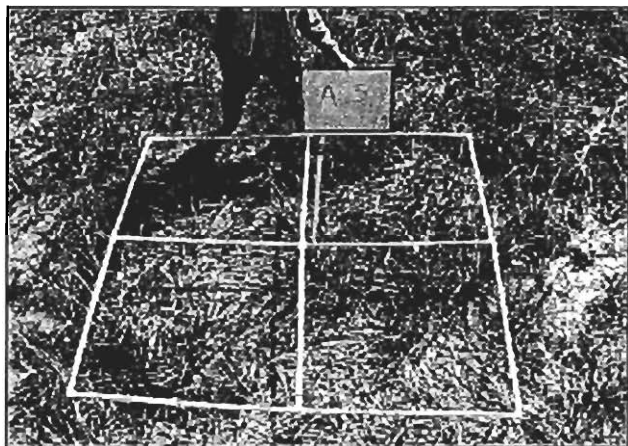
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

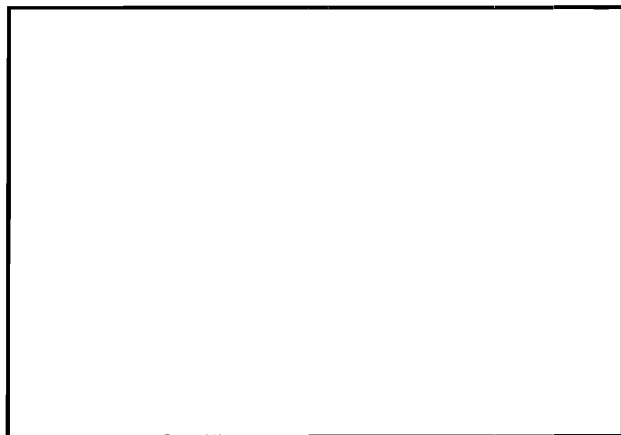
11/9/02

GROUND

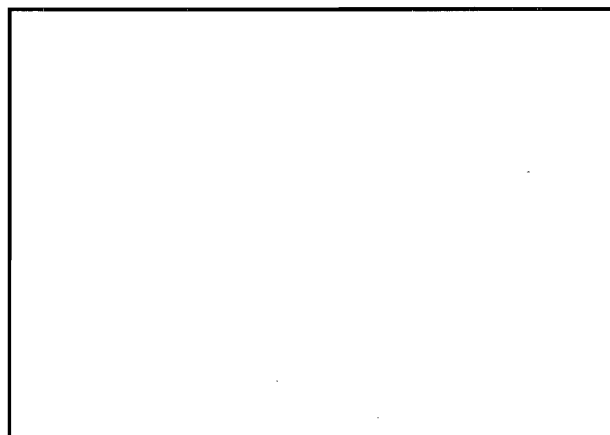
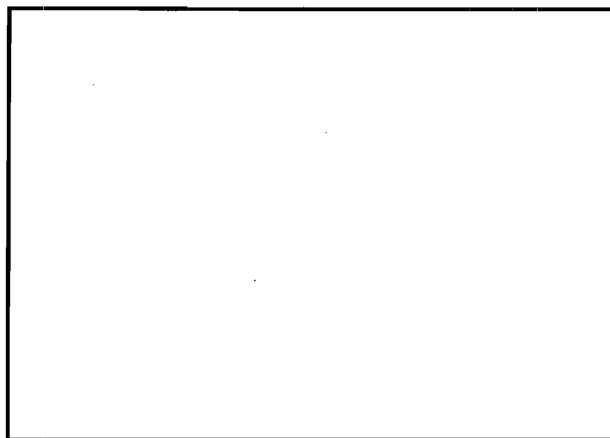


A5

CANOPY



2003



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

A-6

STATION

9+10

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	5%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	65%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	3%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	27%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

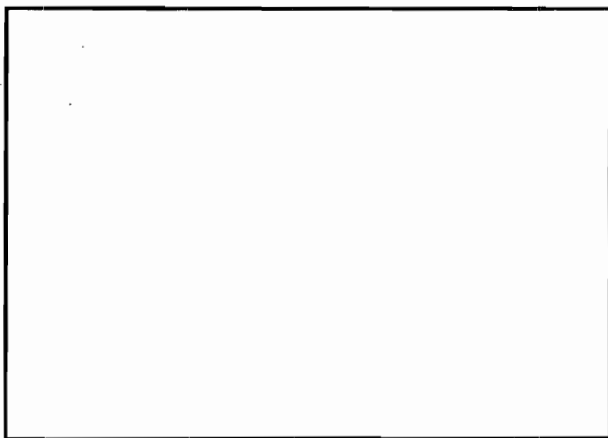
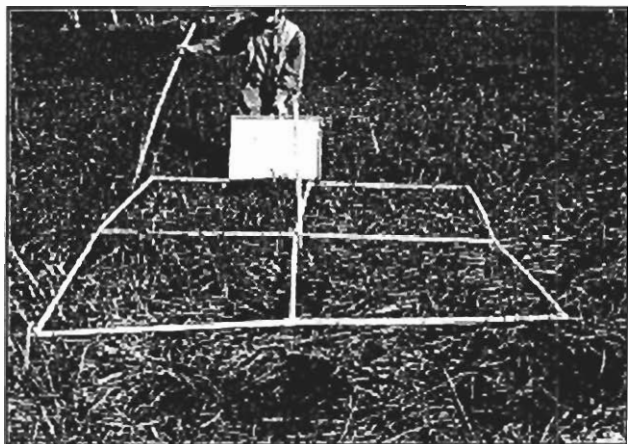
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

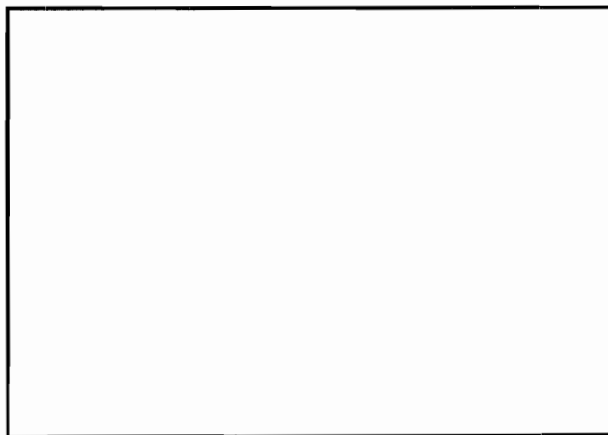
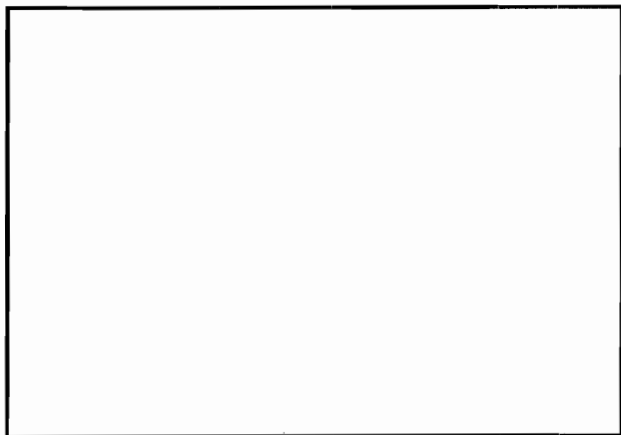
2003

GROUND



A6

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-7

STATION

10+92

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	20%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	43%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	2%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	35%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

6.5" of standing water

Aquatic Macrofauna

None

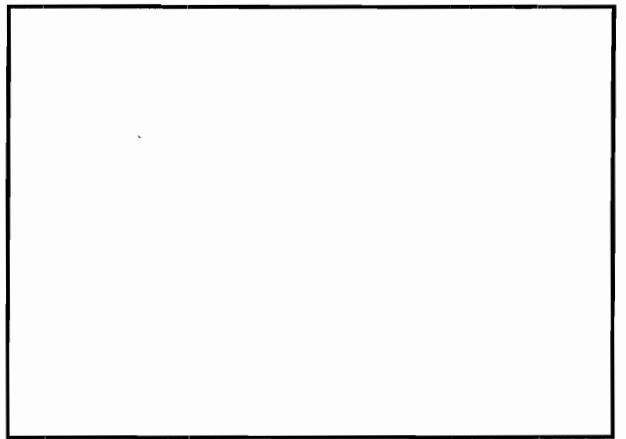
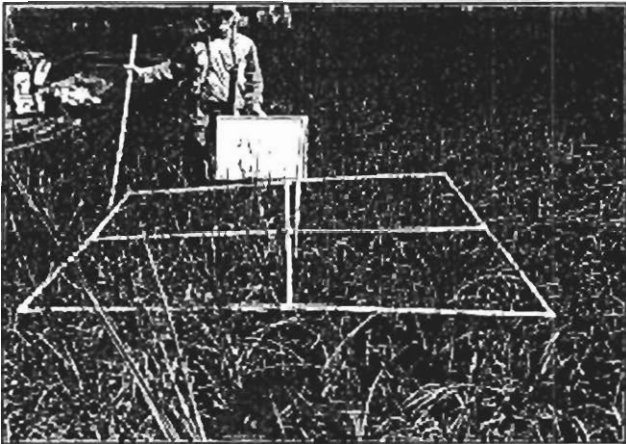
Wildlife Indicators (tracks, scat, nests)

None

11/9/02

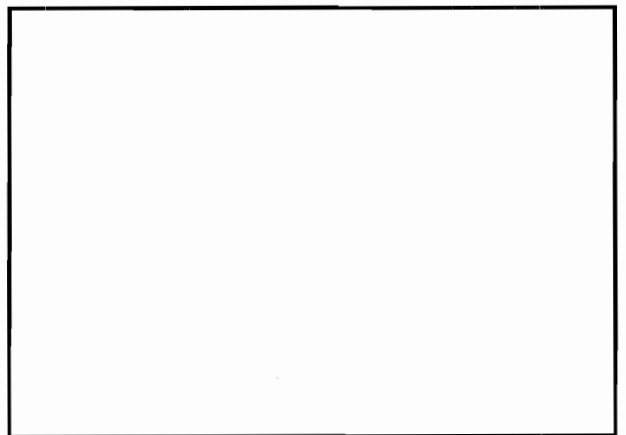
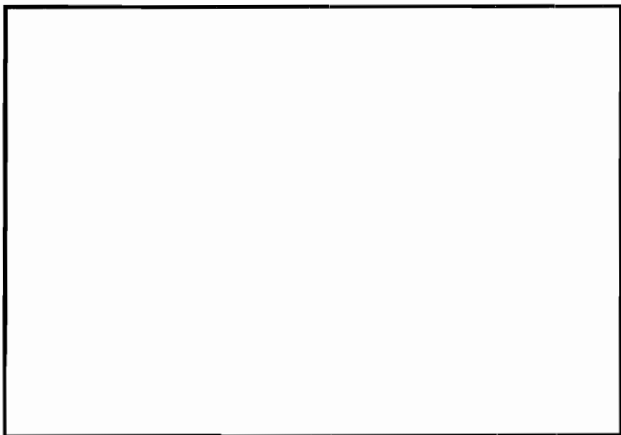
2003

GROUND



A7

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-8

STATION

12+74

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	50%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	5%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	45%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

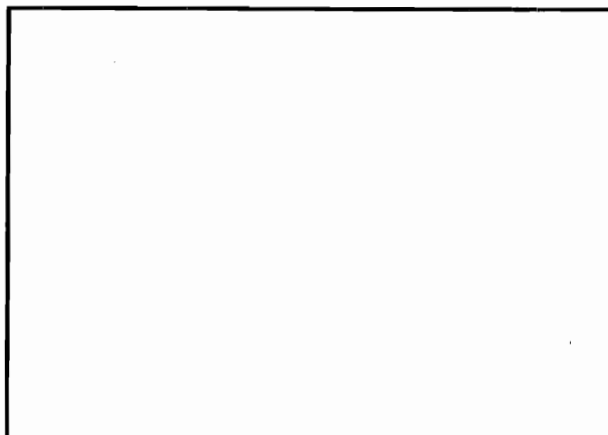
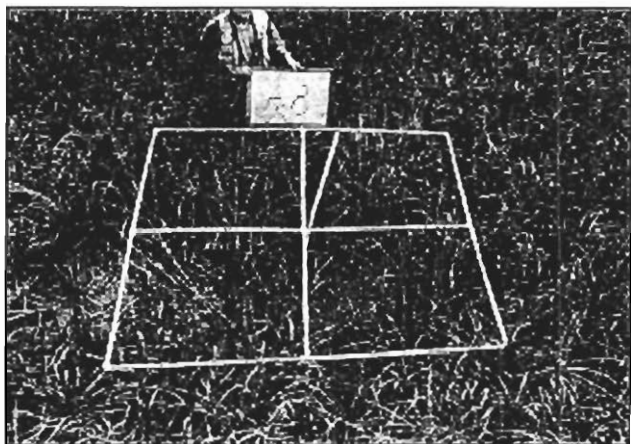
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

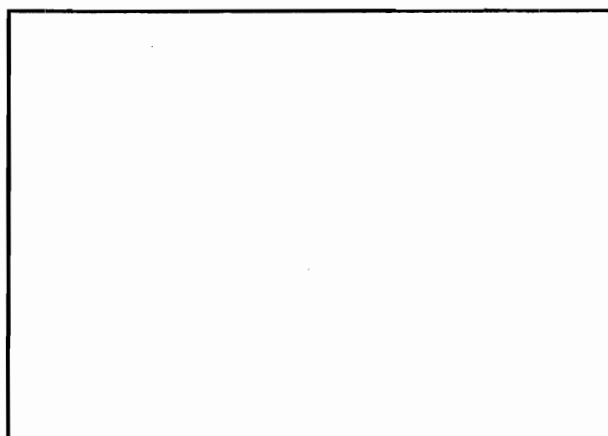
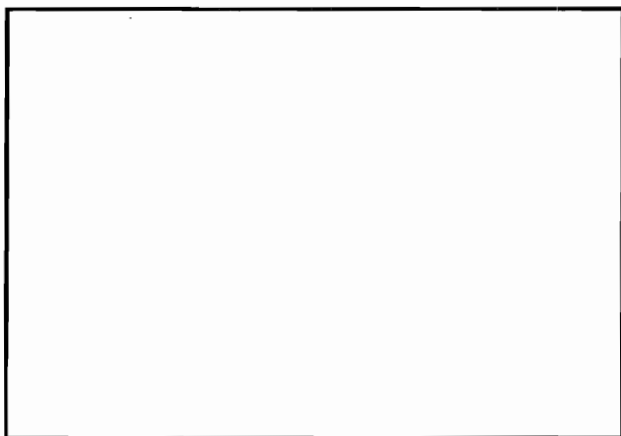
2003

GROUND



A8

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-9

STATION

14+56

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	45%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	2%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	52%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

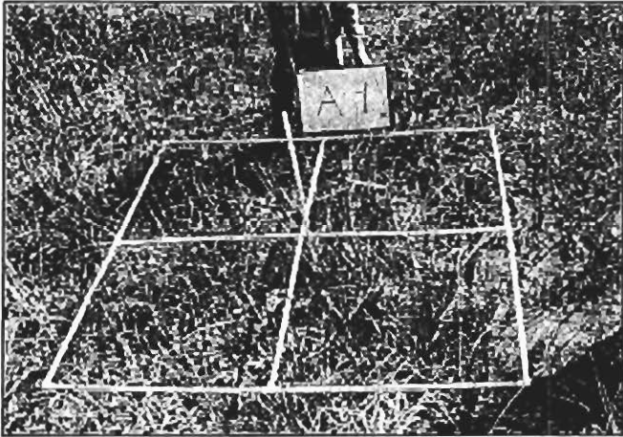
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

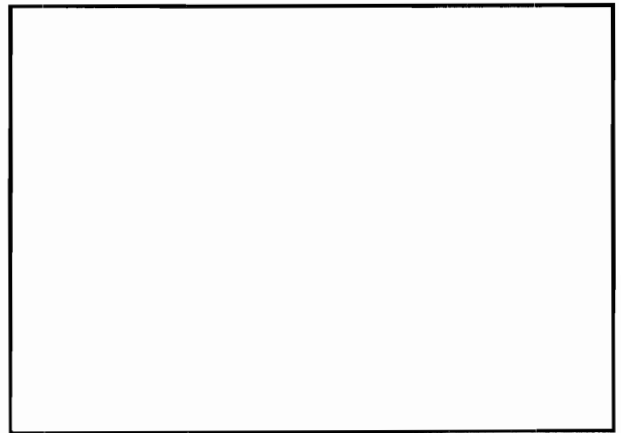
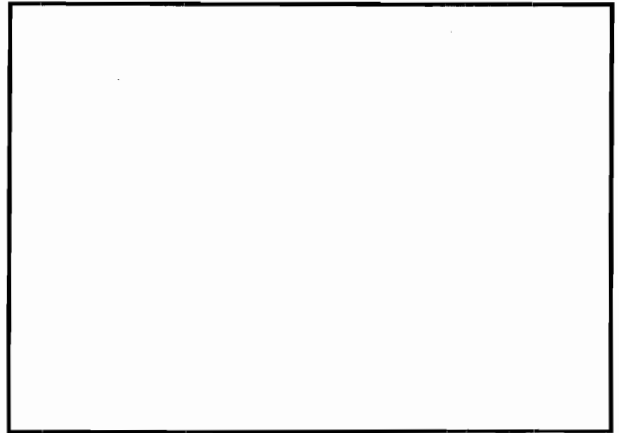
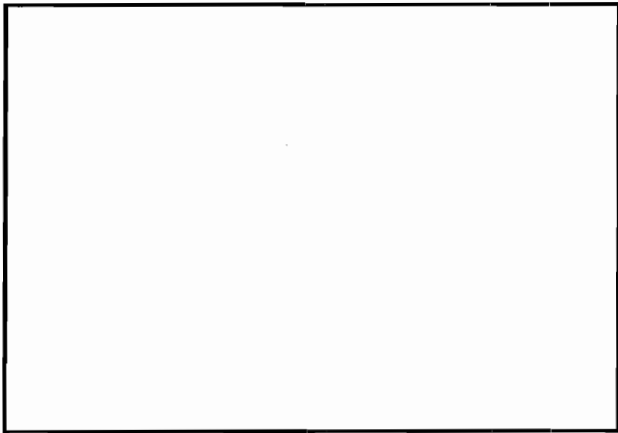
2003

GROUND



A9

CANOPY



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

A-10

STATION

16+38

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	50%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereleweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	49%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

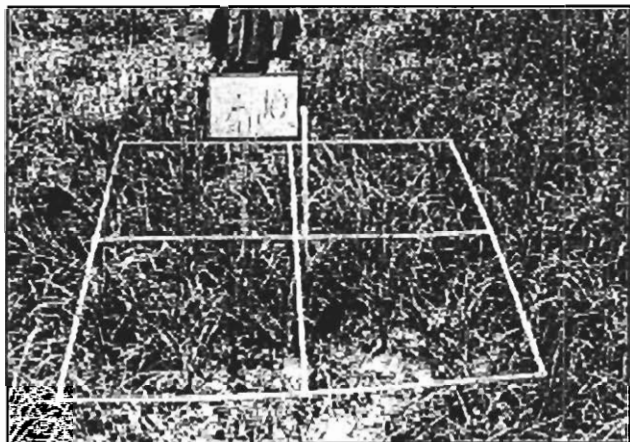
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

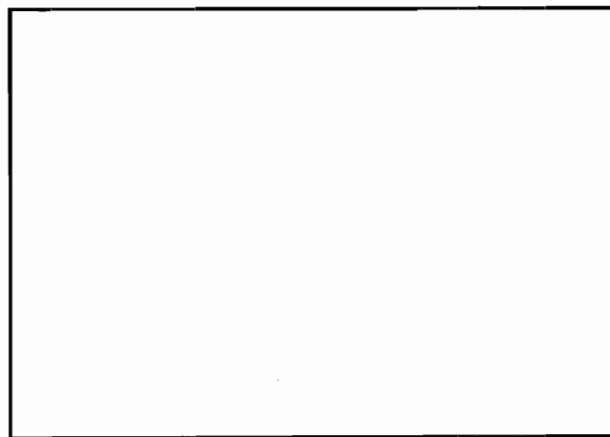
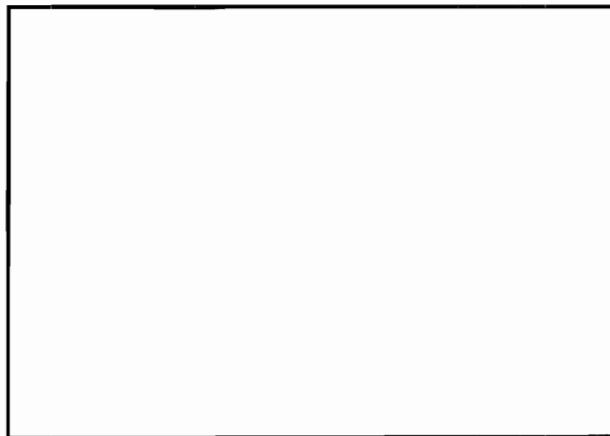
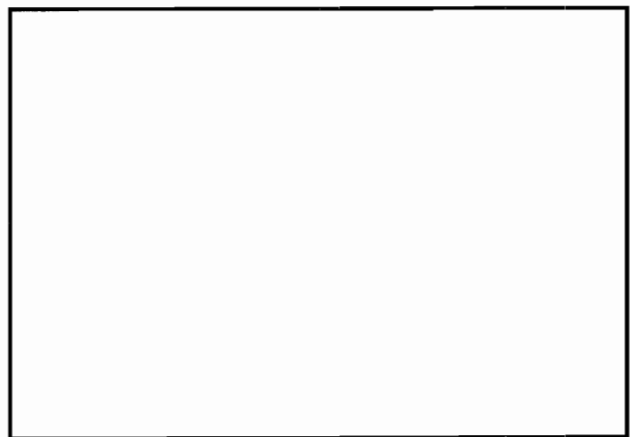
2003

GROUND



A10

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-11

STATION

18+20

SUBMERGED AQUATICS

		11/9/02	2003
Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	55%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	45%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

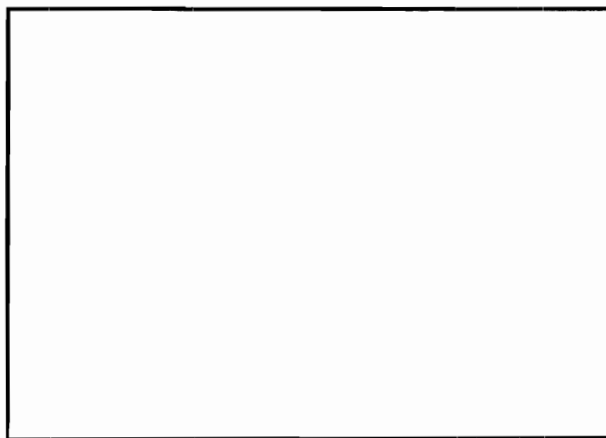
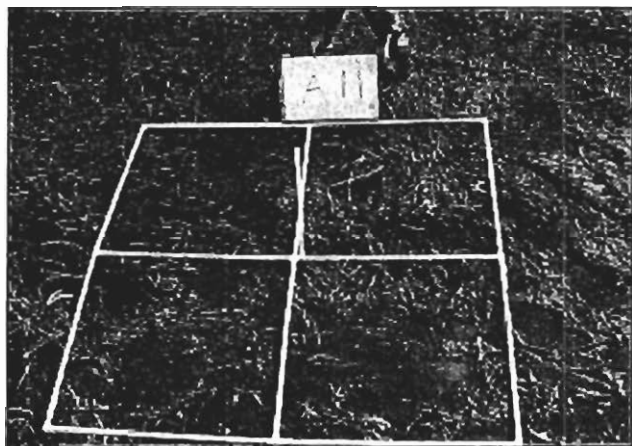
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

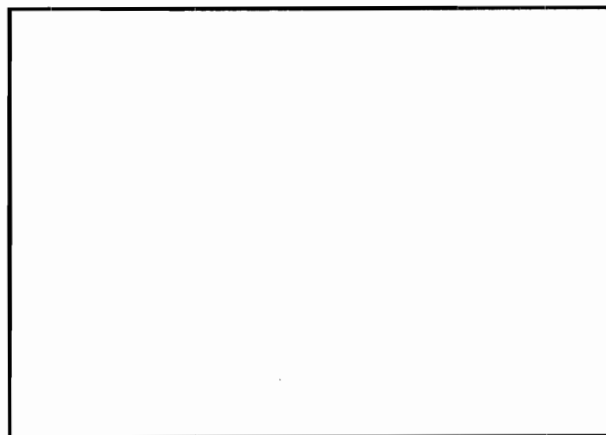
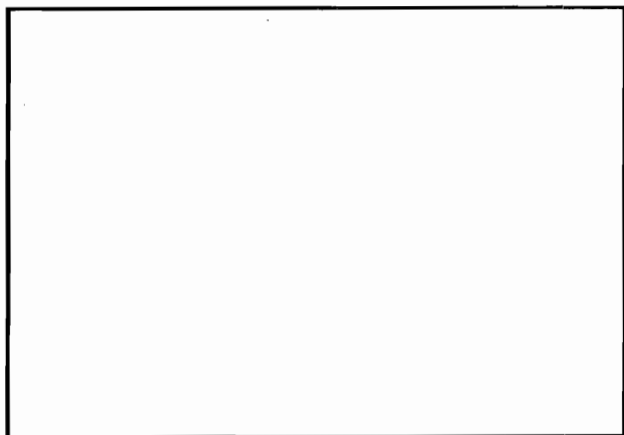
2003

GROUND



A11

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-12

STATION

20+02

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	40%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	40%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	20%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

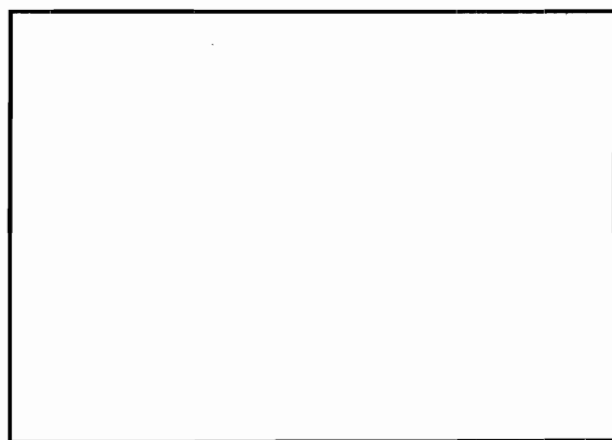
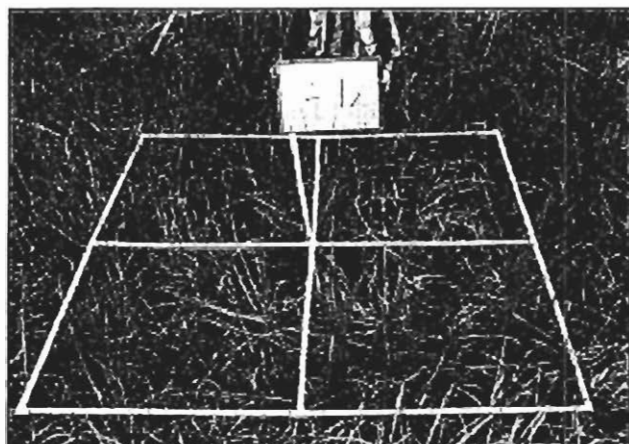
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

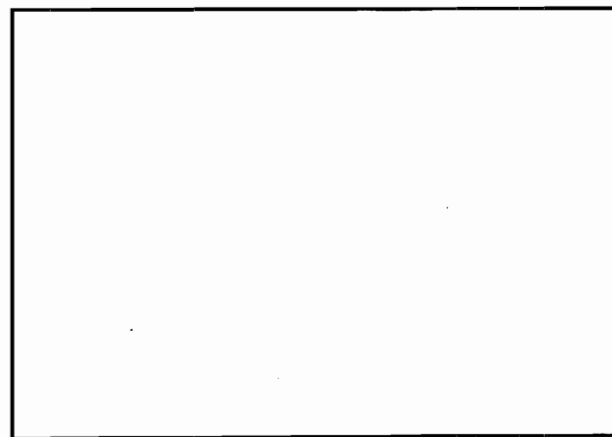
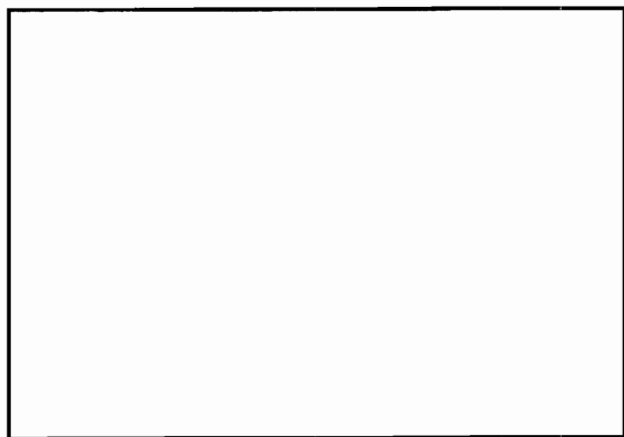
2003

GROUND



A12

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-13

STATION

21+84

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	95%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	5%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

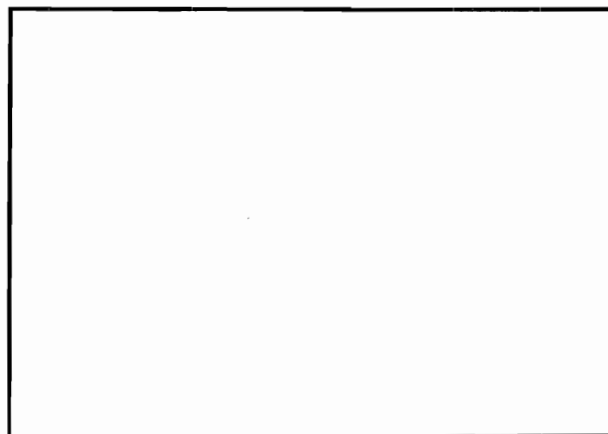
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

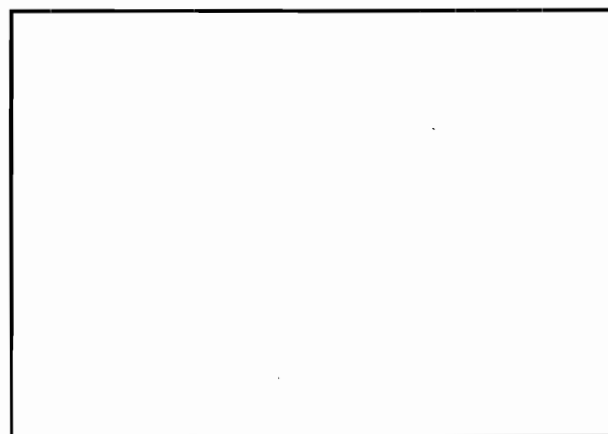
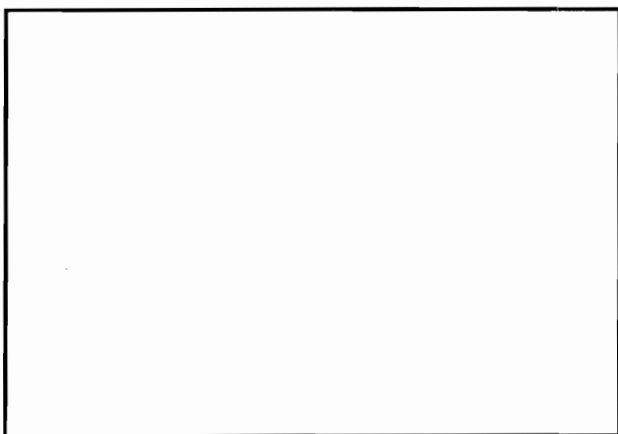
2003

GROUND



A13

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-14

STATION

23+66

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	45%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	20%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
UK9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	35%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

5.75" of standing water

Aquatic Macrofauna

None

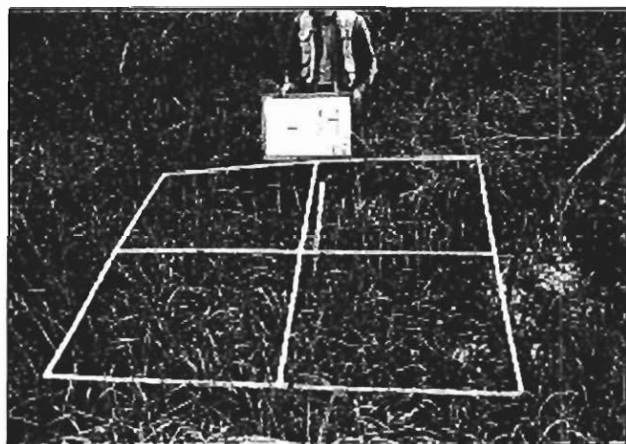
Wildlife Indicators (tracks, scat, nests)

None

11/9/02

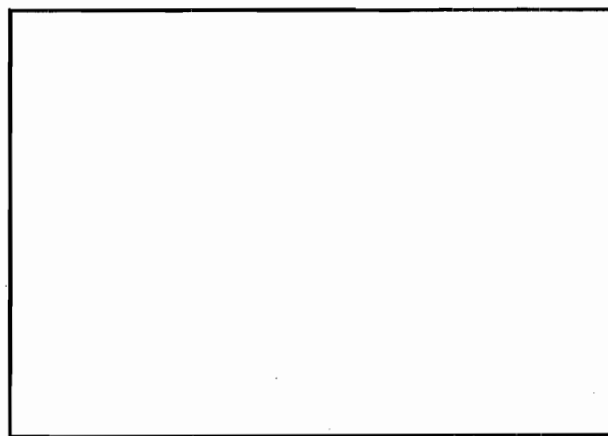
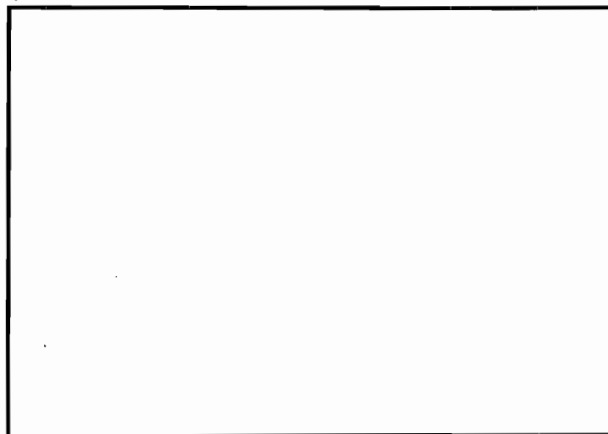
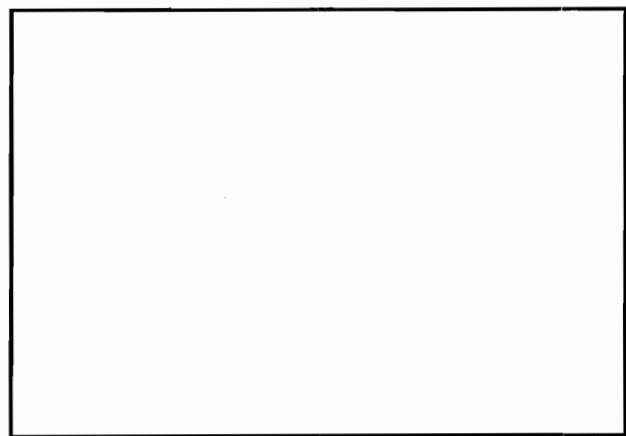
2003

GROUND



A14

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-15

STATION

25+48

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	10%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	10%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	80%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

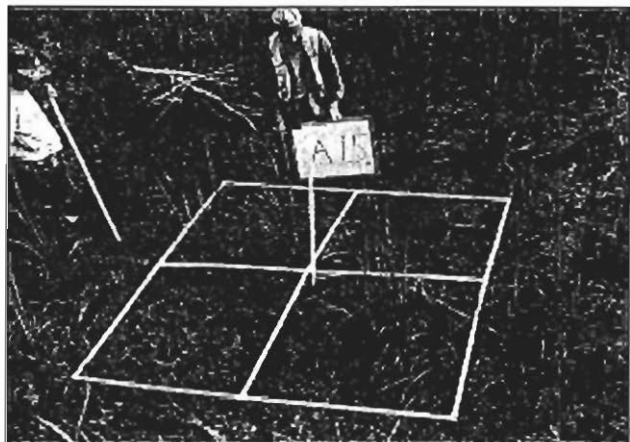
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

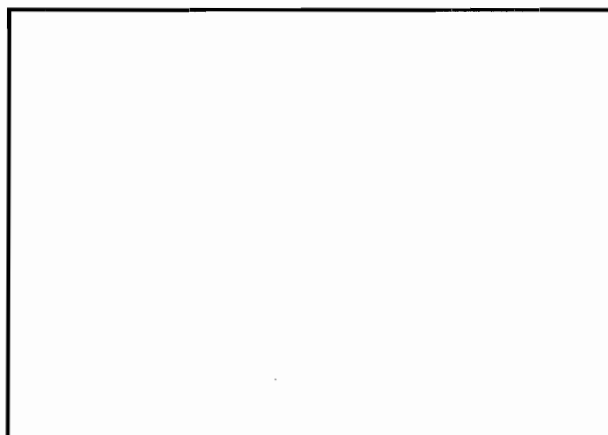
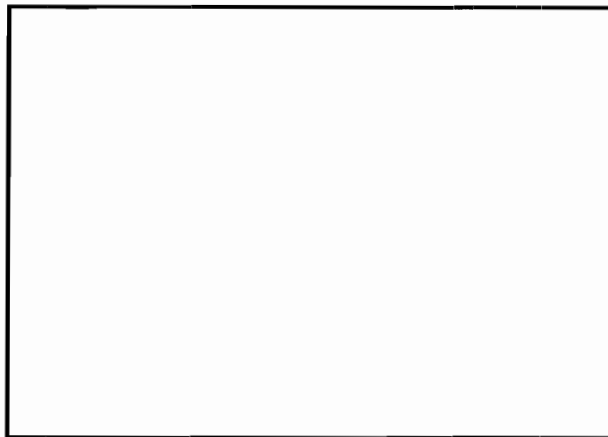
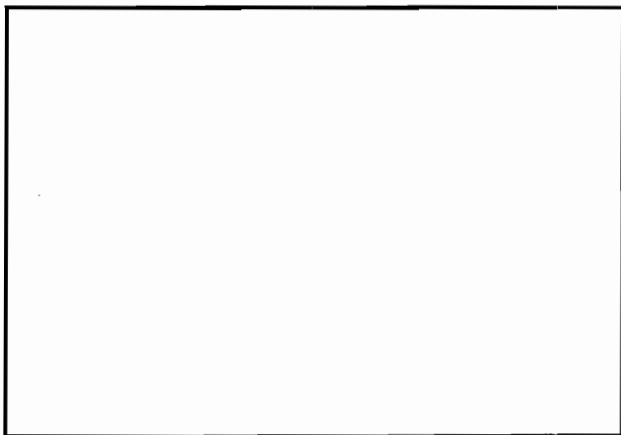
2003

GROUND



A15

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-16

STATION

27+30

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	5%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerselweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	3%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	92%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

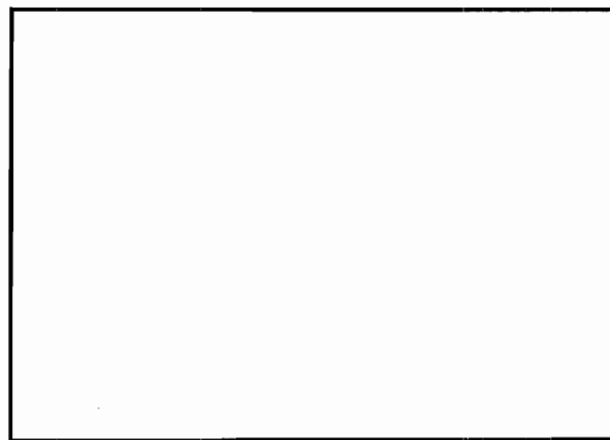
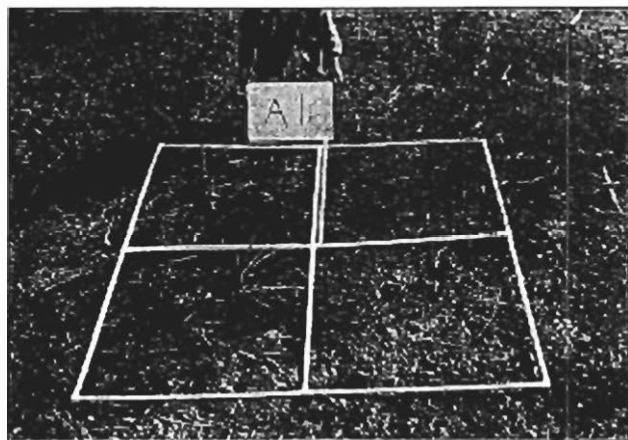
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

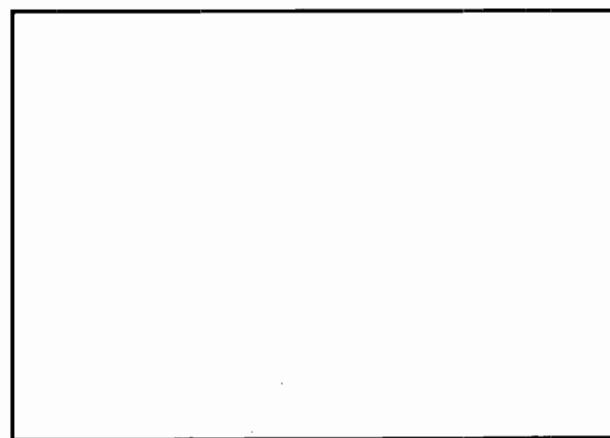
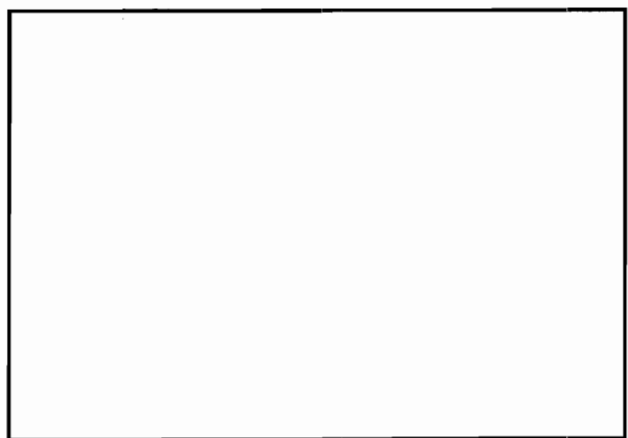
2003

GROUND



A16

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-17

STATION

29+12

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	20%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	40%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	3%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	37%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

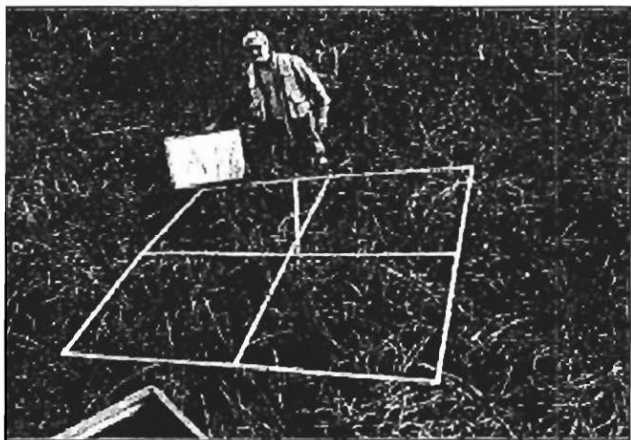
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

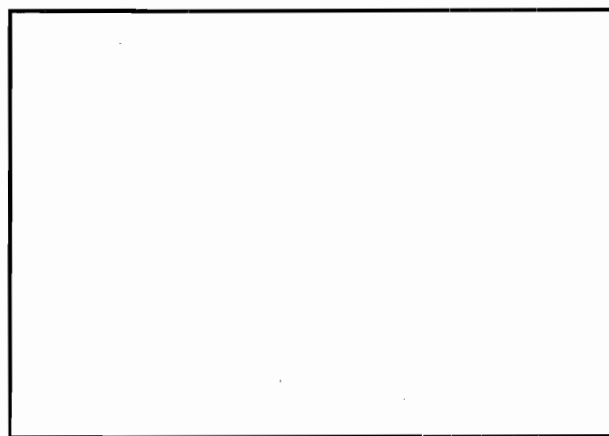
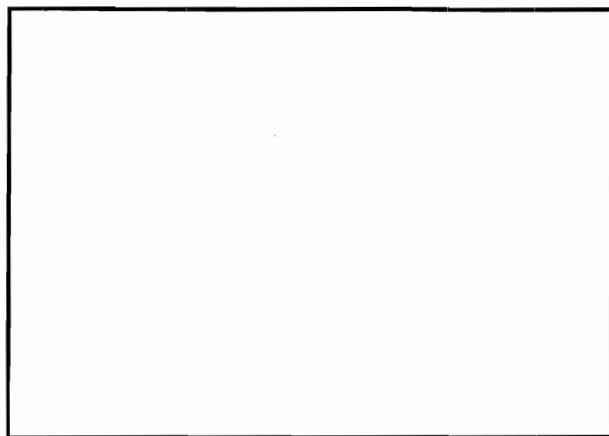
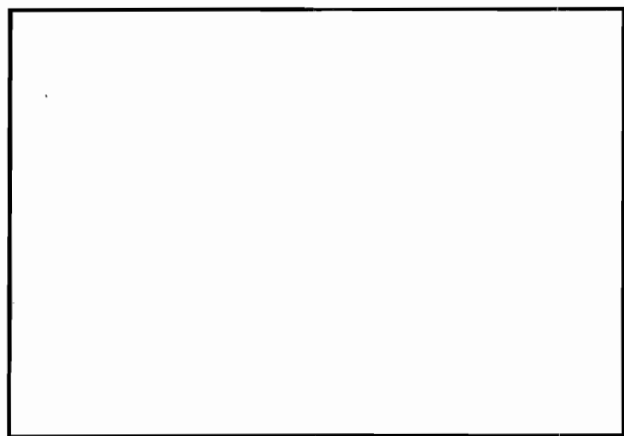
2003

GROUND



A17

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-18

STATION

30+94

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	35%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickersweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	1%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	64%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

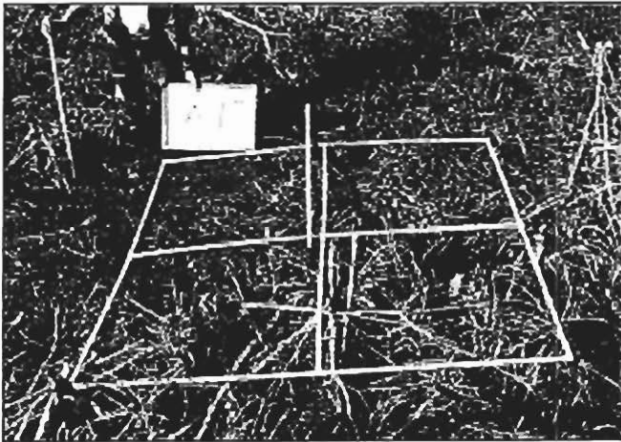
Wildlife Indicators (tracks, scat, nests)

dead melaleuca +
sawgrass?

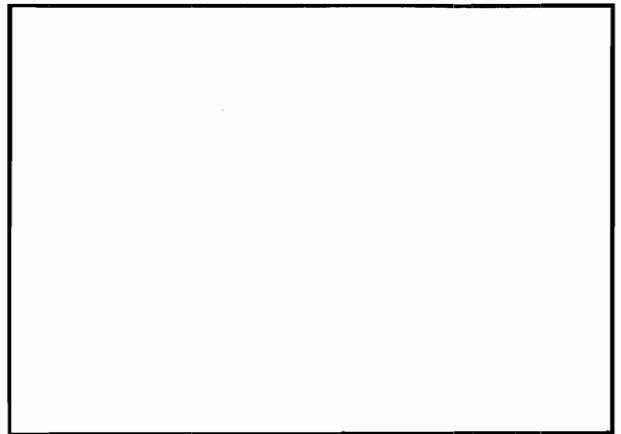
11/9/02

2003

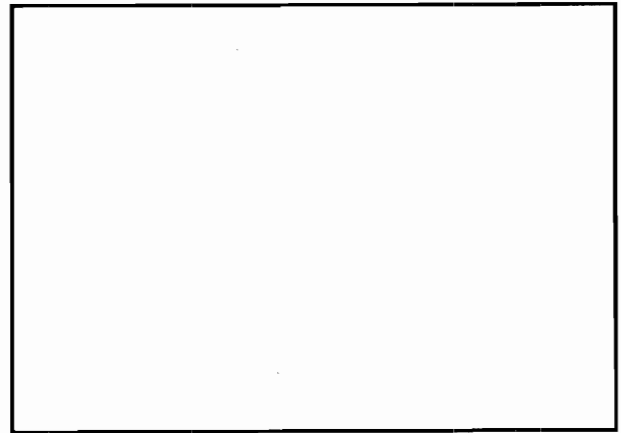
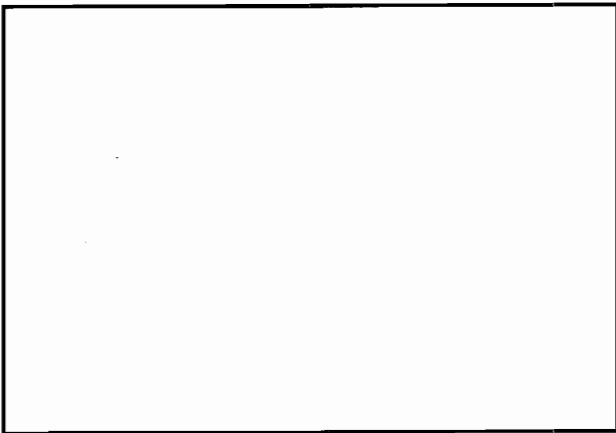
GROUND



A18



CANOPY



Pennsco Monitoring Project - Data Form

TRANSECT / POINT

A-19

STATION

32+76

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	50%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	25%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	25%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

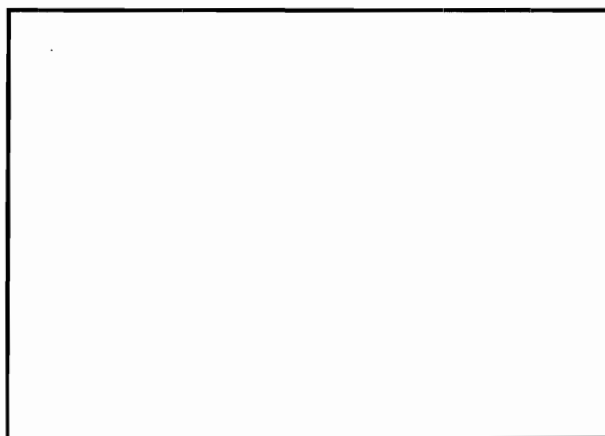
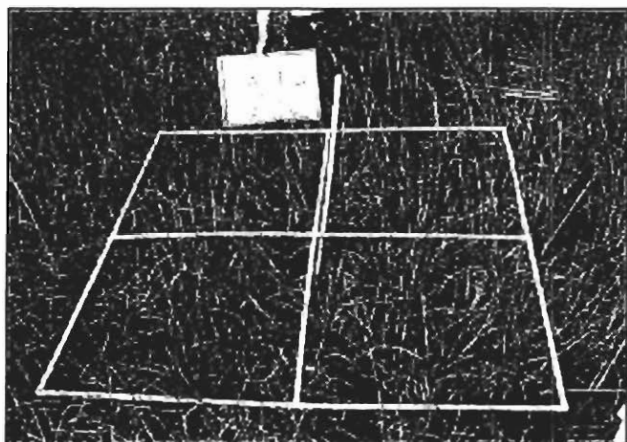
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

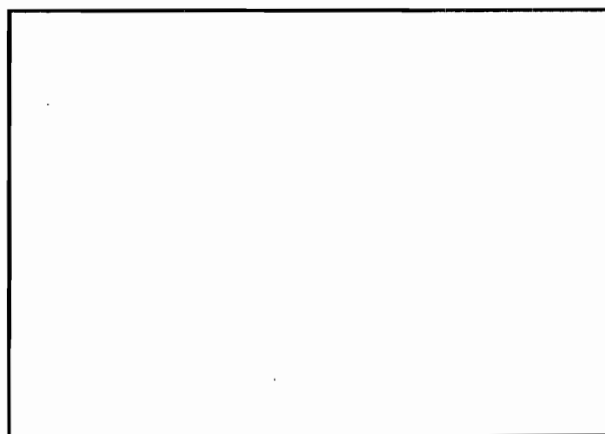
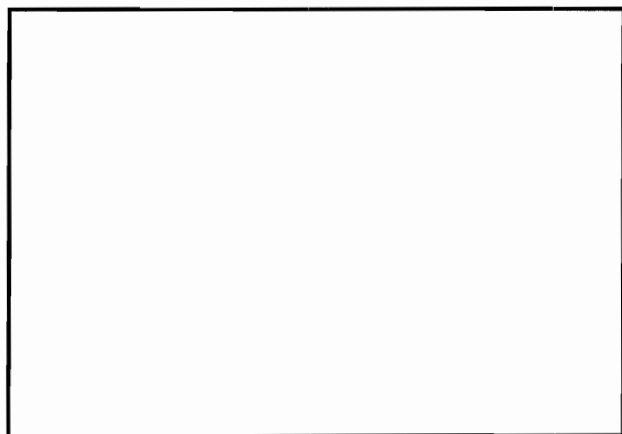
2003

GROUND



A19

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-20

STATION

34+58

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	30%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	30%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	39%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

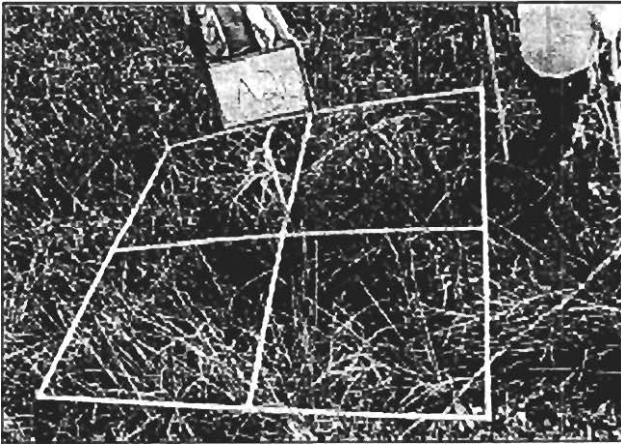
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

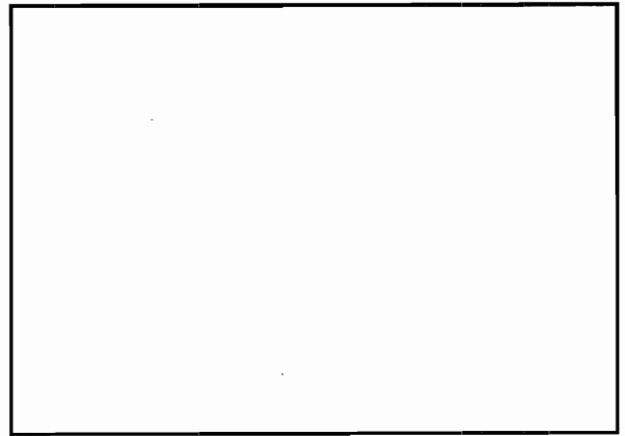
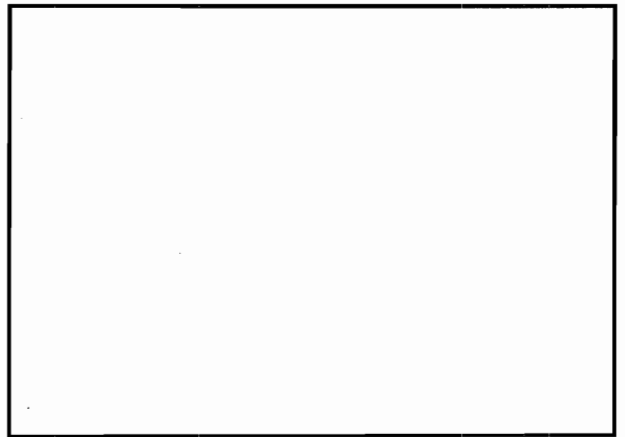
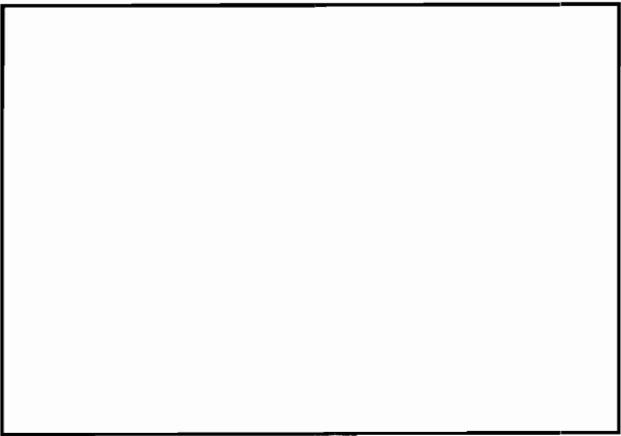
2003

GROUND



A20

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-21

STATION

36+40

SUBMERGED AQUATICS

		11/9/02	2003
Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	20%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	25%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	55%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

4.5" standing water

Aquatic Macrofauna

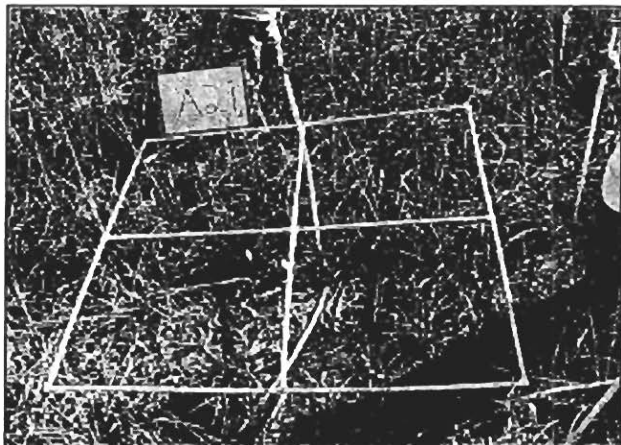
Few fish frye 2cm

Wildlife Indicators (tracks, scat, nests)

