

Standard Agenda Item Cover Sheet

Agenda Item No. _____

		Meeting Date:					
Consent Section	Regular Section	Public Hearing					
Requires Chair Signature? [∐Yes ⊠No	Includes a Technology Compo	onent? Yes No				
Subject: Hopewell Mine 2	2023-2024 Annual Re	port					
Department Name: Public	Utilities Department	t-Environmental Services Division	on				
Contact Person: Kim C	Cruz	Contact Phone:	(813) 276-8370				
Sign-Off Approvals:	0.5.10.5.10.00.5	W ' C M	04/04/0005				
George B. Cassady Assistant County Administrator	05/05/2025	Kevin S. Moran Department Director	04/24/2025				
N/A		Nancy Takemori	04/28/2025				
Management and Budget – Approved as to Financial Impact Accur	racy Date	County Attorney – Approved as to Legal Sufficiency	Date				
mining and reclamation repo	Acceptance of the Hopewell 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.						
Financial Impact Statement: No County funds are require							
Development Code, a phosp	hate mining permittee of mining operations	ion 8.02.09 of the Hillsborough (e is required to submit an Annua and reclamation during the precent reporting year.	l Report of Operations				
	Staff Review Report	į.					
• Attachment 1: Agen	-						
Attachment 2: Hope	well Mine 2023/2024	Annual Report					

County Staff Review Report



A Report Presented to the
Board of County Commissioners
on DATE from
Public Utilities Department
Environmental Services Division
regarding

Hopewell Mine 2023-2024 Annual Report

Application No.: PMAR 24-1074

Phosphate Reference No.: 724.01P

Staff Review of the Hopewell Mine 2023/2024 Annual Report

Annual Review of Development Order Compliance Assessment

The Hopewell Mine Operating Permit 82-1 was approved by the Hillsborough County Board of County Commissioners on June 23, 1982. The development encompasses 4,083 acres and is located in southeast Hillsborough County. The project is approved for Phosphate Mining and the project's build out date was 2018.

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.

Agency Review

The Annual Report of Operations (Attachment 2) submitted for the Hopewell 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. The review generated no adverse comments or recommendations (Attachment 1). 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.

During the reporting year from July 1, 2023, through June 30, 2024, the following development was reported for informational purposes:

Project Status

The developer of record continues to be Mosaic Fertilizer LLC, (Mosaic). The authorized agent is Russell T. Schweiss. The Operating Permit was amended six times and was valid through June 23, 2018, under Resolution Number R06-249, which allows for no more than 3,050 acres to be mined. Phosphate mining was concluded at the Hopewell Mine on January 16, 2011, resulting in a cumulative acreage mined at 2,526 acres. The Plant site demolition was completed as of December 2011, and all product removal from the plant stockpile was completed as of April 2012. The plant site and stockpile areas have been contoured and grassed as of June 2012.

Mining Operations

Mosaic reports that final mining of Hopewell mine was completed on January 16, 2011; therefore, there has been no additional acres mined since that time and no product has been shipped from the mine during the reporting period. All mine cut contouring and revegetation for the Hopewell Mine has been completed. According to the annual report, the area mined has not exceeded 3,050 acres as set forth in approved Resolution Number R06-249. Additionally, for the life of the Hopewell Mine the cumulative average of area mined was approximately 95 acres per year. All yearly totals were under or met the 125-acre annual mining limitation. No setback waivers were applied for during the 2023/2024 reporting year.

Consumptive use of water during the reporting period was reported at 0 gallons of water per day and did not exceed the SWFWMD Water Use Permit withdrawal annual average and daily maximum limits.

Clay Storage

Mosaic reports that Clay Settling Areas (CSA) HL-1, HL-2, HL-3 and HL-4 have a total area of approximately 1,215 acres out of the 1,600 acres allowable and a total effective flooded area of 1,060 acres out of the 1,360 acres allowable. Additionally, the annual report indicates that reclamation activities for the HL-1, HL-2 and HL-4 clay settling areas are complete and have received FDEP release. Reclamation of HL-3 was completed in April 2016, and abandonment was obtained from the FDEP Industrial Wastewater Group.

Reclamation

Since 1982, Mosaic Fertilizer, LLC and its predecessors, Mosaic Phosphates Company and IMC Phosphates Company have requested and obtained written releases from the Florida Department of Environmental Protection (FDEP) for certain FDEP Reclamation and Restoration Program Units in the Hopewell Mine.

