Standard Agenda Item Cover Sheet

Agenda Item No. _____

Meeting Date: _____

☒ Consent Section ☐ Regular Section ☐ Public Hearing

Requires Chair Signature? ☐ Yes ☒ No Includes a Technology Component? ☐ Yes ☒ No

Subject: Consolidated Mines 2023-2024 Annual Report			
Department Name: Public Utilities Department-Environmental Services Division			
Contact Person: Kim Cruz		Contact Phone: (813) 276-8370	
Sign-Off Approvals:			
George B. Cassady	05/05/2025	Kevin S. Moran	04/24/2025
Assistant County Administrator	Date	Department Director	Date
N/A		Nancy Takemori	04/28/2025
Management and Budget – Approved as to Financial Impact Accuracy	Date	County Attorney – Approved as to Legal Sufficiency	Date

Staff's Recommended Board Motion:
Acceptance of the Consolidated Mines 2023/2024 Annual Report for informational purposes. This phosphate mining and reclamation report provides a general review of mining operations, reclamation during the preceding reporting year and identifying expected activity for the subsequent reporting year. This staff report is for informational purposes only.

Financial Impact Statement:
No County funds are required for this item.

Background:
Pursuant to Land Development Code (LDC) Section 8.02.09 of the Hillsborough County Land Development Code, a phosphate mining permittee is required to submit an Annual Report of Operations containing a general review of mining operations and reclamation during the preceding reporting year and identifying expected activity for the subsequent reporting year.

List Attachments:

- Hillsborough County Staff Review Report
- Attachment 2: Agency Comments
- Attachment 3: Consolidated Mines 2023/2024 Annual Report

County Staff Review Report

Hillsborough County Florida

A Report Presented to the
Board of County Commissioners
on DATE from
Public Utilities Department
Environmental Services Division
regarding
Consolidated Mines 2023-2024 Annual Report
Application No.: PMAR 24-1175
Phosphate Reference No.: 824.03P

Staff Report of the Consolidated Mines 2023/2024 Annual Report

Annual Review of Development Order Compliance Assessment

The Hillsborough Consolidated Mines Development of Regional Impact #213 was approved by the Hillsborough County Board of County Commissioners (BOCC) on March 23, 1995, covering 53,388 acres. The Hillsborough Consolidated Mines Development of Regional Impact #263 Substantial Deviation (DRI #263) was approved on March 11, 2008, and decreased the size to 48,115 acres. Subsequent land acquisitions have increased the total area regulated by DRI #263 to 48,734 acres. The development is located in southeast Hillsborough County and approved for Phosphate Mining. On December 23, 2024, Hillsborough County recognized Mosaics notification to exercise permit tolling and extensions granted pursuant to Section 252.363, Florida Statutes. At this time, the project's build out date is July 16, 2036.

Pursuant to LDC Section 8.02.09, the phosphate mining permittee is required to submit an Annual Report of Operations containing a general review of mining operations and reclamation during the preceding reporting year, July 1, 2023, through June 30, 2024, and identify expected activities for the subsequent reporting year.

Agency Review

The Annual Report of Operations (Attachment 2) submitted for the Hillsborough County Consolidated Mine project has been reviewed by the County and other applicable agencies for compliance with the terms and conditions of the Development Order, Operating Permit, and approved plans. Review by Agencies (Attachment 1) generated a comment regarding Mosaic reporting “elevated” Total Phosphorus in surface waters.

All stormwater runoff from the active mine area is released only through Florida Department of Environmental Protection (DEP) National Pollution Discharge Elimination Discharge System (NPDES) permitted outfall locations. Mosaic reported no discharges occurred through the permitted NPDES outfalls during the 2023/2024 reporting year.

In response to the Total Phosphorus comment, Mosaic requested third party analysis of total phosphorus and biological data. In summary, the third party reported that a surface water discharge through the NPDES outfalls has not occurred since 2021, data shows phosphorus concentrations a surface water sample locations either remained stable over time or decreased slightly, and the biological communities for the surface water bodies scored ‘healthy’. Hillsborough County Environmental Services Division will continue to observe surface water quality data.

Approval by the Administrator and/or the Board of County Commissioners does not relieve the applicant from the responsibility to comply with any applicable federal, state, and other local laws, regulations, and ordinances. Acceptance of the Annual Report of operations and approval of the Annual Review is not a substitute for other approval required by the Land Development Code.

During this reporting year, the following development was reported for informational purposes:

Project Status

The developer of record is Mosaic Fertilizer, LLC, (Mosaic). The authorized agent is Russell T. Schweiss. The Development Order has been amended nine times. Mosaic reports that the total area mined (matrix) through June 30, 2023, was 31,253.0 acres (matrix) of the 48,734 acres of the total DRI site.

Mining Operations

Mosaic reports that phosphate mining continued in the Hillsborough Consolidated Mines with approximately 47.3 acres mined in the 2023-2024 report year. One setback waiver was obtained for Lonesome Mining Unit 13 along County Road 39 on August 18, 2024.

Clay Storage

On November 14, 2019, the Hillsborough County BOCC approved to amend the DRI #263 Composite Development Order and Operating Permit as resolved in Resolution R18-128, subject to the terms and conditions set forth therein. Approval of Resolution R18-129 enabled waste clays originating from other counties to be disposed of in existing Hillsborough County Clay Settling Areas (CSA) through November 14, 2023. Mosaic will not construct CSAs L-4, L-5, L-6, and F-8.

On November 7, 2023, the Hillsborough County Board of County Commissioners adopted Resolution 23-095, amending the DRI #263 Composite Development Order and Operating Permit to extend the time period in which certain waste clays originating from Hardee County may be disposed in designated existing Hillsborough County clay settling areas.

During 2023-2024 reporting year, clay storage activities continued at F-4, F-5, F-7, L-1, L-2, and L-3 CSAs. The third-party annual dam inspections included in the 2023/2024 annual report indicated that the clay settling areas operated by Mosaic are generally maintained and safely operated within industry standards for their intended use. The third-party inspectors provided normal maintenance recommendations and indicated there were no conditions observed that required immediate corrective action.

Reclamation

Since 1982, Mosaic and its predecessors, Mosaic Phosphates Company and IMC Phosphates Company have requested and obtained written reclamation release letters from the Florida Department of Environmental Protection (FDEP) for certain FDEP Logical Reclamation Units (LRU) in the Consolidated Mines.

Mosaic reports a total of 61.4 acres of wetland mitigation areas were released by EPCHC during the 2023/2024 reporting year.

Mosaic may request reclamation releases outside of the annual report twice a year in the Spring and the Fall to Hillsborough County.

The spring 2021 release request for 2,915.8 acres in LRUs IMC-FCL-AC(3A), IMC-FCLAC(5), IMC-FCL-LMR(7), IMC-KC-HB(1), IMC-KC-WB(1) was submitted to Hillsborough County on March 24, 2021. On May 16, 2023, Hillsborough County staff requested additional information.

Reclamation activities during the 2023-2024 report year, included:

1) Contouring, 354.5 acres, 2) Upland Planting, 1,008.2 acres, 3) Wetland Planting, 89.2 acres.

Significant Upland Wildlife Habitat (SUWH)

During the 2023/2024 reporting year, Mosaic planted 35 acres of plants within the SUWH area and all areas previously seeded or top soiled were treated to control nuisance and exotic vegetation.

No owls and no scrub jays were translocated from Hillsborough County during 2023/2024. Mosaic reports that the number of scrub jay families observed within the Mosaic Wellfield Duette Preserve Subpopulation, the Little Manatee River State Park, SWFWMD Coker Tract, and Moody Branch is meeting and exceeding the USFW permit criteria. The annual report indicates that 60 family groups were observed, while the permit criteria require 14 family groups.

During 2023/2024 reporting year, a total of 11 gopher tortoises were transported from Four Corners/Lonesome Mines and released to the Lykes Brothers Fisheating Creek long-term protected gopher tortoise recipient site.

Annual Financial Responsibility

Mosaic's current year, 2024/2025, proposed comprehensive (Hillsborough Consolidated Mines, Big Four Mine, and Hopewell Mine) financial responsibility agreement was reviewed and negotiated with the Office of Management and Budget, Hillsborough County Financial and Debt Analysis Department and was approved by the Board of County Commissioners on February 11, 2025. This comprehensive financial responsibility agreement includes the following: (1) a Reclamation Surety Bond equal or greater than $94,299,815 (2) an Environmental Liability Insurance Policy in the minimum amount of $43,000,000, and (3) a Corporate Guarantee from the Mosaic Company of Delaware in the amount of $11,769,656.00 to cover EPC wetland mitigation constructed but not yet released at $7,393 per acre. The total amount of $149,069,471 reported is based on the current level of the Reclamation Bond and Corporate Guarantee, plus the Environmental Liability Insurance Policy. For consistency purposes, a minor correction to the Corporate Guarantee (Attachment 3) was completed prior to the February 11, 2025, BOCC Meeting approval of the 2024/2025 Financial Responsibility.

Projected Development

Mosaic reports the following is projected for the upcoming reporting year:

- Total acreage expected to be mined in the Hillsborough Consolidated Mine during the report year 2024/2025 will be approximately 44.5 acres.
- Reclamation activities expected during the report year 2024/2025 include 1) Contouring, 834 acres, 2) Upland Planting, 970 acres, and 3) Wetland Planting, 300 acres.

- Clay storage activities are projected to continue at Four Corners Mines CSAs F-4, F-5, F-2D, F-7, and Lonesome Mine CSAs L-1, L-2, and L-3.
- Routine herbicide maintenance for nuisance and exotic plant species will continue on all SUWH areas.
- Supplemental plantings of desirable native species will be conducted as needed within the SUWH areas.
- Within the SUWH areas, additional controlled/prescribed burns are planned for the 2024-2025 burn season.
- Initial planting will take place in the SUWH areas within FDEP Reclamation Units LRU HPB(6) and HPB(9), and supplemental plantings will be done in LRU LMR(7) and LMR(6).
- Adjustment of the reclamation timelines due to various reasons such as past State of Emergency Orders and the Clay Settling Area Resolutions.

Review of Development Order Conditions

A review of development order conditions as defined in Section III Amended Development Order Conditions of the Composite Development Order for Hillsborough County Mines, Consolidation and Extension Phases was conducted. Based on the information provided in the 2023/2024 Annual Report, the review verifies compliance with the requirements of DRI 263 and that existing Standard Operating Procedures and Best Management Practices are being followed. While most of the Section III conditions did not apply based on the 2023/2024 activities or will apply in the future, the following did apply and were found to be in compliance:

1) III.C.1. through 7. Water Management and Supply – Groundwater were found to be in compliance. Mosaic is in compliance with the consolidated water use permit issued from the SWFWMD and data provided in the DRI 263 Environmental Monitoring Report indicated ground water quality met or were below applicable ground water standards.
2) III.D.1. through 6. Water Management Surface Water were found to be in compliance. The DRI 263 Environmental Monitoring Report indicated no degradation of water quality standards by stormwater existing the site.
3) III.E.1. through 3. Soils were found to be in compliance.
4) III.G.1. Floodplains were found to be in compliance as no mining occurred in the 25-year floodplain.
5) III.I.1,2, and 6. Vegetation were found to be in compliance, SOPs and BMPs are being followed and permits are obtained for gopher tortoise relocations as required.

Project History

On March 21, 1974, the Lonesome Mine Development of Regional Impact was originally approved by the Hillsborough County Board of County Commissioners and was subsequently amended on February 21, 1984, January 9, 1990, September 25, 1990 and May 7, 1991.

On January 15, 1975, the Kingsford Mine Development of Regional Impact was originally approved by the Hillsborough County Board of County Commissioners and was subsequently amended on March 29, 1988.

On January 4, 1978, the Four Corners Mine Development of Regional Impact was originally approved by the Hillsborough County Board of County Commissioners, and was subsequently amended on April 22, 1981, May 13, 1986, January 9, 1990 and September 25, 1990.

On November 8, 1974, the Lonesome Mine Operating Permit was originally issued by the Hillsborough County Board of County Commissioners and has been subsequently amended.

On January 15, 1975, the Kingsford Mine Operating Permit was originally issued by the Hillsborough County Board of County Commissioners and has been subsequently amended.

On January 5, 1978, the Four Corners Mine Operating Permit was originally issued by the Hillsborough County Board of County Commissioners and has been subsequently amended.

On July 1, 1990, IMC Fertilizer, Inc. filed an application for development approval for a substantial deviation to the approved Lonesome, Kingsford and Four Corners DRIs and related operating permit amendments with the Hillsborough County Board of County Commissioners, pursuant to the provisions of Section 380.06, Florida Statutes; and

A 1990 substantial deviation proposed, among other things, the addition of approximately 18,000 acres to form the Extension Phase, the removal of approximately 850 acres from the Lonesome Mine boundary, an addition to the mining area, a revision to the mining schedule and equipment utilization, a revision of the clay and tailing storage areas and disposal methods, an addition to the approved methods for transporting product from the plants, a revision of the employee traffic impacts, the addition of a railroad to connect the Four Corners, Lonesome and Kingsford plants, the upgrading of the Lonesome Plan operations, including wet rock loading facilities, additional floodplain crossings, and the combination of the three approved mines into a single mine for reporting purposes; and

On or about March 25, 1992, IMC Fertilizer, Inc. requested that the application be divided into Phase I (the "Consolidation Phase") and Phase II (the "Extension Phase"); and

On July 1, 1993, IMC Fertilizer, Inc. became IMC-Agrico (IMC-Agrico).

On July 21, 1993, the Board of County Commissioners (BOCC) adopted Resolution No. R93-0170, granting the consolidation of IMC's existing approved mines (Lonesome, Kingsford, and Four Corners) in Hillsborough County into one mine (DRI-213, Hillsborough County Consolidated). The Development Order authorized changes to these mines (described below) during Phase I (also referred to as the "Consolidation Phase"). The changes to the original mines include the following: the removal of approximately 850 acres from the Lonesome Mine (LSM) site; the addition of 3,248 minable acres within the existing mines' boundaries; a revision to the mining schedule and equipment utilization; a time extension for mining; a revision to the clay and sand tailing storage areas and disposal methods; the approval of trucking as a method for transporting product from the plants; the addition of a railroad to connect all three mine plants; the upgrading of the Lonesome Plant operations; and additional 25-year floodplain, wetland and roadway crossings requirements.

On March 23, 1995, the BOCC adopted Resolution No. R95-062, amending the Development Order (DO) for the Hillsborough Consolidated Mines. This was Phase II, "the Extension Phase" of the project, and included the addition of 17,915 acres (14,706 minable acres). The

amendment also extended the mining schedule to 2018 (a cumulative four-year extension); extended the reclamation schedule (a cumulative 11-year extension); extended the Development Order by 14 years; added nine new tributary floodplain crossings; and revised tailing and clay disposal plans, including the size, capacity and general locations of nine clay settling ponds in the Expansion area. The amendment indicates which conditions are applicable to which parts of the project. Generally, the conditions of the older DRI's are applicable to the added areas, unless superseded by stricter conditions. The Development Order expires on December 31, 2027.

On April 25, 1996, the BOCC adopted Resolution No. R96-120, amending the DRI Development Order, Operating Permit, and Master Mine Plan to add the Shuman Tract, approximately 35 acres.

On January 13, 1998, Hillsborough County Board of County Commissioners approved the NOPC and adopted Resolution 98-012, amending the DRI Development Order, Operating Permit, and Master Mine Plan to add the Spivey Tract, approximately 157 acres.

On September 26, 2000, Hillsborough County Board of County Commissioners approved the NOPC and adopted Resolution 00-223, amending the DRI Development Order, Operating Permit, and Master Mine Plan to add the Reynolds Parcel, approximately 357 acres.

On February 11, 2003, the BOCC approved the NOPC and adopted Resolution 03-026, amending the DRI Development Order, Operating Permit, and Master Mine Plan to temporarily authorize a different destination for the approved Lonesome Mine plant truck traffic, so all 160 trucks may travel north on CR 39 from the Lonesome Mine Plant site to the Tampa Bay Water Regional Reservoir site.

On October 25, 2004, IMC Phosphates Company merged with Cargill Crop Nutrition and was renamed Mosaic Phosphates Company.

On January 25, 2005, the BOCC approved the NOPC and adopted Resolution 05-021, amending the DRI Development Order, Operating Permit, and Master Mine Plan to allow construction and operation of the Central Screening Station.

On July 29, 2005, Mosaic Phosphates Company merged with and into Mosaic Fertilizer, LLC.

On March 11, 2008, the BOCC approved the DRI No. 263 Substantial Deviation and adopted Resolution No. 08-047, amending the DRI Development Order, Operating Permit, and Master Mine Plan. The Development Order authorized among other things the addition of seven parcels containing approximately 1,540 acres to form the Hillsborough County Mines Addition Area - DRI #263 (hereinafter "DRI #263 Addition Area Phase"); the removal of approximately 7,251.5 acres from the Lonesome and Four Corners Mine boundaries; the addition of a mine infrastructure corridor, including expanded use of approved Stream Crossing "O", together with a deletion of Stream Crossings D, M, Q, R, S, and T that will now remain undisturbed; the revision of mining plans and incorporation of clay settling area siting plans conceptually approved by the HCEPC on April 26, 2005 and July 7, 2005, as part of the Life of Mines application for wetland impacts and mitigation approval as depicted on Map 38H-4, Revised Clay Settling Area Locations, 2006 Revisions to MMRP - Revised 5/31/07; the revision of reclamation plans that reflect these changes as well as the reclamation already completed in the DRI #213 area; the updating of DRI #213 Development Order conditions that have been satisfied or are no longer applicable; the updating of the approved methods for transporting

product from the plants; the transfer of approved product shipments from Lonesome to Four Corners; and the updating of the product shipment destination points and deletion of certain destination points and route segments; and except for the amendments specified herein the previous DRI and Operating Permit approvals and conditions set forth in the previous development orders shall remain in full force and effect.

On July 15, 2009, Mosaic Fertilizer, LLC filed a Notice of Proposed Change ("NOPC") and an application to amend the Operating Permit/Master Mine and Reclamation Plan for the Hillsborough County Mines Development of Regional Impact DRI #263 proposing to add approximately 75 acres of land, previously owned by Kathy Surface (hereinafter referred to as the "Surface Parcel"), to DRI #263 Composite Development Order and Operating Permit; and

On August 10, 2010, the Hillsborough County Board of County Commissioners approved the NOPC and adopted Resolution R10-113, amending DRI #263 Composite Development Order and Operating Permit, and the Master Mine and Reclamation Plan to add the approximately 75 acre Surface Parcel; and
On April 4, 2018, per Section 252.363, Florida Statues and State of Florida Executive Order Numbers 17-204 and 17-260, the County recognized the extension of the Effective Period of Development Order from December 31, 2027 to December 22, 2030; Mining Completion Date from December 31, 2018 to December 22, 2021; and Reclamation Completion Date from December 31, 2026 to December 22, 2029.

On November 14, 2018, the BOCC adopted Resolution No. R18-0129, amending the DRI #263 Composite Development Order and Operating Permit requirement that the amount of clay produced in each county be disposed of in that county to allow existing clay settling areas (CSA) L-1, L-2, L-3, F-4, F-5, F-7 in Hillsborough County to accept clays from Hardee County until November 14, 2023 and eliminating the construction of specific CSAs.

On January 25, 2019, Tampa Electric Company (TEC), the owner of a portion of Parcel 7 of the DRI #263 Addition Area Phase, a +/- 435 acre parcel (hereafter, the "TEC Parcel"), submitted an application to amend the DRI #263 Composite Development Order and Operating Permit to remove the TEC Parcel from the boundaries of DRI #263 and from the DRI #263 Composite Development Order and Operating Permit.

On June 11, 2019, the BOCC adopted Resolution No. R19-082, amending DRI #263 Composite Development Order and Operating Permit to remove the 435 acres owned by Tampa Electric Company from the boundaries of DRI #263 and from the DRI #263 Composite Development Order and Operating Permit.

On January 14, 2022, the County recognized time extensions per § 252.363, Florida Statutes, and by letter dated September 13, 2021, from counsel for Mosaic. The DRI #263 Composite Development Order and Operating Permit dates were extended as follows: the Section 5 Restriction on Downzoning was extended from December 22, 2030 to October 9, 2032; the Composite Attachment A- Section III.A. Life and Timing of Development-Effective period of Development Order was extended from December 22, 2030 to October 9, 2032; the Composite Attachment A- Section III.A. Life and Timing of Development-Mining Completion Date was extended from December 21, 2021 to October 9, 2023; and Composite Attachment A- Section III.A. Life and Timing of Development-Reclamation Completion Date was extended from December 22, 2029 to October 9, 2031.

On November 7, 2023, the Hillsborough County Board of County Commissioners adopted Resolution 23-095, amending the DRI #263 Composite Development Order and Operating Permit to extend the time period in which certain waste clays originating from Hardee County may be disposed in designated existing Hillsborough County clay settling areas.

On December 23, 2024, the County recognized time extensions per § 252.363, Florida Statutes, and by letter dated November 11, 2024, from counsel for Mosaic. The DRI #263 Composite Development Order and Operating Permit dates were extended as follows: the Section 5 Restriction on Downzoning was extended from October 9, 2032 to July 16, 2036; the Composite Attachment A- Section III.A. Life and Timing of Development-Effective period of Development Order was extended from October 9, 2032 to July 16, 2036; the Composite Attachment A- Section III.A. Life and Timing of Development-Mining Completion Date was extended from October 9, 2023 to July 15, 2027; and Composite Attachment A- Section III.A. Life and Timing of Development-Reclamation Completion Date was extended from October 9, 2031 to July 15, 2035.
On December 4, 2024, Keesai Farms, LLC (“Keesai”), the owner of parcel 088895.0050 (“Keesai Parcel”) of the DRI #263 submitted an application to amend the DRI #263 Composite Development Order and Operating Permit to remove the Keesai Parcel from the boundaries of DRI #263 and from the DRI #263 Composite Development Order and Operating Permit.

Attachment 1: Agency Comments

Submittal Name:	2023-2024 Consolidated Mines DRI 263 Annual Report - Agency Comments
Applicant Name:	Mosaic Fertilizer, LLC
HC Contact Name:	Kim Cruz
HC Contact Phone No.:	813-276-8370
HC Contact Email:	CruzKi@hillsboroughcounty.org
Submittal Date:	8/5/2024
Submittal Due Date:	

For Reviewers Use Only							For Applicants Use Only		For Reviewers Use Only		
Comment No.	Reviewer	Organization/Discipline	Document	Page-Sheet No.	Initial Comment(s)/Request for Info	Comment Date	Applicant Response	Response Date	Response Accepted	Date	Follow-up Comment
1	Ed Coppock	EPC	Consolidated Mines DRI 263 AR		No comments	8/14/2024	No comments	12/20/2024			
2	Forest Turbiville	Conservation & Env Lands	Consolidated Mines DRI 263 AR		No comments	9/9/2024	No comments	12/20/2024			
3	Lance Kautz	FDEP Bur of Mines	Consolidated Mines DRI 263 AR		No comments	9/9/2024	No comments	12/20/2024			
4	Lizzie Baker	HC Planning Commission	Consolidated Mines DRI 263 AR	655	The Planning Commission finds the Consolidated Mines DRI 263 Annual Report consistent with the Hillsborough County Comprehensive Plan. Per Hillsborough County Comprehensive Plan Policy 3.2.7, The Planning Commission acknowledges surface water quality meets parameters with minor exceptions, such as dissolved oxygen and elevated levels of total phosphorous. Planning Commission staff trusts Mosaic will work with the County to develop solutions to meet all standards and continue to reduce total phosphorous. If water quality standards are not met in the future, then there may be issues regarding consistency with the Hillsborough County Comprehensive Plan.	10/2/2024	Phosphorus data from approximately 1993-2024 for the DRI 263 surface water locations with current report year geomeans above the Numeric Nutrient Criteria (NNC) threshold of 0.49 mg/L were provided to a third party environmental consultant for analysis and comparison to the NNC contained in F.A.C. 62-302. South Prong Alafia Waterbody ID (WBID) 1653 biological data in the Florida Department of Environmental Protection (FDEP) Statewide Biological Database (SBIO) was also included in the analysis to determine the overall health of the entire WBID that includes the DRI 263 monitoring locations as noted in the NNC. The third party analysis of both the phosphorus annual geometric means (AGM) and biological data concluded that WBID (1653) as a whole has an average Stream Condition Index (SCI) score of 53.65 (healthy) and despite total phosphorous AGM's above the threshold of 0.49 mg/L at most Mosaic sampling locations within the South Prong Alafia River and upstream tributaries, the biology has not been impacted over the 2007-2023 sampling period according to the SCI results. Based on the linear regressions of AGMs of routine sampling data collected by Mosaic (note: only the Boggy Branch sites had regressions with any statistical power), phosphorus concentrations either remained stable over time (no trend) or decreased slightly. The Alderman Creek WBID (1768), specifically the Alderman Creek at Taylor Gill Road location had an average SCI score of 52.4 (healthy) over five events with the publicly accepted data used for IWR runs along with FDEP data from SBIO. Despite TP annual geometric means above the NNC threshold at the two Alderman Creek monitoring locations, the biology does not appear to be impaired over the 2016-2021 time period (most recent 2024 SCI score currently not available). Additionally, two monitoring locations within the Little Manatee River (WBID 1742B) either downstream of the Alderman Creek or downstream of the Unnamed Tributary/Howard's Prairie Branch (WBID 1770/1762A) have had "healthy" biological results from 2012-2021, with the more upstream location having an average SCI score of 62 and the more downstream having an average SCI core of 61.3. Based on these assessments downstream of outfalls D-001 and D-003 (within Alderman Creek or the Little Manatee River), the biology does not appear to be negatively impacted by discharge or TP concentrations. As there has been little to no discharge from either outfall since 2021, data collected to this point indicate stable biological communities based very similar SCI scores over the past 10 years.	12/20/2024	Acknowledged- HC EVSD. Acknowledged - Planning Commission	10/23/2024 01/03/2025	HC EVSD will continue to observe water quality results. No additional comments from HC EVSD at this time. No additional comments from Planning Commission
5	Kim Cruz/Mike Carter	EVSD	Consolidated Mines DRI 263 AR	General	Hillsborough County EVSD and Mosaic continue to coordinate with regards to areas needing maintenance, fixing areas that need repair, supplemental planting, and mitigation of invasive species.	11/22/2024	Acknowledged	12/20/2024			
6	Kim Cruz/Mike Carter	EVSD	Consolidated Mines DRI 263 AR	General	Reclamation shall be in accordance with the Hillsborough County BOCC approved post reclamation plans. Post reclamation plan amendment applications shall be submitted for changes to be reviewed for approval.	11/22/2024	Acknowledged	12/20/2024			
7	Kim Cruz/Mike Carter	EVSD	Consolidated Mines DRI 263 AR	General	Hillsborough County EVSD and Mosaic continue to confirm and verify the areas that were released from reclamation obligations across all DRI/DO regulated phosphate mines in Hillsborough County.	11/22/2024	Acknowledged	12/20/2024			
8	Sara Gonzalez	EPC	Consolidated Mines DRI 263 AR		No comments	9/25/2024	No comments	12/20/2024			
9	Mary Guthrie	EPC	Consolidated Mines DRI 263 AR		Regarding construction noise, the EPC' s Chapter 1-10 Noise Rule "Exemptions" section exempts construction activities occurring between the hours of 6:00 a.m. and 8:30 p.m., if reasonable precautions are taken to abate the noise from those activities. Reasonable precautions shall include but not be limited to noise abatement measures such as enclosure of the noise sources, use of acoustical blankets, and change in work practice. Construction occurring at all other times shall be subject to this rule.	9/25/2024	No comments	12/20/2024			
10	Troy Green	EVSD	Consolidated Mines DRI 263 AR		No comments	No comments	No comments	12/20/2024			

Attachment 2: Consolidated Mines DRI#263 2023/2024 Annual Report

The Mosaic Company
Consolidated Mines – DRI #263

2023-2024 Annual Report

August 5, 2024

The Mosaic Company
13830 Circa Crossing Drive
Lithia, Florida 33547
www.mosaicco.com

Tel 813-500-6910
Fax 813-571-6925

August 5, 2024

Ms. Kim Cruz
Environmental Supervisor
Hillsborough County Environmental Services
332 N. Falkenburg Road
Tampa, Florida 33619

RE: ***The Mosaic Company 2023/2024 Hillsborough County Mines Annual Report; DRI #263***

Dear Ms. Cruz:

Pursuant to Sections 8.02.09 and 8.02.10B of the Hillsborough County Land Development Code, Mosaic is filing an electronic copy of its 2023/2024 Annual Report of Operations for the Consolidated Hillsborough County Mines (DRI #263). Provided Information:

1) The County Annual Report Form for DRI's;

2) The 2023/2024 Annual Report for DRI 263, Hillsborough County Mine on Form RPM-BSP-ANNUAL REPORT-1, as required by the Development Order.

3) The County Annual Report prepared pursuant to the requirements of the Hillsborough County Land Development Code and Operating Permit (R08-047). Included with this report are the required financial responsibility estimates.

A check covering the combination DRI and Phosphate Mining Annual Report review fee and EPC review will be paid to Hillsborough County Board of Commissioners.

Feel free to contact me at laney.mcgraw@mosaicco.com if you have any questions or require additional information.

Sincerely,

Laney McGraw

The Mosaic Company
Laney McGraw
Mine Permitting Specialist

INDEX
THE MOSAIC COMPANY
HILLSBOROUGH COUNTY MINES
2023/2024 ANNUAL REPORT

SECTION 1
DRI ANNUAL REPORT
EXHIBITS F, G, H, I, & J

Reporting Period: July 1, 2023 to June 30, 2024
Month/Day/Year **Month/Day/Year**

Development: DRI #263 - HILLSBOROUGH COUNTY MINES

Location: N/A HILLSBOROUGH
City **County**

Developer: Name: The Mosaic Company

Address: 13830 Circa Crossing Drive

Lithia, Florida 33547
City, State, Zip Code

1) Describe any changes made in the proposed plan of development, phasing, or in the representations contained in the Application for Development Approval since the Development of Regional Impact received approval. Note any actions (substantial deviation determinations) taken by local government to address these changes.

a) Describe changes in the plan of development or phasing for the reporting year and for the subsequent years.

The operation of the mines was conducted according to the plans contained in the approved Development Order and ADA application. This annual report is being submitted under the requirements of the Development Order for the Additional Area Phase, which was approved on March 11, 2008 (Resolution 08-047).

b) State any known incremental DRI applications for development approval or requests for a substantial deviation determination that were filed in the reporting year and to be filed during the next year.

No additional applications were filed.

c) Attach a copy of any notice of the adoption of a Development Order or the subsequent modification of an adopted Development Order that was recorded by the developer pursuant to Subsection 380.06(14)(d), F.S.

No modifications/adoptions have been made during this report period.

2) Has there been a change in local government jurisdiction for any portion of the development since the development order was issued? If so, has the annexing local, government adopted a new Development of Regional Impact Development Order for the project? Please provide a copy of the order adopted by the annexing local government.

There have been no changes in the jurisdiction.

3) Provide copies of any revised master plans, incremental site plans, etc., not previously submitted.

There have been no changes to the approved DRI #263 master plans.

4) Provide a summary comparison of development activity proposed and actually conducted for the reporting year as well as a cumulative total of development proposed and actually conducted to date.

Please refer to the attached annual report of operations to Hillsborough County. The total area mined (matrix) through June 30, 2024, is 31,252.0 acres.

5) Have undeveloped tracts of land in the development (other than individual single-family lots) been sold to a separate entity or developer? If so, identify tract, its size and the buyer. Please provide maps which show the tracts involved.

Tract	Buyer

There were none this past year.

6) Describe any lands purchased or optioned adjacent to the original Development of Regional Impact site subsequent to issuance of the development order. Identify such land, its size, and intended use on site plan and map.

There were no additional lands purchased or optioned adjacent to the original Development of Regional Impact site subsequent to issuance of the development order during this reporting period.

7) List any substantial local, state, and federal permits which have been obtained, applied for, or denied during this reporting period. Specify the agency, type of permit, and duty for each.

See Exhibit "F". During the reporting period, LMU 13 CR 39 Setback Waiver (123.01P) was obtained on August 18, 2024 for DRI-263, although the setback waiver is not considered substantial, it may be relevant to the question.

8) Provide a list specifying each development order condition and each developer commitment as contained in the ADA and state how and when each condition or commitment has been complied with during the annual report reporting period.

See Exhibit "G".

9) Provide any information that is specifically required by the Development Order to be included in the annual report.

In the Development Order, Condition S.1. lists several additional items to be included in the annual report. The requirement with the appropriate response follows:

a. The information required by the State Land Planning Agency to be included in the Annual Report, which information is described in the Rules and Regulations promulgated by the State Land Planning Agency pursuant to Section 380.06, Florida Statutes; and

This report fulfills this requirement.

b. A description of all development activities proposed to be conducted under the terms of this Development order for the year immediately following the submittal of the annual report; and

The attached County Report contains this information.

c. A statement listing all Applications for Incremental Review pursuant to this Development order or other applicable local regulations which the Developer propose to submit during the year immediately following submittal of the annual report; and

The attached County Report contains this information.

d. A statement setting forth the name(s) and address of any heir, assignee or successor in interest to this Development Order; and

Mosaic Fertilizer, LLC (MOSF) is the party of record for this Development Order.

e. A statement describing how the Developer has complied with each term and condition of this Development Order applicable when the Annual Report was prepared.

This is contained in Exhibit G attached.

f. [K-120] The Annual Report shall include reports on the status of Mosaic's purchase of extension area agreement lands, water quality monitoring and soils study results, historical and archaeological site activities, reclamation progress, and tributary crossing in addition to mining activities.

There were no additional purchases of applicable land for DRI-263 during this reporting period. Other status reports for water quality monitoring, soil studies, historical sites, etc. can be found within this 2023-2024 Annual Report. Note that the total land area in Hillsborough County regulated by DRI-263 is 48,734.0 ac.

g. [All] The DRI annual report shall comply with the Florida Department of Community Affairs (DCA) report format and DCA informational requirements. The annual report shall also include the following items:

1. cumulative results of setback variance request;

See Exhibit I.

2. summaries of environmental monitoring results, including any violation of standards, for each area of monitoring (including monitoring conducted in association with the additional acreage to be mined in Lonesome and Four Corners Mines);

Results of environmental monitoring are listed in the Summary of Monitoring Program Results and Data section, *See* attached.

3. corrective actions taken for any violation of water quality standards per Chapter 62-303, FAC, Surface Water Quality Standards and Chapter 62-520, FAC, Groundwater Standards, and the results of the corrective actions;

Corrective actions taken, where appropriate, are listed in the Summary of Monitoring Program Data Section of this report.

4. success or problems with implementation of listed species management plans required by the Consolidation or Extension Phase approvals;

The 2024 annual report on Scrub Jays has been included in the wildlife section of this report. A copy of the 2024 bald eagle nest activity survey report is also provided in this section as well as Mosaic's annual gopher tortoise report.

5. mining and reclamation progress (including cumulative totals of acres mined, in reclamation and released by FDEP); and

See response to item 4 of this report and the County Annual Report.

6. assessments of compliance with the approved Consolidation and Extension Phase mining and Reclamation schedules;

See response to item 4 of this report.

7. the results of the regional roadway and bridge structural integrity monitoring conducted by FDOT, Hillsborough and Polk Counties; and

This information has become a classified document, and not available for distribution to the public.

8. reports on any Mosaic agreements with FDOT, Hillsborough and/or Polk County for improvements needed to provide 12-foot lanes and appropriate structural integrity on the regional roadways and bridges in the transportation impact study area;

No agreements have been made to date, and no indication for a need for an agreement. All roads on our currently active haul routes meet the 12-foot lane width requirement.

9. Mosaic shall continue to provide proof of long-term financial responsibility for the reclamation of mined lands in accordance with Hillsborough County and DEP requirements;

This information is found in the attached County Annual Report.

10. Additionally, the first annual report following mining in the Extension Area shall contain descriptions of each of the monitoring programs for the Extension Area including the following elements: sampling locations, parameters and standards; sampling schedule and analysis methods; quality assurance and data reporting;

This information was contained in the 1986 annual report.

10) Provide a statement certifying that all persons have been sent copies of the annual report in conformance with Subsections 380.06 (15) & (18), F.S.

By my signature below I certify that all of those persons shown on the attached distribution list (Exhibit H) on the following page have been provided a copy of this report.