None

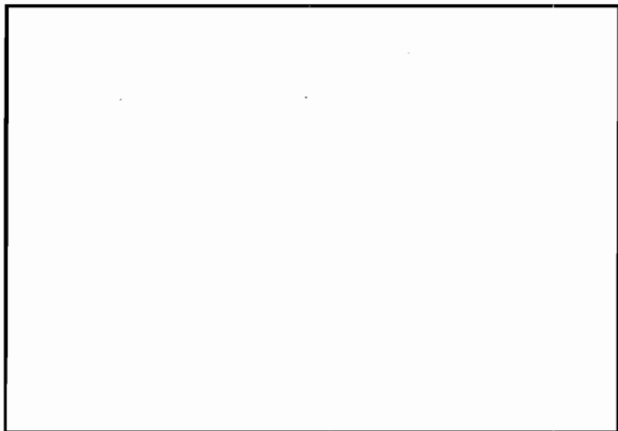
GROUND

11/9/02

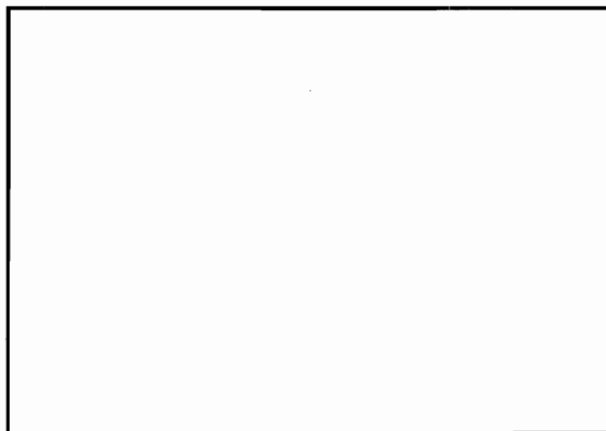
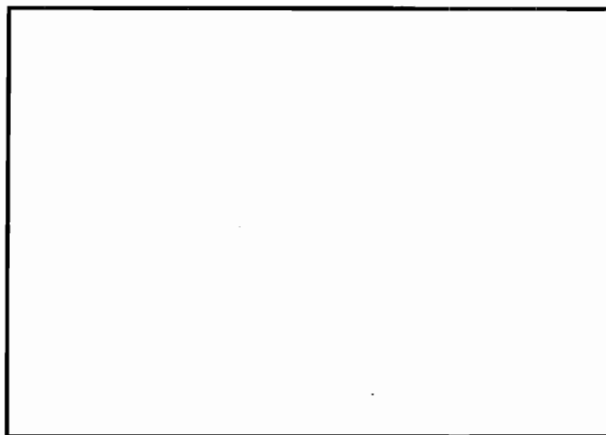


A21

CANOPY



2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-22

STATION

38+22

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	85%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	14%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

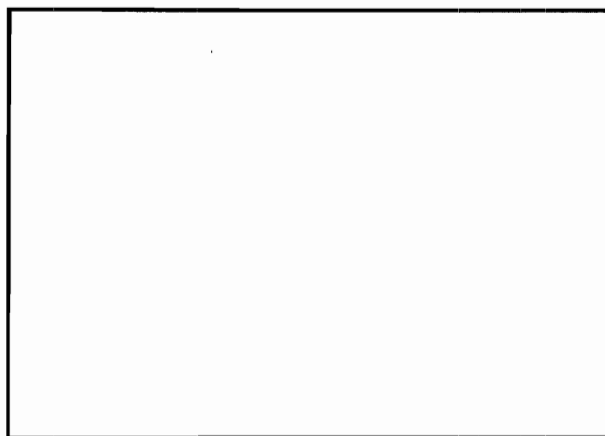
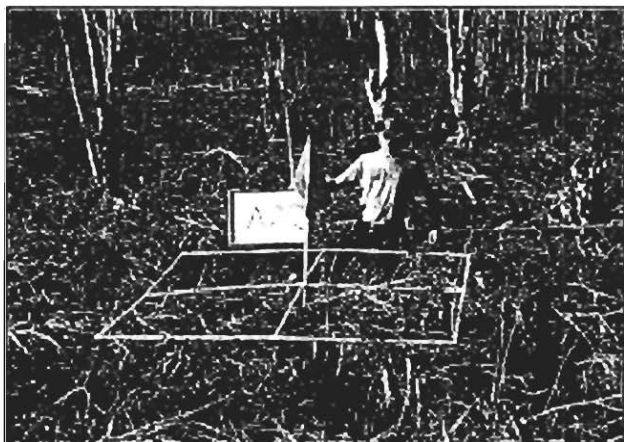
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

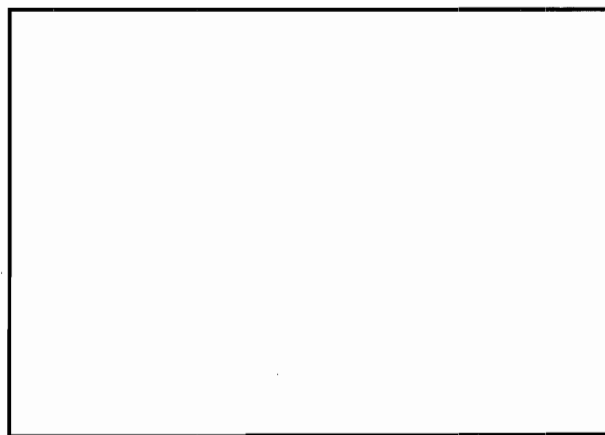
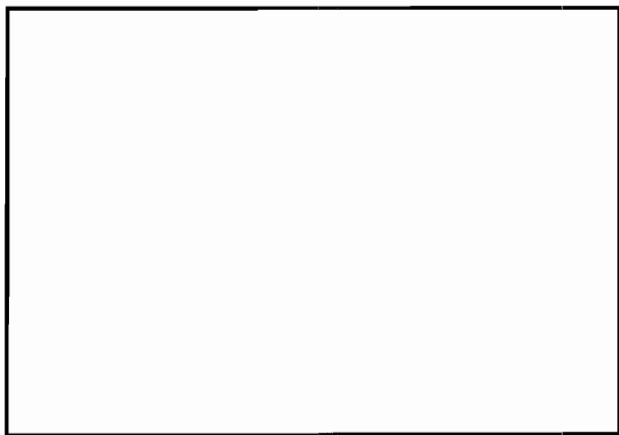
2003

GROUND



A22

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-23

STATION

40+04

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	5%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	95%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	20%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		80%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

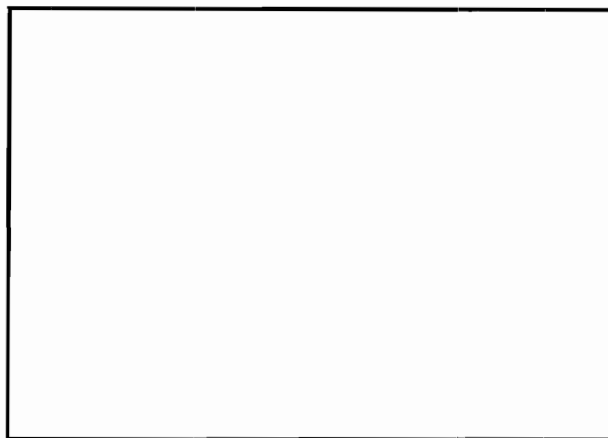
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

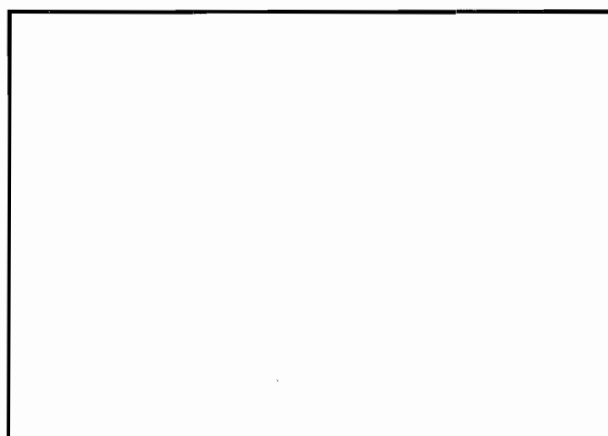
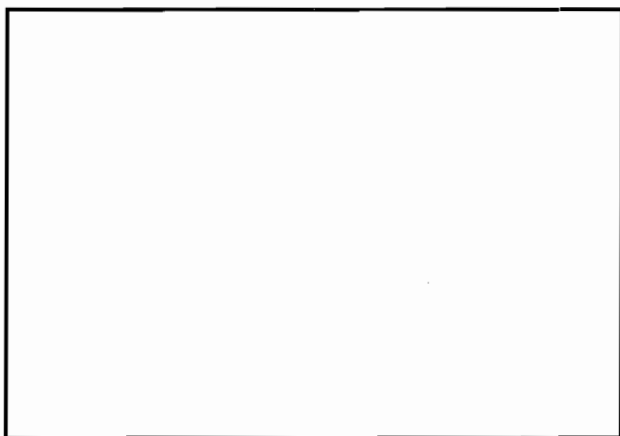
2003

GROUND



A23

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-24

STATION

41+86

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	50%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickersweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	49%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	30%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		70%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Saw grass 3-4' tall

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

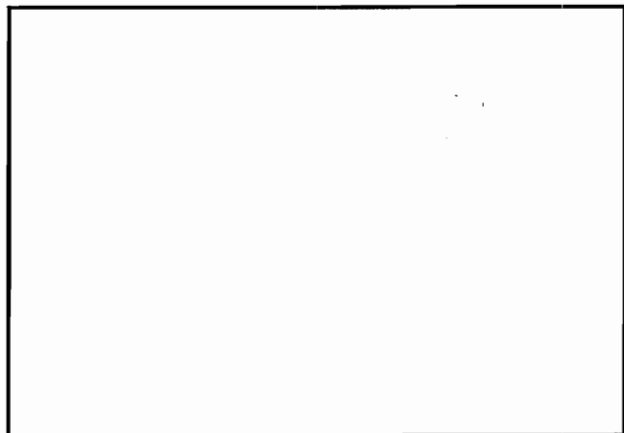
GROUND

11/9/02



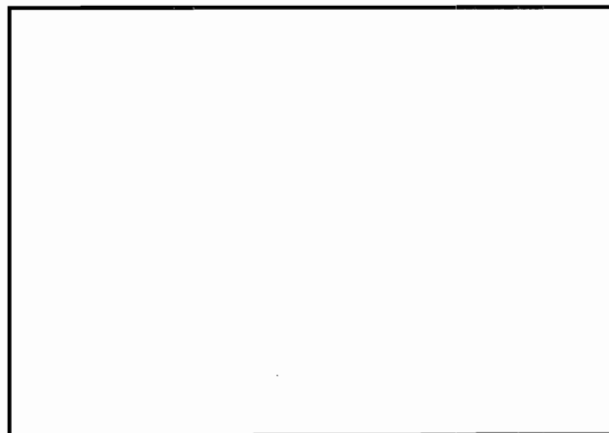
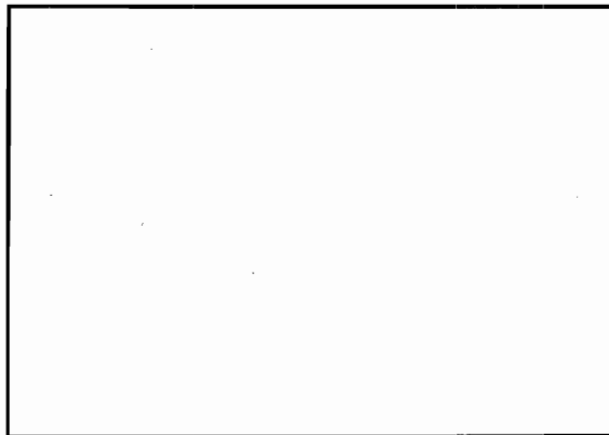
A24

CANOPY



what is all this
scrub stuff?
Sawgrass
50% dead
Mel. still alive

2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-25

STATION

43+68

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	5%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	70%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	25%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	10%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		90%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

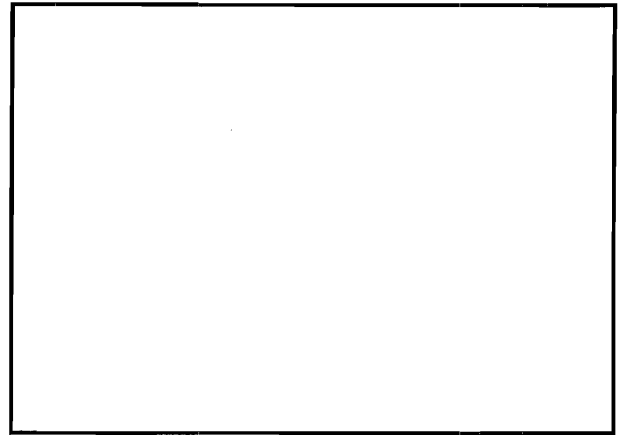
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

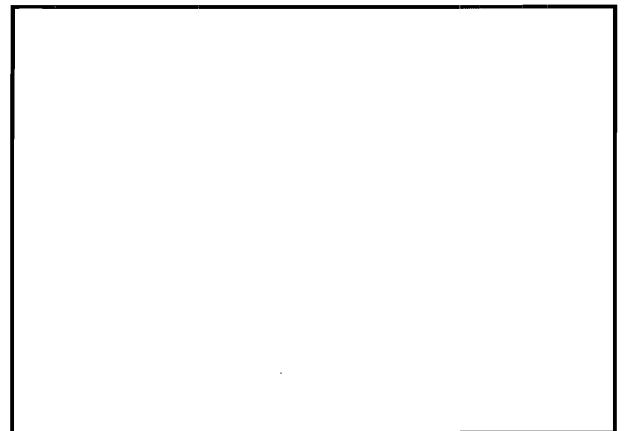
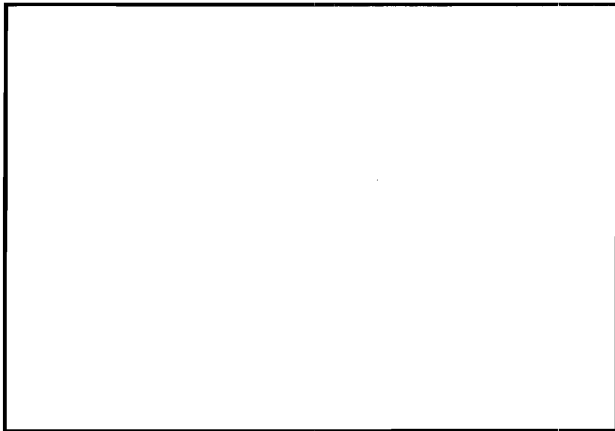
2003

GROUND



A25

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-26

STATION

45+50

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	90%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	5%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	5%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

looks like
rice + dead
melaleuca?
seedlings - 90
no sign - 90

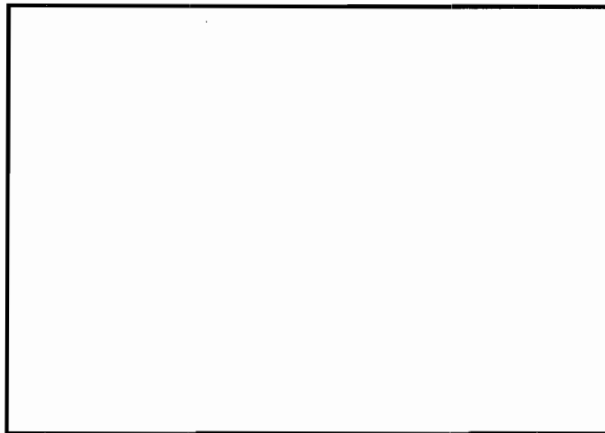
11/9/02

2003

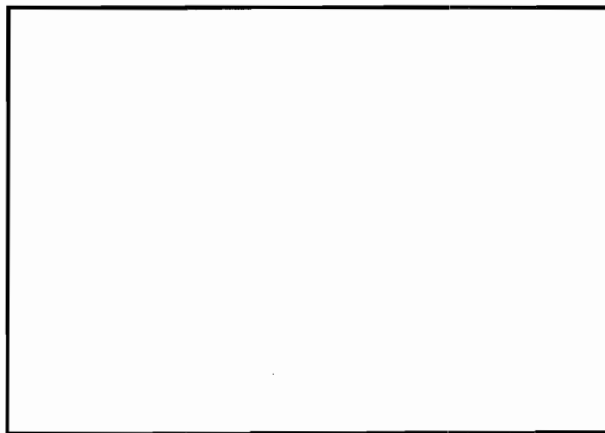
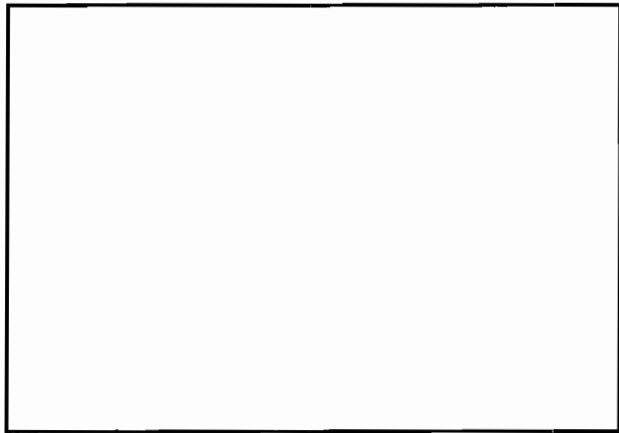
GROUND



A26



CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-27

STATION

47+32

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	90%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	10%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	10%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		90%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

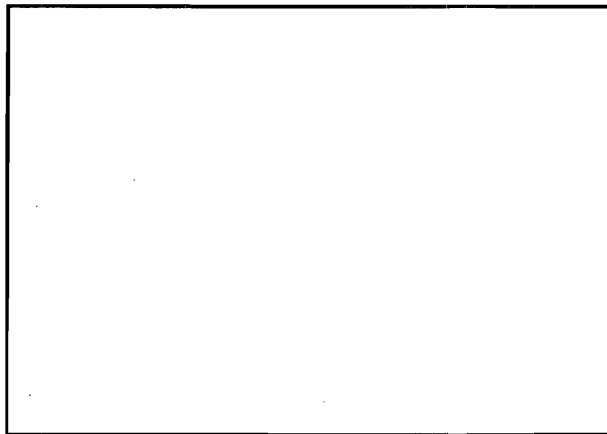
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

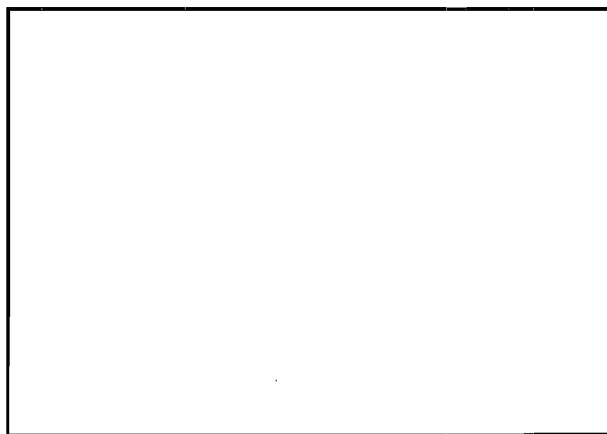
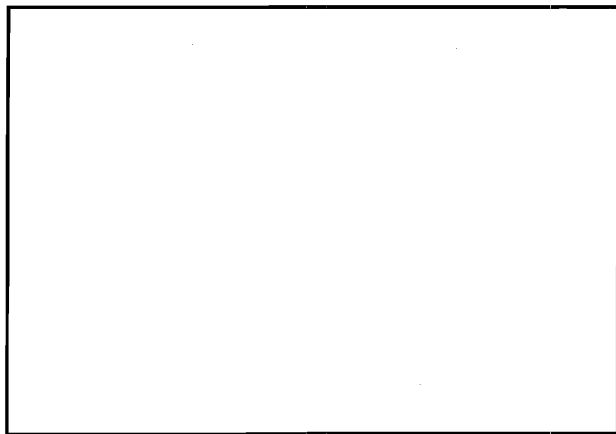
2003

GROUND



A27

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT A-28

STATION 49+14

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	80%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickrelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	20%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	20%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		80%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

4.5" standing water

Aquatic Macrofauna

Few fry 1cm in length

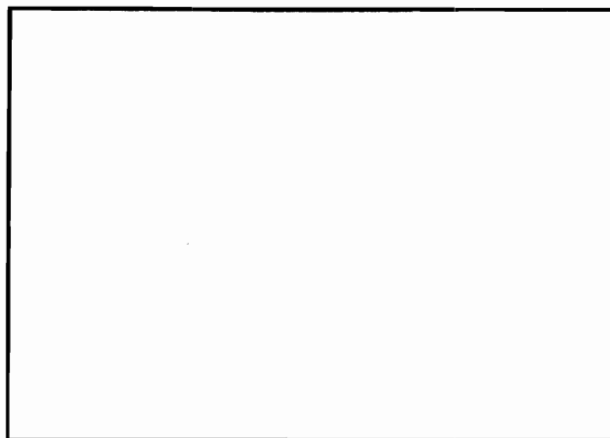
Wildlife Indicators (tracks, scat, nests)

none

11/9/02

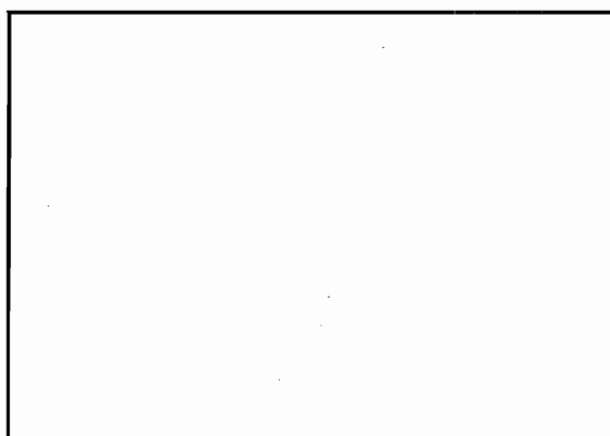
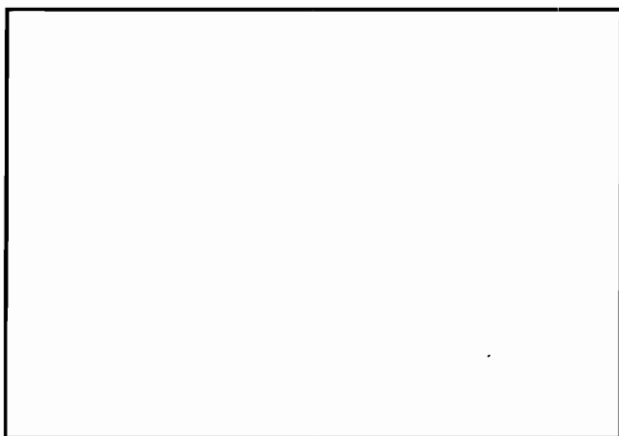
2003

GROUND



A28

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-29

STATION

50+96

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	35%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	25%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	40%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	20%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		80%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

GROUND

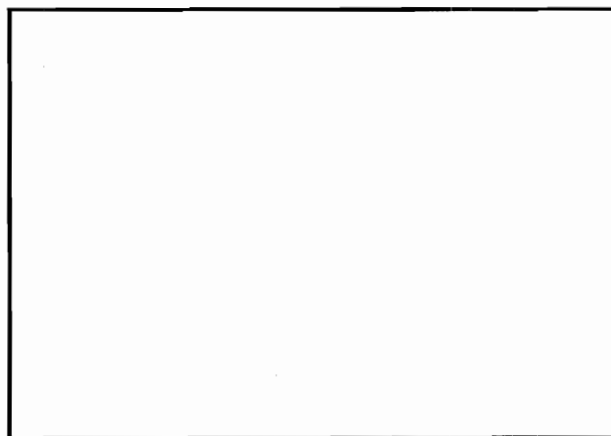
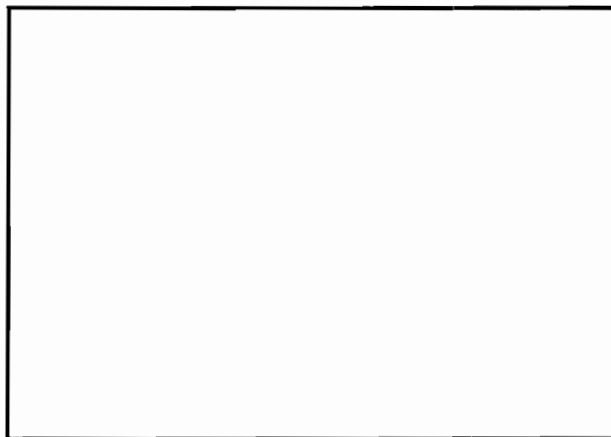
11/9/02



A29

CANOPY

2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-30

STATION

52+78

SUBMERGED AQUATICS

Common Name	Scientific Name	11/9/02 % Coverage	2003 % Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw-grass (Alive)	<i>Cladium jamaicense</i>	15%	
Saw-grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweeds	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	1%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	84%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	10%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		90%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

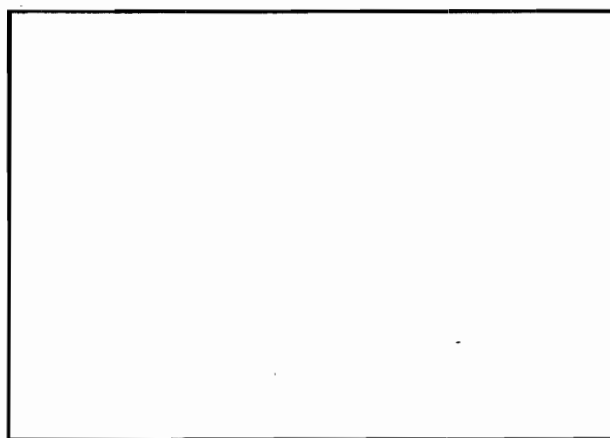
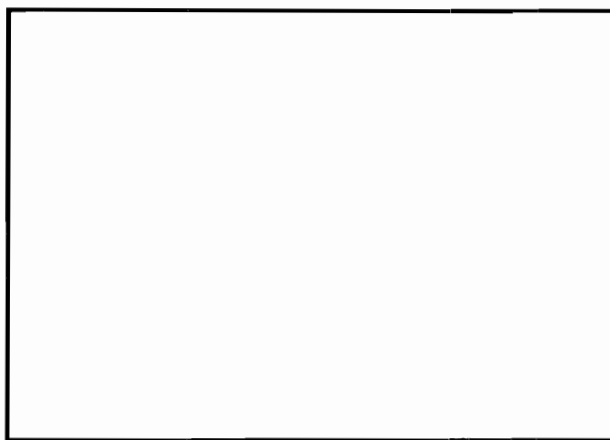
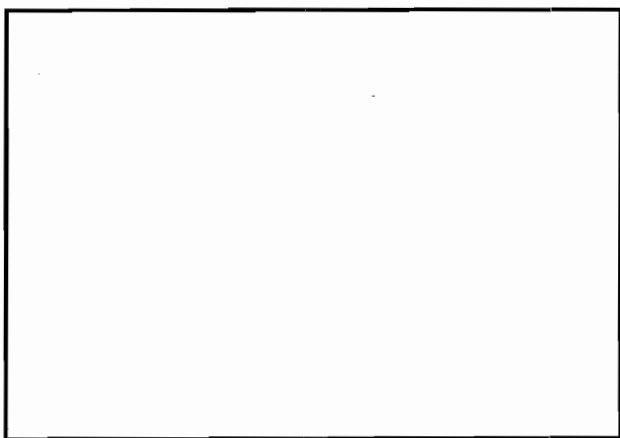
2003

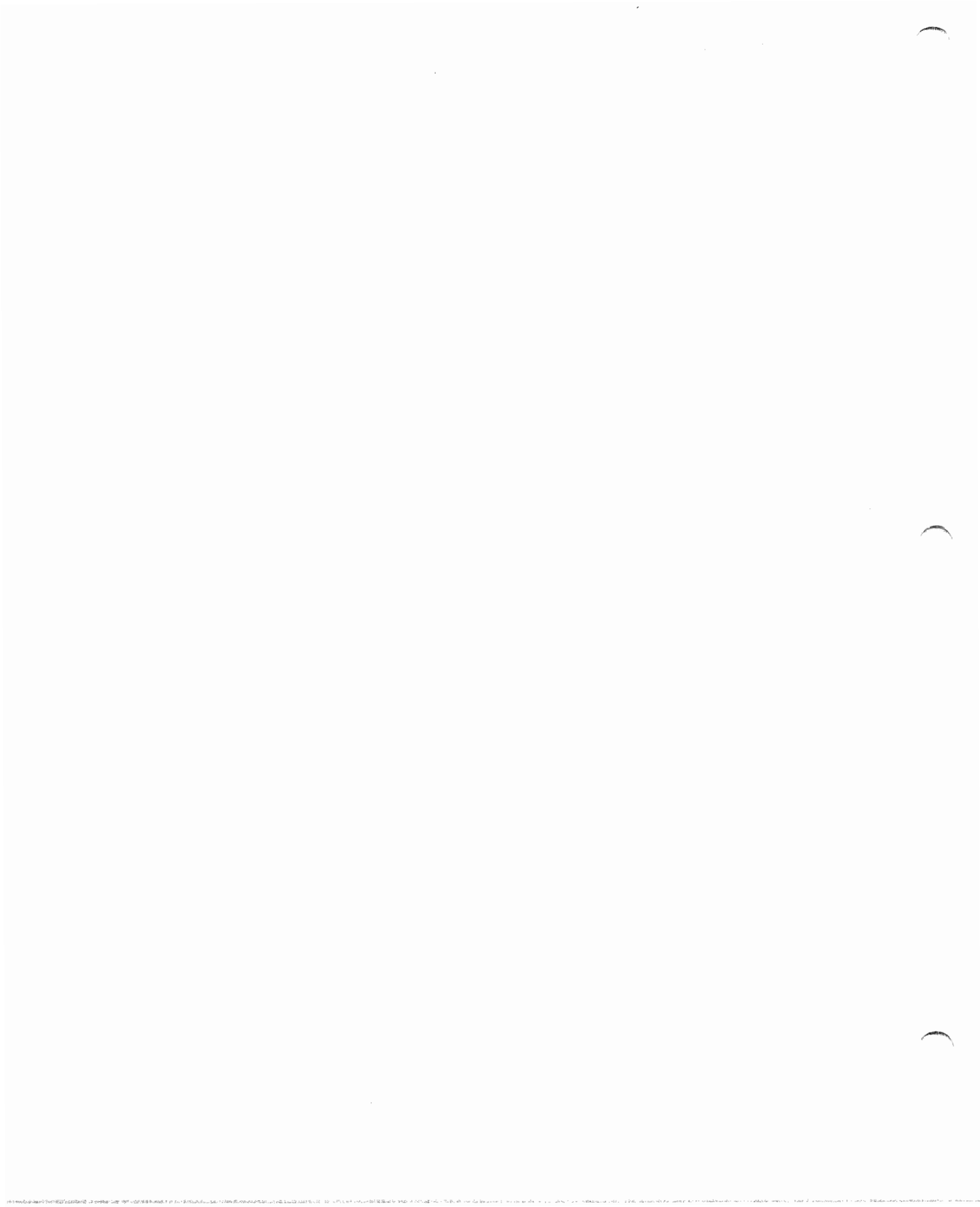
GROUND



A30

CANOPY





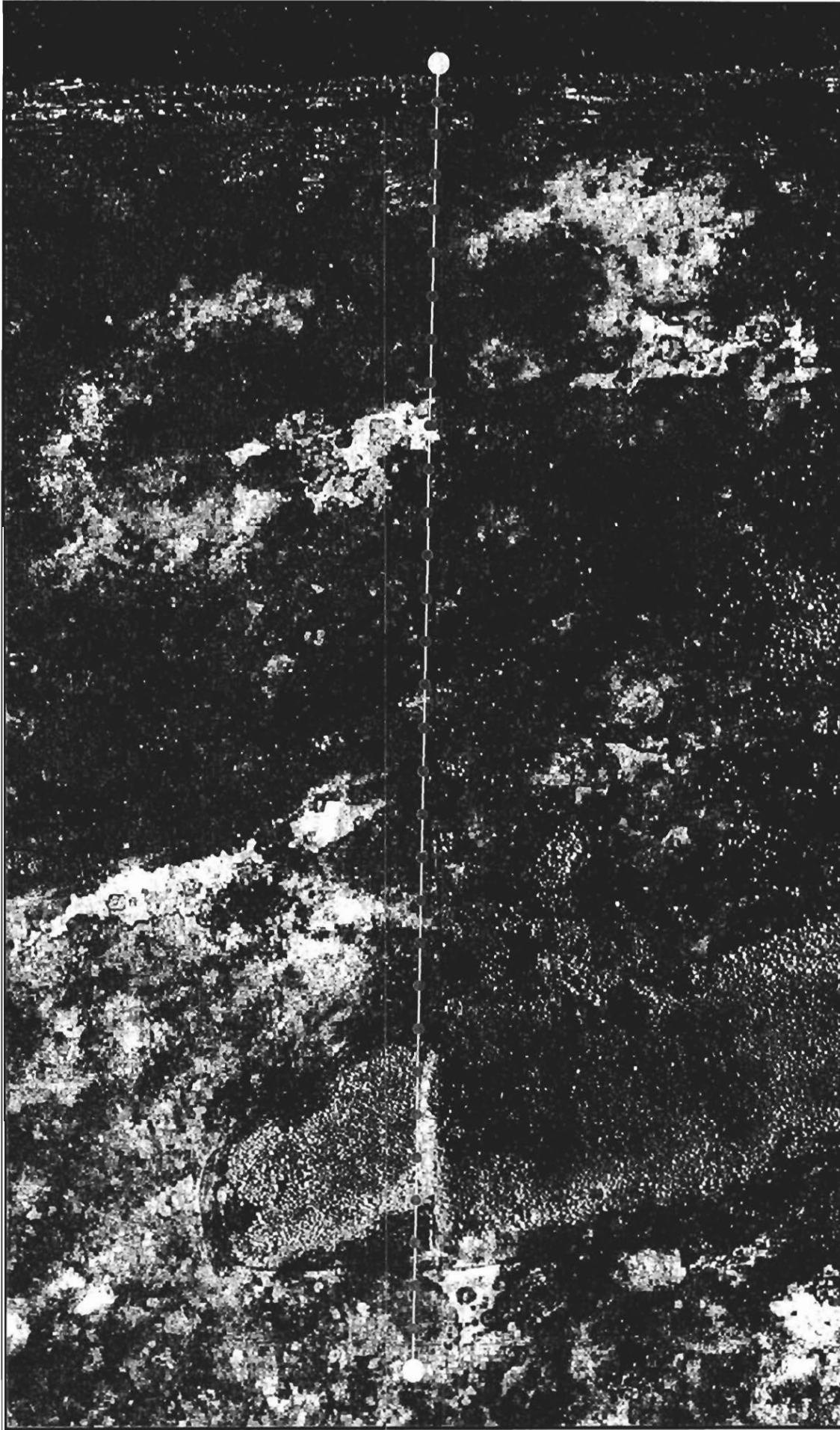
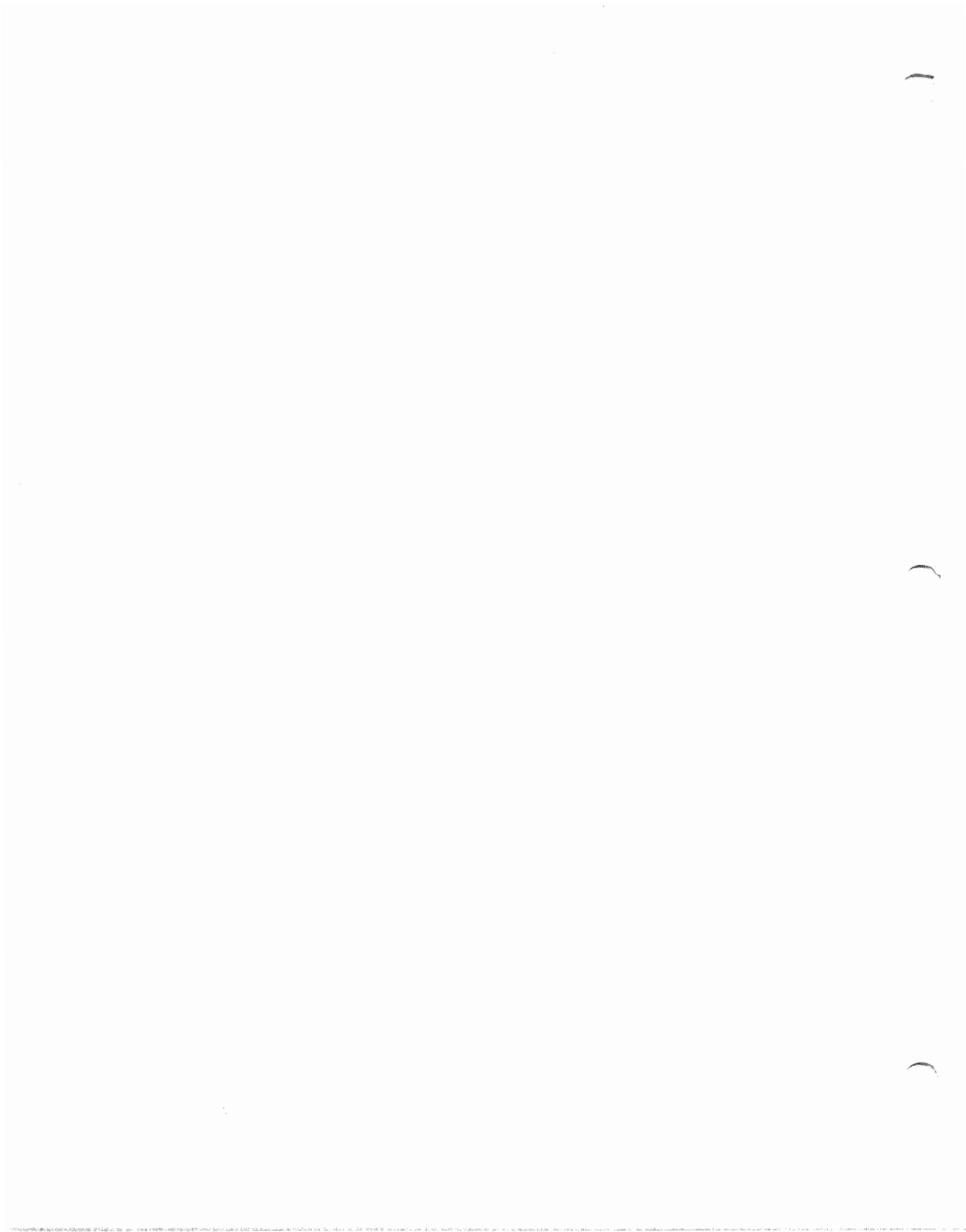


Figure 4. Transect B

- End Points of Segment
- Data Collection Locations



300 0 300 Feet



TRANSECT B

Narrative

Transect B is located in Section 5, Township 53, Range 39 (Cell 26 – Pennsuco Exotic Treatment Area). It starts at point B1 approximately one mile east of Krome Avenue (GPS Coordinates Latitude 25° 51' 20.39", Longitude 80° 28' 01.70"), and extends one mile east to Point B30 at the Dade-Broward Levee (Figure 4). One community type, the wet prairie, was identified for transect B. This wet prairie was primarily dominated by saw-grass (*Cladium jamaicense*). Photo points B8 and B9, though dominated by Pickerelweed (*Pontederia lanceolata*) and Arrowhead (*Sagittaria graminea*), have punk tree (*Melaleuca quinquenervia*) saplings visible in all directions outside the grid. Punk tree seedlings occupy one percent of the herbaceous species at photopoint B7, where the open water area totals 56 percent. The appearance of the exotic and invasive punk tree vegetation indicates a shift in the community types from saw-grass and aquatic emergent in the area.

Water depths ranged from 11 to 14 inches at the four photopoint locations (B7, B14, B21, and B28). A few two-centimeter fry were observed at photopoints B13 and B21. A few small snails about five centimeters in length were noted at B22. One Cuban Tree frog was photographed on saw-grass at B18.

Much of the punk tree vegetative communities were dead, as shown in photos B8 and B9, due to enhancement efforts, which called for eradication of exotic and invasive species. Control efforts consisted of herbicidal treatment and a physical removal program, followed by a controlled burn.

In summary, the percent vegetative coverage, by layer, for this transect identified:

- In the submerged aquatics layer, one percent Bladderworts (*Utricularia spp.*).
- In the herbaceous species layer, 63 percent live saw-grass, one percent Southern Swamp Lily (*Crinum Americanum*), and one percent Button Bush (*Cephalanthus occidentalis*).
- In the sapling/vine layer, one percent live punk trees.
- In the overstory layer, one percent dead punk trees.

Pennsco Monitoring Project - Summary Sheet

TRANSECT

"B"

Total Length

5280'

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0.00%	
Bladderwort	<i>Utricularia foliosa</i>	0.67%	
Bladderwort	<i>Utricularia purpurea</i>	0.33%	
Ludwigia	<i>Ludwigia repens</i>	0.03%	
Open/Void	N/A	98.97%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	62.70%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0.00%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0.17%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0.00%	
Southern Swamp Lily	<i>Crinum americanum</i>	0.70%	
Pickernelweed	<i>Pontederia lanceolata</i>	0.43%	
Yellowtops	<i>Flaveria linearis</i>	0.00%	
Arrowhead	<i>Sagittaria graminea</i>	0.33%	
Floating-Heart	<i>Nymphoides aquatica</i>	0.07%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0.00%	
Cattail	<i>Typha latifolia</i>	0.00%	
Button Bush	<i>Cephalanthus occidentalis</i>	1.00%	
Maiden-Cane	<i>Panicum hemitomum</i>	0.10%	
Shield Fern	<i>Thelypteris kunthii</i>	0.00%	
Swamp Fern	<i>Blechnum serrulatum</i>	0.00%	
Elm	<i>Trema micrantha</i>	0.00%	
Uk9	<i>Malvaceae</i>	0.00%	
Open Water/Mud/Void	N/A	34.50%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1.00%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0.00%	
Elm	<i>Trema micrantha</i>	0.00%	
TBD		0.00%	
Open/Void		99.00%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0.00%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	1.17%	
Golden Fig	<i>Ficus Aurea</i>	0.00%	
Open/Void		98.83%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

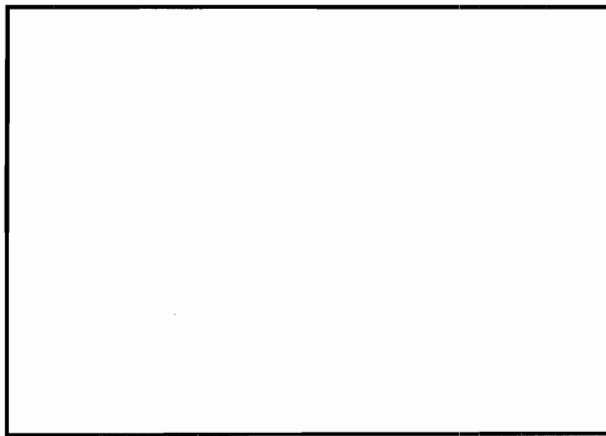
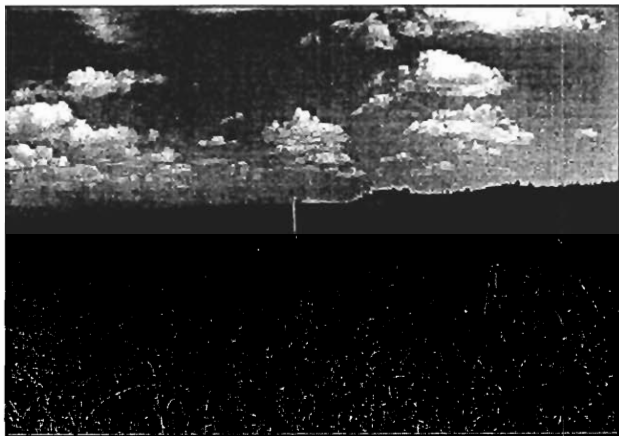
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

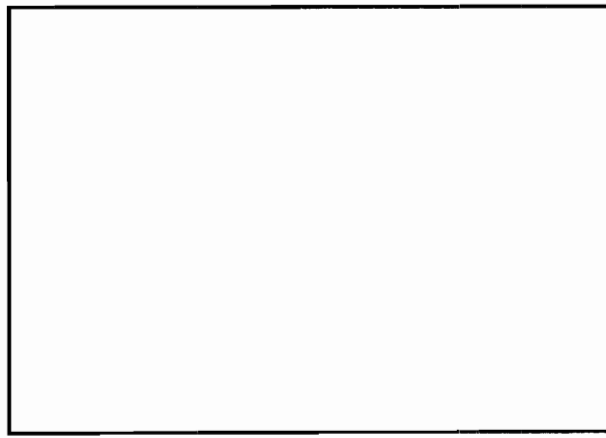
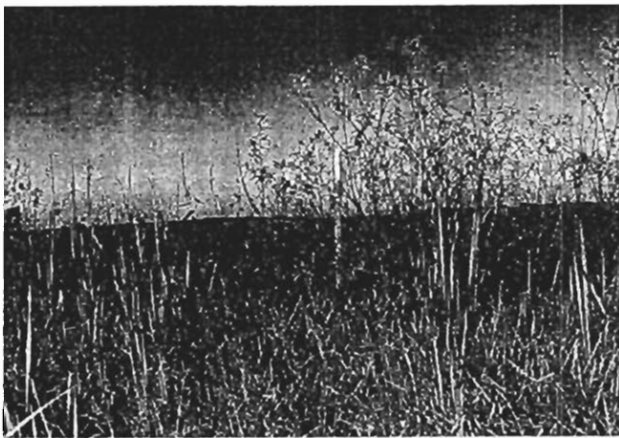
2003

0+00 Panoramic - Looking east



B transect

52+78 Panoramic - Looking West



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-1

STATION

0+00

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	48%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	52%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

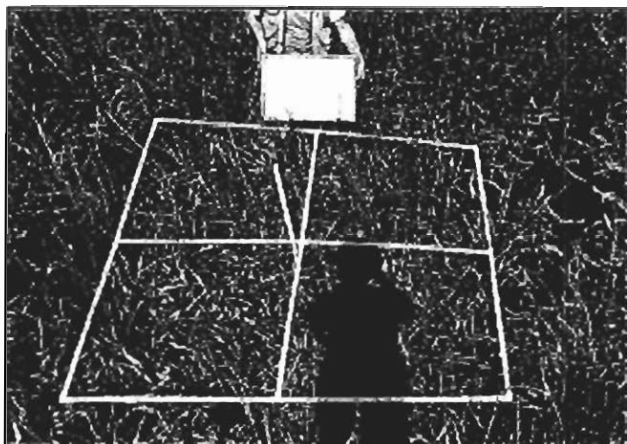
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

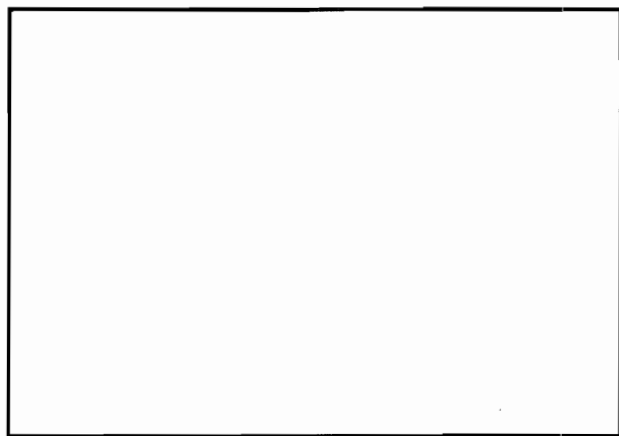
11/9/02

GROUND

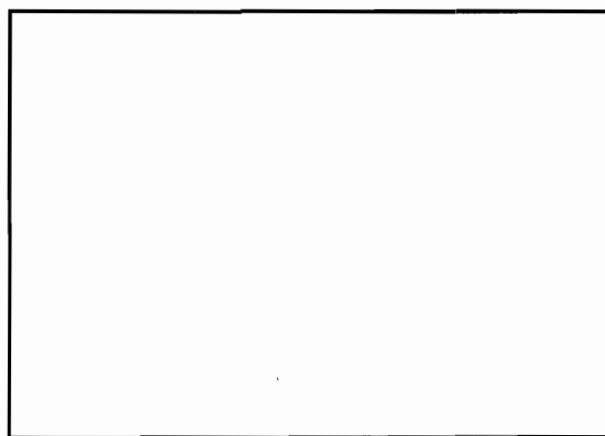
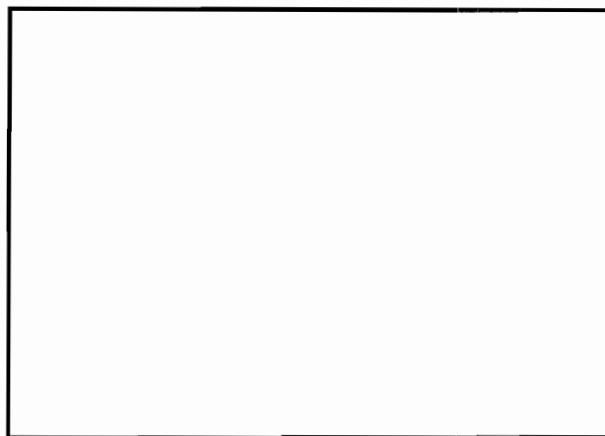


B1

CANOPY



2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-2

STATION

1+82

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	65%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	35%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

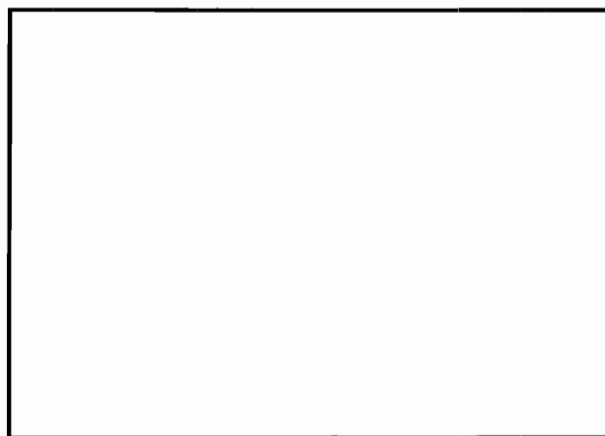
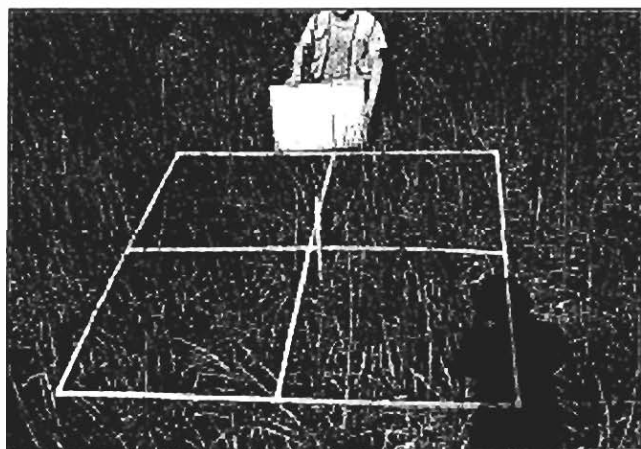
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

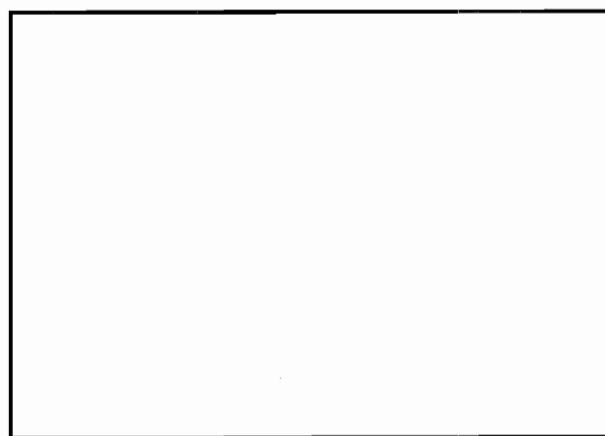
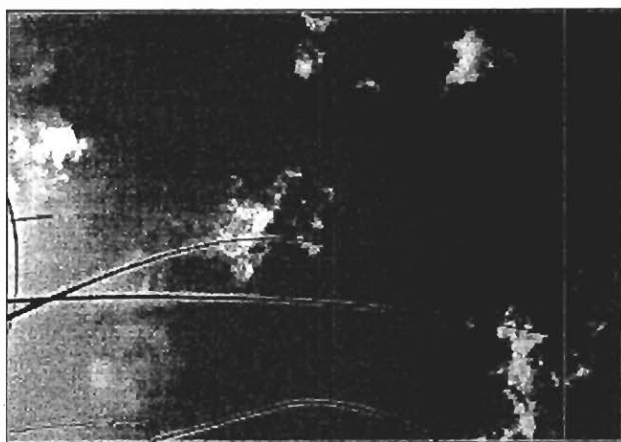
2003

GROUND



B2

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-3

STATION

3+64

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	85%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	15%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

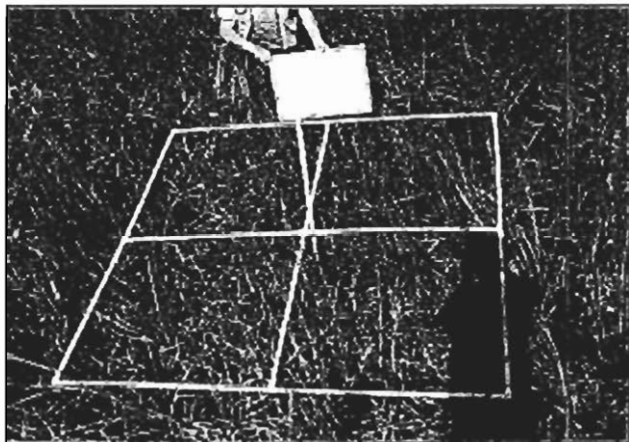
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

GROUND

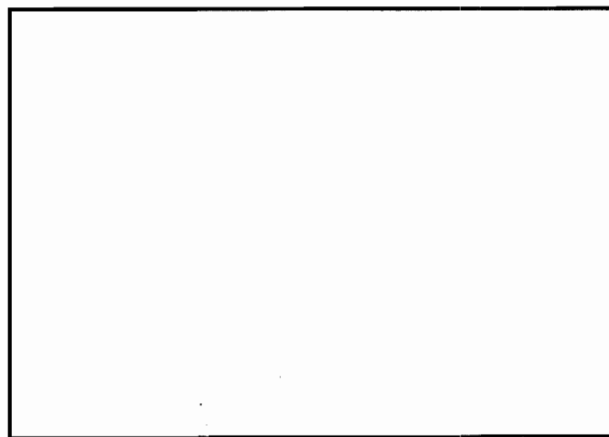
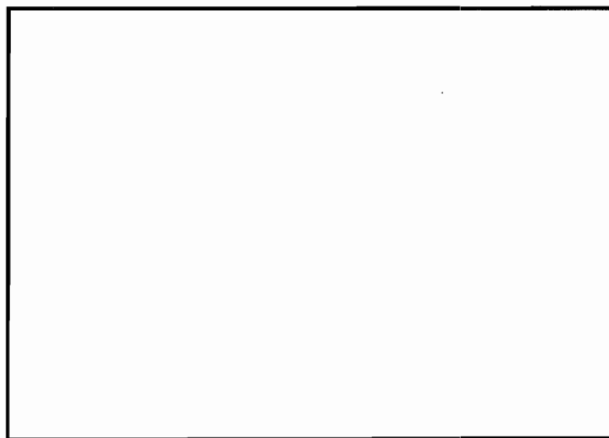


B3

CANOPY



2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-4

STATION

5+46

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	60%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	3%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	1%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomon</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	36%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

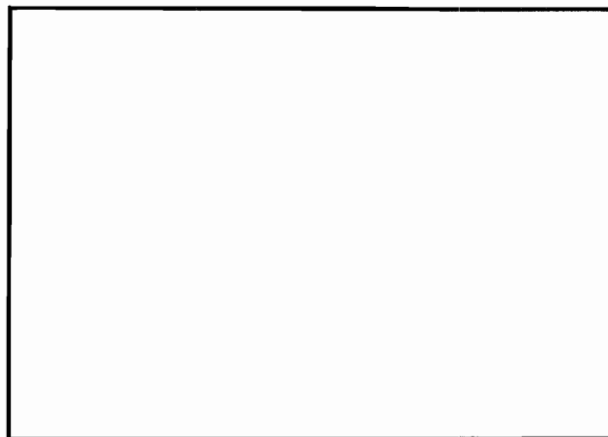
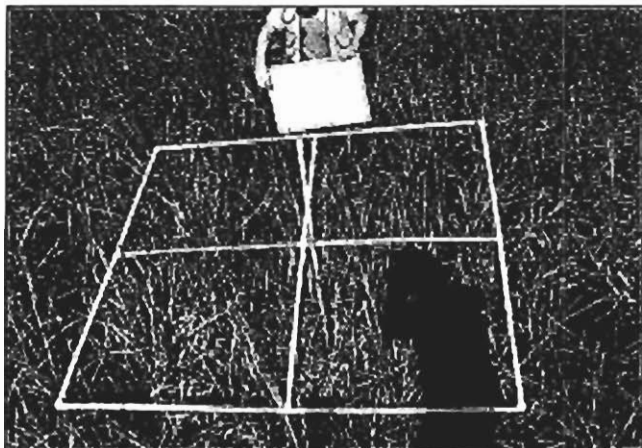
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

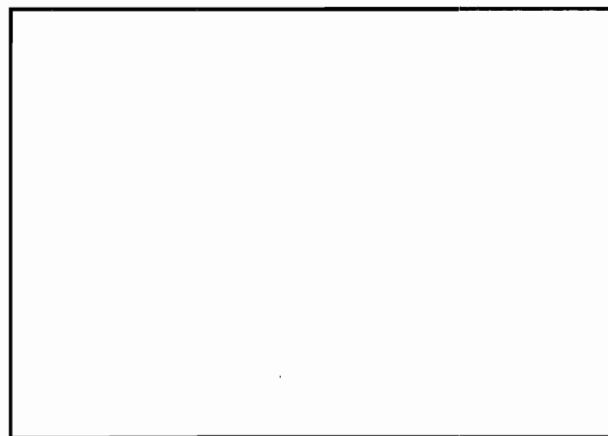
2003

GROUND



B4

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-5

STATION

7+28

SUBMERGED AQUATICS

		11/9/02	2003
Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	90%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	10%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