Mosaic may request reclamation releases outside of the annual report twice a year in the Spring and the Fall to Hillsborough County. Per the 2023/2024 Annual Report no reclamation requests were submitted to Hillsborough County or FDEP during the 2023/2024 reporting year.

Supplemental wetland reclamation plantings occurred during the 2023/2024 reporting period.

Hillsborough County and Mosaic are working to clarify the locations and amount of acreage identified as released by Hillsborough County outside of 2023/2024 annual

report staff review. Future annual reports shall be updated, if needed, to include the areas verified as released by Hillsborough County.

Significant Upland Wildlife Habitat

Hopewell Mining Unit 9 was approved by the Hillsborough County Board of County Commissioners on August 26, 2003 (application number 202.01P). Condition number 2 of the approval references reclamation of Significant Upland Wildlife Habitat (SUWH) to be constructed within MU 8A. On behalf of Mosaic, Kleinfelder reports the SUWH met the total vegetative cover greater than 40% and identified more than four tree species within the canopy, however, it did not meet success criteria for the required 75% species diversity, 20% relative bare ground cover, 80% relative cover of desirable herbaceous species, less than 10% cover of nuisance species, nor total species cover success criterion. Mosaic plans to continue maintenance to assure that nuisance/exotic species remain below the 10% specified in the permit.

Annual Financial Responsibility

Mosaic's 2024/2025, proposed comprehensive current year, (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. 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 vet 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. Environmental Liability Insurance Policy. For consistency purposes, a the minor correction to the Corporate Guarantee was completed prior to the 2025. BOCC Meeting approval of the 2024/2025 Financial February 11. Responsibility and has no impact on the Financial Responsibility summary in 2023/2024 Hopewell Mine Annual Report.

Projected Development:

At this time, Mosaic indicated that there is no mining in the Hopewell Mine proposed for 2024/2025. Reclamation activities expected during the reporting year 2024/2025 include routine monitoring, maintenance and supplemental plantings as needed. Additionally, repair of any wetland connection areas as needed. Mosaic indicated that they will be requesting reclamation releases outside the reporting period.

Project History

1. On June 23, 1982, the Hillsborough County Board of County Commissioners (BOCC) approved and issued Community Unit Rezoning Resolution No. C-U #82-223, and Mine Operating Permit No. 82-1 for the Hopewell Mine to the Hopewell Land Corporation. The Operating Permit and Zoning approvals authorized mining and mining related activities at the Hopewell Mine.

- 2. On July 6, 1983, the BOCC adopted Resolution No. R83-0079, amending provision 2 of Operating Permit No. 82-1 to read as follows:
 - "This Operating Permit shall remain in effect for a period of thirty (30) years from and after the date of its issuance provided that this term may be extended by this Board upon findings of excusable delay in any proposed mining or reclamation."
- 3. On October 3, 1989, IMC Fertilizer (Mosaic Fertilizer LLC predecessor in interest, hereinafter collectively referred to as "IMC") purchased most of the Hopewell Mine and entered into a lease for the remaining portion of the Hopewell Mine.
- 4. On October 12, 1989, the BOCC approved the transfer of the Hopewell Mine Operating Permit, as amended, from Hopewell Land Corporation to IMC.
- 5. On July 10, 1990, the BOCC approved Personal Appearance PRS #90-0102 request to amend the General Site Plan (CU 82-223) to realign the phosphate mining boundary for the Hopewell Mine.
- 6. On June 13, 1991, the BOCC approved Personal Appearance PRS #90-0168 request to amend the General Site Plan (CU 82-223) to realign the phosphate mining boundary for the Hopewell Mine.
- 7. On June 10, 1997, the BOCC approved Resolution #R97-125 approving Major Modification MM #97-0070 request to amend the General Site Plan (CU 82-223) to allow development of a portion of the property for residential and commercial uses.
- 8. On December 12, 1999, the Zoning Administrator approved Minor Change #MC00-0229 request and on April 25, 2000, the BOCC approved an amendment to the Operating Permit #82-1 to add a 40-acre parcel zoned AM, which was not included in the CU zoning for the Hopewell Mine.
- 9. On March 12, 2002, the BOCC approved Resolution #R02-042 approving Personal Appearance PRS #01-0009 and the Phosphate Mining Application #1000.13P requests to amend the General Site Plan (CU 82-223) and the Operating Permit #82-1 to allow inbound and outbound truck shipments of phosphate product.
- 10. On October 25, 2004, IMC Phosphates Company merged with Cargill Crop Nutrition and was renamed Mosaic Phosphates Company.