Laney McGraw

Person completing the questionnaire: Laney McGraw
Title: Mine Permitting Specialist
Representing: The Mosaic Company

Exhibit F

The following is a tabulation of Permits that were active during the reporting period:

ACTION *	AGENCY	PERMIT NO.	PURPOSE
Water Use Permits			
C	SWFWMD	2011400.033	For All Mosaic land
Surface Water Discharge Permits			
C	FDEP	FL0036412	FCO - NPDES Discharge Permit
C	FDEP	FL0033332	LSM - NPDES Discharge Permit
Domestic Wastewater Permit			
C	FDEP	FLA012623	FCO - Domestic Wastewater Permit
Air Permits			
C	FDEP	1050034-028-AO	Air Operating Permit
Drinking Water System			
C	DHRS	6293070	FCO - Drinking Water System- Plant
C	DHRS	6296253	FCO - Drinking Water System- Annex
Radioactive Materials License			
C	DHRS	3841-1	All - Radioactive Materials License
Dredge & Fill Permits			
C	FDEP	292018519	LSM- MU 14 D & F
C	ACOE	199500794 (IP-ML)	FCO - Minewide
C	FDEP	155875-005	FCO - Regional Permit
C	FDEP	128272001-DF	FCO - Bridging Area
C	FDEP	0133996-001	KFD - MU R
C	ACOE	199500794	FCO - Bridging Permit
		(IP-ML) (MOD 3)	FCO - MU # 10&11E
		(IP-ML) (MOD 2)	FCO – MU 12E Utility Corridor
		(IP-CS) (MOD 11)	FCO/FTG Utility Corridor
C	ACOE	2008782(NW-MGH)	Hurrah Creek Outfall
C	ACOE	199905366(IP-CS)	FCO Regional Permit
C	FDEP	0155875-001	FCO - Wetland V
C	FDEP	0155875-038	FCO - Surface Tract
C	ACOE	2013-01258	LSM - MU 21A
C	ACOE	1995-00794	FCO - Crossing L Removal
C	FDEP	0155875-084	LSM - MU 21A SWERP
C	ACOE	19904414	LSM – LMR Miles Grove/The Lake
C	ACOE	91NW-41177	LSM – Hurrah Creek
C	FDEP	0155875-139 GP	FCO - Hurrah Creek Fencing
C	FDEP	142476-063 NGP	FCO to FTG DL Xing
C	FDEP	0155875-148 ERP	LSM - MU 13
C	FDEP	291997143 WRP	LSM - Hurrah Creek
C	FDEP	0155875-014 WRP	FCO - LMR Temp. DL Crossing O

* A - Applied for; C - Continued in effect; C&A - Continued in effect, Applied for modification; O - Obtained; D – Denied

C	FDEP	0035468-001-E1 ERP	FCO - MU8 Expansion
C	FDEP	0155875-021 WRP	LSM – Miles Grove, MU 14
C	FDEP	01254999-001 WRP	FCO - MU 12E Access Corridor
C	FDEP	0155875-025 ERP	FCO -Hurrah Creek Outfall
C	FDEP	0155875-061 ERP	FCO - MU 20E Carlton Corridor
C	ACOE	0133996-004 WRP	KFD - MU T
C	FDEP	291117409 WRP	KFD – Lake Branch
C	FDEP	291739679 WRP	KFD – MU K
C	FDEP	0133996-104 NGP	KFD – K-7 Repair
C	FDEP	0133996-095 NGP	KFD – Non-Mandatory Program
C	ACOE	199200024(IP-ML)	KFD – MU T
C	ACOE	199603173(IP-CS)	KFD – Kingsford Plant Site
C	ACOE	199603173(IP-ML)	KFD – MU R
C	ACOE	199402903(IP-ML)	KFD – South Bradley Junction
C	ACOE	199402902(IP-ML)	KFD – West Kingsford
C	ACOE	199200291(IP-IL)	KFD – North Bradley Junction
C	ACOE	90IPF-00027(IP-BL)	KFD – Boggy Branch, MU K

Hills. Co. Mining Units (including EPC approvals)

C	HPGMD	991.13P	LSM – MU 13
C	HPGMD	602.10P	LSM – MU 14
C	HPGMD	197.01P	LSM - MU 15
C	HPGMD	702.12P	LSM - MU 16
C	HPGMD	804.05P	LSM - MU 17
C	HPGMD	696.05P	FCO - MU 13
C	HPGMD	1199.10P	FCO - MU 12E
C	HPGMD	598.03P	FCO - MU 14E
C	HPGMD	1298.12P	FCO - MU 15E
C	HPGMD	698.04P	KFD - MU R
C	HPGMD	1298.11P	KFD - MU T
C	HPGMD	402.03P	KFD - MU K
C	HPGMD	1192.20P	KFD - MU P
C	HPGMD	400.04P	FCO - MU 16E
C	HPGMD	301.09P	FCO - MU 17E
C	HPGMD	101.03P	FCO - MU 18E
C	HPGMD	802.15P	FCO - MU 19E
C	HPGMD	210.01P	LSM - MU 18
C	HPGMD	1106.01P	LSM - MU 19
C	HPGMD	1208.12P	LSM - MU 19A
C	HPGMD	408.03P	LSM - MU 20
C	HPGMD	610.04P	FCO - MU 20E
C	HPGMD	711.03P	LSM - MU 21
C	HPGMD	312.01P	LSM - MU 22
C	HCDS	813.05P	LSM - MU 21A

Setback Waivers

C	HPGMD	695.07P	FCO - Taylor Rd. Setback Waiver
C	HPGMD	1192.20P	FCO - MU 7 - Setback Waived 2-22-95
C	HPGMD	1298.11P	KIN - MU T
C	HPGMD	1298.12P	FCO - MU 15E
C	HPGMD	702.12P	LSM - MU 16 setback waiver
C	HPGMD	804.05P	LSM - MU 17 setback waiver
C	HPGMD	1106.01P	LSM - MU 19 setback waiver
C	HPGMD	610.04P	FCO - MU 20E setback waiver
C	HPGMD	711.03P	LSM - MU 21
C	HPGMD	312.01P	LSM - MU 22
C	HCDS	813.05P	LSM - MU 21A
C	HCDS	DRI 23-0119	LSM - MU 13 SR 674 setback waiver
O	HCDS	123.01P	LSM - MU 13 CR 39 setback waiver

Clay Pond Construction

C	FDEP	FCO - FL0036412-IW1S/RA - Settling Pond F-5 construction	
C	FDEP		LSM - Settling Pond L-1 construction
C	FDEP	FCO - FL0036412-027	Settling Pond F-7 construction
C	FDEP	FL003332	LSM - Settling Pond L-2 construction
C	HPGMD	1010.09P	LSM - Settling Pond L-2 construction
C	FDEP	FL003332-016	LSM - Settling Pond L-3 construction
C	HCDS	314.02P	LSM - Settling Pond L-3 construction

General Wildlife Relocation

C	FFWCC	LSNR-20-00216	Migratory Bird Nest Removal (typically osprey's)
	C	FFWCC	GTC-19-00286 Gopher Tortoise Conservation - mine wide
C	USFWS	ES 051429-9	FCO/LSM Fl. Scrub Jay capture / tag / translocate
C	USFWS	00-171a	Biological Opinion (Scrub Jay, Indigo Snake, Bald Eagle)
C	USFWS	MB101068-0	Scientific Collecting (take, transport, possess or salvage – burrowing owls, eagles, or other non-listed migratory birds)

Hills. Co. Mining Units (including EPC approvals)

C	FFWCC	LSSC-14-00079	MU 21 & 22 Burrowing Owl Translocations (Scientific Collecting)
C	FFWCC	LSNR-14-00160	Migratory Nest Removal (Burrowing Owl)
C	FFWCC	GTLR-13-00004B	Gopher Tortoise Recipient Site
C	FFWCC	GTC-19-0028A6	Capture and Relocate Gopher Tortoise
C	FFWCC	GTLR-22-00001	Gopher Tortoise Recipient Site

* A - Applied for; C - Continued in effect; C&A - Continued in effect, Applied for modification; O - Obtained; D – Denied

EXHIBIT G
SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS

CONDITION No.	CONDITION SUMMARY	STATUS
LIFE AND TIMING OF DEVELOPMENT		
A.1. [All][DRI 263]	Development Order effective until December 31, 2027.	Noted *(The comment "Noted" is used for all cases where implementation of the condition is to take place in the future, the situation that triggers the condition has not taken place, or Mosaic is addressing the issue on a routine basis with no specific response warranted.)*
AIR QUALITY		
B.1. [Consol][DRI 263]	Any proposed change that could have negative air quality impacts must be mitigated to assure compliance with applicable laws.	No changes to development proposed.
B.2. [Consol][DRI 263]	Number and location of air and surface water monitoring stations may be changes by EPC or Mosaic.	No changes have been requested to date.
B.3. [Ext.]	Measure to reduce erosion and fugitive dust to be implemented.	Noted
B.4. [Ext.]	If proposed change to project is S/D, County shall determine if change or re-analysis of air source is needed.	Noted
B.5 [DRI 263]	BMPs shall be employed during site preparation, mining and reclamation to minimize air quality impacts.	Noted. This is standard operating procedure (SOP)
WATER MANAGEMENT AND SUPPLY - GROUND WATER		
C.1. [All[DRI 263]	Water use shall not exceed SWFWMD permitted amount. Mosaic to copy PGMD on any permit modifications.	Water use is in compliance with the SWFWMD permit. There were no changes to the water use permit this past year for activities in Hillsborough County.
C.2. [L-85]	MOSF shall implement water quality measures referenced in the Application on pgs. 15-56 through 15-58 for parcels A, B & C.	Parcels A, B and a portion of Parcel C has been mined and reclaimed. The remainder of portion C is located within an active mine corridor and will not be mined until the end of mine life.
C.3. [All][DRI 263]	All wells shall be maintained, operated, or plugged per SWFWMD regulations.	Noted. All on-site wells requiring abandonment are permitted according to applicable SWFWMD regulations.

EXHIBIT G
SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS

CONDITION No.	CONDITION SUMMARY	STATUS
C.4 [EXT][ADD][DRI 263]	If requested by the County, FDEP, or SWFWMD, groundwater quality monitoring program shall be instituted.	County requested addition of stream stage monitoring. The recordings are included.
C.5. [FC-1]	Production wells to be sampled for water quality monthly & reported quarterly.	This information was sent to the County.
C.6 [FC-1]	Pumpage records for each production well to be sent to county quarterly.	This information was sent to the County.
C.7 [FC-1]	Water level will be provided by SWFWMD ROMP # 40 wells.	This information is available from SWFWMD web site : http://www.swfwmd.state.fl.us/waterlevel/welall/. Look for site # 368, 370 & 371.
C.8. [DRI 263]	Only as applied to Parcel One, MOSF's mining activities shall not breach the clay confining unit, and in no event shall contact with the limestone aquifer be allowed.	Noted.
WATER MANAGEMENT - SURFACE WATER		
D.1. [FC-1]	Correct operation of control structures and surface water flows required per regulations.	Condition met. This is standard operating procedure (SOP).
D.2. [K-31]	Donate 300 acres for county water reservoir.	An offer to donate 300 acres was made to Hillsborough County and was declined.
D.3. [EXT][DRI 263]	Erosion control measures such as siltation screens and hay bales shall be used to prevent surface water quality degradation.	Noted. BMP procedures have been implemented and are followed.
D.4. [EXT][ADD][DRI 263]	No degradation of water quality standards by stormwater exiting the site. If agency requires, monitoring will be done.	No stormwater from mine area is allowed to leave the site, except through DEP/EPA NPDES permitted outfalls. All required monitoring is performed and will continue on the approved sampling schedule.
D.5. [ALL][DRI 263]	Base flow to Alafia and Little Manatee & tributaries shall be documented by USGS stations, and not adversely altered by mining/reclamation.	This information is published annually by SWFWMD/USGS. This data shows that the mining has had no adverse impact on the base flow.
D.6. [ALL][DRI 263]	All stormwater runoff from active mine area shall be released only through NPDES points.	Noted. This is standard operating procedure.
SOILS		

EXHIBIT G
SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS

CONDITION No.	CONDITION SUMMARY	STATUS
E.1. [ALL]	Natural top soils should be used in reclamation.	This is SOP for new reclamation areas where feasible.
E.2. [EXT]	Soil conservation measures referenced in ADA to be implemented.	This is SOP for new mine operation & reclamation areas.
E.3. [DRI 263]	BMPs shall be employed during site preparation.	This is standard operating procedure.
	WETLANDS	
F.1.A. [All]	All future mining and reclamation plans submitted to the County to show preservation and conservation areas per TBRPC policies, including wildlife corridors.	Noted. See Mining Unit Applications.
F.1.B. [DRI 263]	Those areas which meet the definition of preservation and conservation areas, unless vested, shall be identified in the application for approval of "Mining and Mining Related Activities".	Noted. See Mining Unit Applications.
F.2. [ALL]	For construction and operation of mine access corridors and clay settling areas: A. Wetland mitigation on 1:1 ratio required. B. Wetland delineation and mitigation plan to be approved by EPC. C. EPCHC to assist in crossing site selection. D. EPCHC has approved the shapes and configurations of L-2, L-3, L-4, F-5, F-7, and F-8 clay settling areas. E. A minimum or 9,096 acres of clay settling area is approved. F. ACOE & FDEP dredge & fill permits to be obtained prior to wetland disturbance.	Crossing "O" has been permitted and built according to these requirements. All other future crossings and clay settling areas will meet these requirements. A. Noted. B. Noted. C. Noted. D. Noted. F-8 CSA will not be constructed. E. Noted. F. Noted.
F.3. [DRI 263]	Impacts to EPCHC/FDEP jurisdictional wetlands for parcels 4-8 must be mitigated pursuant to Ch. 62C-16, 62-343 and 62-345, F.A.C. and Ch. 1-11, Rules of the EPC.	Noted. This is addressed in the mining unit approval process.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
F.4 [EXT]	Pursuant to TBRPC policy 10.3.1, in the mining unit applications, there shall be no mining in preservation areas.	Noted. No mining has occurred in the preservation areas.
F.5. [EXT]	For the portion of the LMR that is currently and OFW, the associated adjoining natural forested communities shall be preserved in their entirety.	Noted.
F.6. [EXT][ADD]	Mining in the Additional Areas and the Ext. Area shall not adversely impact TBRPC defined preservation areas.	Noted.
F.7. [EXT][ADD][DRI 263]	There shall be no adverse hydroperiod alteration on the plans submitted to Hillsborough County & FDEP. Historic annual hydroperiods, normal pool elevation and normal seasonal high water elevation shall be maintained.	Noted.
F.8. [EXT][ADD][DRI 263]	Mosaic shall provide a natural buffer according to the requirement of the County LDC, around all preservation areas. A. Allowable wetland losses to be require a minimum 1:1 replacement. B. Permitted wetland impact area to be used as donor material for reclamation. C. Mitigation areas and littoral shelves to be designed, implemented and monitored per EPC & FDEP requirements.	Noted. A. Noted. B. Noted. C. Noted.
FLOODPLAINS		
G.1. [ALL][DRI 263]	There shall be no mining within the 25-year floodplain. Mining within the 100-year floodplain is not prohibited.	Noted. No mining has occurred within the 25-year floodplain.
G.2. [DRI 263]	There shall be no net loss of the 100-year floodplain storage capacity.	Noted.
STREAM AND RIVER CROSSINGS		
H.1. [ALL][DRI 263]	Site specific plans for each 25-year floodplain and wetland crossing shall be included in the mining unit application.	Noted.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
H.1.A. [ALL][DRI 263]	Crossings shall be scheduled for base or low water-flow periods and shall be conducted in accordance with BMPs.	Noted.
H.1.B. [ALL][DRI 263]	Crossings and culverts shall be designed to handle the 100-year flood event.	Noted.
H.1.C. [ALL][DRI 263]	The removal of vegetation shall be minimized. Clearing width for dragline crossings shall be limited to 175 to 200 feet and the length and width of each crossing shall be specified.	Noted.
H.1.D. [ALL] [DRI 263]	Fill material used in the wetlands for the crossings shall be clean sand.	Noted.
H.1.E. [ALL][DRI 263]	Fill material required for the crossing shall be placed no sooner than three days before the crossing, and removed within two days after the crossing. The crossing shall be restored without delay to the original grade elevations and permanently re-vegetate the area.	Noted.
H.1.F. [All][DRI 263]	Siltation control devices shall be used in the streams/wetlands as needed.	Noted.
H.1.G. [ALL][DRI 263]	Pipelines shall be jacketed, placed above the 100-yr. floodplain pursuant to and as mapped by the approved DRI 213 and isolated from tributaries by berms.	Noted.
H.1.H. [All][DRI 263]	All utility crossings shall be elevated above the 25-year floodplain pursuant to and as mapped by the approved DRI 213, and shall consist of piers without any approach embankment.	Noted.
H.1. I. [ALL][DRI 263]	Each crossing shall require an FDEP permit, with the SWFWMD, EPCHC, and TBRPC receiving copy of the application.	Noted.
H.2. [ALL][DRI 263]	Additional stream crossings or crossing of tributaries at locations other than those described in the Applications shall be cause for a substantial deviation determination.	Noted.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
H.3 [CONSOL][DRI 263]	The applicant shall not use floodplain crossings A, B and I or wetland crossings 5, 6, 10, and 12 for mine operations.	Noted.
H.4 [ALL]	No clay transfer pipeline crossings of the 25-yr floodplain or wetlands in route to clay settling areas shall be allowed within the Consolidation Phase, except for 25-yr floodplain crossings I (Hurrah Creek) and J (Alderman) and at wetland crossing 12 (Hurrah Creek) or 4.	Noted.
H.5. [EXT][DRI 263]	MOSF shall document to Hills. Co., in mining unit applications, that 25-yr floodplain and wetland crossings are necessary.	Noted.
H.6. [EXT][DRI 263]	MOSF shall be provided access to all areas approved for mining by the DO.	Noted.
H.7. [EXT]	All 25-yr floodplain and wetland crossings in S33 and 34, Twn. 32S, Rng. 21E, must be submitted for approval in the same application.	Noted.
H.8. [EXT][DRI 263]	If any 25-yr floodplain or wetland crossings occur in the Additional Acreage or Ext. Area, recommended Mining Operations conditions iii.Q.13.D shall apply	Noted.
VEGETATION AND WILDLIFE		
I.1. [FC-1]	BMP for revegetation, forestation & erosion control shall be used.	This is SOP.
I.2. [FC-1]	BMP shall be used to accelerate natural development of forested and unforested wetland vegetation.	This is SOP.
I.3. [FC-1]	Reclamation shall not be considered complete until vegetation associations are established and will fully develop.	Noted.
I.4. [L-85][DRI 263]	A program to protect rare, endangered or threatened species such as capture-relocation programs and/or recreation of appropriate habitat shall be implemented by MOSF.	Noted.
I.5. [ALL][DRI 263]	In event listed species frequent site for nesting, feeding, or breeding, proper measures shall be taken.	Noted.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
I.6. [EXT][K-120][DRI 263]	Relocation of gophers is alternative if accepted by FFWCC.	Permits are obtained from FFWCC for gopher tortoise relocations as required. See listing of permits.
I.7.A. [CONSOL][DRI 263]	MOSF shall participate in a Hillsborough County Wildlife corridor protection program. Post-mining wildlife corridors and xeric habitats identified in this program shall be in addition to the FRCRPP policy preservation areas.	Following the mine reclamation plan is the means by which Mosaic will increase the wildlife corridor section on site. Mosaic management personnel also served on the Hillsborough County Greenways Advisory Committee. Mosaic's donation of the land in the Little Manatee River Corridor is the fulfillment of this condition.
I.7.B. [EXT][DRI 263]	MOSF shall participate, in conjunction with the FFWCC, the U.S. Fish and Wildlife Service and Hillsborough County, in a wildlife corridor protection program.	See response above.
I.8. [EXT][DRI 263]	MOSF to utilize and abide by USFWS & FFWCC species guidelines as defined by Habitat and Wildlife Management Plan (Appendix D).	Noted.
I.9. [EXT][DRI 263]	Mosaic to use BMPs to establish the landforms, uses and natural vegetation in the reclamation plans.	Noted.
I.10. [EXT][DRI 263]	Mining Unit Plans to include conditions which ensure maintenance and where feasible, increase in listed species.	Noted.
I.11. [EXT][DRI 263]	Mosaic to perform pre-clearing wildlife surveys for the purpose of locating for mitigation (relocation) according to Habitat & Wildlife Management Plan, 6 mo. prior to clearing.	Noted. This is done at the time of the Mining Unit application.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
I.12 [EXT][DRI 263]	Habitat and Wildlife Management will: A. Continue existing range management of controlled burning on 2 to 4 year cycle in the palmetto prairie and xeric areas. B. Clearing to be done in directional method. C. Reclamation of habitat to be staged to maintain total of 50% of habitat on site. D. Bald Eagles and nest to be protected according to USFWS & FFWCC rules.	Noted. A. Noted. B. Noted. C. Noted. D. Noted. Protective measures are in place in areas of active mining.
I.13 [EXT][DRI 263]	Mining unit application submittals to include sub-basin plans, to show total ecosystem context.	Noted.
I.14 [EXT][DRI 263]	Mining and disturbance of significant wildlife habitat shall be according to 3.8 & 3.9 LDC. Status of habitat re-establishment to be included in Annual Report.	Mitigation is planned to occur in stages and is ongoing, see attached maps and monitoring reports.
I.15 [EXT][DRI 263]	Significant habitat to be field verified at the time of mining unit approval.	Noted.
I.16 [EXT][DRI 263]	Mining Unit application to show that mining activities are not fragmenting wildlife corridors.	Noted.
I.17 [EXT][DRI 263]	Upon adoption of Hillsborough County Mining Reclamation Manual, all restoration and re-establishment shall be in accordance with the success criteria of the manual.	Noted.
I.18. [EXT][ADD][DRI 263]	As possible, relocated population of listed wildlife to be as large after relocation as before, & viable.	Noted.
I.19. [DRI 263]	Existing wetlands which are permitted to be altered or eliminated shall be used as donor material for revegetation or mitigation to the greatest extent practicable.	Noted.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
I.20 [DRI 263]	Existing agricultural activities on the site may continue until the area is prepared for mining, but at no greater density or intensity than at present.	Noted.
I.21. [DRI 263]	Mining Unit applications will include a survey of the current status of threatened and endangered plants and animals in those areas indicated to be of possible concern in the ADA.	Noted.
I.22. [DRI 263]	The areas of regionally significant habitat within the DRI 263 Addition Area Phase shall be protected in perpetuity.	Noted.
ARCHAEOLOGICAL AND HISTORIC RESOURCES		
J.1. [All]	Any historical or archaeological resources discovered shall be immediately reported to DHR, and all disturbance of site stopped until DHR determines site requirements.	No new sites have been discovered during this reporting period.
J.2. [ALL]	Sites to be excavated prior to impact are:8Hi3791, 8Hi3792, 8Hi3794, 8Hi3795, 8Hi3797, 8Hi3801, 8Hi3804, 8Hi3817 & 8Hi3824, 8Hi3868. Documentation of release to be provided in annual report.	Noted. Site 8Hi3795 “pole barn” has been moved and the site released. Sites 8Hi3792 and 8Hi3797 have been released.
J.3. [DRI 263]	If historical or archeological sites are discovered within the DRI 263 Addition Area Phase, the FDHR shall evaluate the significance of such findings and assess the measures which will be taken to avoid, minimize, or mitigate any adverse impacts prior to continuation of mining activities.	Noted. FDHR will be notified in the event potential significant sites are located.
EMERGENCY RESPONSE & FIRE PROTECTION		
K.1 [ALL][DRI 263]	Mosaic shall continue to meet or exceed federal, state & local fire codes.	Noted.
K.2 [EXT][DRI 263]	Mosaic shall continue to maintain effective communication with the Hills. Co. Fire Rescue Dept. to assure immediate paramedic assistance, including Medevac response if necessary.	Noted.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
SOLID WASTE AND HAZARDOUS WASTE		
L.1 [ALL][DRI 263]	Mosaic is encouraged to utilize waste exchanges and develop on-site treatment capabilities.	Noted.
L.2 [ALL][DRI 263]	Mosaic shall provide employees with information on type of waste, handling, & regulations.	This information is available at all operational locations.
L.3 [ALL][DRI 263]	Underground storage of hazardous or toxic materials is prohibited.	Noted.
L.4 [ALL][DRI 263]	MOSF shall comply with all applicable regulations on hazardous material and wastes.	Noted.
L.5 [K-120]	Solid wastes shall be collected, transported and disposed according to terms the Hillsborough County Ord.	All solid wastes are collected at plant sites in appropriate containers, removed and disposed by licensed Contractors according to Federal, State, and County regulations.
L.6 [DRI 263]	There shall be no increased wastewater generation in excess of the currently permitted volume as it pertains to the mining of the DRI 263 Addition Area Phase.	Noted.
ENERGY CONSERVATION		
M.1. [CONSOL][DRI 263]	Energy Conservation measures are encouraged.	Mosaic employs electrical engineers to develop, review, and promote energy conservation measures throughout our operations.
EQUAL OPPORTUNITY		
N.1 [K-120][DRI 263]	Developer to encourage contractor to involve minority groups.	This is SOP.
DRAINAGE		
O.1. [FC-1]	After reclamation is completed in each drainage basin, floodplains are to be determined.	No action required to date.
O.2. [FC-1]	If peak discharge increases over premining, additional retention will be added to reduce peak.	This condition is dependent on O.1. above. No action required to date.
O.3. [FC-1]	Upon completion of reclamation, all floodplains and wetland will be subject to rules and regulation in effect.	Noted.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
O.4. [L-85]	Parcels B & C reclamation to restore drainage basin to same size.	Parcel B reclamation is completed, and reclamation is complete. Parcel C has been mined and no future mining is planned. Reclamation in Parcel C is planned for reclamation in 2024-2025 with ongoing discussions with Hillsborough County staff on timing updates. .
O.5. [K-120]	Mining Unit Drainage plans to be reviewed by TBRPC, and approved by SWFWMD & Hills. Co.	Noted.
O.5.A. [EXT][DRI 263]	Stormwater runoff and stream discharges from active mining areas shall not cause violation of Class III water quality standards in the receiving stream.	Noted.
O.5.B. [EXT][DRI 263]	MOSF shall be responsible for maintaining the drainage system including channels, culvert and erosion protection facilities. Any transfer of this responsibility from MOSF to subsequent owners shall require the approval of Hills. Co. and/or SWFWMD.	Noted.
O.5.C. [CONSOL]	BMPs for reducing adverse water quality impacts, as recommended by Hills. Co. and SWFWMD shall be implemented.	Noted.
O.6. [ALL][DRI 263]	The post-reclamation peak flow to meet Hills. Co. & SWFWMD requirements.	Noted.
TRANSPORTATION		
P.1. [K-120]	No private access to be interrupted unless adequate alternative is provided.	Noted.
P.2. [K-120]	MOSF shall be held responsible for any damage caused by MOSF to public streets or roads used for mining activities as reasonably determined by the Hills. Co. Public Works Dept., Engineering Division.	Noted.
P.3. [ALL]	FDOT monitoring of highways structural condition to be provided to TBRPC, and County. If accelerated structural degradation occurs, Mosaic shall enter into agreement to pay proportionate share of improvement cost.	Noted.

EXHIBIT G
SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS

CONDITION No.	CONDITION SUMMARY	STATUS
P.4. [ALL][DRI 263]	Mosaic shall not use SR 674 between U.S. 301 and I-75 to transport product by truck. The approved alternate haul route, subject to weight restrictions, is SR 674 to Balm Wimauma Rd. to SR 672 in lieu of the proposed haul route through Sun City Center, as shown on the map "Approved Truck Haul Routes" July 21, 1993, as amended.	Noted.
P.5. [ALL][DRI 263]	Any proposed change to haul routes shall require S/D determination.	No changes have been proposed.
P.6. [CONSOL]	When mine & plants are at maximum capacity, Mosaic to provide peak-hour daily traffic counts to verify traffic projections.	Traffic counts were completed as part of DRI #263.
MINING OPERATION		
Q.1. [ALL][DRI 263]	The total area disturbed and unreclaimed shall not exceed 14,622 acres (not including access corridors).	Noted.
Q.2. [ALL][DRI 263]	The Board approved the amended Mining and Reclamation Plan as shown on Table 38A-2, subject to the requirement that all mining be completed by 2018, and all reclamation by Dec. 31, 2026.	Noted.
Q.3. [FC-2A]	Tailing Area A & B approved for 550 acres, and wetlands impacted to be mitigated on 1:1 basis.	The tailing at these sites has been moved and the site mined. Wetland mitigation is included in Mining Unit 7.
Q.3. [CONSOL][FC-2A]	Settling Pond F-2 to have maximum area of 2750 acres, and reclamation started by 1998, and completed by 2011.	Reclamation of F-2A started in 1998.
Q.4. [ALL][DRI 263]	No disturbance of preservation areas shown on Map H-7. No disturbance of wetland until EPC or FDEP review and mitigation plan approval obtained.	Preservation areas (floodplains) have and will not be disturbed except at approved crossing sites. Wetland mitigation plans will be obtained prior to disturbance.
Q.5. [L-85]	No mining in stream in northern part of parcel B.	This area was protected while the adjoining part of parcel B was mined and reclaimed. No further activity is planned in this area.
Q.6. [L-85]	Mosaic shall meet setback requirements of County Ord. and SWFWMD WUP.	Noted.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
Q.7. [ALL][DRI 263]	Cumulative rate of mining shall not exceed 10% or 11 acres, whichever is greater, of schedule shown on Table 38A-2 without County approval.	Noted. The total area mined (matrix) through June 30, 2023 is 31,253
Q.8. [K-120][DRI 263]	If MOSF elects to amend the approved Mining and Reclamation Schedule as shown on Table 38A-2, MOSF shall submit amendments to HCPGMD for review and approval.	Noted.
Q.9. [K-120][DRI 263]	Mining & Reclamation plans to include: a. Preservation of 25 Yr. floodplain, and restoration of forest areas. b. Toe spoiling of all overburden containing matrix or leach material.	Noted.
Q.10. [K-120]	Developer to comply with all condition of Mining and Reclamation plan, County Ord. 87-27, and all other applicable rules.	Noted.
Q.11. [K-120][DRI 263]	This DO is intended to control future mining and mining related activities in the Consolidation, Extension Phases, and DRI 263 Addition Area Phase. All activities shall be consistent with the current LDC unless determined to be vested.	Noted.
Q.12. [ALL][DRI 263]	Mosaic shall continue all existing monitoring requirements. Changes to monitoring will require County and affected agency approval.	Monitoring is continuing in accordance with the scheduled approved by PGMD in 2002.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
Q.13. [ALL][DRI 263]	**Mining Unit plans to include**: A. Preservation of 25 yr. floodplain, restoration of forested wetland along 100 yr. floodplain, no impervious surfaces in 25 yr. floodplain crossings, and S/D determination for any new wetland or floodplain crossings. B. Allowable wetland impacts to be mitigated at 1:1 in kind replacement, wetland soil used as donor material in reclamation. C. Maintain same watershed size and locations. D. Provide positive protection against any significant leaks, discharge to outside containment area. Routine inspection of all pipes, and systems shut down if spill occurs.	Noted. This is SOP.
Q.14. [ALL][DRI 263]	All setback variances must be specifically approved by County BOCC.	Noted. See table in the text section of this annual report for status.
Q.15. [ALL]	All dams or embankments that impound water are to be designed and maintained according to Ch. 62-672 F.A.C. Inspections and maintenance to be as described on page 38E-15 of ADA.	Noted. This is SOP.
Q.16. [ALL]	The clay stored in F-1 are approved to be moved to F-2.	Noted.
Q.17. [CONSOL][DRI 263]	Clay settling area L-2 & L-3 locations includes preservation and conservation areas. Appropriate mitigation will be required.	Noted. This was addressed in the MU 16 & 17 applications.
Q.18. [ALL][DRI 263]	Any additional clay settling area will require S/D determination.	Noted.
Q.19. [EXT]	Clay settling areas shall not be built on unmined areas.	Noted.
Q.20. [EXT]	Mosaic shall develop a contingency plan for each waste clay settling pond, to be filed with the dam construction permit application.	Noted. This is part of FDEP permitting process.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
Q.21. [EXT]	Mosaic will provide sufficient copies of Mining Unit plans for TBRPC & SWFWMD review of wetland impacts, control of exotic species, scheduling of mitigation, and cumulative acres of wetlands preserved, altered, mined & recreated.	Noted. The copies are provided to these agencies by Hillsborough County as part of the review process.
Q.22. [EXT]	D.O. recognizes Mosaic's continued use of area for agricultural operations until area is used for mining.	Noted.
Q.23. [DRI 263]	During the course of the S/D review, MOSF shall ensure all critical locations are provided alternative energy sources for the pumps during the hurricane season to assure the appropriate control of the water within the recirculation/containment systems.	Noted.
RECLAMATION		
R.1 [L-85]	Reclamation of mined areas to be completed within 3 years on each parcel.	Parcels A & B are reclaimed. Parcel C has been mined and no future mining is planned. Reclamation in Parcel C is planned for reclamation in 2024-2025 with ongoing discussions with Hillsborough County staff on timing updates.
R.2 [L-85]	Reclamation for parcels B & C to be approved by EPC.	This is part of Mining Unit review procedure. Parcel B has been released by EPC. Parcel C has been mined and no future mining is planned. Reclamation in Parcel C is planned for reclamation in 2024-2025 with ongoing discussions with Hillsborough County staff on timing updates. EPCHC has approved updated mitigation plan for LMU 19 on 10/27/2023 of which Parcel C is a portion. There is currently no required mitigation in Parcel C on this recently approved mitigation plan.
R.3 [L-85]	Parcel B to include 1:1 reclamation of sand pine scrub community.	This reclamation is completed.
R.4 [L-85]	Lake littoral zone to use mulching techniques.	No lakes are planned for [L-85] area.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
R.5. [K-120]	Reclamation plans to include: a. 1:1 replacement of hardwood forest. b. Maintenance of existing watersheds. c. Pasture areas to include 10% forest for wildlife. d. MOSF to maintain all reclaimed areas to DEP & County rules. e. Implement mitigation measures on pg.22-10.	These conditions have been and will continue to be recognized in the Mining Unit applications.
R.6. [ALL][DRI 263]	Reclamation to be according to 16C-16, F.A.C., and County rules.	This is SOP.
R.7. [ALL][DRI 263]	Mosaic to clean up site and remove all structures that are not be put to allowable use per FDEP reclamation regulations.	This is SOP.
R.8. [ALL][DRI 263]	Amendment to solely stay in compliance with 16C-16, F.A.C. are presumed not to be a S/D. Mosaic shall amend DRI, if FDEP amendments are significant, to assure consistency.	Noted. No amendment has been required to date.
R.9. [ALL][DRI 263]	Deeds to land shall disclose if the parcel was mined.	Noted. No mined land has been sold to date.
R.10. [ALL][DRI 263]	New mining and reclamation procedures developed by USBM, FIPR, etc. to lessen adverse environmental impact are to be implemented, and are presumed not to be a S/D.	Noted.
R.11. [EXT][DRI 263]	Mosaic shall continue to comply with DHRS rules and procedures for radioactivity soils.	Noted.
R.12. [EXT][DRI 263]	Until reclamation or mitigation areas are released, Mosaic shall control exotic species per rules/permit conditions.	Noted.
R.13. [EXT][DRI 263]	All reclaimed lakes & wetlands to have water quality comparable to natural systems.	Noted.
GENERAL CONDITIONS		
S.1. [ALL][DRI 263]	Annual Report.	This report is in response to this condition. See main report section for details.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
S.2. [ALL][DRI 263]	Provide copy of County annual progress report to TBRPC, along with all monitor data.	Monitoring Data Appendix attached to TBRPC & DCA copy.
S.3. [ALL][DRI 263]	Mosaic to encourage small business, and non-discriminatory employment.	Noted.
S.4. [ALL][DRI 263]	No capital improvement costs shall accrue to the County due to this project.	There will be no capital improvement cost to the County as a result of this project.
S.5. [ALL]	Any change to project that departs from the information that is shown in the latest tables figures and maps as identified in the 6th A.I. addenda shall require a S/D determination.	Noted.
S.6. [EXT]	All Mining Units within the Extension area to be numbered to distinguish them from the Consolidation Phase area.	Noted. An “E” is being added to the Mining unit number to indicate that the Unit is in the Extension area.
S.7. [DRI 263]	Any approval of Hills. Co. Mine Consolidation S/D shall satisfy the provisions of 380.06 (15), F.S. and the following provisions o f the FAC: Rule 9J-2.041; Rule 9J-2.043; Rule 9J-2.044; and Rule 9J-2.0252.	Noted.
S.8. [DRI 263]	Payment for any future activities of the TBRPC with regard to this development, including enforcement actions, shall be paid to the TBRPC by MOSF in accordance with Rule 9J-2.0252.	Noted.
S.9. [DRI 263]	All provisions contained within the Application shall be considered conditions of this DO unless inconsistent with the terms and conditions of this DO, in which case the terms and conditions of this DO shall control.	Noted.
S.10. [DRI 263]	This DO shall be binding. It is understood that any reference herein to any govt. agency shall be construed to mean any future instrumentality which may be created or designated as successors in interest to any branch of government or governmental agency.	Noted.

EXHIBIT G SUMMARY STATUS OF DEVELOPMENT ORDER CONDITIONS		
CONDITION No.	CONDITION SUMMARY	STATUS
S.11. [DRI 263]	Should the changes to pre-mining, mining or post-mining scenarios depart significantly from the schedules and methods described in the ADA or meet the criteria set forth in Subsection 380.06(19), F.S., the project will be subject to a S/D determination.	Noted.
WATER QUALITY, WATER SUPPLY AND STORMWATER MANAGEMENT		
T.1. [DRI 263]	Crossing O is also designated as a pipeline crossing point for water pipes and slurry pipes.	Noted.
T.2. [DRI 263]	Mine use of these existing crossings (N, K, L, P, 13, 14 and 21) was approved by DRI 213. The exact justification for any remaining tributary crossings will be done at the time of the future mining unit approvals.	Noted.
T.3. [DRI 263]	All existing wells which have no future use or attempted wells or test foundation holes shall be cement plugged by the firm of a licensed water well contractor (under SWFWMD Well Abandonment Permit(s)).	Noted.
T.4. [DRI 263]	There shall be no net increase in the public water demand in excess of the currently permitted volume as of 2006 as it pertains to the mining of the DRI 263 Addition Area Phase.	Noted.
T.5. [DRI 263]	As committed, MOSF shall implement the following measures to avoid potential adverse impacts upon ground and surface water hydrology and water quality on, beneath, and downgradient of the DRI 263 Addition Area Phase: Maintenance of Water Table Elevations; Stream Flows; and Water Quality.	Noted.
T.6. [DRI 263]	In order to ensure the protection of water resources, water table measurements shall continue to be taken on a weekly basis or as required by SWFWMD.	Noted.

EXHIBIT H
EXTERNAL DISTRIBUTION LIST

Ms. Kim Cruz — 1 Copy of Report
Environmental Supervisor
Hillsborough County Environmental Services
332 N. Falkenburg Road
Tampa, Florida 33619

Mr. Jeffry Greenwell — 1 Copy of Report
Section Manager
Public Utilities Department
332 N. Falkenburg Road
Tampa, Florida 33619

Ms. Barbara Powell or Current Responsible Party — 1 Copy of Report
Department of Economic Opportunity
Bureau of Community Planning
170 E Madison St
Tallahassee, FL 32399-2100

Ms. Cara Martin — 1 Copy of Report
Government and Community Affairs
Southwest Florida Water Management District
2379 Broad Street
Brooksville, FL 34604-6899

Mr. Lance Kautz — 1 Copy of Report
Environmental Consultant
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Parkway
Temple Terrace, Florida 33637

Ms. Marisa Rhian — 1 Copy of Report
Program Administrator
Department of Environmental Protection
2001 Homeland Garfield Rd.
Bartow, FL 33830

Ms. Zachariah Shely — 1 Copy of Report
Environmental Administrator
Department of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

Ms. Jackie Langston — 1 Copy of Report
Environmental Specialist II
Department of Environmental Protection
2001 Homeland Garfield Rd.
Bartow, FL 33830

Ms. April Breton 1 Copy of Report
Water Use Compliance Manager
Southwest Florida Water Management District
7601 US Hwy 301 North
Tampa, Florida 33637

EXHIBIT H
INTERNAL DISTRIBUTION LIST

James Briscoe 1 Copy of Report
Four Corners Mine Manager

Laura Morris 1 Copy of Report
Superintendent Permitting and Reclamation and Compliance

Shelley Thornton 1 Copy of Report
Sr. Manager Mine Permitting

Patrick van der Voorn 1 Copy of Report
Vice President and Chief Environmental Counsel

Lisa Lannon 1 Copy of Report
Superintendent Reclamation

File Copy 1 Copy of Report

Exhibit I

Following is a table showing the setback waivers approved to date, and the cumulative acres affected.1 There was one addition in this past year:

HILLSBOROUGH COUNTY
CUMULATIVE SETBACK WAIVERS

SETBACK LOCATION	PERMIT NO.	ACRES WAIVED
LSM – Mining Unit 13 - CR 39	123.01P	9.6
LSM - Mining Unit 13 - SR 674	N/A	12
LSM - Mining Unit 14 - SR 674	890.21P	12
FCO - Mining Unit 6 - Taylor Rd.	690.15P	19
FCO - Mining Unit 7 - Taylor Rd.	695.07P	6
FCO - Mining Unit 6 - Taylor Rd.	1295.12P	48
FCO - Mining Unit 10 - Taylor - Gill Rd.	895.09P	34
FCO - Mining Unit 11E - Taylor - Gill Rd.	1295.11P	34
FCO - Mining Unit 9 - Shuman amend.	1295.12P	10
FCO - Mining Unit 8 - Taylor Rd.	690.17P	29.5
FCO - Mining Unit 13 - Taylor Rd., SR 674 & Taylor Gill Rd.	696.05P	122.6
FCO - Mining Unit 12 E. - CR 39	797.15P	20.2
KFD - Mining Unit S	1096.13P	39
KFD - Mining Unit T	1298.11P	36
FCO - 14E	1298.12P	43
FCO - MU 16E	400.04P	17.5
KFD - MU R - Walter Hunter Road	698.04P	23
KFD - MU R - Amend. - Adj. Property Owner Consent	999.08P	24
FCO - MU 14E - Taylor Gill Rd.	300.01P	20
FCO - MU 15E - Colding Property	201.06P	24.1
FCO - MU 17E	301.09P	83.8
KFD - MU T - Albritton Rd.	101.02P	50.1
FCO - MU 19E	802.15	5.9
LSM MU 16 - CR 39	702.12	3.9

LSM MU 17 - SR 674	804.05	14.7
LSM MU 19	1106.11	71.8
LSM MU 18	210.01P	23.8
LSM MU 20E	610.04P	114.5
LSM MU 21	711.03P	295.4
LSM MU 22	312.01P	266.1
LSM MU 21A	813.05P	6.7
LSM MU 13	123.01P	9.3
TOTAL		**1529.5**

Gopher Tortoise Conservation

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
Division of Habitat and Species Conservation
Species Conservation Planning Section
620 South Meridian Street, Mail Station 2A
Tallahassee, Florida 32399-1600
(850) 921-1031

Permittee Name:	Mosaic Fertilizer LLC	Permit Number:	GTC-19-00286
Permittee Address:	13830 Circa Crossing Drive LITHIA, FLORIDA 33547 UNITED STATES	Effective Date: Expiration Date:	August 19, 2019 August 19, 2024

Agent Name:	Edward Murawski
Agent Address:	Kleinfelder 1907 North US Highway 301 Suite 100 TAMPA, FLORIDA 33619 UNITED STATES

IS AUTHORIZED TO:

Capture and relocate all gopher tortoise (*Gopherus polyphemus*) hatchlings less than or equal to 60 mm carapace length (CL), and up to 2,253 gopher tortoises greater than 60 mm CL by non-harmful means and to molest, damage or destroy gopher tortoise burrows while conducting these activities, subject to the following conditions and provisions, in association with development activities at the following site.