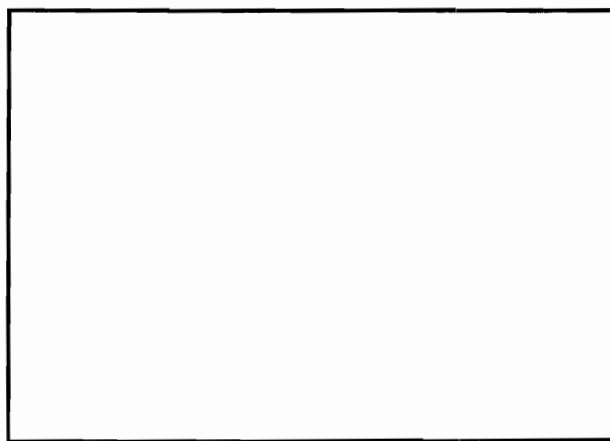
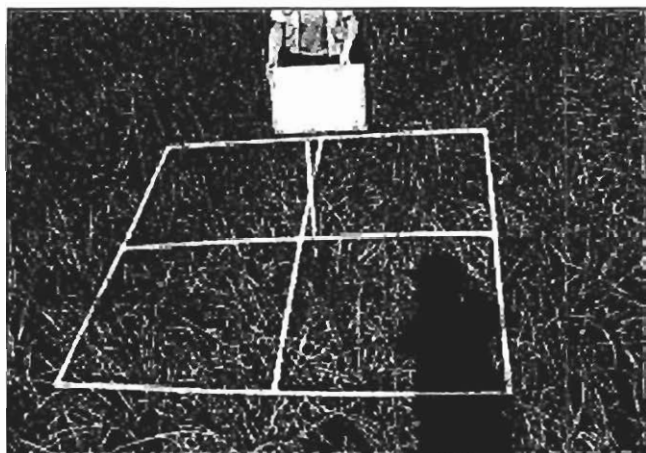
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

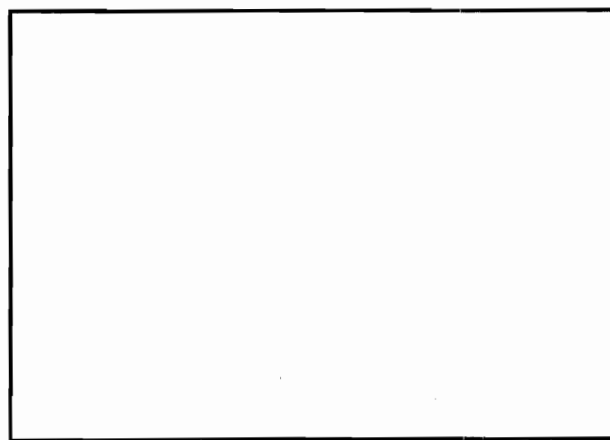
2003

GROUND



B5

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-6

STATION

9+10

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	44%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	55%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

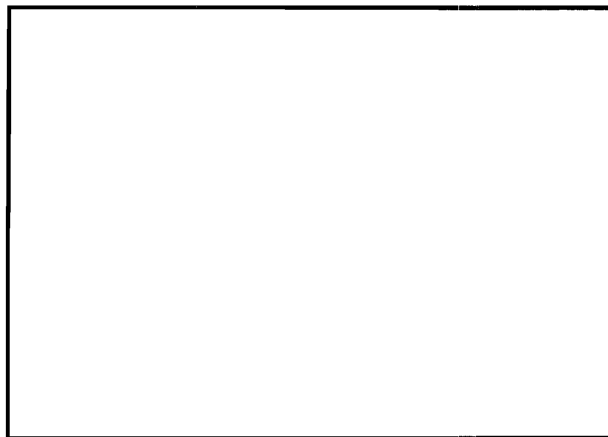
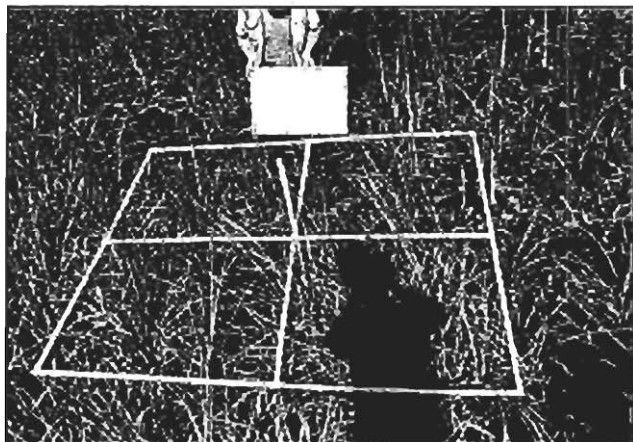
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

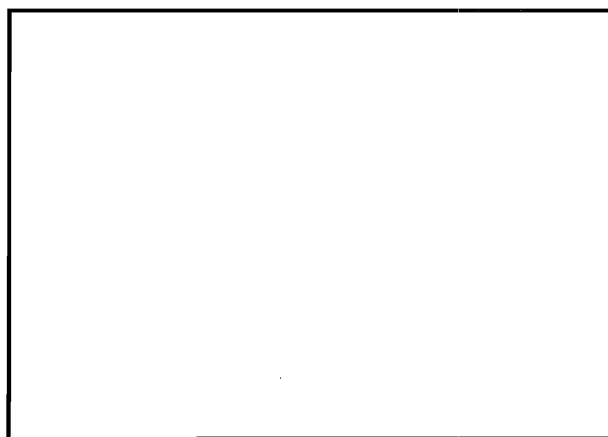
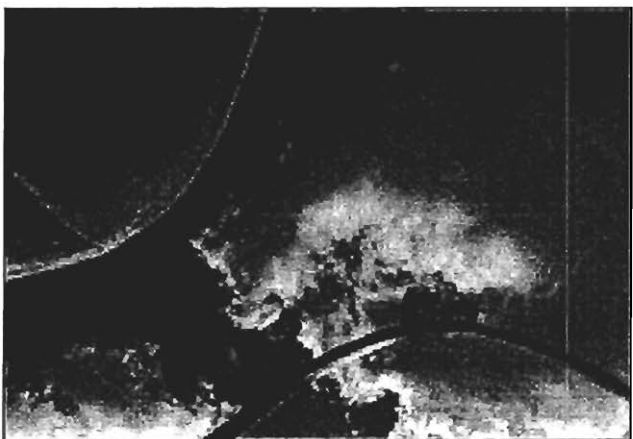
2003

GROUND



B6

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-7

STATION

10+92

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	5%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	8%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	30%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	56%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

12" of standing water

Aquatic Macrofauna

Few fry 1 to 2cm in length

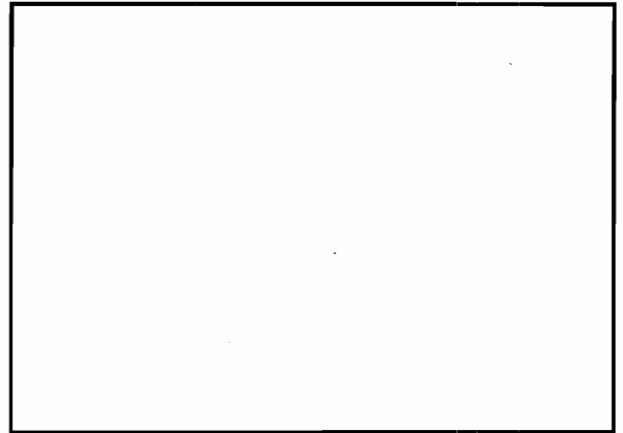
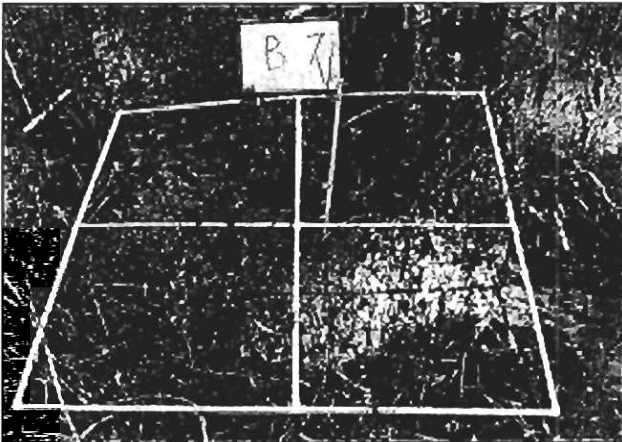
Wildlife Indicators (tracks, scat, nests)

None

11/9/02

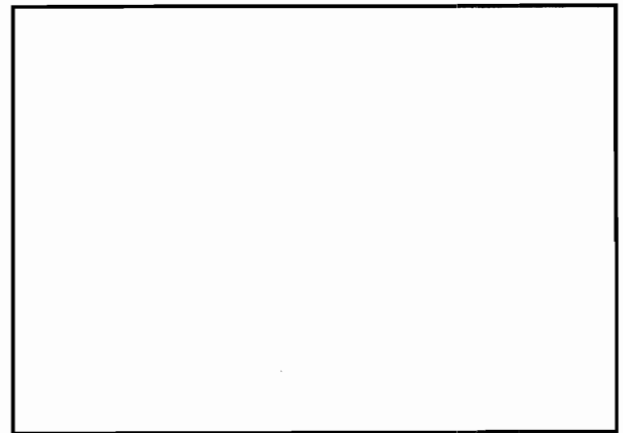
2003

GROUND



B7

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-8

STATION

12+74

SUBMERGED AQUATICS

Common Name	Scientific Name	11/9/02 % Coverage	2003 % Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	10%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	90%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickeralweed	<i>Pontederia lanceolata</i>	2%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	2%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	96%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

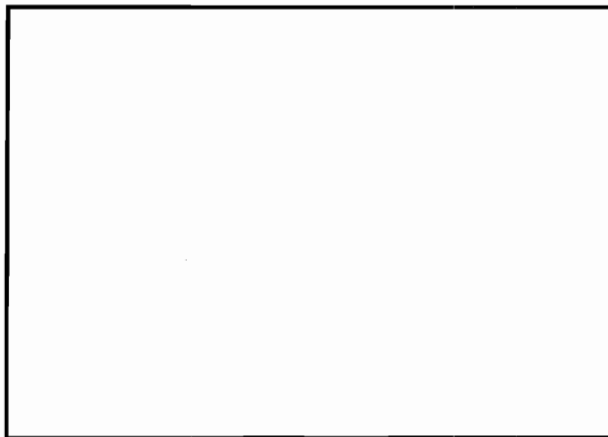
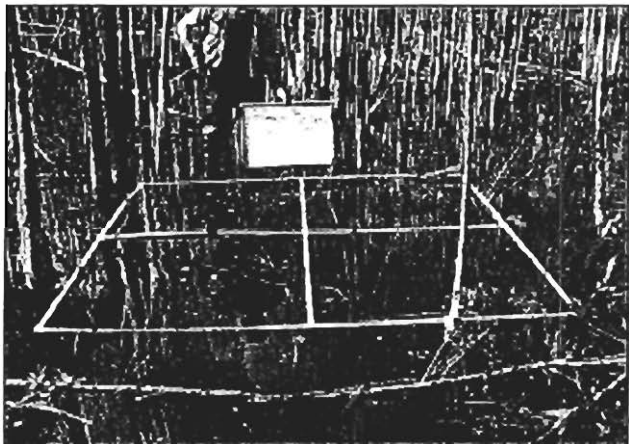
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

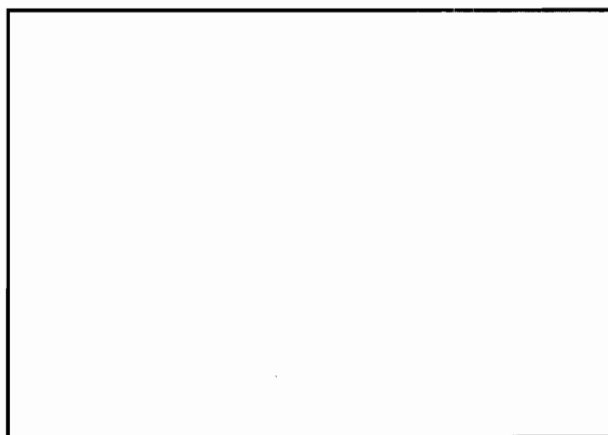
2003

GROUND



B8

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-9

STATION

14+56

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	10%	
Bladderwort	<i>Utricularia purpurea</i>	10%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	80%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	1%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	99%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	35%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		65%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

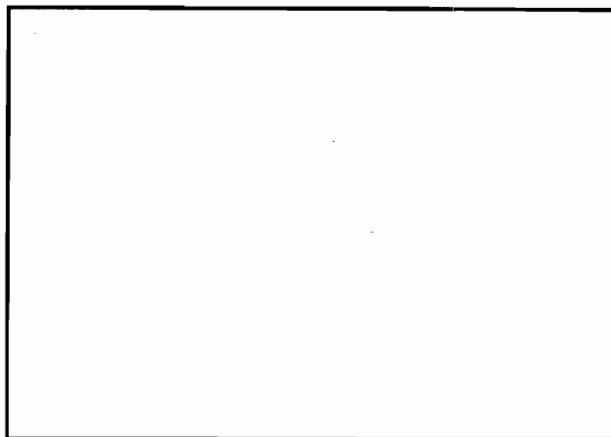
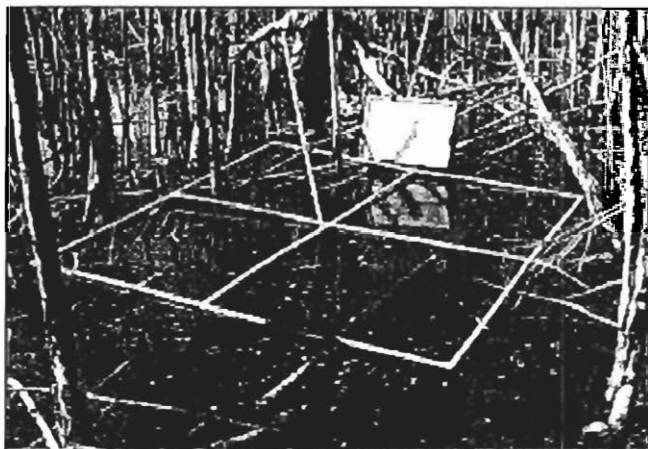
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

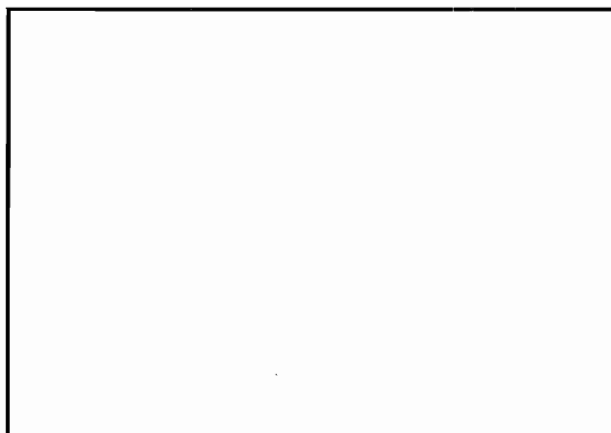
2003

GROUND



B9

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-10

STATION

16+38

SUBMERGED AQUATICS

Common Name	Scientific Name	11/9/02 % Coverage	2003 % Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	90%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	10%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

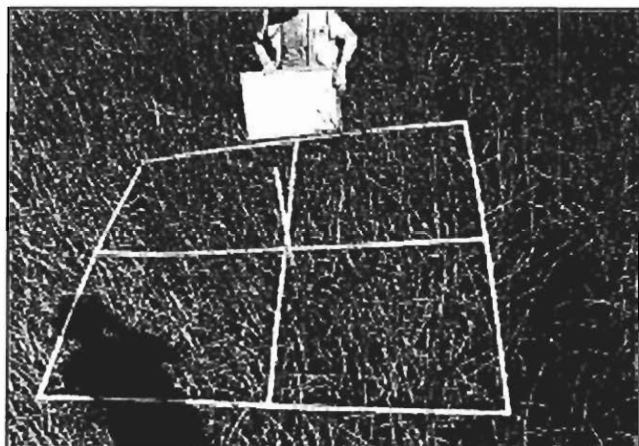
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

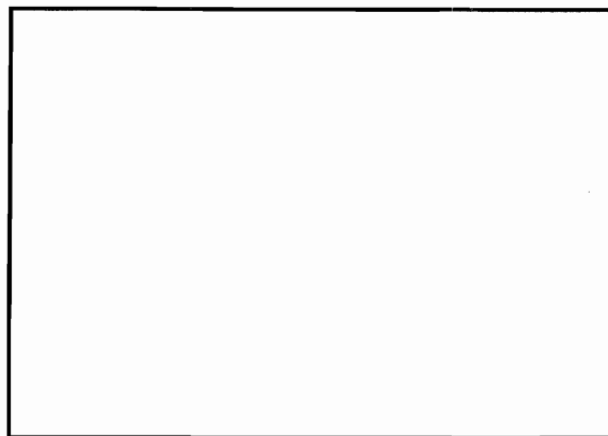
11/9/02

GROUND

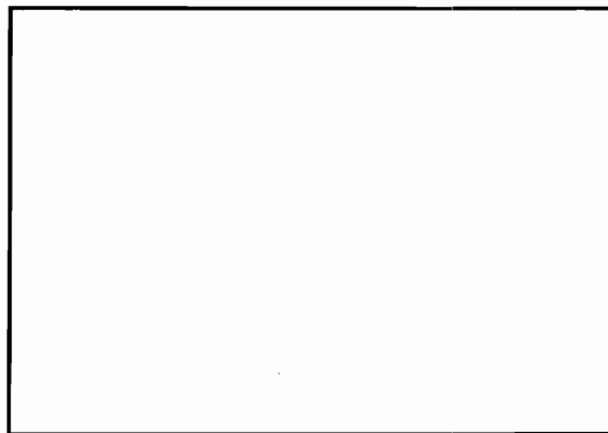


B10

2003



CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-11

STATION

18+20

SUBMERGED AQUATICS

Common Name	Scientific Name	11/9/02 % Coverage	2003 % Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	65%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	5%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	30%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

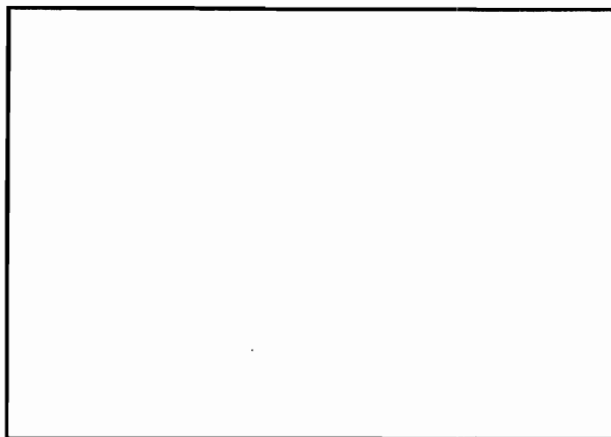
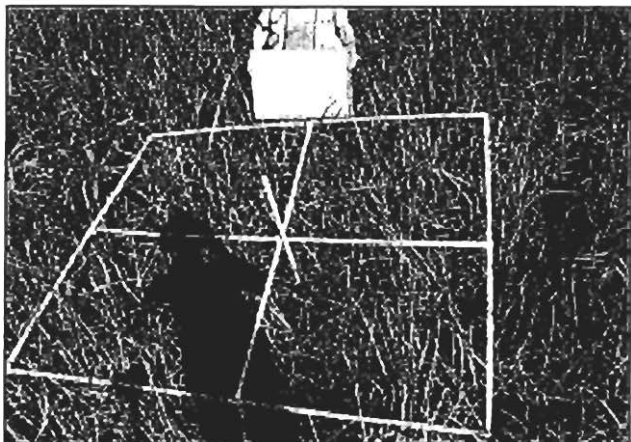
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

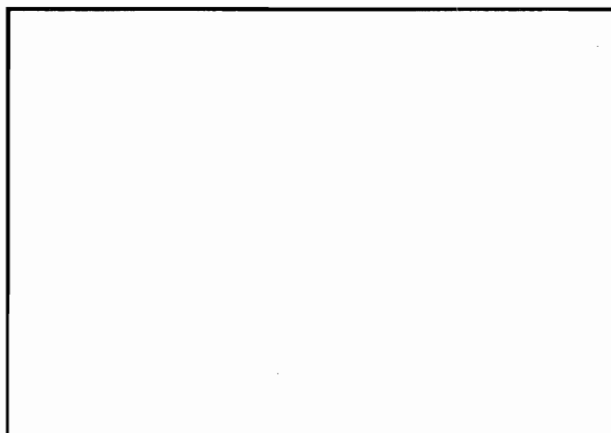
2003

GROUND



B11

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-12

STATION

20+02

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	1%	
Open/Void	N/A	99%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	65%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	3%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	32%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

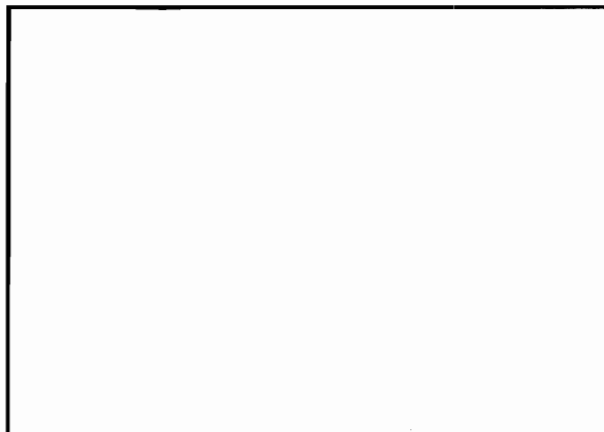
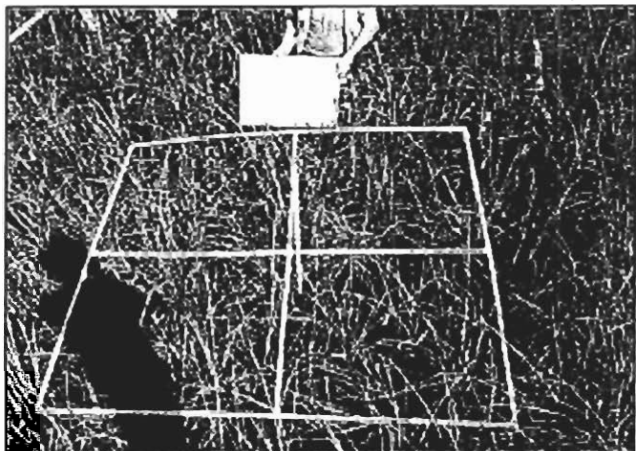
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

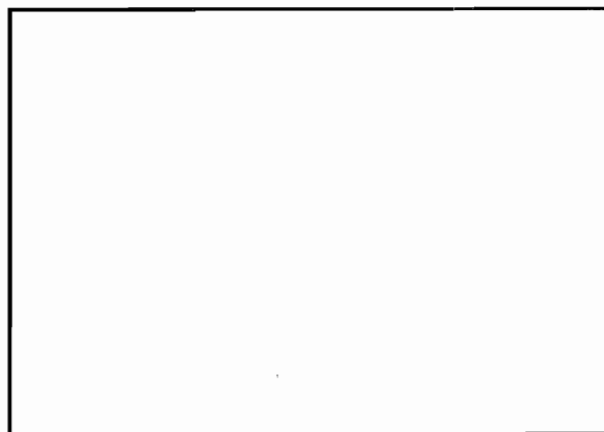
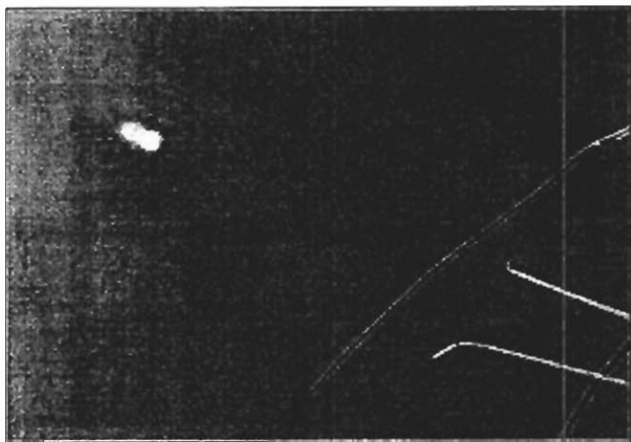
2003

GROUND



B12

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-13

STATION

21+84

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	25%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	1%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	74%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

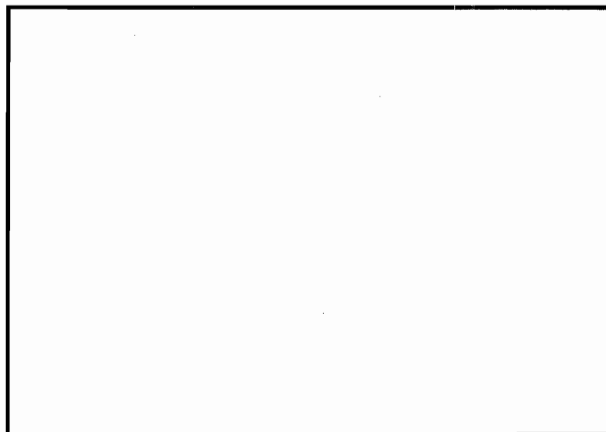
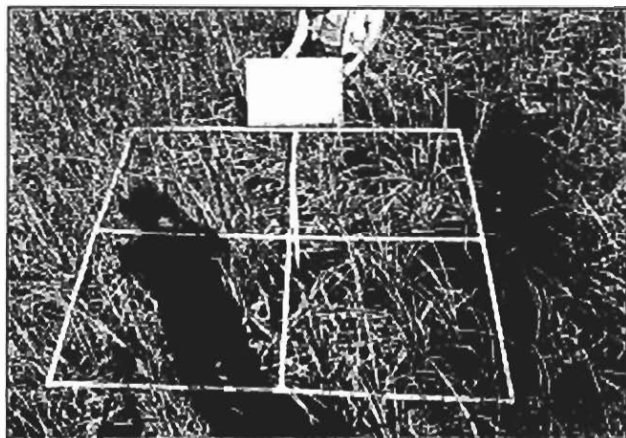
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

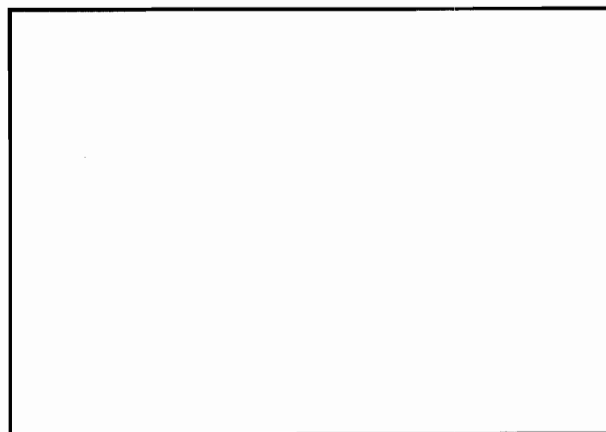
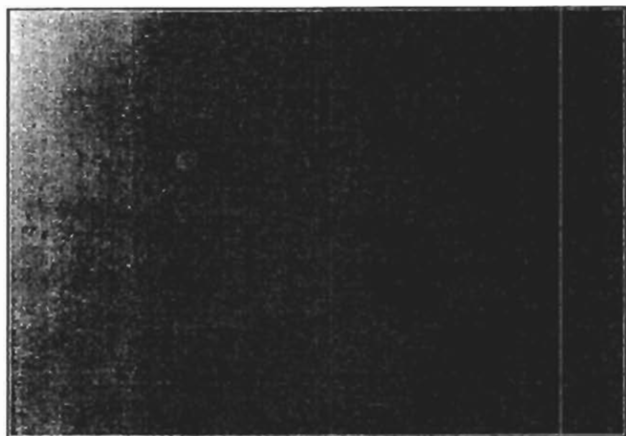
2003

GROUND



B13

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-14

STATION

23+66

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	80%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	20%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

11" of standing water

Aquatic Macrofauna

Few insects

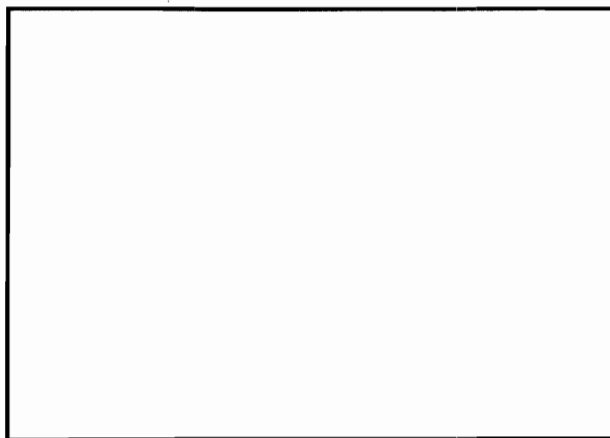
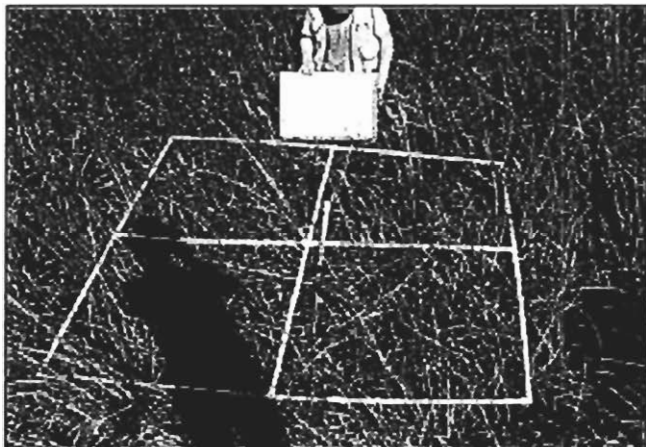
Wildlife Indicators (tracks, scat, nests)

None

11/9/02

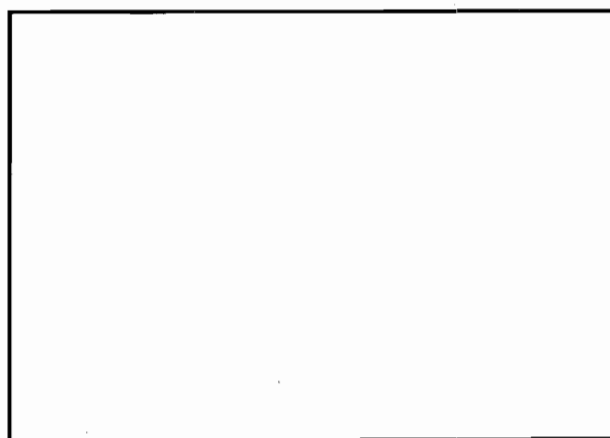
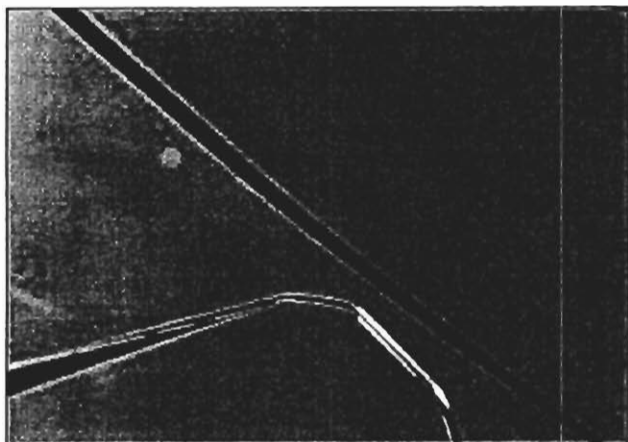
2003

GROUND



B14

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-15

STATION

25+48

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	95%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	5%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Saw grass 6' tall

Water Level / Soil Moisture

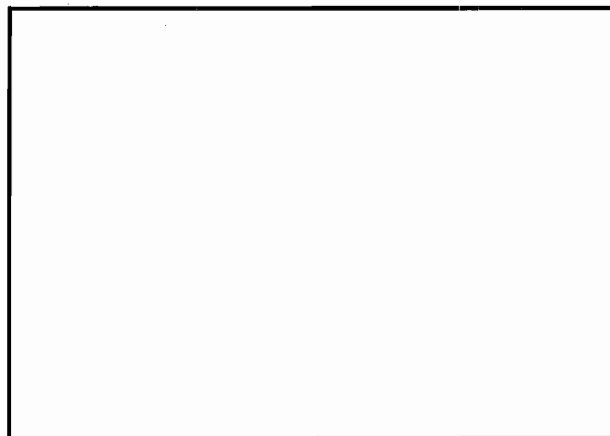
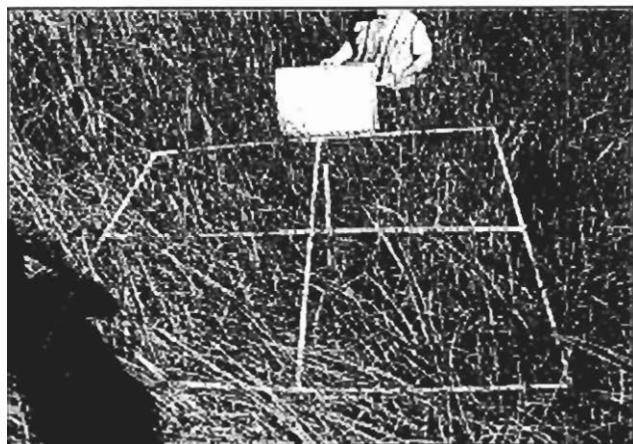
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

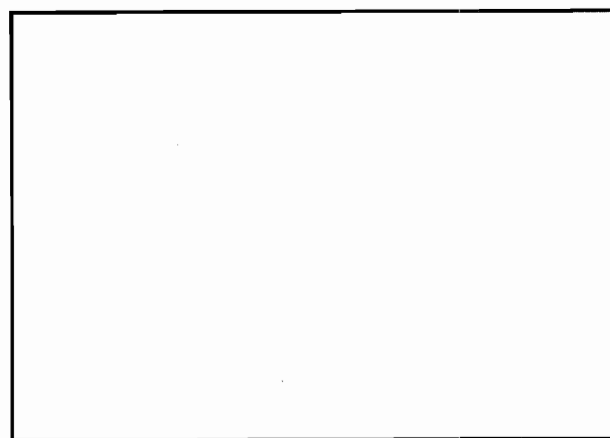
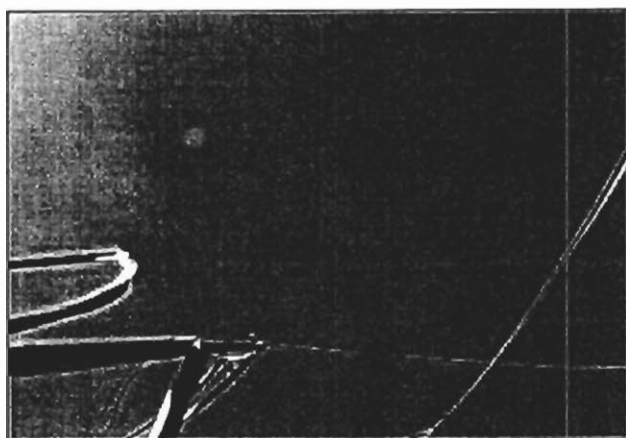
2003

GROUND



B15

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-16

STATION

27+30

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	85%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	2%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	13%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

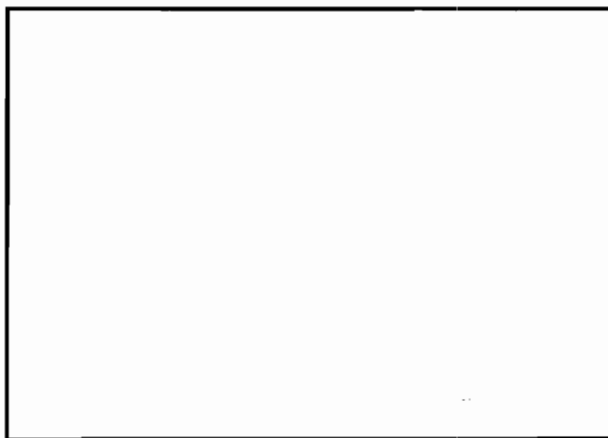
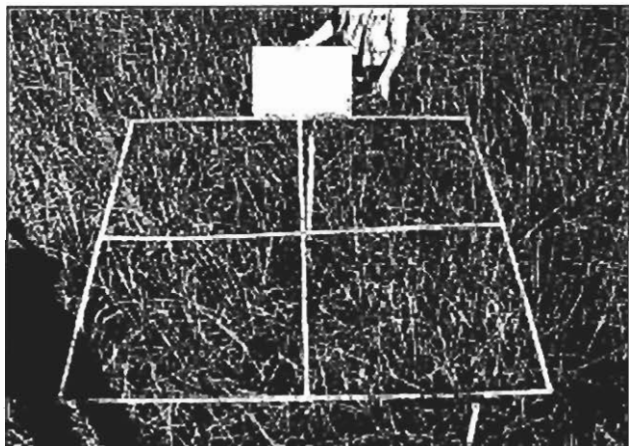
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

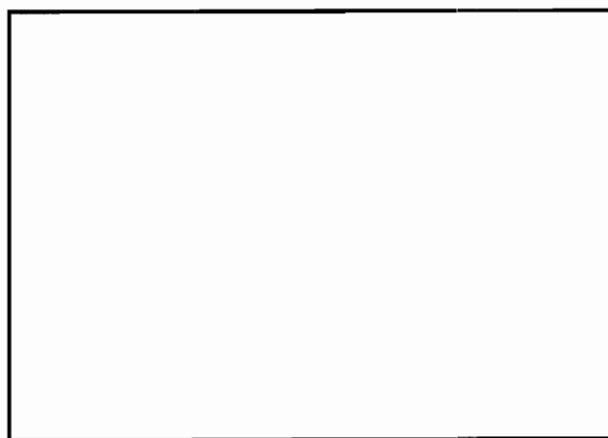
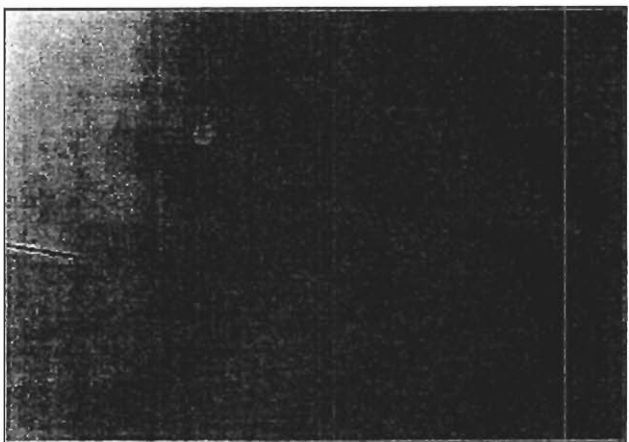
2003

GROUND



B16

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-17

STATION

29+12

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	60%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	40%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Several Melaleuca stumps

Water Level / Soil Moisture

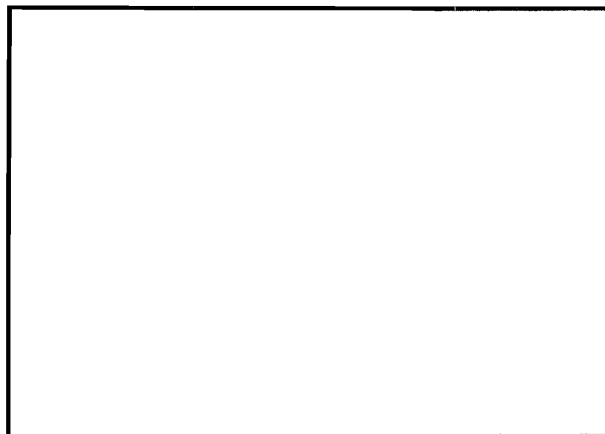
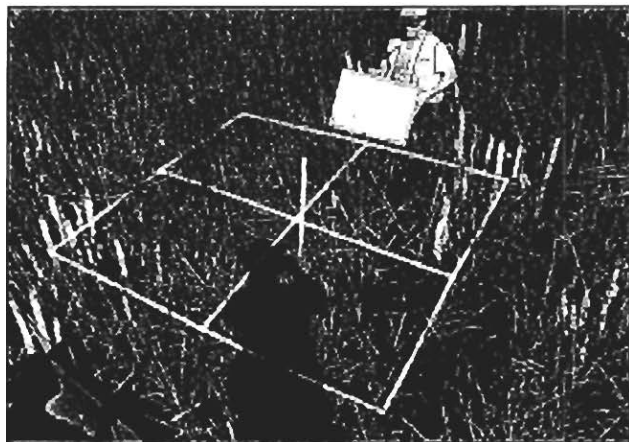
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

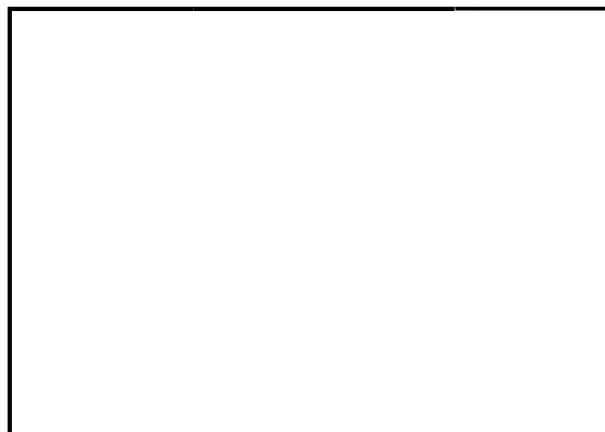
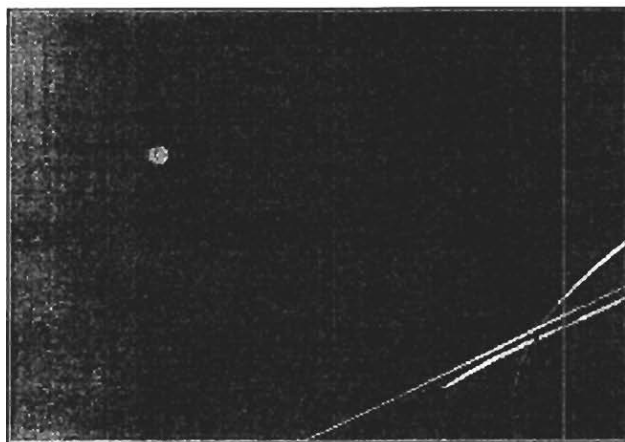
2003

GROUND



B17

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-18

STATION

30+94

SUBMERGED AQUATICS

		11/9/02	2003
Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	75%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	25%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Cuban tree frog observed in sample plot

Water Level / Soil Moisture

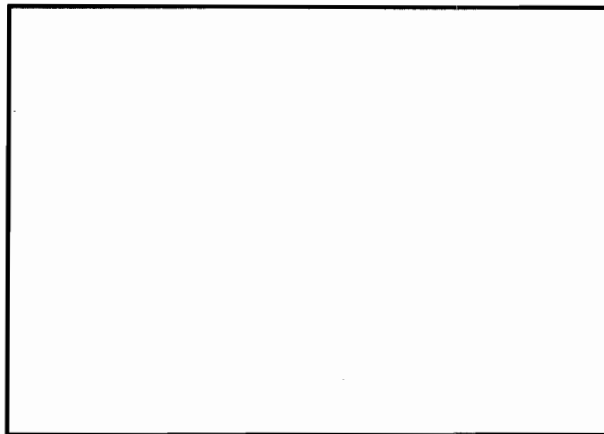
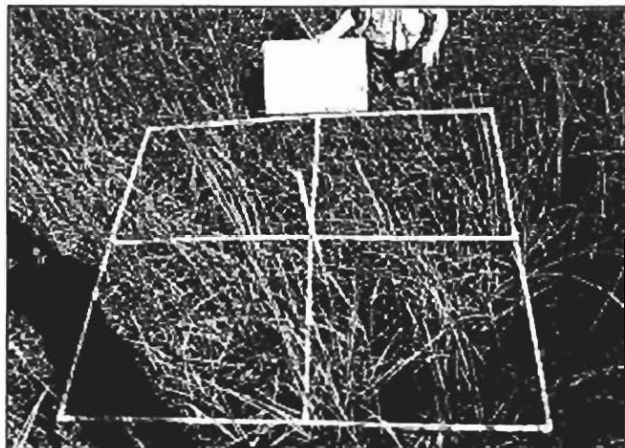
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

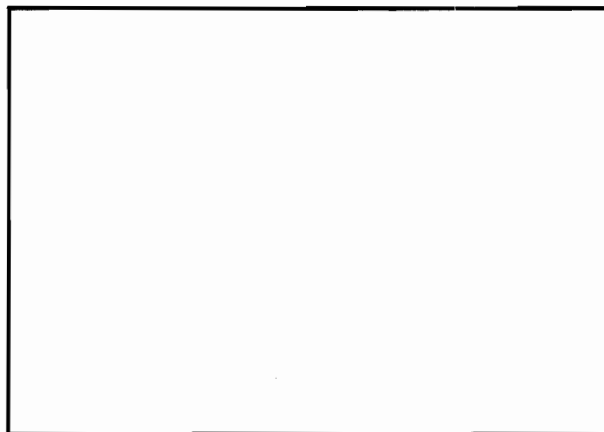
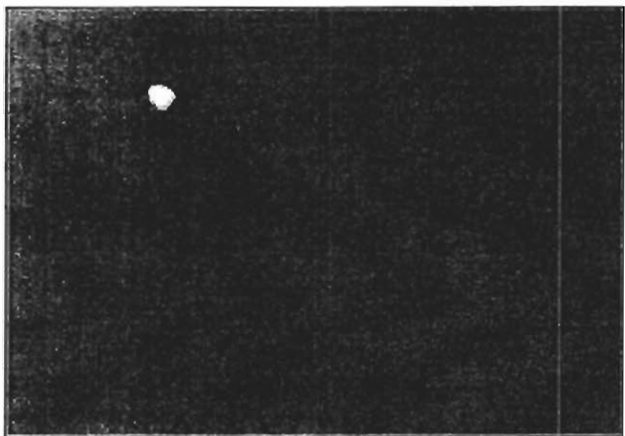
2003

GROUND



B18

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-19

STATION

32+76

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	57%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	3%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	40%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

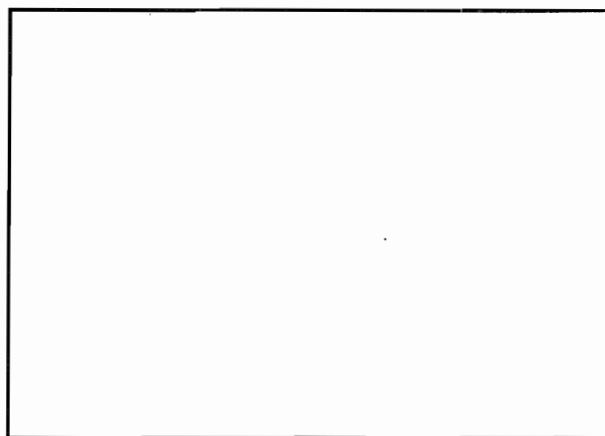
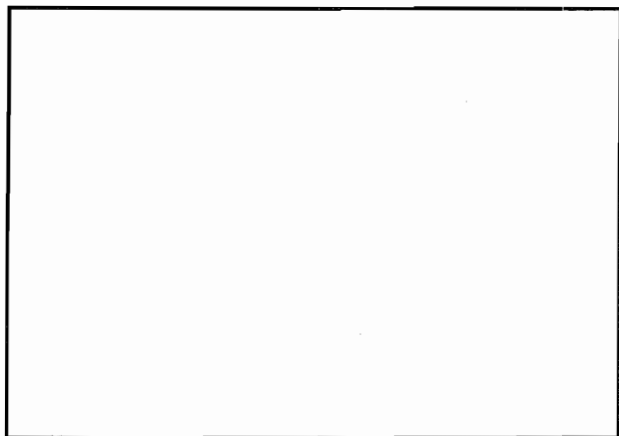
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

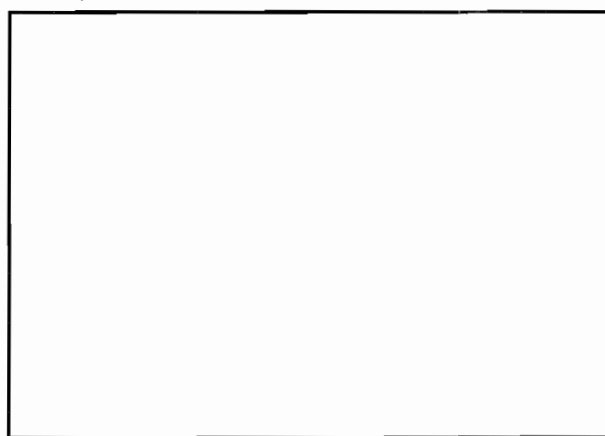
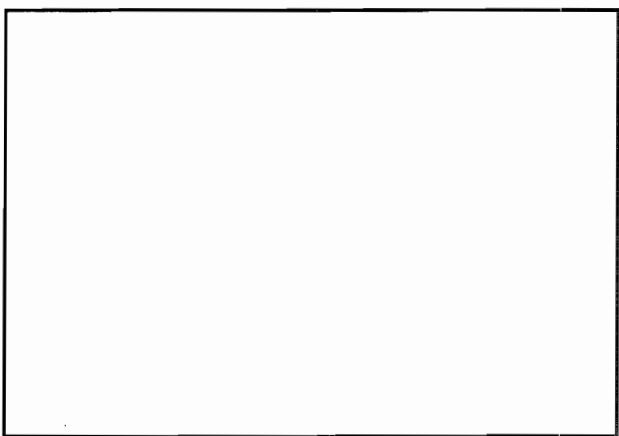
2003

GROUND



B19

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-20

STATION

34+58

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	75%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	25%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

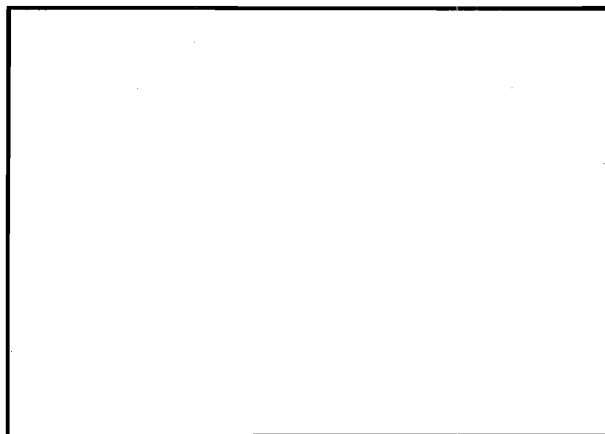
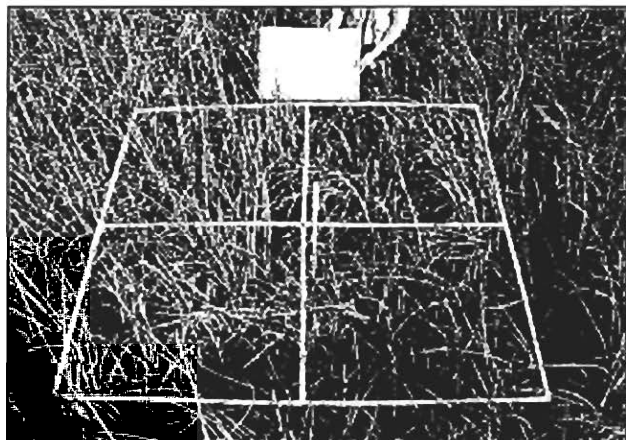
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

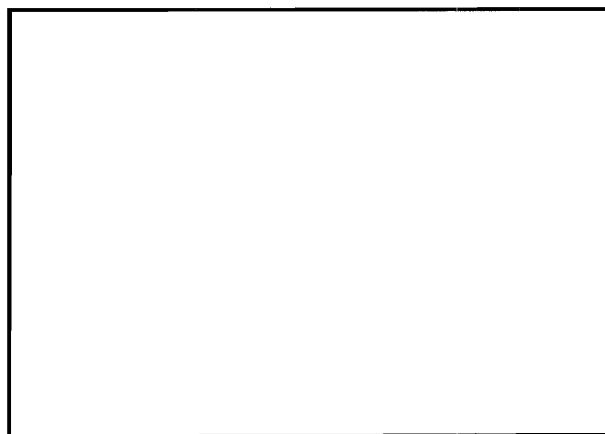
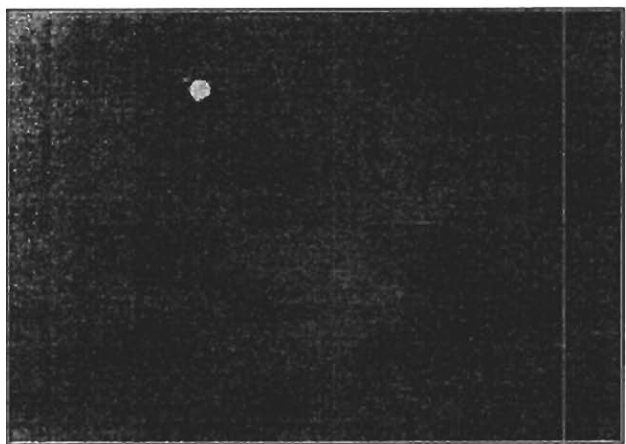
2003

GROUND



B20

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-21

STATION

36+40

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	70%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	30%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

14" standing water

Aquatic Macrofauna

Few fish frye 2cm

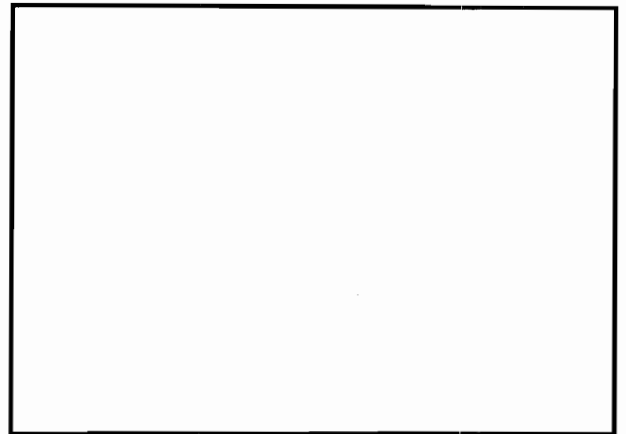
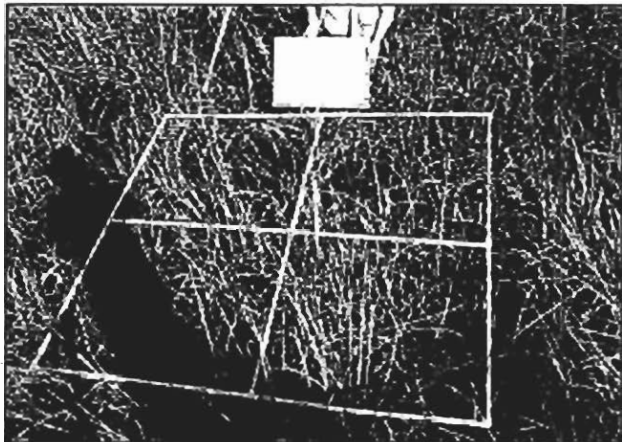
Wildlife Indicators (tracks, scat, nests)

None

11/9/02

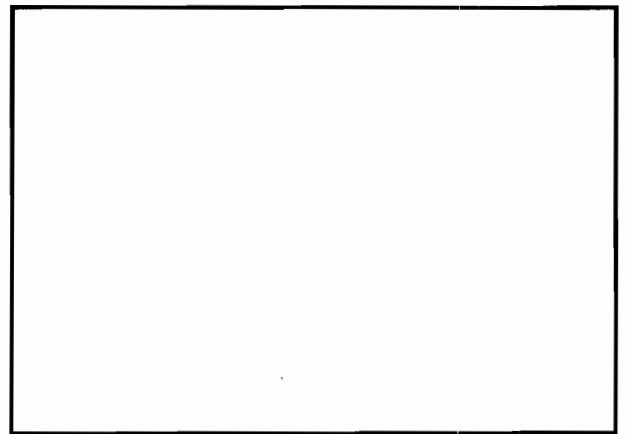
2003

GROUND



B21

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-22

STATION

38+22

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	45%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerselweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	55%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Few small snail shells in the vicinity of the point.