Authorized Capture Methods:

1. Capture gopher tortoises using bucket traps
2. Capture gopher tortoises using live traps
3. Capture gopher tortoises using hand shovel excavation of gopher tortoise burrows
4. Transport, marking and release of gopher tortoises
5. Supervise backhoe excavation of gopher tortoise burrows to capture gopher tortoises

AUTHORIZED LOCATION(S): 24,829.15-acre Mosaic 15-year Mining Plan area located in Hardee, Hillsborough, Manatee and Polk counties (Latitude 27° 30' 26.09" N Longitude 82° 4' 57.59"W; Latitude 27° 31' 12.76" N Longitude 81° 59' 59.03" W; Latitude 27° 32' 54.83" N Longitude 81° 54' 38.32" W; Latitude 27° 35' 9.93" N Longitude 81° 45' 44.53" W; Latitude 27° 40' 30.28" N Longitude 82° 1' 43.75" W; Latitude 27° 41' 26.5" N Longitude 82° 12' 2.45" W; Latitude 27° 42' 2.57" N Longitude 81° 52' 33.72" W; Latitude 27° 46' 48.45" N Longitude 81° 56' 22.8" W; Latitude 27° 48' 17.33" N Longitude 82° 1' 53.75" W; Latitude 27° 53' 18.45" N Longitude 82° 22' 27.66" W; and Latitude 27° 53' 41.05" N Longitude 81° 53' 45.94" W), (continued below)

Permittee Signature: _____ Date: 8-20-19

Not valid unless signed. By signature, confirms that all information provided to issue the permit is accurate and complete, and indicates acceptance and understanding of the provisions and conditions listed below. **Any false statements or misrepresentations when applying for this permit may result in felony charges and will result in revocation of this permit.**

Authorized By: Deborah Burr Authorized for: Eric Sutton, Executive Director

Authorizing Signature: _____ Date: 08/19/2019

AUTHORIZED LOCATION(S) (CONTINUED)

with up to 605 tortoises relocated to and released at 1214.3-acre Squirrel Island Unit 1 recipient site (Latitude 27° 1' 13.91" N Longitude 81° 25' 14.71" W), in Glades County, authorized under permit GTLR-14-00003A; and up to 738 tortoises relocated to and released at 369.83-acre Mosaic Wellfield North (Latitude 27° 28' 16.27" N Longitude 82° 12' 5.33" W), in Manatee County, authorized under permit GTLR-14-00005B; and up to 910 tortoises relocated to and released at 281-acre Fort Green FG-HC-10/11/12 recipient site (Latitude 27° 35' 2.37" N Longitude 82° 2' 22.68" W, in Hardee County, authorized to receive gopher tortoises under permit GTLR-14-00004B.

PERMIT CONDITIONS AND PROVISIONS:

1 Authorization to conduct the specified activities in association with the relocation of gopher tortoises in Florida is subject to Rules 68A-9.002 and 68A-27 Florida Administrative Code (F.A.C.), and the Florida Fish and Wildlife Conservation Commission's (hereafter, "FWC") Gopher Tortoise Permitting Guidelines (April 2008 - revised September 2012) [hereafter, "Guidelines"], the Restated and Amendment Memorandum of Agreement Regarding Gopher Tortoises on Mosaic Land (June 18, 2015), as amended [hereafter, MOA], and is subject to the following provisions/conditions. Where the MOA and the Guidelines are in conflict, the terms of the MOA shall control.

2 Authorized activities are also predicated and conditioned on the information and assurances provided in the Permittee's 03/08/2019 application (as supplemented), the assurances of which are herein incorporated by reference.

3 During colder months, tortoises shall only be captured and relocated when the low temperature at the recipient site is forecasted by the National Weather Service (www.weather.gov) to be above 50° F for three consecutive days [72 hours] after release (including the day of relocation). This three-day window of milder temperatures is required to allow the relocated tortoises to settle into the recipient site and reduce the chance of cold-related stress or mortality. If capturing tortoises using bucket traps, the Permittee shall cover all traps on days forecasted to be below 50° F. The 28 consecutive day trapping period must restart at day 1 when a trap is closed for any reason.

4 Captured gopher tortoises that show signs of disease (i.e., nasal and ocular discharge, emaciation, etc.) shall not be relocated off-site to the authorized recipient site. At the Permittee's discretion, symptomatic tortoises may be: relocated on-site; transported to and quarantined at a FWC-licensed wildlife rehabilitation center (list available upon request) for treatment and subsequent relocation of recovered, non-symptomatic gopher tortoises along with others from the population; transported and donated to a FWC-permitted disease research program; or humanely euthanized by a licensed veterinarian when disease is advanced.

5 Gopher tortoise capture and relocation activities may be conducted only if written local government approvals have been obtained for land clearing, grading, or construction activities and provided to the Gopher Tortoise Program Coordinator (via the FWC online permit system or via email to GTPermits@MyFWC.com) prior to commencing relocation activities.

6 This permit can be suspended, revoked or not renewed for just cause pursuant to 68-1.010, F.A.C. and Chapter 120, Florida Statutes. It is non-transferable and must be readily available for inspection at all times while engaging in the permitted activities.

7 The activities authorized under this Permit must be carried out by the Authorized Gopher Tortoise Agent ("Authorized Agent") designated on this permit, or under the direct supervision and responsibility of that Authorized Agent. The Permittee and Authorized Agent shall be as fully responsible for any such activities to the same extent as if they had themselves carried out those activities under this Permit.

8 The Authorized Agent shall conduct a gopher tortoise burrow survey covering 100% of the tortoise habitat within the donor site area from which gopher tortoises will be relocated, and shall notify the FWC and provide the survey results in accordance with Section 7.c of the MOA.

9 The Permittee shall notify the Gopher Tortoise Program Coordinator by uploading the notice to the FWC online permit system, by email at GTPermits@MyFWC.com, or by phone at (850)921-1031 at least 24 hours (excluding weekends and holidays) before initiating the tortoise relocation effort.

10 Either this original permit, or a complete copy, must be clearly posted at the affected site at all times while engaged in the permitted tortoises relocation activities, and should remain posted until construction activities are completed.

11 Any gopher tortoise mortality or injury that occurs while conducting activities authorized under this permit shall

be reported to the Gopher Tortoise Program Coordinator (by phone at 850-921-1031 or by email to GTPermits@MyFWC.com) within 48 hours of the occurrence. An injured gopher tortoise shall be promptly taken to either a licensed wildlife rehabilitation facility or a licensed veterinarian for evaluation and treatment. Contact information for the facility or veterinarian shall be included with the information reported.

12 The Permittee, by signing this permit, specifically agrees to allow authorized FWC personnel, upon presentation of credentials as may be required by law, access to the donor and recipient sites, at reasonable times, for the purpose of inspecting the capture/relocation activities authorized under this permit.

13 The Permittee shall submit a report detailing the capture and relocation activities via the FWC online permit system within 30 days of the release of the captured/relocated tortoises. An after action report checklist is attached for use in that regard. Any request for permit renewal or extension should be submitted at least 45 days prior to the expiration date of this permit.

14 Nonnative wildlife that are members of the families Pythonidae, Boidae, Varanidae, Iguanidae and Teiidae captured during gopher tortoise relocation activities shall be euthanized in accordance with the requirements of the Permitting Guidelines. Authorized Agents are authorized to transport conditional species for purposes of euthanasia in accordance with the transport requirements in the Permitting Guidelines. All other non-native wildlife captured should be humanely euthanized or allowed to escape on-site. Sightings of Burmese python, Argentine tegu, or other nonnative wildlife species should be reported to the FWC within 48 hours by either calling the toll-free number 1-888-IVEGOT1 (1-888-483-4681) or online at www.IveGot1.org.

15 Gopher tortoise commensals listed in 68A-27 F.A.C. as State-designated threatened species and encountered in the gopher tortoise capture operation should either be released on-site or allowed to escape unharmed, or be donated to an educational or research facility that possesses the appropriate FWC scientific collecting/educational use permit and is authorized to receive additional specimens of the captured species. Non-listed native commensals should either be allowed to escape unharmed or released on-site. Refer to Appendix 9 of the Permitting Guidelines for additional information on gopher tortoise commensals. If you have questions regarding handling/releasing gopher tortoise commensals encountered during capture operations, contact the Gopher Tortoise Program Coordinator's office by calling 850-921-1031.

16 This permit does not authorize the take of Federally-designated Endangered and Threatened species. Only individuals who are in possession of a valid permit or authorization issued by the United States Fish and Wildlife Service (USFWS) to capture or possess an eastern indigo snake or other Federally-designated Endangered and Threatened species may physically handle those species. If individuals without a USFWS permit or authorization encounter an eastern indigo snake during attempts to capture gopher tortoises or during subsequent land alteration or development activities within the property, all movement of heavy equipment and land alteration or development activities within the vicinity of the snake shall cease to allow the snake to vacate the area. No movement of heavy equipment, or land alteration or development activities within the vicinity of the snake shall resume until the snake has vacated the work area.

17 This permit does not authorize Permittee access to any public or private properties. Permission to access the property must be secured from the appropriate landholders prior to undertaking any work on such properties.

A person whose substantial interests are affected by FWC's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. A person seeking a hearing on FWC's action shall file a petition for hearing with the agency within 21 days of receipt of written notice of the decision. The petition must contain the information and otherwise comply with section 120.569, Florida Statutes, and the uniform rules of the Florida Division of Administration, chapter 28-106, Florida Administrative Code. If the FWC receives a petition, FWC will notify the Permittee. Upon such notification, the Permittee shall cease all work authorized by this permit until the petition is resolved. The enclosed Explanation of Rights statement provides additional information as to the rights of parties whose substantial interests are or may be affected by this action.

Gopher Tortoise Recipient Site (For Long-Term Protected Sites)

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
Division of Habitat and Species Conservation
Species Conservation Planning Section
620 South Meridian Street, Mail Station 2A
Tallahassee, Florida 32399-1600
(850) 921-1031

Permittee Name: Mosaic Fertilizer LLC
Permittee Address: 13830 Circa Crossing Drive
LITHIA, FLORIDA
33547 UNITED STATES

Permit Number: GTLR-14-00004**B**
Effective Date: **Feb 22, 2017**
Expiration Date: Perpetual

Agent Name: Edward Murawski
Agent Address: Kleinfelder
1907 North US Highway 301 Suite 100
TAMPA, FLORIDA 33619
UNITED STATES

IS AUTHORIZED TO:

receive and release gopher tortoises (Gopherus polyphemus) within the long-term protected recipient site identified below

AUTHORIZED LOCATION(S): 281.00-acre Fort Green (FG-HC-10/11/12) recipient site located south of State Road 62 (T33S,R23E,S19, 20, 29 & 30; with Latitude 27° 35' 2.37"N and Longitude 82° 2' 22.68"W), in Hardee County.

Permittee Signature: _____ Date: 3/13/2017

Not valid unless signed. By signature, confirms that all information provided to issue the permit is accurate and complete, and indicates acceptance and understanding of the provisions and conditions listed below. **Any false statements or misrepresentations when applying for this permit may result in felony charges and will result in revocation of this permit.**

Authorized By: Richard McCann Authorized for: Nick Wiley, Executive Director

Richard D. McCann

Authorizing Signature: _____ Date: 02/22/2017
Species Conservation Planning Section

This permit is in effect an amendment of permit GTLR-14-00004**A** which does not have an expiration date, and supersedes all previous versions. The Authorized Gopher Tortoise Agent associated with this permit has been changed. All other amended conditions and provisions of the previous permit (changed or new items) are indicated by bold text.

PERMIT CONDITIONS AND PROVISIONS:

1 Authorization to conduct the specified activities in association with the relocation of gopher tortoises in Florida is subject to Rules 68A-9.002 and 68A-27, Florida Administrative Code (F.A.C.), the Gopher Tortoise Permitting Guidelines (April 2008 – revised September 2012) [hereafter, the "Permitting Guidelines"], the Memorandum of Agreement Regarding Gopher Tortoises on Mosaic Land (December 18, 2012), as amended [hereafter, MOA], and subject to the

following provisions/conditions. Where the MOA and the Guidelines are in conflict, the terms of the MOA shall control.

2 The Permittee shall grant a perpetual conservation easement over the Fort Green (FG-HC-10/11/12) recipient site to the Florida Fish and Wildlife Conservation Commission (FWC) and record the easement in the permanent Hardee County property records. Either the original recorded easement, or a certified as recorded copy, shall be provided to the Gopher Tortoise Permit Coordinator, 620 S. Meridian Street (M.S. 2A), Tallahassee, Florida 32399-1600. The conservation areas perimeter boundaries shall be either clearly marked with boundary posts or have boundary points recorded on a Global Positioning System (GPS) unit, at no less than 500-linear-foot intervals and at boundary turning points, to facilitate boundary identification by FWC biologists. If GPS boundary points are recorded, a copy of the record shall be provided to the FWC. The boundary posts or GPS records must be maintained for the life of the easement. This permit will not go into effect until the Permittee has obtained a receipt from the FWC for the conservation easement specified under this condition.

3 Up to 1,018 gopher tortoises may be received at and released into the 281.00-acre FG-HC-10/11/12 recipient site, entirely comprised of gopher tortoise habitat, identified above.

4 Approval of the recipient site is otherwise predicated and conditioned on the information and assurances provided in the Permittee's 07/24/2014 application (supplemented on 07/25/2014, 07/28/2014, 07/29/2014 and 07/30/2014), and the 08/29/2014 (supplemented on 09/02/2014) **and 02/13/2017 (supplemented on 02/14/2017)** amendment request**s**, the assurances of which are herein incorporated by reference.

5 The Permittee shall have the obligation to manage and maintain habitat for gopher tortoises in accordance with the Mosaic Fertilizer, LLC FG-HC-10/11/12 Long-term Protected Gopher Tortoise Recipient Site, Hardee County, Florida, Habitat Management Plan (July 25, 2014) [hereafter, Management Plan] that has been approved by the FWC. The approved Management Plan shall be appended to and incorporated by reference into the conservation easement.

6 The Permittee shall keep written records of all the habitat management activities conducted within, and all tortoises relocated into the recipient site. A report of the habitat management activities, habitat monitoring and gopher tortoise population monitoring, as described in the Management Plan, shall be provided to the **Gopher Tortoise Permit Coordinator either by being uploaded to the FWC online permit system, sent via email to GTPermits@MyFWC.com,** or mailed to the address indicated in Condition #2, in accordance with the phased recipient site monitoring and reporting requirements of the Permitting Guidelines, with the first report due September 30, 2017. The subsequent reports shall be received by the **Gopher Tortoise Permitting Coordinator's office** by September 30th every three years thereafter for the first 15 years this permit is in effect. If the landowner has met monitoring and reporting requirements during the first 15 years, the monitoring and reporting requirement is reduced to every 5 years for the next 10 years. Following 25 years of successfully meeting all monitoring, habitat management and reporting requirement, reports are required every ten years. Reports shall contain the content and be in the form provided by the FWC, and shall include the results of all monitoring and habitat management activities conducted through June 30th of the year the report is due.

7 All tortoises accepted and received at the recipient site must be covered under a valid FWC permit that specifically authorizes the relocation of those animals to this site.

8 If an enclosure is constructed within a portion of a recipient site unit, the stocking rate within the enclosure may be up to 1.5 times the gopher tortoise density that is approved by the FWC for that entire recipient site unit. However, the maximum number of tortoises approved by the FWC for release into the entire recipient site unit shall not be exceeded.

9 During colder months, tortoises shall only be captured and relocated when the low temperature at the recipient site is forecasted by the National Weather Service (www.weather.gov) to be above 50° F for three consecutive days [72 hours] after release (including the day of relocation). This three-day window of milder temperatures is required to allow the relocated tortoises to settle into the recipient site and reduce the chance of cold-related stress or mortality.

10 Permittee shall not accept gopher tortoises that show signs of disease (i.e., nasal and ocular discharge, emaciation, etc.). The Permittee should direct individuals that bring symptomatic tortoises to the recipient site to alternatively release those tortoises back within the donor/capture site; transport them to an FWC licensed wildlife rehabilitation center (list available upon request) or licensed veterinary facility for quarantine and observation for recovery and subsequent relocation; transport and donate them to an FWC permitted disease research program; or have them humanely euthanized by a licensed veterinarian when disease is advanced.

11 This permit does not authorize Permittee access to any public or private properties. Any required permission accordingly must be secured from the appropriate landholders prior to undertaking any work on such properties.

12 This permit can be suspended, revoked or not renewed for just cause pursuant to 68-1.010, F.A.C. and Chapter 120, Florida Statutes. It is non-transferable and must be readily available for inspection at all times while engaging in the permitted activities.

13 The activities authorized under this Permit may be carried out by authorized personnel or contractors of the Permittee or the designated Authorized Gopher Tortoise Agent (Agent), provided all such activities are under the direct supervision and responsibility of the Permittee or Agent. The Permittee and Agent shall be as fully responsible for any such activities to the same extent as if they had themselves carried out those activities under this Permit.

14 The Permittee, by signing this permit, specifically agrees to allow authorized Commission personnel, upon presentation of credentials as may be required by law, access to the recipient site, at reasonable times, for the purpose of inspecting the relocation and release activities authorized under this permit.

15 After the first tortoises are received for release at this site, the Permittee should submit a monthly summary report to the FWC for each month that gopher tortoises are received. The report should include the numbers of tortoises relocated and released within the recipient site, by each relocation authorization permit number, and either be uploaded to the FWC online permit system, or be sent via email to GTPermits@MyFWC.com.

16 The Permittee shall provide the FWC with sufficient assurance that it retains the financial capability to conduct the habitat management necessary to enhance or maintain quality habitat for gopher tortoises by complying with the requirements of Sections 10.b.ii through 10.b.vi, and Section 16.e of Amendment 1 to the MOA, executed July 25, 2014.

17 Applications to amend this permit to authorize relocations of gopher tortoises to other units within this recipient site will be evaluated and acted upon by the FWC under either the Guidelines and MOA, if the amendment application is filed pursuant to the MOA; or under the rules, permitting guidelines and provision/conditions in pace at the time of application. Specific areas within other units that are proposed to receive relocated tortoises will also be evaluated for their suitability during the application review process.

18 Receipt of gopher tortoises that are relocated but not pursuant to the MOA will be subject to the rules, permitting guidelines and provisions/conditions that are in effect at the time those activities are authorized. This provision only applies to gopher tortoise relocation permits that are not covered under the MOA, and does not require this recipient site permit to be amended.

19 Gopher tortoises released at a recipient site shall be released into an enclosure in conformance with the FWC enclosure requirements. The enclosure must be maintained for a minimum period of six months from the date gopher tortoises were most recently released, but no longer than twelve months; however, the maximum 12-month time limit will not apply when the entire perimeter of the approved recipient site parcel is permanently fenced in conformance with the FWC enclosure requirements. Enclosure materials, construction methods and dimensions must conform to the requirements specified in the Guidelines. The enclosures must be regularly monitored and maintained, including the immediate repair of any damage to maintain the integrity of the enclosure. Monitoring of the enclosure shall be conducted at least once a week for the first four weeks following release of tortoises, and at least once a month thereafter.

A person whose substantial interests are affected by FWC's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. A person seeking a hearing on FWC's action shall file a petition for hearing with the agency within 21 days of receipt of written notice of the decision. The petition must contain the information and otherwise comply with section 120.569, Florida Statutes, and the uniform rules of the Florida Division of Administration, chapter 28-106, Florida Administrative Code. If the FWC receives a petition, FWC will notify the Permittee. Upon such notification, the Permittee shall cease all work authorized by this permit until the petition is resolved. The enclosed Explanation of Rights statement provides additional information as to the rights of parties whose substantial interests are or may be affected by this action.

Gopher Tortoise Recipient Site (For Long-Term Protected Sites)

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
Division of Habitat and Species Conservation
Species Conservation Planning Section
620 South Meridian Street, Mail Station 2A
Tallahassee, Florida 32399-1600
(850) 921-1031

Permittee Name: Mosaic Fertilizer LLC
Permittee Address: 13830 Circa Crossing Drive
LITHIA, FLORIDA
33547 UNITED STATES

Permit Number: GTLR-14-00005**B**
Effective Date: **Feb 22, 2017**
Expiration Date: Perpetual

Agent Name: Edward Murawski
Agent Address: Kleinfelder
1907 North US Highway 301 Suite 100
TAMPA, FLORIDA 33619
UNITED STATES

IS AUTHORIZED TO:

receive and release gopher tortoises (Gopherus polyphemus) within the long-term protected recipient site identified below

AUTHORIZED LOCATION(S): 369.83-acre Mosaic Wellfield North recipient site located at 33000 State Road 64 (T34S,R21E,S34; T35S,R21E,S3 & 4; with Latitude 27° 28' 16.27"N and Longitude 82° 12' 5.33"W), in Manatee County

Permittee Signature: _____ Date: 3/13/2017

Not valid unless signed. By signature, confirms that all information provided to issue the permit is accurate and complete, and indicates acceptance and understanding of the provisions and conditions listed below. **Any false statements or misrepresentations when applying for this permit may result in felony charges and will result in revocation of this permit.**

Authorized By: Richard McCann Authorized for: Nick Wiley, Executive Director

Richard D. McCann

Authorizing Signature: _____ Date: 02/22/2017

Species Conservation Planning Section

This permit is in effect an amendment of permit GTLR-14-00005**A** which does not have an expiration date, and supersedes all previous versions. The Authorized Gopher Tortoise Agent associated with this permit has been changed. All other amended conditions and provisions of the previous permit (changed or new items) are indicated by bold text.

PERMIT CONDITIONS AND PROVISIONS:

1 Authorization to conduct the specified activities in association with the relocation of gopher tortoises in Florida is subject to Rules 68A-9.002 and 68A-27, Florida Administrative Code (F.A.C.), the Gopher Tortoise Permitting Guidelines (April 2008 – revised September 2012) [hereafter, the "Permitting Guidelines"], the Memorandum of Agreement Regarding Gopher Tortoises on Mosaic Land (December 18, 2012), as amended [hereafter, MOA], and subject to the

following provisions/conditions. Where the MOA and the Guidelines are in conflict, the terms of the MOA shall control.

2 The Permittee shall grant a perpetual conservation easement over Mosaic Wellfield North recipient site to the Florida Fish and Wildlife Conservation Commission (FWC). The easement approved by the FWC shall be executed and recorded in the permanent Manatee County property records. Either the original recorded easement, or a certified as recorded copy, shall be provided to the Gopher Tortoise Permit Coordinator, 620 S. Meridian Street (M.S. 2A), Tallahassee, Florida 32399-1600. The conservation areas perimeter boundaries shall be either clearly marked with boundary posts or have boundary points recorded on a Global Positioning System (GPS) unit, at no less than 500-linear-foot intervals and at boundary turning points, to facilitate boundary identification by FWC biologists. If GPS boundary points are recorded, a copy of the record shall be provided to the FWC. The boundary posts or GPS records must be maintained for the life of the easement. This permit will not go into effect until the Permittee has obtained a receipt from the FWC for the conservation easement specified under this condition.

3 Up to 973 gopher tortoises may be received at and released into the 369.83-acre Mosaic Wellfield North recipient site, entirely comprised of gopher tortoise habitat, identified above.

4 Approval of the recipient site is otherwise predicated and conditioned on the information and assurances provided in the Permittee's 07/24/2014 application (supplemented on 07/25/2014, 07/28/2014 and 07/29/2014), and the 08/29/2014 (supplemented on 09/02/2014) **and 02/13/2017 (supplemented on 02/14/2017)** amendment request**s**, the assurances of which are herein incorporated by reference.

5 The Permittee shall have the obligation to manage and maintain habitat for gopher tortoises in accordance with the Mosaic Fertilizer, LLC Mosaic Wellfield North Long-term Protected Gopher Tortoise Recipient Site, Manatee County, Florida, Habitat Management Plan (July 25, 2014) [hereafter, Management Plan] that has been approved by the FWC. The approved Management Plan shall be appended to and incorporated by reference into the conservation easement.

6 The Permittee shall keep written records of all the habitat management activities conducted within, and all tortoises relocated into the recipient site. A report of the habitat management activities, habitat monitoring and gopher tortoise population monitoring, as described in the Management Plan, shall be provided to the **Gopher Tortoise Permit Coordinator either by being uploaded to the FWC online permit system, sent via email to GTPermits@MyFWC.com,** or mailed to the address indicated in Condition #2, in accordance with the phased recipient site monitoring and reporting requirements of the Permitting Guidelines, with the first report due by September 30, 2017. The subsequent reports shall be received by the **Gopher Tortoise Permitting Coordinator's office** by September 30th every three years thereafter for the first 15 years this permit is in effect. If the landowner has met monitoring and reporting requirements during the first 15 years, the monitoring and reporting requirement is reduced to every 5 years for the next 10 years. Following 25 years of successfully meeting all monitoring, habitat management and reporting requirement, reports are required every ten years. Reports shall contain the content and be in the form provided by the FWC, and shall include the results of all monitoring and habitat management activities conducted through June 30th of the year the report is due.

7 All tortoises accepted and received at the recipient site must be covered under a valid FWC permit that specifically authorizes the relocation of those animals to this site.

8 If an enclosure is constructed within a portion of a recipient site unit, the stocking rate within the enclosure may be up to 1.5 times the gopher tortoise density that is approved by the FWC for that entire recipient site unit. However, the maximum number of tortoises approved by the FWC for release into the entire recipient site unit shall not be exceeded.

9 During colder months, tortoises shall only be captured and relocated when the low temperature at the recipient site is forecasted by the National Weather Service (www.weather.gov) to be above 50° F for three consecutive days [72 hours] after release (including the day of relocation). This three-day window of milder temperatures is required to allow the relocated tortoises to settle into the recipient site and reduce the chance of cold-related stress or mortality.

10 Permittee shall not accept gopher tortoises that show signs of disease (i.e., nasal and ocular discharge, emaciation, etc.). The Permittee should direct individuals that bring symptomatic tortoises to the recipient site to alternatively release those tortoises back within the donor/capture site; transport them to an FWC licensed wildlife rehabilitation center (list available upon request) or licensed veterinary facility for quarantine and observation for recovery and subsequent relocation; transport and donate them to an FWC permitted disease research program; or have them humanely euthanized by a licensed veterinarian when disease is advanced.

11 This permit does not authorize Permittee access to any public or private properties. Any required permission accordingly must be secured from the appropriate landholders prior to undertaking any work on such properties.

12 This permit can be suspended, revoked or not renewed for just cause pursuant to 68-1.010, F.A.C. and Chapter 120, Florida Statutes. It is non-transferable and must be readily available for inspection at all times while engaging in the permitted activities.

13 The activities authorized under this Permit may be carried out by authorized personnel or contractors of the Permittee or the designated Authorized Gopher Tortoise Agent (Agent), provided all such activities are under the direct supervision and responsibility of the Permittee or Agent. The Permittee and Agent shall be as fully responsible for any such activities to the same extent as if they had themselves carried out those activities under this Permit.

14 The Permittee, by signing this permit, specifically agrees to allow authorized Commission personnel, upon presentation of credentials as may be required by law, access to the recipient site, at reasonable times, for the purpose of inspecting the relocation and release activities authorized under this permit.

15 After the first tortoises are received for release at this site, the Permittee should submit a monthly summary report to the FWC for each month that gopher tortoises are received. The report should include the numbers of tortoises relocated and released within the recipient site, by each relocation authorization permit number, and either be uploaded to the FWC online permit system, or be sent via email to GTPermits@MyFWC.com.

16 The Permittee shall provide the FWC with sufficient assurance that it retains the financial capability to conduct the habitat management necessary to enhance or maintain quality habitat for gopher tortoises by complying with the requirements of Sections 10.b.ii through 10.b.vi, and Section 16.e of Amendment 1 to the MOA, executed July 25, 2014.

17 Applications to amend this permit to authorize relocations of gopher tortoises to other units within this recipient site will be evaluated and acted upon by the FWC under either the Guidelines and MOA, if the amendment application is filed pursuant to the MOA; or under the rules, permitting guidelines and provision/conditions in place at the time of application. Specific areas within other units that are proposed to receive relocated tortoises will also be evaluated for their suitability during the application review process.

18 Receipt of gopher tortoises that are relocated but not pursuant to the MOA will be subject to the rules, permitting guidelines and provisions/conditions that are in effect at the time those activities are authorized. This provision only applies to gopher tortoise relocation permits that are not covered under the MOA, and does not require this recipient site permit to be amended.

19 Gopher tortoises released at a recipient site shall be released into an enclosure in conformance with the FWC enclosure requirements. The enclosure must be maintained for a minimum period of six months from the date gopher tortoises were most recently released, but no longer than twelve months; however, the maximum 12-month time limit will not apply when the entire perimeter of the approved recipient site parcel is permanently fenced in conformance with the FWC enclosure requirements. Enclosure materials, construction methods and dimensions must conform to the requirements specified in the Guidelines. The enclosures must be regularly monitored and maintained, including the immediate repair of any damage to maintain the integrity of the enclosure. Monitoring of the enclosure shall be conducted at least once a week for the first four weeks following release of tortoises, and at least once a month thereafter.

A person whose substantial interests are affected by FWC's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. A person seeking a hearing on FWC's action shall file a petition for hearing with the agency within 21 days of receipt of written notice of the decision. The petition must contain the information and otherwise comply with section 120.569, Florida Statutes, and the uniform rules of the Florida Division of Administration, chapter 28-106, Florida Administrative Code. If the FWC receives a petition, FWC will notify the Permittee. Upon such notification, the Permittee shall cease all work authorized by this permit until the petition is resolved. The enclosed Explanation of Rights statement provides additional information as to the rights of parties whose substantial interests are or may be affected by this action.

Gopher Tortoise Recipient Site (For Long-Term Protected Sites)

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
Division of Habitat and Species Conservation
Wildlife Diversity Conservation Section
620 South Meridian Street, Mail Station 2A
Tallahassee, Florida 32399-1600
(850) 921-1031

Permittee Name:	Mosaic Fertilizer LLC	Permit Number:	GTLR-22-00001
Permittee Address:	13830 Circa Crossing Drive LITHIA, FLORIDA 33547 UNITED STATES	Effective Date: Expiration Date:	January 31, 2022 Perpetual
Agent Name:	Edward Murawski		
Agent Address:	Kleinfelder 1907 North US Highway 301 Suite 100 TAMPA, FLORIDA 33619 UNITED STATES		

IS AUTHORIZED TO:

receive and release gopher tortoises (*Gopherus polyphemus*) within the long-term protected recipient site identified below.

AUTHORIZED LOCATION(S): 275.76-acre Mosaic Wellfield South long-term protected recipient site located at 33000 SR 64 E (T35S,R21E,S3 & 4; with Latitude 27° 28' 2.21" N and Longitude 82° 12' 8.95" W), in Manatee County.

Permittee Signature: _____ Date: 03/16/2022

Not valid unless signed. By signature, confirms that all information provided to issue the permit is accurate and complete, and indicates acceptance and understanding of the provisions and conditions listed below. **Any false statements or misrepresentations when applying for this permit may result in felony charges and will result in revocation of this permit.**

Authorized By: Claire Blunden Authorized for: Eric Sutton, Executive Director

Authorizing Signature: _____ Date: 01/31/2022

Wildlife Diversity Conservation Section

PERMIT CONDITIONS AND PROVISIONS:

1 Authorization to conduct the specified activities in association with the relocation of gopher tortoises in Florida is subject to Rules 68A-9.002 and 68A-27, Florida Administrative Code (F.A.C.), the Gopher Tortoise Permitting Guidelines (April 2008 – revised January 2017) [hereafter, the 'Permitting Guidelines'], and subsequent revisions of these guidelines that are in effect at the time permits are granted to relocate gopher tortoises to the authorized location, and subject to the following provisions/conditions. The Mosaic Wellfield South Recipient Site is permitted under the Gopher Tortoise Permitting Guidelines (revised January 2017).

2 The Permittee shall grant a perpetual conservation easement over the Mosaic Wellfield South recipient site to the Florida Fish and Wildlife Conservation Commission (FWC) and record the easement in the permanent Manatee County property records. Either the original recorded easement, or a certified as recorded copy, shall be provided to the Gopher Tortoise Program Coordinator, 620 S. Meridian Street (M.S. 2A), Tallahassee, Florida 32399-1600. The easement boundary shall have boundary points recorded on a Global Positioning System (GPS) unit and an ArcGIS shapefile provided to FWC to facilitate boundary identification by FWC biologists. The GPS records must be maintained for the life of the easement. This permit will not go into effect until FWC confirms receipt for the recorded conservation easement from the Permittee as specified under this condition.

3 The activities authorized under this Permit may be carried out by authorized personnel or contractors of the Permittee or the designated Authorized Gopher Tortoise Agent (Agent), provided all such activities are under the direct supervision and responsibility of the Permittee or Agent. The Permittee and Agent shall be as fully responsible for any such activities to the same extent as if they had themselves carried out those activities under this Permit.

4 Approval of the recipient site is otherwise predicated and conditioned on the information and assurances provided in the Permittee's August 13, 2020 application (as supplemented), the assurances of which are herein incorporated by reference.

5 The Permittee shall manage and maintain habitat for gopher tortoises in accordance with the Mosaic Fertilizer, LLC Mosaic Wellfield South Long-term Protected Gopher Tortoise Recipient Site Habitat Management Plan (May 18, 2021) that has been approved by the FWC. This Management Plan includes a landowner commitment to develop a gopher tortoise mortality contingency plan and notify FWC if tortoise mortality meets the criteria identified in Appendix 3 of the Permitting Guidelines. Any observed mortalities must be reported to FWC within 30 days of initial observation and must include information outlined in the *Tortoise mortality/contingency plan* described in the FWC-approved recipient site management plan. This information must also be documented in the recipient site monitoring report outlined in condition 6, below. The approved Management Plan shall be appended to and incorporated by reference into the conservation easement.

6 The Permittee shall keep written records of all the habitat management activities conducted within, and all tortoises relocated into the recipient site. A report of the habitat management activities, habitat monitoring and gopher tortoise population monitoring, as described in the Management Plan, shall be provided to the Gopher Tortoise Program Coordinator either by being uploaded to the FWC online permit system , sent via email to GTPermits@MyFWC.com, or mailed to the address indicated in Condition #2, in accordance with the phased recipient site monitoring and reporting requirements of the Permitting Guidelines, with the first report due April 30, 2025. The subsequent reports shall be received by the Gopher Tortoise Program's office by April 30th every three years thereafter for the first 15 years this permit is in effect. If the landowner has met monitoring and reporting requirements during the first 15 years, the monitoring and reporting requirement is reduced to every 5 years for the next 10 years. Following 25 years of successfully meeting all monitoring, habitat management and reporting requirement, reports are required every ten years. Reports shall contain the content and be in the form provided by the FWC and include the results of all monitoring and habitat management activities conducted through January 31st of the year the report is due.

7 All tortoises accepted and received at the recipient site must be covered under a valid FWC permit that specifically authorizes the relocation of those animals to this site.

8 All tortoises must be marked. The marginal scutes of tortoises $\geq$130 mm carapace length (CL) shall either be drilled or notched, and marginal scutes of juveniles < 130 mm CL notched. Passive Integrated Transponder (PIT) tags may be used as an alternative to drilling or notching the marginal scutes.

9 During colder months, tortoises shall only be captured and relocated when the low temperature at the recipient site is forecasted by the National Weather Service (www.nws.noaa.gov) to be above 50° F for three consecutive days [72 hours] after release (including the day of relocation). This three-day window of milder temperatures is required to allow the relocated tortoises to settle into the recipient site and reduce the chance of cold-related stress or mortality.

10 Permittee shall not accept gopher tortoises that show signs of disease (i.e., nasal and ocular discharge, emaciation, etc.). The Permittee should direct individuals that bring symptomatic tortoises to the recipient site to alternatively release those tortoises back within the donor/capture site; transport them to an FWC licensed wildlife rehabilitation center (list available upon request) or licensed veterinary facility for quarantine and observation for recovery and subsequent relocation; transport and donate them to an FWC permitted disease research program; or have them humanely euthanized by a licensed veterinarian when disease is advanced.

11 This permit does not authorize Permittee access to any public or private properties. Any required permission accordingly must be secured from the appropriate landholders prior to undertaking any work on such properties.

12 This permit can be suspended, revoked or not renewed for just cause pursuant to 68-1.010, F.A.C. and Chapter 120, Florida Statutes. It is non-transferable and must be readily available for inspection at all times while engaging in the permitted activities.

13 Up to 667 gopher tortoises may be received at and relocated to the estimated 266.53 acres of tortoise habitat contained within the 275.76-acre Mosaic Wellfield South recipient site identified above.

14 The Permittee, by signing this permit, specifically agrees to allow authorized Commission personnel, upon presentation of credentials as may be required by law, access to the recipient site, at reasonable times, for the purpose of inspecting the relocation and release activities authorized under this permit.

15 The Permittee shall provide the FWC with sufficient assurance that it retains the financial capability to conduct the habitat management necessary to enhance or maintain quality habitat for gopher tortoises by complying with the requirements of Sections 10.b.ii through 10.b.vi, and Section 16.e of Amendment 2 to the MOA, executed June 18, 2015.

16 Applications to amend this permit to authorize relocations of gopher tortoises to other units within this recipient site will be evaluated and acted upon by the FWC under either the Guidelines and MOA, if the amendment application is filed pursuant to the MOA; or under the rules, permitting guidelines and provision/conditions in place at the time of application. Specific areas within other units that are proposed to receive relocated tortoises will also be evaluated for their suitability during the application review process.

17 Receipt of gopher tortoises that are relocated but not pursuant to the MOA will be subject to the rules, permitting guidelines and provisions/conditions that are in effect at the time those activities are authorized. This provision only applies to gopher tortoise relocation permits that are not covered under the MOA, and does not require this

recipient site permit to be amended.

18 Gopher tortoises released at a recipient site shall be released into an enclosure in conformance with the FWC enclosure requirements. The enclosure must be maintained for a minimum period of six months from the date gopher tortoises were most recently released, but no longer than twelve months; however, the maximum 12-month time limit will not apply when the entire perimeter of the approved recipient site parcel is permanently fenced in conformance with the FWC enclosure requirements. Enclosure materials, construction methods and dimensions must conform to the requirements specified in the Guidelines. The enclosures must be regularly monitored and maintained, including the immediate repair of any damage to maintain the integrity of the enclosure. Monitoring of the enclosure shall be conducted at least once a week for the first four weeks following release of tortoises, and at least once a month thereafter.

A person whose substantial interests are affected by FWC's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. A person seeking a hearing on FWC's action shall file a petition for hearing with the agency within 21 days of receipt of written notice of the decision. The petition must contain the information and otherwise comply with section 120.569, Florida Statutes, and the uniform rules of the Florida Division of Administration, chapter 28-106, Florida Administrative Code. If the FWC receives a petition, FWC will notify the Permittee. The attached Explanation of Rights statement provides additional information as to the rights of parties whose substantial interests are or may be affected by this action.

SECTION 2

SIGNIFICANT UPLAND WILDLIFE HABITAT & WILDLIFE SUMMARY SUWH MONITORING REPORT ENVIRONMETAL REPORT WILDLIFE REPORTS & PERMITS

The Mosaic Company

Hillsborough County Consolidated Mines
DRI 263

2023/2024 Annual Report

SIGNIFICANT WILDLIFE HABITAT

In accordance with Condition I.14 of the approved DRI 263 Development Order the following is an update of:

1.) SUWH reclamation status within the Extension Areas of DRI 263 and;
2.) Wildlife relocation activity for the current reporting period

SIGNIFICANT UPLAND WILDLIFE HABITAT

(July 1, 2019 – June 30, 2024 Update)

In accordance with the Hillsborough County Reclamation Manual (HCRM) and/or the Significant Upland Wildlife Habitat Mitigation Plan, Mosaic is required to reclaim approximately 2,232 acres of land designated as Significant Upland Wildlife Habitat (SUWH). Ongoing discussions with County staff and field reviews conducted in 2021 have identified areas of SUWH that were not impacted and currently the reclamation of SUWH acres is ~2,079 acres. As defined in the above-mentioned Mitigation Plan/Reclamation Manual reclaimed SUWH will be deemed successful once particular vegetative and wildlife criteria have been successfully met.

Discussions with the County Development Services and Conservation & Environmental Lands Management Departments began in 2018 to address the required acreage of SUWH and other land management and conservation goals. This discussion is ongoing with the intent of finalizing acreage, location and final configuration of SUWH. The proposed approach consists of 3 phases: 1) review of approval letters for mining units and determination of baseline impacts, 2) analysis of actual impacts and field verification, and 3) analysis of areas restored to date. Actual impacts and field verifications are complete (2021), and third phase discussions have begun regarding areas to be transferred to the County. Regular meetings have been scheduled to keep this work moving forward.

This approach will help to better ensure all responsibility has been met and better align the SUWH footprint with the County's land management and conservation goals. Once these meetings are final a revised SUWH plan will be provided and reflect revised footprints and acreage. The attached SUWH maps have not been updated to reflect the recent discussions and field inspections as that work has not yet been formally submitted or approved.

Below is a brief summary of the reclamation efforts currently utilized in order to meet the SUWH reclamation success standards.

In 2023-24, Mosaic planted 35 acres with nursery grown containerized plants in the HPB(6) portion of SUWH. During the 2023-24 season all areas previously seeded or top soiled were treated to control nuisance and exotic vegetation.

(2024-2025 Proposed Activities)

Routine herbicide maintenance for nuisance and exotic plant species will continue in all SUWH areas. Supplemental plantings of desirable native species will be conducted as needed. Additional controlled/prescribed burns are planned for the 2024-25 burn season. As well, initial planting will take place in the SUWH areas within LRU HPB(6) and HPB(9), and supplemental planting will be done in LRU LMR(7) and LMR(6).

WILDLIFE RELOCATION ACTIVITY

Burrowing Owls

No owls were translocated from Hillsborough County during this report period.

Scrub Jays

No scrub jays were translocated from Hillsborough County during the annual report period. Included is the Twenty-Second Annual Florida Scrub Jay Management Activity Report, dated November 2023.

In summary, there are currently 34 family groups consisting of 99 individual scrub-jays being maintained by Mosaic Fertilizer, LLC within the Mosaic Wellfield – Manatee County Duette Preserve - SWFWMD Coker Tract Subpopulation. Furthermore, descendants of translocated birds have dispersed to Little Manatee River State Park, FWC Moody Branch Park, and DEP Wingate State Park. The total regional population now numbers 60+ groups and is growing. USFWS permit criteria requires Mosaic to maintain at least14 groups. Currently Mosaic is meeting and surpassing USFWS permit criteria. In addition, Mosaic is using the last 22 years of data collection to understand best practices for Florida Scrub-Jay translocations and ascertain if additional measures, such as increased genetic heterogeneity is needed for conservation of this population.

Habitat management activities undertaken in 2022 and 2023 have included two scrub fires totaling 700 acres, the second of which was designed to top kill much of the tall oak. Large oaks establishing in the palmetto prairie outside of the fire zone were felled, and overall condition of scrub habitat and the adjacent non-scrub habitats at the Mosaic Wellfield were improved. In addition, non-native nuisance species are treated and are currently maintained below 1% at the Wellfield site.

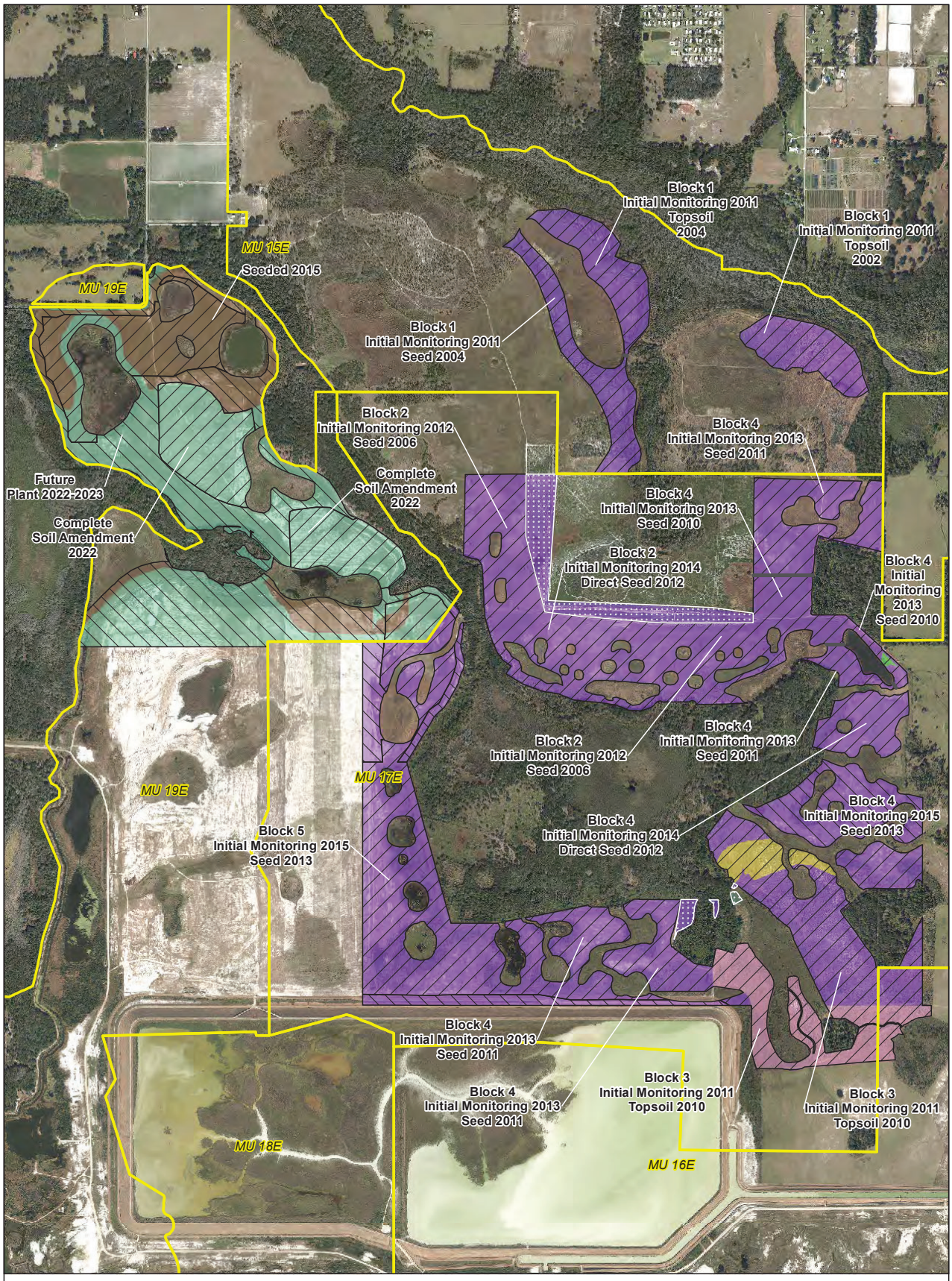
Gopher Tortoises

All relocation of gopher tortoises and commensal species was conducted under the authorization of Florida Fish & Wildlife Conservation Commission (FFWCC) Gopher Tortoise Conservation Permit No. GTC-19-00286B as well as the Restated and Amended Memorandum of Agreement Regarding Gopher Tortoises on Mosaic Land (FWC Contract: 12375) (MOA).

Between 7/1/2023 and 6/30/2024, gopher tortoise surveying and relocations occurred within Hillsborough County at

- Four Corners/Lonesome Mine - Walkpath (Prior-Notice Unanticipated)
- Four Corners/Lonesome Mine - LMR(12A)
- Lonesome Mine - Mining Unit 13 Part 2 (Prior-Notice Unanticipated Relocation)

A total of 11 gopher tortoises (6 males, 4 females, and 1 hatchling) were captured, marked, and then transported and released to the Lykes Brothers Fisheating Creek long-term protected gopher tortoise recipient site (Units 3 and 14).



Legend

- Mining Unit Boundaries
- **Construction Phase**
  - Complete
  - Future
  - Not Mined
- LMU 18 (0.5 Ac.)
- LMU 19 (15.5 Ac.)
- LMU19A (0.6 Ac.)
- LMU 20 (265.0 Ac.)
- MU 17E (797.9 Ac.)
- MU 19E (278.6 Ac.)
- MU 20E (110.5 Ac.)

N

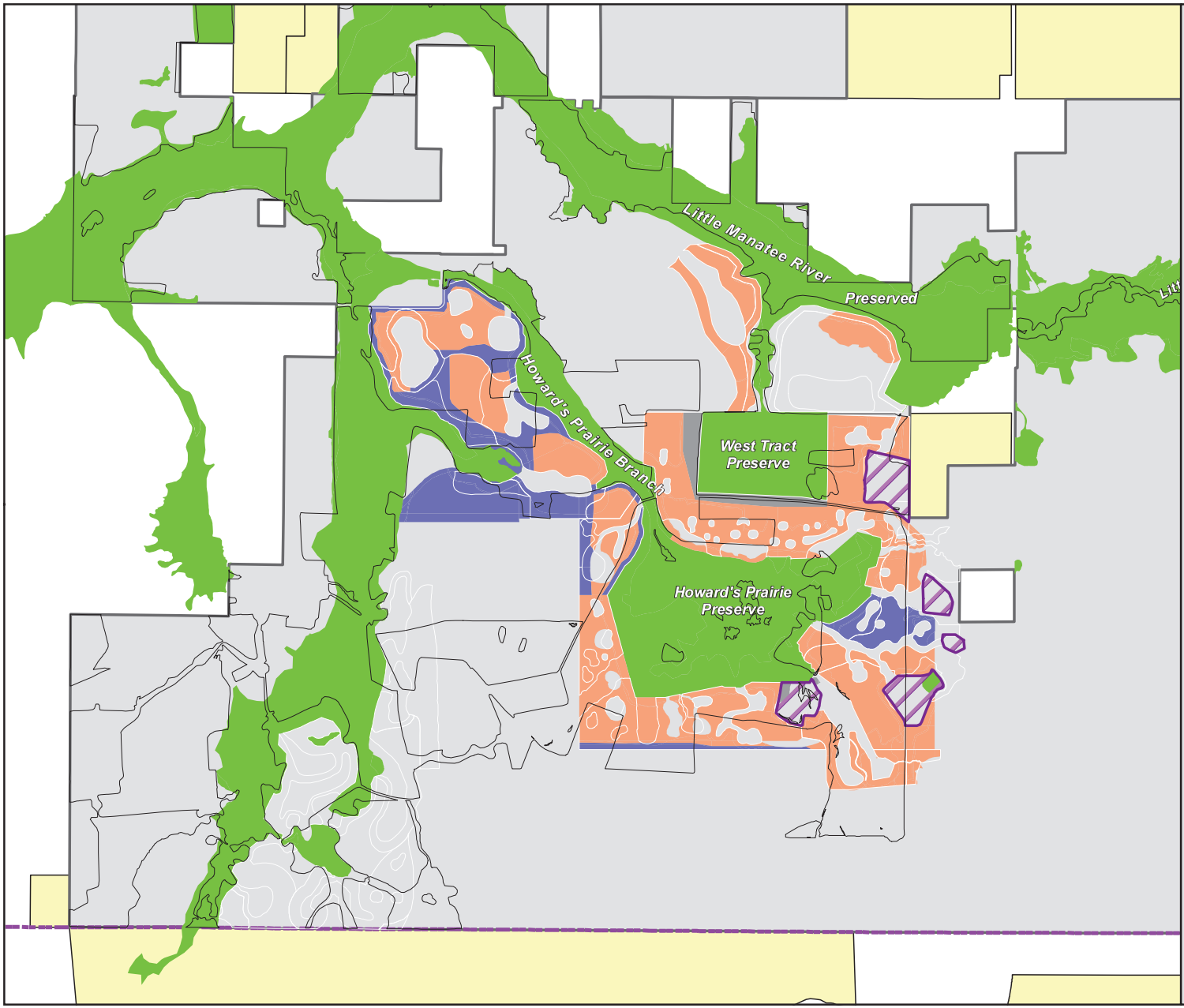
0 1,500 Feet

Mosaic

Four Corners / Lonesome Mine
DRI 263
SUWH 2023-2024
Reclamation Status

Aerial Flown: December 2021

User: keb Date: 7/18/2024
Path: G:\projects\2023\2023_0046\maps\SUWH Maps\SUWH 2024 07.mxd



N
W E
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0 2,500
Feet

Mosaic

Four Corners/Lonesome Mine
DRI 263 - Extension Areas
Post Reclamation
Significant Wildlife Habitat Progress

- County Verified Significant Wildlife Habitat
- Under Current Conservation Easement by EPCHC
- Approved SUWH Plan *
- Constructed
- To be Constructed
- Not Mined
- Preservation Areas, Conservation Easements & 25 Year Floodplain
- County Lines
- DRI 213 - Extension Areas
- Other Mosaic Holdings

* Approved SUWH Areas - Exact Location Dependent Upon Land Donation Settlement

Submitted for 2023/2024
Hillsborough County Annual Report

User: keb Date: 7/18/2024
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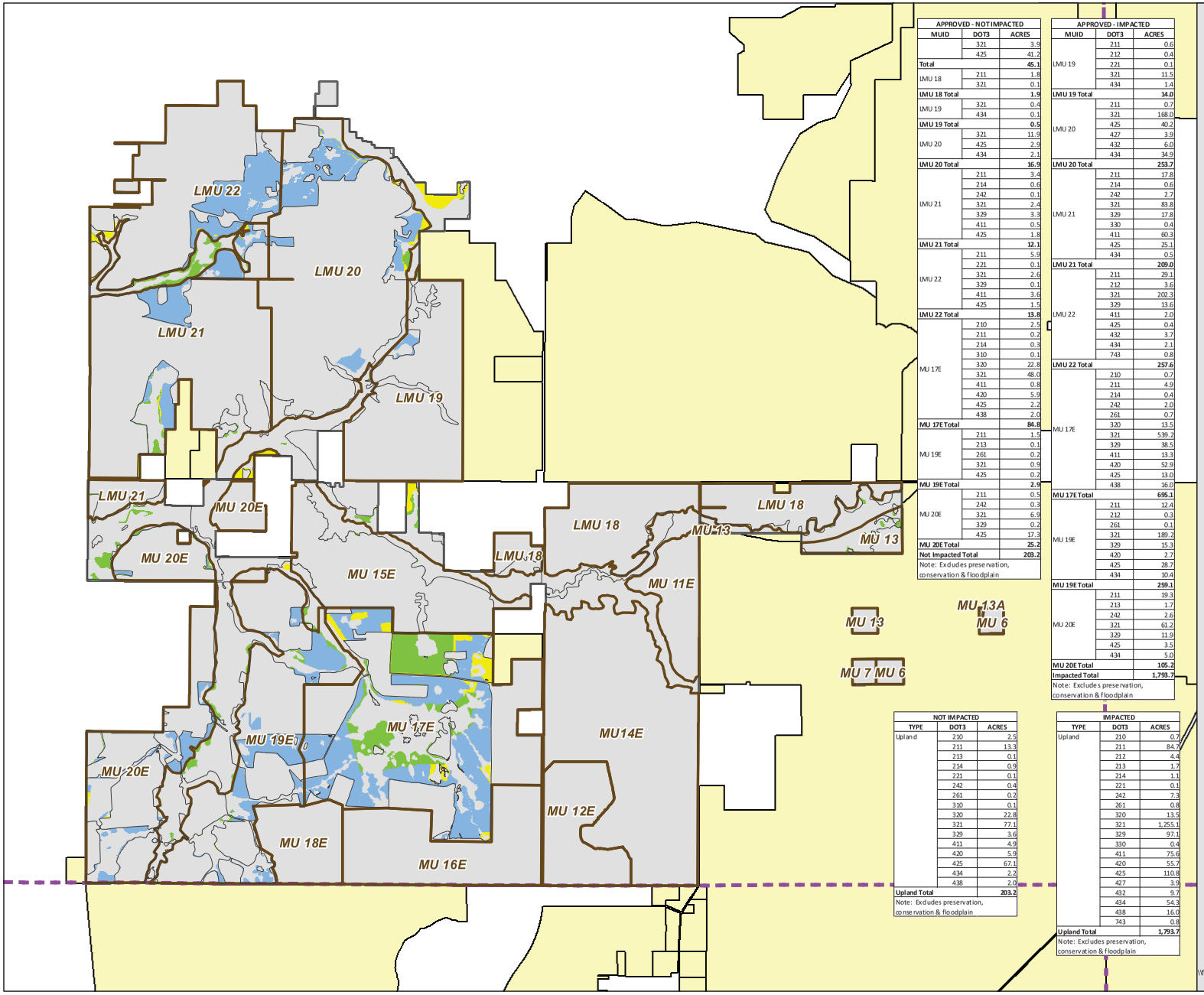

APPROVED - NOT IMPACTED		
MUID	DOT3	ACRES
	321	3.9
	425	41.2
Total		**45.1**
LMU 18	211	1.8
	321	0.1
LMU 18 Total		**1.9**
LMU 19	321	0.4
	434	0.1
LMU 19 Total		**0.5**
LMU 20	321	11.9
	425	2.9
	434	2.1
LMU 20 Total		**16.9**
LMU 21	211	3.4
	214	0.6
	242	0.1
	321	2.4
	329	3.3
	411	0.5
	425	1.8
LMU 21 Total		**12.1**
LMU 22	211	5.9
	221	0.1
	321	2.6
	329	0.1
	411	3.6
	425	1.5
LMU 22 Total		**13.8**
MU 17E	210	2.5
	211	0.2
	214	0.3
	310	0.1
	320	22.8
	321	48.0
	411	0.8
	420	5.9
	425	2.2
	438	2.0
MU 17E Total		**84.8**
MU 19E	211	1.5
	213	0.1
	261	0.2
	321	0.9
	425	0.2
MU 19E Total		**2.9**
MU 20E	211	0.5
	242	0.3
	321	6.9
	329	0.2
	425	17.3
MU 20E Total		**25.2**
Not Impacted Total		**203.2**
Note: Excludes preservation, conservation & floodplain		

APPROVED - IMPACTED		
MUID	DOT3	ACRES
LMU 19	211	0.6
	212	0.4
	221	0.1
	321	11.5
	434	1.4
LMU 19 Total		**14.0**
LMU 20	211	0.7
	321	168.0
	425	40.2
	427	3.9
	432	6.0
	434	34.9
LMU 20 Total		**253.7**
LMU 21	211	17.8
	214	0.6
	242	2.7
	321	83.8
	329	17.8
	330	0.4
	411	60.3
	425	25.1
	434	0.5
LMU 21 Total		**209.0**
LMU 22	211	29.1
	212	3.6
	321	202.3
	329	13.6
	411	2.0
	425	0.4
	432	3.7
	434	2.1
	743	0.8
LMU 22 Total		**257.6**
MU 17E	210	0.7
	211	4.9
	214	0.4
	242	2.0
	261	0.7
	320	13.5
	321	539.2
	329	38.5
	411	13.3
	420	52.9
	425	13.0
	438	16.0
MU 17E Total		**695.1**
MU 19E	211	12.4
	212	0.3
	261	0.1
	321	189.2
	329	15.3
	420	2.7
	425	28.7
	434	10.4
MU 19E Total		**259.1**
MU 20E	211	19.3
	213	1.7
	242	2.6
	321	61.2
	329	11.9
	425	3.5
	434	5.0
MU 20E Total		**105.2**
Impacted Total		**1,793.7**
Note: Excludes preservation, conservation & floodplain		

NOT IMPACTED		
TYPE	DOT3	ACRES
Upland	210	2.5
	211	13.3
	213	0.1
	214	0.9
	221	0.1
	242	0.4
	261	0.2
	310	0.1
	320	22.8
	321	77.1
	329	3.6
	411	4.9
	420	5.9
	425	67.1
	434	2.2
	438	2.0
Upland Total		**203.2**
Note: Excludes preservation, conservation & floodplain		

IMPACTED		
TYPE	DOT3	ACRES
Upland	210	0.7
	211	84.7
	212	4.4
	213	1.7
	214	1.1
	221	0.1
	242	7.3
	261	0.8
	320	13.5
	321	1,255.1
	329	97.1
	330	0.4
	411	75.6
	420	55.7
	425	110.8
	427	3.9
	432	9.7
	434	54.3
	438	16.0
	743	0.8
Upland Total		**1,793.7**
Note: Excludes preservation, conservation & floodplain		

N
W E
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0 5,000 Feet

Mosaic

Four Corners/Lonesome Mine
DRI 263 - Extension Areas
Pre-mining
Significant Wildlife Habitat Status
Map 71 - 2023

Revised July 30, 2023

Legend

- County Verified Significant Wildlife Habitat
- Mining Unit Boundaries
- County Lines
- Significant Wildlife Habitat Impacts (Pre 2022)
- Significant Wildlife Habitat Preservation, Conservation & Floodplain
- Significant Wildlife Habitat Not Impacted
- DRI 213 - Extension Areas
- Other Mosaic Holdings

2023 IMPACTS
0.0 UPLAND ACRES

Submitted for 2023/2024
Hillsborough County Annual Report

User: keb Date: 7/18/2024
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SUWH MONITORING REPORTS

FOUR CORNERS MINE
ANNUAL MONITORING REPORT

JUNE 2023 (SPRING)
DECEMBER 2023 (FALL)

SIGNIFICANT UPLAND WILDLIFE MONITORING
MUs 15E, 16E, 17E, AND 19E

2006 HILLSBOROUGH COUNTY PHOSPHATE MINING RECLAMATION MANUAL

HILLSBOROUGH COUNTY, FLORIDA

Submitted to:

Hillsborough County Florida

601 E. Kennedy Blvd.
Tampa, FL 33602

Submitted by:

Mosaic

13830 Circa Crossing Drive
Lithia, Florida 33547

Prepared by:

KLEINFELDER
Bright People. Right Solutions.

1907 North US Highway 301, Suite 100
Tampa, Florida 33619
(KLF #24000777.001A)

FOUR CORNERS MINE
ANNUAL MONITORING REPORT
JUNE 2023 (SPRING)
DECEMBER 2023 (FALL)
SIGNIFICANT UPLAND WILDLIFE MONITORING
MUs 15E, 16E, 17E, AND 19E
2006 HILLSBOROUGH COUNTY PHOSPHATE MINING RECLAMATION MANUAL
HILLSBOROUGH COUNTY, FLORIDA

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FALL (Continued)

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ANNUAL MONITORING REPORT
JUNE 2023 (SPRING)
DECEMBER 2023 (FALL)
SIGNIFICANT UPLAND WILDLIFE MONITORING
MUs 15E, 16E, 17E, AND 19E
2006 HILLSBOROUGH COUNTY PHOSPHATE MINING RECLAMATION MANUAL
HILLSBOROUGH COUNTY, FLORIDA

EXECUTIVE SUMMARY

This annual monitoring report for the Four Corners Mine - Significant Upland Wildlife Habitat (SUWH), MUs 15E, 16E, 17E, and 19E area includes the results for the 2023 Spring and Fall monitoring events. The 2023 Spring Monitoring event was conducted on June 1st, 8th, 9th, 13th, 21st, and 25th 2023. The 2023 Fall Monitoring event was conducted on December 18th - 21st 2023. The SUWH will be considered successful when the following conditions are met:

Hillsborough County Phosphate Mining Reclamation Manual (2006) Volume 1.V.B. Release Criteria	Current Status of SUWH Site	Success Criteria Demonstrated
1.Natural plant communities mitigating mapped significant upland habitat must have the species, areal coverage/ projected areal coverage, quantities, and diversity of trees, shrubs, and ground cover consistent with Tables 2, 3, 4, and 5 as appropriate unless other plant lists and/or success criteria are otherwise specified as conditions of approval of the mining unit.	Evaluated in Executive Tables below	Yes
2. The landward extent and areas water ward of the proposed limits for RA wetlands must also meet criteria as described in Chapter 62-340, F.A.C. inclusive of vegetation and evidence of hydrology or hydric soil characteristics.	Site consists of uplands only	NA

EXECUTIVE SUMMARY (Continued)

Hillsborough County Phosphate Mining Reclamation Manual (2006) Volume 1.V.B. Release Criteria	Current Status of SUWH Site			Success Criteria Demonstrated
	# Spp. Reproducing			
	Land Use (Land Status)	Spring	Fall	
3. Documentation of the species from each stratum, exclusive of nuisance species, with viable seed set for each of the natural plant communities. Seedlings, saplings, or other 'young' vegetation may be considered proof of flowering and/or viable seed.	Dry Prairie (Reclamation)	103	71	Yes (Yr. 3)
	Dry Prairie (Enhancement)	66	12	Yes (Yr. 3)
	Dry Prairie (Native Area)	26	27	Yes (Yr. 3)
	Pine Flatwoods (Reclamation)	58	66	Yes (Yr. 3)
	Pine Flatwoods (Enhancement)	42	21	Yes (Yr. 3)
	Pine Flatwoods (Native Area)	13	23	Yes (Yr. 3)
	Temperate Hardwoods (Reclamation)	50	24	Yes (Yr. 3)
	Temperate Hardwoods (Enhancement)	16	14	Yes (Yr. 3)
	Temperate Hardwoods (Native Area)	37	6	Yes (Yr. 3)
	Xeric Oak (Reclamation)	24	6	Yes (Yr. 3)
	Xeric Oak (Enhancement)	15	17	Yes (Yr. 3)
	Xeric Oak (Native Area)	8	12	Yes (Yr. 3)

FOUR CORNERS MINE
ANNUAL MONITORING REPORT
JUNE 2023 (SPRING)
DECEMBER 2023 (FALL)
SIGNIFICANT UPLAND WILDLIFE MONITORING
MUs 15E, 16E, 17E, AND 19E
2006 HILLSBOROUGH COUNTY PHOSPHATE MINING RECLAMATION MANUAL
HILLSBOROUGH COUNTY, FLORIDA

EXECUTIVE SUMMARY (Continued)

Hillsborough County Phosphate Mining Reclamation Manual (2006) Volume 1.V.B. Release Criteria	Current Status of SUWH Site			Success Criteria Demonstrated
4. Table 6 provides a list of native vertebrate species known or suspected to occur in HC. These vertebrates form the pool from which representative species can be sampled to evaluate the success of the rehabilitation area. Table 6 includes both the permanent native resident fauna and migratory birds, which depend heavily on the Florida landscape for their survival and are an important component of the consumer food web. Each RA will be evaluated separately unless connected by a wildlife corridor (exclusive of avifauna corridors). Success criteria will only use those vertebrate species appropriate for the plant communities contained within each RA i.e., fish criteria will not be used if the RA consists of only upland plant communities.	**# Of HC Native Vertebrates**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Dry Prairie (Reclamation)	67	72	Yes (Yr. 2)
	Dry Prairie (Enhancement)	40	39	Yes (Yr. 2)
	Dry Prairie (Native Area)	31	31	Yes (Yr. 2)
	Pine Flatwoods (Reclamation)	50	47	Yes (Yr. 2)
	Pine Flatwoods (Enhancement)	27	25	Yes (Yr. 2)
	Pine Flatwoods (Native Area)	33	20	Yes (Yr. 2)
	Temperate Hardwoods (Reclamation)	23	21	Yes (Yr. 2)
	Temperate Hardwoods (Enhancement)	29	23	Yes (Yr. 2)
	Temperate Hardwoods (Native Area)	17	19	Yes (Yr. 2)
	Xeric Oak (Reclamation)	20	23	Yes (Yr. 2)
	Xeric Oak (Enhancement)	38	33	Yes (Yr. 2)
	Xeric Oak (Native Area)	25	22	Yes (Yr. 2)
5. Wildlife Success Criteria for each RA are intended to be flexibly applied in light of certain factors including, but not limited to, future and adjacent land uses and inherent uncertainties involved in documenting wildlife species presence onsite: a. Fishes: For connected wetlands combined (forested and freshwater marshes), a minimum of four forage species (prey base primarily plants and invertebrates), and one top carnivore species (eats other fish).	**# Spp. Observed**			NA
	Site consists of uplands only			

FOUR CORNERS MINE
ANNUAL MONITORING REPORT
JUNE 2023 (SPRING)
DECEMBER 2023 (FALL)
SIGNIFICANT UPLAND WILDLIFE MONITORING
MUs 15E, 16E, 17E, AND 19E
2006 HILLSBOROUGH COUNTY PHOSPHATE MINING RECLAMATION MANUAL
HILLSBOROUGH COUNTY, FLORIDA

EXECUTIVE SUMMARY (Continued)

Hillsborough County Phosphate Mining Reclamation Manual (2006) Volume 1.V.B. Release Criteria	Current Status of SUWH Site			Success Criteria Demonstrated
	# Spp. Observed			
b. Amphibians: For upland plant communities combined, a minimum of three anurian species, as documented by occurrence in the uplands or at their breeding ponds (isolated wet prairies or freshwater marshes). For connected wetlands combined (forested and freshwater wetlands), a minimum of three anuran species and one salamander species.		**Spring**	**Fall**	
	3 Anurian Species	5	4	Yes (Yr. 2)
	# Spp. Observed			
c. Birds: For upland plant communities combined, a minimum of 20 total resident species represented by at least three birds of prey species (Falconiformes or Strigiformes); one dove species (Columbiformes); one woodpecker species (Piciformes); and 10 songbird species (Passeriformes) represented by at least one member of the following families: Emberizidae, Hirundinidae, Icteridae, Mimidae, Troglodytidae, Trannidae, and Vireonidae; and at least two members of the Parulidae family. For wetland plant communities combined, a total of 18 total resident species represented by at least two waterfowl species (Anseriformes or Podicipediformes), one shorebird species (Charadriiformes), four wading birds species (Ciconiformes), one member of cranes and their allies (Guiformes), two bird of prey species (Falconiformes or Strigiformes) and four songbird species (Passeriformes) from at least two families.		**Spring**	**Fall**	
	3 Birds of Prey Species:	8	8	Yes (Yr. 2)
	1 Dove Species:	2	2	Yes (Yr. 2)
	1 Woodpecker Species:	3	2	Yes (Yr. 2)
	<u>Songbird Species</u>			
	1 Emberizidae:	3	3	Yes (Yr. 2)
	1 Hirundinidae:	1	1	Yes (Yr. 2)
	1 Icteridae:	4	4	Yes (Yr. 2)
	1 Mimidae:	2	2	Yes (Yr. 2)
	1 Troglodytidae:	2	2	Yes (Yr. 2)
	1 Trannidae:	2	1	Yes (Yr. 2)
	1 Vireonidae:	1	1	Yes (Yr. 2)
	2 Parulidae:	3	2	Yes (Yr. 2)
	Total Songbird Species Observed (10):	27	23	Yes (Yr. 2)
	Total Resident Species (20):	32	30	Yes (Yr. 2)

EXECUTIVE SUMMARY (Continued)

Hillsborough County Phosphate Mining Reclamation Manual (2006) Volume 1.V.B. Release Criteria	Current Status of SUWH Site			Success Criteria Demonstrated
d. Reptiles: For upland plant communities combined, a minimum of two lizard species, one herbivorous turtle species, and three snake species with a total reptilian diversity of at least seven species. For wetland plant communities, a minimum of two turtle species (represented by at least one herbivore and one carnivore) and two snake species with a minimum reptilian diversity of at least five species.	**#Spp. Observed**			
		Spring	**Fall**	
	2 Lizard Species:	3	2	Yes (Yr. 2)
	1 Turtle Species:	2	3	Yes (Yr. 2)
	3 Snake Species:	3	3	Yes (Yr. 2)
	Total # Spp. Observed (5):	8	8	Yes (Yr. 2)
e. Mammals: For upland plant communities combined, a minimum of eight total species represented by at least three small mammal species (Insectivora or Rodentia), one rabbit species (Lagomorpha), the opossum (Marsupiala), and two carnivore species (Carnivora). For wetland plant communities combined, a minimum of five total species represented by at least one small mammal species (Rodentia), one rabbit species (Lagomorpha), and two carnivore species (Carnivora).	**# Spp. Observed**			
		Spring	**Fall**	
	3 Small Mammal Species:	2	1	No
	1 Rabbit Species:	1	2	Yes (Yr. 2)
	Opossum:	1	1	Yes (Yr. 2)
	2 Carnivore Species:	3	4	Yes (Yr. 2)
	Total # Spp. Observed (8):	8	9	Yes (Yr. 1)

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EXECUTIVE SUMMARY (Continued)

Hillsborough County Phosphate Mining Reclamation Manual (2006) Volume 1.V.C.1 Management Guidelines	Current Status of SUWH Site			Success Criteria Demonstrated
Category 1 and 2 nuisance exotic species (as defined by the Florida Exotic Pest Plant Council (FLEPPC), most recent available list) abundance shall not exceed 10 percent aggregate areal coverage at any time in any RA, or within any individual plant community. The following species listed in Subsection C.1 of Section V must be managed so that areal coverage does not exceed 10 percent areal coverage within an RA or within any individual plant community at any time: Australian pine (*Casuarina spp.*), bermudagrass (*Cynodon dactylon*), air potato (*Dioscorea bulbifera*), water-hyacinth (*Eichhornia crassipes*), hydrilla (*Hydrilla verticillata*), cogongrass (*Imperata spp.*), climbing fern (*Lygodium spp.*), skunkvine (*Paederia foetida*), bahiagrass (*Paspalum notatum*) – except for erosion control as referenced, (downy rose myrtle (*Rhodomyrtus tomentosa*), Chinese tallowtree (*Sapium sebiferum*), Brazilian peppertree (*Schinus terebinthifolius*), tropical soda apple (*Solanum viarum)*, punk tree (*Melaleuca quinquenervia*), rose natal grass (*Rhynchelytrum repens*)	**Nuisance Species Cover**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Dry Prairie (Reclamation)	11.5%	12.4%	No
	Dry Prairie (Enhancement)	20.8%	27.9%	No
	Dry Prairie (Native Area)	1.5%	2.1%	Yes (Yr. 1)
	Pine Flatwoods (Reclamation)	16.9%	19.5%	No
	Pine Flatwoods (Enhancement)	34.5%	0.0%	Yes (Yr. 1)
	Pine Flatwoods (Native Area)	0.0%	0.3%	Yes (Yr. 2)
	Temperate Hardwoods (Reclamation)	25.8%	20.1%	No
	Temperate Hardwoods (Enhancement)	0.3%	2.7%	Yes (Yr. 2)
	Temperate Hardwoods (Native Area)	18.2%	25.4%	No
	Xeric Oak (Reclamation)	18.2%	13.1%	No
	Xeric Oak (Enhancement)	6.6%	0.0%	Yes (Yr. 2)
	Xeric Oak (Native Area)	0.1%	0.2%	Yes (Yr. 2)

EXECUTIVE SUMMARY (Continued)

Hillsborough County Phosphate Mining Reclamation Manual (2006) Table 5. Number/Areal Coverage Requirements	Current Status of SUWH Site			Success Criteria Demonstrated
For Dry Prairies				
Total groundcover must be greater than or equal to 50% and have a minimum of 30 groundcover species consistent of appropriate Dry Prairie plant communities.	**Total Groundcover / # HCPMRM Listed Species**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Dry Prairie (Reclamation):	77.0% / 68	84.8% / 53	Yes (Yr. 2)
	Dry Prairie (Enhancement):	31.3% / 50	84.5% / 13	Yes (Yr. 1)
	Dry Prairie (Native Area):	76.1% / 43	94.8% / 38	Yes (Yr. 2)
Total canopy cover must be less than 5%.	**Canopy Cover**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Dry Prairie (Reclamation):	2.9%	4.1%	Yes (Yr. 1)
	Dry Prairie (Enhancement):	0.0%	1.3%	Yes (Yr. 2)
	Dry Prairie (Native Area):	0.6%	0.0%	Yes (Yr. 1)
Total shrubs per acre must be greater than or equal to 20 shrubs per acre (shrubs/acre) and consist of a minimum of five appropriate dry prairie shrub species.	**Shrub Density (shrubs/acre) / # HCPMRM Listed Species**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Dry Prairie (Reclamation):	104 / 4	61 / 2	No
	Dry Prairie (Enhancement):	0 / 0	0 / 0	No
	Dry Prairie (Native Area):	684 / 1	172 / 1	No

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EXECUTIVE SUMMARY (Continued)

Hillsborough County Phosphate Mining Reclamation Manual (2006) Table 5. Number/Areal Coverage Requirements	Current Status of SUWH Site			Success Criteria Demonstrated
For Pine Flatwoods				
Total mesic groundcover species must be greater than or equal to 50% total cover and xeric groundcover species must be greater than or equal to 35%. A minimum of 30 groundcover species consistent of appropriate Pine Flatwoods plant communities must be present.	**Mesic Groundcover / Xeric Groundcover / # HCPMRM Listed Species**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Pine Flatwoods (Reclamation):	27.6% / 37.6% / 58	24.1% / 56.5% / 64	No
	Pine Flatwoods (Enhancement):	38.7% / 48.5% / 60	56.1% / 19.8% / 28	No
	Pine Flatwoods (Native Area):	47.6% / 12.7% / 29	48.7% / 33.7% / 29	No
Total canopy cover must be 10% and have between 15-100 Trees Per Acre (trees/acre). A minimum of 3-4 appropriate Pine Flatwoods tree species must be present.	**Total Canopy Cover / Trees Density (trees/acre) / # HCPMRM Listed Species**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Pine Flatwoods (Reclamation):	56.8% / 160 / 7	20.8% / 136 / 5	No
	Pine Flatwoods (Enhancement):	33.2% / 66 / 3	40.4% / 1,014 / 6	Yes (Yr. 1)
	Pine Flatwoods (Native Area):	78.4% / 479 / 5	2.4% / 173 / 3	No
Total shrubs per acre must be greater than or equal to 100 shrubs per acre (shrubs/acre) and have a minimum of 5-8 appropriate Pine Flatwoods shrub species.	**Shrub Density (shrubs/acre) / # HCPMRM Listed Species**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Pine Flatwoods (Reclamation):	84 / 2	54 / 2	No
	Pine Flatwoods (Enhancement):	200 / 2	360 / 2	No
	Pine Flatwoods (Native Area):	1,414 / 6	1,199 / 3	Yes (Yr. 1)