Water Level / Soil Moisture

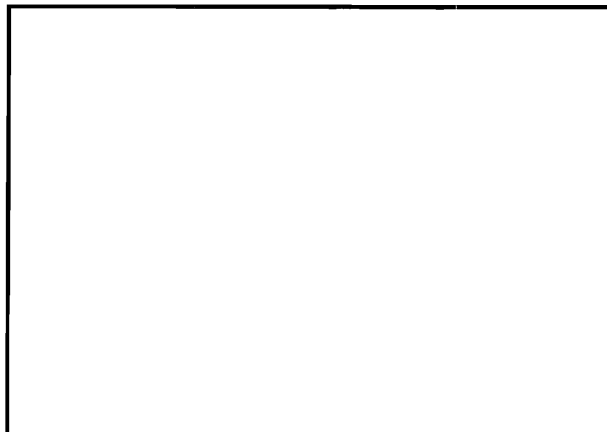
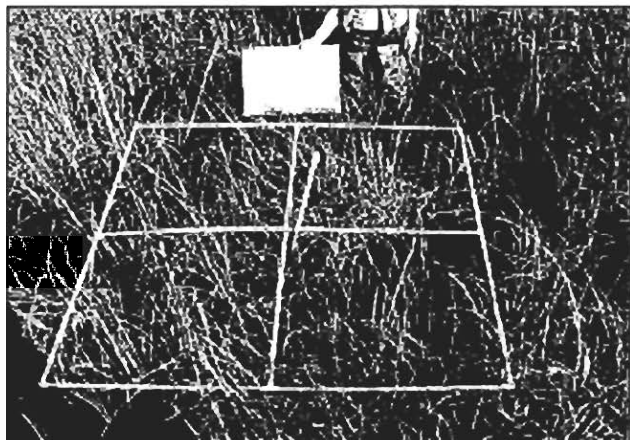
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

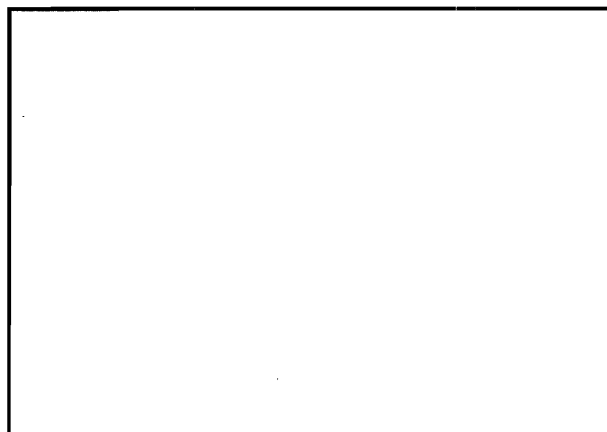
2003

GROUND



B22

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-23

STATION

40+04

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	97%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerelweed	<i>Pontederia lanceolata</i>	3%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	0%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	20%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		80%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

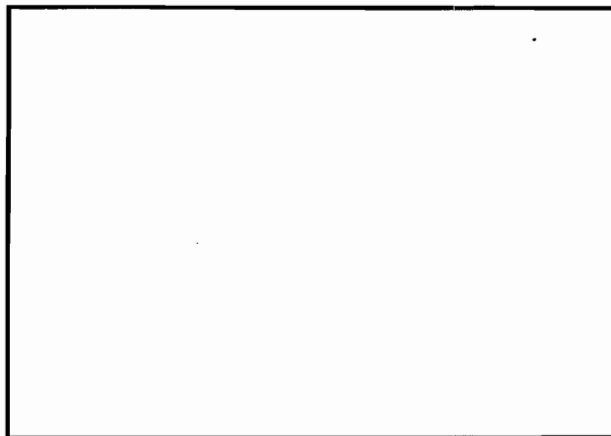
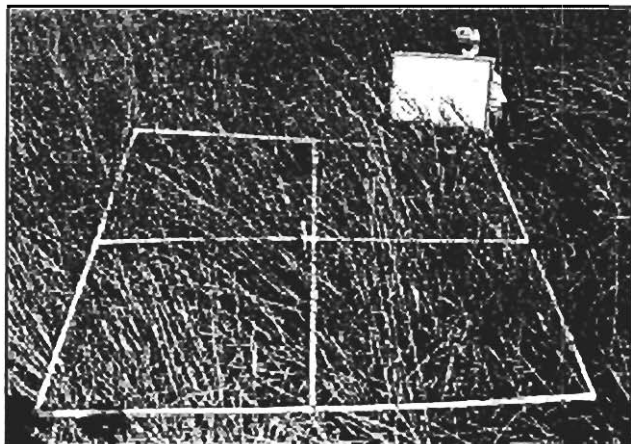
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

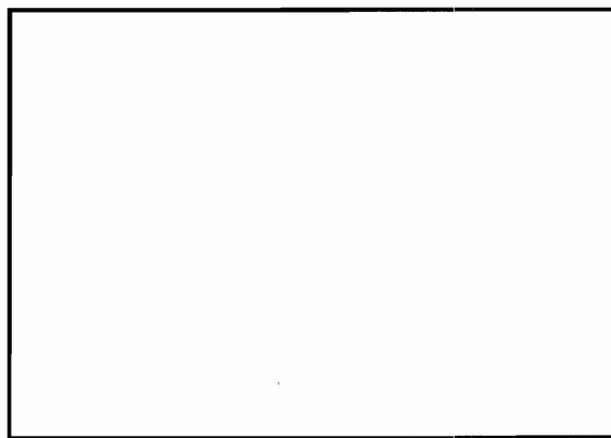
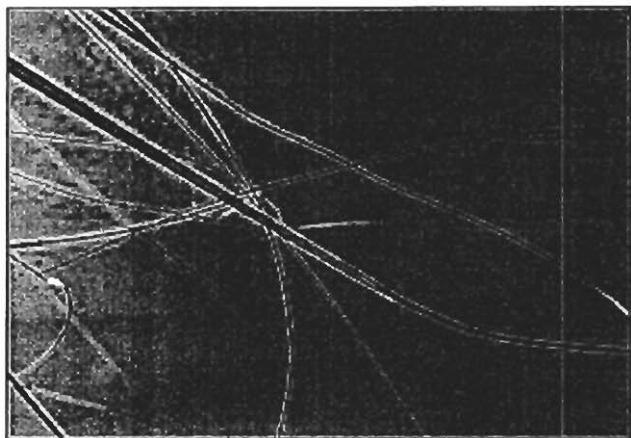
2003

GROUND



B23

CANOPY



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

B-24

STATION

41+86

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	80%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	5%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	15%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Saw grass 3-4' tall

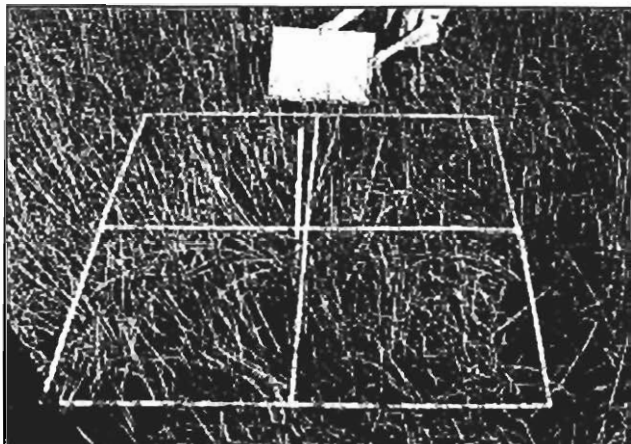
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

GROUND

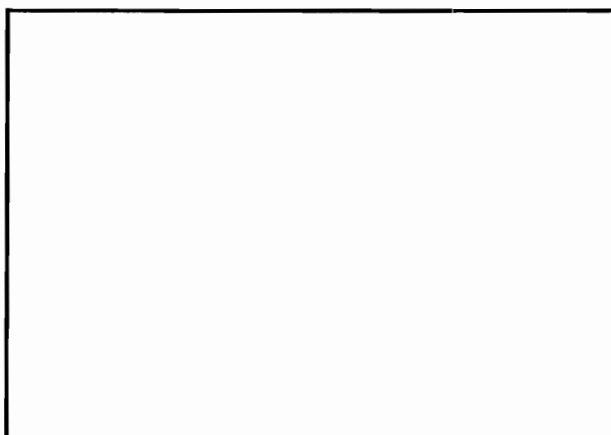
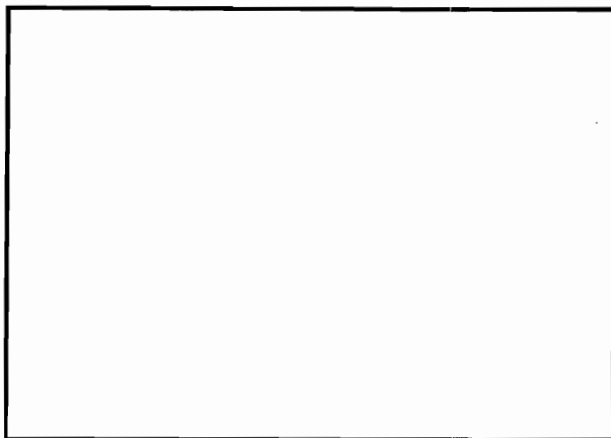


B24

CANOPY



2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-25

STATION

43+68

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	65%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	3%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	32%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

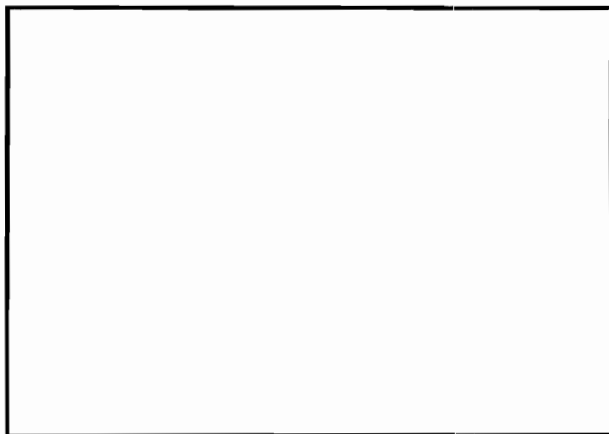
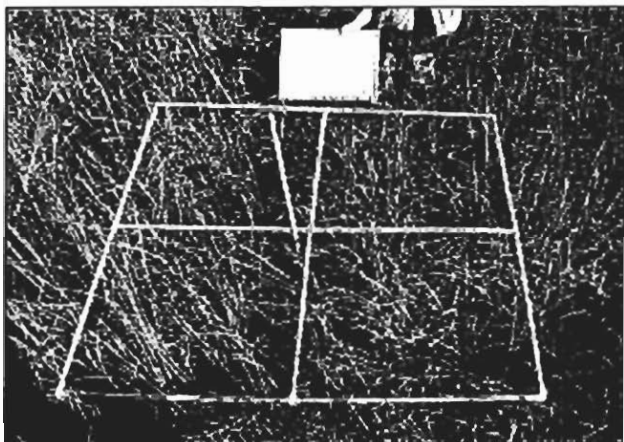
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

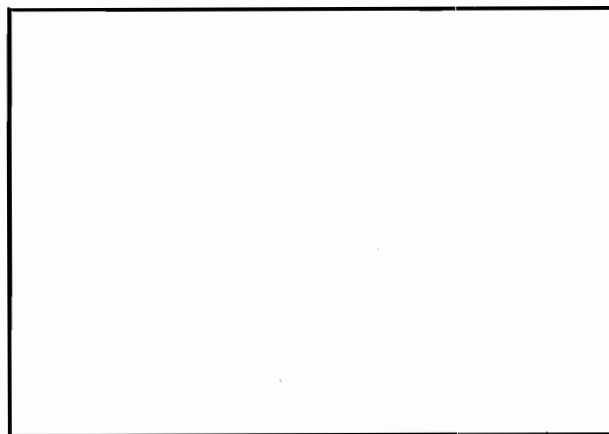
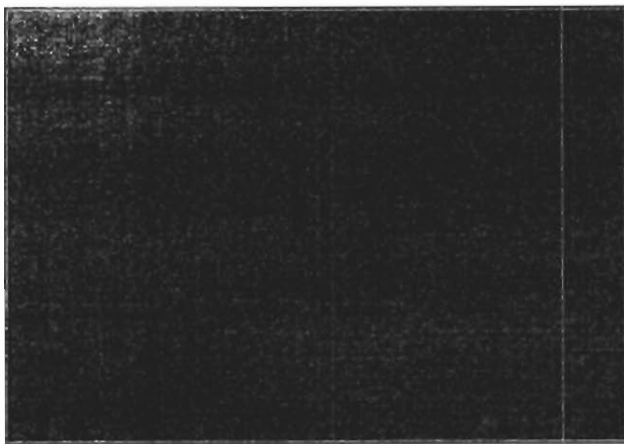
2003

GROUND



B25

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-26

STATION

45+50

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	25%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	75%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

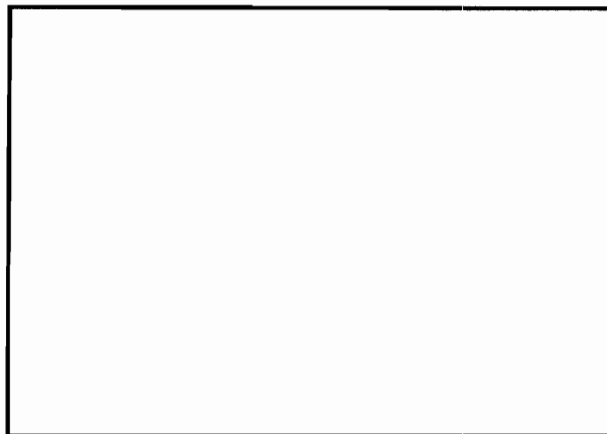
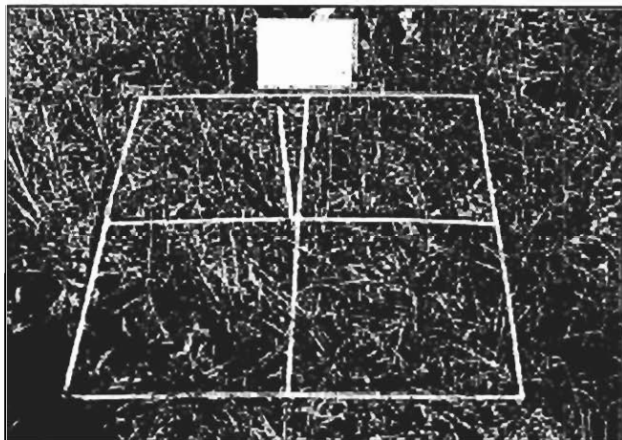
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

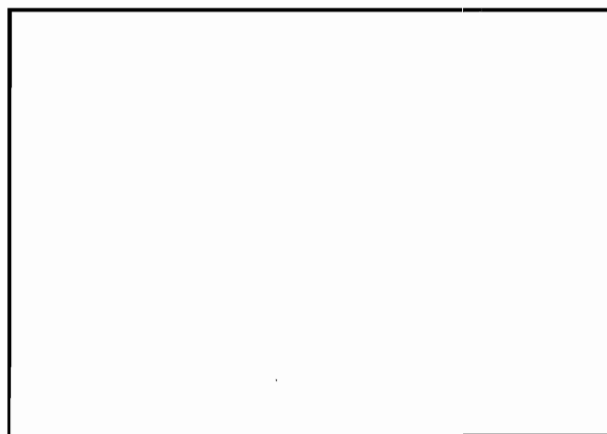
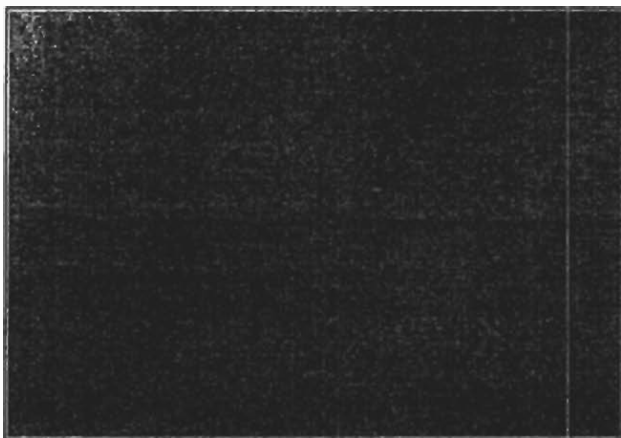
2003

GROUND



B26

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-27

STATION

47+32

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	95%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	5%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	10%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		90%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

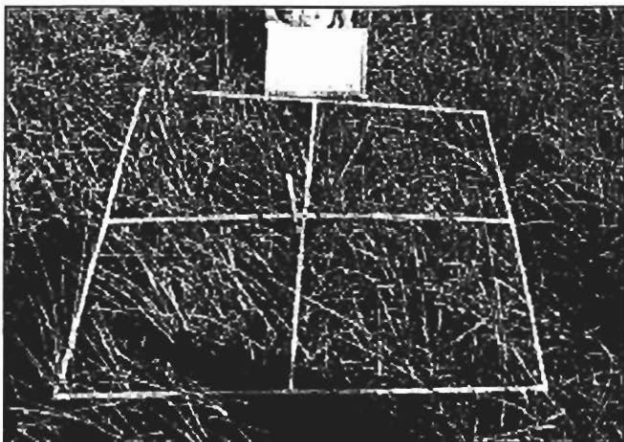
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

GROUND

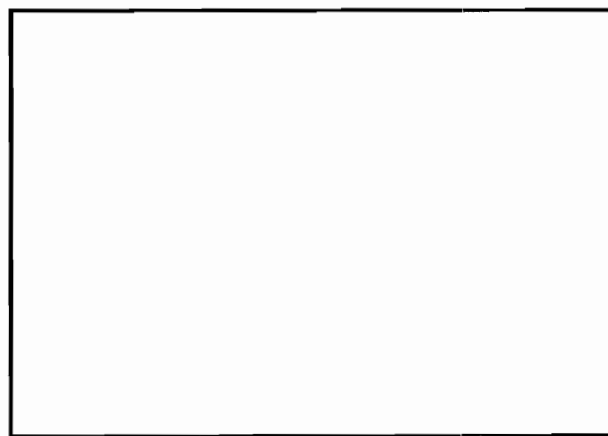
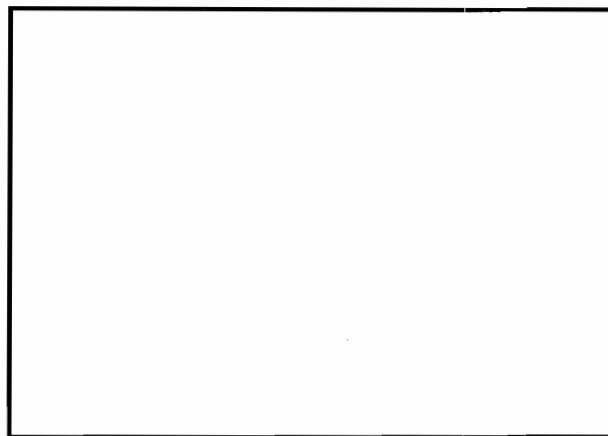


B27

CANOPY



2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-28

STATION

49+14

SUBMERGED AQUATICS

		11/9/02	2003
Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	85%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	15%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

12" standing water

Aquatic Macrofauna

None

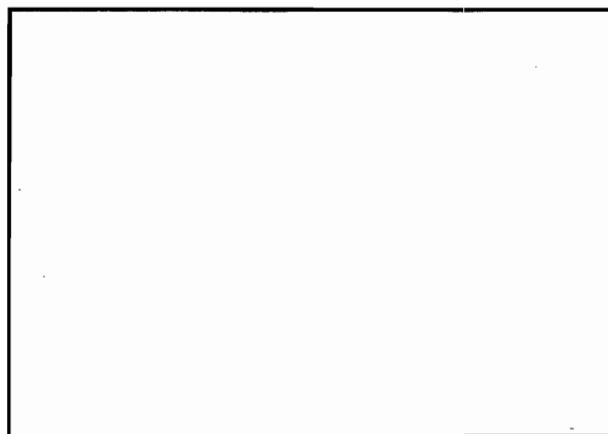
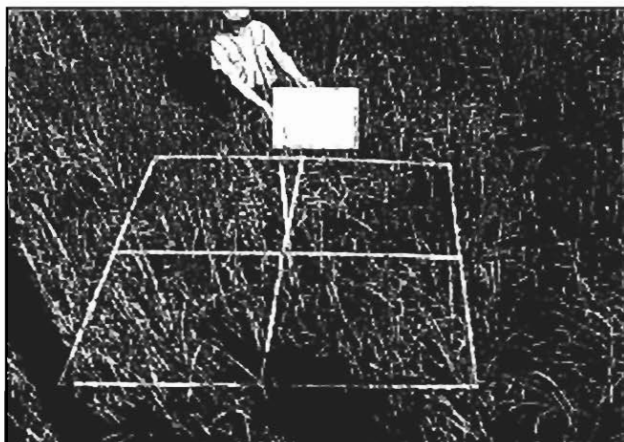
Wildlife Indicators (tracks, scat, nests)

None

11/9/02

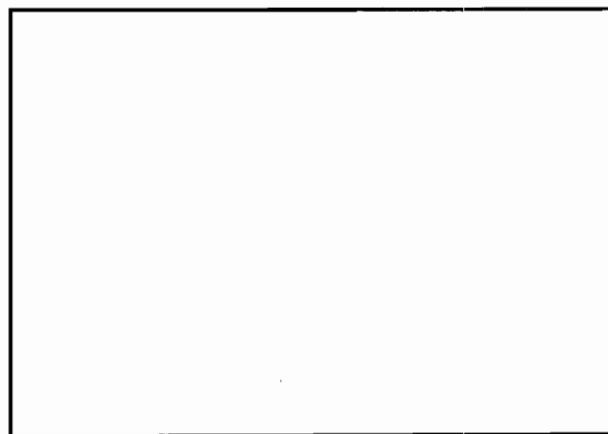
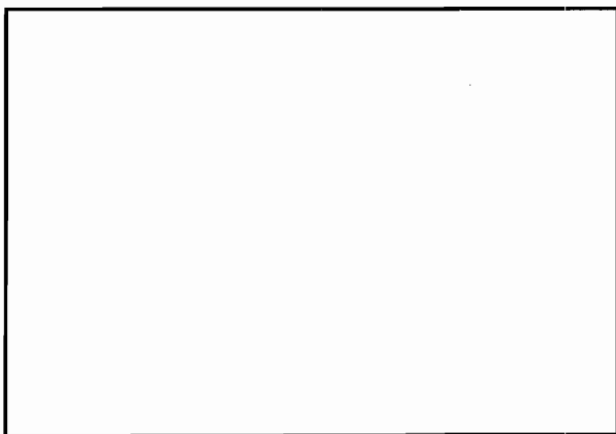
2003

GROUND



B28

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

A-29

STATION

50+96

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	70%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerselweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	30%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

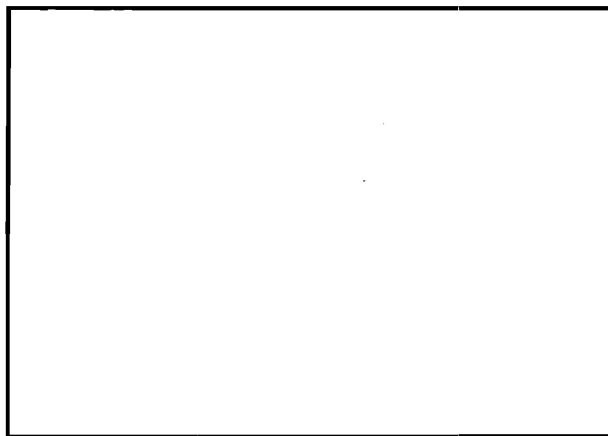
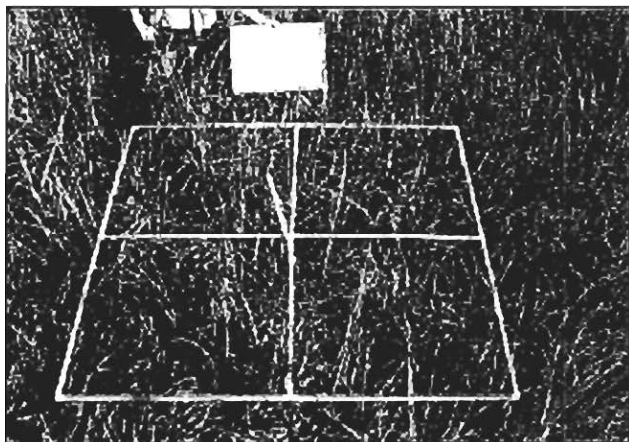
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/9/02

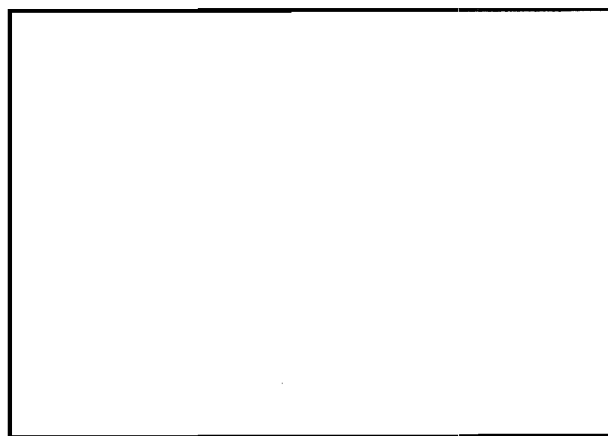
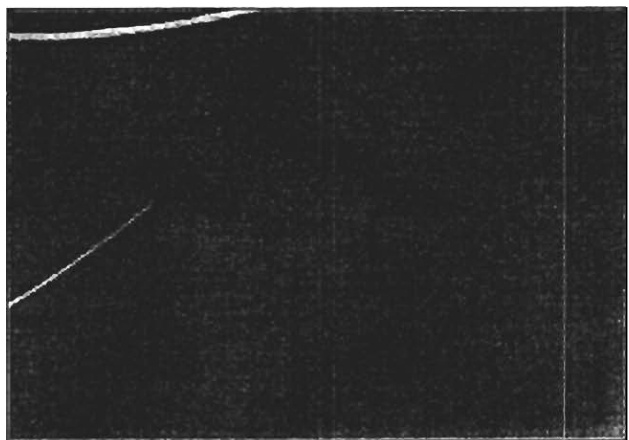
2003

GROUND



B29

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

B-30

STATION

52+78

SUBMERGED AQUATICS

11/9/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	85%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	2%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	3%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
Uk9	<i>Malvaceae</i>	0%	
Open Water/Mud/Void	N/A	10%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

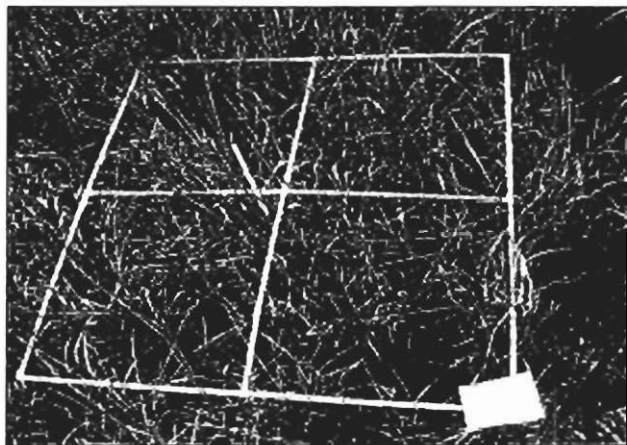
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

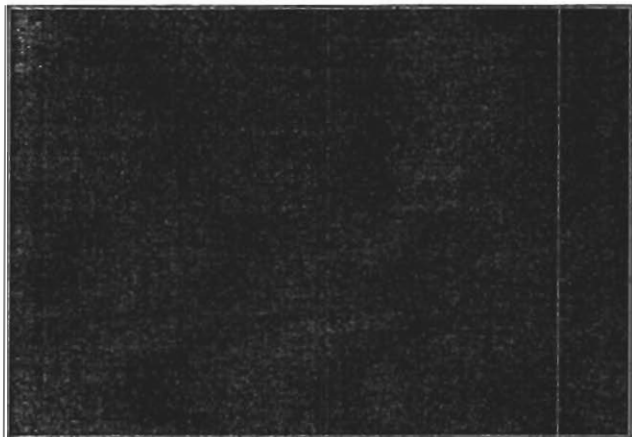
GROUND

11/9/02

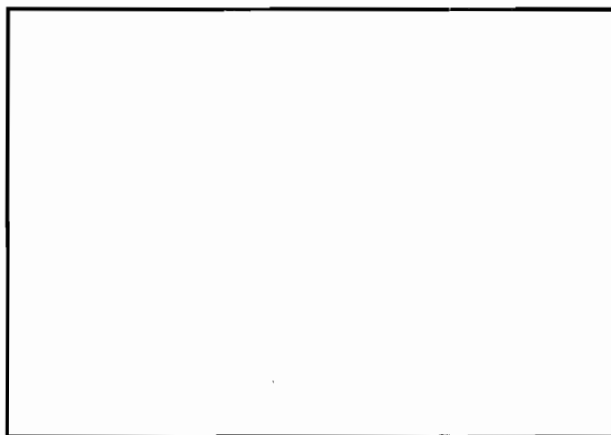
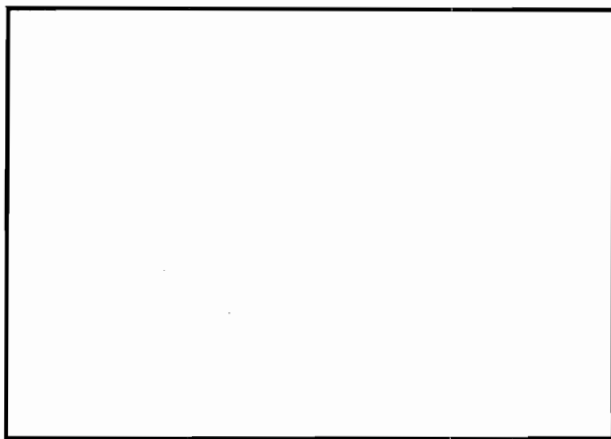


B30

CANOPY



2003



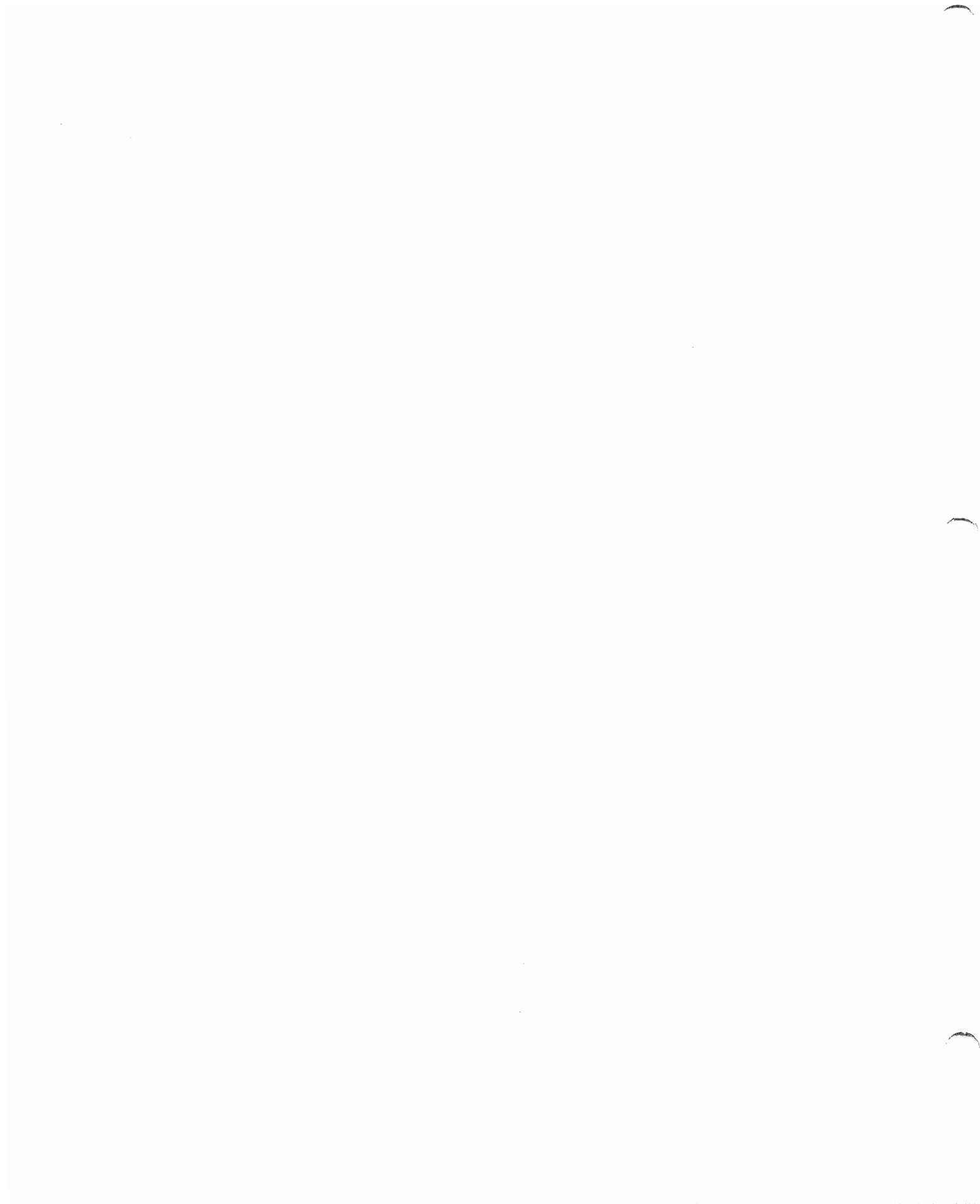


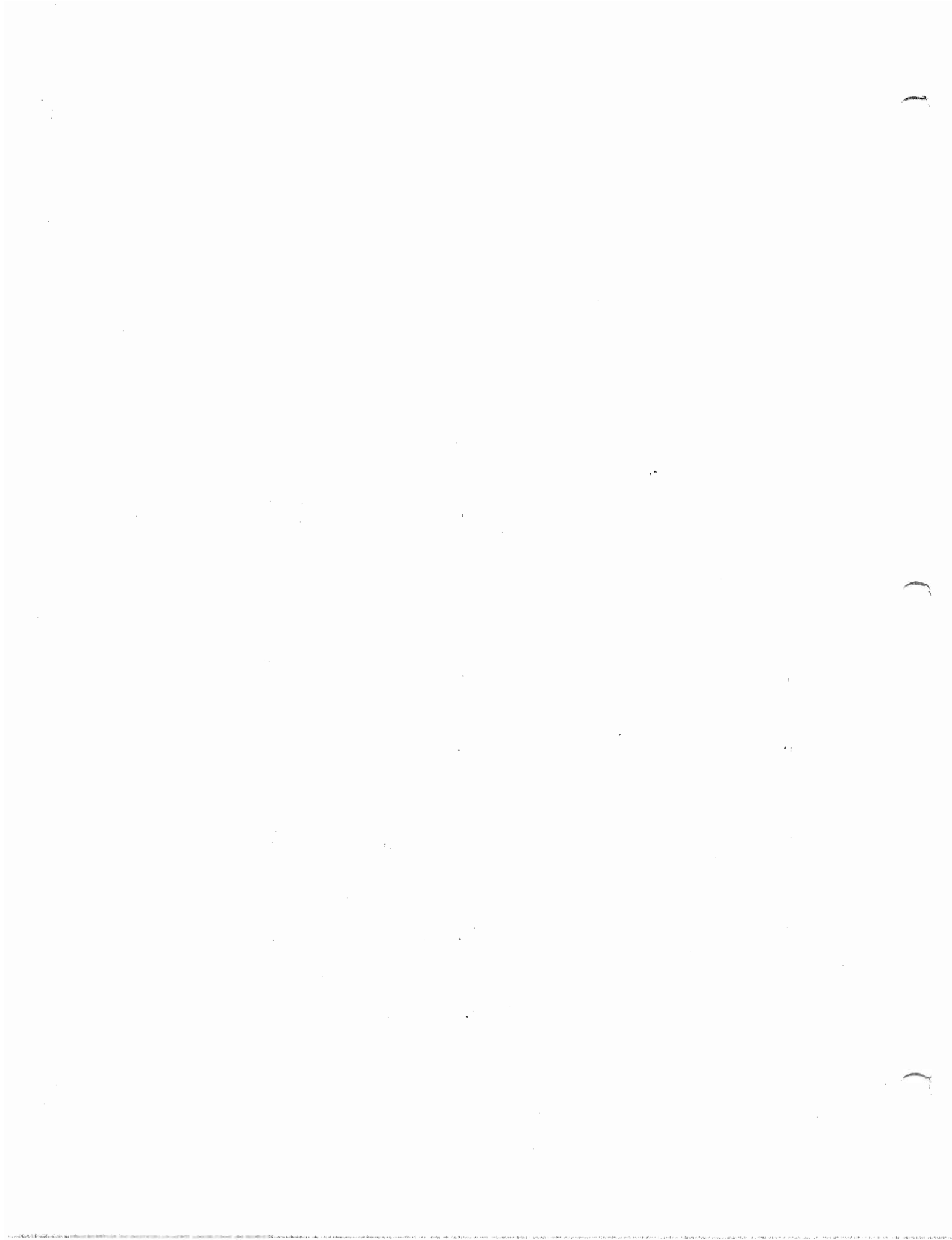


Figure 5. Transect C

- End Points of Segment
- Data Collection Locations



300 0 300 Feet



TRANSECT C

Narrative

Transect C is located in Section 18, Township 53, Range 39 (Cell 26 – Pennsuco Exotic Treatment Area). It starts on the levee at Krome Avenue with point C1 (GPS Coordinates Latitude 25° 53' 12.76", Longitude 80° 29' 03.33") and continues east one mile to point C30 (GPS coordinates Latitude 25° 53' 12.69", Longitude 80° 28' 04.91"), which is west of the Dade-Broward Levee (Figure 5). Two community types were identified for transect C. Point C1 represents an upland levee community dominated by Swamp Fern (*Blechnum serrulatum*) in the herbaceous layer and Elm (*Trema micrantha*) in the sapling layer. Points C2 through C30 represent a wet prairie community type dominated by saw-grass (*Cladium jamaicense*). The appearance of the exotic and invasive punk tree vegetation indicates a shift in the community types from saw-grass in the area.

Water depths ranged from 6.5 to 9.5 inches at photopoints C7, C14, C21 and C28. Fry were common in the open water areas of C20 and C21, although few fry less than one centimeter long were noted at C28. At C28, a water spider and grasshopper were observed.

The area along this transect does not appear to have been treated for exotic or invasive species, however it was reported to have been burned two to three years ago. The dead saw-grass along this transect appeared to be natural. The vegetative community consisted primarily of saw-grass, which ranged from six to eight feet in height. Additionally, one to two percent of punk tree was observed in the herbaceous layer at data collection points C13, C23, and C28. These plants appear to gain a footing in openings where the saw-grass density is limited.

In summary, the percent vegetative coverage, by layer, for this transect identified:

- In the submerged aquatics layer, one percent Bladderworts (*Utricularia purpurea*).
- In the herbaceous species layer, 33 percent live saw-grass, 34 percent dead saw-grass, and three percent Swamp Fern (*Blechnum serrulatum*) was observed at data collection point C2.

Pennsuco Monitoring Project - Summary Sheet

TRANSECT

"C"

Total Length

5280'

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0.00%	
Bladderwort	<i>Utricularia foliosa</i>	0.00%	
Bladderwort	<i>Utricularia purpurea</i>	1.00%	
Ludwigia	<i>Ludwigia repens</i>	0.00%	
Open/Void	N/A	99.00%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	32.83%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	34.07%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0.13%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0.00%	
Southern Swamp Lily	<i>Crinum americanum</i>	0.07%	
Pickereelweed	<i>Pontederia lanceolata</i>	0.10%	
Yellowtops	<i>Flaveria linearis</i>	0.00%	
Arrowhead	<i>Sagittaria graminea</i>	0.23%	
Floating-Heart	<i>Nymphoides aquatica</i>	0.40%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0.33%	
Cattail	<i>Typha latifolia</i>	0.33%	
Button Bush	<i>Cephalanthus occidentalis</i>	0.00%	
Maiden-Cane	<i>Panicum hemitomum</i>	0.00%	
Shield Fern	<i>Thelypteris kunthii</i>	0.17%	
Swamp Fern	<i>Blechnum serrulatum</i>	3.00%	
Elm	<i>Trema micrantha</i>	0.17%	
TBD		0.00%	
Open Water/Mud/Void	N/A	28.17%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0.00%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0.00%	
Elm	<i>Trema micrantha</i>	2.00%	
TBD		0.00%	
Open/Void		98.00%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0.00%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0.33%	
Golden Fig	<i>Ficus Aurea</i>	0.00%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

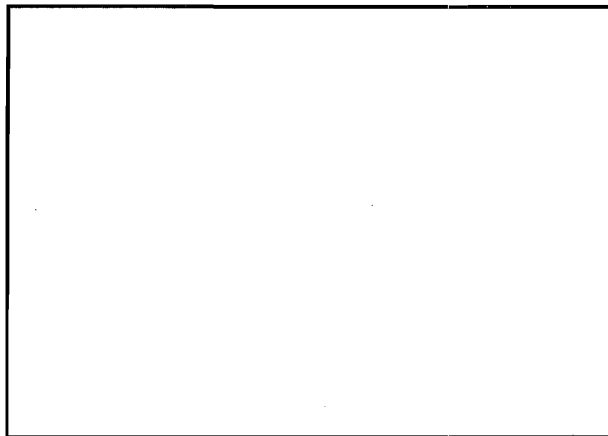
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

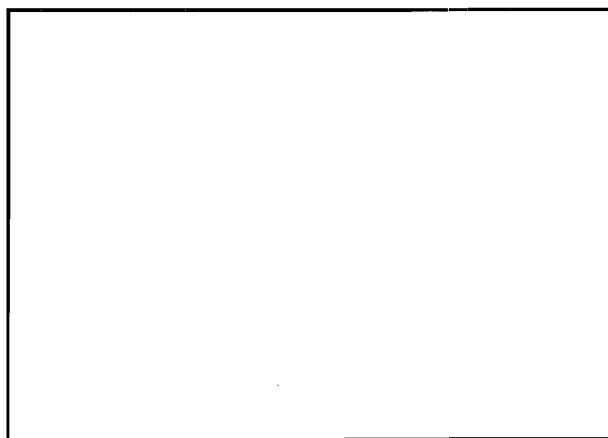
2003

0+00 Panoramic - Looking east



C transect

52+78 Panoramic - Looking West



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-1

STATION

0+00

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	5%	
Swamp Fern	<i>Blechnum serrulatum</i>	85%	
Elm	<i>Trema micrantha</i>	5%	
TBD		0%	
Open Water/Mud/Void	N/A	5%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	60%	
TBD		0%	
Open/Void		40%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	10%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		90%	
TOTAL		100%	0%

NOTES: Levee position adjacent to canal.

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

GROUND

11/10/02

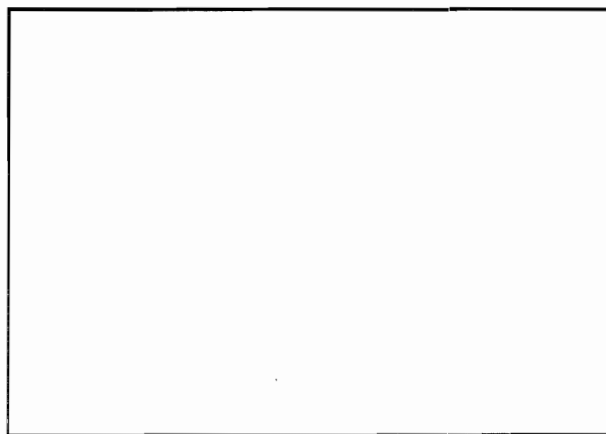
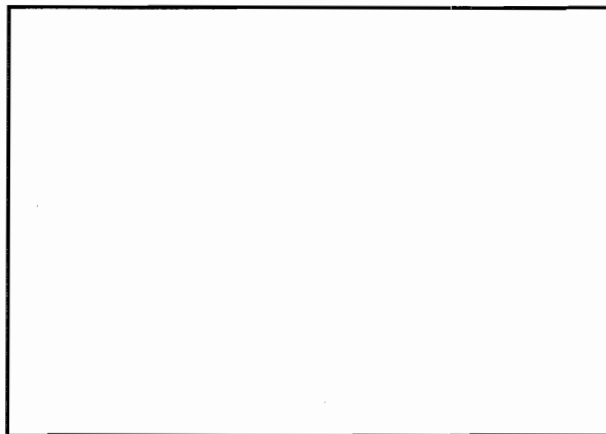


C1

CANOPY



2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-2

STATION

1+82

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	95%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	5%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	0%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Saw grass 6 to 10' tall

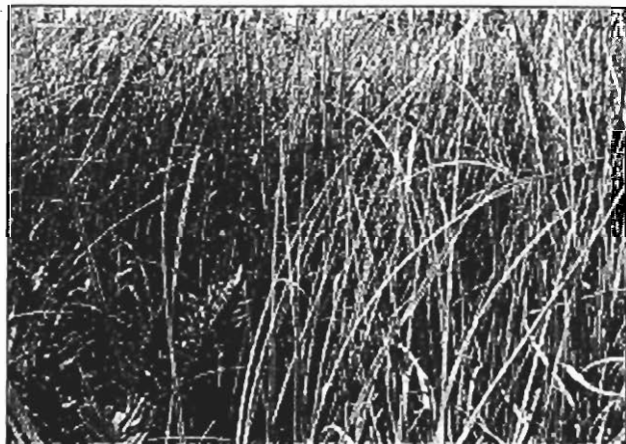
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

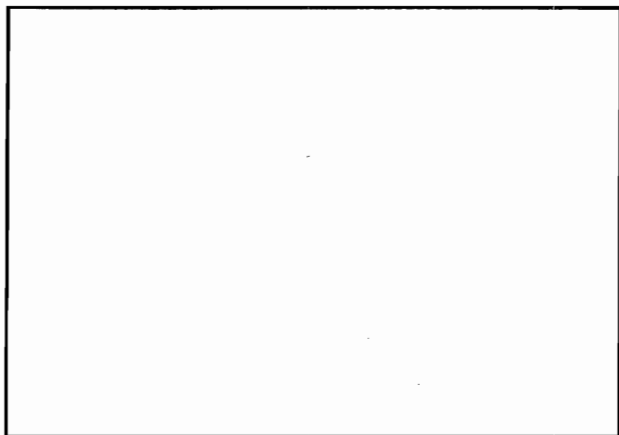
11/10/02

GROUND

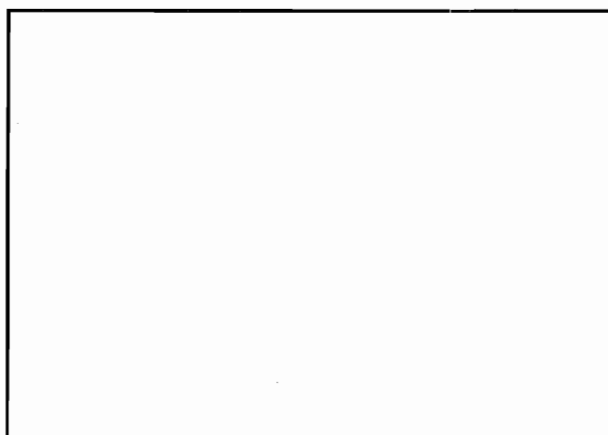
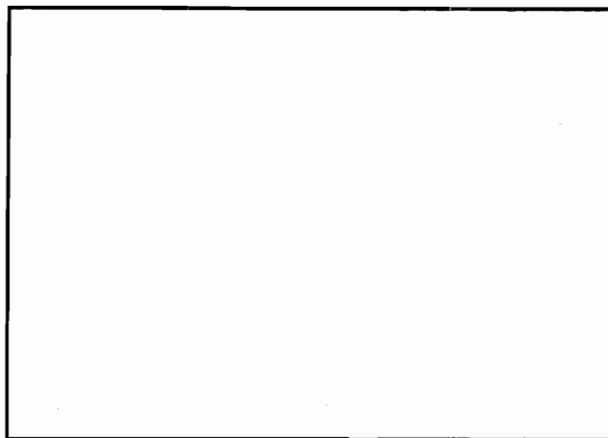


C2

CANOPY



2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-3

STATION

3+64

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	50%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerselweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	50%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Saw grass 6' tall

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

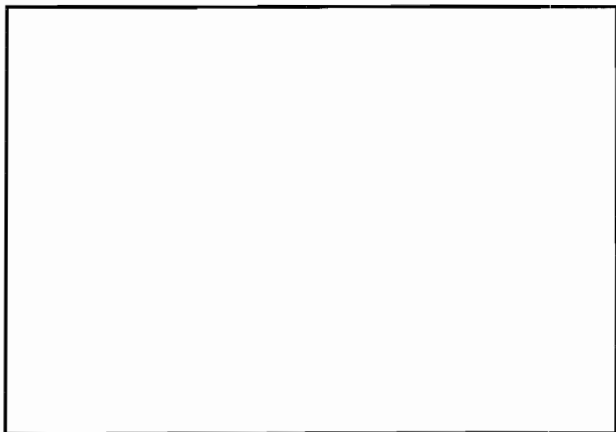
GROUND

11/10/02

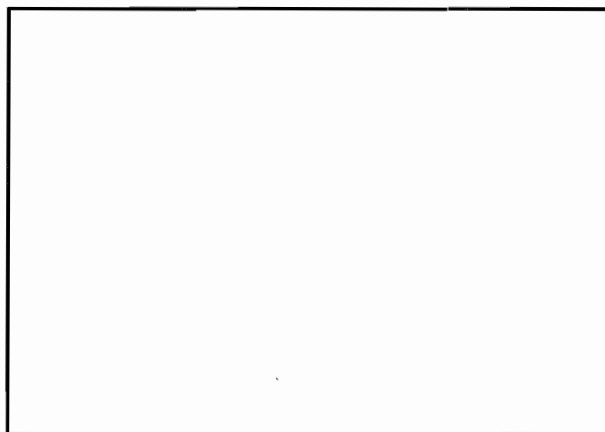
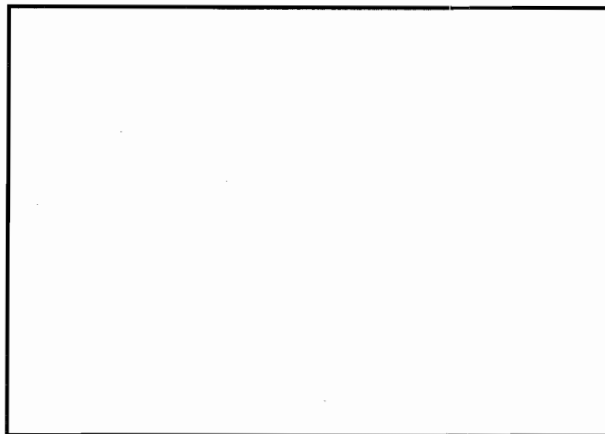


C3

CANOPY



2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-4

STATION

5+46

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	65%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	35%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

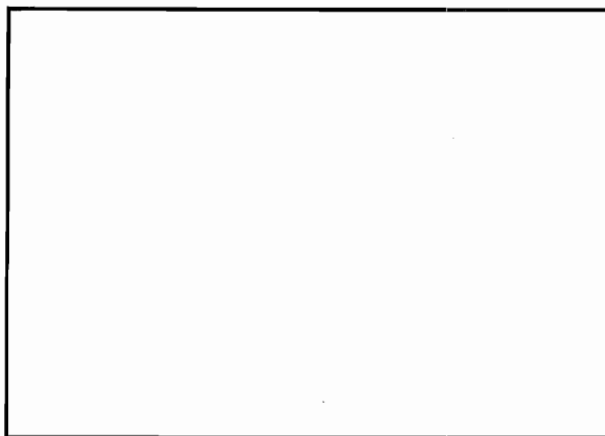
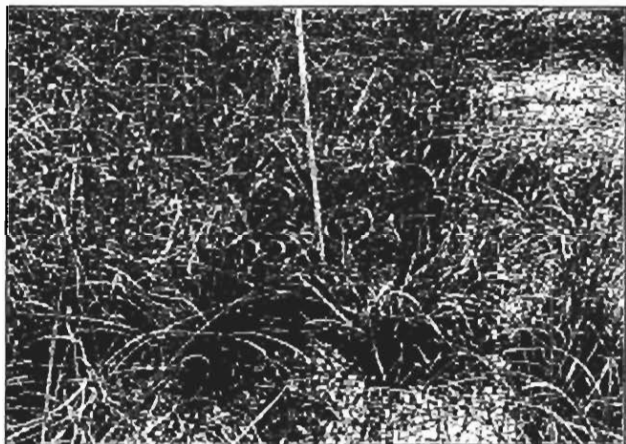
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

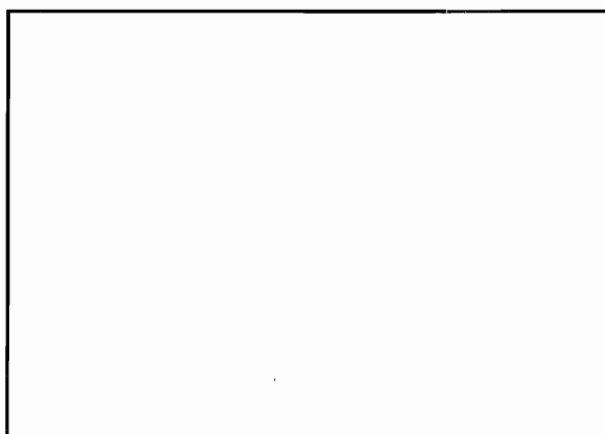
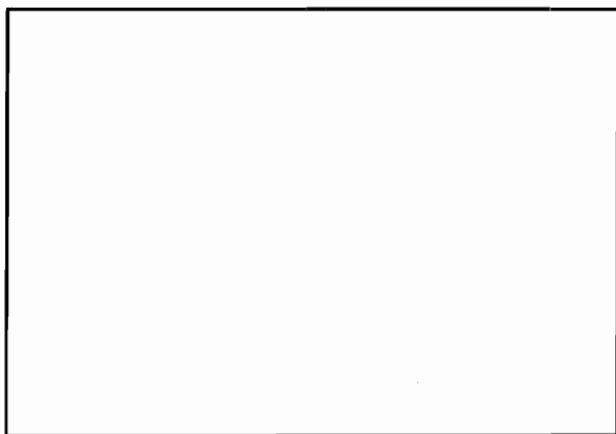
2003

GROUND



C4

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-5

STATION

7+28

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	15%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	20%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	5%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	60%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Saw grass 4' to 6' tall

Water Level / Soil Moisture

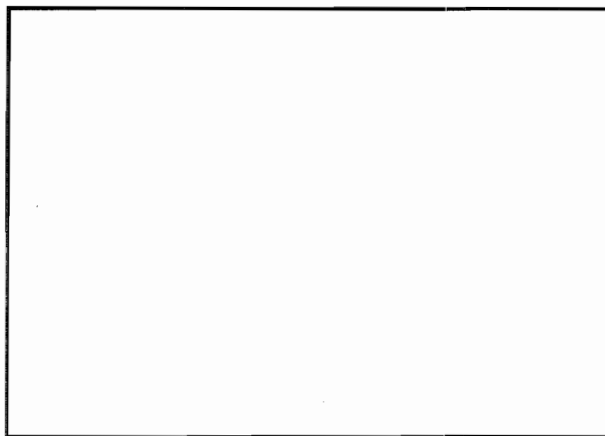
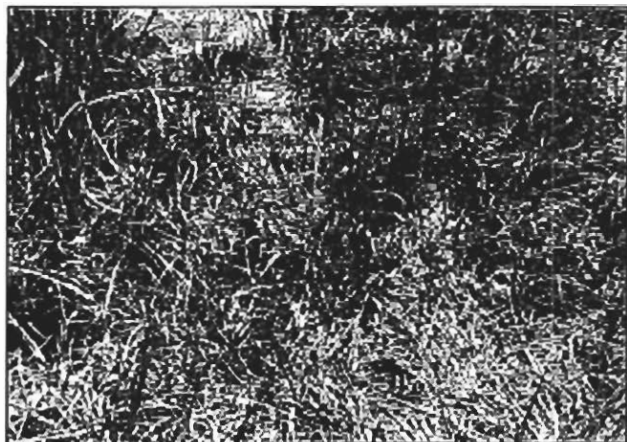
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

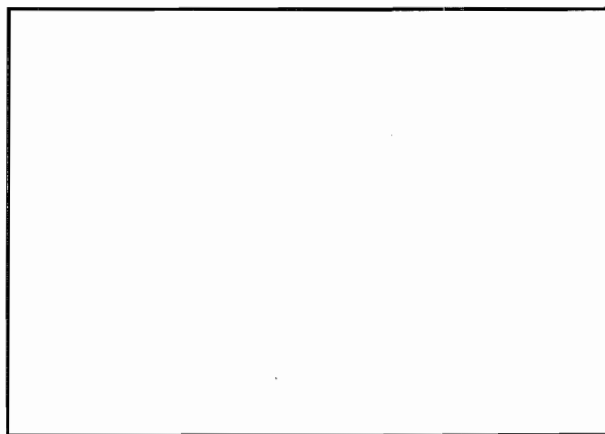
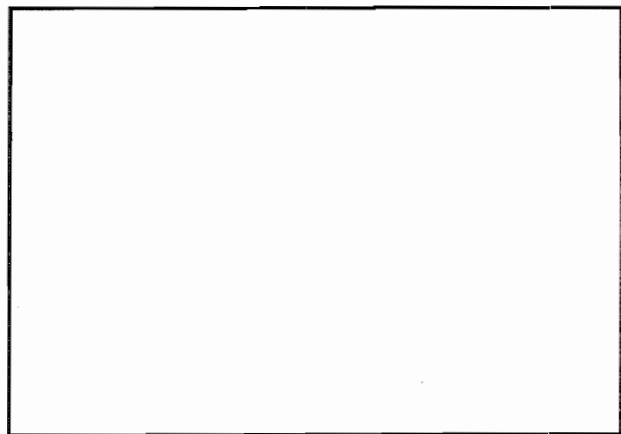
2003

GROUND



C5

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-6

STATION

9+10

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	25%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	70%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	5%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	0%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

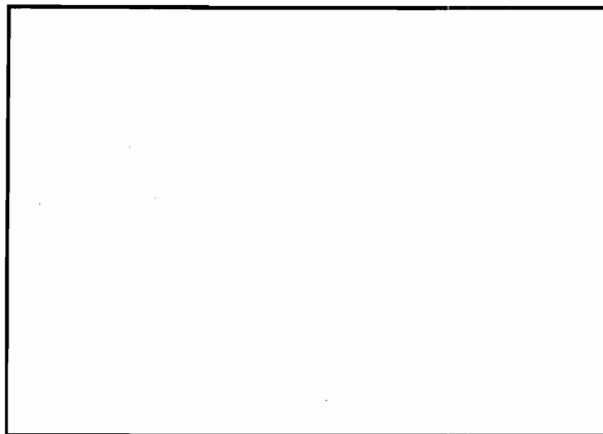
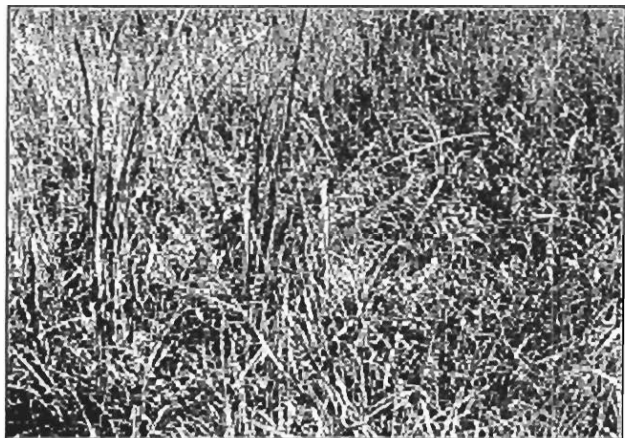
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

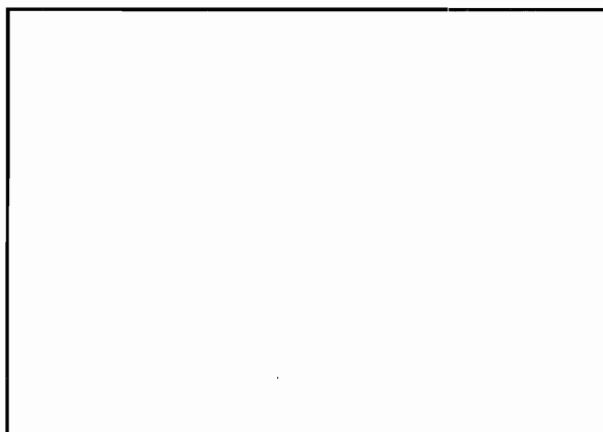
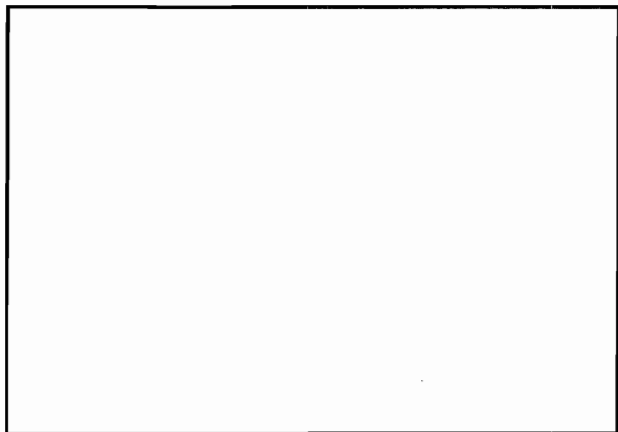
2003

GROUND



C6

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-7

STATION

10+92

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	65%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	20%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	15%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

6.5" of standing water

Aquatic Macrofauna

None

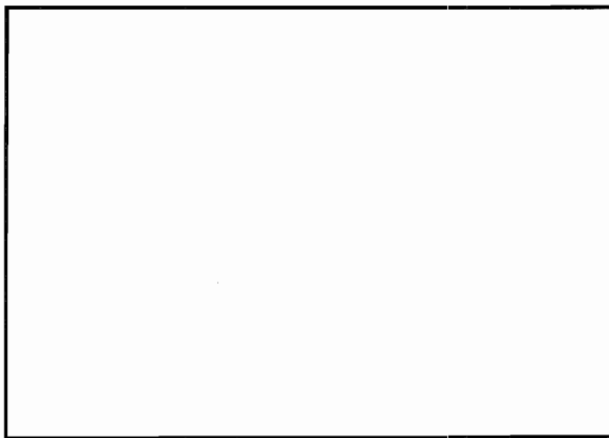
Wildlife Indicators (tracks, scat, nests)

None

11/10/02

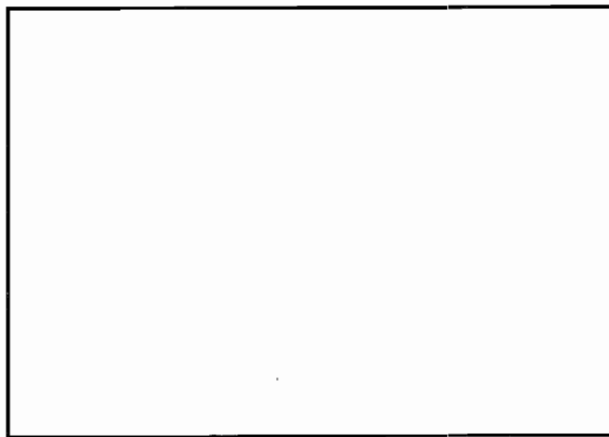
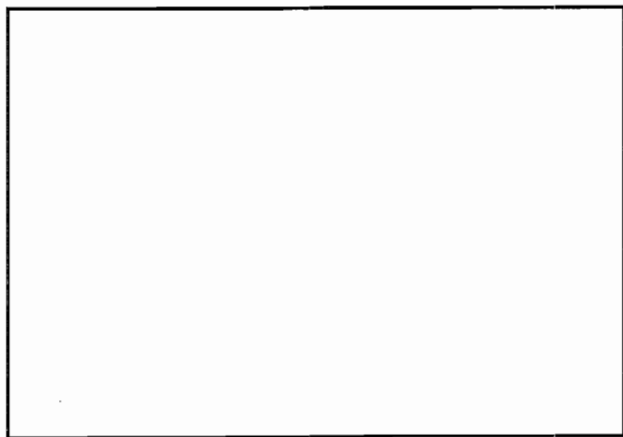
2003

GROUND



C7

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-8

STATION

12+74

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	20%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	5%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerselweed	<i>Pontederia lanceolata</i>	3%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	72%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

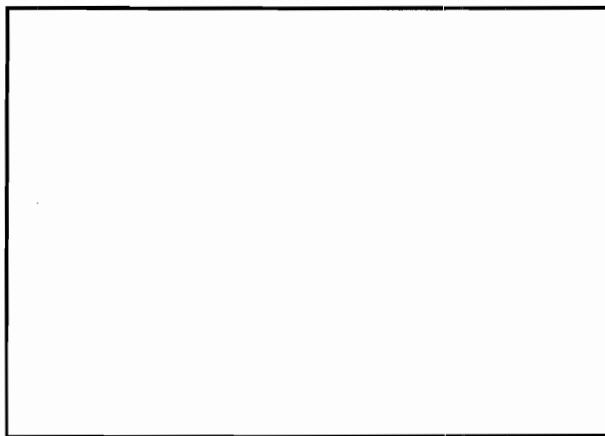
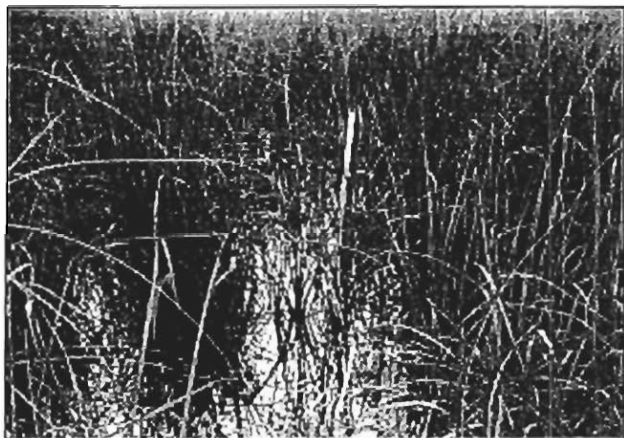
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

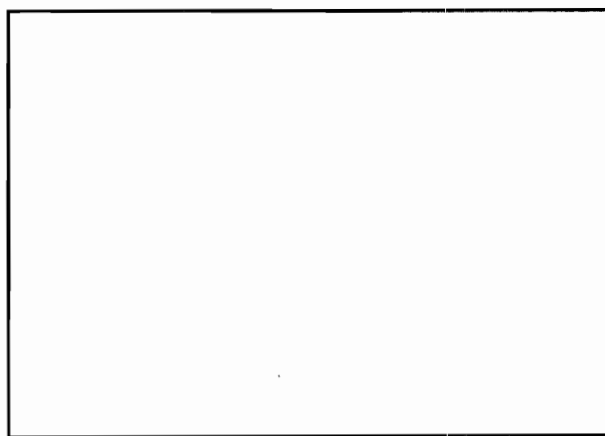
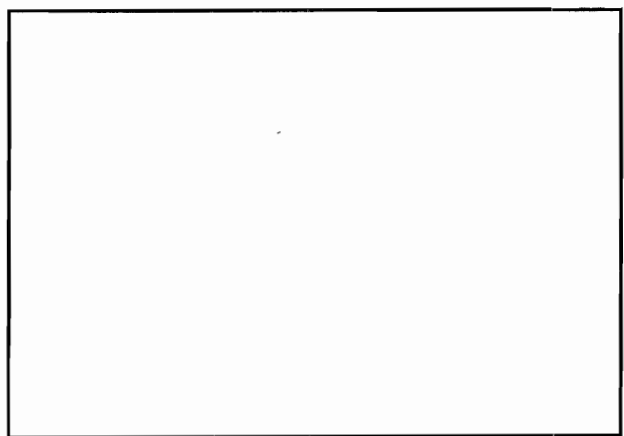
2003

GROUND



C8

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-9

STATION

14+56

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	15%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	40%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	45%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Open water area adjacent to point, many fry 1 to 2.5cm in length

Water Level / Soil Moisture

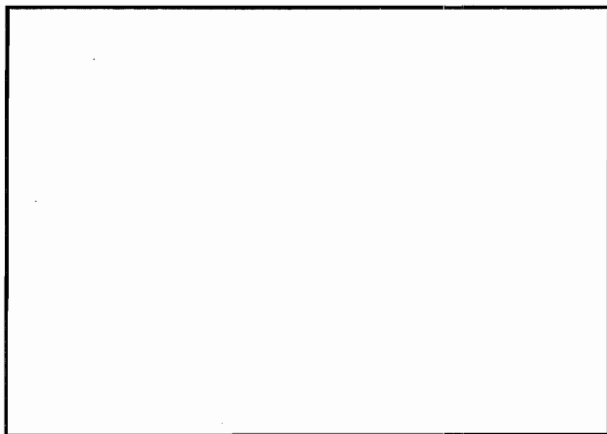
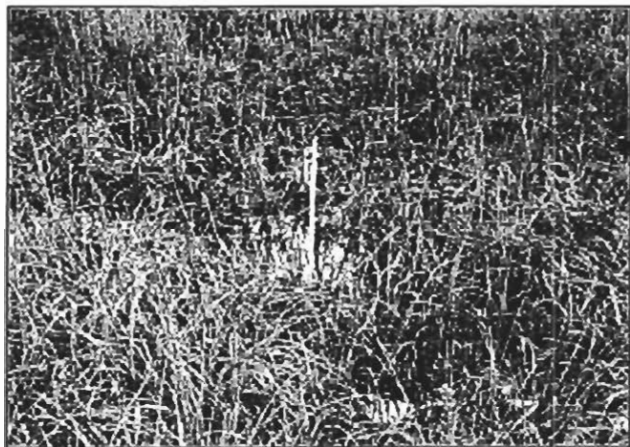
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

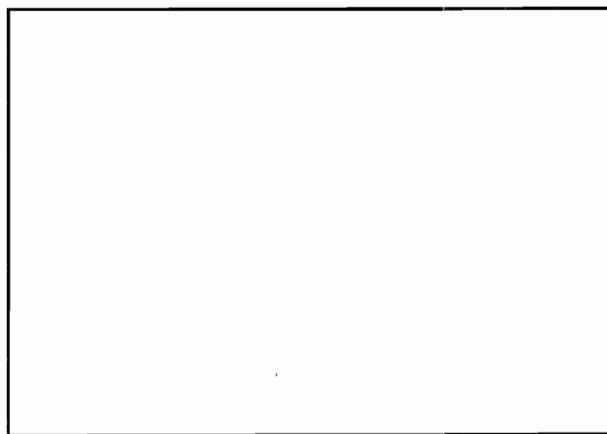
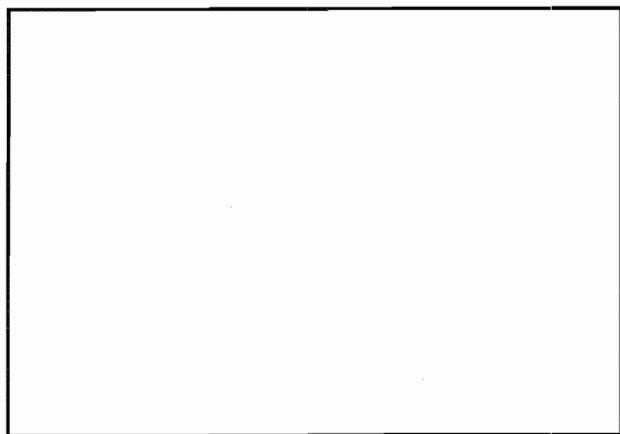
2003

GROUND



C9

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-10

STATION

16+38

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	40%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	55%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	5%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

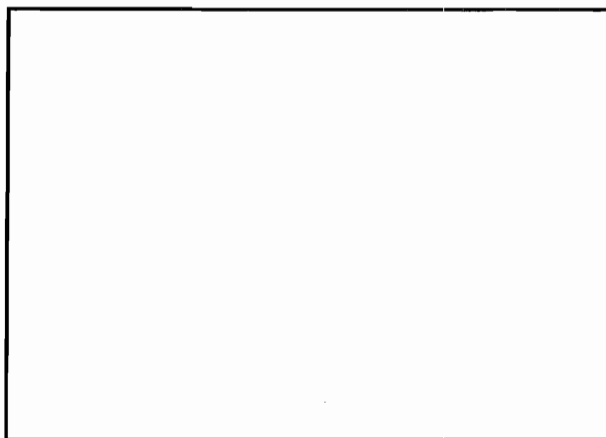
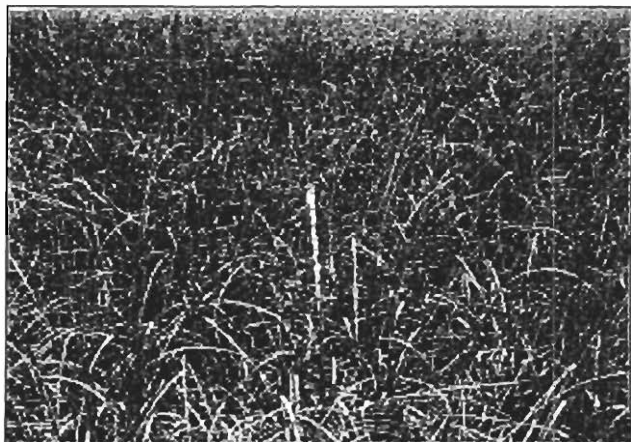
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

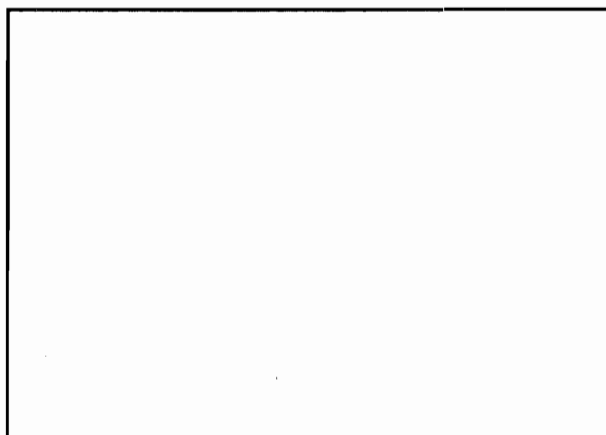
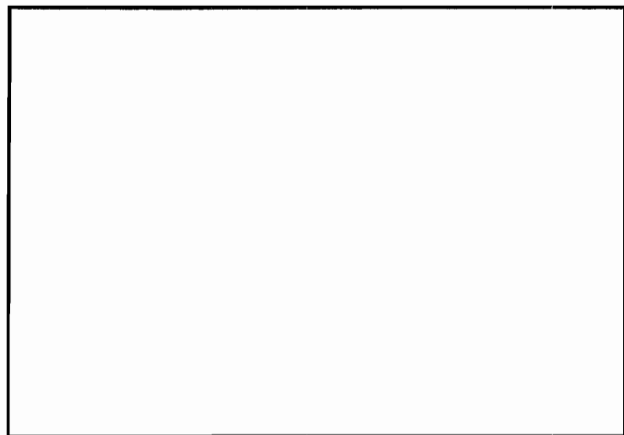
2003

GROUND



C10

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-11

STATION

18+20

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	35%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	65%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	0%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

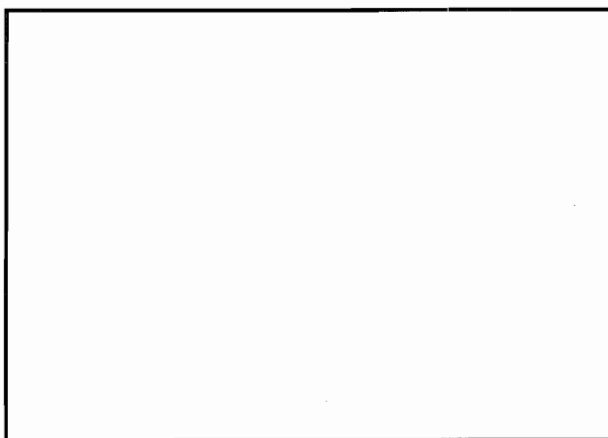
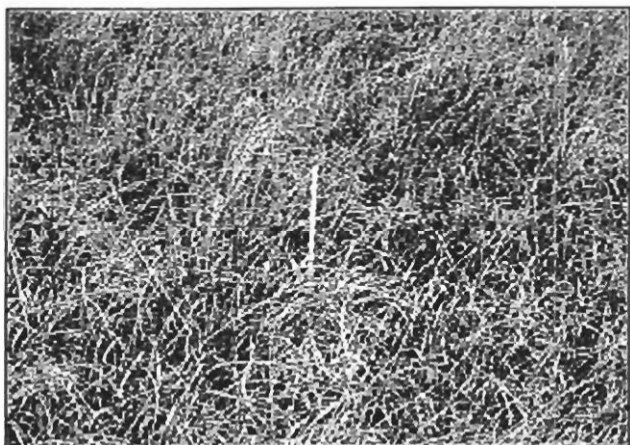
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

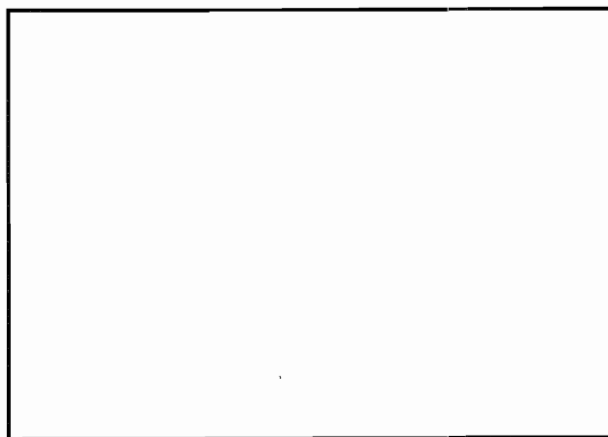
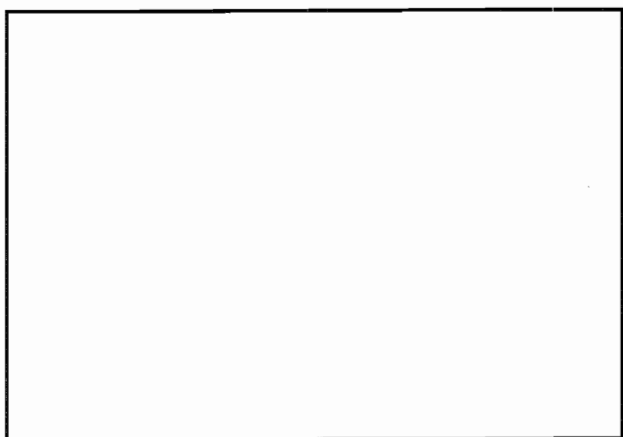
2003

GROUND



C11

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-12

STATION

20+02

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	25%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	75%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	0%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Saw grass 6' tall

Water Level / Soil Moisture

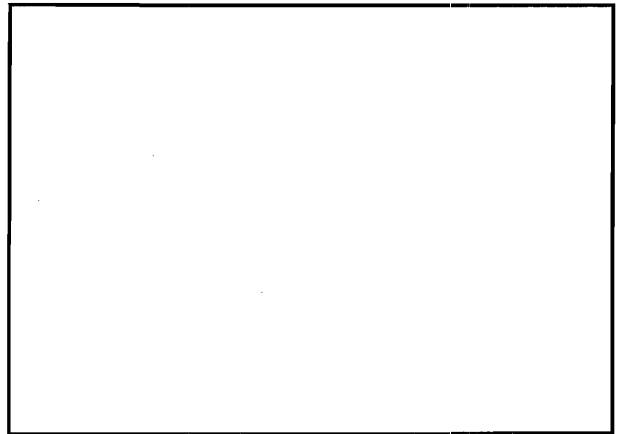
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

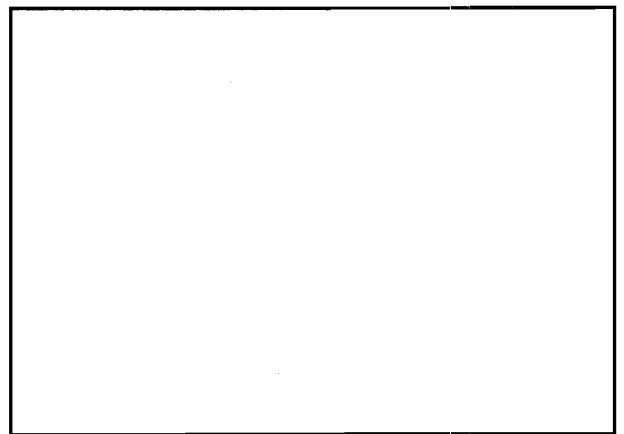
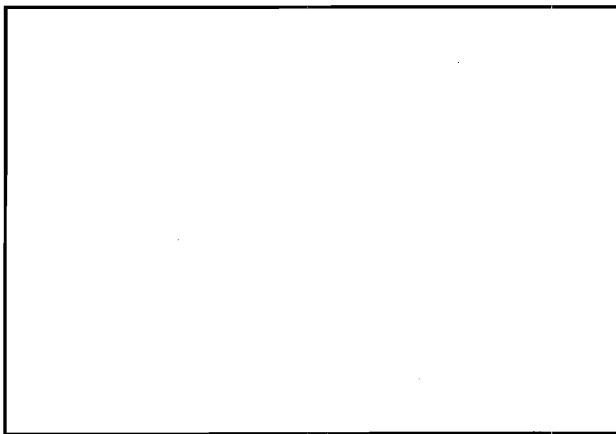
2003

GROUND



C12

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-13

STATION

21+84

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	30%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	20%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	49%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

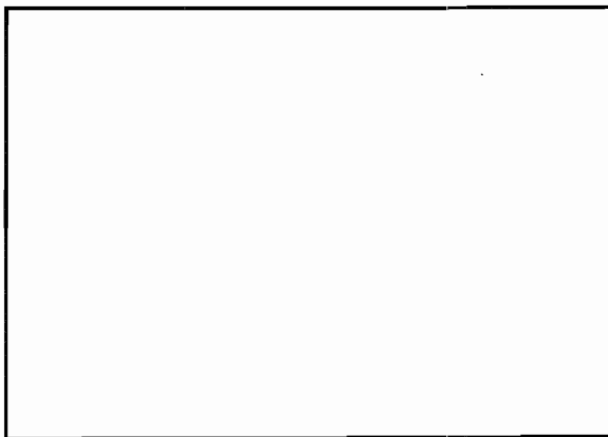
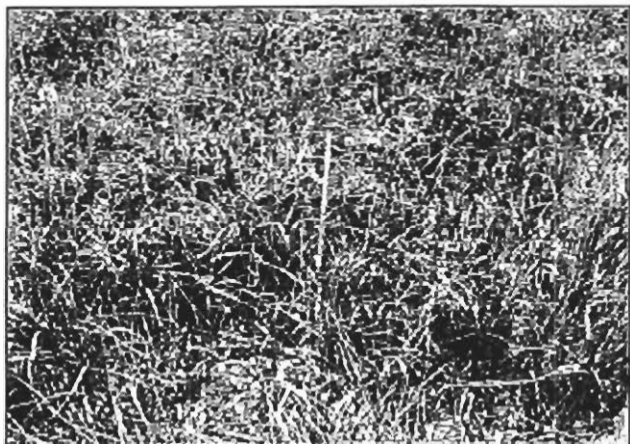
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

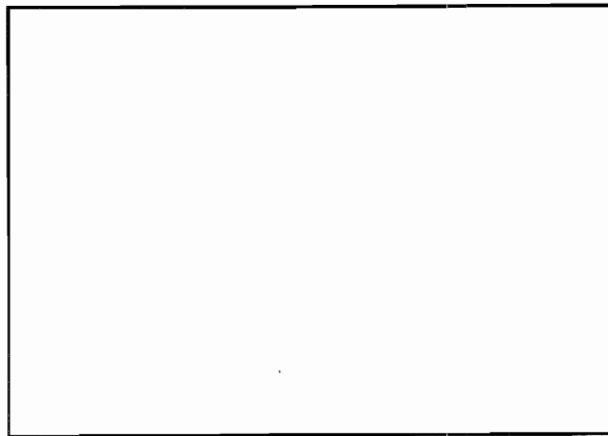
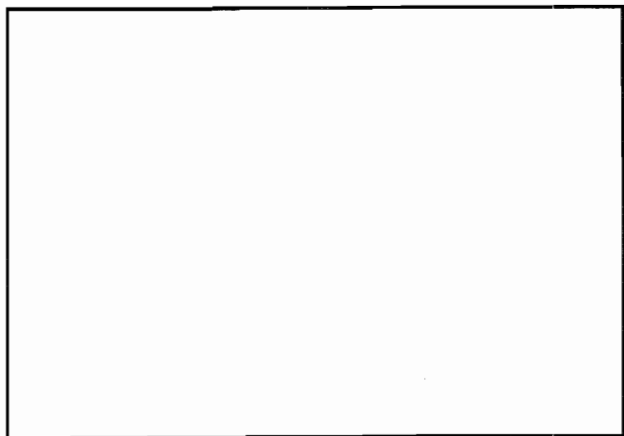
2003

GROUND



C13

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-14

STATION

23+66

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	65%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	35%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	0%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

9" of standing water

Aquatic Macrofauna

None

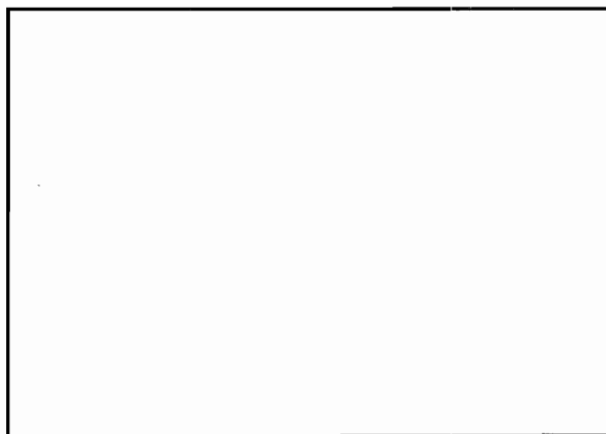
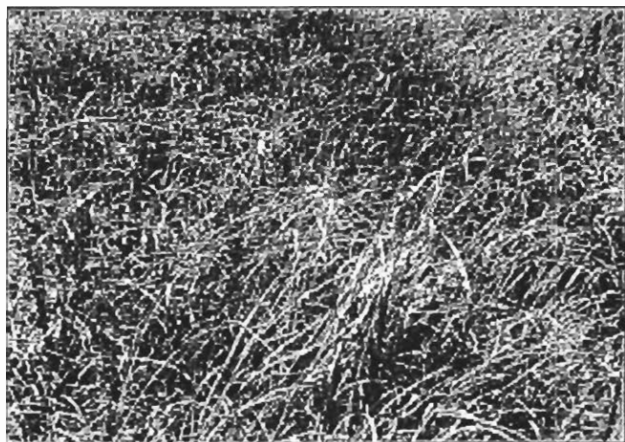
Wildlife Indicators (tracks, scat, nests)

None

11/10/02

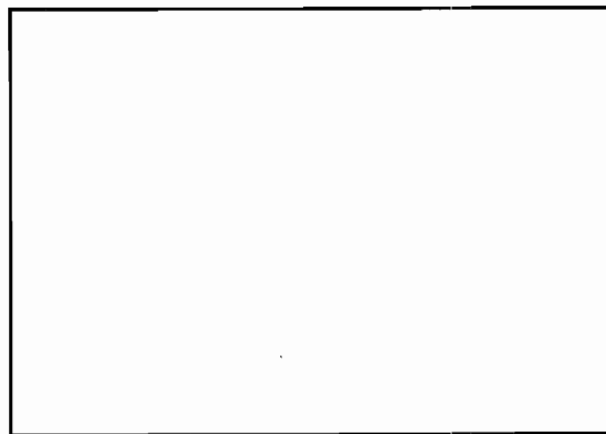
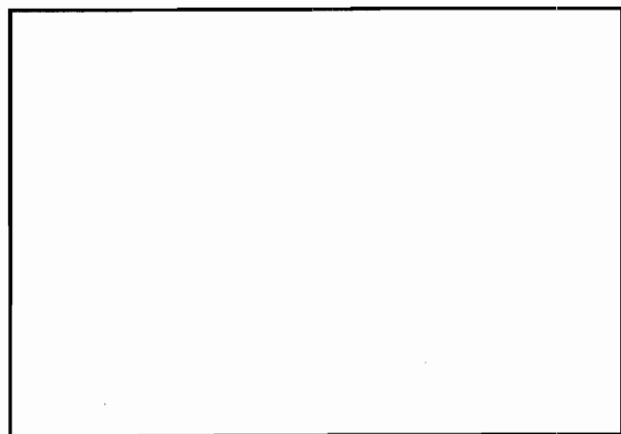
2003

GROUND



C14

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-15

STATION

25+48

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	35%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	45%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	20%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

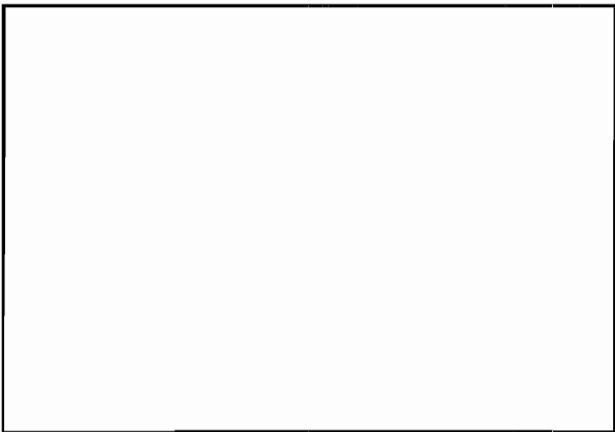
GROUND

11/10/02

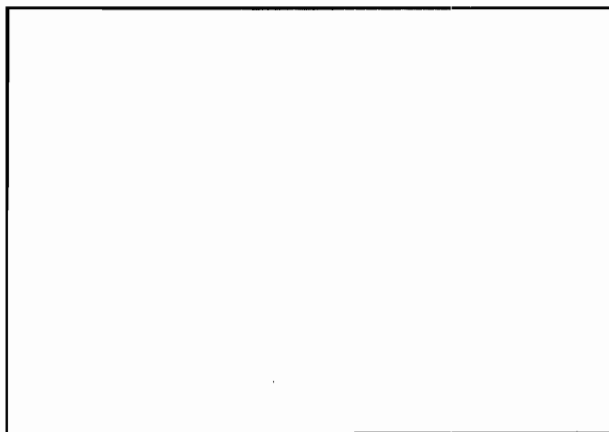
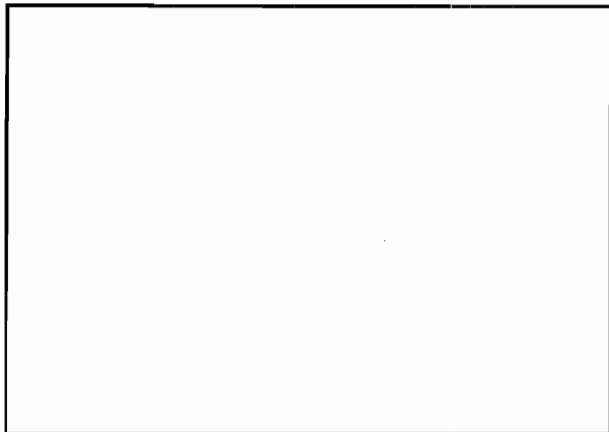


C15

CANOPY



2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-16

STATION

27+30

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	45%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	55%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	0%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

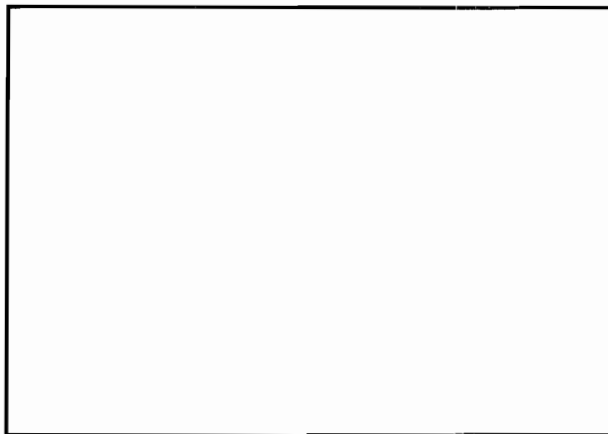
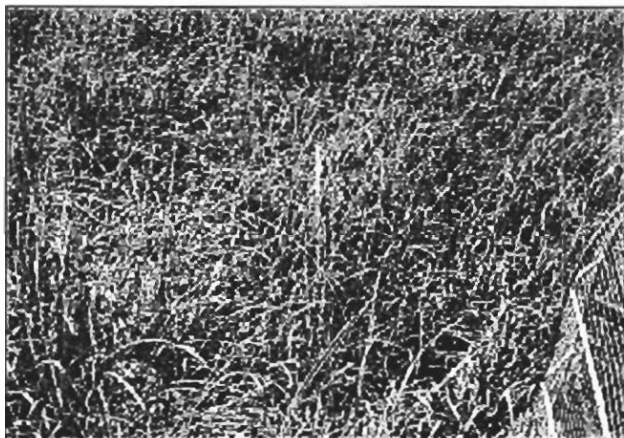
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

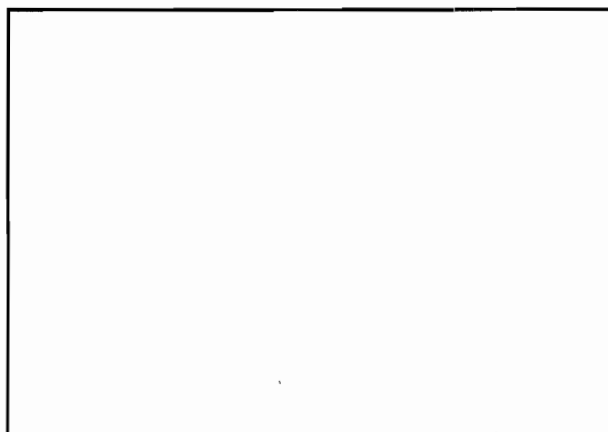
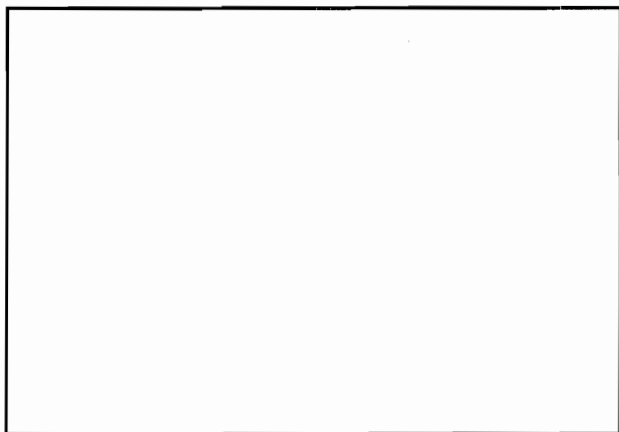
2003

GROUND



C16

CANOPY



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

C-17

STATION

29+12

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	25%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	40%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	35%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

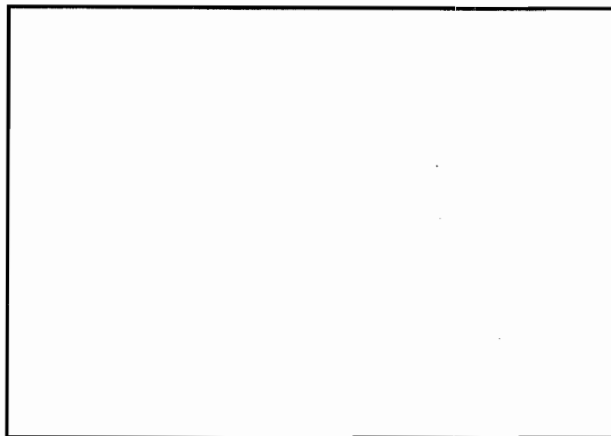
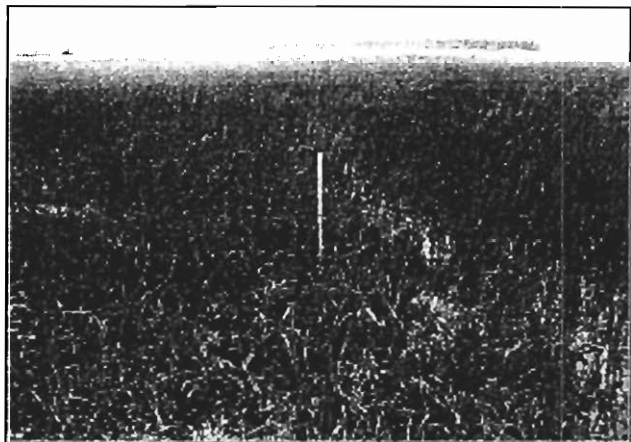
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

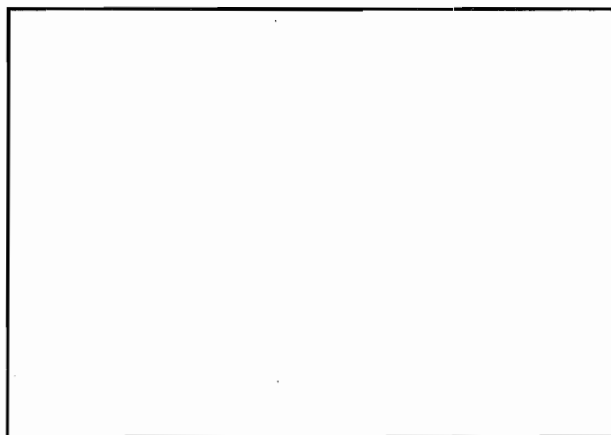
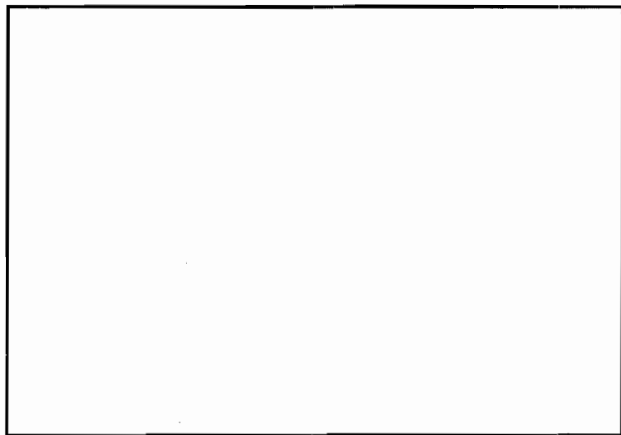
2003

GROUND



C17

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-18

STATION

30+94

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	20%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	70%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickrelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	10%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

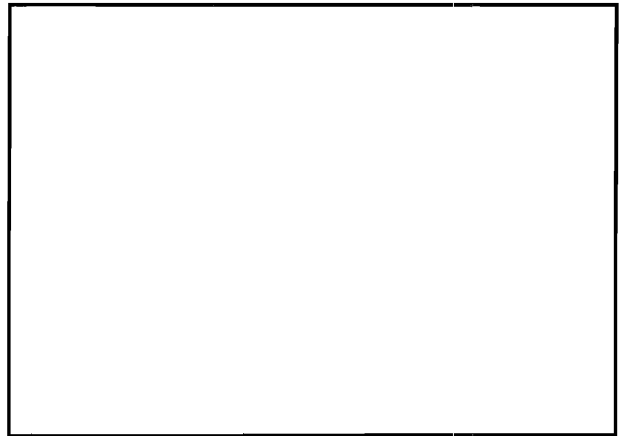
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

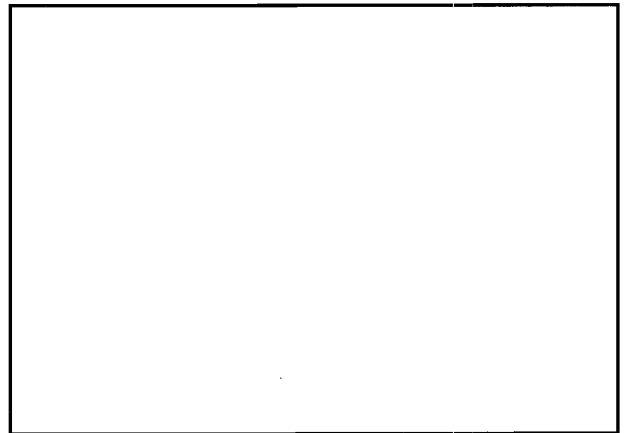
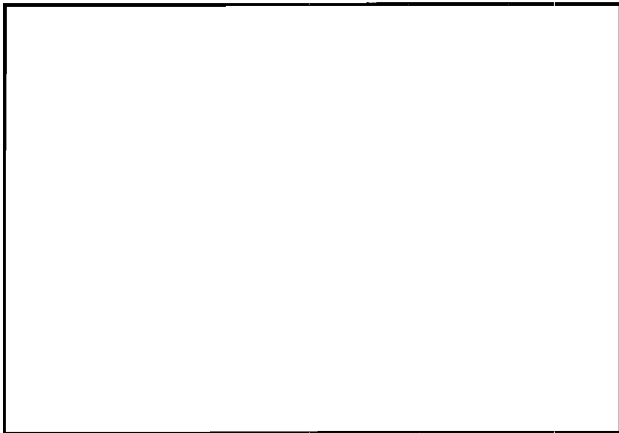
2003

GROUND



C18

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-19

STATION

32+76

SUBMERGED AQUATICS

Common Name	Scientific Name	11/10/02 % Coverage	2003 % Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	45%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	55%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickrelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	0%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

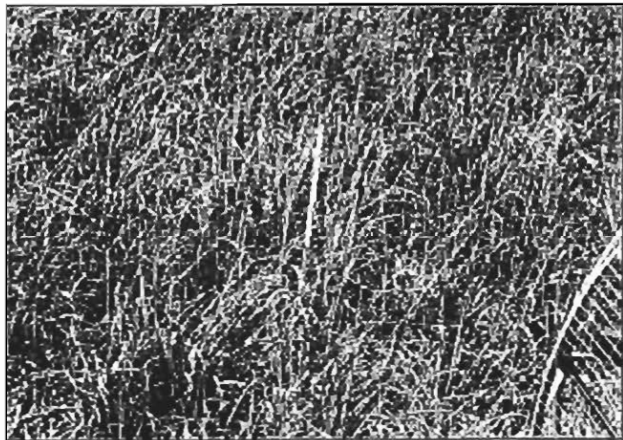
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

GROUND

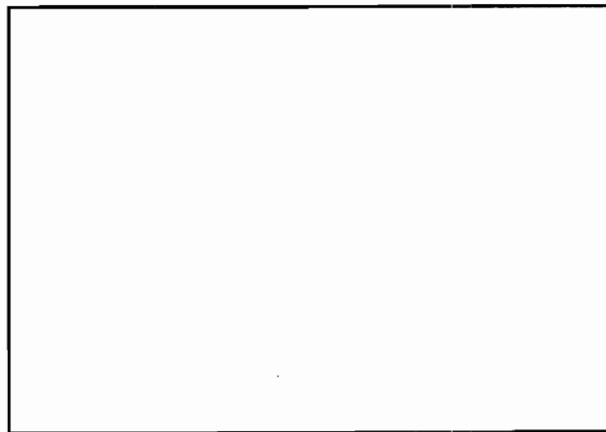
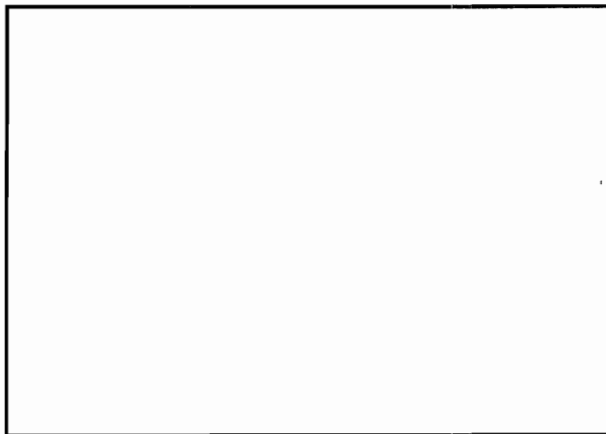
11/10/02



C19

CANOPY

2003



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-20

STATION

34+58

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	30%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	2%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	68%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Fry common observed in open water area.

Water Level / Soil Moisture

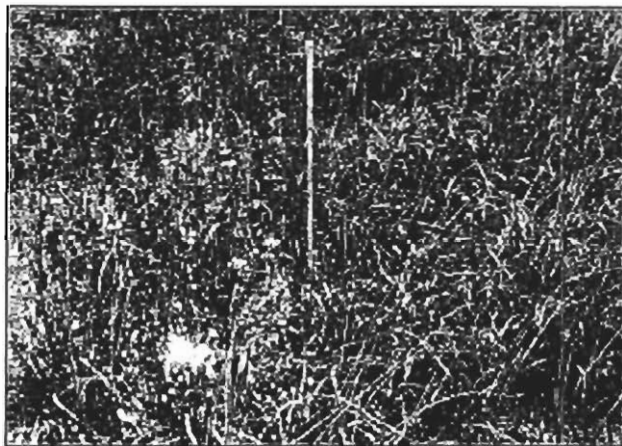
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

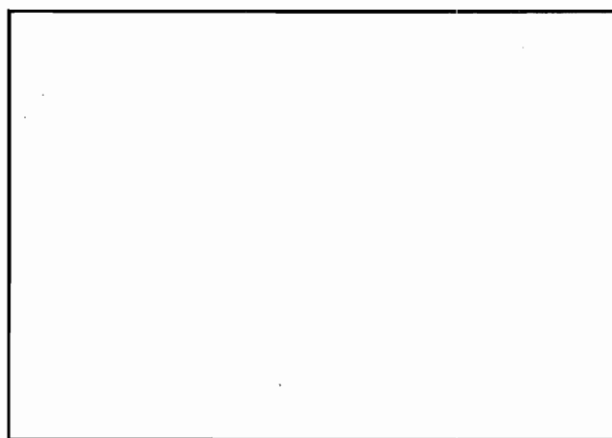
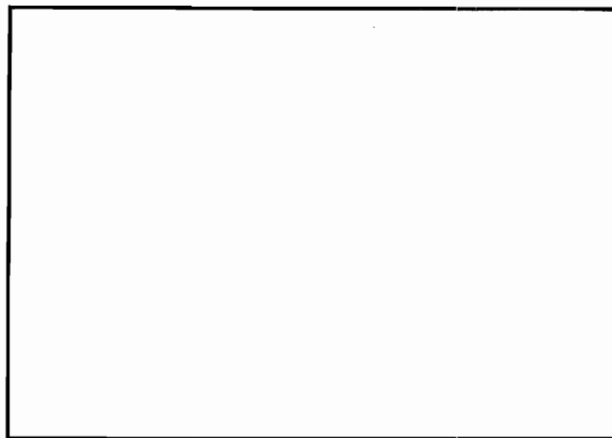
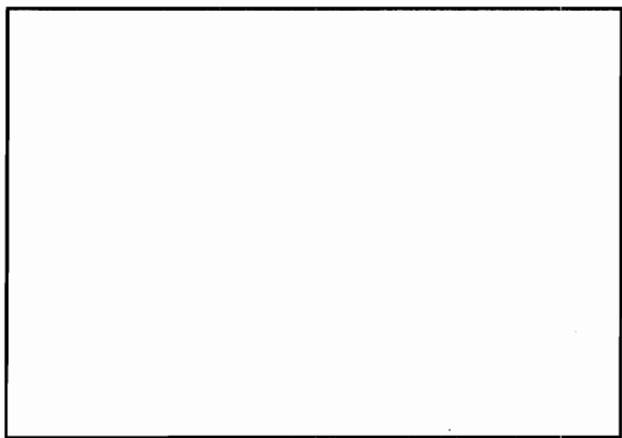
2003

GROUND



C20

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-21

STATION

36+40

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	20%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	50%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickersweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	2%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	28%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

9.5" standing water

Aquatic Macrofauna

Fry 2cm in length common

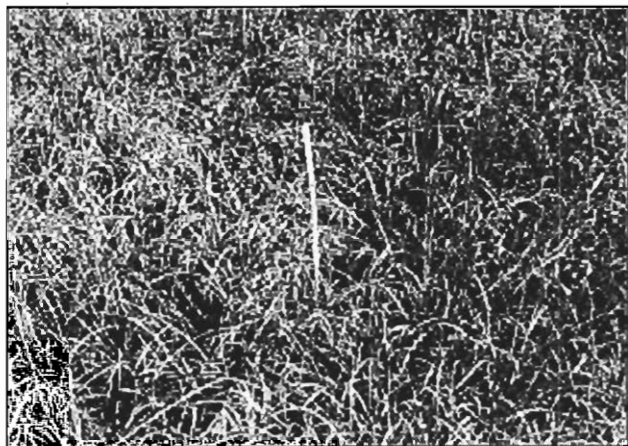
Wildlife Indicators (tracks, scat, nests)

None

11/10/02

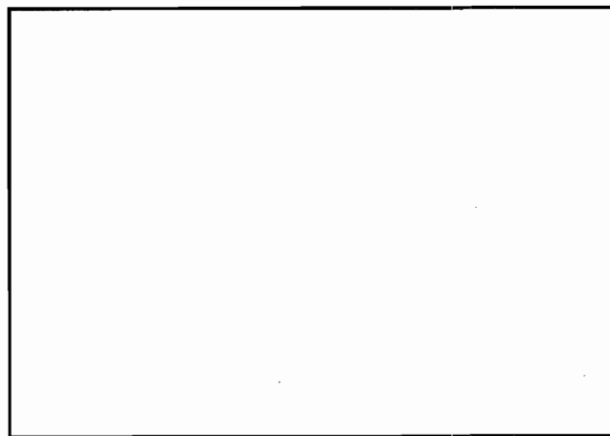
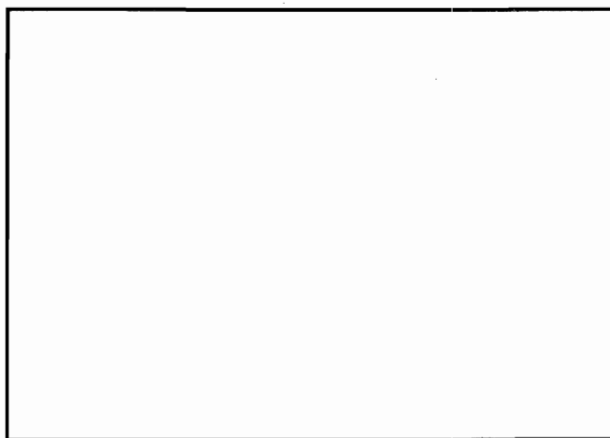
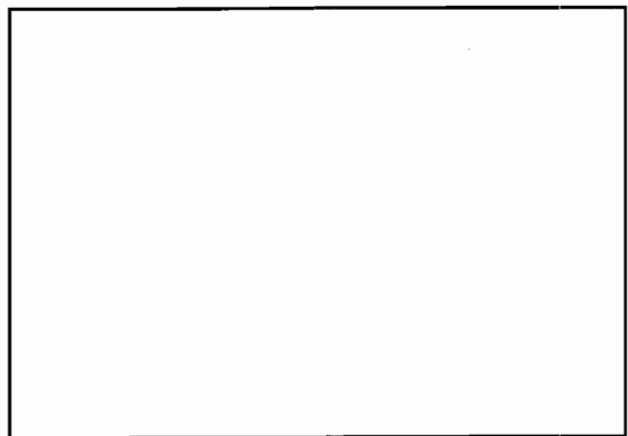
2003

GROUND



C21

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-22

STATION

38+22

SUBMERGED AQUATICS

		11/10/02	2003
Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	30%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	70%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	15%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	10%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	75%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

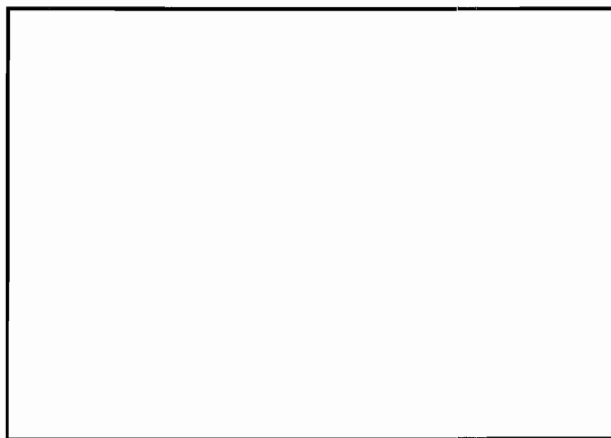
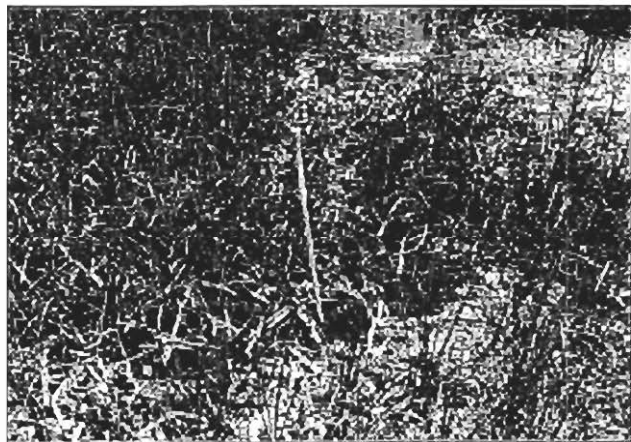
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

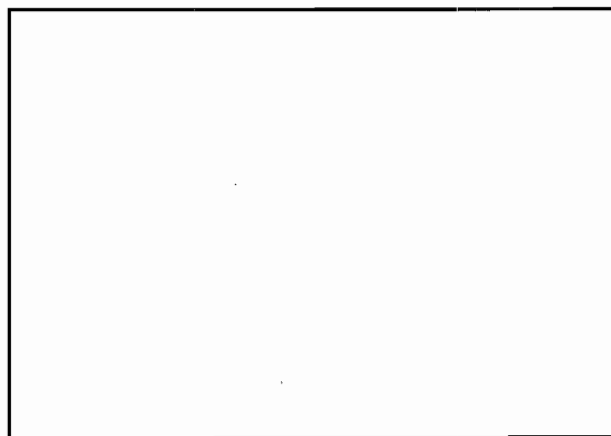
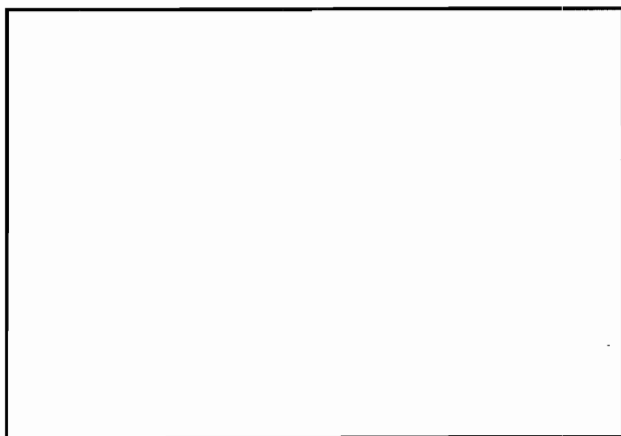
2003

GROUND



C22

CANOPY



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

C-23

STATION

40+04

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	25%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	20%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerselweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	54%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

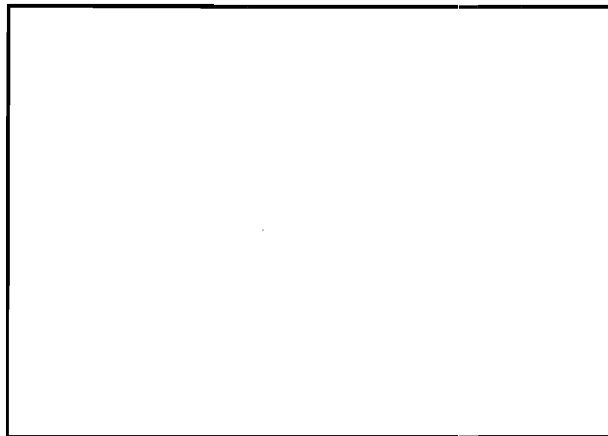
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

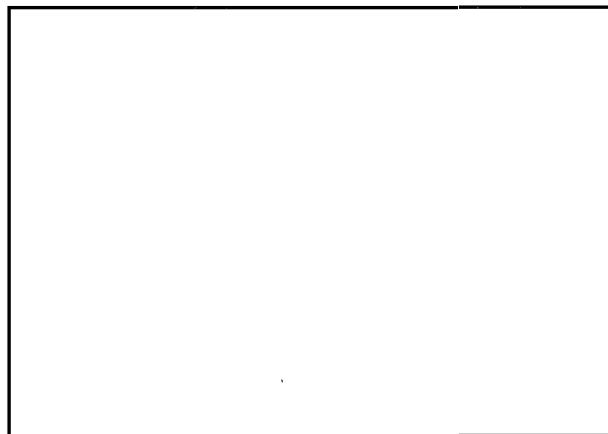
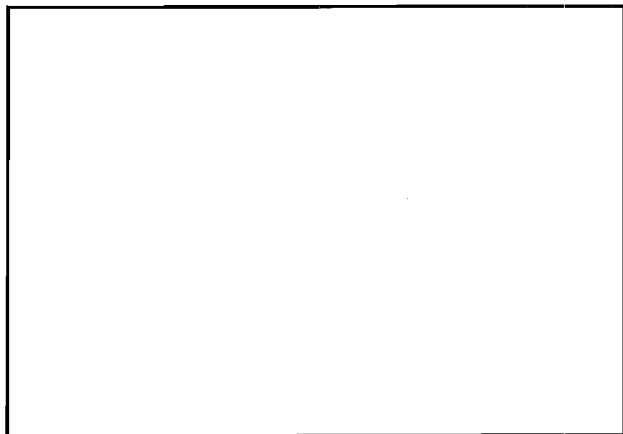
2003

GROUND



C23

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-24

STATION

41+86

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	10%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	70%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	20%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Saw grass 3-4' tall

Water Level / Soil Moisture

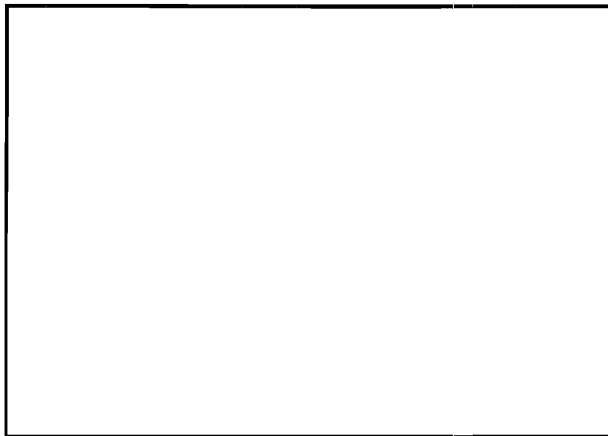
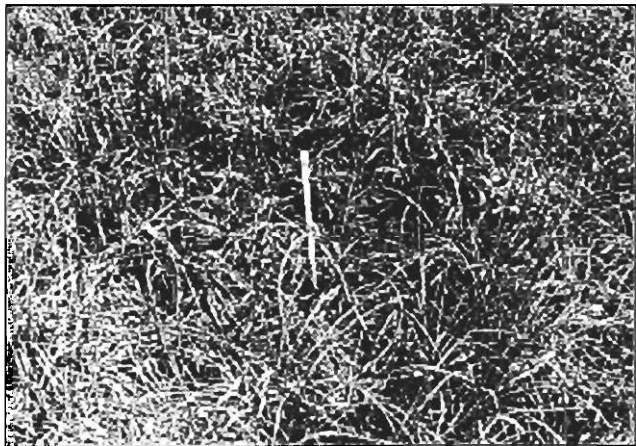
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