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EXECUTIVE SUMMARY (Continued)

Hillsborough County Phosphate Mining Reclamation Manual (2006) Table 5. Number/Areal Coverage Requirements	Current Status of SUWH Site			Success Criteria Demonstrated
For Temperate Hardwoods				
Total groundcover must be greater than or equal to 50% and have a minimum of 20 groundcover species consistent of appropriate Temperate Hardwoods plant communities.	**Total Groundcover / # HCPMRM Listed Species**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Temperate Hardwoods (Reclamation):	91.4% / 22	53.6% / 16	Yes (Yr. 2)
	Temperate Hardwoods (Enhancement):	58.4% / 25	91.5% / 14	Yes (Yr. 1)
	Temperate Hardwoods (Native Area):	47.9% / 40	68.1% / 11	Yes (Yr. 1)
Total canopy cover must be 30% and have greater than or equal to 200 Trees Per Acre (trees/acre) and have a minimum of 8-10 appropriate Temperate Hardwoods tree species present.	**Canopy Cover / Tree Density (trees/acre) / # HCPMRM Listed Species**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Temperate Hardwoods (Reclamation):	7.4% / 28 / 2	4.7% / 63 / 3	No
	Temperate Hardwoods (Enhancement):	31.9% / 293 / 7	12.2% / 265 / 4	No
	Temperate Hardwoods (Native Area):	118.2% / 170 / 4	1.9% / 293 / 4	No
Total shrubs per acre must be greater than or equal to 50 shrubs per acre (shrubs/acre) and consist of a minimum of 5-8 appropriate Temperate Hardwoods shrub species.	**Shrub Density (shrubs/acre) / # HCPMRM Listed Species**			
	Land Use (Land Status)	**Spring**	**Fall**	
	Temperate Hardwoods (Reclamation):	17 / 1	103 / 2	No
	Temperate Hardwoods (Enhancement):	293 / 2	40 / 1	No
	Temperate Hardwoods (Native Area):	0 / 0	1,014 / 1	No

EXECUTIVE SUMMARY (Continued)

<table>
<tr><th>Hillsborough County
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Table 5. Number/Areal Coverage Requirements</th><th colspan="3">Current Status of SUWH Site</th><th>Success Criteria Demonstrated</th></tr>
<tr><td colspan="5">For Xeric Oak</td></tr>
<tr><td rowspan="5">Total groundcover must be greater than or equal to 35% and have a minimum of 30 groundcover species consistent of appropriate Xeric Oak plant communities present.</td><td colspan="3">Total Groundcover /
HCPMRM Listed Species</td><td rowspan="5"></td></tr>
<tr><td>Land Use (Land Status)</td><td>Spring</td><td>Fall</td></tr>
<tr><td>Xeric Oak (Reclamation):</td><td>65.0% / 19</td><td>62.0% / 7</td><td>No</td></tr>
<tr><td>Xeric Oak (Enhancement):</td><td>85.7% / 23</td><td>79.6% / 17</td><td>No</td></tr>
<tr><td>Xeric Oak (Native Area):</td><td>45.7% / 11</td><td>67.6% / 12</td><td>No</td></tr>
<tr><td rowspan="5">Total shrubs per acre must be greater than or equal to 200 shrubs per acre (shrubs/acre) and have a minimum of 5-8 appropriate Xeric Oak shrub species.</td><td colspan="3">Shrub Density (shrubs/acre) /
HCPMRM Listed Species</td><td rowspan="5"></td></tr>
<tr><td>Land Use (Land Status)</td><td>Spring</td><td>Fall</td></tr>
<tr><td>Xeric Oak (Reclamation):</td><td>120 / 1</td><td>80 / 1</td><td>No</td></tr>
<tr><td>Xeric Oak (Enhancement):</td><td>600 / 2</td><td>333 / 1</td><td>No</td></tr>
<tr><td>Xeric Oak (Native Area):</td><td>920 / 1</td><td>187 / 1</td><td>No</td></tr>
</table>

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1.0 INTRODUCTION

This report represents the results for the 2023 biannual monitoring surveys at the Four Corners Mine, Significant Upland Wildlife Habitat (SUWH), Mining Units 15E, 16E, 17E, and 19E. The Four Corners Mine SUWH is located in Sections 13-15, 19, 22-28, 30, 33-36, Township 32 South, Range 21 and 22 East, Hillsborough County, Florida (Figures 1 and 1A). Monitoring was conducted according to the methodologies outlined within the Hillsborough County Phosphate Mining Reclamation Manual (HCPMRM). The following table summarizes the SUWH areas that were monitored for this event:

Land Use	Land Status	Annual Event	Acreage
Dry Prairie	Reclamation	Third	946.4
Dry Prairie	Enhancement	Third	16.2
Dry Prairie	Native Area	Third	150.7
Pine Flatwoods	Reclamation	Third	310.2
Pine Flatwoods	Enhancement	Third	33.2
Pine Flatwoods	Native Area	Third	73.7
Temperate Hardwoods	Reclamation	Third	93.9
Temperate Hardwoods	Enhancement	Third	14.1
Temperate Hardwoods	Native Area	Third	63.0
Xeric Oak	Reclamation	Third	62.2
Xeric Oak	Enhancement	Third	20.8
Xeric Oak	Native Area	Third	21.4
Total			**1805.8**

2.0 CONSTRUCTION SUMMARY

Mining occurred in mid-2000's and the area was contoured to the final grade consistent with a Dry Prairie, Pine flatwoods, Temperate Hardwoods, and Xeric Oak community types. Topsoil consisting of native soils and vegetation material for reclamation areas were spread at depths ranging from 6-12 inches. Between 2004 and 2012, seeding occurred on previously mined soils consisting of sand tailings and overburden. A detailed planting list is provided in Appendix A.

3.0 RELEASE CRITERIA

Volume 1.V.B.
Per Volume 1.V.B., 1.V.C., and Table 5 of the Hillsborough County Phosphate Mining Reclamation Manual (HCPMRM): For Reclamation Areas (RA) to be considered successful and released from further monitoring or reclamation obligations, the following criteria shall be met:

1. Natural plant communities mitigating mapped significant upland habitat must have the species, areal coverage/projected areal coverage, quantities, and diversity of trees, shrubs, and ground cover consistent with Tables 2, 3, 4, and 5 as appropriate unless other plant lists and/or success criteria are otherwise specified as conditions of approval of the mining unit.

2. The landward extent and areas water ward of the proposed limits for RA wetlands must also meet criteria as described in Chapter 62-340, F.A.C. inclusive of vegetation and evidence of hydrology or hydric soil characteristics.

3. Documentation of the species from each stratum, exclusive of nuisance species, with viable seed set for each of the natural plant communities. Seedlings, saplings, or other 'young' vegetation may be considered proof of flowering and/or viable seed.

4. Table 6 provides a list of native vertebrate species known or suspected to occur in HC. These vertebrates form the pool from which representative species can be sampled to evaluate the success of the rehabilitation area. Table 6 includes both the permanent native resident fauna and migratory birds, which depend heavily on the Florida landscape for their survival and are an important component of the consumer food web. Each RA will be evaluated separately unless connected by a wildlife corridor (exclusive of avifauna corridors). Success criteria will only use those vertebrate species appropriate for the plant communities contained within each RA i.e., fish criteria will not be used if the RA consists of only upland plant communities.

5. Wildlife Success Criteria for each RA are intended to be flexibly applied in light of certain factors including, but not limited to, future and adjacent land uses and inherent uncertainties involved in documenting wildlife species presence onsite:

> a. Fishes: For connected wetlands combined (forested and freshwater marshes), a minimum of four forage species (prey base primarily plants and invertebrates), and one top carnivore species (eats other fish).
>
> b. Amphibians: For upland plant communities combined, a minimum of three anurian species, as documented by occurrence in the uplands or at their breeding ponds (isolated wet prairies or freshwater marshes). For connected wetlands combined (forested and freshwater wetlands), a minimum of three anuran species and one salamander species.
>
> c. Birds: For upland plant communities combined, a minimum of 20 total resident species represented by at least three birds of prey species (Falconiformes or Strigiformes); one dove species (Columbiformes); one woodpecker species (Piciformes); and 10 song bird species (Passeriformes) represented by at least one member of the following families:

Emberizidae, Hirundinidae, Icteridae, Mimidae, Troglodytidae, Trannidae, and Vireonidae; and at least two members of the Parulidae family.

For wetland plant communities combined, a total of 18 total resident species represented by at least two waterfowl species (Anseriformes or Podicipediformes), one shorebird species (Charadriiformes), four wading birds species (Ciconiformes), one member of cranes and their allies (Guiformes), two bird of prey species (Falconiformes or Strigiformes) and four songbird species (Passeriformes) from at least two families.

d. Reptiles: For upland plant communities combined, a minimum of two lizard species, one herbivorous turtle species, and three snake species with a total reptilian diversity of at least seven species. For wetland plant communities, a minimum of two turtle species (represented by at least one herbivore and one carnivore) and two snake species with a minimum reptilian diversity of at least five species.

e. Mammals: For upland plant communities combined, a minimum of eight total species represented by at least three small mammal species (Insectivora or Rodentia), one rabbit species (Lagomorpha), the opossum (Marsupiala), and two carnivore species (Carnivora). For wetland plant communities combined, a minimum of five total species represented by at least one small mammal species (Rodentia), one rabbit species (Lagomorpha), and two carnivore species (Carnivora).

Volume 1.V.C.1

Category 1 and 2 nuisance exotic species (as defined by the Florida Exotic Pest Plant Council (FLEPPC), most recent available list) abundance shall not exceed 10 percent aggregate areal coverage at any time in any RA, or within any individual plant community.

The following species listed in Subsection C.1 of Section V must be managed so that areal coverage does not exceed 10 percent areal coverage within an RA or within any individual plant community at any time: Australian pine (*Casuarina spp.*), bermudagrass (*Cynodon dactylon*), air potato (*Dioscorea bulbifera*), water-hyacinth (*Eichhornia crassipes*), hydrilla (*Hydrilla verticillata*), cogongrass (*Imperata spp.*), climbing fern (*Lygodium spp.*), skunkvine (*Paederia foetida*), bahiagrass (*Paspalum notatum*) – except for erosion control as referenced, (downy rose myrtle (*Rhodomyrtus tomentosa*), Chinese tallowtree (*Sapium sebiferum*), Brazilian peppertree (*Schinus terebinthifolius*), tropical soda apple (*Solanum viarum)*, punk tree (*Melaleuca quinquenervia*), rose natal grass (*Rhynchelytrum repens*).

HCPMRM (2006) Table 5. Number/areal coverage requirements

Plant Community	**Strata**		
	Ground Cover & Vines	**Canopy** **Trees/acre avg.**	**Shrub** **Shrubs/acre avg.**
Dry Prairie	≥ 50 (30 spp.)	< 5% total cover	≥ 20 shrubs (5 spp.)
Pine Flatwoods	≥ 50 mesic, ≥ 35 scrubby (30 spp.)	15 – 100 (3-4 spp.) 10% closure	≥ 100 shrubs (5-8 spp.)
Temperate Hardwoods	≥ 50 (20 spp.)	≥ 200 (8-10 spp.) 30% closure	≥ 50 shrubs (5-8 spp.)
Xeric Oak Hammock	≥ 35 (30 spp.)	NA	≥ 200 shrubs (5-8 spp.)

4.0 METHODOLOGY

Vegetative sampling was conducted along 120 randomized monitoring points each containing one, 10 meters x 10 meters transect. Monitoring results were reported by land use per Florida Land Use Cover and Forms Classification System (FLUCFCS) and land status (reclamation, enhancement, or native area). The data was entered directly into an iPad mini and downloaded onto a computer for analysis.

Taxonomy and nomenclature of species followed Wunderlin and Hansen (2011). Plant species have been assigned to a natural plant community if listed on the HCPMRM Tables 2, 3, and 4. Species indicator status was assigned pursuant to Section 62-340, Florida Administrative Code (F.A.C.). As per success criteria, species were classified as *nuisance* according to both the Florida Invasive Species Council's List of Invasive Species- Category I and II (FISC, 2019) and the Noxious Weed List per Chapter 5B-57.007, (F.A.C.). Species were classified as non-native according to those listed as non-native by The Atlas of Florida Vascular Plants (Wunderlin and Hansen, 2023).

4.1 Photographic Documentation

Photographic documentation was conducted at fourteen (14) permanent photo stations at fixed locations within the SUWH (Figures 2). These stations were made from 8-foot tall, galvanized signpost with the top exactly five feet from the ground and include a L shape sign blank bolted to the top and used as a holder/shelf for the camera to rest upon. Photographs were taken in four cardinal directions (North, East, South, & West). The land use, transect status, and compass direction were recorded for each photograph.

4.2 Tree Sampling

Transects were established at randomly generated points provided by Mosaic and consisted of 10 meters long by 10 meters wide belt format. All transects where aligned north to south, with the mid-point of the transect occurring at a randomly generated monitoring point.

Belt transects were utilized to calculate tree and shrub densities within the 10 meters by 10 meters transect. Trees and shrubs located within each transect were marked for identification and monitored to calculate density and condition. Tree seedlings were also noted but were not included in the tree density calculations.

Land Use (Land Status)	Number of Transects	Acreage (ac)
Dry Prairie (Reclamation)	56	1.400
Dry Prairie (Enhancement)	3	0.075
Dry Prairie (Native Area)	10	0.250
Pine Flatwoods (Reclamation)	20	0.500
Pine Flatwoods (Enhancement)	3	0.075
Pine Flatwoods (Native Area)	4	0.100
Temperate Hardwoods (Reclamation)	7	0.175
Temperate Hardwoods (Enhancement)	3	0.075
Temperate Hardwoods (Native Area)	4	0.100

Land Use (Land Status)	Number of Transects	Acreage (ac)
Xeric Oak (Reclamation)	4	0.100
Xeric Oak (Enhancement)	3	0.075
Xeric Oak (Native Area)	3	0.075

Tree/shrub density was determined with the following formula:

$$\textit{Tree/shrub Density (trees/shrubs per acre)} = \frac{\textit{Number of Individuals in all transects}}{\textit{Total Area of all transects}}$$

Belt transects were utilized to calculate the canopy cover except when transects were within xeric oak plant communities. Canopy spread was taken in centimeters and the following formula was used to estimate canopy cover (cm^2) for each tree.

$$\textit{Canopy Cover X} = \pi r^2$$

Where: X is the sample tree, π equals 3.14159, and r is the radius (1/2 the diameter).

The following formula is used to calculate total percent canopy cover.

$$\textit{Percent Canopy Cover} = \frac{\sum \textit{ of all tree canopy measurements x 100}}{\textit{Total sample area}}$$

Additional tree species observed outside the designated transects were identified and recorded if rooted within the boundaries of the SUWH area; however, these were not included in tree density calculations.

4.3 Herbaceous Sampling

Groundcover consisted of herbaceous species less than eighteen (18) inches in height. Herbaceous inventory quadrats ($1m^2$) were established adjacent to and outside of the monitoring transect (i.e.: 5-meters distance from the monitoring point) in each cardinal direction. Monitoring results were reported by land use (per FLUCFCS) and land status (reclamation, enhancement, or native area). The data was entered directly into an iPad mini and downloaded onto a computer for analysis.

Land Use	Land Status	No. of Transects	No. of Quadrats
Dry Prairie	Reclamation	56	224
	Enhancement	3	12
	Native Area	10	40
Pine Flatwoods	Reclamation	20	80
	Enhancement	3	12
	Native Area	4	16
Temperate Hardwoods	Reclamation	7	28
	Enhancement	3	12
	Native Area	4	16
Xeric Oak	Reclamation	4	16
	Enhancement	3	12
	Native Area	3	12
Totals		**120**	**480**

Data for all quadrats were combined to determine the average percent cover of listed species, native non-listed species, non-native species, nuisance species, and bare ground/dead litter.

Herbaceous cover of each species was determined with the following formula:

$$\textit{Relative Percent Cover} = \frac{\textit{Total Relative Cover of Species A}}{\textit{Total \# of Quadrats in Sample Area}}$$

Average percent cover of all herbaceous species was determined with the following formula:

$$\textit{Total Estimated \% Cover of X} = \frac{\textit{Total Estimated Cover of X in all Quadrats in that Land Use}}{\textit{Total \# Quadrats in that Land Use}}$$

Additional shrub and herbaceous species observed outside of the designated sampling quadrats were identified and recorded as additional species if rooted within the boundaries of the SUWH area.

4.4 Wildlife Utilization

Wildlife species were observed and reported by land use (per FLUCFCS) and land status (Mitigation/Conservation) during the monitoring events. Evidence of wildlife including tracks, calls, and scat were also recorded. Wildlife tables will be cumulative over time per land use and land status and evaluated against success criteria.

5.0 RESULTS

The 2023 quantitative monitoring surveys were conducted on June 1st, 8th, 9th, 13th, 21st, and 25th, 2023, and December 18th – 21st, 2023, by Kleinfelder ecologists Zach Conger, Riley Lund, Edward Murawski, and Ben Pardue. Average temperature during the spring monitoring event was 87 degrees (°Fahrenheit) with a max temperature of 95 degree (°Fahrenheit). Conditions ranged from sunny and clear to partly cloudy and rainy. Average temperature during the fall monitoring event was 66 degrees (°Fahrenheit) with max temperature of 77 degrees (°Fahrenheit). Conditions ranged from clear skies and sunny to cloudy and rainy.

5.1 Photographic Documentation

Photographic documentation was conducted at fourteen (14) permanent photo stations at fixed locations within the SUWH (Figure 2). Photographs of each monitoring event are included in Appendix B.

5.2 Spring Monitoring Event

5.2.1 Dry Prairie (Reclamation)

Trees

Six tree species were recorded within the belt transects for a total density of 39 trees per acre (Table 1). Three of the six trees were listed in the HCPMRM for a total density of 36 trees per acre. The dominant species was wax myrtle (*Myrica cerifera*) with a density of 34 trees per acre. Total canopy cover accounted for 2.9% of habitat. No trees showed signs of stress at the time of the monitoring event. No dead trees were recorded, and thirty-five tree seedlings were observed but not included in the density calculations. No additional tree species were observed outside of the belt transects.

Shrubs

Seven shrub species were documented within the belt transect for a total density of 104 shrubs per acre (Table 1). Four of the seven shrub species were listed in the HCPMRM. Dominant shrub species was saw palmetto (*Serenoa repens*) with a density of 76 shrubs per acre. Three additional shrub species, large seedbox (*Ludwigia octovalvis*), round-pod St. John's wort (*Hypericum cistifolium*), and highbush blueberry (*Vaccinium corymbosum*), were observed outside of the belt transects.

Herbaceous Vegetation

One hundred and sixteen herbaceous species were recorded within the Dry Prairie (Reclamation) plant community for a total cover of 77.0%, which included 35.5% cover by species listed in the HCPMRM, 19.0% cover by other native species not listed in the HCPMRM, 11.0% cover by non-native species, and 11.5% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 24.9% of total cover (Table 2).

The dominant species was broomsedge (*Andropogon virginicus*) with 6.6% cover. Subdominant species included licorice weed (*Scoparia dulcis*; 6.0%) (Table 3). Forty-nine additional species were encountered within the Reclamation plant community, but outside the sampling area (Table 4). A total of sixty-eight species listed in the HCPMRM were observed. Forty-five HCPMRM listed species were observed reproducing naturally within the SUWH (Tables 3 and 4).

Ten nuisance species were recorded within the Dry Prairie (Reclamation) plant community for a total cover of 11.5% (Table 3). The most abundant nuisance species was natalgrass (*Melinis repens*) with 3.7% cover.

5.2.2 Dry Prairie (Enhancement)

Trees
No trees were recorded within the belt transects during this monitoring event and no trees were observed outside of the belt transects (Table 5).

Shrubs
No shrubs were recorded within the belt transects during this monitoring event. Six additional shrub species, bigflower pawpaw (*Asimina obovata*), saw palmetto, round-pod St. John's wort, St. Andrews cross (*Hypericum hypericoides*), large seedbox, and highbush blueberry, were observed outside of the belt transects.

Herbaceous Vegetation
Twelve herbaceous species were recorded within the Dry Prairie (Enhancement) plant community for a total cover of 31.3%, which included 8.6% cover by species listed in the HCPMRM, 1.2% cover by other native species not listed in the HCPMRM, 0.7% cover by non-native species, and 20.8% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 69.8% of total cover (Table 2).

The most abundant species was bahia grass (*Paspalum notatum*) with 17.5% cover. Subdominant species included pinebarren flatsedge (*Cyperus retrorsus*; 5.8%) (Table 6). One-hundred-thirteen additional species were encountered within the Enhancement plant community, but outside the sampling area (Table 7). A total of 50 species listed in the HCPMRM were observed. Twenty-nine HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 6 and 7).

Three nuisance species were recorded within the Dry Prairie (Enhancement) plant community for a total cover of 20.8% (Table 6). The most abundant nuisance species was bahia grass with 17.5% cover.

5.2.3 Dry Prairie (Native Area)

Trees
One HCPMRM listed tree species, live oak (*Quercus virginiana*) was recorded within the belt transects for a total density of 16 trees per acre (Table 8). Total canopy cover

accounted for 0.6% of habitat. No tree showed signs of stress at the time of the monitoring event, no tree seedlings were observed, no dead trees were recorded. Six additional tree species, wax myrtle (*Myrica cerifera*), turkey oak (*Quercus laevis*), red maple (*Acer rubrum),* water oak (*Quercus nigra*), loblolly bay (*Gordonia lasianthus*), and sand pine (*Pinus clausa*) were observed outside of the belt transects.

Shrubs

Three shrub species were documented within the belt transect for a total density of 684 shrubs per acre (Table 8). One of the three shrub species was listed in the HCPMRM for a total density of 664 shrubs per acre. The dominant shrub species was saw palmetto with a density of 664 shrubs per acre. Nine additional shrub species, shiny blueberry (*Vaccinium myrsinites*), bigflower pawpaw, netted pawpaw (*Asimina reticulata*), winged sumac (*Rhus copallinum*), dwarf huckleberry (*Gaylussacia dumosa*), round-pod St. John's-wort, gallberry (*Ilex glabra*), and coastplain staggerbush (*Lyonia fruticosa*), were observed outside of the belt transects.

Herbaceous Vegetation

Fifty-two herbaceous species were recorded within the Dry Prairie (Native Area) plant community for a total cover of 76.1%, which included 47.5% cover by species listed in the HCPMRM, 26.8% cover by other native species not listed in the HCPMRM, 0.3% cover by non-native species, and 1.5% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 29.6% of total cover (Table 2).

The dominant species was pineland three-awn (*Aristida stricta* var. *beyrichiana*) with 14.9% cover. Subdominant species included broomsedge (14.0%), saw palmetto (8.3%), and milkpea (*Galactica elliottii*; 8.2%) (Table 9). Twenty-one additional species were encountered within the Native Area plant community, but outside the sampling area (Table 10). A total of 43 species listed in the HCPMRM were observed. Eighteen HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 9 and 10).

Two nuisance species were recorded within the Dry Prairie (Native Area) plant community for a total cover of 1.5% (Table 9). The most abundant nuisance species was cogon grass (*Imperata cylindrica*) with 0.9% cover.

5.2.4 Pine Flatwoods (Reclamation)

Trees

Seven tree species, all of which were listed in the HCPMRM were recorded within the belt transects for a total density of 160 trees per acre (Table 11). The dominant species was slash pine (*Pinus elliottii*) with a density of 104 trees per acre. Total canopy cover accounted for 56.8% of habitat. A single tree showed signs of stress (1.3% of all trees) at the time of the monitoring event. No tree seedlings were observed, and one dead tree was recorded, but not included in the density calculations. No additional tree species were observed outside of the belt transects.

Shrubs
Two shrub species, all of which are listed in the HCPMRM, were documented within the belt transect for a total density of 84 shrubs per acre (Table 11). The dominant shrub species was saw palmetto with a density of 80 shrubs per acre. Eight additional shrub species, shiny blueberry, American beauty-berry, round-pod St. John's wort, St. John's wort, large flowered pawpaw, highbush blueberry, gallberry, and large seedbox was observed outside of the belt transects.

Herbaceous Vegetation
Eighty-nine herbaceous species were recorded within the Pine Flatwoods (Reclamation) plant community for a total cover of 67.5%, which included 26.2% cover by species listed in the HCPMRM, 8.3% cover by other native species not listed in the HCPMRM, 16.1% cover by non-native species, and 16.9% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 34.9% of total cover (Table 2).

The most abundant species was hairy indigo (*Indigofera hirsuta*) with 7.7% cover. Subdominant species included Caesarweed (*Urena lobata*; 7.1%) and bahia grass (6.6%) (Table 12). Thirty-two additional species were encountered within the Reclamation plant community, but outside the sampling area (Table 13). A total of 62 species listed in the HCPMRM were observed. Thirty-five HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 12 and 13).

Four nuisance species were recorded within the Pine Flatwoods (Reclamation) plant community for a total cover of 16.9% (Table 12). The most abundant nuisance species was Caesarweed with 7.1% cover.

5.2.5 Pine Flatwoods (Enhancement)

Trees
Three tree species, all of which were listed in the HCPMRM, were recorded within the belt transects for a total density of 66 trees per acre (Table 14). The dominant species was slash pine with a density of 40 trees per acre. Total canopy cover accounted for 33.2% of habitat. No listed trees showed signs of stress at the time of the monitoring event. No trees seedlings were observed, and no dead trees were recorded. No additional tree species were observed outside of the belt transects.

Shrubs
Two shrub species, all of which are listed in the HCPMRM, were documented within the belt transect for a total density of 200 shrubs per acre (Table 14). The dominant shrub species was saw palmetto with a density of 187 shrubs per acre. Six additional shrub species, round-pod St. John's-wort, St. John's wort, gallberry, shiny blueberry, bigflower pawpaw, and highbush blueberry were observed outside of the belt transects.

Herbaceous Vegetation
Forty-two herbaceous species were recorded within the Pine Flatwoods (Enhancement) plant community for a total cover of 92.8%, which included 48.6% cover by species listed in the HCPMRM, 4.7% cover by other native species not listed in the HCPMRM, 5.0% cover by non-native species, and 34.5% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 11.5% of total cover (Table 2).

The most abundant species was bahia grass with 17.8% cover. The subdominant species included broomsedge (12.2%) and Caesarweed (8.5%) (Table 15). Forty-seven additional species were encountered within the Enhancement plant community, but outside the sampling area (Table 16). A total of 60 species listed in the HCPMRM were observed. Thirty HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 15 and 16).

Five nuisance species were recorded within the Pine Flatwoods (Enhancement) plant community for a total cover of 34.5% (Table 15). The most abundant nuisance species was bahia grass with 17.8% cover.

5.2.6 Pine Flatwoods (Native Area)

Trees
Nine tree species were recorded within the belt transects for a total density of 479 trees per acre (Table 17). Five of the nine tree species were listed in the HCPMRM for a total density of 377 trees per acre. The dominant species was wax myrtle with a density of 175 trees per acre. Total canopy cover accounted for 78.4% of habitat. One tree species showed signs of stress (2.6% of all trees) at the time of the monitoring event. No trees seedlings, or dead trees were observed. Two additional tree species, sand pine, and loblolly pine (*Pinus taeda*) were observed outside of the belt transects.

Shrubs
Eight shrub species were recorded within the belt transects for a total density of 1414 shrubs per acre. Six of the eight shrub species were listed in the HCPMRM for a total density of 1351 shrubs per acre (Table 17). The dominant shrub species was saw palmetto with a density of 625 shrubs per acre. Four additional shrub species, blue huckleberry, shiny blueberry, round-pod St. John's-wort, and bigflower pawpaw were observed outside the belt transects.

Herbaceous Vegetation
Thirty-five herbaceous species were recorded within the Pine Flatwoods (Native Area) plant community for a total cover of 68.7%, which included 45.9% cover by species listed in the HCPMRM, and 22.8% cover by other native species not listed in the HCPMRM. Bare ground and/or dead litter accounted for approximately 40.5% of total cover (Table 2).

The dominant species was broomsedge with 12.8% cover. The subdominant species included panic grass (7.8%), and Baldwin's spikerush (*Eleocharis baldwinii*; 5.4%) (Table 18). Six additional species were encountered within the Native Area plant community, but outside the sampling area (Table 19). A total of 29 species listed in the HCPMRM were observed. Eleven HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 18 and 19).

No nuisance species were recorded within the Pine Flatwoods (Native Area) plant community (Table 18).

5.2.7 Temperate Hardwoods (Reclamation)

Trees
Two tree species, all of which are listed in the HCPMRM, were recorded within the belt transects for a total density of 28 trees per acre (Table 20). The dominant species was wax myrtle with a density of 17 trees per acre. Total canopy cover accounted for 7.4% of habitat. No trees showed signs of stress at the time of the monitoring event. No listed tree seedlings were observed. No additional tree species were observed outside of the belt transects.

Shrubs
One listed shrub species, eastern false-willow was documented within the belt transect for a total density of 17 shrubs per acre (Table 20). One additional shrub species, large seedbox, was observed outside of the transects.

Herbaceous Vegetation
Fifty-eight herbaceous species were recorded within the Temperate Hardwood (Reclamation) plant community for a total cover of 91.4%, which included 19.9% cover by species listed in the HCPMRM, 32.5% cover by other native species not listed in the HCPMRM, 13.2% cover by non-native species, and 25.8% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 10.8% of total cover (Table 2).

The most abundant species was bahia grass with 10.5% cover. The subdominant species included meadow joint-vetch (*Aeschynomene americana*; 9.6%), Caesarweed (8.5%), and common ragweed (*Ambrosia artemissiifolia*; 6.9%) (Table 21). Nineteen additional species were encountered within the Reclamation plant community, but outside the sampling area (Table 22). A total of 22 species listed in the HCPMRM were observed. Fourteen HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 21 and 22).

Eight nuisance species were recorded within the Temperate Hardwood (Reclamation) plant community for a total cover of 25.8% (Table 21). The most abundant nuisance species was bahia grass with 10.5% cover.

5.2.8 Temperate Hardwoods (Enhancement)

Trees
Seven tree species, all of which are listed in the HCPMRM, were recorded within the belt transects for a total density of 293 trees per acre (Table 23). The dominant species was laurel oak (*Quercus laurifolia*) with a density of 93 trees per acre. Total canopy cover accounted for 31.9% of habitat. No listed tree species seedlings or dead trees were recorded. No additional tree species were observed outside of the belt transects.

Shrubs
Two shrub species, all of which are listed in the HCPMRM, were documented within the belt transect for a total density of 293 shrubs per acre (Table 23). The dominant shrub species was eastern false-willow with a density of 280 shrubs per acre. Two additional shrub species, round-pod St. John's wort, and St. John's wort were observed outside of the belt transects.

Herbaceous Vegetation
Eight herbaceous species were recorded within the Temperate Hardwoods (Enhancement) plant community for a total cover of 58.4%, which included 57.7% cover by species listed in the HCPMRM, 0.4% cover by other native species not listed in the HCPMRM, and 0.3% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 41.6% of total cover (Table 2).

The dominant species was muscadine grape (*Vitis rotundifolia*) with 30.8% cover. The subdominant species included yellow jasmine (*Gelsemium sempervirens*; 10.3%), saw greenbrier (*Smilax bona-nox*; 9.9%), and Virginia creeper (*Parthenocissus quinquefolia*; 5.2%) (Table 24). Forty-eight additional species were encountered within the Enhancement plant community, but outside the sampling area (Table 25). A total of 25 species listed in the HCPMRM were observed. Nine HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Table 25).

One nuisance species, Caesarweed, was recorded within the Temperate Hardwoods (Enhancement) plant community for a total cover of 0.3% (Table 24).

5.2.9 Temperate Hardwoods (Native Area)

Trees
Five tree species were recorded within the belt transects for a total density of 170 trees per acre (Table 26). Four of the five trees were listed in the HCPMRM for a total density of 160 trees per acre. The dominant species was laurel oak with a density of 80 trees per acre. Total canopy cover accounted for 118.2% of habitat. No trees showed signs of stress at the time of the monitoring event. No tree seedlings were observed, and one dead tree was recorded but not included in the density calculations. Two additional tree species, red maple, and water oak were observed outside of the belt transects.

Shrubs
No shrubs were recorded within the belt transects during this monitoring event (Table 26). Five additional shrub species, American beauty-berry, eastern false-willow, saw palmetto, round-pod St. John's wort, and St. Andrews cross (*Hypericum hypercoides*) were observed outside of the belt transects.

Herbaceous Vegetation
Twenty-two herbaceous species were recorded within the Temperate Hardwoods (Native Area) plant community for a total cover of 52.8%, which included 18.8% cover by species listed in the HCPMRM, 15.8% cover by other native species not listed in the HCPMRM, and 18.2% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 47.9% of total cover (Table 2).

The most abundant species was Caesarweed with 14.3% cover. The subdominant species was netted chain fern (*Woodwardia areolata*; 12.2%) (Table 27). Sixty-three additional species were encountered within the Native Area plant community, but outside the sampling area (Table 28). A total of 40 species listed in the HCPMRM were observed. Sixteen HCPMRM listed species was measured or observed reproducing naturally within the SUWH (Tables 27 and 28).

Six nuisance species were recorded within the Temperate Hardwood (Native Area) plant community for a total cover of 18.2% (Table 27). The most abundant nuisance species was Caesarweed with 14.3% cover.

5.2.10 Xeric Oak (Reclamation)

Trees
Two tree species were recorded within the belt transects for a total density of 90 trees per acre (Table 29). One of the two trees were listed in the HCPMRM for a total density of 80 trees per acre. The dominant species was sand live oak (*Quercus geminata*) with a density of 80 trees per acre. No tree showed signs of stress at the time of the monitoring event. Twenty tree seedlings were observed but not included in the density calculations and no dead trees was recorded. No additional tree species were observed outside of the belt transects.

Shrubs
One listed shrub species, saw palmetto, was documented within the belt transect for a total density of 120 shrubs per acre (Table 29). Two additional shrub species, winged sumac and round-pod St. John's wort were observed outside the belt transects.

Herbaceous Vegetation
Thirty-four herbaceous species were recorded within the Xeric Oak (Reclamation) plant community for a total cover of 65.0%, which included 20.8% cover by species listed in the HCPMRM, 18.7% cover by other native species not listed in the HCPMRM, 7.3% cover by non-native species, and 18.2% cover by nuisance

herbaceous species. Bare ground and/or dead litter accounted for approximately 35.8% of total cover (Table 2).

The most abundant species was bahia grass with 10.9% cover. The subdominant species was rustweed (*Polypremum procumbens*) (Table 30). Seventeen additional species were encountered within the Reclamation plant community, but outside the sampling area (Table 31). A total of 19 species listed in the HCPMRM were observed. Eight HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 30 and 31).

Four nuisance species were recorded within the Xeric Oak (Reclamation) plant community for a total cover of 18.2% (Table 30). The most abundant nuisance species was bahia grass with 10.9% cover.

5.2.11 Xeric Oak (Enhancement)

Trees
One non-listed tree species, live oak, was recorded within the belt transects for a total density of 107 trees per acre (Table 32). No trees showed signs of stress at the time of the monitoring event. One-hundred-fifty tree seedlings were observed but not included in the density calculations, and no dead trees were recorded. No additional tree species were observed outside of the belt transects.

Shrubs
Two shrub species, both listed in the HCPMRM were documented within the belt transect for a total density of 600 shrubs per acre (Table 32). The dominant shrub species was saw palmetto with a density of 520 shrubs per acre. Five additional shrub species, winged sumac, bigflower pawpaw, running oak (*Quercus pumila*), St. John's wort, and highbush blueberry were observed outside of the transects.

Herbaceous Vegetation
Twenty-eight herbaceous species were recorded within the Xeric Oak (Enhancement) plant community for a total cover of 53.7%, which included 21.9% cover by species listed in the HCPMRM, 24.6% cover by other native species not listed in the HCPMRM, 0.6% cover by non-native species, and 6.6% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 47.3% of total cover (Table 2).

The dominant species was milkpea with 9.2% cover. The subdominant species were pineland three-awn (6.7%) and bahia grass (6.6%) (Table 33). Sixteen additional species were encountered within the Enhancement plant community, but outside the sampling area (Table 34). A total of 22 species listed in the HCPMRM were observed. Nine species listed in the HCPMRM were measured or observed reproducing naturally within the SUWH (Tables 33 and 34).

One nuisance species, bahia grass, was recorded within the Xeric Oak (Enhancement) plant community for a total cover of 6.6% (Table 33).

5.2.12 Xeric Oak (Native Area)

Trees
Three non-listed tree species were recorded within the belt transects for a total density of 213 trees per acre (Table 35). The dominant tree species was water oak with a density of 93 trees per acre. No listed trees showed signs of stress at the time of the monitoring event. No listed trees seedlings were observed, and two dead trees were recorded but not included in density calculations. One additional tree species, red bay (*Persea borbonia*), was observed outside of the belt transects.

Shrubs
One listed shrub species, saw palmetto, was documented within the belt transect for a total density of 920 shrubs per acre (Table 35). Three additional shrub species, American beauty-berry, myrtle oak (*Quercus myrtifolia*), and shiny blueberry were observed outside of the transects.

Herbaceous Vegetation
Twenty-one herbaceous species were recorded within the Xeric Oak (Native Area) plant community for a total cover of 45.7%, which included 22.1% cover by species listed in the HCPMRM, 23.5% cover by other native species not listed in the HCPMRM, and 0.1% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 54.3% of total cover (Table 2).

The dominant species was pineland three-awn with 11.7% cover. The subdominant species included milkpea (8.3%), saw palmetto (8.3%), and bracken fern (*Pteridium aquilinum*; 6.3%) (Table 36). Two additional species were encountered within the Native Area plant community, but outside the sampling area (Table 37). Eleven species listed in the HCPMRM were observed. Four HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 36 and 37).

One nuisance species, Caesarweed, was recorded within the Xeric Oak (Native Area) plant community for a total cover of 0.1% (Table 36).

5.2.13 Wildlife Utilization (Spring)

Dry Prairie (Reclamation)
Seventy-six wildlife species have been observed since the baseline monitoring event, including fifty-six (56) avian species, seven (7) reptilian species, four (4) amphibian species, and nine (9) mammalian species (Table 50). Fifteen wildlife species were observed during the current monitoring event, five of which were observed for the first time. Of the seventy-six species, seventy-one are native vertebrates known or suspected to occur in Hillsborough County.

Dry Prairie (Enhancement)
Forty-three wildlife species have been observed since the baseline monitoring event, including twenty-nine (29) avian species, three (3) reptilian species, three (3) amphibian species, and eight (8) mammalian species (Table 51). Three wildlife species were observed during the current monitoring event, two of which were observed for the first time. Of the forty-three species, forty-five are native vertebrates known or suspected to occur in Hillsborough County.

Dry Prairie (Native Area)
Thirty-three wildlife species have been observed since the baseline monitoring event, including twenty-three (23) avian species, four (4) reptilian species, one (1) amphibian species, and five (5) mammalian species (Table 52). Seven wildlife species were observed during the current monitoring event, four of which were observed for the first time. Of the 33 species, 31 are native vertebrates known or suspected to occur in Hillsborough County.

Pine Flatwoods (Reclamation)
Fifty-three wildlife species have been observed since the baseline monitoring event, including thirty-seven (37) avian species, four (4) reptilian species, two (2) amphibian species, and ten (10) mammalian species (Table 53). Fifteen wildlife species were observed during the current monitoring event, six of which were observed for the first time. Of the 53 species, 50 are native vertebrates known or suspected to occur in Hillsborough County.

Pine Flatwoods (Enhancement)
Thirty wildlife species have been observed since the baseline monitoring event, including twenty-one (21) avian species, one (1) reptilian species, two (2) amphibian species, and six (6) mammalian species (Table 54). Thirteen wildlife species were observed during the current monitoring event, five of which were observed for the first time. Of the 30 species, 27 are native vertebrates known or suspected to occur in Hillsborough County.

Pine Flatwoods (Native Area)
Thirty-five wildlife species have been observed since the baseline monitoring event, including twenty-seven (27) avian species, three (3) reptilian species, one (1) amphibian species, and four (4) mammalian species (Table 55). Sixteen wildlife species were observed during the current monitoring event, twelve of which were observed for the first time. Of the 35 species, 33 are native vertebrates known or suspected to occur in Hillsborough County.

Temperate Hardwoods (Reclamation)
Twenty-six wildlife species have been observed since the baseline monitoring event, including twenty (20) avian species, two (2) reptilian species, and four (4) mammalian species (Table 56). Fifteen wildlife species were observed during the current monitoring event, seven of which were observed for the first time. Of the 26 species, 23 are native vertebrates known or suspected to occur in Hillsborough County.

Temperate Hardwoods (Enhancement)
Thirty-two wildlife species have been observed since the baseline monitoring event, including fourteen (20) avian species, three (3) reptilian species, three (3) amphibian species, and six (6) mammalian species (Table 57). Fifteen wildlife species were observed during the current monitoring event, eight of which were observed for the first time. Of the 32 species, 29 are native vertebrates known or suspected to occur in Hillsborough County.

Temperate Hardwoods (Native Area)
Eighteen wildlife species have been observed since the baseline monitoring event, including ten (10) avian species, four (4) reptilian species, two (2) amphibian species, and two (2) mammalian species (Table 58). One wildlife species was observed during the current monitoring event. Of the 18 species, 17 are native vertebrates known or suspected to occur in Hillsborough County.

Xeric Oak (Reclamation)
Twenty-three wildlife species have been observed since the baseline monitoring event, including fifteen (16) avian species, two (2) reptilian species, one (1) amphibian species, and four (4) mammalian species (Table 59). Three wildlife species were observed during the current monitoring event, one of which was observed for the first time. Of the 23 species, 20 are native vertebrates known or suspected to occur in Hillsborough County.

Xeric Oak (Enhancement)
Thirty-nine wildlife species have been observed since the baseline monitoring event, including twenty-six (26) avian species, five (5) reptilian species, two (2) amphibian species, and six (6) mammalian species (Table 60). Seventeen wildlife species were observed during the current monitoring event, seven of which were observed for the first time. Of the 39 species, 37 are native vertebrates known or suspected to occur in Hillsborough County.

Xeric Oak (Native Area)
Twenty-eight wildlife species have been observed since the baseline monitoring event, including twenty-one (21) avian species, two (2) reptilian species, one (1) amphibian species, and four (4) mammalian species (Table 61). Five wildlife species were observed during the current monitoring event, all of which were observed for the first time. Of the 28 species, 25 are native vertebrates known or suspected to occur in Hillsborough County.

5.3 Fall Monitoring Event

5.3.1 Dry Prairie (Reclamation)

Trees
Seven tree species were recorded within the belt transects for a total density of 42 trees per acre (Table 62). Four of the seven trees were listed in the HCPMRM for a density of 30 trees per acre. The dominant species was wax myrtle (*Myrica cerifera*) with a density of 20 trees per acre. Total canopy cover accounted for 4.1% of habitat. Three trees showed signs of stress at the time of the monitoring event (5.2% of all trees). Two tree seedlings and a single dead tree was recorded. No additional tree species were observed outside of the belt transects.

Shrubs
Two shrub species, all of which are listed in the HCPMRM, were documented within the belt transects for a total density of 61 shrubs per acre (Table 62). The dominant shrub species was saw palmetto (*Serenoa repens*) with a density of 53 shrubs per acre. One additional shrub species, large seedbox (*Ludwigia octovalvis*) was observed outside of the belt transects.

Herbaceous Vegetation
Eighty-seven herbaceous species were recorded within the Dry Prairie (Reclamation) plant community for a total cover of 84.8%, which included 43.4% cover by species listed in the HCPMRM, 12.2% cover by other native species not listed in the HCPMRM, 16.8% cover by non-native species, and 12.4% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 15.2% of total cover (Table 63).

The dominant species was broomsedge (*Andropogon virginicus*) with 15.0% cover. Subdominant species included were hairy indigo (*Indigofera hirsuta*; 6.6%), licorice weed (*Scoparia dulcis*; 5.7%), Elliot's lovegrass (*Eragrostis elliottii*; 5.4%), and natalgrass (*Melinis repens*; 5.0%) (Table 64). Forty-three additional species were encountered within the Reclamation plant community, but outside the sampling area (Table 65). A total of 58 species listed in the HCPMRM were observed. Twenty-six HCPMRM listed species were observed reproducing naturally within the SUWH (Tables 64 and 65).

Eight nuisance species were recorded within the Dry Prairie (Reclamation) plant community for a total cover of 12.4% (Table 64). The most abundant nuisance species was natalgrass with 5.0% cover.

5.3.2 Dry Prairie (Enhancement)

Trees
Two tree species, one of which was listed in the HCPMRM, were recorded within the belt transects for a total density of 106 trees per acre (Table 66). The tree species listed

in the HCMRM was cabbage palm (*Sabal* palmetto) with a density of 13 trees per acre. Total canopy cover accounted for 1.3% of habitat. No tree species showed signs of stress, no tree seedlings were observed, and no dead trees were recorded during the current monitoring event. One additional tree species, live oak (*Quercus virginiana*), was observed outside of the belt transects.

Shrubs
No shrub species were documented within the belt transects and no additional shrub species were observed outside of the sample plots.

Herbaceous Vegetation
Twenty-five herbaceous species were recorded within the Dry Prairie (Enhancement) plant community for a total cover of 84.5%, which included 27.6% cover by species listed in the HCPMRM, 21.5% cover by other native species not listed in the HCPMRM, 7.5% cover by non-native species, and 27.9% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 18.2% of total cover (Table 63).

The most abundant species was paragrass (*Urochloa mutica*) with 18.7% cover. Subdominant species included broomsedge (12.1%), slender goldenrod (*Euthamia caroliniana*; 9.2%), Indian crabgrass (*Digitaria longiflora*; 7.1%), knotroot bristle grass (*Setaria parviflora*; 6.3%), and sand blackberry (*Rubus cuneifolius*; 5.0%) (Table 67). Five additional species were encountered within the Enhancements plant community, but outside the sampling area (Table 68). A total of twelve species listed in the HCPMRM were observed. Five HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 67 and 68).

Five nuisance species were recorded within the Dry Prairie (Enhancement) plant community for a total cover of 27.9% (Table 67). The most abundant nuisance species was paragrass with 18.7% cover.

5.3.3 Dry Prairie (Native Area)

Trees
No tree species were recorded within the belt transects within the Dry Prairie (Native Area) (Table 69). No tree seedlings were observed, and no dead trees were recorded. Two additional tree species, water oak (*Quercus nigra*) and turkey oak (*Quercus laevis*), were observed outside of the belt transects.

Shrubs
One shrub species listed in the HCPMRM, saw palmetto, was documented within the belt transects for a total density of 172 shrubs per acre (Table 69). Six additional shrub species, highbush blueberry (*Vaccinium corymbosum*), American beauty-berry (*Callicarpa americana*), shiny blueberry (*Vaccinium myrsinites*), gallberry (*Ilex glabra*), bigflower pawpaw (*Asimina obovata*), winged sumac (*Rhus copallinum*), and coastplain staggerbush (*Lyonia fruticosa*).

Herbaceous Vegetation
Forty-three herbaceous species were recorded within the Dry Prairie (Native Area) plant community for a total cover of 94.8%, which included 84.5% cover by species listed in the HCPMRM, 3.4% cover by other native species not listed in the HCPMRM, 4.8% cover by non-native species, and 2.1% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 6.2% of total cover (Table 63).

The dominant species was wiregrass (*Aristida stricta*) with 21.0% cover. Subdominant species included saw palmetto (17.1%), broomsedge (16.8%), and slender goldenrod (12.2%) (Table 70). Sixteen additional species were encountered within the Native Area plant community, but outside the sampling area (Table 71). A total of thirty-seven species listed in the HCPMRM were observed. Twenty HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 70 and 71).

Four nuisance species were recorded within the Dry Prairie (Native Area) plant community for a total cover of 2.1% (Table 70). The most abundant nuisance species was cogon grass (*Imperata cylindrica*) with 0.8% cover.

5.3.4 Pine Flatwoods (Reclamation)

Trees
Five tree species, all of which are listed in the HCPMRM, were recorded within the belt transects for a total density of 136 trees per acre (Table 72). The dominant species was slash pine (*Pinus elliottii*) with a density of 84 trees per acre. Total canopy cover accounted for 20.8% of habitat. Three trees showed signs of stress at the time of the monitoring event (~4.4% of all trees). No tree seedlings were observed, and no dead trees were recorded. Two additional tree species, sweetgum (*Liquidambar styraciflua*) and live oak, were observed outside of the belt transects.

Shrubs
Two shrub species, all of which are listed in the HCPMRM, were documented within the belt transects for a total density of 54 shrubs per acre (Table 72). The dominant shrub species was saw palmetto with a density of 52 shrubs per acre. Additional shrub species including, bigflower pawpaw, large seedbox (*Ludwigia octovalvis*), dwarf live oak (*Quercus minima*), coral bean (*Erythrina herbacea*), St. John's wort (*Hypericum tetrapetalum*), shiny blueberry, and deerberry (*Vaccinium stamineum*) were observed outside of the belt transects.

Herbaceous Vegetation
Sixty-one herbaceous species were recorded within the Pine Flatwoods (Reclamation) plant community for a total cover of 82.6%, which included 29.2% cover by species listed in the HCPMRM, 5.1% cover by other native species not listed in the HCPMRM, 28.8% cover by non-native species, and 19.5% cover by nuisance

herbaceous species. Bare ground and/or dead litter accounted for approximately 20.6% of total cover (Table 63).

The most abundant species was hairy indigo with 16.2% cover. Subdominant species included bahia grass (*Paspalum notatum*; 15.7%) and yellow wood sorrel (*Oxalis corniculata*; 6.0%) (Table 73). Fifty-four additional species were encountered within the Reclamation plant community, but outside the sampling area (Table 74). A total of sixty-four species listed in the HCPMRM were observed. Thirty-seven HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 73 and 74).

Seven nuisance species were recorded within the Pine Flatwoods (Reclamation) plant community for a total cover of 19.5% (Table 73). The most abundant nuisance species was bahia grass with 15.7% cover.

5.3.5 Pine Flatwoods (Enhancement)

Trees
Six tree species, all of which were listed in the HCPMRM, were recorded within the belt transects for a total density of 1,014 trees per acre (Table 75). The dominant species was slash pine with a density of 560 trees per acre. Total canopy cover accounted for 40.4% of habitat. Three listed trees showed signs of stress (~3.9% of all trees) at the time of the monitoring event. No trees seedlings were observed, and no dead trees were recorded. One additional tree species, live oak, was observed outside of the belt transects.

Shrubs
Two shrub species, all of which are listed in the HCPMRM, were documented within the belt transects for a total density of 360 shrubs per acre (Table 75). The dominant shrub species was saw palmetto with a density of 347 shrubs per acre. Additional shrub species including St. John's wort and shiny blueberry were observed outside of the belt transects.

Herbaceous Vegetation
Twenty-five herbaceous species were recorded within the Pine Flatwoods (Enhancement) plant community for a total cover of 83.9%, which included 81.5% cover by species listed in the HCPMRM, and 2.4% cover by other native species not listed in the HCPMRM. Bare ground and/or dead litter accounted for approximately 16.1% of total cover (Table 63).

The dominant species was broomsedge with 37.4% cover. Subdominant species included wild sensitive plant (*Chamaecrista nictitans*; 7.5%), needlepod rush (*Juncus scirpoides*; 6.3%), and bantam-buttons (*Syngonanthus flavidulus*; 5.8%) (Table 76). Twelve additional species were encountered within the Enhancement plant community, but outside the sampling area (Table 77). A total of twenty-eight species

listed in the HCPMRM were observed. Eighteen HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 76 and 77).

No nuisance species were recorded within the Pine Flatwoods (Enhancement) plant community (Table 76).

5.3.6 Pine Flatwoods (Native Area)

Trees
Four tree species, three of which are listed in the HCPMRM, were recorded within the belt transects for a total density of 173 trees per acre (Table 78). The dominant species were wax myrtle and live oak each with a density of 40 trees per acre. The dominant species not listed in the HCPMRM was dahoon holly (*Ilex cassine*) with a density of 80 trees per acre. Total canopy cover accounted for 2.4% of habitat. No tree species showed signs of stress at the time of the monitoring event. No trees seedlings were observed, and no dead trees were recorded. One additional tree species, red bay (*Persea borbonia*), was observed outside of the belt transects.

Shrubs
Three shrub species, all of which were listed in the HCPMRM, were documented within the belt transects for a total density of 1,199 shrubs per acre (Table 78). The dominant shrub species was gallberry with a density of 693 shrubs per acre. Additional shrub species including, round-pod St. John's wort (*Hypericum cistifolium*), St. John's wort, coastplain staggerbush, Darrow's blueberry (*Vaccinium darrowii*), shiny blueberry, and bigflower pawpaw, were observed outside the belt transects.

Herbaceous Vegetation
Thirty herbaceous species were recorded within the Pine Flatwoods (Native Area) plant community for a total cover of 86.5%, which included 82.5% cover by species listed in the HCPMRM, 3.4% cover by other native species not listed in the HCPMRM, 0.3% cover by exotic species, and 0.3% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 16.8% of total cover (Table 63).

The dominant species was saw palmetto with 19.4% cover. The subdominant species included broomsedge (14.1%), wiregrass (13.4%), and needleleaf witchgrass (*Dichanthelium aciculare*; 7.9%) (Table 79). Eleven additional species were encountered within the Native Area plant community, but outside the sampling area (Table 80). A total of twenty-nine species listed in the HCPMRM were observed. Seventeen HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 79 and 80).

One nuisance species, caesarweed (*Urena lobata*), was recorded within the Pine Flatwoods (Native Area) plant community for a total cover of 0.3% (Table 79).

5.3.7 Temperate Hardwoods (Reclamation)

Trees
Three tree species, all of which were listed in the HCPMRM, were recorded within the belt transects for a total density of 63 trees per acre (Table 81). The dominant species was slash pine with a density of 23 trees per acre. Total canopy cover accounted for 4.7% of habitat. No trees showed signs of stress at the time of the monitoring event. No listed tree seedlings were observed, and no dead trees were recorded. No additional tree species were observed outside of the belt transects.

Shrubs
Two shrub species, all of which are listed in the HCPMRM, were documented within the belt transects for a total density of 103 shrubs per acre (Table 81). The dominant shrub species was saw palmetto with a density of 63 shrubs per acre. No additional shrub species were observed outside of the transects.

Herbaceous Vegetation
Thirty-nine herbaceous species were recorded within the Temperate Hardwood (Reclamation) plant community for a total cover of 53.6%, which included 14.1% cover by species listed in the HCPMRM, 8.5% cover by other native species not listed in the HCPMRM, 10.9% cover by non-native species, and 20.1% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 48.5% of total cover (Table 63).

The dominant species was broomsedge with 6.5% cover. The subdominant species included natalgrass (*Melinis repens*; 5.7%) and hairy indigo (5.6%) (Table 82).Seven additional species were encountered within the Reclamation plant community, but outside the sampling area (Table 83). A total of sixteen species listed in the HCPMRM were observed. Nine HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 82 and 83).

Seven nuisance species were recorded within the Temperate Hardwood (Reclamation) plant community for a total cover of 20.1% (Table 82). The most abundant nuisance species was natalgrass with 5.7% cover.

5.3.8 Temperate Hardwoods (Enhancement)

Trees
Six tree species were recorded within the belt transects for a total density of 265 trees per acre (Table 84). Four of the six trees were listed in the HCPMRM for a total density of 239 trees per acre. The dominant species was sweetgum with a density of 93 trees per acre. No tree showed signs of stress at the time of the monitoring event. No tree seedlings were observed, and no dead trees were recorded. One additional tree species, wax myrtle, was observed outside of the belt transects.

Shrubs
One shrub species, eastern false-willow (*Baccharis halimifolia*), which is listed in the HCPMRM was documented within the belt transect for a total density of 40 shrubs per acre (Table 84). One additional shrub species, American beauty-berry, was observed outside of the belt transects.

Herbaceous Vegetation
Sixteen herbaceous species were recorded within the Temperate Hardwoods (Enhancement) plant community for a total cover of 91.5%, which included 44.6% cover by species listed in the HCPMRM, 44.2% cover by other native species not listed in the HCPMRM, and 2.7% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 11.5% of total cover (Table 63).

The dominant species was sand blackberry with 15.7% cover. Subdominant species included muscadine grape (*Vitis rotundifolia*; 13.9%), saw greenbrier (*Smilax bona-nox*; 11.3%), flat-joint carpet grass (*Axonopus furcatus*; 10.0%), Boston fern (*Nephrolepis exaltata*; 10.0%), Virginia chain fern (*Woodwardia virginica*; 6.3%), and broomsedge (5.8%) (Table 85). Fourteen additional species were encountered within the Enhancement plant community, but outside the sampling area (Table 86). A total of fourteen species listed in the HCPMRM were observed. Five HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 85 and 86).

Three nuisance species were recorded within the Temperate Hardwoods (Enhancement) plant community for a total cover of 2.7% (Table 85). The most abundant nuisance species was caesarweed with 2.3% cover.

5.3.9 Temperate Hardwoods (Native Area)

Trees
Five tree species were recorded within the belt transects for a total density of 293 trees per acre (Table 87). Four of the five trees were listed in the HCPMRM for a total density of 280 trees per acre. The dominant species was live oak with a density of 173 trees per acre. No tree showed signs of stress at the time of the monitoring event. No tree seedlings were observed, and no dead trees were recorded. Two additional tree species, wax myrtle and red bay, were observed outside of the belt transects.

Shrubs
Two shrub species were documented within the belt transect for a total density of 1,014 shrubs per acre (Table 87). One of the shrub species, saw palmetto, was listed in the HCPMRM for a total density of 907 shrubs per acre. Additional shrub species including, deerberry, St. John’s wort, bigflower pawpaw, coastplain staggerbush, shiny blueberry, and round-pod St. John’s wort, were observed outside of the belt transects.

Herbaceous Vegetation
Seventeen herbaceous species were recorded within the Temperate Hardwoods (Native Area) plant community for a total cover of 68.1%, which included 31.0% cover by species listed in the HCPMRM, 11.7% cover by other native species not listed in the HCPMRM, and 25.4% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 34.0% of total cover (Table 63).

The most abundant species was cogon grass with 21.6% cover. Subdominant species included saw palmetto (20.0%), broomsedge (6.6%), and wiregrass (6.2%) (Table 88). Eleven additional species were encountered within the Native Area plant community, but outside the sampling area (Table 89). A total eleven species listed in the HCPMRM were observed. Four HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 88 and 89).

Two nuisance species were recorded within the Temperate Hardwood (Native Area) plant community for a total cover of 25.4% (Table 88). The most abundant nuisance species was cogon grass with 21.6% cover.

5.3.10 Xeric Oak (Reclamation)

Trees
Two tree species, both of which are not listed in the HCPMRM, were recorded within the belt transects for a total density of 40 trees per acre (Table 90). The dominant species was slash pine with a density of 27 trees per acre. One tree showed signs of stress (33.3% of all trees) at the time of the monitoring event. No tree seedlings were observed, and no dead trees were recorded. Two additional tree species, sand pine (*Pinus clausa*) and turkey oak, were observed outside of the belt transects.

Shrubs
One shrub species, saw palmetto, which is listed in the HCPMRM, was documented within the belt transects for a total density of 80 shrubs per acre (Table 90). No additional shrub species were observed outside the belt transects.

Herbaceous Vegetation
Seventeen herbaceous species were recorded within the Xeric Oak (Reclamation) plant community for a total cover of 62.0%, which included 15.6% cover by species listed in the HCPMRM, 15.7% cover by other native species not listed in the HCPMRM, 17.6% cover by non-native species, and 13.1% cover by nuisance herbaceous species. Bare ground and/or dead litter accounted for approximately 38.9% of total cover (Table 63).

The most abundant species was hairy indigo with 15.5% cover. Subdominant species included bahia grass (11.9%), wiregrass (6.6%), yellow wood sorrel (*Oxalis corniculata*; 6.6%), and broomsedge (5.6%) (Table 91). Five additional species were

encountered within the Reclamation plant community, but outside the sampling area (Table 92). A total of seven species listed in the HCPMRM were observed. Three HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 91 and 92).

Three nuisance species were recorded within the Xeric Oak (Reclamation) plant community for a total cover of 13.1% (Table 91). The most abundant nuisance species was bahia grass with 11.9% cover.

5.3.11 Xeric Oak (Enhancement)

Trees
One tree species, live oak, which is not listed in the HCPMRM was recorded within the belt transects for a total density of 360 trees per acre (Table 93). No trees showed signs of stress at the time of the monitoring event. No tree seedlings were observed and no dead trees were recorded during the current monitoring event. No additional tree species were observed outside of the belt transects.

Shrubs
One listed HCPMRM shrub species, saw palmetto, was documented within the belt transect, for a total density of 333 shrubs per acre (Table 93). Four additional shrub species, American beauty-berry, deerberry, shiny blueberry, and St. John's wort, were observed outside of the transects.

Herbaceous Vegetation
Twenty-eight herbaceous species were recorded within the Xeric Oak (Enhancement) plant community for a total cover of 79.6%, which included 67.4% cover by species listed in the HCPMRM, 10.5% cover by other native species not listed in the HCPMRM, and 1.7% cover by non-native species. Bare ground and/or dead litter accounted for approximately 20.4% of total cover (Table 63).

The dominant species was narrowleaf silkgrass (*Pityopsis* graminifolia) with 14.1% cover. The subdominant species were thin paspalum (*Paspalum setaceum*; 13.3%), broomsedge (10.8%), and beaked panic grass (*Panicum anceps*; 10.6%) (Table 94). Five additional species were encountered within the Enhancement plant community, but outside the sampling area (Table 95). A total of seventeen species listed in the HCPMRM were observed. Eleven species listed in the HCPMRM were measured or observed reproducing naturally within the SUWH (Tables 94 and 95).

No nuisance species were recorded within the Xeric Oak (Enhancement) plant community at the time of the current monitoring event. (Table 94).

5.3.12 Xeric Oak (Native Area)

Trees
Two tree species that are not listed in the HCPMRM were recorded within the belt transects for a total density of 174 trees per acre (Table 96). The dominant species was live oak with a density of 107 trees per acre. No listed trees showed signs of stress at the time of the monitoring event. No listed trees seedlings were observed, and no dead trees were recorded. One additional tree species, persimmon (*Diospyros virginiana*), was observed outside of the belt transects.

Shrubs
One shrub species, saw palmetto, which is listed in the HCPMRM, was documented within the belt transect for a total density of 187 shrubs per acre (Table 96). Three additional shrub species, shiny blueberry, coastplain staggerbush, and American beauty-berry were observed outside of the transects.

Herbaceous Vegetation
Sixteen herbaceous species were recorded within the Xeric Oak (Native Area) plant community for a total cover of 67.6%, which included 42.6% cover by species listed in the HCPMRM, 24.8% cover by other native species not listed in the HCPMRM, and 0.2% cover by nuisance species. Bare ground and/or dead litter accounted for approximately 32.4% of total cover (Table 63).

The dominant species was wiregrass with 21.6% cover (Table 97). Subdominant species included bracken fern (*Pteridium* aquilinum; 12.9%), saw palmetto (10.4%), and forked fimbry (*Fimbristylis* dichotoma; 5.4%) (Table 97). Eight additional species were encountered within the Native Area plant community, but outside the sampling area (Table 98). Twelve species listed in the HCPMRM were observed. Six HCPMRM listed species were measured or observed reproducing naturally within the SUWH (Tables 97 and 98).

One nuisance species, caesarweed, was recorded within the Xeric Oak (Native Area) with 0.2% cover (Table 97).

5.3.13 Wildlife Utilization (Fall)

Dry Prairie (Reclamation)
Seventy-six wildlife species have been observed since the baseline monitoring event, including fifty-five (55) avian species, seven (7) reptilian species, four (4) amphibian species, and ten (10) mammalian species (Table 111). Twenty wildlife species were observed during the current monitoring event, two of which were observed for the first time. Of the seventy-six species, seventy are native vertebrates known or suspected to occur in Hillsborough County.

Dry Prairie (Enhancement)
Forty-two wildlife species have been observed since the baseline monitoring event, including twenty-eight (28) avian species, three (3) reptilian species, three (3) amphibian species, and eight (8) mammalian species (Table 112). Three wildlife species were observed during the current monitoring event. Of the forty-two species, thirty-nine are native vertebrates known or suspected to occur in Hillsborough County.

Dry Prairie (Native Area)
Thirty-three wildlife species have been observed since the baseline monitoring event, including twenty-three (23) avian species, four (4) reptilian species, one (1) amphibian species, and five (5) mammalian species (Table 113). Seven wildlife species were observed during the current monitoring event. Of the thirty-three species, thirty-one are native vertebrates known or suspected to occur in Hillsborough County.

Pine Flatwoods (Reclamation)
Fifty-one wildlife species have been observed since the baseline monitoring event, including thirty-five (35) avian species, four (4) reptilian species, two (2) amphibian species, and ten (10) mammalian species (Table 114). Eleven wildlife species were observed during the current monitoring event, one of which was observed for the first time. Of the fifty-one species, forty-seven are native vertebrates known or suspected to occur in Hillsborough County.

Pine Flatwoods (Enhancement)
Twenty-eight wildlife species have been observed since the baseline monitoring event, including nineteen (19) avian species, one (1) reptilian species, two (2) amphibian species, and six (6) mammalian species (Table 115). Four wildlife species were observed during the current monitoring event, two of which were observed for the first time. Of the twenty-eight species, twenty-five are native vertebrates known or suspected to occur in Hillsborough County.

Pine Flatwoods (Native Area)
Twenty-five wildlife species have been observed since the baseline monitoring event, including seventeen (17) avian species, three (3) reptilian species, one (1) amphibian species, and four (4) mammalian species (Table 116). Seven wildlife species were observed during the current monitoring event, three of which were observed for the first time. Of the twenty-five species, twenty-three are native vertebrates known or suspected to occur in Hillsborough County.

Temperate Hardwoods (Reclamation)
Twenty-four wildlife species have been observed since the baseline monitoring event, including seventeen (17) avian species, two (2) reptilian species, and five (5) mammalian species (Table 117). Ten wildlife species were observed during the current monitoring event, five of which were observed for the first time. Of the twenty-four species, twenty-one are native vertebrates known or suspected to occur in Hillsborough County.

Temperate Hardwoods (Enhancement)
Twenty-five wildlife species have been observed since the baseline monitoring event, including fifteen (15) avian species, three (3) reptilian species, one (1) amphibian species, and six (6) mammalian species (Table 118). One wildlife species was observed during the current monitoring event for the first time. Of the twenty-five species, twenty-three are native vertebrates known or suspected to occur in Hillsborough County.

Temperate Hardwoods (Native Area)
Twenty-one wildlife species have been observed since the baseline monitoring event, including eleven (11) avian species, five (5) reptilian species, two (2) amphibian species, and three (3) mammalian species (Table 119). Five wildlife species were observed during the current monitoring event, two of which was observed for the first time. Of the twenty-one species, eighteen are native vertebrates known or suspected to occur in Hillsborough County.

Xeric Oak (Reclamation)
Twenty-six wildlife species have been observed since the baseline monitoring event, including eighteen (18) avian species, three (3) reptilian species, one (1) amphibian species, and four (4) mammalian species (Table 120). Two wildlife species were observed during the current monitoring event, all of which have been observed previously. Of the twenty-six species, twenty-three are native vertebrates known or suspected to occur in Hillsborough County.

Xeric Oak (Enhancement)
Thirty-five wildlife species have been observed since the baseline monitoring event, including twenty-three (23) avian species, four (4) reptilian species, two (2) amphibian species, and six (6) mammalian species (Table 121). Five wildlife species were observed during the current monitoring event, all of which were observed previously. Of the thirty-five species, thirty-three are native vertebrates known or suspected to occur in Hillsborough County.

Xeric Oak (Native Area)
Twenty-five wildlife species have been observed since the baseline monitoring event, including sixteen (16) avian species, two (2) reptilian species, one (1) amphibian species, and six (6) mammalian species (Table 122). Five wildlife species were observed during the current monitoring event, two of which were observed for the first time. Of the twenty-five species, twenty are native vertebrates known or suspected to occur in Hillsborough County.

6.0 PROBLEM AREAS

The SUWH did not meet the minimum number of small mammal species.

Dry Prairie (Reclamation) and (Enhancement), Pine Flatwoods (Reclamation), Temperate Hardwoods (Reclamation) and (Native), and Xeric Oak (Reclamation) did not meet the nuisance species criterion.

Pine Flatwoods (all habitats), and Xeric Oak (all habitats) did not meet any groundcover requirements.

Temperate Hardwoods (Reclamation) did not meet the success criteria for canopy cover. Pine Flatwoods (Reclamation) and (Native), and Temperate Hardwoods (Reclamation) did not meet their requirements for tree density. Temperate Hardwoods (all habitats) did not meet the minimum number of listed tree species.

Dry Prairie (Enhancement), Pine Flatwoods (Reclamation), and Xeric oak (Reclamation) did not meet the shrub density requirements. Dry Prairie (all habitats), Pine Flatwoods (Reclamation) and (Enhancement), Temperate Hardwoods (all habitats), and Xeric Oak (all habitats) did not meet the minimum number of listed shrub species.

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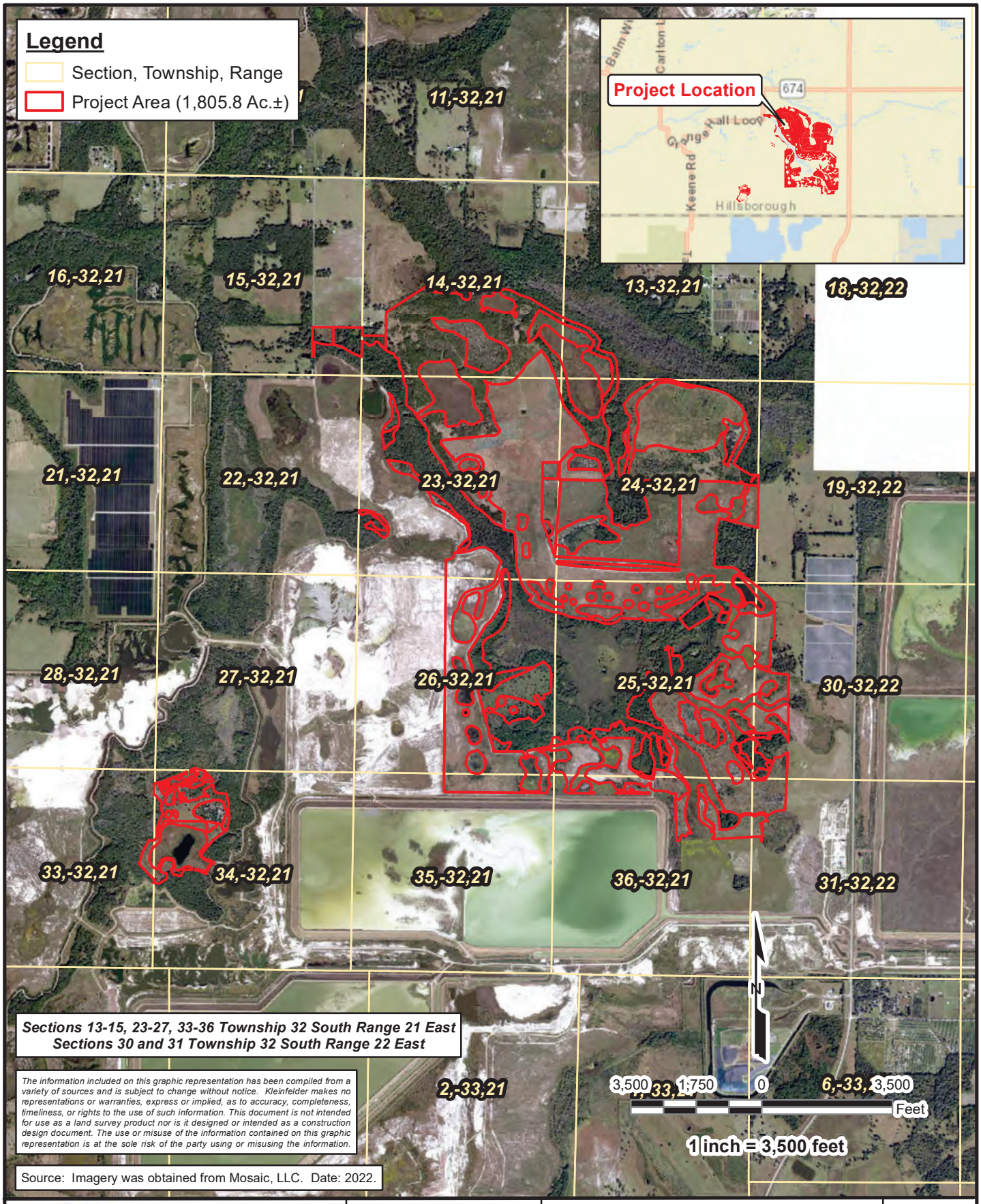
FIGURES



Sections 13-15, 23-27, 33-36 Township 32 South Range 21 East
Sections 30 and 31 Township 32 South Range 22 East

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DRAWN:	7/28/2023
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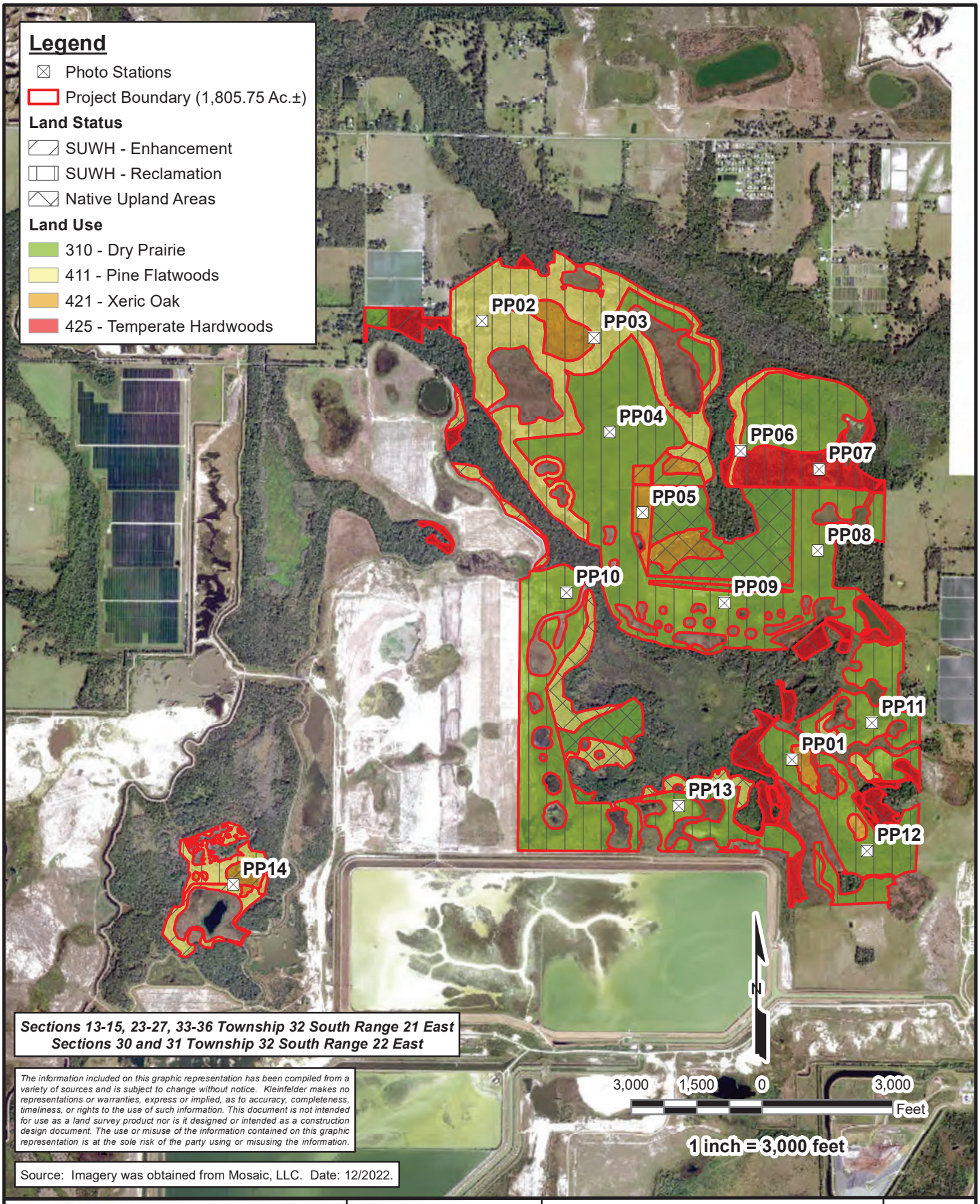
FILE NAME:	FCO SUWH_Fig1

Project Location Map

Mosaic Fertilizer, LLC.
Four Corners Mine
Significant Upland Wildlife Habitat
Hillsborough County, Florida

FIGURE
1

Document Path: W:\Projects\Mosaic MM Projects\Active Projects\FCO - SUWH\GIS\Spring 2022 Event\FCO SUWH_Fig1_Location.mxd



Sections 13-15, 23-27, 33-36 Township 32 South Range 21 East
Sections 30 and 31 Township 32 South Range 22 East