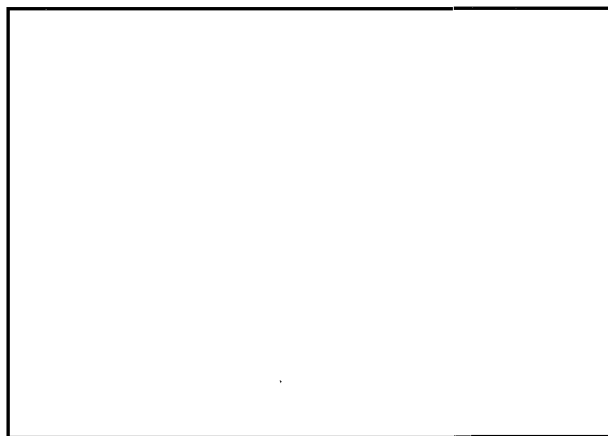
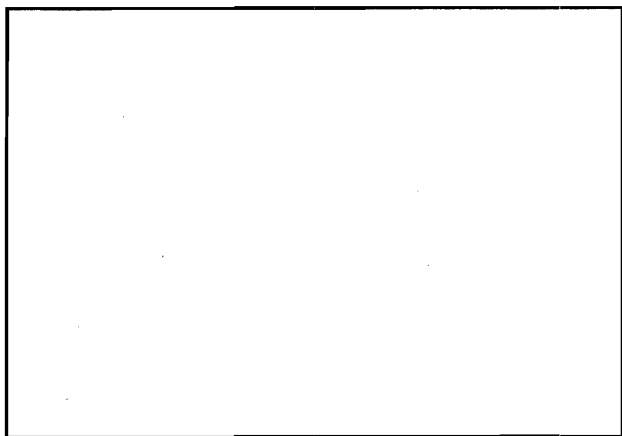
2003

GROUND



C24

CANOPY



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

C-25

STATION

43+68

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	30%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	40%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	30%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

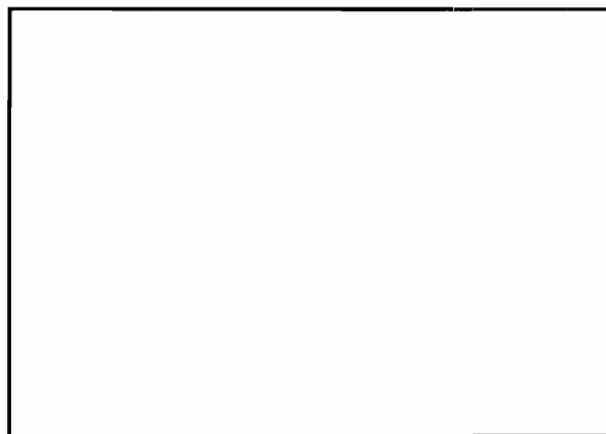
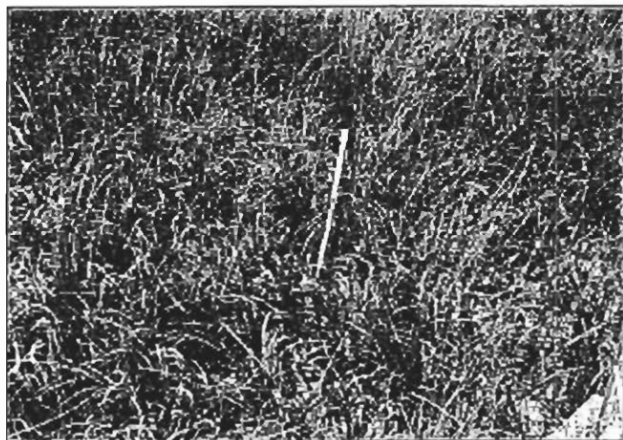
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

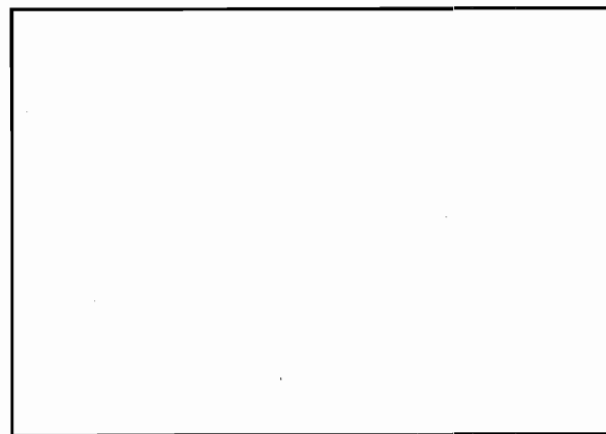
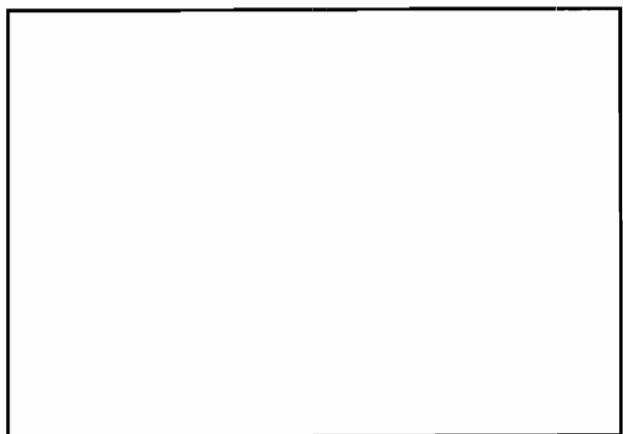
2003

GROUND



C25

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-26

STATION

45+50

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	45%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	40%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickrelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	2%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	13%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: 2cm fry common

Water Level / Soil Moisture

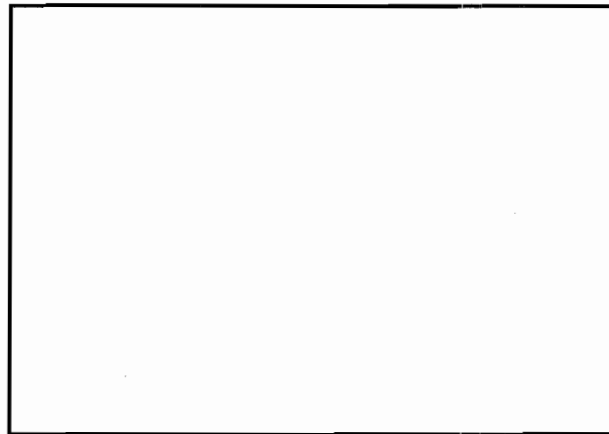
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

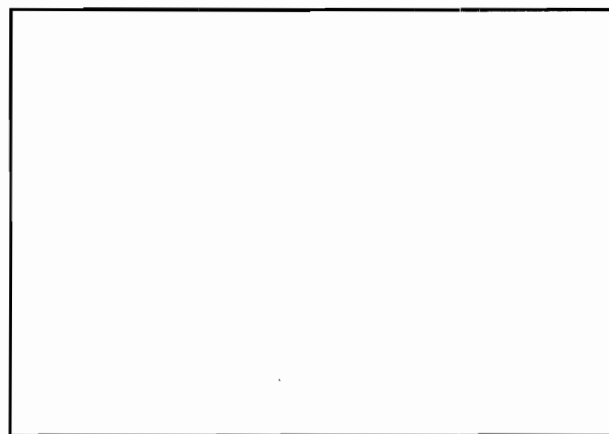
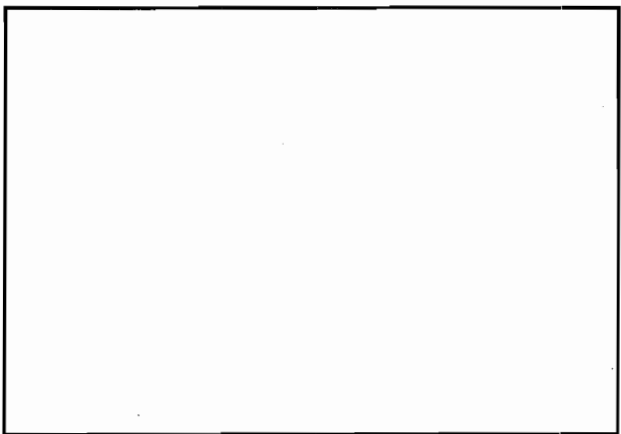
2003

GROUND



C26

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-27

STATION

47+32

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	20%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	70%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	10%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Saw grass 5-6' tall

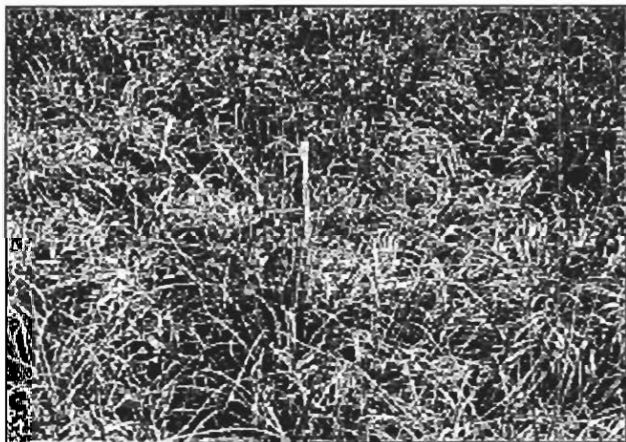
Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

GROUND

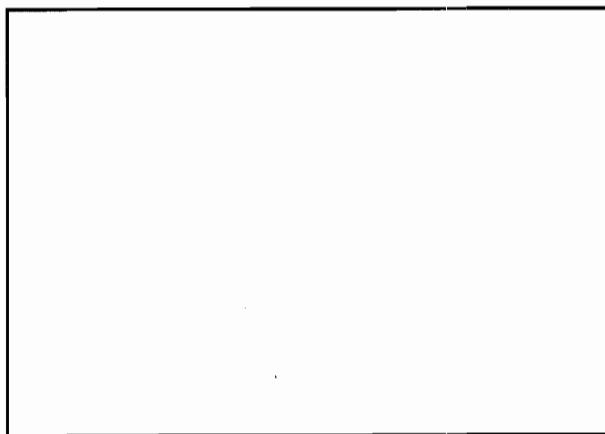
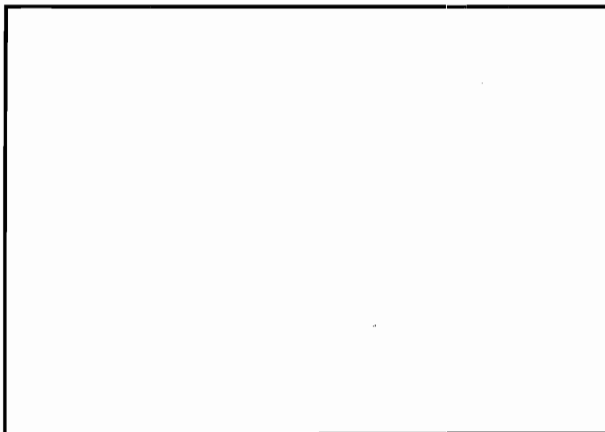
11/10/02



C27

CANOPY

2003



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

C-28

STATION

49+14

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	10%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	2%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	2%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	2%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	8%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	10%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	66%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

9" standing water

Aquatic Macrofauna

Water spiders, fry 1cm in length few, grasshopper

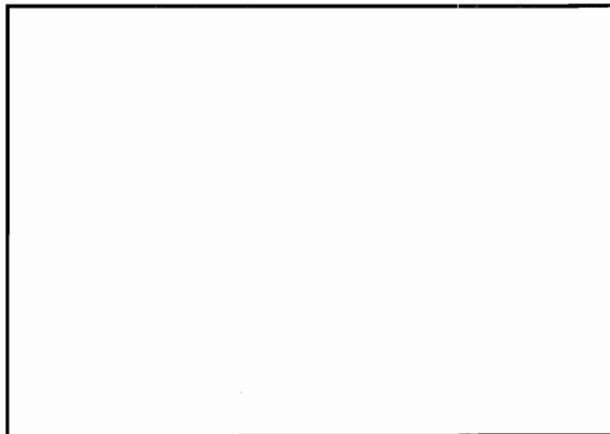
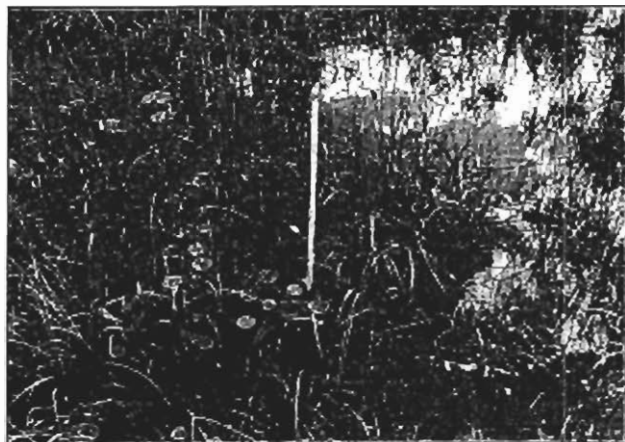
Wildlife Indicators (tracks, scat, nests)

none

11/10/02

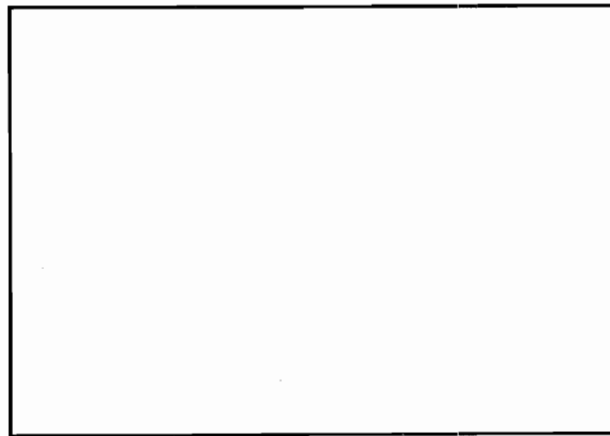
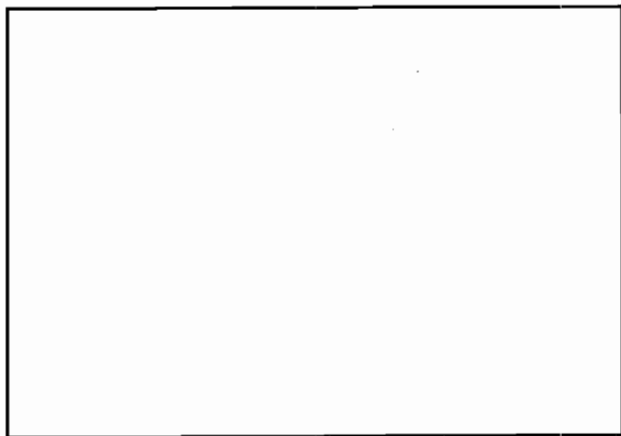
2003

GROUND



C28

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-29

STATION

50+96

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	25%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	25%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	5%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	45%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

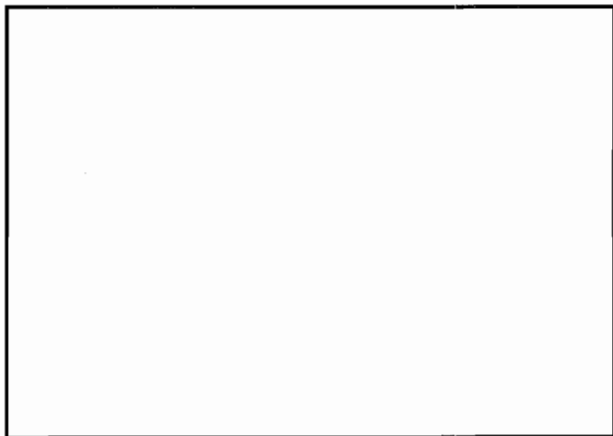
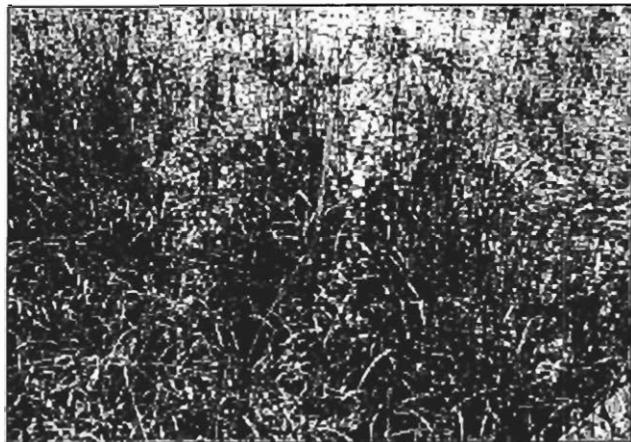
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

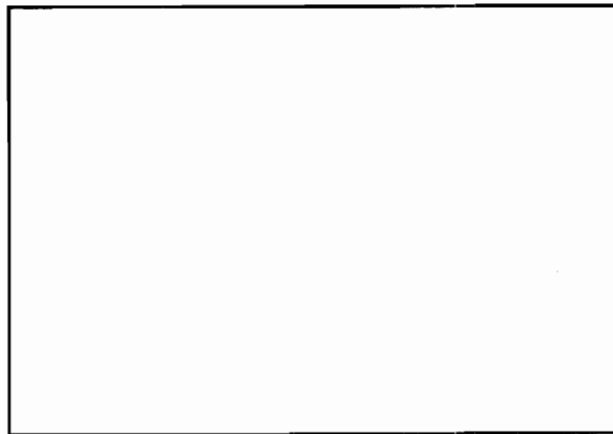
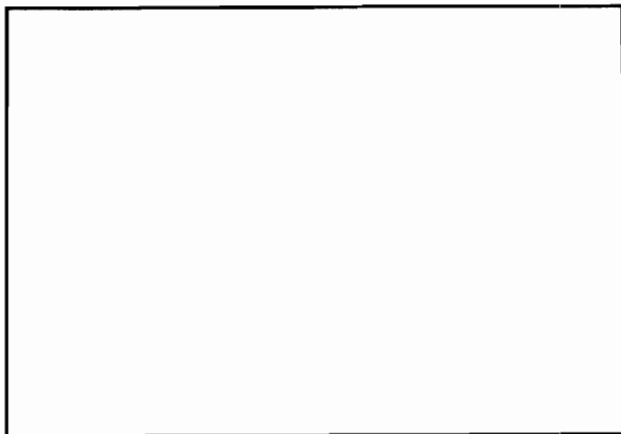
2003

GROUND



C29

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

C-30

STATION

52+78

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	40%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	25%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open Water/Mud/Void	N/A	35%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

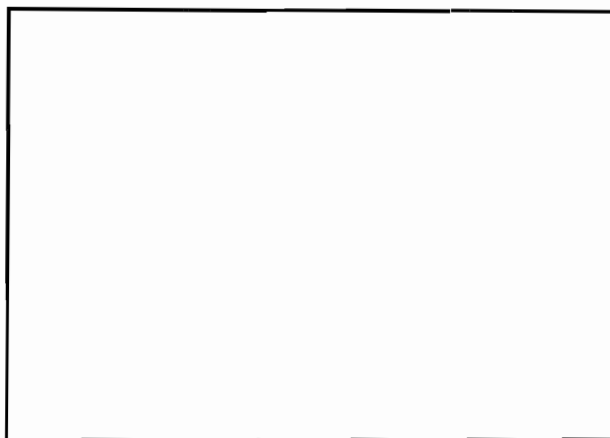
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

2003

GROUND



C30

CANOPY

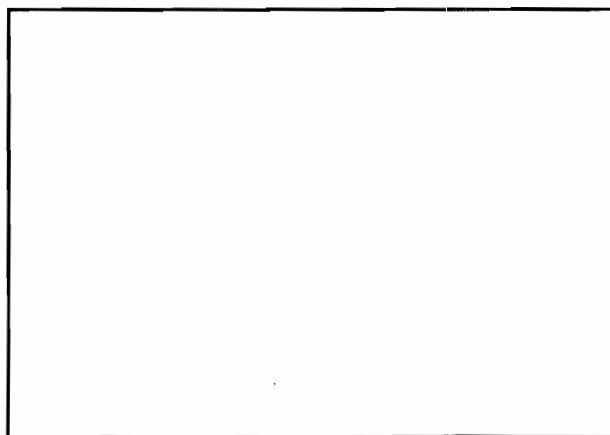
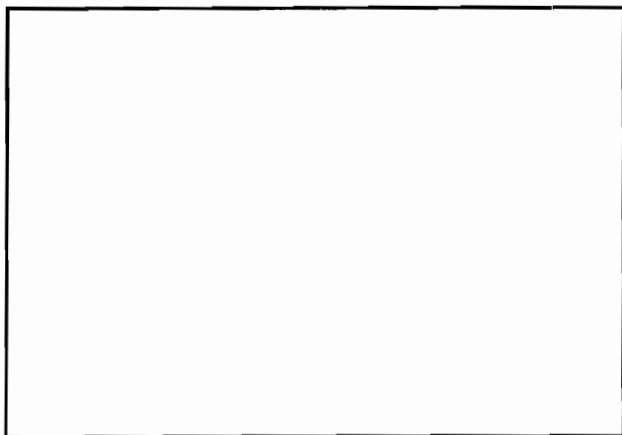




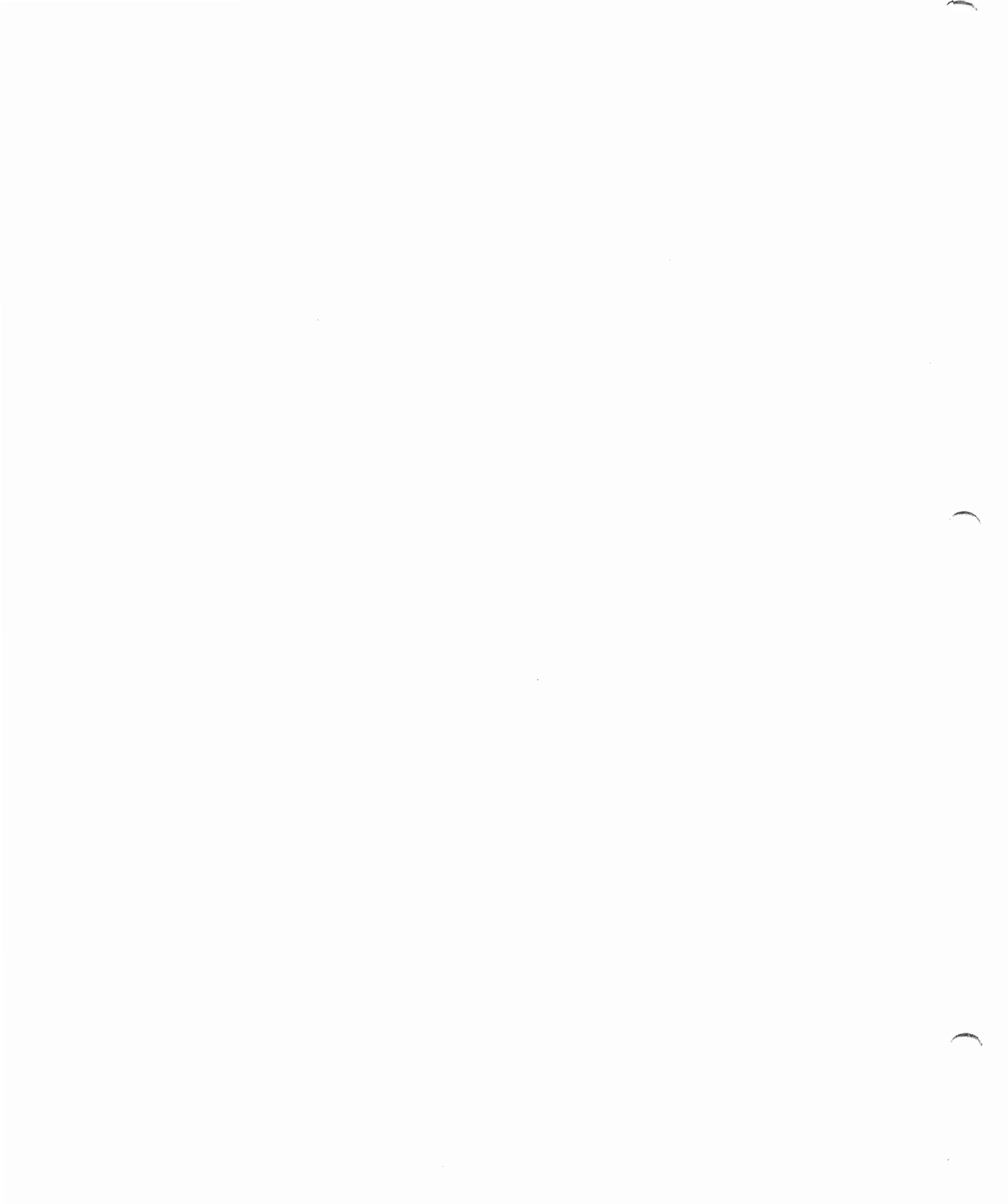


Figure 6. Transect D

End Points of Segment
● Data Collection Locations

N

300 0 300 Feet



TRANSECT D

Narrative

Transect D is located in Section 6, Township 53, Range 39 east (Cell 26 - Pennsuco Exotic Treatment Area). It starts on the levee at Krome Avenue with point D1 (GPS Coordinates Latitude 25° 46' 40.00", Longitude 80° 29' 03.33") and continues east one mile to point D30 (GPS coordinates Latitude 25° 53' 12.69", Longitude 80° 28' 52.00"), which is west of the Dade-Broward Levee (Figure 6). Two community types were identified for transect D. Point D1 represents an upland levee community dominated by Swamp Fern (*Blechnum serrulatum*) in the herbaceous layer and Golden Fig Tree (*Ficus aurea*) in the overstory layer. Points D2 through D30 represent a wet prairie community type dominated by saw-grass (*Cladium jamaicense*). The appearance of the exotic and invasive punk tree vegetation indicates a shift in the community types from saw-grass in the area.

Water depths ranged from 4.5 to 7 inches at the four photopoint locations (D7, D14, D21, and D28). Small fry one to two centimeters long were abundant, and were noted at photopoints D14, D28, and D23. A few small fry two centimeters long were also observed at points D26 and D27. At photopoint D9, many fry one to two centimeters long were noted.

Much of the saw-grass and punk tree vegetative communities appeared dead due to enhancement efforts, which called for the eradication of exotic and invasive species. Control efforts focused primarily on punk tree, and consisted of herbicidal treatment and a physical removal program, followed by a controlled burn.

In summary, the percent vegetative coverage, by layer, for this transect identified:

- In the submerged aquatics layer, two percent Bladderworts (*Utricularia foliosa*).
- In the herbaceous species layer, 13 percent live saw-grass, 44 percent dead saw-grass, one percent live punk trees, and one percent dead punk trees.
- In the sapling/vine layer, six percent live punk trees and six percent dead punk trees.
- In the overstory layer, one percent live punk trees, one percent dead punk trees, and one percent Golden Fig Tree (*Ficus aurea*) was observed.

Pennsuco Monitoring Project - Summary Sheet

TRANSECT

"D"

Total Length

5280'

SUBMERGED AQUATICS

Common Name	Scientific Name	11/10/02 % Coverage	2003 % Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0.00%	
Bladderwort	<i>Utricularia foliosa</i>	1.50%	
Bladderwort	<i>Utricularia purpurea</i>	0.07%	
Ludwigia	<i>Ludwigia repens</i>	0.00%	
Open/Void	N/A	98.43%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	12.83%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	43.83%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1.37%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	1.40%	
Southern Swamp Lily	<i>Crinum americanum</i>	0.33%	
Pickernelweed	<i>Pontederia lanceolata</i>	0.00%	
Yellowtops	<i>Flaveria linearis</i>	0.00%	
Arrowhead	<i>Sagittaria graminea</i>	0.00%	
Floating-Heart	<i>Nymphoides aquatica</i>	0.00%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0.00%	
Cattail	<i>Typha latifolia</i>	0.00%	
Button Bush	<i>Cephalanthus occidentalis</i>	0.17%	
Maiden-Cane	<i>Panicum hemitomum</i>	0.07%	
Shield Fern	<i>Thelypteris kunthii</i>	0.00%	
Swamp Fern	<i>Blechnum serrulatum</i>	0.17%	
TBD		0.00%	
TBD		0.00%	
Open Water/Mud/Void	N/A	39.83%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	5.73%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	5.57%	
Elm	<i>Trema micrantha</i>	0.00%	
TBD		0.00%	
Open/Void		88.70%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1.33%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0.67%	
Golden Fig	<i>Ficus Aurea</i>	1.17%	
Open/Void		96.83%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

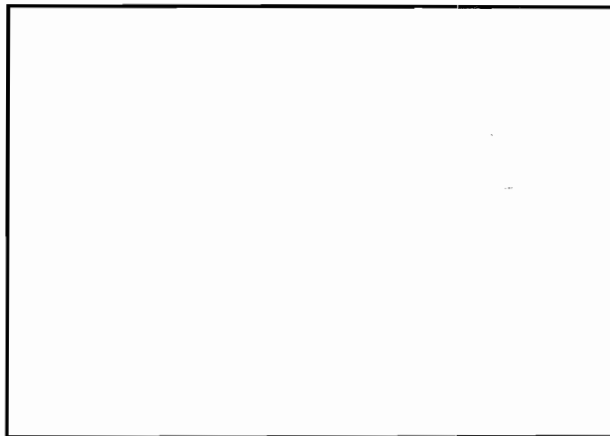
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

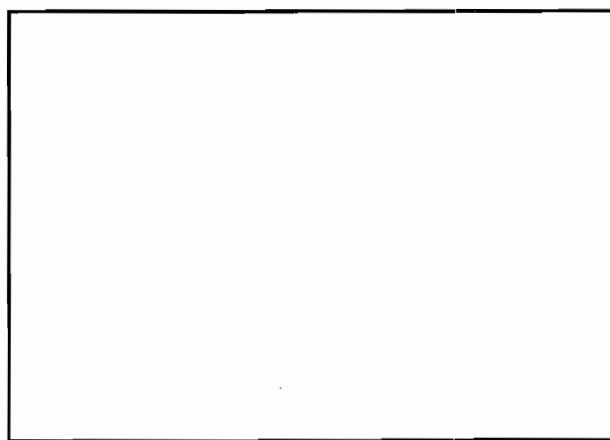
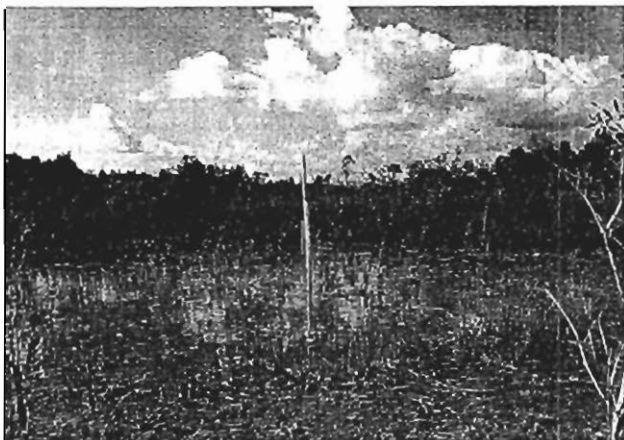
2003

0+00 Panoramic - Looking east



D transect

52+78 Panoramic - Looking West



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-1

STATION

0+00

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	5%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	95%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	35%	
Open/Void		65%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

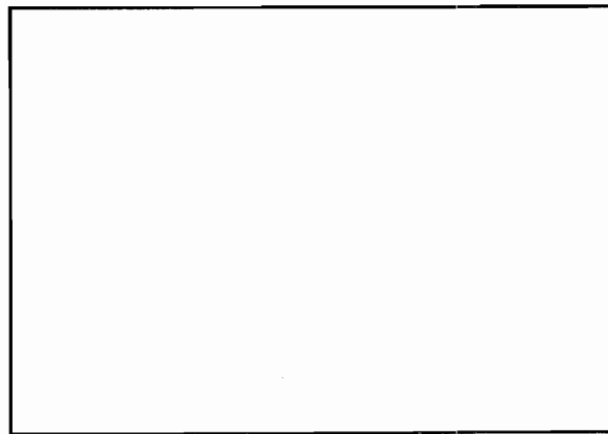
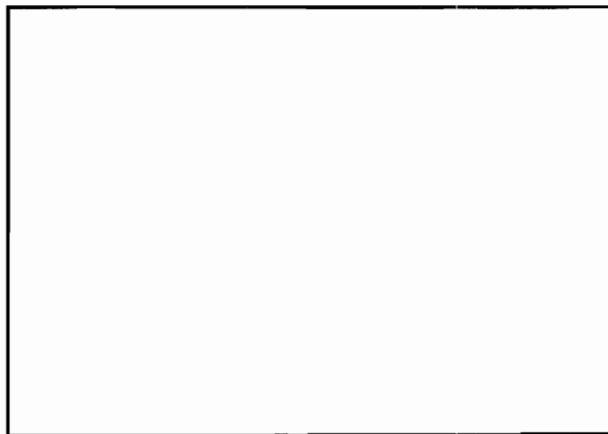
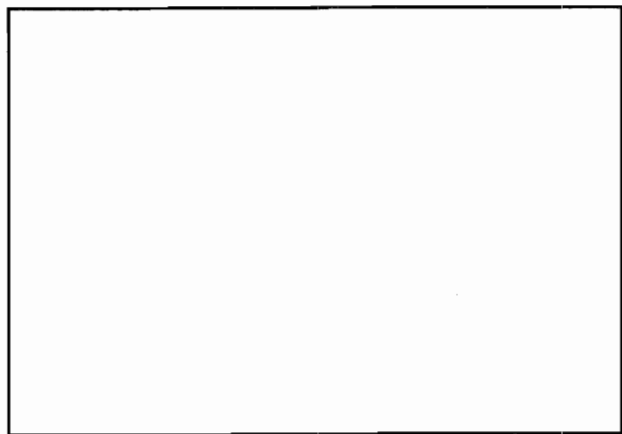
2003

GROUND



D1

CANOPY



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

D-2

STATION

1+82

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	3%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	97%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	47%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	53%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	20%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		80%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

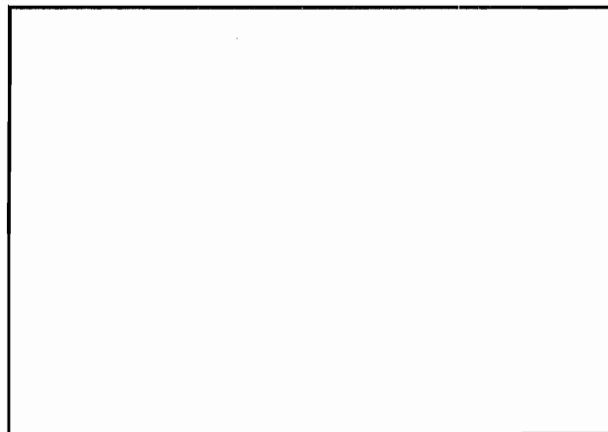
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

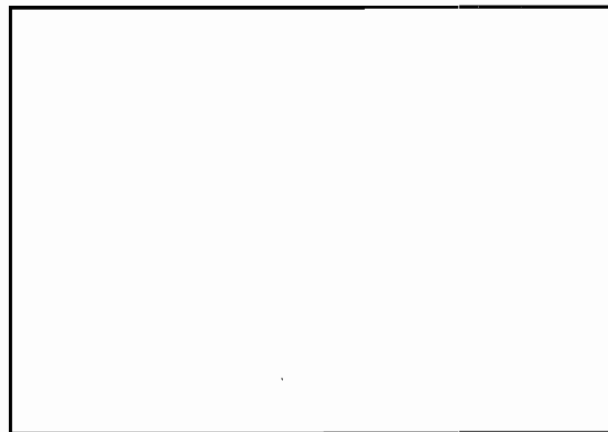
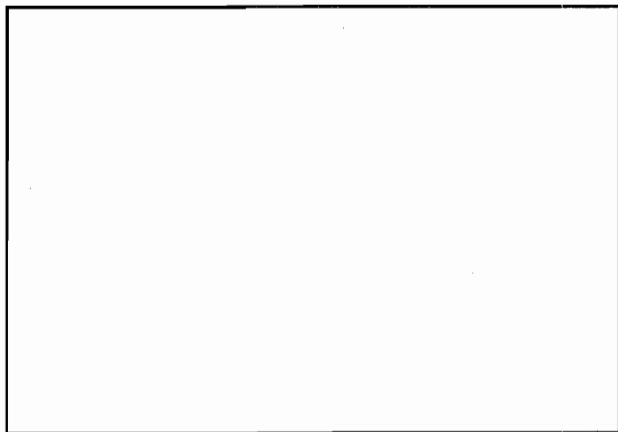
2003

GROUND



D2

CANOPY



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

D-3

STATION

3+64

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	90%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	5%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	5%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

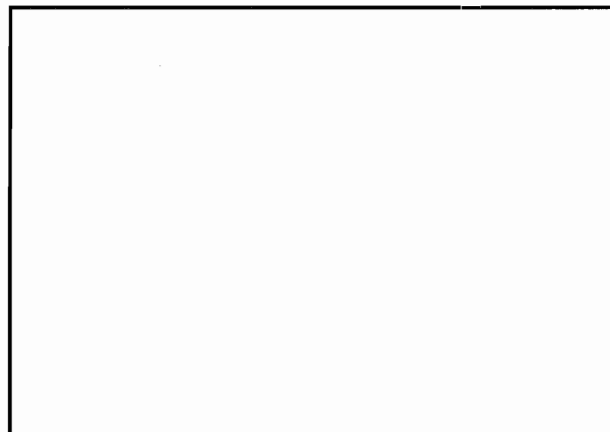
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

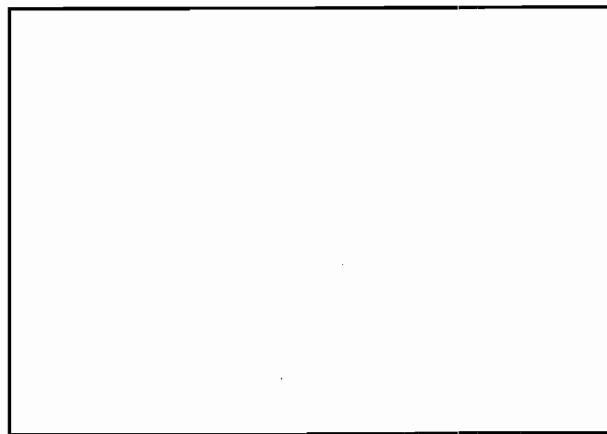
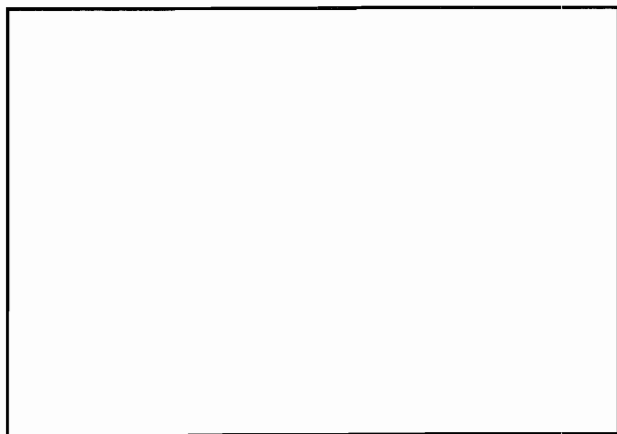
2003

GROUND



D3

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-4

STATION

5+46

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	50%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	50%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	40%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		60%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

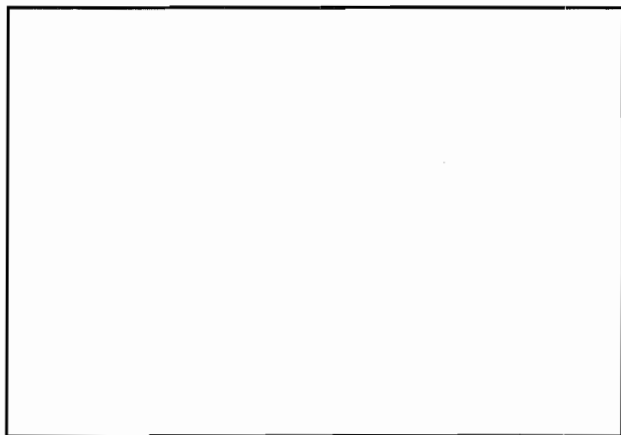
11/10/02

GROUND

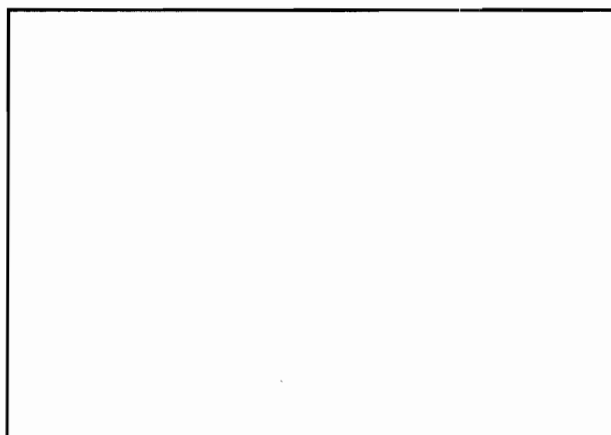
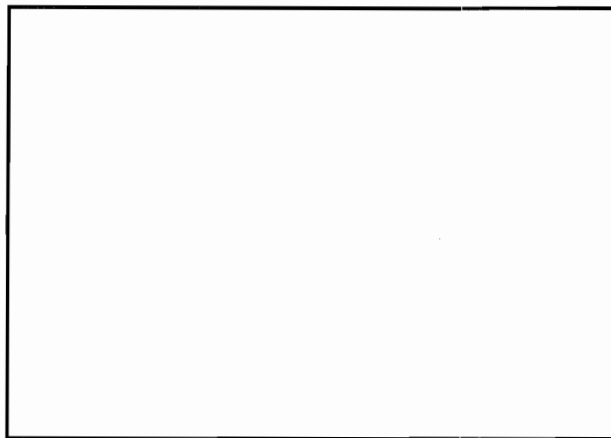


D4

CANOPY



2003



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

D-5

STATION

7+28

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	75%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	5%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	20%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	0%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Live melaleuca resprouting from stumps

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

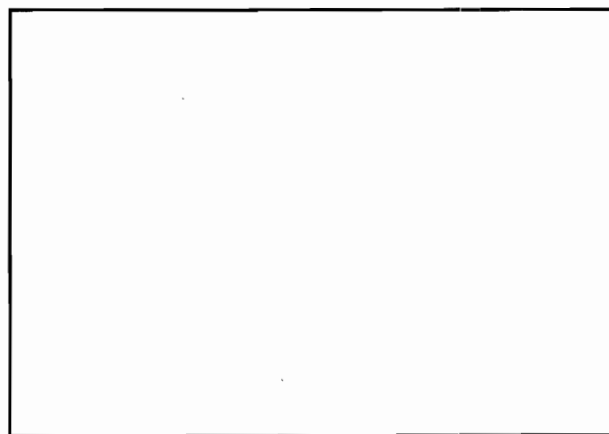
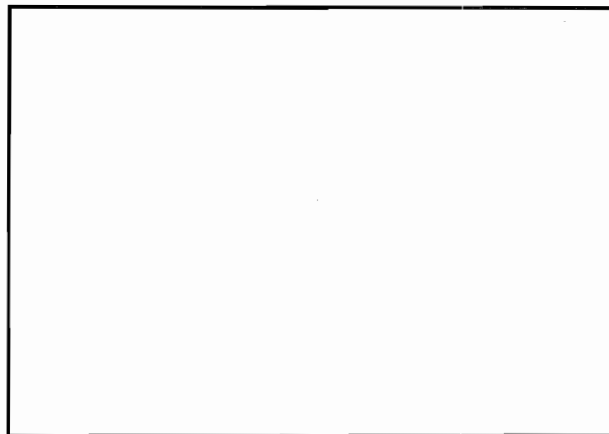
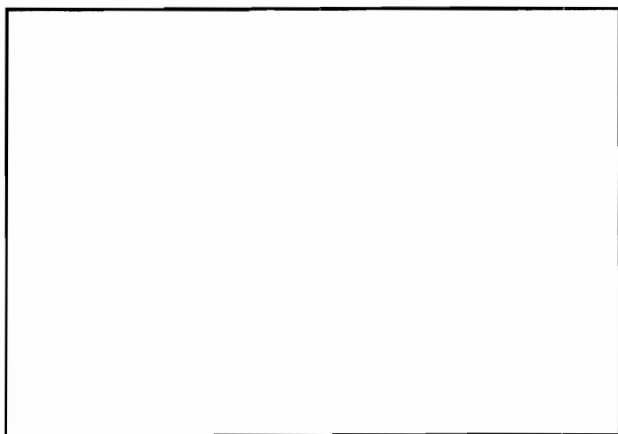
2003

GROUND



D5

CANOPY



11/10/02

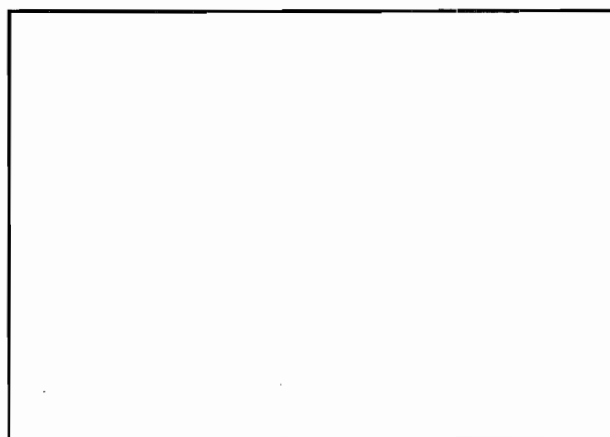
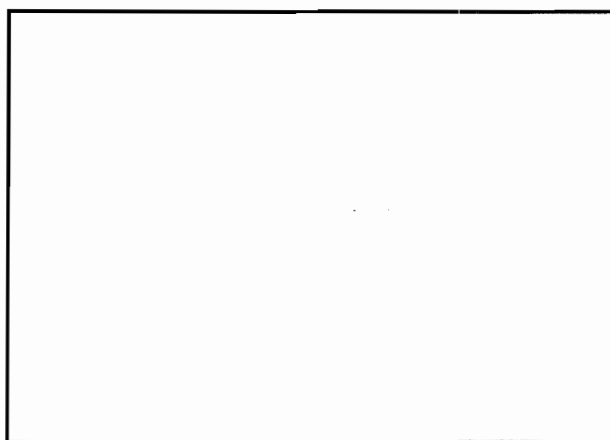
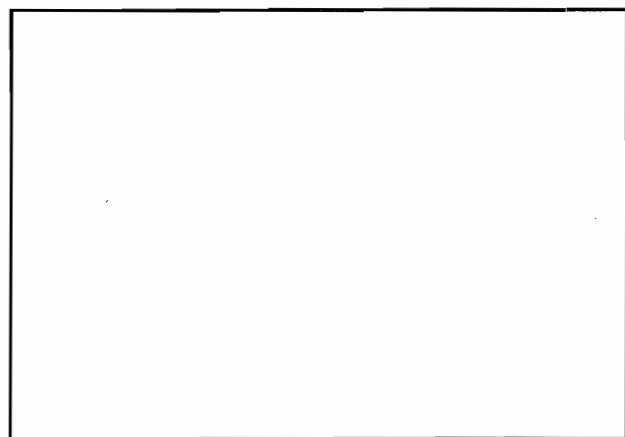
2003

GROUND



D6

CANOPY



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

D-7

STATION

10+92

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	90%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	2%	
Southern Swamp Lily	<i>Crinum americanum</i>	2%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	6%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

7" of standing water

Aquatic Macrofauna

None

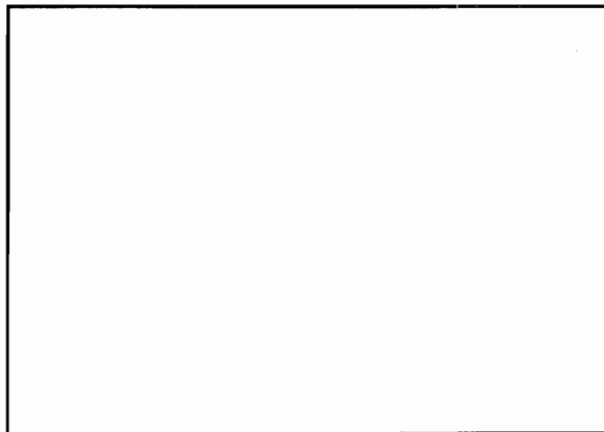
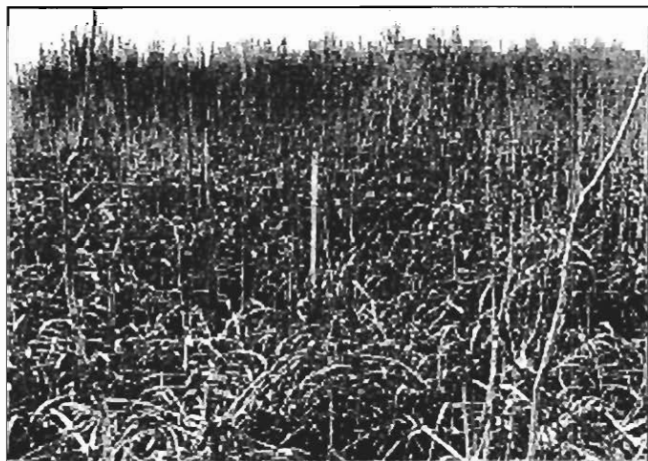
Wildlife Indicators (tracks, scat, nests)

None

11/10/02

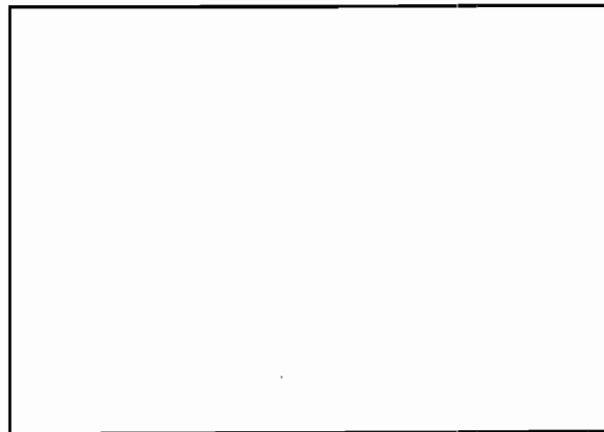
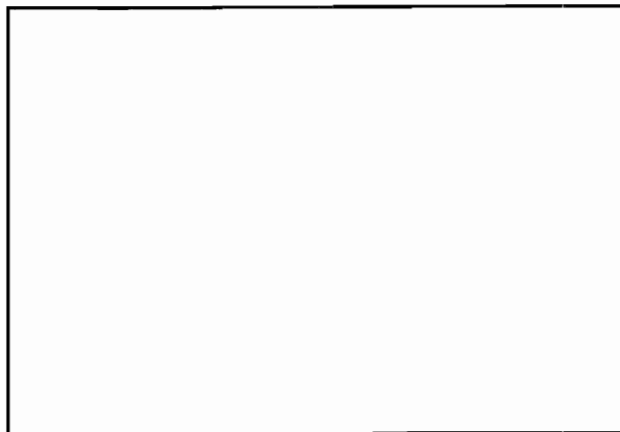
2003

GROUND



D7

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-8

STATION

12+74

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	40%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	10%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	50%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

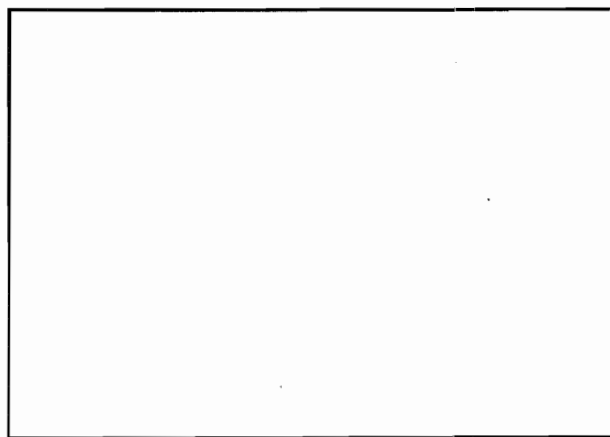
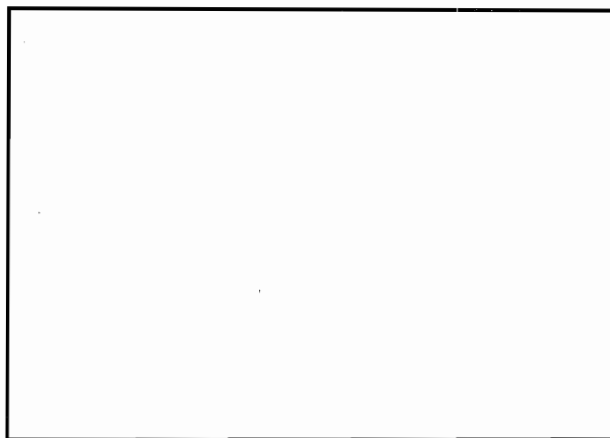
Wildlife Indicators (tracks, scat, nests)

11/10/02



D8

2003



GROUND

CANOPY

Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-9

STATION

14+56

SUBMERGED AQUATICS

		11/10/02	2003
Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	75%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	5%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	20%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	5%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	2%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		93%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Open water area adjacent to point, fry 1 to 2cm in length many.