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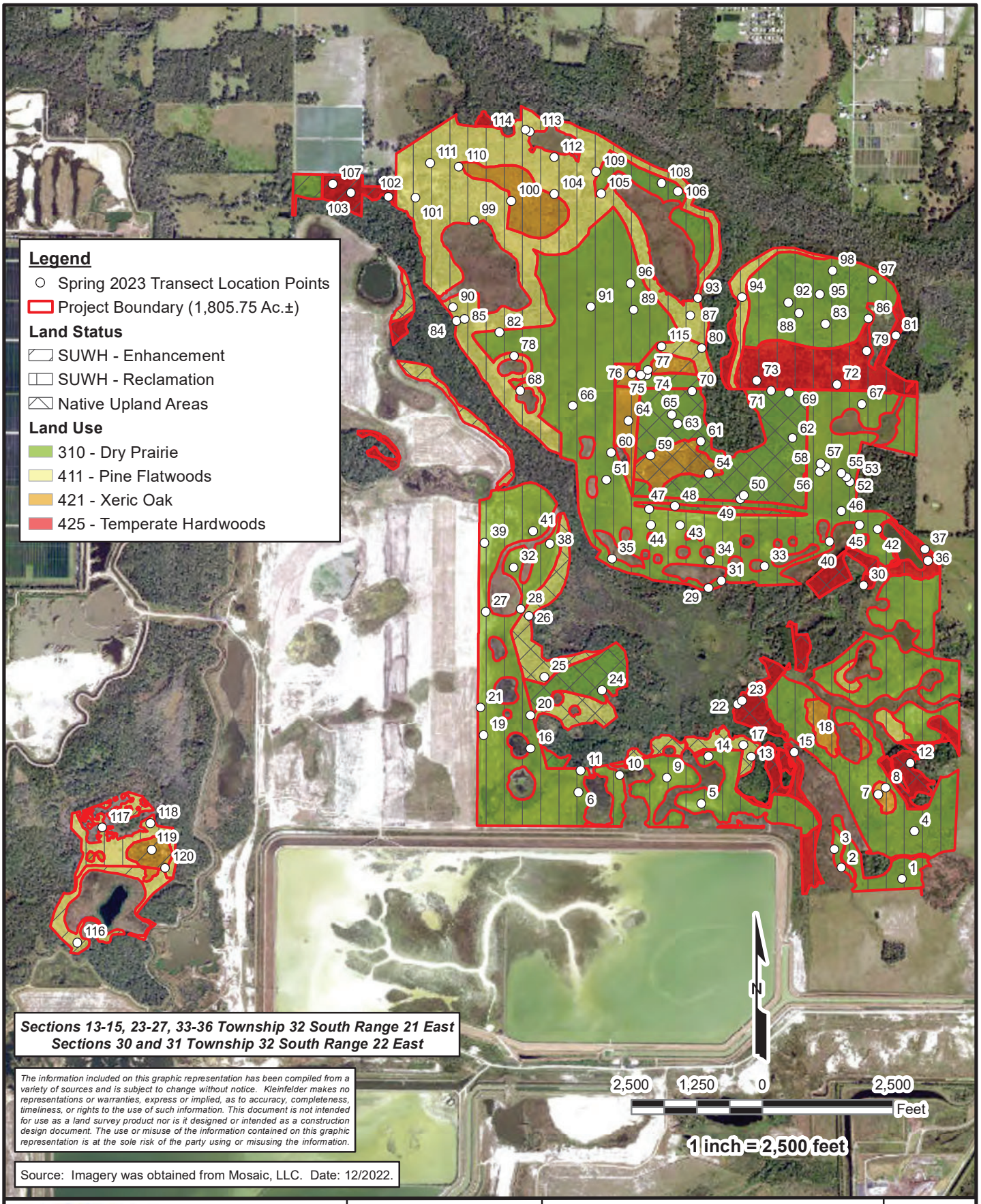
Photo Station Location Map

Mosaic Fertilizer, LLC.
Four Corners Mine
Significant Upland Wildlife Habitat
Hillsborough County, Florida

FIGURE
2

Document Path: W:\Projects\Mosaic MM Projects\Active Projects\FCO - SUWH\GIS\Spring 2023 Event\FCO SUWH_Fig2_Photostations.mxd



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PROJECT NO.	20224110.001A
DRAWN:	3/15/2022
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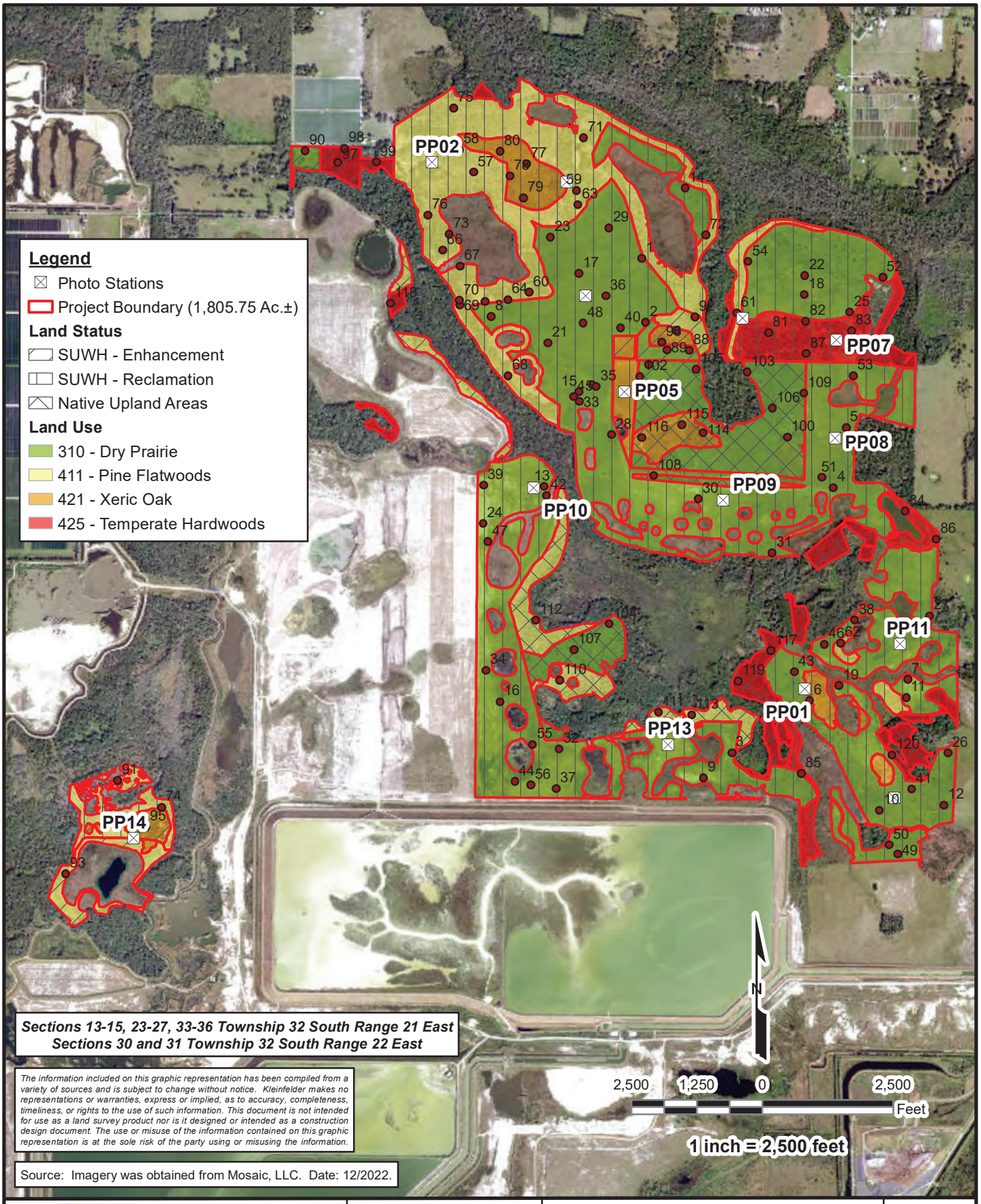
FILE NAME:	FCO SUWH_Fig3_StationsSpring23

Transect Location Map - Spring

Mosaic Fertilizer, LLC.
Four Corners Mine
Significant Upland Wildlife Habitat
Hillsborough County, Florida

FIGURE

3A



Sections 13-15, 23-27, 33-36 Township 32 South Range 21 East
Sections 30 and 31 Township 32 South Range 22 East

Source: Imagery was obtained from Mosaic, LLC. Date: 12/2022.

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PROJECT NO.	20224110.001A
DRAWN:	10/16/2023
DRAWN BY:	EM
CHECKED BY:	EM
FILE NAME:	FCO SUWH_Fig3_StationsFall23

Transect Location Map - Fall

Mosaic Fertilizer, LLC.
Four Corners Mine
Significant Upland Wildlife Habitat
Hillsborough County, Florida

FIGURE
3 B

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TABLES

TABLE 1: TREE DENSITY BY SPECIES - DRY PRAIRIE (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

TREES

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (trees/acre)	PERCENT OF TOTAL	PERCENT CANOPY COVER	SEEDLING
			LIVE	STRESSED					
Tree Species Listed in Table[1]									
Myrica cerifera	Wax myrtle	FAC	48	0	48	34	85.7	1.1	0
Quercus virginiana	Live oak	UPL	2	0	2	1	3.6	0.2	0
Pinus elliottii	Slash pine	UPL	1	0	1	1	1.8	0.1	0
Tree Species Listed In Table Subtotals			**51**	**0**	**51**	**36**	**91.1**	**1.4**	**0**
Tree Species Not Listed in Table									
Quercus inopina	Scrub oak	UPL	2	0	2	1	3.6	<0.05	18
Quercus laurifolia	Laurel oak	FACW	2	0	2	1	3.6	1.4	0
Quercus geminata	Sand live oak	UPL	1	0	1	1	1.8	0.1	17
Tree Species Not Listed in Table Subtotals			**5**	**0**	**5**	**3**	**8.9**	**1.5**	**35**
TOTALS			**56**	**0**	**56**	**39**	**100.0**	**2.9**	**35**

SHRUBS

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (shrubs/acre)
			LIVE	STRESSED		
Shrub Species Listed in Table[2]						
Serenoa repens	Saw palmetto	UPL	106	0	106	76
Ilex glabra	Gallberry	UPL	25	0	25	18
Baccharis halimifolia	Eastern false-willow	FAC	7	0	7	5
Quercus myrtifolia	Myrtle oak	UPL	1	0	1	1
Shrub Species Listed in Table Subtotals			**139**	**0**	**139**	**100**
Shrub Species Not Listed in Table						
Hypericum hypericoides	St. Andrews cross	FAC	3	0	3	2
Rhus copallinum	Winged sumac	UPL	1	0	1	1
Callicarpa americana	American beauty-berry	UPL	1	0	1	1
Shrub Species Not Listed in Table Subtotals			**5**	**0**	**5**	**4**
TOTALS			**144**	**0**	**144**	**104**

[1] Tree species listed in Table 2 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] Shrub species listed in Table 3 of the Hillsborough County Phosphate Mining Reclamation Manual

TABLE 2: SUMMARY OF HERBACEOUS SPECIES COVER
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SPECIES CLASSIFICATION	NUMBER OF SPECIES	TOTAL PERCENT COVER
Dry Prairie (Reclamation)		
Species Listed in Tables[1]	50	35.5
Other Species Not Listed in Tables	38	19.0
Non-native Species	18	11.0
Nuisance Species[2]	10	11.5
Total Species Cover	116	77.0
Total Bare Ground/Dead Litter	-	24.9
Dry Prairie (Enhancement)		
Species Listed in Tables[1]	5	8.6
Other Species Not Listed in Tables	2	1.2
Non-native Species	2	0.7
Nuisance Species[2]	3	20.8
Total Species Cover	12	31.3
Total Bare Ground/Dead Litter	-	69.8
Dry Prairie (Native Area)		
Species Listed in Tables[1]	30	47.5
Other Species Not Listed in Tables	18	26.8
Non-native Species	2	0.3
Nuisance Species[2]	2	1.5
Total Species Cover	52	76.1
Total Bare Ground/Dead Litter	-	29.6
Pine Flatwoods (Reclamation)		
Species Listed in Tables[1]	47	26.2
Other Species Not Listed in Tables	20	8.3
Non-native Species	18	16.1
Nuisance Species[2]	4	16.9
Total Species Cover	89	67.5
Total Bare Ground/Dead Litter	-	34.9

TABLE 2: SUMMARY OF HERBACEOUS SPECIES COVER
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SPECIES CLASSIFICATION	NUMBER OF SPECIES	TOTAL PERCENT COVER
Pine Flatwoods (Enhancement)		
Species Listed in Tables[1]	30	48.6
Other Species Not Listed in Tables	3	4.7
Non-native Species	4	5.0
Nuisance Species[2]	5	34.5
Total Species Cover	42	92.8
Total Bare Ground/Dead Litter	-	11.5
Pine Flatwoods (Native Area)		
Species Listed in Tables[1]	25	45.9
Other Species Not Listed in Tables	10	22.8
Total Species Cover	35	68.7
Total Bare Ground/Dead Litter	-	40.5
Temperate Hardwoods (Reclamation)		
Species Listed in Tables[1]	17	19.9
Other Species Not Listed in Tables	25	32.5
Non-native Species	8	13.2
Nuisance Species[2]	8	25.8
Total Species Cover	58	91.4
Total Bare Ground/Dead Litter	-	10.8
Temperate Hardwoods (Enhancement)		
Species Listed in Tables[1]	6	57.7
Other Species Not Listed in Tables	1	0.4
Nuisance Species[2]	1	0.3
Total Species Cover	8	58.4
Total Bare Ground/Dead Litter	-	41.6

TABLE 2: SUMMARY OF HERBACEOUS SPECIES COVER
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SPECIES CLASSIFICATION	NUMBER OF SPECIES	TOTAL PERCENT COVER
Temperate Hardwoods (Native Area)		
Species Listed in Tables[1]	13	18.8
Other Species Not Listed in Tables	3	15.8
Nuisance Species[2]	6	18.2
Total Species Cover	22	52.8
Total Bare Ground/Dead Litter	-	47.9
Xeric Oak (Reclamation)		
Species Listed in Tables[1]	13	20.8
Other Species Not Listed in Tables	14	18.7
Non-native Species	3	7.3
Nuisance Species[2]	4	18.2
Total Species Cover	34	65.0
Total Bare Ground/Dead Litter	-	35.8
Xeric Oak (Enhancement)		
Species Listed in Tables[1]	15	21.9
Other Species Not Listed in Tables	11	24.6
Non-native Species	1	0.6
Nuisance Species[2]	1	6.6
Total Species Cover	28	53.7
Total Bare Ground/Dead Litter	-	47.3
Xeric Oak (Native Area)		
Species Listed in Tables[1]	10	22.1
Other Species Not Listed in Tables	10	23.5
Nuisance Species[2]	1	0.1
Total Species Cover	21	45.7
Total Bare Ground/Dead Litter	-	54.3

[1] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] FISC (2023) Category 1 and 2 nuisance species.

TABLE 3: HERBACEOUS COVER BY SPECIES - DRY PRAIRIE (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Listed in Tables(1)				
Andropogon virginicus	Broomsedge	FAC	‡	6.6
Scoparia dulcis	Licorice weed	FAC	‡	6.0
Galactia elliotii	Milkpea	UPL		2.2
Coreopsis leavenworthii	Leavenworth's tickseed	FACW	‡	2.0
Pteridium aquilinum	Bracken fern	UPL		1.5
Digitaria ciliaris	Southern crabgrass	UPL	‡	1.4
Setaria parviflora	Knotroot bristle grass	FAC	‡	1.2
Axonopus fissifolius	Southern carpet grass	FAC	‡	1.0
Eupatorium capillifolium	Dogfennel	FAC		1.0
Andropogon glomeratus	Bushy bluestem	FACW	‡	0.8
Cyperus retrorsus	Pinebarren flatsedge	FAC	‡	0.8
Euthamia caroliniana	Slender goldenrod	FAC		0.8
Chamaecrista nictitans	Wild sensitive plant	UPL		0.6
Polygonum punctatum	Dotted smartweed	OBL	‡	0.6
Amphicarpum muhlenbergianum	Blue maidencane	FACW		0.5
Aristida stricta	Wiregrass	FAC		0.5
Eleocharis baldwinii	Baldwin's spikerush	OBL		0.5
Elephantopus elatus	Tall elephantsfoot	UPL	‡	0.5
Erechtites hieraciifolius	Fireweed	FAC	‡	0.5
Juncus marginatus	Grassleaf rush	FACW	‡	0.5
Ambrosia artemisiifolia	Common ragweed	UPL		0.4
Helianthemum corymbosum	Pinebarren frostweed	UPL	‡	0.4
Paspalum setaceum	Thin paspalum	FAC	‡	0.4
Buchnera americana	American bluehearts	UPL	‡	0.3
Dichanthelium aciculare	Needleleaf witchgrass	FACW	‡	0.3
Digitaria serotina	Hairy crabgrass	FAC		0.3
Hydrocotyle umbellata	Manyflower marshpennywort	FACW		0.3
Oxalis corniculata	Yellow wood sorrel	UPL	‡	0.3
Panicum hemitomon	Maidencane	OBL		0.3
Pityopsis graminifolia	Narrowleaf silkgrass	UPL	‡	0.3
Agalinis fasciculata	Beach False-foxglove	FACW	‡	0.2
Bidens alba (synonym B. pilosa)	White beggar-ticks	FAC	‡	0.2
Carex longii	Long's sedge	FACW	‡	0.2
Crotalaria rotundifolia	Rabbitbells	UPL	‡	0.2
Cyperus compressus	Poorland flatsedge	FACW	‡	0.2
Rhexia mariana	Meadow-beauty	FACW	‡	0.2
Solidago fistulosa	Pine-barren goldenrod	FACW	‡	0.2
Centella asiatica	Asian coinwort	FACW		0.1

TABLE 3: HERBACEOUS COVER BY SPECIES - DRY PRAIRIE (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Listed in Tables(1) (continued)				
Cyperus croceus	Baldwin flatsedge	FAC	‡	0.1
Desmodium incanum	Zarzabacao comun	UPL	‡	0.1
Diodia virginiana	Rough button-weed	FACW	‡	0.1
Eustachys glauca	Saltmarsh fingergrass	FACW	‡	0.1
Froelichia floridana	Cottonweed	UPL	‡	0.1
Gamochaeta pensylvanica	Pennsylvania everlasting	UPL	‡	0.1
Helianthus angustifolius	Narrowleaf sunflower	FACW	‡	0.1
Juncus scirpoides	Needlepod rush	OBL	‡	0.1
Ludwigia maritima	Seaside primrosewillow	FACW	‡	0.1
Phyla nodiflora	Frog-fruit	FAC	‡	0.1
Piloblephis rigida	Wild pennyroyal	UPL	‡	0.1
Serenoa repens	Saw palmetto	UPL		0.1
Total Cover of Species Listed in Tables			**(36)**	**35.5**
Species Not Listed in Tables				
Polypremum procumbens	Rustweed	FAC	‡	3.5
Aeschynomene americana	Meadow joint-vetch	UPL	‡	2.0
Sesbania herbacea	Danglepod	FAC		1.6
Ptilimnium capillaceum	Bishop-weed	FACW		1.4
Heterotheca subaxillaris	Camphorweed	UPL		1.2
Xyris sp.	Yellow-eyed grass	OBL	‡	0.9
Conyza canadensis	Dwarf horseweed	UPL	‡	0.8
Lythrum alatum	Winged lythrum	OBL	‡	0.5
Paspalum distichum	Knot grass	OBL	‡	0.5
Cyperus surinamensis	Tropical flatsedge	FACW	‡	0.4
Ludwigia octovalvis	Large seedbox	OBL	‡	0.4
Parietaria floridana	Florida pellitory	FAC		0.4
Cirsium horridulum	Thistle	UPL	‡	0.3
Crotalaria lanceolata	Lanceleaf rattle-box	UPL		0.3
Fimbristylis dichotoma	Forked fimbry	OBL	‡	0.3
Rumex hastatulus	Dock	FACW	‡	0.3
Cirsium nuttallii	Nuttall's thistle	FACW		0.2
Cyperus odoratus	Fragrant flatsedge	FACW	‡	0.2
Cyperus strigosus	Straw colored flatsedge	FACW	‡	0.2
Cyperus virens	Green flatsedge	FACW	‡	0.2
Lechea deckertii	Deckert's pinweed	-		0.2
Phytolacca americana	Common pokeweed	UPL	‡	0.2
Pluchea odorata	Sweetscent	FACW	‡	0.2
Solidago sempervirens	Seaside goldenrod	FACW	‡	0.2

TABLE 3: HERBACEOUS COVER BY SPECIES - DRY PRAIRIE (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Not Listed in Tables (continued)				
Woodwardia virginica	Virginia chain fern	FACW		0.2
Bidens laevis	Bur-marigold	OBL		0.1
Chamaesyce hirta	Pillpod sandmat	UPL	ǂ	1.2
Cyperus flavescens	Yellow flatsedge	FACW	ǂ	0.1
Echinochloa walteri	Coast cockspur	FACW	ǂ	0.1
Hypericum cistifolium	Round-pod St. John's wort	FACW	ǂ	0.1
Juncus effusus	Softrush	OBL	ǂ	0.1
Juncus megacephalus	Bighead rush	OBL	ǂ	0.1
Lindernia grandiflora	False pimpernel	FACW	ǂ	0.1
Lycopodiella cernua	Nodding clubmoss	FACW		0.1
Mikania scandens	Climbing hempvine	-	ǂ	0.1
Oenothera laciniata	Cutleaf evening primrose	UPL		0.1
Rhynchospora microcarpa	Southern beakrush	OBL	ǂ	0.1
Vitis rotundifolia	Muscadine grape	-		0.1
Total Cover of Species Not Listed in Tables			**(26)**	**19.0**
Non-Native Species				
Indigofera hirsuta	Hairy indigo	UPL	ǂ	3.5
Phyllanthus urinaria	Chamberbitter	FAC		1.5
Sporobolus indicus	Smutgrass	UPL	ǂ	1.0
Paspalum urvillei	Vaseygrass	FAC	ǂ	0.9
Desmodium triflorum	Beggarweed	UPL	ǂ	0.8
Bulbostylis barbata	Watergrass	UPL	ǂ	0.6
Richardia brasiliensis	Richardia	UPL	ǂ	0.5
Sacciolepis indica	Glenwood grass	FAC	ǂ	0.4
Cyperus rotundus	Nutgrass	FAC	ǂ	0.3
Mollugo verticillata	Green carpetweed	UPL		0.3
Alysicarpus ovalifolius	False moneywort	UPL	ǂ	0.2
Crotalaria pallida	Smooth rattle-box	UPL	ǂ	0.2
Melochia corchorifolia	Chocolate-weed	FAC	ǂ	0.2
Wahlenbergia marginata	Southern rockbell	-		0.2
Cyperus lanceolatus	Epiphytic flatsedge	OBL	ǂ	0.1
Eragrostis atrovirens	Thalia lovegrass	FAC		0.1
Kyllinga brevifolia	Shortleaf spikesedge	FACW	ǂ	0.1
Lindernia crustacea	Malaysian false pimpernel	FAC	ǂ	0.1
Total Cover of Non-native Species			**(13)**	**11.0**

TABLE 3: HERBACEOUS COVER BY SPECIES - DRY PRAIRIE (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Nuisance Species[2]				
Melinis repens	Natalgrass	UPL	ǂ	3.7
Paspalum notatum	Bahia grass	UPL	ǂ	2.4
Urena lobata	Caesarweed	UPL	ǂ	1.7
Cynodon dactylon	Bermuda grass	UPL	ǂ	1.5
Praxelis clematidea	Praxelis	UPL	ǂ	0.9
Panicum repens	Torpedo grass	FACW	ǂ	0.6
Spermacoce verticillata	Shrubby false buttonweed	UPL		0.4
Imperata cylindrica	Cogon grass	UPL		0.1
Ludwigia peruviana	Primrose willow	OBL	ǂ	0.1
Macroptilium lathyroides	Phaseolus	-	ǂ	0.1
Total Cover of Nuisance Species			**(8)**	**11.5**
Total Species Cover			**84**	**77.0**
Total Bare Ground/Dead Litter				**24.9**

[1] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] FISC (2023) Category 1 and 2 nuisance species and HCPMRM Section V. Subsection C. Management Guidelines

ǂ Observation of fruit or flowering body

TABLE 4: ADDITIONAL SPECIES - DRY PRAIRIE (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Species Listed in Tables(1)			
Baccharis halimifolia	Eastern false-willow		FAC
Carphephorus corymbosus	Florida paintbrush	ǂ	UPL
Carphephorus odoratissimus	Pineland purple	ǂ	FAC
Cyperus polystachyos	Manyspike flatsedge	ǂ	FACW
Dichanthelium ensifolium	Cypress witchgrass	ǂ	OBL
Eragrostis elliottii	Elliot's lovegrass	ǂ	FAC
Eupatorium rotundifolium	False hoarhound		FAC
Fimbristylis autumnalis	Fringe-rush	ǂ	OBL
Hedyotis uniflora	Hedyotis		FACW
Lachnocaulon anceps	White-head bogbutton		FACW
Ludwigia repens	Red-leaf ludwigia		OBL
Euphorbia polyphylla	Lesser Florida spruge		UPL
Panicum anceps	Beaked panic grass	ǂ	FAC
Pseudognaphalium obtusifolium	Rabbit tobacco		UPL
Rhynchospora fascicularis	Fasciculate beakrush	ǂ	FACW
Helenium amarum	Bitterweed		FAC
Spartina bakeri	Sand cordgrass		FACW
Syngonanthus flavidulus	Bantam-buttons	ǂ	FACW
Species Not Listed in Tables			
Cenchrus spinifex	Coastal sandbur		UPL
Chamaesyce hyssopifolia	Hyssopleaf sandmat	ǂ	UPL
Chamaesyce prostrata	Prostrate sandmat		UPL
Commelina diffusa	Dayflower	ǂ	FACW
Dichanthelium acuminatum	Panic grass	ǂ	FACW
Crocanthemum corymbosum	Pinebarren frostweed	ǂ	-
Erigeron quercifolius	Oak-leaf fleabane	ǂ	FAC
Hypericum hypericoides	St. Andrews cross	ǂ	FAC
Lepidium virginicum	Pepper grass	ǂ	UPL
Lindernia dubia var. anagallidea	Yellowseed false pimpernel	ǂ	FACW
Panicum dichotomiflorum	Fall panicum	ǂ	FACW
Paspalum floridanum	Florida paspalum	ǂ	FACW
Portulaca pilosa	Pink purslane	ǂ	UPL
Solanum americanum	Common nightshade		UPL
Thelypteris kunthii	Southern shield fern		FACW
Vaccinium corymbosum	Highbush blueberry		FACW

TABLE 4: ADDITIONAL SPECIES - DRY PRAIRIE (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Non-native Species			
Aeschynomene indica	India joint-vetch		FACW
Ceratopteris thalictroides	Watersprite		OBL
Cuphea carthagenensis	Columbian waxweed	ǂ	FAC
Cynodon nlemfuensis	African Bermudagrass		UPL
Cyperus alopecuroides	Foxtail flatsedge	ǂ	FACW
Cyperus iria	Rice flatsedge	ǂ	FACW
Drymaria cordata	West Indian chickweed		FAC
Emilia fosbergii	Florida tasselflower	ǂ	UPL
Emilia sonchifolia	Tasselflower	ǂ	UPL
Senna occidentalis	Septicweed		UPL
Nuisance Species(2)			
Begonia cucullata	Wax begonia	ǂ	UPL
Lygodium japonicum	Japanese climbing fern		-
Solanum viarum	Tropical soda apple	ǂ	UPL
Typha sp.	Cattail	ǂ	OBL
Lindernia crustacea	Malaysian false pimpernel	ǂ	FACW
Total Additional Species Listed in Tables		**9**	**18**
Total Additional Species Not Listed in Tables		**11**	**16**
Total Additional Non-native Species		**5**	**10**
Total Additional Nuisance Species		**4**	**5**
Total Additional Species		**29**	**49**

*Native nuisance species

(1) Species listed in Tables 2, 3, and 4 of the Hillsborough County Phospate Mining Reclamation Manual

(2) FISC (2019) Category 1 and 2 nuisance species & species listed in the HCPMRM Section V. C. 1.

ǂ Observation of fruit or flowering body

TABLE 5: TREE DENSITY BY SPECIES - DRY PRAIRIE (ENHANCEMENT)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

No Trees or Shrubs were recorded within the belt transect during the Spring monitoring event.

TABLE 6: HERBACEOUS COVER BY SPECIES - DRY PRAIRIE (ENHANCEMENT)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Listed in Tables[1]				
Cyperus retrorsus	Pinebarren flatsedge	FAC	ǂ	5.8
Galactia elliotii	Milkpea	UPL	ǂ	1.3
Euthamia caroliniana	Slender goldenrod	FAC	ǂ	0.8
Asimina obovata	Bigflower pawpaw	-		0.4
Sida rhombifolia	Indian hemp	UPL		0.3
Total Cover of Species Listed in Table			**(3)**	**8.6**
Species Not Listed in Table				
Scoparia dulcis	Licorice weed	FAC	ǂ	0.8
Dichanthelium acuminatum	Panic grass	FACW		0.4
Total Cover of Species Not Listed in Table			**(1)**	**1.2**
Non-native Species				
Desmodium triflorum	Beggarweed	UPL	ǂ	0.4
Indigofera hirsuta	Hairy indigo	UPL	ǂ	0.3
Total Cover of Non-native Species			**(2)**	**0.7**
Nuisance Species[2]				
Paspalum notatum	Bahia grass	UPL	ǂ	17.5
Cynodon dactylon	Bermuda grass	UPL	ǂ	2.9
Imperata cylindrica	Cogon grass	UPL		0.4
Total Cover of Nuisance Species			**(2)**	**20.8**
Total Species Cover			**8**	**31.3**
Total Bare Ground/Dead Litter				**69.8**

[1] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] FISC (2019) Category 1 and 2 nuisance species & species listed in the HCPMRM Section V. C. 1.

ǂ Observation of fruit or flowering body

TABLE 7: ADDITIONAL SPECIES - DRY PRAIRIE (ENHANCEMENT)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Species Listed in Table(1)			
Agalinis fasciculata	Beach False-foxglove	‡	FACW
Ambrosia artemisiifolia	Common ragweed	‡	UPL
Andropogon glomeratus	Bushy bluestem	‡	FACW
Andropogon virginicus	Broomsedge	‡	FAC
Aristida stricta	Wiregrass		FAC
Axonopus fissifolius	Southern carpet grass		FAC
Buchnera americana	American bluehearts	‡	UPL
Carphephorus corymbosus	Florida paintbrush		UPL
Chamaecrista nictitans	Wild sensitive plant	‡	UPL
Coreopsis leavenworthii	Leavenworth's tickseed	‡	FACW
Crotalaria rotundifolia	Rabbitbells	‡	UPL
Cyperus polystachyos	Manyspike flatsedge	‡	FACW
Desmodium incanum	Zarzabacao comun	‡	UPL
Digitaria ciliaris	Southern crabgrass	‡	UPL
Eleocharis baldwinii	Baldwin's spikerush		OBL
Elephantopus elatus	Tall elephantsfoot		UPL
Eragrostis elliottii	Elliot's lovegrass	‡	FAC
Erechtites hieraciifolius	Fireweed	‡	FAC
Eupatorium capillifolium	Dogfennel		FAC
Eupatorium rotundifolium	False hoarhound		FAC
Eustachys glauca	Saltmarsh fingergrass		FACW
Fimbristylis autumnalis	Fringe-rush	‡	OBL
Froelichia floridana	Cottonweed		UPL
Gamochaeta pensylvanica	Pennsylvania everlasting	‡	UPL
Helianthemum corymbosum	Pinebarren frostweed	‡	UPL
Helianthus angustifolius	Narrowleaf sunflower		FACW
Hydrocotyle umbellata	Manyflower marshpennywort		FACW
Juncus marginatus	Grassleaf rush	‡	FACW
Juncus scirpoides	Needlepod rush	‡	OBL
Ludwigia maritima	Seaside primrosewillow		FACW
Ludwigia repens	Red-leaf ludwigia		OBL
Oxalis corniculata	Yellow wood sorrel	‡	UPL
Panicum hemitomon	Maidencane		OBL
Paspalum setaceum	Thin paspalum		FAC
Phyla nodiflora	Frog-fruit	‡	FAC
Pityopsis graminifolia	Narrowleaf silkgrass	‡	UPL
Polygonum punctatum	Dotted smartweed	‡	OBL
Pseudognaphalium obtusifolium	Rabbit tobacco		UPL
Pteridium aquilinum	Bracken fern		UPL
Rhexia mariana	Meadow-beauty	‡	FACW
Serenoa repens	Saw palmetto		UPL
Setaria parviflora	Knotroot bristle grass	‡	FAC
Solidago fistulosa	Pine-barren goldenrod	‡	FACW
Spartina bakeri	Sand cordgrass		FACW
Syngonanthus flavidulus	Bantam-buttons	‡	FACW

TABLE 7: ADDITIONAL SPECIES - DRY PRAIRIE (ENHANCEMENT)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Species Not Listed in Table			
Aeschynomene americana	Meadow joint-vetch		UPL
Bidens laevis	Bur-marigold		OBL
Chamaesyce hirta	Pillpod sandmat		UPL
Cirsium horridulum	Thistle	ǂ	UPL
Cirsium nuttallii	Nuttall's thistle		FACW
Conyza canadensis	Dwarf horseweed	ǂ	UPL
Croton michauxii	Rushfoil		UPL
Cyperus flavescens	Yellow flatsedge	ǂ	FACW
Cyperus odoratus	Fragrant flatsedge	ǂ	FACW
Cyperus strigosus	Straw colored flatsedge	ǂ	FACW
Cyperus surinamensis	Tropical flatsedge	ǂ	FACW
Echinochloa walteri	Coast cockspur	ǂ	FACW
Eclipta prostrata	Upright burhead	ǂ	FACW
Erigeron quercifolius	Oak-leaf fleabane		FAC
Heterotheca subaxillaris	Camphorweed	ǂ	UPL
Hypericum cistifolium	Round-pod St. John's wort		FACW
Hypericum hypericoides	St. Andrews cross	ǂ	FAC
Juncus effusus	Softrush		OBL
Juncus megacephalus	Bighead rush	ǂ	OBL
Lechea deckertii	Deckert's pinweed		-
Lepidium virginicum	Pepper grass	ǂ	UPL
Lindernia grandiflora	False pimpernel		FACW
Ludwigia octovalvis	Large seedbox	ǂ	OBL
Lythrum alatum	Winged lythrum	ǂ	OBL
Mikania scandens	Climbing hempvine	ǂ	-
Oenothera laciniata	Cutleaf evening primrose		UPL
Opuntia humifusa	Pricklypear		UPL
Parietaria floridana	Florida pellitory		FAC
Phytolacca americana	Common pokeweed		UPL
Piloblephis rigida	Wild pennyroyal	ǂ	UPL
Pluchea odorata	Sweetscent	ǂ	FACW
Polypremum procumbens	Rustweed	ǂ	FAC
Ptilimnium capillaceum	Bishop-weed		FACW
Rhynchospora microcarpa	Southern beakrush	ǂ	OBL
Rumex hastatulus	Dock		FACW
Sesbania herbacea	Danglepod		FAC
Solidago sempervirens	Seaside goldenrod	ǂ	FACW
Thelypteris kunthii	Southern shield fern		FACW
Vaccinium corymbosum	Highbush blueberry	ǂ	FACW
Woodwardia virginica	Virginia chain fern		FACW
Xyris sp.	Yellow-eyed grass	ǂ	OBL

TABLE 7: ADDITIONAL SPECIES - DRY PRAIRIE (ENHANCEMENT)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Non-native Species			
Aeschynomene indica	India joint-vetch		FACW
Bulbostylis barbata	Watergrass	ǂ	UPL
Crotalaria pallida	Smooth rattle-box	ǂ	UPL
Cyperus alopecuroides	Foxtail flatsedge	ǂ	FACW
Cyperus lanceolatus	Epiphytic flatsedge	ǂ	OBL
Drymaria cordata	West Indian chickweed		FAC
Emilia fosbergii	Florida tasselflower	ǂ	UPL
Emilia sonchifolia	Tasselflower	ǂ	UPL
Eragrostis atrovirens	Thalia lovegrass	ǂ	FAC
Paspalum urvillei	Vaseygrass	ǂ	FAC
Phyllanthus urinaria	Chamberbitter		FAC
Richardia brasiliensis	Richardia	ǂ	UPL
Sacciolepis indica	Glenwood grass	ǂ	FAC
Senna occidentalis	Septicweed		UPL
Sporobolus indicus	Smutgrass	ǂ	UPL
Wahlenbergia marginata	Southern rockbell		UPL
Nuisance Species[(2)]			
Begonia cucullata	Wax begonia	ǂ	UPL
Ludwigia peruviana	Primrose willow		OBL
Lygodium japonicum	Japanese climbing fern		-
Macroptilium lathyroides	Phaseolus	ǂ	-
Melinis repens	Natalgrass	ǂ	UPL
Panicum repens	Torpedo grass		FACW
Praxelis clematidea	Praxelis	ǂ	UPL
Solanum viarum	Tropical soda apple		UPL
Spermacoce verticillata	Shrubby false buttonweed	ǂ	UPL
Typha sp.	Cattail		OBL
Urena lobata	Caesarweed	ǂ	UPL
Total Additional Species		**65**	**113**
Total Additional Species Listed in Tables		**26**	**45**
Total Additional Species Not Listed in Tables		**22**	**41**
Total Additional Non-native Species		**11**	**16**
Total Additional Nuisance Species		**6**	**11**

[(1)] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[(2)] FISC (2019) Category 1 and 2 nuisance species & species listed in the HCPMRM Section V. C. 1.