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

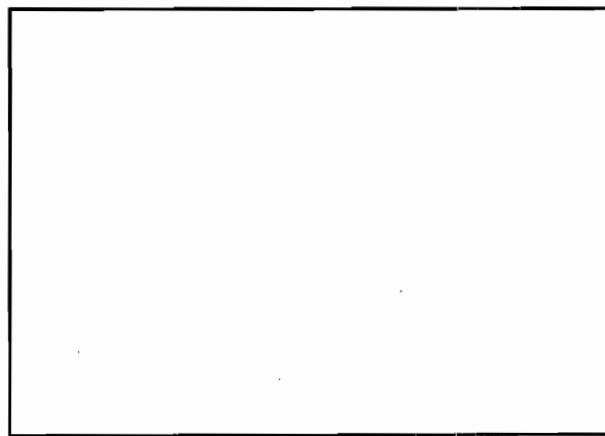
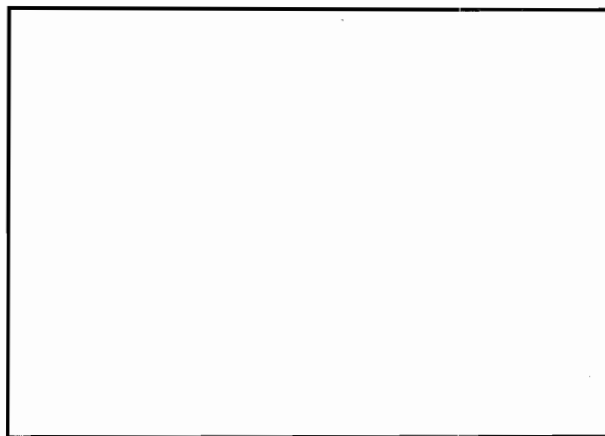
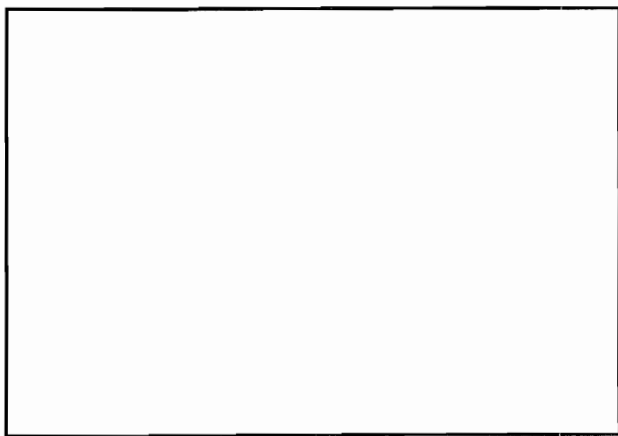
2003

GROUND



D9

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-10

STATION

16+38

SUBMERGED AQUATICS

Common Name	Scientific Name	11/10/02 % Coverage	2003 % Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	75%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	10%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	15%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

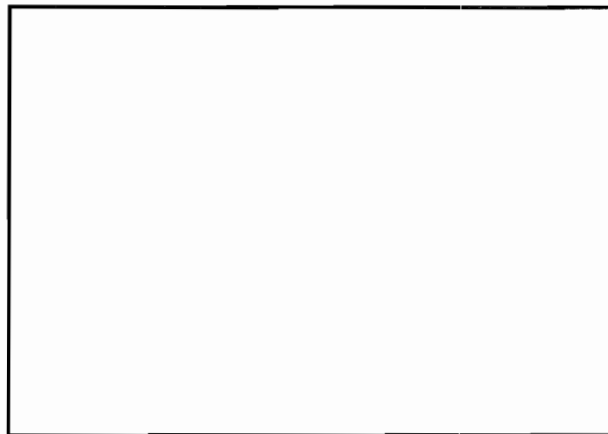
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

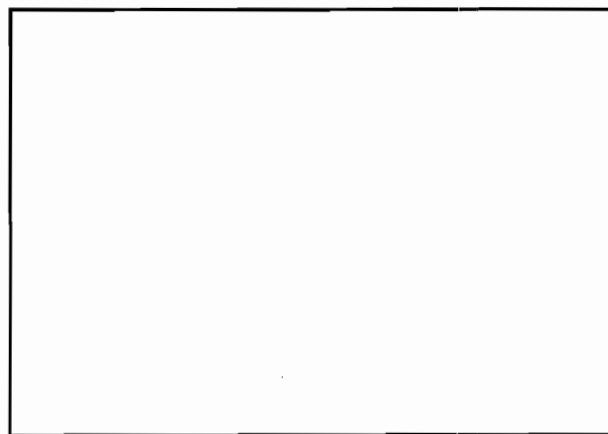
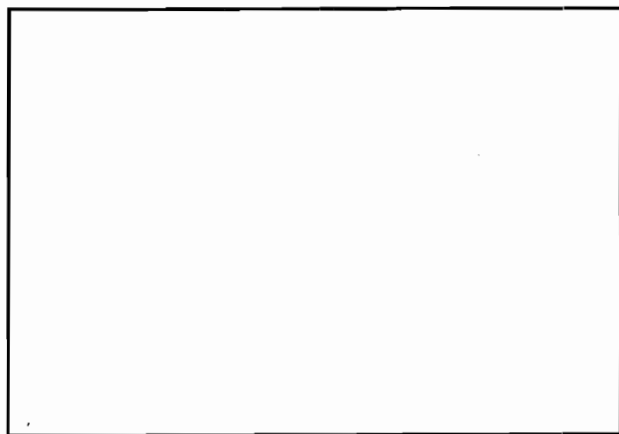
2003

GROUND



D10

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-11

STATION

18+20

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	50%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	50%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	55%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	10%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		35%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	20%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		80%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

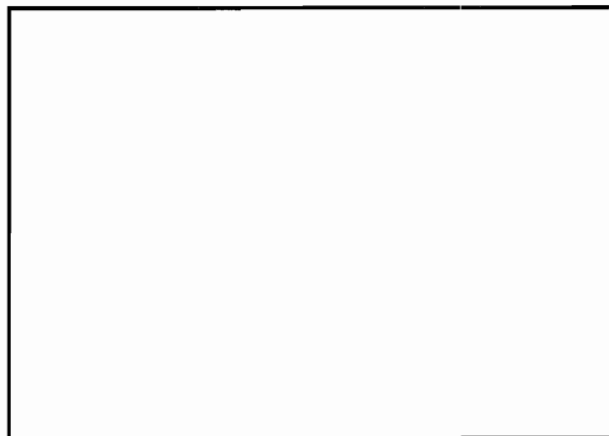
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

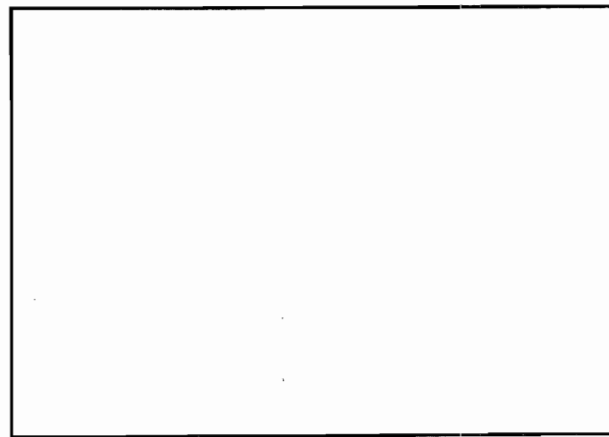
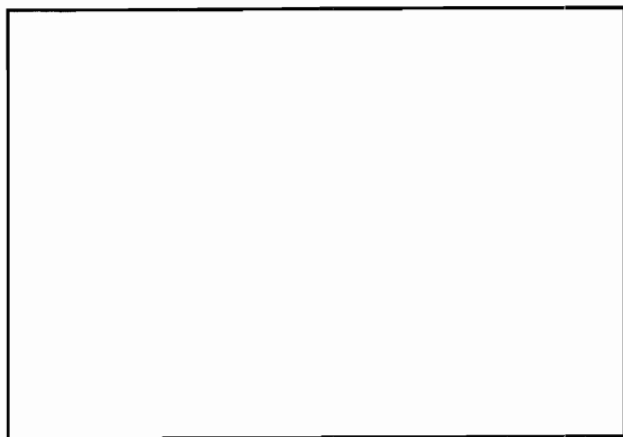
2003

GROUND



D11

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-12

STATION

20+02

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	30%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	50%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	10%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	10%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	10%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		90%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

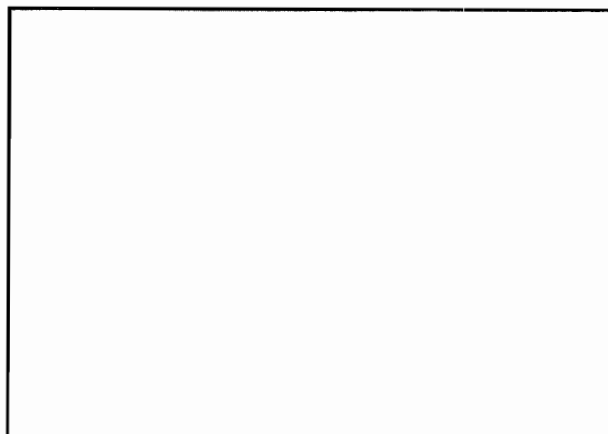
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

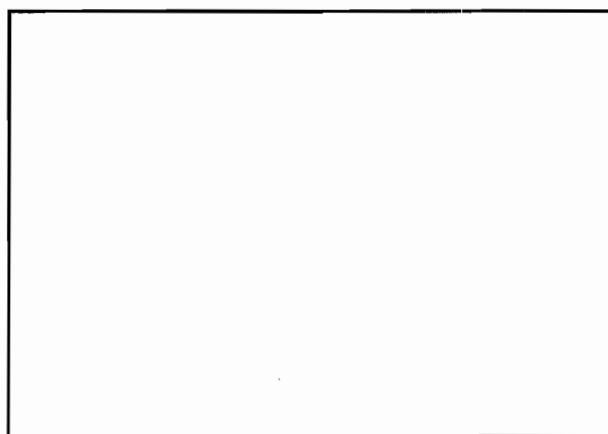
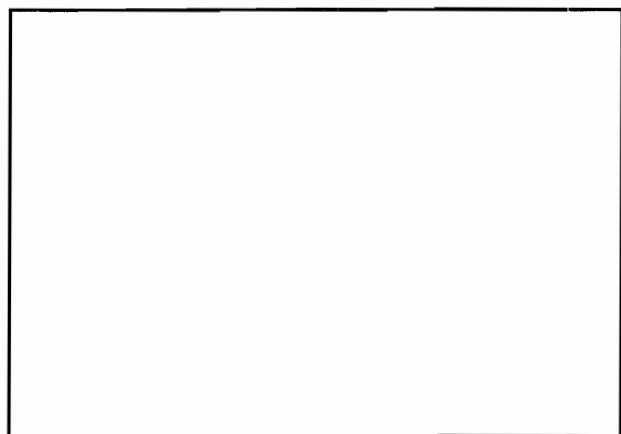
2003

GROUND



D12

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-13

STATION

21+84

SUBMERGED AQUATICS

		11/10/02	2003
Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	30%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	18%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	2%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	50%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

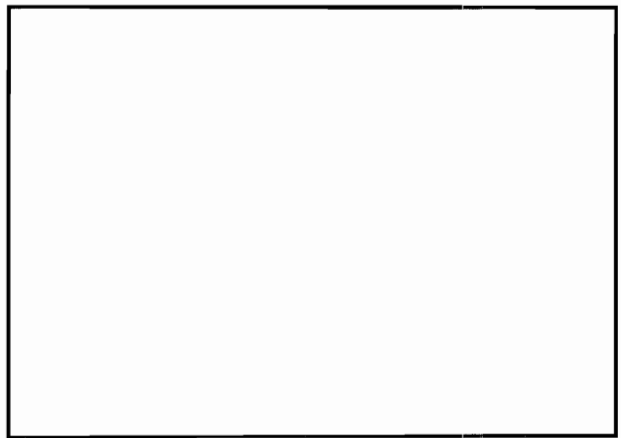
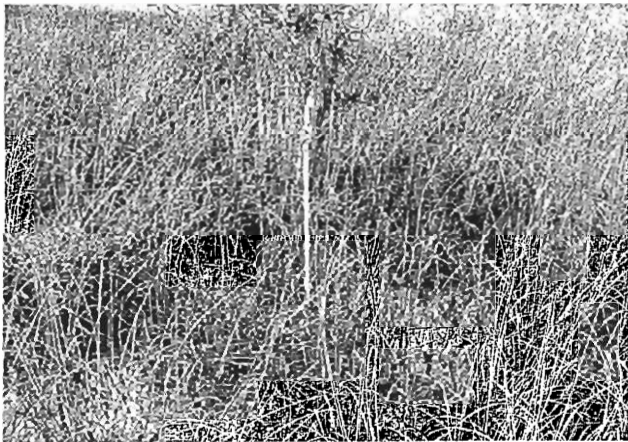
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

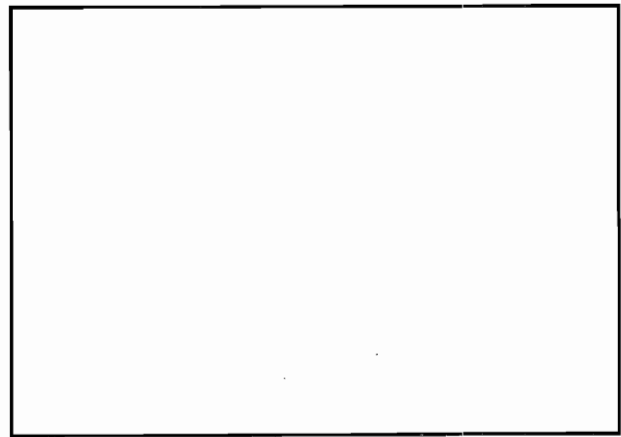
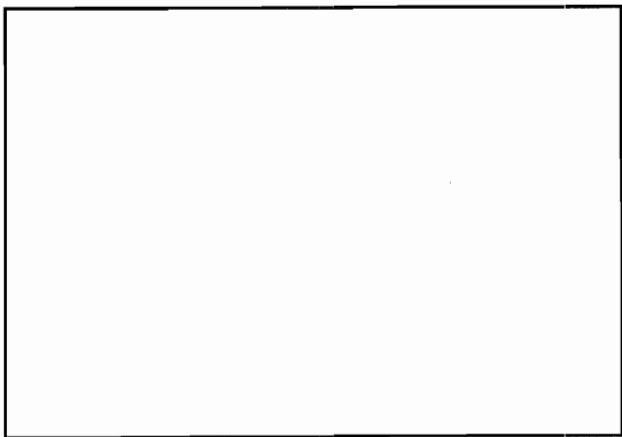
2003

GROUND



D13

CANOPY



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

D-14

STATION

23+66

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	10%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	20%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	70%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

6" of standing water

Aquatic Macrofauna

Fry 1 to 2cm in length common, small dead snails common.

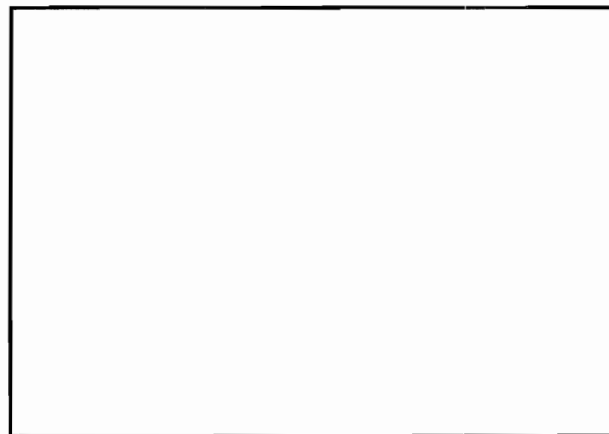
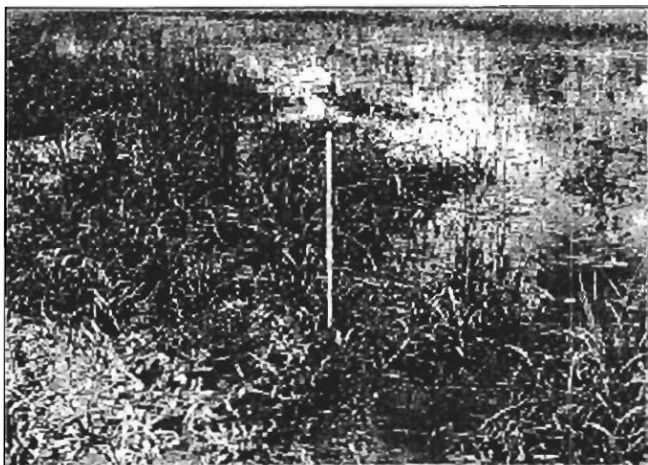
Wildlife Indicators (tracks, scat, nests)

none

11/10/02

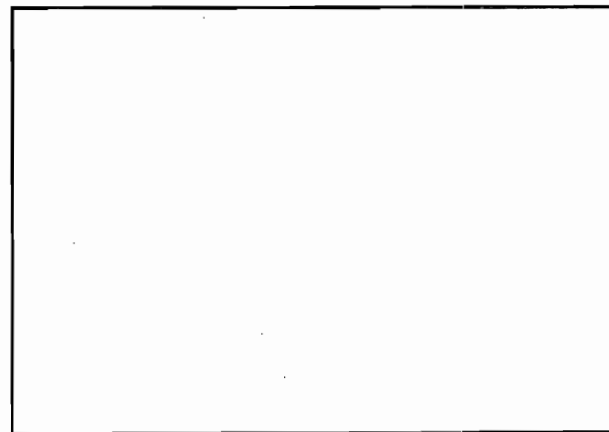
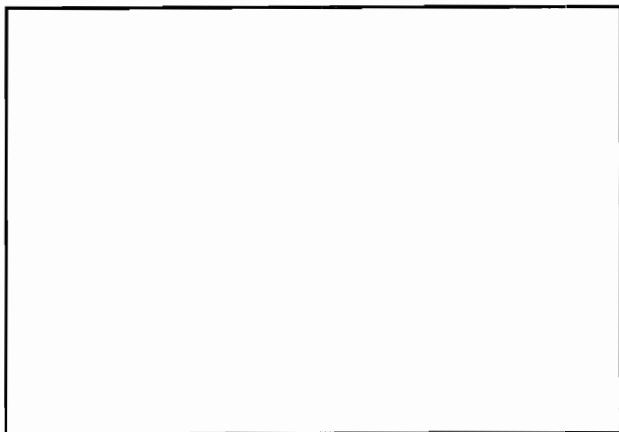
2003

GROUND



D14

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-15

STATION

25+48

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	65%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickersweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	35%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	20%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		80%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

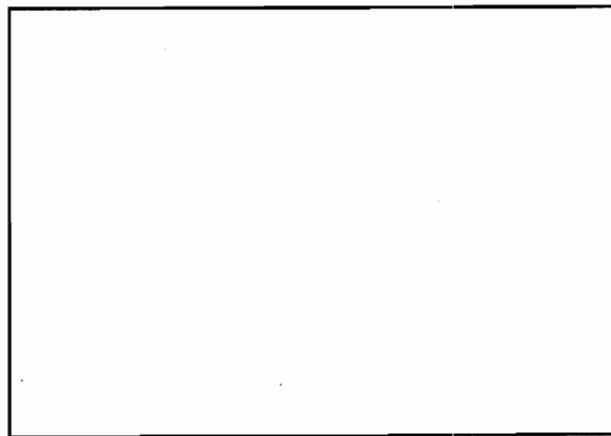
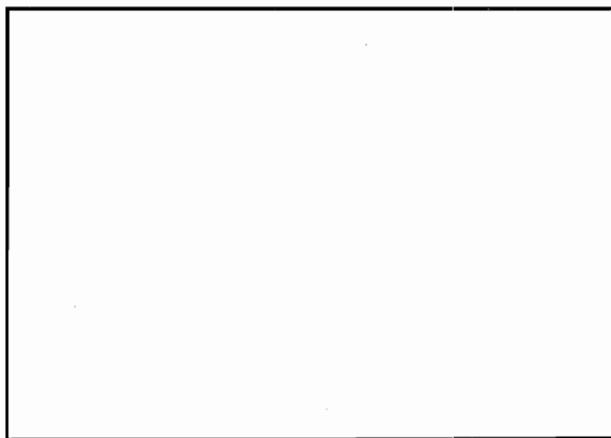
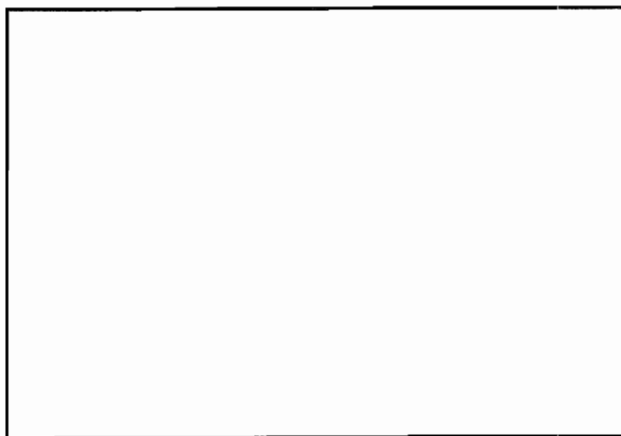
2003

GROUND



D15

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-16

STATION

27+30

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	65%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	35%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	20%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		80%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

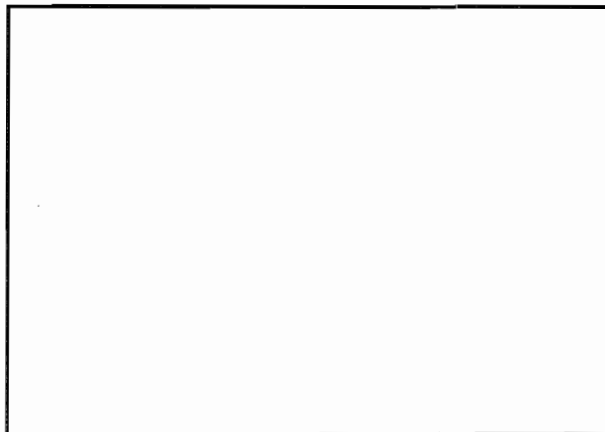
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

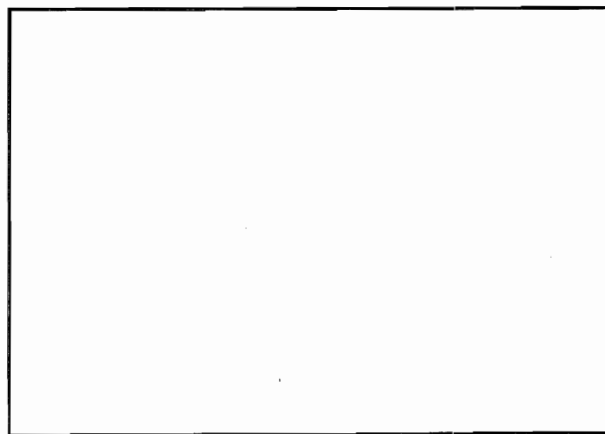
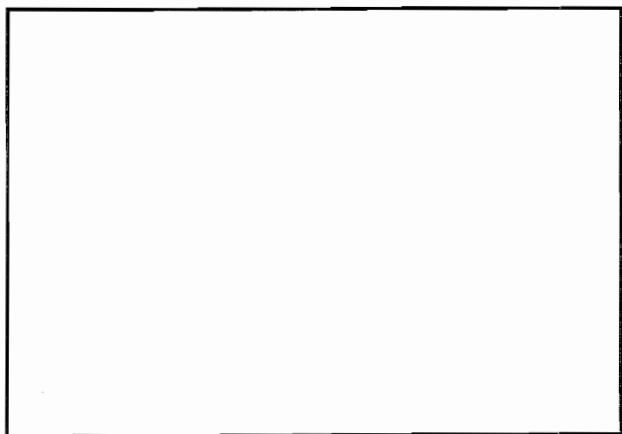
2003

GROUND



D16

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-17

STATION

29+12

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	35%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	60%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	5%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

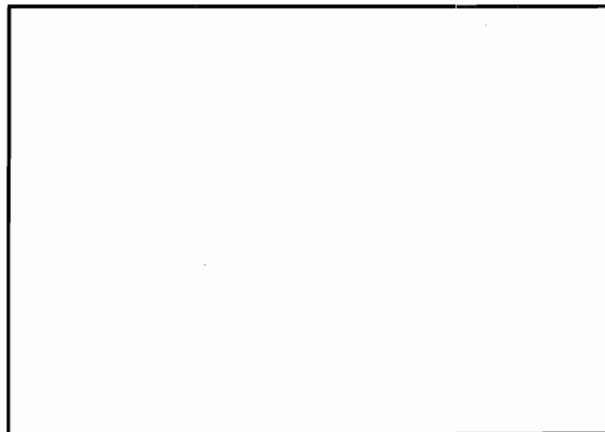
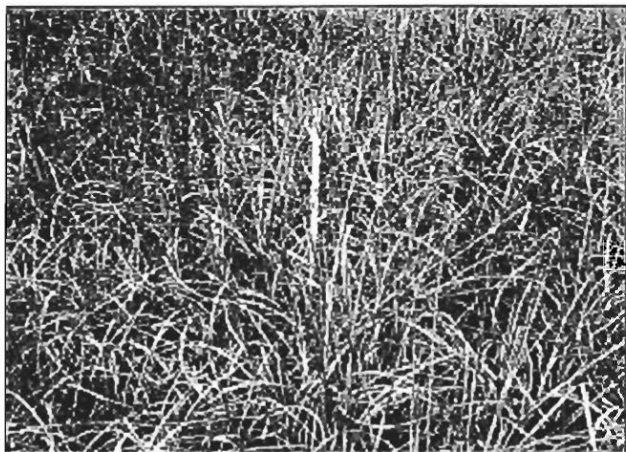
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

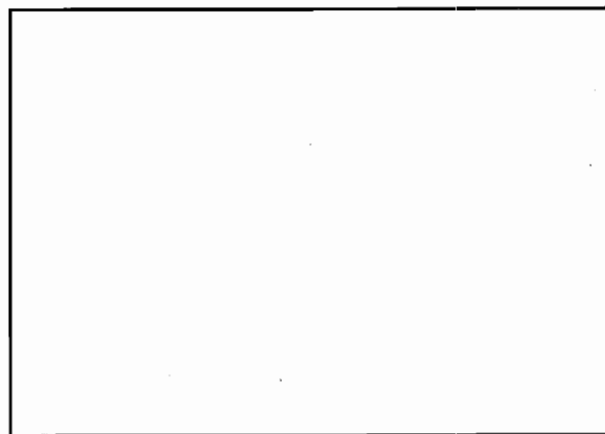
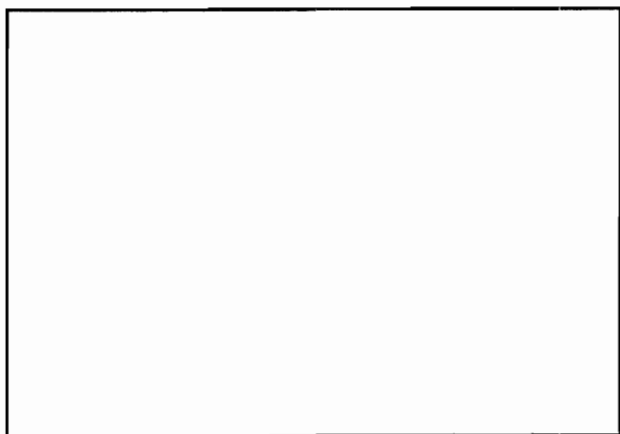
2003

GROUND



D17

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-18

STATION

30+94

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	25%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	25%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	2%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	48%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

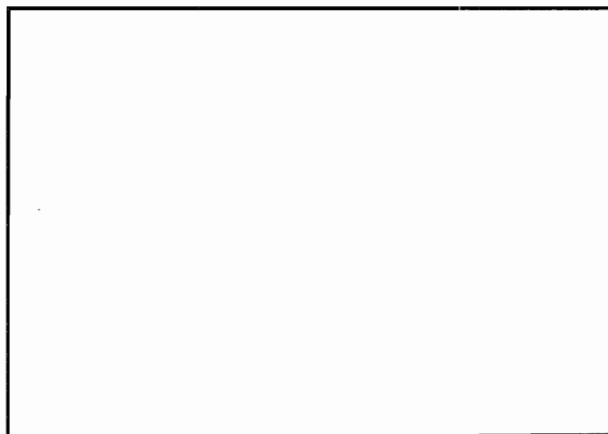
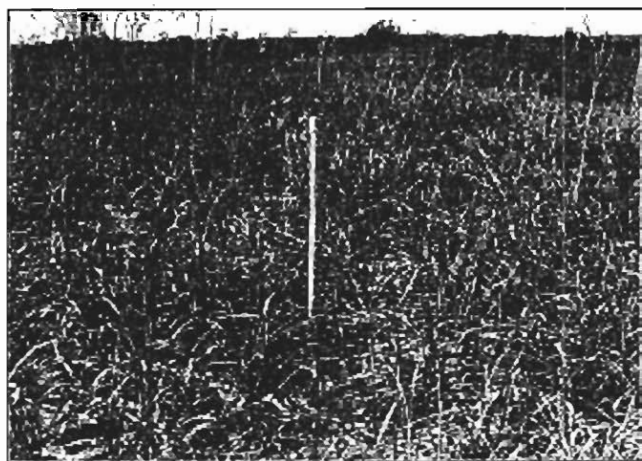
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

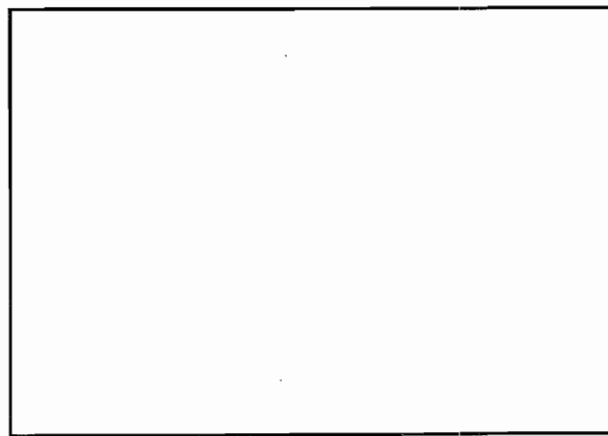
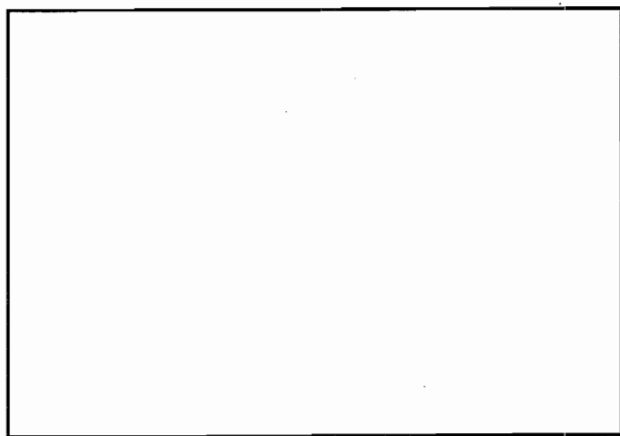
2003

GROUND



D18

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-19

STATION

32+76

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	2%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	98%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	95%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	5%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	40%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		60%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

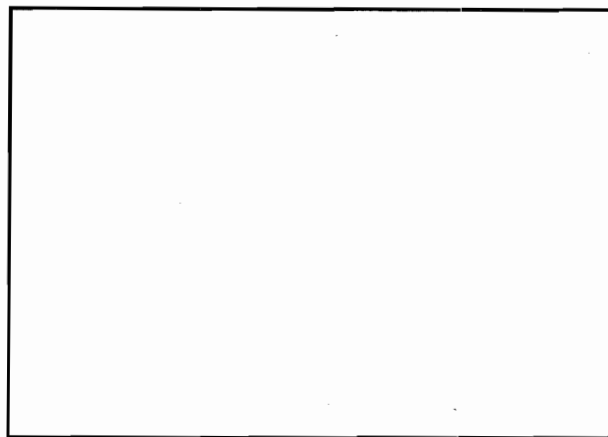
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

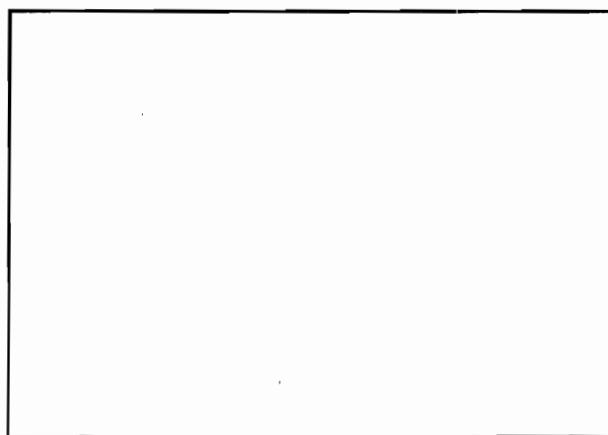
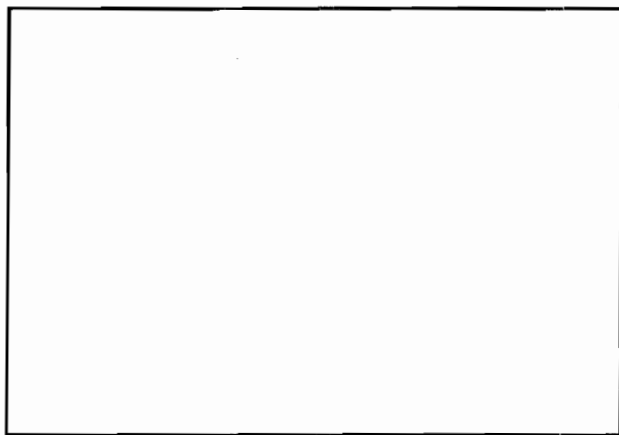
2003

GROUND



D19

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-20

STATION

34+58

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	35%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	35%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	30%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	10%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		90%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	20%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		80%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

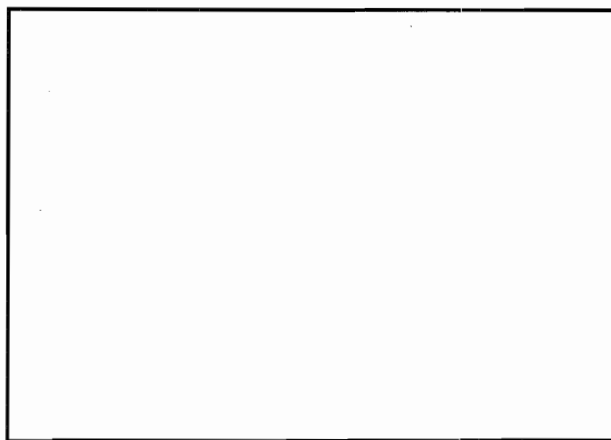
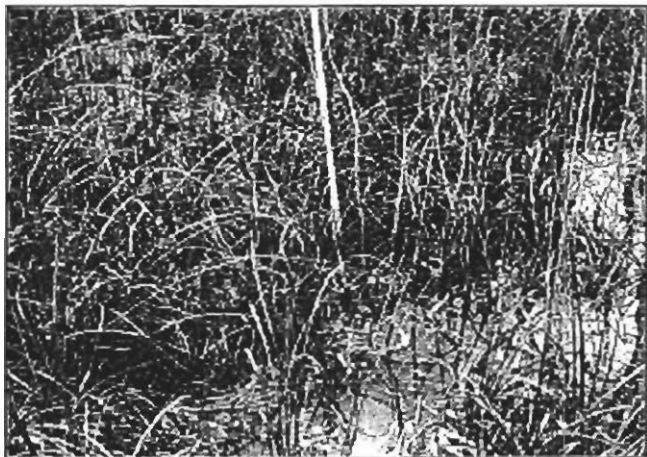
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

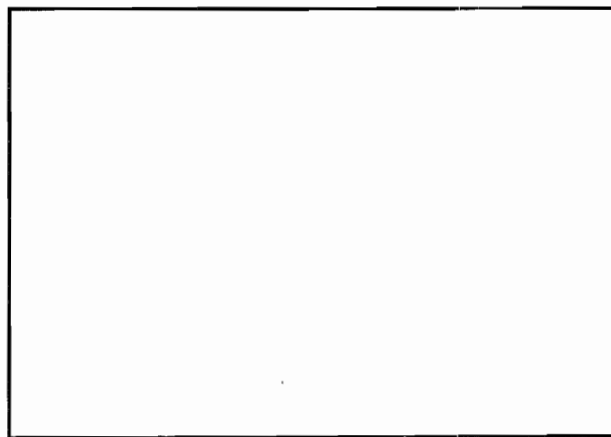
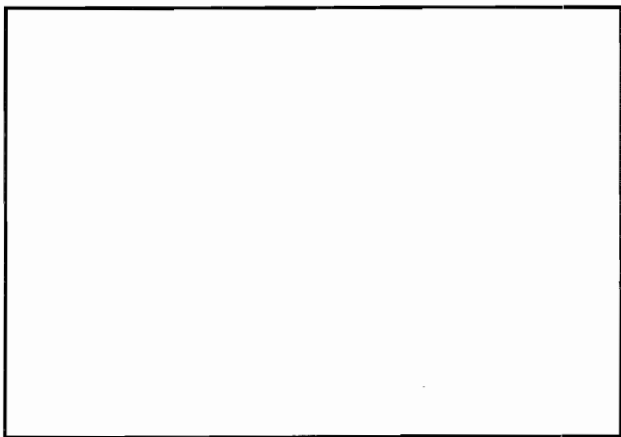
2003

GROUND



D20

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-21

STATION

36+40

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	35%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	63%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	2%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickrelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	0%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	15%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		85%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

6" standing water

Aquatic Macrofauna

None

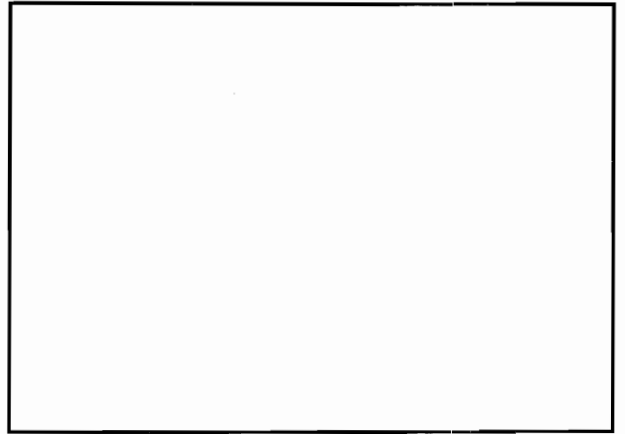
Wildlife Indicators (tracks, scat, nests)

None

11/10/02

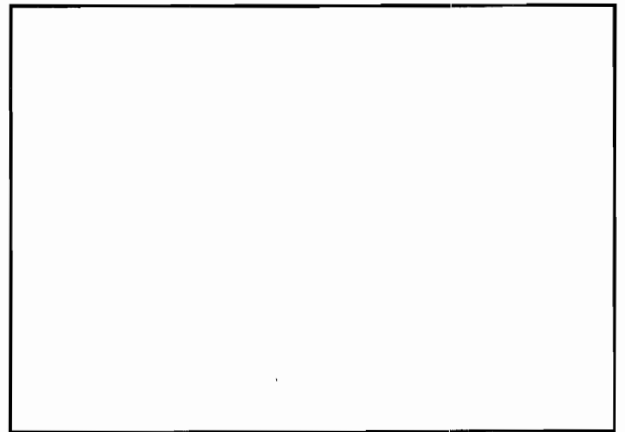
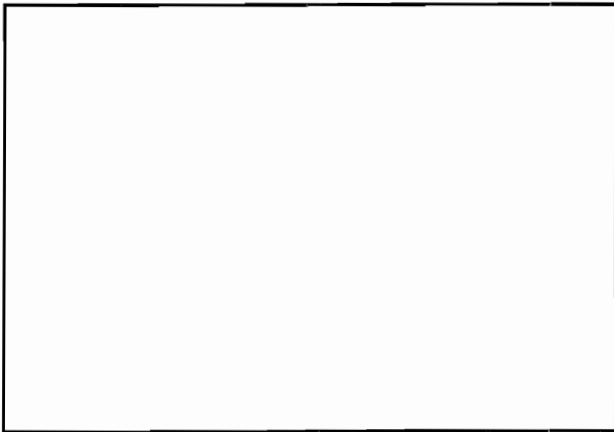
2003

GROUND



D21

CANOPY



Pennsuko Monitoring Project - Data Form

TRANSECT / POINT

D-22

STATION

38+22

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	30%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	20%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	50%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

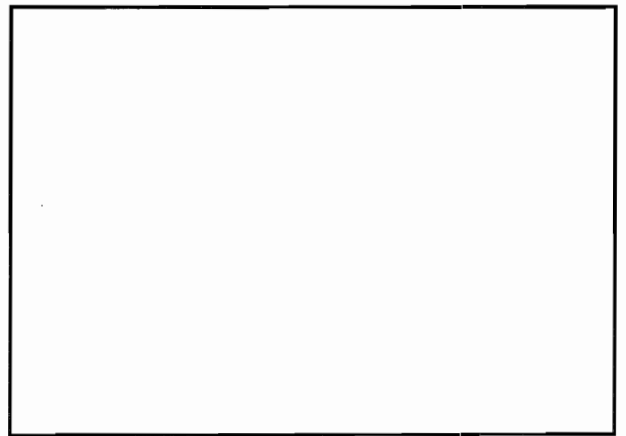
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

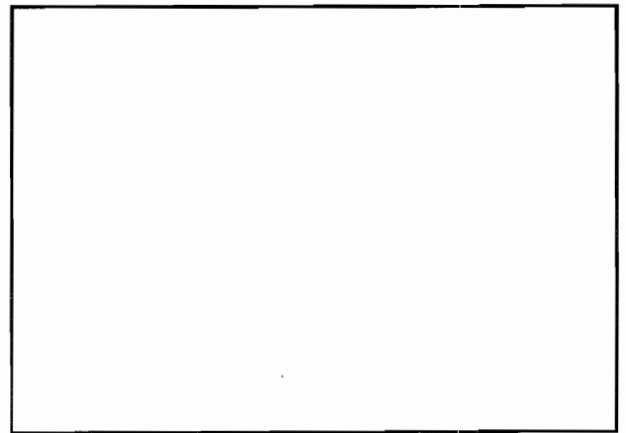
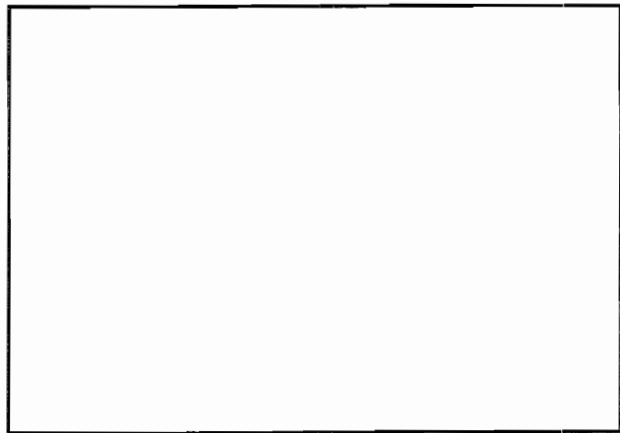
2003

GROUND



D22

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-23

STATION

40+04

SUBMERGED AQUATICS

		11/10/02	2003
Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	15%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	15%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	2%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerselweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	68%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Yellow-orange algae growing in open areas. Fry common throughout area.

Water Level / Soil Moisture

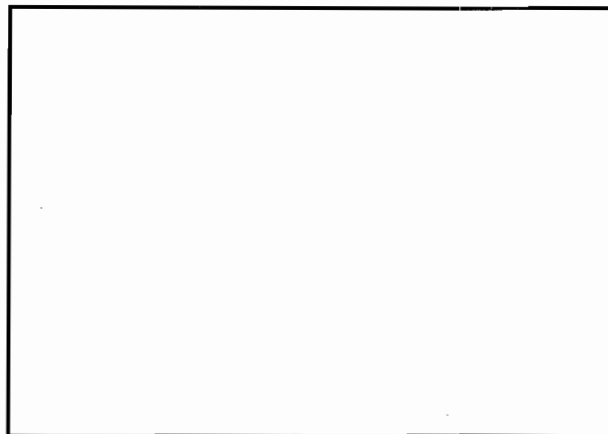
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

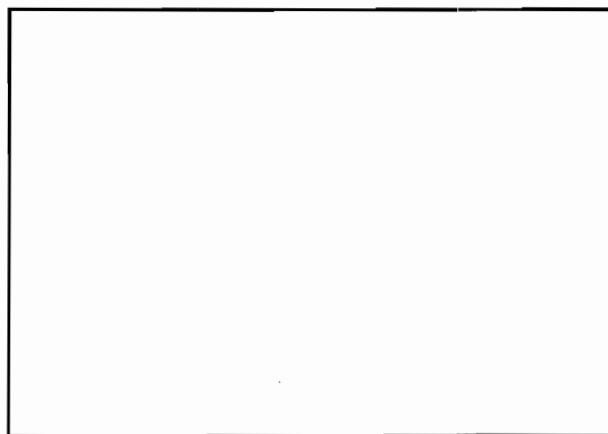
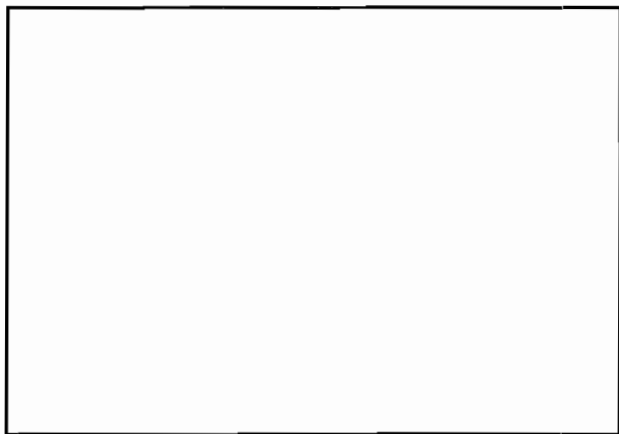
2003

GROUND



D23

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-24

STATION

41+86

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	1%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	99%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	15%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	5%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	80%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

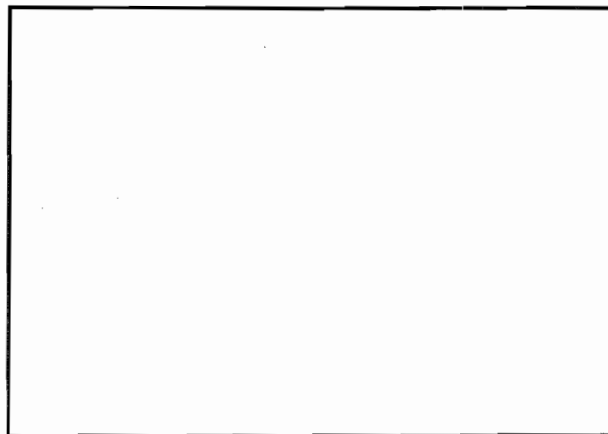
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

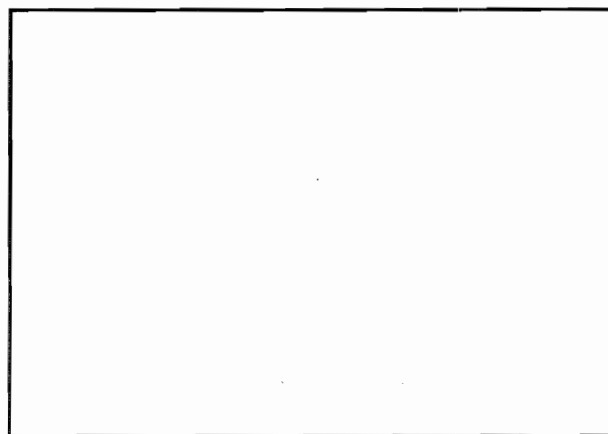
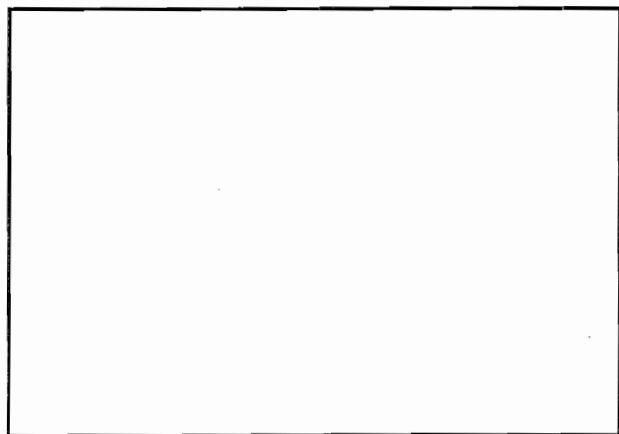
2003

GROUND



D24

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-25

STATION

43+68

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	20%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	55%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	5%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	20%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	25%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		75%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

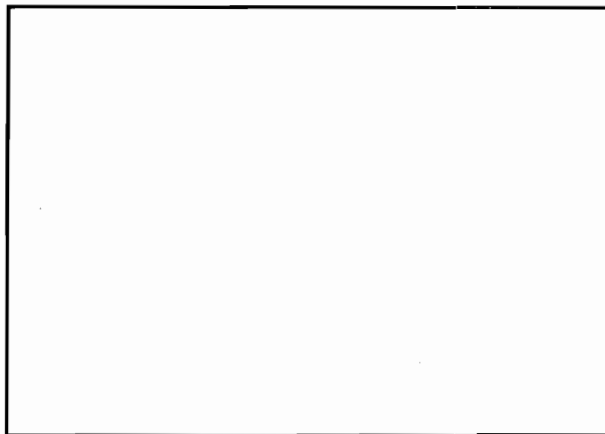
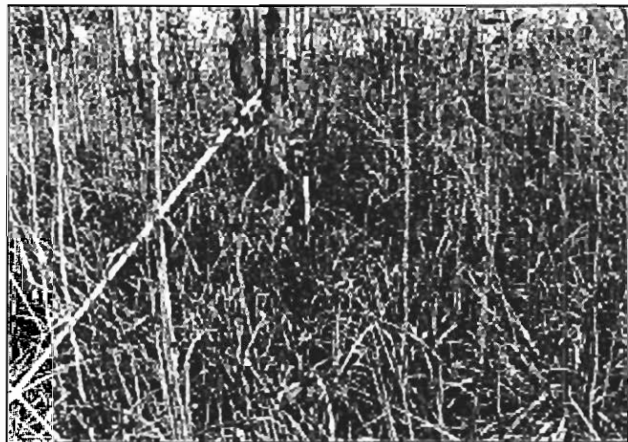
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

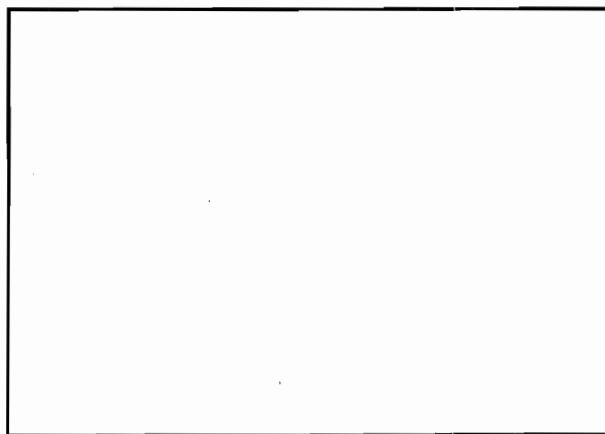
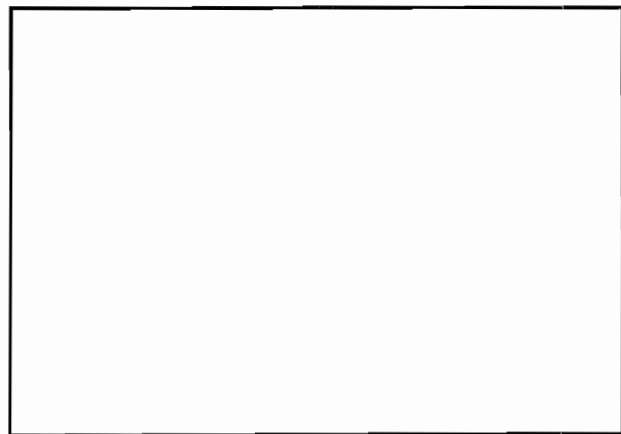
2003

GROUND



D25

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-26

STATION

45+50

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	35%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	25%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	5%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickertweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	35%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	2%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		98%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Fry 2cm in length common

Water Level / Soil Moisture

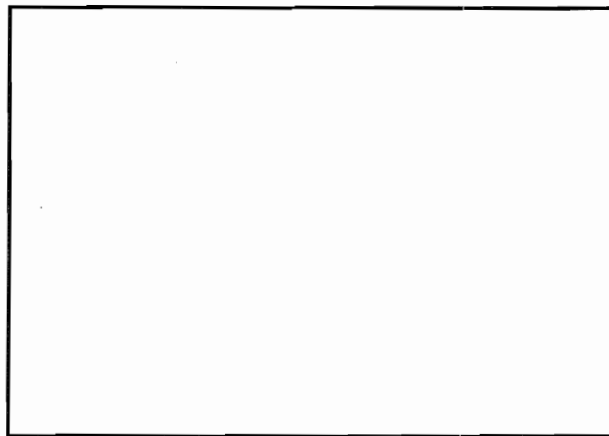
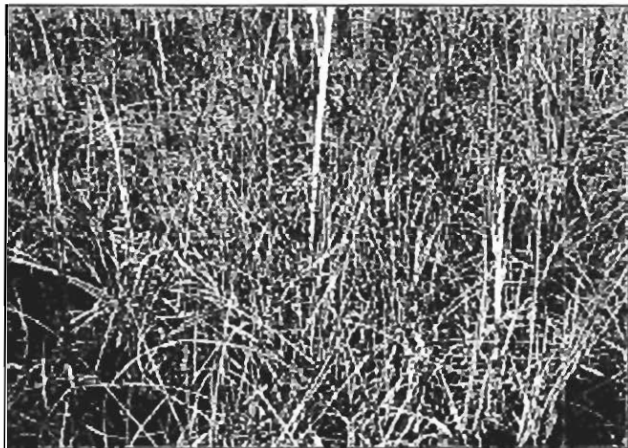
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

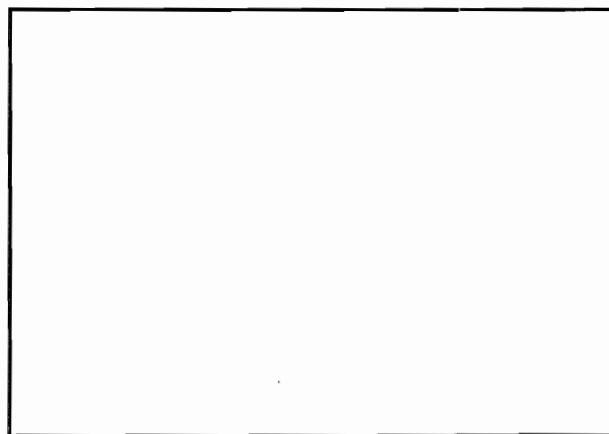
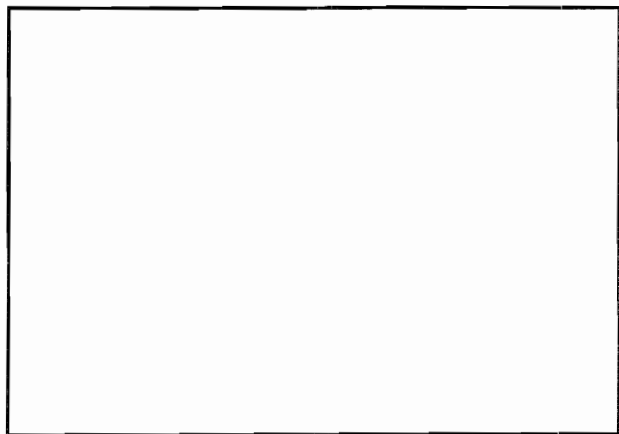
2003

GROUND



D26

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-27

STATION

47+32

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	1%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	99%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	15%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	10%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickerselweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	75%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	15%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		85%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Fry 2cm in length few.

Water Level / Soil Moisture

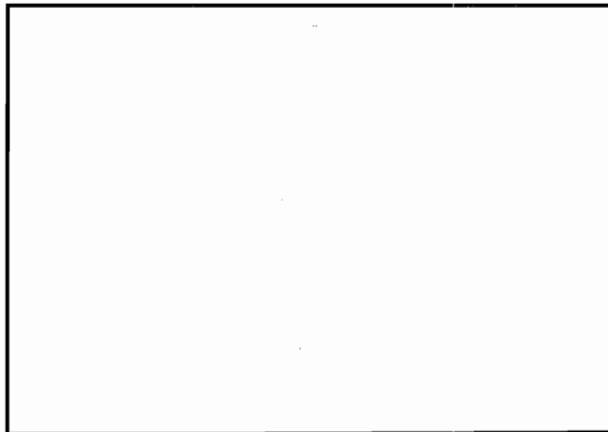
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

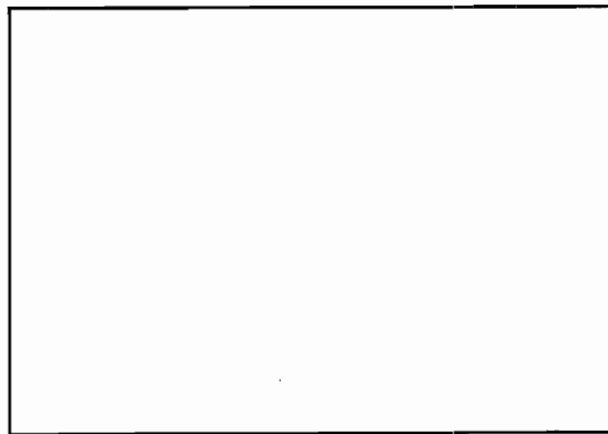
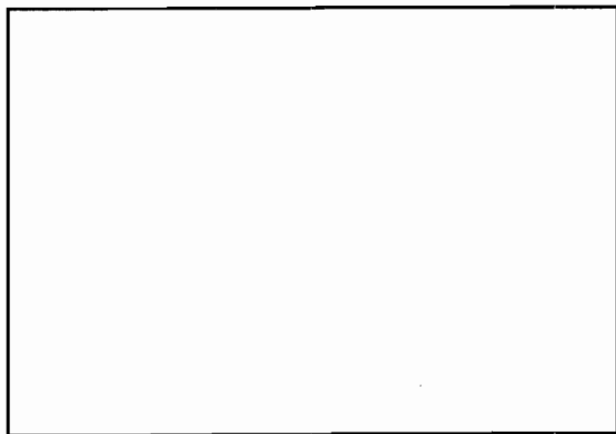
2003

GROUND



D27

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-28

STATION

49+14

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	15%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	25%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	2%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	58%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

4.5" standing water

Aquatic Macrofauna

Water spiders few, fry 2cm in length common.

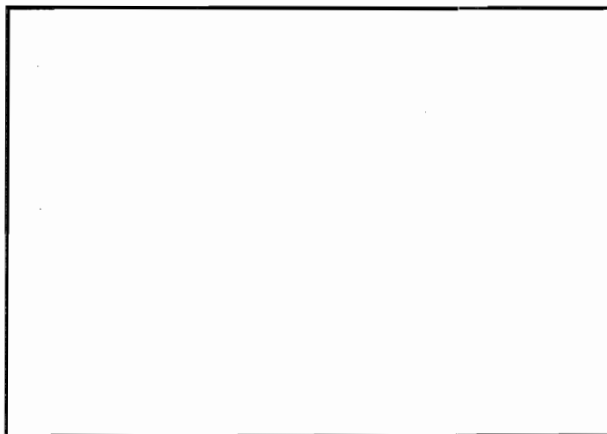
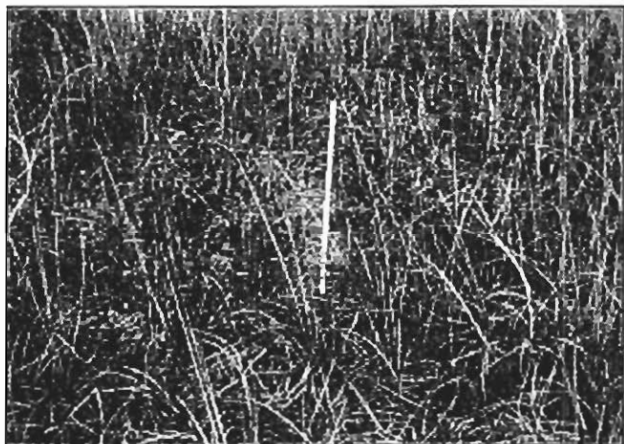
Wildlife Indicators (tracks, scat, nests)

none

11/10/02

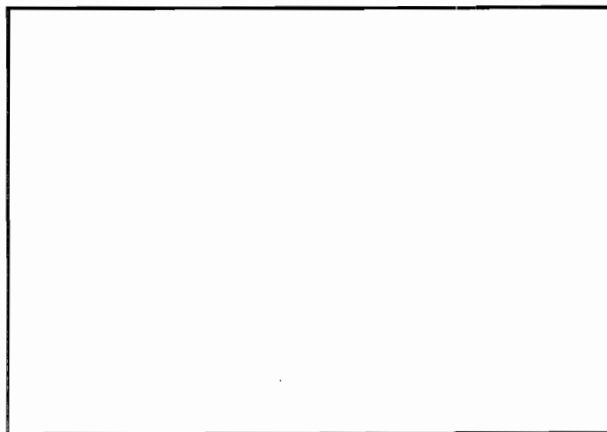
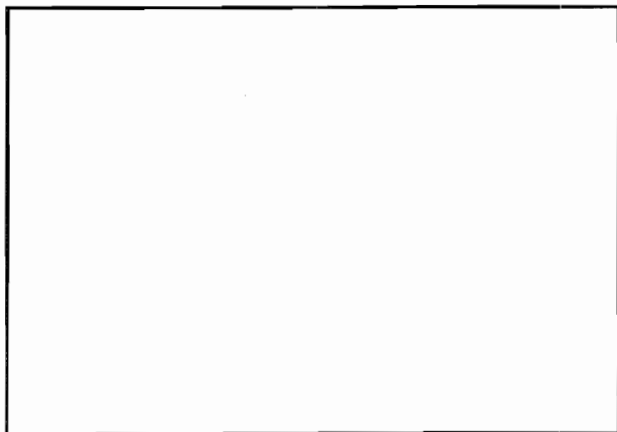
2003

GROUND



D28

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-29

STATION

50+96

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	0%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	100%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	40%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	40%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	5%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickernelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	0%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	15%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	25%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		75%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES:

Water Level / Soil Moisture

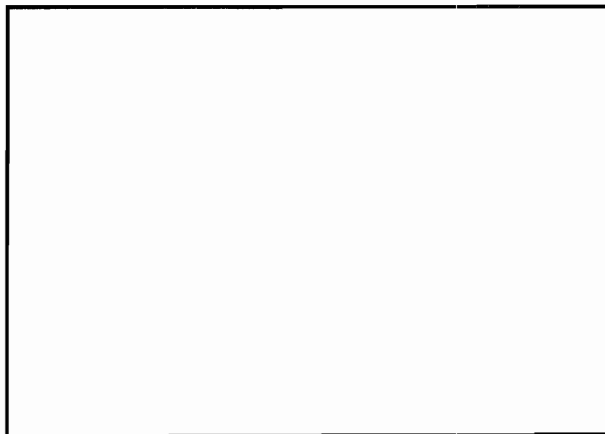
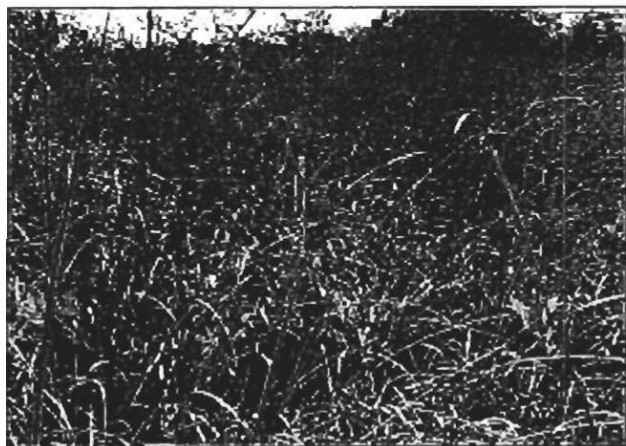
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

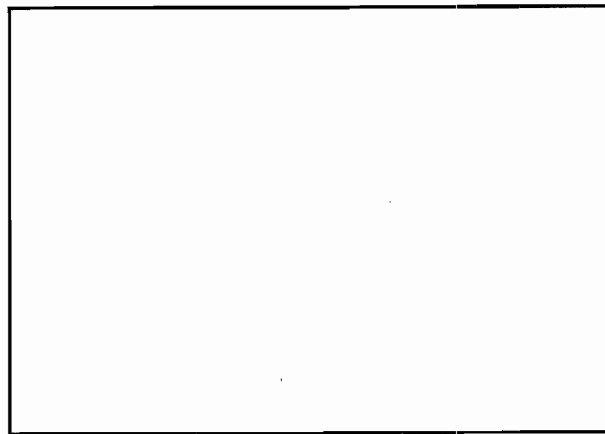
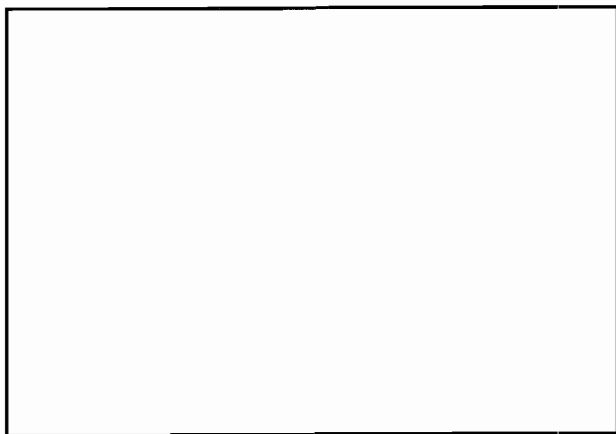
2003

GROUND



D29

CANOPY



Pennsuco Monitoring Project - Data Form

TRANSECT / POINT

D-30

STATION

52+78

SUBMERGED AQUATICS

11/10/02

2003

Common Name	Scientific Name	% Coverage	% Coverage
Mermaid Weed	<i>Proserpinaca palustris</i>	0%	
Bladderwort	<i>Utricularia foliosa</i>	40%	
Bladderwort	<i>Utricularia purpurea</i>	0%	
Ludwigia	<i>Ludwigia repens</i>	0%	
Open/Void	N/A	60%	
TOTAL		100%	0%

HERBACEOUS SPECIES

Common Name	Scientific Name	% Coverage	% Coverage
Saw Grass (Alive)	<i>Cladium jamaicense</i>	0%	
Saw Grass (Dead)	<i>Cladium jamaicense</i>	0%	
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	1%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Southern Swamp Lily	<i>Crinum americanum</i>	0%	
Pickereelweed	<i>Pontederia lanceolata</i>	0%	
Yellowtops	<i>Flaveria linearis</i>	0%	
Arrowhead	<i>Sagittaria graminea</i>	0%	
Floating-Heart	<i>Nymphoides aquatica</i>	0%	
Capillary Hairsedge	<i>Bulbostylis ciliataefolia</i>	0%	
Cattail	<i>Typha latifolia</i>	0%	
Button Bush	<i>Cephalanthus occidentalis</i>	0%	
Maiden-Cane	<i>Panicum hemitomum</i>	2%	
Shield Fern	<i>Thelypteris kunthii</i>	0%	
Swamp Fern	<i>Blechnum serrulatum</i>	0%	
TBD		0%	
TBD		0%	
Open Water/Mud/Void	N/A	97%	
TOTAL		100%	0%

SAPLING / VINE

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Elm	<i>Trema micrantha</i>	0%	
TBD		0%	
Open/Void		100%	
TOTAL		100%	0%

OVERSTORY

Common Name	Scientific Name	% Coverage	% Coverage
Punk Tree (Alive)	<i>Melaleuca quinquenervia</i>	0%	
Punk Tree (Dead)	<i>Melaleuca quinquenervia</i>	0%	
Golden Fig	<i>Ficus Aurea</i>	0%	
Open/Void		100%	
TOTAL		100%	0%

NOTES: Yellow-orange algae common, covering submerged aquatics

Water Level / Soil Moisture

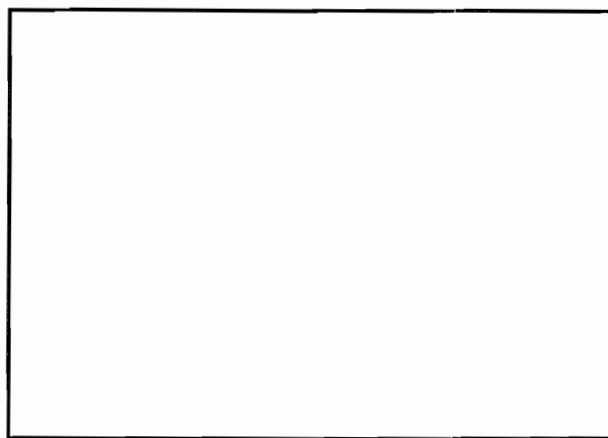
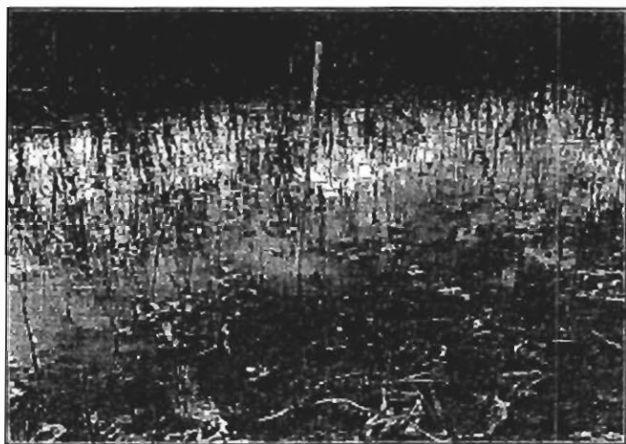
Aquatic Macrofauna

Wildlife Indicators (tracks, scat, nests)

11/10/02

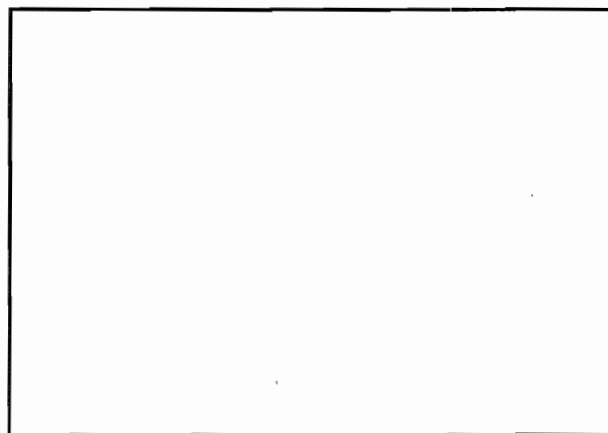
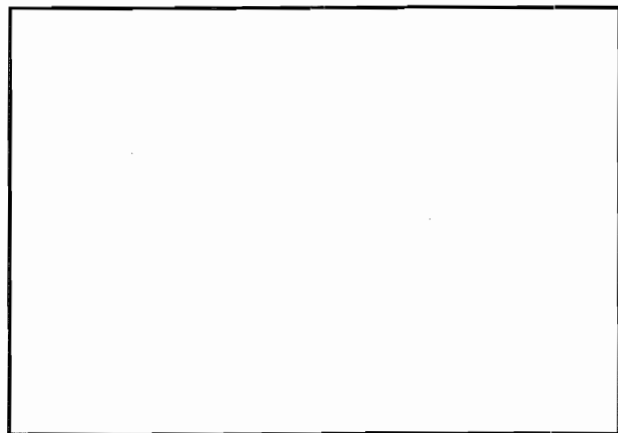
2003

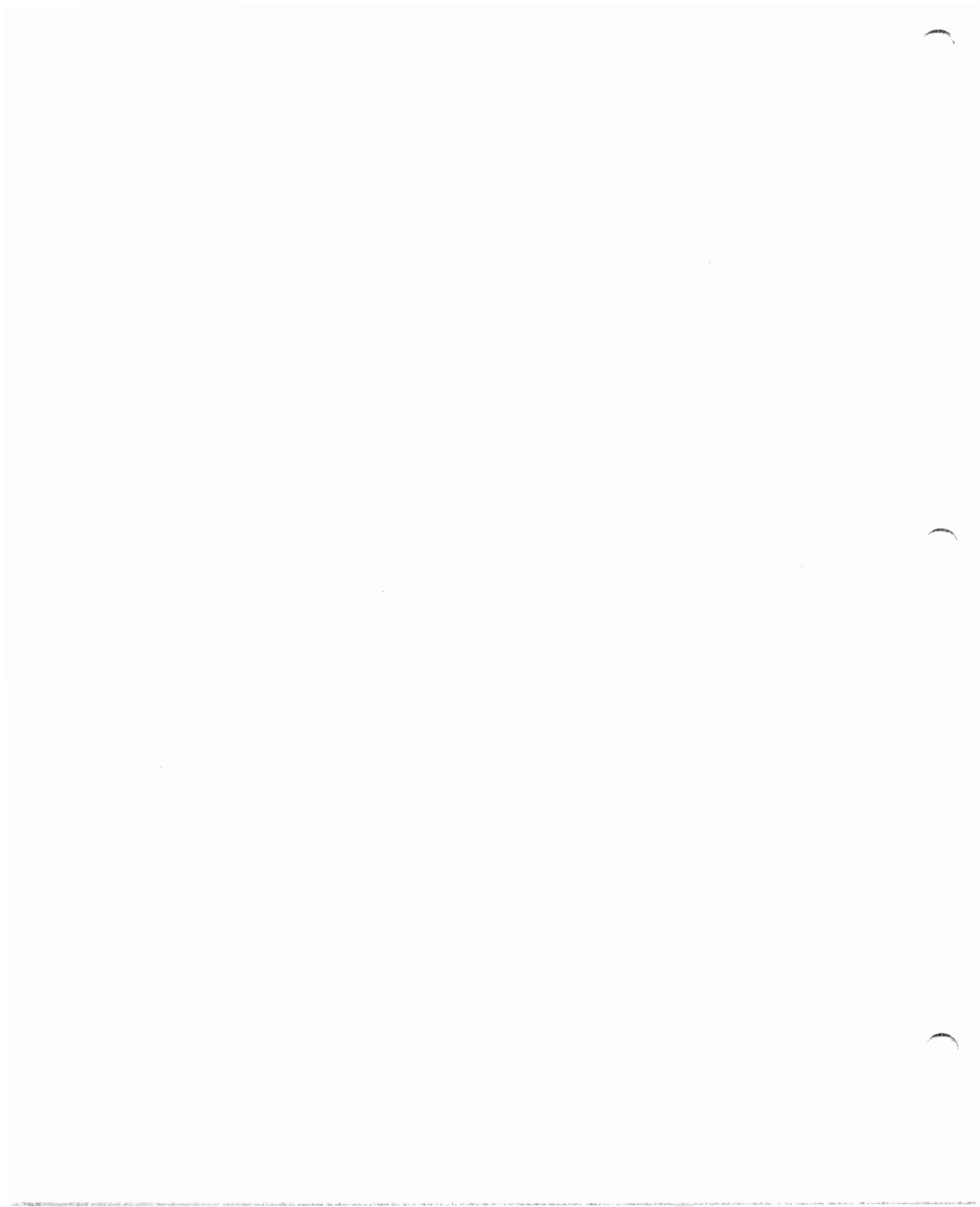
GROUND



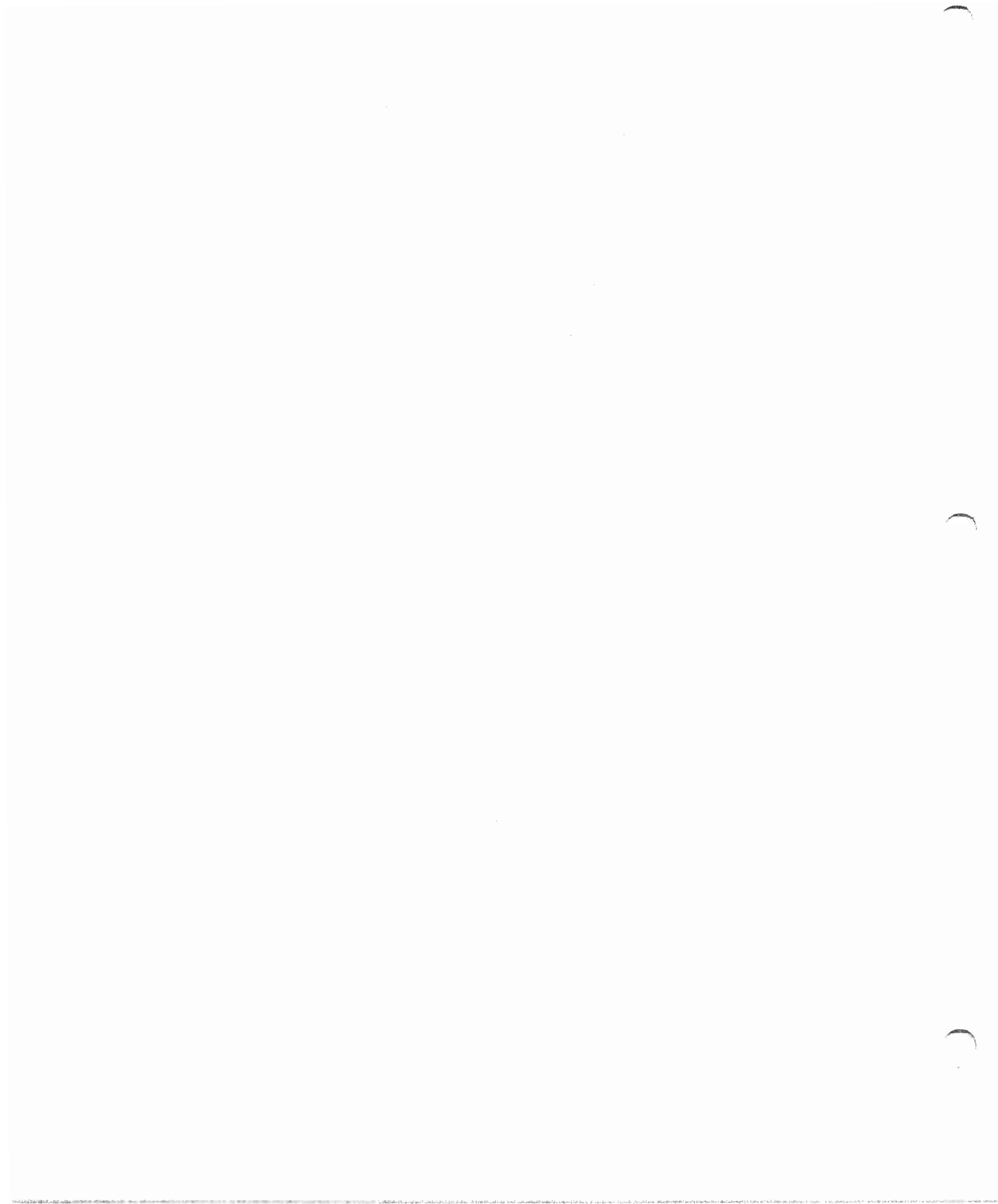
D30

CANOPY

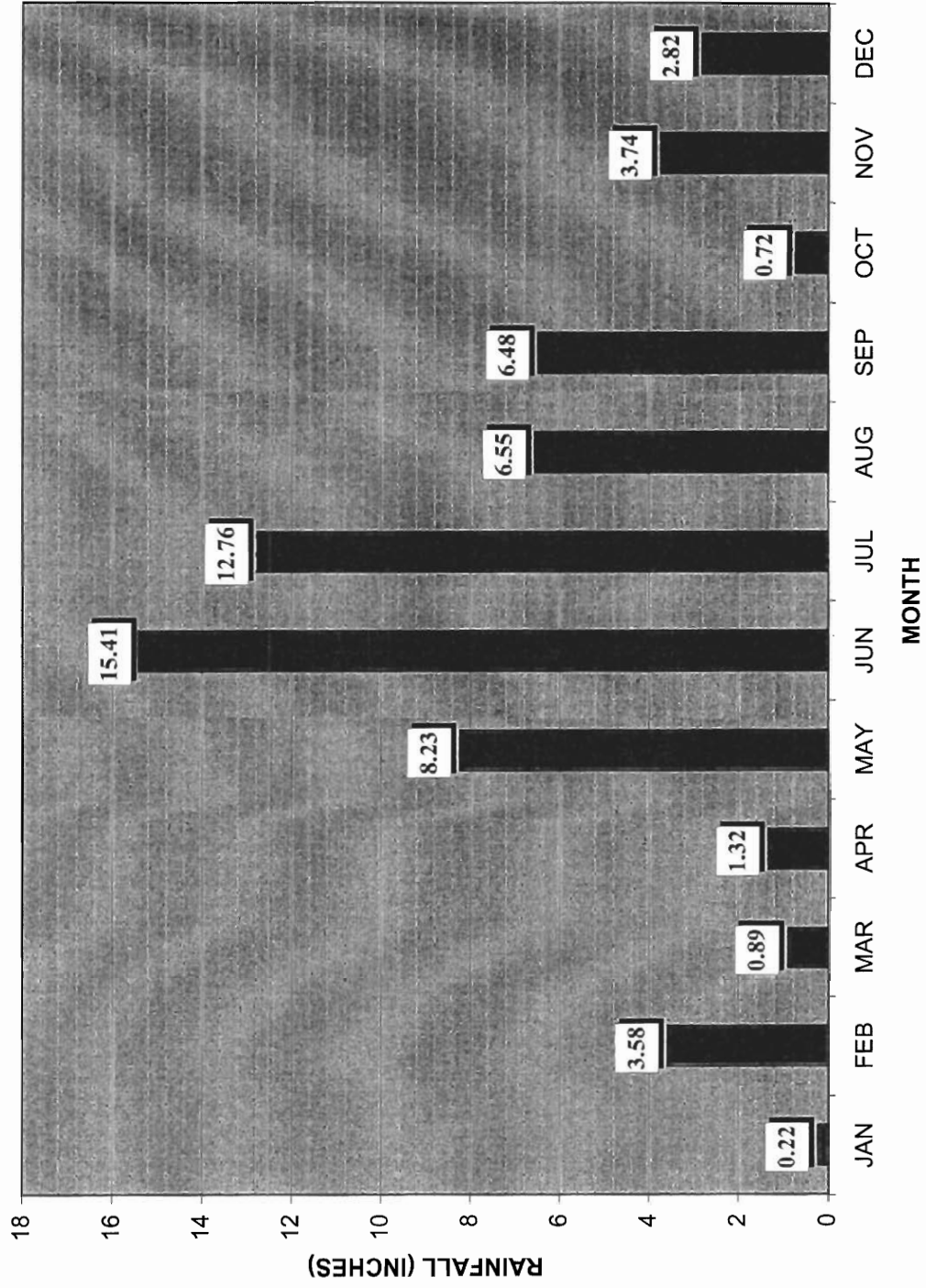




RAINFALL DATA 2002



Monthly Precipitation 2002
Miami Station 25° 49' N, 80° 17' W





PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: JANUARY
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:			SNOW:			WIND			:SUNSHINE:			SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18		
										AVG MX 2MIN										
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR		
1	75	60	68	-1	0	3	0.00	0.0	0	7.4	15	310	M	M	7	1	17	60		
2	75	64	70	1	0	5	0.19	0.0	0	8.8	20	110	M	M	8	13	24	120		
3	71	50	61	-8	4	0	T	0.0	0	9.6	21	290	M	M	7		26	300		
4	55	42	49	-19	16	0	0.00	0.0	0	9.9	20	340	M	M	2		25	320		
5	71	46	59	-9	6	0	0.00	0.0	0	8.0	15	130	M	M	6		20	120		
6	80	65	73	5	0	8	0.02	0.0	0	9.6	25	240	M	M	6	1	33	230		
7	71	52	62	-6	3	0	0.00	0.0	0	9.4	22	300	M	M	6		30	300		
8	61	44	53	-15	12	0	0.00	0.0	0	7.7	16	350	M	M	2		20	350		
9	65	45	55	-13	10	0	0.00	0.0	0	6.4	12	310	M	M	1		16	360		
10	74	52	63	-5	2	0	0.00	0.0	0	4.7	13	90	M	M	3		15	80		
11	77	56	67	-1	0	2	0.00	0.0	0	4.0	12	110	M	M	4		14	110		
12	76	58	67	-1	0	2	0.00	0.0	0	3.7	13	150	M	M	6		18	150		
13	76	63	70	2	0	5	0.00	0.0	0	5.5	12	340	M	M	8		22	250		
14	79	66	73	5	0	8	0.00	0.0	0	9.3	20	130	M	M	7		24	140		
15	81	67	74	6	0	9	T	0.0	0	6.1	14	310	M	M	8	1	18	190		
16	78	63	71	3	0	6	0.00	0.0	0	8.0	14	90	M	M	6		17	90		
17	81	67	74	6	0	9	0.00	0.0	0	6.6	14	110	M	M	3		15	150		
18	82	68	75	7	0	10	0.00	0.0	0	3.2	9	310	M	M	5	1	14	170		
19	81	66	74	6	0	9	0.00	0.0	0	5.8	17	180	M	M	4		22	200		
20	82	68	75	7	0	10	0.00	0.0	0	5.2	14	130	M	M	3		16	150		
21	83	68	76	8	0	11	0.00	0.0	0	6.8	15	180	M	M	3		23	170		
22	82	70	76	8	0	11	0.00	0.0	0	8.1	17	90	M	M	3	18	21	90		
23	81	73	77	9	0	12	0.00	0.0	0	13.4	22	120	M	M	4		28	130		
24	82	69	76	8	0	11	0.00	0.0	0	10.8	22	130	M	M	3		24	160		
25	84	69	77	9	0	12	0.00	0.0	0	5.6	13	140	M	M	3		18	180		
26	84	65	75	7	0	10	0.00	0.0	0	4.5	13	120	M	M	2		14	130		
27	83	68	76	8	0	11	0.00	0.0	0	6.7	14	120	M	M	4		18	120		
28	82	69	76	8	0	11	0.00	0.0	0	6.2	14	120	M	M	3		17	120		
29	83	67	75	7	0	10	0.00	0.0	0	8.2	16	110	M	M	4		20	150		
30	83	72	78	10	0	13	T	0.0	0	12.6	20	90	M	M	4		25	110		
31	82	73	78	10	0	13	0.01	0.0	0	13.6	22	100	M	M	4		23	120		
SM 2400 1925					53	211	0.22		0.0	235.4			M		138					
AV 77.4 62.1										7.6	FASTST		PSBL	%	4		MAX (MPH)			
											25	240					33	230		

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: FEBRUARY
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:			SNOW:		WIND		:SUNSHINE:		SKY		:PK WND			
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18	
										AVG MX 2MIN									
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR	
1	80	71	76	8	0	11	0.29	0.0	0	5.0	16	110	M	M	6	13	22	110	
2	81	68	75	7	0	10	T	0.0	0	3.0	13	130	M	M	4		15	130	
3	84	70	77	9	0	12	0.00	0.0	0	3.3	9	310	M	M	6	1	15	190	
4	78	61	70	2	0	5	0.00	0.0	0	6.9	15	10	M	M	2		20	10	
5	74	55	65	-3	0	0	0.00	0.0	0	10.9	17	90	M	M	5		22	70	
6	77	66	72	4	0	7	0.00	0.0	0	11.4	23	110	M	M	5		28	100	
7	84	68	76	8	0	11	0.00	0.0	0	10.4	18	220	M	M	5		24	230	
8	75	60	68	0	0	3	T	0.0	0	8.7	16	80	M	M	8		20	80	
9	78	68	73	5	0	8	0.74	0.0	0	7.3	16	140	M	M	10	1	21	120	
10	80	70	75	7	0	10	0.02	0.0	0	7.8	17	140	M	M	8		24	180	
11	78	63	71	2	0	6	T	0.0	0	7.1	14	330	M	M	9		18	330	
12	80	65	73	4	0	8	0.00	0.0	0	5.2	13	140	M	M	6		17	160	
13	84	66	75	6	0	10	0.06	0.0	0	5.1	15	30	M	M	8		20	30	
14	71	61	66	-3	0	1	0.05	0.0	0	7.4	13	340	M	M	9	1	15	10	
15	80	64	72	2	0	7	0.00	0.0	0	5.0	15	120	M	M	7		20	150	
16	79	65	72	2	0	7	0.41	0.0	0	5.8	16	340	M	M	8	1	18	330	
17	74	59	67	-3	0	2	0.00	0.0	0	6.7	14	300	M	M	2		18	300	
18	75	55	65	-5	0	0	0.00	0.0	0	9.8	20	60	M	M	3		23	50	
19	75	64	70	0	0	5	0.00	0.0	0	15.9	25	100	M	M	7		31	90	
20	79	69	74	4	0	9	0.00	0.0	0	13.6	22	140	M	M	7		28	130	
21	80	68	74	4	0	9	T	0.0	0	9.0	18	140	M	M	8		24	160	
22	81	67	74	4	0	9	0.05	0.0	0	7.2	18	160	M	M	6	1	25	170	
23	78	58	68	-2	0	3	1.96	0.0	0	11.4	26	230	M	M	9	18	32	230	
24	71	55	63	-7	2	0	0.00	0.0	0	8.8	17	340	M	M	3		24	320	
25	76	58	67	-3	0	2	0.00	0.0	0	6.2	15	90	M	M	6		20	90	
26	78	61	70	0	0	5	T	0.0	0	5.9	15	120	M	M	6		20	140	
27	73	51	62	-8	3	0	0.00	0.0	0	8.8	20	310	M	M	5		24	310	
28	65	46	56	-14	9	0	0.00	0.0	0	7.0	14	340	M	M	6		17	360	
SM 2168 1752					14 160		3.58		0.0 220.6				M		177				
AV 77.4 62.6									7.9		FASTST		PSBL %		6		MAX (MPH)		
							MISC ---->		26		230						32 230		

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: MARCH
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:		SNOW:		WIND			:SUNSHINE:			SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
AVG MX 2MIN																		
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	76	61	69	-2	0	4	T	0.0	0	16.8	26	90	M	M	9		32	100
2	81	72	77	6	0	12	0.00	0.0	0	16.0	28	150	M	M	6		36	140
3	84	73	79	8	0	14	T	0.0	0	12.5	22	160	M	M	6		29	170
4	75	54	65	-6	0	0	T	0.0	0	9.9	21	340	M	M	8	1	26	350
5	70	51	61	-10	4	0	0.00	0.0	0	12.9	22	60	M	M	9		29	60
6	72	66	69	-2	0	4	0.04	0.0	0	10.7	18	80	M	M	10	1	22	80
7	75	66	71	0	0	6	0.80	0.0	0	7.5	16	90	M	M	9	13	20	110
8	81	63	72	1	0	7	0.00	0.0	0	7.2	16	90	M	M	3	18	22	80
9	82	67	75	4	0	10	0.00	0.0	0	5.8	13	110	M	M	4		16	90
10	83	67	75	3	0	10	0.00	0.0	0	7.2	18	50	M	M	5		23	50
11	82	68	75	3	0	10	0.02	0.0	0	10.6	22	90	M	M	5		26	90
12	84	71	78	6	0	13	T	0.0	0	9.6	18	150	M	M	4		24	170
13	87	72	80	8	0	15	0.00	0.0	0	9.3	18	260	M	M	5		23	260
14	85	66	76	4	0	11	0.00	0.0	0	4.7	13	120	M	M	3		18	140
15	84	71	78	6	0	13	0.00	0.0	0	8.0	15	140	M	M	3		21	150
16	83	72	78	6	0	13	0.00	0.0	0	10.2	16	70	M	M	3		25	60
17	83	68	76	3	0	11	0.00	0.0	0	8.9	15	110	M	M	3		17	100
18	84	67	76	3	0	11	0.00	0.0	0	10.9	17	110	M	M	4		21	120
19	82	70	76	3	0	11	0.00	0.0	0	11.0	17	110	M	M	4		21	120
20	83	73	78	5	0	13	0.00	0.0	0	11.1	20	110	M	M	3		24	140
21	85	69	77	4	0	12	0.00	0.0	0	5.7	15	140	M	M	3		24	150
22	83	68	76	3	0	11	T	0.0	0	7.9	18	50	M	M	8		24	40
23	81	67	74	1	0	9	0.00	0.0	0	10.4	18	80	M	M	6		23	90
24	83	73	78	5	0	13	T	0.0	0	13.2	21	90	M	M	6		24	90
25	84	74	79	6	0	14	0.00	0.0	0	11.1	17	100	M	M	4		21	100
26	85	70	78	5	0	13	0.03	0.0	0	7.8	17	110	M	M	6	3	21	300
27	88	70	79	5	0	14	0.00	0.0	0	6.5	15	110	M	M	3		20	170
28	87	67	77	3	0	12	0.00	0.0	0	8.3	18	40	M	M	5	18	25	330
29	85	72	79	5	0	14	0.00	0.0	0	8.8	17	90	M	M	5		21	90
30	83	74	79	5	0	14	0.00	0.0	0	10.8	18	130	M	M	5		23	120
31	84	73	79	5	0	14	0.00	0.0	0	11.7	17	120	M	M	5		23	160
SM 2544 2115																		
					4	328	0.89	0.0	303.0	M			162					

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: APRIL
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:			SNOW:			WIND		:SUNSHINE:			SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18	
AVG MX 2MIN																			
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR	
1	87	69	78	4	0	13	1.08	0.0	0	7.2	26	110	M	M	7	1	30	110	
2	85	73	79	4	0	14	T	0.0	0	5.4	15	130	M	M	6	3	22	160	
3	86	70	78	3	0	13	0.00	0.0	0	6.2	21	330	M	M	4	3	24	330	
4	87	68	78	3	0	13	0.00	0.0	0	5.6	15	100	M	M	2		20	90	
5	86	70	78	3	0	13	0.00	0.0	0	8.3	16	330	M	M	3		21	320	
6	80	68	74	-1	0	9	0.00	0.0	0	9.8	18	50	M	M	5		24	60	
7	80	67	74	-1	0	9	T	0.0	0	15.1	28	90	M	M	6		32	80	
8	80	72	76	1	0	11	T	0.0	0	19.1	28	100	M	M	7		32	90	
9	83	72	78	3	0	13	0.02	0.0	0	14.3	25	110	M	M	4		30	110	
10	83	72	78	3	0	13	0.00	0.0	0	13.7	23	110	760	100	4		28	120	
11	82	73	78	3	0	13	0.09	0.0	0	12.9	22	110	M	M	5		30	140	
12	81	73	77	2	0	12	0.00	0.0	0	14.0	23	110	M	M	5		28	130	
13	82	72	77	2	0	12	0.00	0.0	0	11.4	18	100	M	M	6		22	100	
14	83	71	77	2	0	12	0.01	0.0	0	10.1	21	130	M	M	7		26	140	
15	85	73	79	4	0	14	0.00	0.0	0	10.1	15	90	M	M	4		18	110	
16	85	74	80	4	0	15	0.12	0.0	0	12.0	18	110	M	M	5	1	22	100	
17	85	75	80	4	0	15	T	0.0	0	12.3	17	110	M	M	5		22	110	
18	85	74	80	4	0	15	T	0.0	0	11.3	17	100	M	M	4		22	90	
19	85	73	79	3	0	14	0.00	0.0	0	10.4	20	90	M	M	3		24	80	
20	85	73	79	3	0	14	0.00	0.0	0	8.9	15	100	M	M	2		21	80	
21	85	70	78	2	0	13	0.00	0.0	0	6.5	14	130	M	M	5		18	140	
22	87	71	79	3	0	14	0.00	0.0	0	5.2	14	110	M	M	3		20	150	
23	91	73	82	6	0	17	0.00	0.0	0	6.6	14	150	M	M	3		17	120	
24	87	77	82	6	0	17	0.00	0.0	0	9.7	17	90	M	M	6		22	80	
25	85	75	80	3	0	15	0.00	0.0	0	12.9	18	90	M	M	3		22	90	
26	85	72	79	2	0	14	0.00	0.0	0	8.9	14	120	M	M	2		21	130	
27	84	75	80	3	0	15	0.00	0.0	0	11.8	18	120	M	M	4		25	120	
28	85	74	80	3	0	15	0.00	0.0	0	9.5	18	120	M	M	6		22	160	
29	90	71	81	4	0	16	0.00	0.0	0	5.2	13	130	M	M	8		17	170	
30	89	73	81	4	0	16	0.00	0.0	0	6.2	14	140	M	M	5		18	150	
SM 2543 2163																			
					0	409	1.32	0.0 300.6			760			140					
AV 84.8 72.1																			
										10.0	FASTST	PSBL	%	5	MAX (MPH)				
										MISC	----	#	28	100	#	32	90		

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: MAY
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:			SNOW:		WIND			:SUNSHINE:			SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18	
AVG MX 2MIN																			
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR	
1	90	74	82	4	0	17	0.00	0.0	0	7.9	17	160	M	M	2		24	160	
2	90	75	83	5	0	18	0.00	0.0	0	8.1	17	190	M	M	1		23	170	
3	88	76	82	4	0	17	0.00	0.0	0	9.1	18	130	M	M	2		25	110	
4	87	77	82	4	0	17	0.00	0.0	0	9.8	15	110	M	M	3		21	140	
5	88	77	83	5	0	18	0.00	0.0	0	10.7	16	90	M	M	6		21	140	
6	88	78	83	5	0	18	0.00	0.0	0	11.5	20	90	M	M	5		25	70	
7	88	77	83	4	0	18	0.00	0.0	0	11.3	15	90	M	M	3		21	100	
8	86	77	82	3	0	17	0.00	0.0	0	11.0	16	90	M	M	3		20	90	
9	87	75	81	2	0	16	0.00	0.0	0	11.5	20	110	M	M	4		24	110	
10	87	77	82	3	0	17	0.00	0.0	0	13.7	21	110	M	M	3		24	110	
11	87	76	82	3	0	17	0.01	0.0	0	15.6	21	90	M	M	5		24	90	
12	87	77	82	3	0	17	0.00	0.0	0	14.9	20	90	M	M	6		25	100	
13	88	77	83	4	0	18	0.00	0.0	0	10.5	16	120	M	M	5		21	130	
14	91	74	83	4	0	18	T	0.0	0	6.3	17	200	M	M	4		24	180	
15	89	73	81	1	0	16	2.00	0.0	0	7.6	21	50	M	M	8	13	25	30	
16	86	73	80	0	0	15	1.73	0.0	0	9.9	25	100	M	M	7	13	31	100	
17	87	78	83	3	0	18	0.00	0.0	0	9.9	17	130	M	M	5		22	140	
	91	76	84	4	0	19	0.20	0.0	0	7.6	18	170	M	M	6	13	25	250	
19	83	71	77	-3	0	12	1.38	0.0	0	5.7	29	260	M	M	10	13	36	250	
20	86	68	77	-3	0	12	0.52	0.0	0	6.2	14	110	M	M	9	13	16	80	
21	87	72	80	0	0	15	0.29	0.0	0	6.9	16	90	M	M	9	1	20	90	
22	83	71	77	-3	0	12	0.03	0.0	0	10.4	20	60	M	M	9		25	60	
23	84	72	78	-2	0	13	0.00	0.0	0	12.0	23	80	M	M	5		29	70	
24	84	75	80	-1	0	15	0.00	0.0	0	12.9	21	70	M	M	4		26	80	
25	83	74	79	-2	0	14	0.00	0.0	0	11.9	20	80	M	M	7		24	90	
26	85	74	80	-1	0	15	T	0.0	0	11.7	20	60	M	M	7		24	60	
27	86	77	82	1	0	17	T	0.0	0	14.2	22	80	M	M	6		25	90	
28	84	72	78	-3	0	13	1.43	0.0	0	9.5	21	120	M	M	7	13	26	130	
29	87	73	80	-1	0	15	0.00	0.0	0	6.8	16	110	M	M	3		20	110	
30	89	78	84	3	0	19	T	0.0	0	5.5	20	110	M	M	5		22	120	
31	86	72	79	-2	0	14	0.64	0.0	0	7.6	14	340	M	M	7	138	18	140	
SM 2692 2316																			
					0	497	8.23	0.0 308.2			M			167					
AV 86.8 74.7																			
										9.9	FASTST	PSBL	%	5	MAX (MPH)				
										MISC	----	29	260	36 250					

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: JUNE
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:			SNOW:			WIND			:SUNSHINE:			SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18		
AVG MX 2MIN																				
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR		
1	90	73	82	0	0	17	T	0.0	0	6.2	16	100	M	M	5		18	100		
2	91	75	83	1	0	18	T	0.0	0	3.5	18	250	M	M	6		26	270		
3	92	76	84	2	0	19	0.00	0.0	0	4.6	14	130	M	M	7		18	130		
4	89	79	84	2	0	19	0.00	0.0	0	8.7	16	90	M	M	8		23	100		
5	88	80	84	2	0	19	0.00	0.0	0	10.3	16	100	M	M	9		20	100		
6	88	74	81	-1	0	16	1.30	0.0	0	4.7	20	290	M	M	8	13	28	290		
7	90	74	82	0	0	17	0.05	0.0	0	4.3	16	110	M	M	7	3	17	120		
8	81	75	78	-4	0	13	0.29	0.0	0	4.2	15	100	M	M	8	1	16	80		
9	88	76	82	0	0	17	0.00	0.0	0	9.7	20	70	M	M	5		24	70		
10	87	72	80	-2	0	15	1.07	0.0	0	10.8	29	120	M	M	6	13	36	110		
11	81	73	77	-5	0	12	1.11	0.0	0	4.9	21	160	M	M	9	1	26	160		
12	85	74	80	-2	0	15	0.22	0.0	0	5.9	15	160	M	M	9	1	24	140		
13	84	76	80	-2	0	15	0.06	0.0	0	9.0	18	140	M	M	9	1	25	170		
14	85	74	80	-2	0	15	0.07	0.0	0	8.5	21	280	M	M	9	13	26	290		
15	80	73	77	-5	0	12	2.75	0.0	0	8.6	25	260	M	M	10	12	31	260		
16	90	71	81	-1	0	16	0.00	0.0	0	7.9	18	200	M	M	8		24	170		
17	88	73	81	-1	0	16	0.06	0.0	0	7.9	25	200	M	M	8	3	29	190		
18	88	73	81	-1	0	16	0.78	0.0	0	7.9	26	90	M	M	7	13	35	90		
19	89	74	82	0	0	17	0.35	0.0	0	10.2	22	90	M	M	7	1	24	80		
20	85	72	79	-4	0	14	0.41	0.0	0	11.0	22	100	M	M	9	13	25	100		
21	79	72	76	-7	0	11	1.37	0.0	0	6.5	17	140	M	M	10	1	21	130		
22	83	75	79	-4	0	14	0.16	0.0	0	9.3	21	130	M	M	10	1	25	130		
23	87	75	81	-2	0	16	0.20	0.0	0	7.4	18	140	M	M	9	1	26	150		
24	87	75	81	-2	0	16	0.41	0.0	0	7.4	23	250	M	M	8	13	26	240		
25	85	75	80	-3	0	15	0.03	0.0	0	4.9	13	90	M	M	9		17	130		
26	82	71	77	-6	0	12	4.18	0.0	0	4.5	15	250	M	M	8	13	17	250		
27	86	75	81	-2	0	16	0.01	0.0	0	5.0	16	140	M	M	6		18	130		
28	85	75	80	-3	0	15	T	0.0	0	5.7	15	90	M	M	7		20	150		
29	88	78	83	0	0	18	T	0.0	0	9.1	18	100	M	M	8		22	90		
30	83	74	79	-4	0	14	0.53	0.0	0	7.1	21	190	M	M	9	1	26	190		
SM 2584 2232					0	465	15.41	0.0	215.7				M		238					
AV 86.1 74.4										7.2	FASTST	PSBL	%	8		MAX (MPH)				
								MISC ---->		29	120					36	110			

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: JULY
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:		SNOW:		WIND		:SUNSHINE:		SKY		:PK WND				
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18	
										AVG MX 2MIN									
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR	
1	85	73	79	-4	0	14	1.14	0.0	0	3.2	15	190	M	M	9	13	21	130	
2	87	72	80	-3	0	15	1.39	0.0	0	4.0	18	90	M	M	6	13	23	150	
3	89	75	82	-1	0	17	0.08	0.0	0	3.6	21	190	M	M	6	13	31	180	
4	88	74	81	-2	0	16	0.34	0.0	0	3.8	20	270	M	M	5	18	24	280	
5	91	77	84	1	0	19	0.26	0.0	0	3.7	17	70	M	M	6	138	21	70	
6	86	74	80	-3	0	15	0.42	0.0	0	3.0	17	130	M	M	7	38	21	120	
7	88	74	81	-2	0	16	0.67	0.0	0	6.8	21	130	M	M	8	13	26	90	
8	87	74	81	-2	0	16	2.86	0.0	0	8.2	21	110	M	M	9	13	24	120	
9	89	72	81	-2	0	16	0.40	0.0	0	7.0	18	120	M	M	10	13	24	200	
10	85	69	77	-7	0	12	2.16	0.0	0	6.1	17	190	M	M	9	13	30	210	
11	87	74	81	-3	0	16	0.80	0.0	0	4.4	30	320	M	M	6	13	35	320	
12	88	71	80	-4	0	15	0.50	0.0	0	6.1	18	250	M	M	5	13	23	100	
13	90	74	82	-2	0	17	0.00	0.0	0	7.1	16	130	M	M	4	3	21	170	
14	93	78	86	2	0	21	0.00	0.0	0	5.5	13	130	M	M	4		17	160	
15	90	81	86	2	0	21	0.01	0.0	0	4.4	15	280	M	M	6	3	18	280	
16	91	79	85	1	0	20	0.00	0.0	0	4.8	13	120	M	M	5	3	17	150	
17	94	79	87	3	0	22	0.40	0.0	0	4.8	17	30	M	M	5	13	25	30	
18	89	78	84	0	0	19	0.01	0.0	0	4.8	16	180	M	M	5	3	21	160	
19	90	78	84	0	0	19	0.00	0.0	0	6.7	17	140	M	M	5		99	999	
20	90	78	84	0	0	19		T	0.0	5.2	9	130	M	M	5		12	130	
21	90	79	85	1	0	20	0.00	0.0	0	7.3	21	120	M	M	8		26	120	
22	90	81	86	2	0	21		T	0.0	8.7	16	120	M	M	8		20	140	
23	90	80	85	1	0	20	0.02	0.0	0	9.5	16	120	M	M	7		20	150	
24	88	76	82	-2	0	17	0.78	0.0	0	8.4	22	130	M	M	8	138	29	130	
25	88	78	83	-1	0	18	0.37	0.0	0	7.6	26	110	M	M	7	138	31	110	
26	90	80	85	1	0	20		T	0.0	9.2	18	130	M	M	6		23	140	
27	90	81	86	2	0	21	0.00	0.0	0	9.2	15	120	M	M	5		18	120	
28	91	81	86	2	0	21	0.00	0.0	0	10.0	16	90	M	M	5		18	120	
29	91	76	84	0	0	19	0.01	0.0	0	9.2	25	160	M	M	6		30	160	
30	92	83	88	4	0	23		T	0.0	9.4	14	100	M	M	8		M	M	
31	91	78	85	1	0	20	0.14	0.0	0	5.0	14	90	M	M	7	13	16	100	
SM 2768 2377					0 565 12.76		0.0 196.7		M		200								
AV 89.3 76.7							6.3 FASTST		PSBL %		6		MAX(MPH)						
							MISC ---->		30 320				99 999						

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: AUGUST
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:			SNOW:		WIND		:SUNSHINE:		SKY		:PK WND		
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
AVG MX 2MIN																		
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	95	77	86	2	0	21	1.17	0.0	0	5.6	16	100	M	M	5	38	21	90
2	94	77	86	2	0	21	0.66	0.0	0	4.2	25	160	M	M	7	138	31	170
3	92	76	84	0	0	19	0.38	0.0	0	5.7	18	310	M	M	5	1	23	180
4	92	78	85	1	0	20	0.00	0.0	0	6.5	14	120	M	M	4		22	160
5	91	80	86	2	0	21	0.34	0.0	0	2.9	15	50	M	M	5		17	50
6	92	75	84	0	0	19	0.22	0.0	0	3.9	20	280	M	M	7	13	26	270
7	88	72	80	-4	0	15	0.76	0.0	0	5.9	22	320	M	M	9	18	25	320
8	88	73	81	-3	0	16	0.15	0.0	0	5.1	17	60	M	M	5	18	21	50
9	89	75	82	-2	0	17	0.39	0.0	0	9.5	17	100	M	M	8	1	21	90
10	88	77	83	-1	0	18	0.00	0.0	0	8.9	17	130	M	M	8		22	130
11	89	78	84	0	0	19	0.01	0.0	0	2.4	13	250	M	M	8	3	15	240
12	91	76	84	0	0	19	0.00	0.0	0	6.3	16	120	M	M	7		20	100
13	92	80	86	2	0	21	0.00	0.0	0	7.1	17	100	M	M	6		23	110
14	91	79	85	1	0	20	0.18	0.0	0	8.0	23	70	M	M	8	1	26	70
15	91	79	85	1	0	20	0.10	0.0	0	13.2	29	80	M	M	7		33	80
16	91	82	87	3	0	22	T	0.0	0	13.4	24	90	M	M	6	1	29	80
17	91	77	84	0	0	19	0.61	0.0	0	9.0	18	110	M	M	7	13	22	110
18	91	78	85	1	0	20	0.04	0.0	0	7.8	16	120	M	M	5		20	110
19	90	78	84	0	0	19	T	0.0	0	6.9	15	120	M	M	5	3	21	120
20	91	74	83	0	0	18	0.20	0.0	0	5.5	20	250	M	M	8	13	28	240
21	90	78	84	1	0	19	0.00	0.0	0	10.5	16	120	M	M	6		21	100
22	91	77	84	1	0	19	0.31	0.0	0	6.9	16	360	M	M	5	13	21	360
23	90	80	85	2	0	20	T	0.0	0	7.6	16	90	M	M	6		21	70
24	89	79	84	1	0	19	0.00	0.0	0	6.4	15	100	M	M	7		18	80
25	92	76	84	1	0	19	0.03	0.0	0	4.4	14	130	M	M	5		16	120
26	90	77	84	1	0	19	0.05	0.0	0	5.3	17	140	M	M	5		23	160
27	90	74	82	-1	0	17	0.60	0.0	0	5.6	20	140	M	M	6	13	23	160
28	89	75	82	-1	0	17	0.11	0.0	0	3.6	15	270	M	M	8	3	20	270
29	91	77	84	1	0	19	0.08	0.0	0	7.4	21	110	M	M	7	1	25	120
30	89	78	84	1	0	19	0.14	0.0	0	10.1	22	100	M	M	7	138	26	120
31	91	78	85	2	0	20	0.02	0.0	0	7.2	14	120	M	M	6		21	100
=====																		
SM	2809	2390			0	591	6.55		0.0	212.8			M		198			
=====																		
AV	90.6	77.1								6.9	FASTST		PSBL	%	6		MAX (MPH)	
										MISC	----	>	29	80			33	80
=====																		

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: SEPTEMBER
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:			SNOW:		WIND			:SUNSHINE:			SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18	
AVG MX 2MIN																			
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR	
1	93	74	84	1	0	19	0.73	0.0	0	5.0	16	100	M	M	5	3	18	360	
2	91	79	85	2	0	20	0.46	0.0	0	3.9	21	170	M	M	6	138	25	180	
3	89	78	84	1	0	19	0.36	0.0	0	2.6	14	130	M	M	7	138	18	140	
4	90	78	84	1	0	19	0.01	0.0	0	4.2	16	170	M	M	8	1	20	260	
5	87	79	83	0	0	18	0.28	0.0	0	5.3	15	120	M	M	9	1	21	140	
6	89	75	82	-1	0	17	0.21	0.0	0	6.1	17	110	M	M	8	1	20	160	
7	88	78	83	0	0	18	0.14	0.0	0	8.7	21	90	M	M	7	1	26	90	
8	89	77	83	0	0	18	0.08	0.0	0	6.9	15	90	M	M	8	1	17	130	
9	90	78	84	1	0	19	0.00	0.0	0	5.3	15	140	M	M	6		18	120	
10	89	75	82	-1	0	17	1.67	0.0	0	5.8	28	230	M	M	8	13	32	240	
11	87	70	79	-4	0	14	0.30	0.0	0	4.6	20	280	M	M	10	1	25	290	
12	85	73	79	-4	0	14	0.04	0.0	0	7.0	22	100	M	M	10		26	110	
13	89	75	82	-1	0	17	0.10	0.0	0	10.6	23	190	M	M	8	13	28	190	
14	90	79	85	2	0	20	0.00	0.0	0	11.3	20	120	M	M	7		23	140	
15	91	82	87	4	0	22	T	0.0	0	9.5	14	90	M	M	6		17	110	
16	91	77	84	1	0	19	T	0.0	0	8.8	16	100	M	M	4		20	100	
17	91	80	86	4	0	21	0.00	0.0	0	8.5	16	90	M	M	3		21	90	
18	91	82	87	5	0	22	0.00	0.0	0	8.8	18	100	M	M	5		23	90	
19	91	77	84	2	0	19	0.10	0.0	0	10.5	20	130	M	M	6	1	25	150	
20	90	77	84	2	0	19	0.23	0.0	0	10.0	20	160	M	M	6	1	28	130	
21	90	77	84	2	0	19	T	0.0	0	10.2	17	160	M	M	5		21	140	
22	89	79	84	2	0	19	T	0.0	0	9.5	22	100	M	M	7		28	110	
23	86	75	81	-1	0	16	1.20	0.0	0	7.2	20	160	M	M	9	128	23	170	
24	88	76	82	0	0	17	0.02	0.0	0	9.9	23	190	M	M	8		29	180	
25	89	77	83	1	0	18	0.01	0.0	0	12.6	22	130	M	M	8		29	120	
26	90	79	85	3	0	20	0.02	0.0	0	10.1	17	140	M	M	4		23	180	
27	90	78	84	3	0	19	0.20	0.0	0	5.8	17	240	M	M	5	13	22	240	
28	90	77	84	3	0	19	0.14	0.0	0	5.3	15	110	M	M	4	1	17	80	
29	89	76	83	2	0	18	0.05	0.0	0	8.7	18	80	M	M	5	1	23	70	
30	89	78	84	3	0	19	0.13	0.0	0	11.5	28	90	M	M	6	1	33	100	
SM 2681 2315																			
					0	555	6.48			0.0	234.2				M	198			
AV 89.4 77.2																			
										7.8	FASTST	PSBL	%	7	MAX(MPH)				
										MISC ---->	# 28	90	33 100						

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: OCTOBER
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:			SNOW:		WIND		:SUNSHINE:		SKY		:PK WND		
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
AVG MX 2MIN																		
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	90	78	84	3	0	19	0.02	0.0	0	12.5	20	120	M	M	7 1		24	120
2	89	80	85	4	0	20	0.00	0.0	0	10.0	16	100	M	M	4		21	70
3	88	78	83	2	0	18	T	0.0	0	9.1	16	90	M	M	4		23	80
4	89	76	83	3	0	18	T	0.0	0	6.0	13	100	M	M	4		17	140
5	88	76	82	2	0	17	0.16	0.0	0	8.1	21	110	M	M	6 1		23	110
6	88	77	83	3	0	18	0.00	0.0	0	6.9	15	90	M	M	4		20	80
7	88	75	82	2	0	17	0.00	0.0	0	5.8	16	90	M	M	3		20	80
8	89	77	83	3	0	18	0.00	0.0	0	7.1	18	90	M	M	3		25	90
9	91	76	84	4	0	19	0.03	0.0	0	6.8	16	70	M	M	3		22	80
10	90	78	84	4	0	19	0.00	0.0	0	4.4	15	140	M	M	6		17	150
11	90	77	84	5	0	19	0.00	0.0	0	4.4	15	120	M	M	4		18	170
12	90	77	84	5	0	19	0.00	0.0	0	6.9	15	130	M	M	3		17	100
13	89	77	83	4	0	18	0.01	0.0	0	6.2	14	100	M	M	6		17	100
14	87	74	81	2	0	16	T	0.0	0	5.8	16	70	M	M	7		20	60
15	89	75	82	3	0	17	0.05	0.0	0	7.6	23	230	M	M	8 1		28	230
16	86	75	81	2	0	16	0.17	0.0	0	5.1	14	280	M	M	6 1		20	290
17	85	70	78	-1	0	13	0.00	0.0	0	8.0	15	60	M	M	3		18	300
18	85	71	78	-1	0	13	0.00	0.0	0	9.8	18	60	M	M	3		22	60
19	86	72	79	1	0	14	0.00	0.0	0	6.6	22	90	M	M	5		24	90
20	87	73	80	2	0	15	0.00	0.0	0	4.8	12	110	M	M	7		16	150
21	86	75	81	3	0	16	T	0.0	0	3.5	18	230	M	M	7		23	230
22	89	73	81	3	0	16	T	0.0	0	4.0	14	110	M	M	3		18	160
23	88	75	82	4	0	17	T	0.0	0	5.8	15	100	M	M	4		18	140
24	88	75	82	4	0	17	0.05	0.0	0	5.8	16	80	M	M	4		18	150
25	89	75	82	4	0	17	0.00	0.0	0	5.0	15	40	M	M	4		22	60
26	89	76	83	6	0	18	0.00	0.0	0	5.4	14	130	M	M	5		16	130
27	89	77	83	6	0	18	T	0.0	0	7.5	14	110	M	M	4		16	110
28	89	78	84	7	0	19	0.00	0.0	0	7.2	13	140	M	M	3		18	170
29	88	77	83	6	0	18	0.00	0.0	0	6.3	16	140	M	M	3		21	150
30	92	77	85	8	0	20	0.00	0.0	0	6.8	16	250	M	M	4		20	260
31	91	75	83	6	0	18	0.23	0.0	0	5.0	12	320	M	M	5 1		14	310
SM	2742	2345			0	537	0.72		0.0	204.2			M		142			
AV	88.5	75.6								6.6	FASTST		PSBL	%	5		MAX (MPH)	
								MISC	----	23	230						28	230

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: NOVEMBER
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:			SNOW:		WIND		:SUNSHINE:			SKY		:PK WND	
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
AVG MX 2MIN																		
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	88	76	82	5	0	17	0.32	0.0	0	4.8	13	40	M	M	8	1	16	40
2	85	73	79	3	0	14	T	0.0	0	7.4	17	60	M	M	5		20	40
3	85	71	78	2	0	13	0.00	0.0	0	6.8	15	110	M	M	6		17	90
4	86	71	79	3	0	14	0.00	0.0	0	5.9	14	120	M	M	4		18	140
5	86	74	80	4	0	15	0.00	0.0	0	8.5	16	160	M	M	4		24	180
6	91	71	81	5	0	16	0.02	0.0	0	10.5	20	310	M	M	4	1	26	320
7	80	62	71	-5	0	6	0.00	0.0	0	9.7	17	340	M	M	1		24	360
8	84	65	75	-1	0	10	0.00	0.0	0	8.2	20	90	M	M	4		23	110
9	86	68	77	2	0	12	0.00	0.0	0	6.2	15	90	M	M	3		18	130
10	87	72	80	5	0	15	0.00	0.0	0	5.4	13	120	M	M	3		16	120
11	89	73	81	6	0	16	0.00	0.0	0	5.2	13	110	M	M	3		15	110
12	89	75	82	7	0	17	0.00	0.0	0	7.0	16	140	M	M	4		22	170
13	76	64	70	-5	0	5	0.03	0.0	0	8.0	22	330	M	M	5	12	31	310
14	81	62	72	-3	0	7	0.00	0.0	0	8.9	16	70	M	M	6		20	50
15	83	70	77	2	0	12	0.00	0.0	0	5.9	15	140	M	M	8		20	120
16	83	71	77	3	0	12	2.14	0.0	0	8.1	20	140	M	M	9	1	29	150
17	73	59	66	-8	0	1	0.08	0.0	0	11.6	26	290	M	M	8	18	39	280
18	74	50	62	-12	3	0	0.00	0.0	0	8.5	18	50	M	M	4		26	50
19	79	59	69	-5	0	4	0.00	0.0	0	7.1	16	50	M	M	5		21	60
20	83	67	75	1	0	10	0.23	0.0	0	7.3	18	80	M	M	8	1	23	70
21	81	70	76	2	0	11	0.90	0.0	0	4.1	12	300	M	M	9	1	15	300
22	79	64	72	-1	0	7	0.01	0.0	0	7.6	14	340	M	M	7		20	290
23	74	56	65	-8	0	0	0.00	0.0	0	7.7	13	340	M	M	2		17	340
24	78	59	69	-4	0	4	T	0.0	0	5.9	10	70	M	M	4		M	M
25	80	67	74	1	0	9	T	0.0	0	5.1	14	100	M	M	8		17	100
26	83	70	77	4	0	12	0.01	0.0	0	6.4	13	350	M	M	9		15	50
27	80	66	73	0	0	8	0.00	0.0	0	6.1	13	330	M	M	6		16	320
28	81	64	73	1	0	8	0.00	0.0	0	6.3	14	330	M	M	7		18	330
29	73	53	63	-9	2	0	0.00	0.0	0	7.5	15	330	M	M	4		18	330
30	74	55	65	-7	0	0	0.00	0.0	0	5.2	13	270	M	M	2		16	260
SM 2451 1977 5 275 3.74 0.0 212.9 M 160																		
AV 81.7 65.9 7.1 FASTST PSBL % 5 MAX(MPH)																		
MISC ----> 26 290 39 280																		

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: MIAMI
 MONTH: DECEMBER
 YEAR: 2002
 LATITUDE: 25 49 N
 LONGITUDE: 80 17 W

TEMPERATURE IN F:					:PCPN:			SNOW:		WIND		:SUNSHINE:		SKY		:PK WND		
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18
AVG MX 2MIN																		
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR
1	78	58	68	-4	0	3	T	0.0	0	3.1	10	200	M	M	6	1	12	300
2	81	65	73	1	0	8	0.00	0.0	0	3.9	9	60	M	M	6	1	12	60
3	81	67	74	2	0	9	T	0.0	0	8.7	16	80	M	M	6		21	100
4	82	74	78	7	0	13	T	0.0	0	13.4	22	100	M	M	7		26	90
5	85	68	77	6	0	12	T	0.0	0	8.1	14	170	M	M	4		22	180
6	83	64	74	3	0	9	0.03	0.0	0	5.8	14	310	M	M	9	12	17	210
7	79	62	71	0	0	6	0.03	0.0	0	8.9	15	50	M	M	9	18	18	60
8	79	72	76	5	0	11	0.66	0.0	0	10.0	18	100	M	M	9	1	24	80
9	81	71	76	5	0	11	0.85	0.0	0	14.5	26	100	M	M	10	1	32	100
10	83	70	77	7	0	12	1.25	0.0	0	8.6	21	230	M	M	8	13	26	240
SM	812	671			0	94	2.82		0.0	85.0			M		74			
AV	81.2	67.1								8.5	FASTST		PSBL	%	7		MAX (MPH)	
							MISC	----	>		26	100					32	100