ǂ Observation of fruit or flowering body

TABLE 8: TREE DENSITY BY SPECIES - DRY PRAIRIE (NATIVE AREA)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

TREES

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (trees/acre)	PERCENT OF TOTAL	PERCENT CANOPY COVER	SEEDLING
			LIVE	STRESSED					
Tree Species Listed in Table[1]									
Quercus virginiana	Live oak	UPL	4	0	4	16	100.0	0.6	0
Tree Species Listed In Table Subtotals			**4**	**0**	**4**	**16**	**100.0**	**0.6**	**0**
TOTALS			**4**	**0**	**4**	**16**	**100.0**	**0.6**	**0**

SHRUBS

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (shrubs/acre)
			LIVE	STRESSED		
Shrub Species Listed in Table[2]						
Serenoa repens	Saw palmetto	UPL	166	0	166	664
Shrub Species Listed in Table Subtotals			**166**	**0**	**166**	**664**
Shrub Species Not Listed in Table						
Quercus myrtifolia	Myrtle oak	UPL	4	0	4	16
Callicarpa americana	American beauty-berry	UPL	1	0	1	4
Shrub Species Not Listed in Table Subtotals			**5**	**0**	**5**	**20**
TOTALS			**171**	**0**	**171**	**684**

[1] Tree species listed in Table 2 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] Shrub species listed in Table 3 of the Hillsborough County Phosphate Mining Reclamation Manual

TABLE 9: HERBACEOUS COVER BY SPECIES - DRY PRAIRIE (NATIVE AREA)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Listed in Tables(1)				
Andropogon virginicus	Broomsedge	FAC	‡	14.0
Serenoa repens	Saw palmetto	UPL		8.3
Galactia elliotii	Milkpea	UPL	‡	8.2
Euthamia caroliniana	Slender goldenrod	FAC		3.1
Syngonanthus flavidulus	Bantam-buttons	FACW	‡	2.8
Licania michauxii	Gopher apple	UPL	‡	1.5
Elephantopus elatus	Tall elephantsfoot	UPL		1.3
Eupatorium rotundifolium	False hoarhound	FAC	‡	0.9
Pteridium aquilinum	Bracken fern	UPL		0.8
Solidago fistulosa	Pine-barren goldenrod	FACW		0.8
Vaccinium myrsinites	Shiny blueberry	UPL		0.8
Solidago odorata var. chapmanii	Chapman's goldenrod	UPL		0.6
Cyperus retrorsus	Pinebarren flatsedge	FAC	‡	0.5
Paspalum setaceum	Thin paspalum	FAC		0.4
Rhexia mariana	Meadow-beauty	FACW	‡	0.4
Stillingia sylvatica	Queensdelight	FAC		0.4
Asimina obovata	Bigflower pawpaw	-		0.3
Asimina reticulata	Netted pawpaw	UPL		0.3
Ilex glabra	Gallberry	UPL		0.3
Pityopsis graminifolia	Narrowleaf silkgrass	UPL	‡	0.3
Quercus virginiana	Live oak	UPL		0.3
Chapmannia floridana	Florida alicia	UPL		0.2
Dichanthelium aciculare	Needleleaf witchgrass	FACW	‡	0.2
Scleria reticularis	Nutrush	FACW	‡	0.2
Cnidoscolus stimulosus	Tread-softly	UPL	‡	0.1
Lygodesmia aphylla	Roserush	UPL	‡	0.1
Myrica cerifera	Wax myrtle	FAC		0.1
Opuntia humifusa	Pricklypear	UPL	‡	0.1
Polgyala rugelii	Yellow milwort	FACW		0.1
Smilax auriculata	Earleaf greenbriar	-		0.1
Total Cover of Species Listed in Tables			**(13)**	**47.5**

TABLE 9: HERBACEOUS COVER BY SPECIES - DRY PRAIRIE (NATIVE AREA)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Not Listed in Table				
Aristida stricta var. beyrichiana	Pineland three-awn	FAC		14.9
Pteridium aquilinum var. pseudocaudatum	Tailed bracken	UPL		2.1
Rhus copallinum	Winged sumac	UPL		1.5
Dichanthelium commutatum	Variable witchgrass	FAC	‡	1.4
Pterocaulon pycnostachyum	Blackroot	UPL	‡	1.4
Callicarpa americana	American beauty-berry	UPL		0.8
Woodwardia virginica	Virginia chain fern	FACW		0.8
Crocanthemum corymbosum	Pinebarren frostweed	UPL		0.9
Polygonum setaceum	Bog smartweed	OBL	‡	0.5
Polypremum procumbens	Rustweed	FAC	‡	0.5
Vitis rotundifolia	Muscadine grape	-		0.5
Rhynchospora gracilenta	Slender beaksedge	FACW	‡	0.4
Dichanthelium acuminatum	Panic grass	FACW	‡	0.3
Vaccinium corymbosum	Highbush blueberry	FACW		0.3
Aeschynomene americana	Meadow joint-vetch	UPL		0.2
Indigofera caroliniana	Carolina indigo	UPL		0.1
Mimosa strigillosa	Mimosa	UPL		0.1
Quercus laevis	Turkey oak	UPL		0.1
Total Cover of Species Not Listed in Table			**(6)**	**26.8**
Non-native Species				
Richardia brasiliensis	Richardia	UPL		0.2
Indigofera suffruticosa	Anil de pasto	UPL		0.1
Total Cover of Non-native Species			**(0)**	**0.3**
Nuisance Species[(2)]				
Imperata cylindrica	Cogon grass	UPL		0.9
Urena lobata	Caesarweed	UPL	‡	0.6
Total Cover of Nuisance Species			**(1)**	**1.5**
Total Species Cover			**20**	**76.1**
Total Bare Ground/Dead Litter				**29.6**

[(1)] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[(2)] FISC (2019) Category 1 and 2 nuisance species & species listed in the HCPMRM Section V. C. 1.

‡ Observation of fruit or flowering body

TABLE 10: ADDITIONAL SPECIES - DRY PRAIRIE (NATIVE AREA)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Species Listed in Table[1]			
Acer rubrum	Red maple		FACW
Eleocharis baldwinii	Baldwin's spikerush		OBL
Eupatorium mohrii	Eupatorium		FAC
Gaylussacia dumosa	Dwarf huckleberry		FAC
Gelsemium sempervirens	Yellow jessamine		-
Hypericum cistifolium	Round-pod St. John's wort	ǂ	FACW
Hypoxis juncea	Yellow star grass	ǂ	FACW
Lyonia fruticosa	Coastplain Staggerbush		UPL
Mimosa quadrivalvis var. floridana	Florida sensitive brier		UPL
Quercus nigra	Water oak		FACW
Rhynchospora fascicularis	Fasciculate beakrush	ǂ	FACW
Scoparia dulcis	Licorice weed	ǂ	FAC
Xyris sp.	Yellow-eyed grass	ǂ	OBL
Species Not Listed in Table			
Gordonia lasianthus	Loblolly bay		FACW
Oclemena reticulata	Whitetop aster	ǂ	UPL
Osmunda cinnamomea	Cinnamon fern		FACW
Pinus clausa	Sand pine		UPL
Pinus taeda	Loblolly pine		UPL
Rhynchospora microcarpa	Southern beakrush	ǂ	OBL
Rubus pensilvanicus	Sawtooth blackberry		FAC
Smilax bona-nox	Saw greenbrier		-
Total Additional Species		**7**	**21**
Total Additional Species Listed in Tables		**5**	**13**
Total Additional Species Not Listed in Tables		**2**	**8**

[1] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

ǂ Observation of fruit or flowering body

TABLE 11: TREE DENSITY BY SPECIES - PINE FLATWOODS (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

TREES

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (trees/acre)	PERCENT OF TOTAL	PERCENT CANOPY COVER	SEEDLING
			LIVE	STRESSED					
Tree Species Listed in Table[1]									
Pinus elliottii	Slash pine	UPL	51	1	52	104	65.0	44.6	0
Myrica cerifera	Wax myrtle	FAC	18	0	18	36	22.5	7.0	0
Quercus laurifolia	Laurel oak	FACW	6	0	6	12	7.5	2.4	0
Liquidambar styraciflua	Sweetgum	FACW	1	0	1	2	1.3	0.4	0
Quercus nigra	Water oak	FACW	1	0	1	2	1.3	0.1	0
Quercus virginiana	Live oak	UPL	1	0	1	2	1.3	2.3	0
Sabal palmetto	Cabbage palm	FAC	1	0	1	2	1.3	<0.05	0
TOTALS			**79**	**1**	**80**	**160**	**100.0**	**56.8**	**0**

SHRUBS

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (shrubs/acre)
			LIVE	STRESSED		
Shrub Species Listed in Table[2]						
Serenoa repens	Saw palmetto	UPL	40	0	40	80
Baccharis halimifolia	Eastern false-willow	FAC	2	0	2	4
TOTALS			**42**	**0**	**42**	**84**

[1] Tree species listed in Table 2 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] Shrub species listed in Table 3 of the Hillsborough County Phosphate Mining Reclamation Manual

TABLE 12: HERBACEOUS COVER BY SPECIES - PINE FLATWOODS (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Listed in Tables(1)				
Digitaria serotina	Hairy crabgrass	FAC	ǂ	1.8
Desmodium incanum	Zarzabacao comun	UPL	ǂ	1.2
Eupatorium capillifolium	Dogfennel	FAC		1.2
Oxalis corniculata	Yellow wood sorrel	UPL	ǂ	1.2
Erechtites hieraciifolius	Fireweed	FAC		1.1
Scoparia dulcis	Licorice weed	FAC	ǂ	1.1
Sesbania herbacea	Danglepod	FAC		1.1
Euthamia caroliniana	Slender goldenrod	FAC	ǂ	1.0
Panicum hemitomon	Maidencane	OBL		1.0
Coreopsis leavenworthii	Leavenworth's tickseed	FACW	ǂ	0.9
Cyperus retrorsus	Pinebarren flatsedge	FAC	ǂ	0.9
Dichanthelium aciculare	Needleleaf witchgrass	FACW	ǂ	0.9
Setaria parviflora	Knotroot bristle grass	FAC	ǂ	0.9
Digitaria ciliaris	Southern crabgrass	UPL	ǂ	0.8
Andropogon virginicus	Broomsedge	FAC	ǂ	0.7
Centella asiatica	Asian coinwort	FACW		0.7
Vaccinium myrsinites	Shiny blueberry	UPL		0.7
Andropogon glomeratus	Bushy bluestem	FACW	ǂ	0.6
Juncus marginatus	Grassleaf rush	FACW	ǂ	0.6
Ludwigia maritima	Seaside primrosewillow	FACW		0.6
Phyla nodiflora	Frog-fruit	FAC	ǂ	0.6
Rhexia mariana	Meadow-beauty	FACW	ǂ	0.6
Callicarpa americana	American beauty-berry	UPL	ǂ	0.5
Cyperus strigosus	Straw colored flatsedge	FACW	ǂ	0.4
Hydrocotyle umbellata	Manyflower marshpennywort	FACW		0.4
Paspalum setaceum	Thin paspalum	FAC		0.4
Polygonum punctatum	Dotted smartweed	OBL	ǂ	0.4
Solidago fistulosa	Pine-barren goldenrod	FACW		0.4
Carex longii	Long's sedge	FACW	ǂ	0.3
Chamaecrista nictitans	Wild sensitive plant	UPL	ǂ	0.3
Elephantopus elatus	Tall elephantsfoot	UPL		0.3
Juncus scirpoides	Needlepod rush	OBL	ǂ	0.3
Ambrosia artemisiifolia	Common ragweed	UPL	ǂ	0.2
Axonopus fissifolius	Southern carpet grass	FAC		0.2
Cyperus surinamensis	Tropical flatsedge	FACW	ǂ	0.2
Eupatorium mohrii	Eupatorium	FAC		0.2
Hypericum cistifolium	Round-pod St. John's wort	FACW	ǂ	0.2
Paspalum floridanum	Florida paspalum	FACW		0.2
Pteridium aquilinum	Bracken fern	UPL		0.2
Sida rhombifolia	Indian hemp	UPL		0.2
Aristida stricta	Wiregrass	FAC		0.1
Buchnera americana	American bluehearts	UPL	ǂ	0.1
Cyperus croceus	Baldwin flatsedge	FAC	ǂ	0.1

TABLE 12: HERBACEOUS COVER BY SPECIES - PINE FLATWOODS (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Listed in Tables(1) (continued)				
Cyperus odoratus	Fragrant flatsedge	FACW	ǂ	0.1
Hypericum tetrapetalum	St. John's wort	FAC	ǂ	0.1
Juncus megacephalus	Bighead rush	OBL	ǂ	0.1
Rhynchospora fascicularis	Fasciculate beakrush	FACW	ǂ	0.1
Total Cover of Species Listed in Table			**(30)**	**26.2**
Species Not Listed in Table				
Aeschynomene americana	Meadow joint-vetch	UPL		2.0
Lepidium virginicum	Pepper grass	UPL	ǂ	1.2
Dichanthelium commutatum	Variable witchgrass	FAC	ǂ	1.1
Polypremum procumbens	Rustweed	FAC	ǂ	0.8
Cirsium nuttallii	Nuttall's thistle	FACW		0.7
Ptilimnium capillaceum	Bishop-weed	FACW		0.6
Conyza canadensis	Dwarf horseweed	UPL	ǂ	0.3
Cyperus ligularis	Swamp flatsedge	FACW	ǂ	0.2
Mikania scandens	Climbing hempvine	-	ǂ	0.2
Woodwardia virginica	Virginia chain fern	FACW		0.2
Asimina obovata	Large flowered pawpaw	UPL		0.1
Chamaesyce hirta	Pillpod sandmat	UPL		0.1
Erigeron quercifolius	Oak-leaf fleabane	FAC		0.1
Mimosa strigillosa	Mimosa	UPL		0.1
Parthenocissus quinquefolia	Virginia creeper	-		0.1
Polgyala rugelii	Yellow milwort	FACW		0.1
Rumex hastatulus	Dock	FACW		0.1
Solidago sempervirens	Seaside goldenrod	FACW		0.1
Vaccinium corymbosum	Highbush blueberry	FACW		0.1
Vicia acutifolia	Four-leaf vetch	FACW		0.1
Total Cover of Species Not Listed in Table			**(6)**	**8.3**
Non-Native Species				
Indigofera hirsuta	Hairy indigo	UPL	ǂ	7.7
Phyllanthus urinaria	Chamberbitter	FAC		3.1
Sporobolus indicus	Smutgrass	UPL	ǂ	1.1
Desmodium triflorum	Beggarweed	UPL	ǂ	1.0
Richardia brasiliensis	Richardia	UPL		0.7
Drymaria cordata	West Indian chickweed	FAC		0.5
Sacciolepis indica	Glenwood grass	FAC		0.5
Crotalaria pallida	Smooth rattle-box	UPL	ǂ	0.3
Cuphea carthagenensis	Columbian waxweed	FAC		0.2
Kyllinga brevifolia	Shortleaf spikesedge	FACW	ǂ	0.2
Bulbostylis barbata	Watergrass	UPL	ǂ	0.1
Cyperus lanceolatus	Epiphytic flatsedge	OBL	ǂ	0.1
Emilia sonchifolia	Tasselflower	UPL	ǂ	0.1
Hyptis verticillata	John Charles	UPL	ǂ	0.1
Lindernia crustacea	Malaysian false pimpernel	FAC	ǂ	0.1
Mollugo verticillata	Green carpetweed	UPL		0.1
Paspalum urvillei	Vaseygrass	FAC		0.1
Wahlenbergia marginata	Southern rockbell	UPL		0.1
Total Cover of Non-Native Species			**(10)**	**16.1**

TABLE 12: HERBACEOUS COVER BY SPECIES - PINE FLATWOODS (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Nuisance Species[(2)]				
Urena lobata	Caesarweed	UPL	ǂ	7.1
Paspalum notatum	Bahia grass	UPL		6.6
Cynodon dactylon	Bermuda grass	UPL	ǂ	3.0
Solanum viarum	Tropical soda apple	UPL		0.2
Total Cover of Nuisance Species			**(2)**	**16.9**
Total Species Cover			**48**	**67.5**
Total Bare Ground/Dead Litter				**34.9**

*Native nuisance species

[(1)] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[(2)] FISC (2019) Category 1 and 2 nuisance species & species listed in the HCPMRM Section V. C. 1.

ǂ Observation of fruit or flowering body

TABLE 13: ADDITIONAL SPECIES - PINE FLATWOODS (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Species Listed in Table[1]			
Acalypha gracilens	Slender threeseed mercury		UPL
Amphicarpum muhlenbergianum	Blue maidencane		FACW
Baccharis halimifolia	Eastern false-willow	ǂ	FAC
Crotalaria rotundifolia	Rabbitbells	ǂ	UPL
Cyperus flavescens	Yellow flatsedge	ǂ	FACW
Gamochaeta pensylvanica	Pennsylvania everlasting		UPL
Helianthus angustifolius	Narrowleaf sunflower		FACW
Hyptis alata	Musky mint		FACW
Ilex glabra	Gallberry		UPL
Lachnocaulon anceps	White-head bogbutton	ǂ	FACW
Licania michauxii	Gopher apple		UPL
Lygodesmia aphylla	Roserush		UPL
Lythrum alatum	Winged lythrum	ǂ	OBL
Serenoa repens	Saw palmetto		UPL
Xyris sp.	Yellow-eyed grass		OBL
Species Not Listed in Table			
Boehmeria cylindrica	Small-spike false nettle	ǂ	OBL
Chamaesyce hyssopifolia	Hyssopleaf sandmat	ǂ	UPL
Eupatorium serotinum	Late-flowering thorough-wort		FAC
Ludwigia octovalvis	Large seedbox	ǂ	OBL
Nephrolepis exaltata	Boston fern	ǂ	FAC
Panicum dichotomiflorum	Fall panicum	ǂ	FACW
Rhynchospora microcarpa	Southern beakrush		OBL
Thelypteris interrupta	Shield fern		FACW
Thelypteris kunthii	Southern shield fern	ǂ	FACW
Non-native Species			
Abutilon theophrasti	Velvetleaf	ǂ	UPL
Emilia fosbergii	Florida tasselflower		UPL
Nuisance Species[2]			
Imperata cylindrica	Cogon grass		UPL
Ludwigia peruviana	Primrose willow		OBL
Lygodium japonicum	Japanese climbing fern	ǂ	-
Macroptilium lathyroides	Phaseolus	ǂ	-
Melinis repens	Natalgrass		UPL
Richardia grandiflora	Largeflower Mexican clover		-
Total Additional Species		**14**	**32**
Total Additional Species Listed in Tables		**5**	**15**
Total Additional Species Not Listed in Tables		**6**	**9**
Total Additional Non-native Species		**1**	**2**
Total Additional Nuisance Species		**2**	**6**

[1] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] FISC (2019) Category 1 and 2 nuisance species & species listed in the HCPMRM Section V. C. 1.

ǂ Observation of fruit or flowering body

TABLE 14: TREE DENSITY BY SPECIES - PINE FLATWOODS (ENHANCEMENT)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

TREES

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (trees/acre)	PERCENT OF TOTAL	PERCENT CANOPY COVER	SEEDLING
			LIVE	STRESSED					
Tree Species Listed in Table[1]									
Pinus elliottii	Slash pine	UPL	3	0	3	40	60.0	24.4	0
Myrica cerifera	Wax myrtle	FAC	1	0	1	13	20.0	8.4	0
Quercus laurifolia	Laurel oak	FACW	1	0	1	13	20.0	0.4	0
TOTALS			**5**	**0**	**5**	**66**	**100.0**	**33.2**	**0**

SHRUBS

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (shrubs/acre)
			LIVE	STRESSED		
Shrub Species Listed in Table[1]						
Serenoa repens	Saw palmetto	UPL	14	0	14	187
Baccharis halimifolia	Eastern false-willow	FAC	1	0	1	13
TOTALS			**15**	**0**	**15**	**200**

[1] Tree species listed in Table 2 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] Shrub species listed in Table 3 of the Hillsborough County Phosphate Mining Reclamation Manual

TABLE 15: HERBACEOUS COVER BY SPECIES - PINE FLATWOODS (ENHANCEMENT)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Listed in Tables(1)				
Andropogon virginicus	Broomsedge	FAC	ǂ	12.2
Panicum hemitomon	Maidencane	OBL		4.9
Euthamia caroliniana	Slender goldenrod	FAC	ǂ	4.4
Elephantopus elatus	Tall elephantsfoot	UPL		3.4
Dichanthelium aciculare	Needleleaf witchgrass	FACW		2.8
Digitaria ciliaris	Southern crabgrass	UPL	ǂ	2.1
Juncus marginatus	Grassleaf rush	FACW	ǂ	1.9
Eupatorium capillifolium	Dogfennel	FAC		1.8
Rhynchospora fascicularis	Fasciculate beakrush	FACW	ǂ	1.8
Pteridium aquilinum	Bracken fern	UPL		1.7
Chamaecrista nictitans	Wild sensitive plant	UPL	ǂ	1.5
Ptilimnium capillaceum	Bishop-weed	FACW		1.3
Axonopus fissifolius	Southern carpet grass	FAC		1.1
Hypoxis juncea	Yellow star grass	FACW	ǂ	1.0
Centella asiatica	Asian coinwort	FACW		0.9
Cyperus flavescens	Yellow flatsedge	FACW	ǂ	0.7
Coreopsis leavenworthii	Leavenworth's tickseed	FACW	ǂ	0.5
Juncus scirpoides	Needlepod rush	OBL	ǂ	0.5
Commelina erecta	Sandhill dayflower	UPL	ǂ	0.4
Erechtites hieraciifolius	Fireweed	FAC		0.4
Hydrocotyle umbellata	Manyflower marshpennywort	FACW		0.4
Hyptis alata	Musky mint	FACW		0.4
Licania michauxii	Gopher apple	UPL		0.4
Pluchea rosea	Rosy camphorweed	FACW		0.4
Buchnera americana	American bluehearts	UPL	ǂ	0.3
Helianthemum corymbosum	Pinebarren frostweed	UPL		0.3
Ludwigia maritima	Seaside primrosewillow	FACW	ǂ	0.3
Scoparia dulcis	Licorice weed	FAC	ǂ	0.3
Solidago fistulosa	Pine-barren goldenrod	FACW		0.3
Oxalis corniculata	Yellow wood sorrel	UPL	ǂ	0.2
Total Cover of Species Listed in Table			**(15)**	**48.6**
Species Not Listed in Table				
Dichanthelium acuminatum	Panic grass	FACW		4.2
Aeschynomene americana	Meadow joint-vetch	UPL		0.3
Mikania scandens	Climbing hempvine	-	ǂ	0.2
Total Cover of Species Not Listed in Table			**(1)**	**4.7**
Non-native Species				
Desmodium triflorum	Beggarweed	UPL	ǂ	1.8
Sacciolepis indica	Glenwood grass	FAC	ǂ	1.6
Indigofera hirsuta	Hairy indigo	UPL		1.2
Richardia brasiliensis	Richardia	UPL	ǂ	0.4
Total Cover of Non-native Species			**(3)**	**5.0**

TABLE 15: HERBACEOUS COVER BY SPECIES - PINE FLATWOODS (ENHANCEMENT)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Nuisance Species[2]				
Paspalum notatum	Bahia grass	UPL		17.8
Urena lobata	Caesarweed	UPL	ǂ	8.5
Cynodon dactylon	Bermuda grass	UPL		4.2
Imperata cylindrica	Cogon grass	UPL		3.3
Melinis repens	Natalgrass	UPL	ǂ	0.7
Total Cover of Nuisance Species			**(2)**	**34.5**
Total Species Cover			**21**	**92.8**
Total Bare Ground/Dead Litter				**11.5**

[1] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] FISC (2019) Category 1 and 2 nuisance species & species listed in the HCPMRM Section V. C. 1.

ǂ Observation of fruit or flowering body

TABLE 16: ADDITIONAL SPECIES - PINE FLATWOODS (ENHANCEMENT)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Species Listed in Table(1)			
Amphicarpum muhlenbergianum	Blue maidencane		FACW
Andropogon glomeratus	Bushy bluestem	ǂ	FACW
Baccharis halimifolia	Eastern false-willow		FAC
Callisia ornata	Florida scrub roseling		UPL
Carex longii	Long's sedge		FACW
Cyperus odoratus	Fragrant flatsedge	ǂ	FACW
Cyperus retrorsus	Pinebarren flatsedge	ǂ	FAC
Cyperus strigosus	Straw colored flatsedge	ǂ	FACW
Cyperus surinamensis	Tropical flatsedge	ǂ	FACW
Digitaria serotina	Hairy crabgrass	ǂ	FAC
Eupatorium mohrii	Eupatorium		FAC
Fimbristylis puberula	Vahl's hairy fringe-rush	ǂ	FACW
Helianthus angustifolius	Narrowleaf sunflower		FACW
Hypericum cistifolium	Round-pod St. John's wort	ǂ	FACW
Hypericum tetrapetalum	St. John's wort	ǂ	FAC
Ilex glabra	Gallberry		UPL
Juncus megacephalus	Bighead rush	ǂ	OBL
Lachnanthes caroliniana	Carolina redroot		FAC
Lachnocaulon anceps	White-head bogbutton	ǂ	FACW
Lygodesmia aphylla	Roserush		UPL
Paspalum setaceum	Thin paspalum		FAC
Phyla nodiflora	Frog-fruit	ǂ	FAC
Polygonum punctatum	Dotted smartweed	ǂ	OBL
Rhexia mariana	Meadow-beauty	ǂ	FACW
Sabatia grandiflora	Marsh pink		FACW
Serenoa repens	Saw palmetto		UPL
Smilax auriculata	Earleaf greenbriar		-
Vaccinium myrsinites	Shiny blueberry		UPL
Vitis shuttleworthii	Calloose grape		-
Xyris sp.	Yellow-eyed grass	ǂ	OBL
Species Not Listed in Table			
Asimina obovata	Bigflower pawpaw		-
Commelina diffusa	Dayflower	ǂ	FACW
Mimosa strigillosa	Mimosa		UPL
Phytolacca americana	Common pokeweed		UPL
Polgyala rugelii	Yellow milwort	ǂ	FACW
Polypremum procumbens	Rustweed	ǂ	FAC
Rhynchospora microcarpa	Southern beakrush	ǂ	OBL
Rumex hastatulus	Dock	ǂ	FACW
Smilax bona-nox	Saw greenbrier		-
Vaccinium corymbosum	Highbush blueberry		FACW
Woodwardia virginica	Virginia chain fern		FACW
Xyris caroliniana	Carolina yelloweyed grass	ǂ	FACW

TABLE 16: ADDITIONAL SPECIES - PINE FLATWOODS (ENHANCEMENT)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Non-native Species			
Bulbostylis barbata	Watergrass	ǂ	UPL
Cuphea carthagenensis	Columbian waxweed		FAC
Hyptis verticillata	John Charles		UPL
Kyllinga brevifolia	Shortleaf spikesedge	ǂ	FACW
Nuisance Species[(2)]			
Macroptilium lathyroides	Phaseolus	ǂ	-
Total Additional Species		**24**	**47**
Total Additional Species Listed in Tables		**15**	**30**
Total Additional Species Not Listed in Tables		**6**	**12**
Total Additional Non-native Species		**2**	**4**
Total Additional Nuisance Species		**1**	**1**

[(1)] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[(2)] FISC (2019) Category 1 and 2 nuisance species & species listed in the HCPMRM Section V. C. 1.

ǂ Observation of fruit or flowering body

TABLE 17: TREE DENSITY BY SPECIES - PINE FLATWOODS (NATIVE AREA)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

TREES

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (trees/acre)	PERCENT OF TOTAL	PERCENT CANOPY COVER	SEEDLING
			LIVE	STRESSED					
Tree Species Listed in Table[(1)]									
Myrica cerifera	Wax myrtle	FAC	14	0	14	175	36.8	7.9	0
Acer rubrum	Red maple	FACW	5	0	5	63	13.2	0.4	0
Quercus nigra	Water oak	FACW	4	1	5	63	13.2	4.9	0
Quercus virginiana	Live oak	UPL	5	0	5	63	13.2	60.9	0
Quercus laurifolia	Laurel oak	FACW	1	0	1	13	2.6	0.0	0
Tree Species Listed In Table Subtotals			**29**	**1**	**30**	**377**	**79.0**	**74.1**	**0**
Tree Species Not Listed in Table									
Gordonia lasianthus	Loblolly bay	FACW	5	0	5	63	13.2	3.5	0
Ilex cassine	Dahoon holly	OBL	1	0	1	13	2.6	0.0	0
Persea borbonia	Red bay	UPL	1	0	1	13	2.6	0.0	0
Persea palustris	Swamp bay	OBL	1	0	1	13	2.6	0.8	0
Tree Species Not Listed in Table Subtotals			**8**	**0**	**8**	**102**	**21.1**	**4.3**	**0**
TOTALS			**37**	**1**	**38**	**479**	**100.0**	**78.4**	**0**

[(1)] Tree species listed in Table 2 of the Hillsborough County Phosphate Mining Reclamation Manual

TABLE 17: TREE DENSITY BY SPECIES - PINE FLATWOODS (NATIVE AREA)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SHRUBS

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (shrubs/acre)
			LIVE	STRESSED		
Shrub Species Listed in Table[(2)]						
Serenoa repens	Saw palmetto	UPL	50	0	50	625
Ilex glabra	Gallberry	UPL	46	0	46	575
Lyonia fruticosa	Coastplain Staggerbush	UPL	8	0	8	100
Callicarpa americana	American beauty-berry	UPL	2	0	2	25
Baccharis halimifolia	Eastern false-willow	FAC	1	0	1	13
Vaccinium stamineum	Deerberry	UPL	1	0	1	13
Shrub Species Listed in Table Subtotals			**108**	**0**	**108**	**1351**
Shrub Species Not Listed in Table						
Vaccinium darrowii	Darrow's blueberry	UPL	8	0	8	36
Vaccinium corymbosum	Highbush blueberry	FACW	6	0	6	27
Shrub Species Not Listed in Table Subtotals			**14**	**0**	**14**	**63**
TOTALS			**122**	**0**	**122**	**1414**

[(2)] Shrub species listed in Table 3 of the Hillsborough County Phosphate Mining Reclamation Manual

NUISANCE SHRUBS

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (shrubs/acre)
			LIVE	STRESSED		
Schinus terebinthifolius	Brazilian pepper	FAC	2	0	2	25
TOTALS			**2**	**0**	**2**	**25**

TABLE 18: HERBACEOUS COVER BY SPECIES - PINE FLATWOODS (NATIVE AREA)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Listed in Tables[1]				
Andropogon virginicus	Broomsedge	FAC	ǂ	12.8
Eleocharis baldwinii	Baldwin's spikerush	OBL		5.4
Galactia elliotii	Milkpea	UPL	ǂ	4.4
Serenoa repens	Saw palmetto	UPL		4.4
Gaylussacia frondosa	Blue huckleberry	FAC		4.0
Syngonanthus flavidulus	Bantam-buttons	FACW		3.1
Vaccinium myrsinites	Shiny blueberry	UPL		2.2
Lyonia fruticosa	Coastplain Staggerbush	UPL		1.3
Vitis rotundifolia	Muscadine grape	-		1.3
Rhynchospora fascicularis	Fasciculate beakrush	FACW	ǂ	1.0
Solidago fistulosa	Pine-barren goldenrod	FACW		0.8
Quercus nigra	Water oak	FACW		0.7
Smilax auriculata	Earleaf greenbriar	-		0.7
Dichanthelium aciculare	Needleleaf witchgrass	FACW	ǂ	0.6
Rhexia mariana	Meadow-beauty	FACW	ǂ	0.6
Eupatorium mohrii	Eupatorium	FAC		0.3
Euthamia caroliniana	Slender goldenrod	FAC	ǂ	0.3
Gelsemium sempervirens	Yellow jessamine	-		0.3
Hypericum cistifolium	Round-pod St. John's wort	FACW	ǂ	0.3
Myrica cerifera	Wax myrtle	FAC		0.3
Paspalum setaceum	Thin paspalum	FAC		0.3
Xyris sp.	Yellow-eyed grass	OBL	ǂ	0.3
Acer rubrum	Red maple	FACW		0.2
Stillingia sylvatica	Queensdelight	FAC		0.2
Mimosa quadrivalvis var. floridana	Florida sensitive brier	UPL		0.1
Total Cover of Species Listed in Table			**(8)**	**45.9**
Species Not Listed in Table				
Dichanthelium acuminatum	Panic grass	FACW	ǂ	7.8
Aristida stricta var. beyrichiana	Pineland three-awn	FAC		4.4
Polgyala rugelii	Yellow milwort	FACW		3.5
Woodwardia virginica	Virginia chain fern	FACW		2.9
Osmunda cinnamomea	Cinnamon fern	FACW		2.5
Vaccinium corymbosum	Highbush blueberry	FACW		0.6
Asimina obovata	Bigflower pawpaw	-		0.4
Pinus clausa	Sand pine	UPL		0.3
Rubus pensilvanicus	Sawtooth blackberry	FAC	ǂ	0.3
Gordonia lasianthus	Loblolly bay	FACW		0.1
Total Cover of Species Not Listed in Table			**(2)**	**22.8**
Total Species Cover			**10**	**68.7**
Total Bare Ground/Dead Litter				**40.5**

[1] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

ǂ Observation of fruit or flowering body

TABLE 19: ADDITIONAL SPECIES - PINE FLATWOODS (NATIVE AREA)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Species Listed in Table[1]			
Callicarpa americana	American beauty-berry		UPL
Pteridium aquilinum	Bracken fern	ǂ	UPL
Pterocaulon pycnostachyum	Blackroot	ǂ	UPL
Scoparia dulcis	Licorice weed	ǂ	FAC
Species Not Listed in Table			
Pinus taeda	Loblolly pine		UPL
Nuisance Species[2]			
Urena lobata	Caesarweed	ǂ	UPL
Total Additional Species		**4**	**6**
Total Additional Species Listed in Tables		**3**	**4**
Total Additional Species Not Listed in Tables		**0**	**1**
Total Additional Nuisance Species		**1**	**1**

[1] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] FISC (2019) Category 1 and 2 nuisance species & species listed in the HCPMRM Section V. C. 1.

ǂ Observation of fruit or flowering body

TABLE 20: TREE DENSITY BY SPECIES - TEMPERATE HARDWOODS (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

TREES

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (trees/acre)	PERCENT OF TOTAL	PERCENT CANOPY COVER	SEEDLING
			LIVE	STRESSED					
Tree Species Listed in Table[1]									
Myrica cerifera	Wax myrtle	FAC	3	0	3	17	60.0	4.6	0
Pinus elliottii	Slash pine	UPL	2	0	2	11	40.0	2.8	0
TOTAL			**5**	**0**	**5**	**28**	**100.0**	**7.4**	**0**

SHRUBS

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	CONDITION		TOTAL	DENSITY (shrubs/acre)
			LIVE	STRESSED		
Shrub Species Listed in Table[2]						
Baccharis halimifolia	Eastern false-willow	FAC	3	0	3	17
TOTAL			**3**	**0**	**3**	**17**

[1] Tree species listed in Table 2 of the Hillsborough County Phosphate Mining Reclamation Manual

[2] Shrub species listed in Table 3 of the Hillsborough County Phosphate Mining Reclamation Manual

TABLE 21: HERBACEOUS COVER BY SPECIES - TEMPERATE HARDWOODS (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Species Listed in Tables(1)				
Ambrosia artemisiifolia	Common ragweed	UPL		6.9
Ptilimnium capillaceum	Bishop-weed	FACW	‡	3.2
Digitaria ciliaris	Southern crabgrass	UPL		3.0
Eupatorium capillifolium	Dogfennel	FAC		1.6
Cyperus retrorsus	Pinebarren flatsedge	FAC	‡	1.0
Scoparia dulcis	Licorice weed	FAC	‡	0.8
Pteridium aquilinum	Bracken fern	UPL	‡	0.6
Hydrocotyle umbellata	Manyflower marshpennywort	FACW		0.5
Bidens alba (synonym B. pilosa)	White beggar-ticks	FAC	‡	0.4
Desmodium incanum	Zarzabacao comun	UPL	‡	0.4
Digitaria serotina	Hairy crabgrass	FAC		0.4
Andropogon virginicus	Broomsedge	FAC	‡	0.2
Erechtites hieraciifolius	Fireweed	FAC	‡	0.2
Oxalis corniculata	Yellow wood sorrel	UPL	‡	0.2
Paspalum setaceum	Thin paspalum	FAC	‡	0.2
Sida rhombifolia	Indian hemp	UPL		0.2
Hyptis alata	Musky mint	FACW	‡	0.1
Total Cover of Species Listed in Table			**(11)**	**19.9**
Species Not Listed in Table				
Aeschynomene americana	Meadow joint-vetch	UPL		9.6
Solidago sempervirens	Seaside goldenrod	FACW		3.9
Setaria parviflora	Knotroot bristle grass	FAC	‡	3.6
Coreopsis leavenworthii	Leavenworth's tickseed	FACW	‡	2.3
Lythrum alatum	Winged lythrum	OBL	‡	2.0
Euthamia caroliniana	Slender goldenrod	FAC	‡	1.9
Sesbania herbacea	Danglepod	FAC		1.6
Chamaesyce hirta	Pillpod sandmat	UPL	‡	1.2
Polypremum procumbens	Rustweed	FAC	‡	0.8
Conyza canadensis	Dwarf horseweed	UPL		0.7
Cyperus surinamensis	Tropical flatsedge	FACW	‡	0.7
Cyperus compressus	Poorland flatsedge	FACW	‡	0.6
Dichanthelium aciculare	Needleleaf witchgrass	FACW		0.6
Boehmeria cylindrica	Small-spike false nettle	OBL		0.5
Croton glandulosus	Vente conmigo	UPL	‡	0.5
Axonopus fissifolius	Southern carpet grass	FAC	‡	0.3
Cyperus strigosus	Straw colored flatsedge	FACW	‡	0.3
Eclipta prostrata	Upright burhead	FACW	‡	0.3
Cirsium horridulum	Thistle	UPL	‡	0.2
Ludwigia maritima	Seaside primrosewillow	FACW		0.2
Portulaca pilosa	Pink purslane	UPL	‡	0.2
Rumex hastatulus	Dock	FACW	‡	0.2
Eustachys glauca	Saltmarsh fingergrass	FACW	‡	0.1
Pluchea odorata	Sweetscent	FACW	‡	0.1
Polygonum punctatum	Dotted smartweed	OBL	‡	0.1
Total Cover of Species Not Listed in Table			**(18)**	**32.5**

TABLE 21: HERBACEOUS COVER BY SPECIES - TEMPERATE HARDWOODS (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	Ch. 62-340, F.A.C. STATUS	FRUIT OR FLOWER	TOTAL PERCENT COVER
Non-native Species				
Indigofera hirsuta	Hairy indigo	UPL	ǂ	4.8
Phyllanthus urinaria	Chamberbitter	FAC	ǂ	1.9
Sporobolus indicus	Smutgrass	UPL	ǂ	1.6
Alysicarpus ovalifolius	False moneywort	UPL	ǂ	1.3
Bulbostylis barbata	Watergrass	UPL	ǂ	1.3
Mollugo verticillata	Green carpetweed	UPL	ǂ	1.2
Richardia brasiliensis	Richardia	UPL	ǂ	1.0
Emilia fosbergii	Florida tasselflower	UPL	ǂ	0.1
Total Cover of Non-native Species			**(8)**	**13.2**
Nuisance Species[(2)]				
Paspalum notatum	Bahia grass	UPL	ǂ	10.5
Urena lobata	Caesarweed	UPL	ǂ	8.5
Cynodon dactylon	Bermuda grass	UPL		4.5
Imperata cylindrica	Cogon grass	UPL		1.0
Spermacoce verticillata	Shrubby false buttonweed	UPL		0.5
Melinis repens	Natalgrass	UPL	ǂ	0.4
Ludwigia peruviana	Primrose willow	OBL	ǂ	0.3
Macroptilium lathyroides	Phaseolus	-		0.1
Total Cover of Nuisance Species			**(4)**	**25.8**
Total Species Cover			**41**	**91.4**
Total Bare Ground/Dead Litter				**10.8**

[(1)] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

[(2)] FISC (2019) Category 1 and 2 nuisance species & species listed in the HCPMRM Section V. C. 1.

ǂ Observation of fruit or flowering body

TABLE 22: ADDITIONAL SPECIES - TEMPERATE HARDWOODS (RECLAMATION)
3RD ANNUAL (SPRING) QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
JUNE 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	Ch. 62-340, F.A.C. STATUS
Species Listed in Table[1]			
Buchnera americana	American bluehearts	ǂ	UPL
Carex longii	Long's sedge	ǂ	FACW
Commelina diffusa	Dayflower	ǂ	FACW
Smilax auriculata	Earleaf greenbriar		-
Solidago fistulosa	Pine-barren goldenrod		FACW
Species Not Listed in Table			
Agalinis fasciculata	Beach False-foxglove	ǂ	FACW
Andropogon glomeratus	Bushy bluestem	ǂ	FACW
Chamaesyce hyssopifolia	Hyssopleaf sandmat	ǂ	UPL
Cirsium nuttallii	Nuttall's thistle	ǂ	FACW
Cyperus odoratus	Fragrant flatsedge	ǂ	FACW
Fuirena pumila	Umbrella-sedge	ǂ	OBL
Habenaria repens	Water-spider orchid		FACW
Juncus marginatus	Grassleaf rush	ǂ	FACW
Juncus megacephalus	Bighead rush	ǂ	OBL
Ludwigia octovalvis	Large seedbox	ǂ	OBL
Mikania scandens	Climbing hempvine	ǂ	-
Non-native Species			
Crotalaria pallida	Smooth rattle-box	ǂ	UPL
Desmodium triflorum	Beggarweed	ǂ	UPL
Paspalum urvillei	Vaseygrass	ǂ	FAC
Total Additional Species		**16**	**19**
Total Additional Species Listed in Tables		**3**	**5**
Total Additional Species Not Listed in Tables		**10**	**11**
Total Additional Non-native Species		**3**	**3**

[1] Species listed in Tables 2, 3, and 4 of the Hillsborough County Phosphate Mining Reclamation Manual

ǂ Observation of fruit or flowering body