11. On July 29, 2005, Mosaic Phosphates Company was renamed Mosaic Fertilizer, LLC.

12. On October 24, 2006, the BOCC approved Resolution Number R06-249, amending the Operating Permit #82-1, allowing the addition of a 532-acre parcel to the Hopewell Mine, extending the build out date from 2013 to 2018, increasing the allowable acres to be mined to 2,971, and increase the total phosphatic clay production. On October 24, 2006, the BOCC also approved PRS #05-1370, incorporating the changes to the Operating Permit #82-1, including allowing mining of areas formerly designated as mining setback areas.

Attachment 1: Agency Comments

				For Reviewers Use Only	Follow-up Comment								
					Date		10/22/2024	10/22/2024		10/30/2024	10/30/2024	10/30/2024	
					Response Accepted	N/A N/A	Yes 10	Yes 10		Yes 10	Yes 10	V6 N/ A 10 10 10 10 10 10 10 10 10 10 10 10 10	N/A
					Response Date	9/24/2024	9/24/2024	9/24/2024	9/24/2024	10/7/2024	10/7/2024	100/1004 100/1004	9/24/2024
				For Applicants Use Only	Applicant Response Re	No comments 8/14/2024 No comments 6	9/16/2024 Adinowledged 5	9/16/2024 Admowledged 5	9/9/2024 Acknowledged 5	Per BOCCS (04/55/2000 approval of HAM 8, the final combined acreage for HAM 16 is 550.) Local acres lasted as 550 in Table. I found in homb Sections 2 and 3 of the AR is a mirror error in rounding when compared to the release acres of 351 and 31 acroage is accounted for in HAM 8. A full turn the people a famual Reports will reference 351 acres in Dob total and released columns.	During list year's review of the 2022-2023 Hopewell Amual Report, acreage of HMU3 was incorrectly listed in Table 1 found in both Section 2 and 3 of the AM. That error was corrected in the 2023-99/2024 Amual Report submittal.	9/9/2024 Admowkedged No comments No comments No comments To address the ruisance cover, Mosaic will schedule a herbicide event to shee place, perioding the resulted of the forementioned herbicide event, Mosaic will schedule amminime (13 supplemental planning to target the deversity requirements of the perim. Mosaic would like but schedule am emprise gwith the littlebough County Natural Resources - Senior Environmental Scientist (see Comment at 31.) to request the sign of the perim. Wo sick accurate picture than monitoring data above an provide, and or accurate picture than monitoring data above an provide, we look forward to the opportunity to work with the County, as we move	
					Comment Date	8/14/2024	9/16/2024	9/16/2024	9/9/2024	9/9/2024	9/9/2024	9/9/2024	9/10/2024 No comments
					Initial Comment(s)/Request for Info	No Comments No Comments	Hils borough County EVSD and Mosaic continue to coordinate with regards to areas needing maintenance, fixing areas that need repair, supplemental comment, planting, and mitigation of invasive species.	Reclamation shall be in accordance with the Hilsbrough County BOCC approved post reclamation plans. Post reclamation plan amendment spipilations shall be submitted for changes to be reviewed for approval.	The Planning Commission finds the Hopewell Mine Annual Report consistent with the Hilsborough County Comprehensive Plan.	HMU 8 - total acres 350, but 351 were released? Was the extra acre accounted for in another mining unit area?	Hopewell Annual report 2022-2023 states MU HMU 3 has 127 total acres, 103 overshive been released and 108 unreseeds exect. Hopewell Annual Report 2023-2024 states VU HMU 3 has 450 total acres, 19 series have been released and 431 unreleased acres. Ofference in total from last years to this years report +223 acres?	I) In reference to the exponses in Echibit G to Conditions IVA 8.a. and IV 8.b. of the ECA AC Publication would like to produce the following updates on the current status regarding AI Annatoring AITH as a second like the monitoring status expedited by IA. As and IA. 8.b. are complete and the monitors were removed. The ECA continues to operate a Spicial and the monitors were removed. The ECA continues to operate a Spicial Annatorial Economics of the monitor were removed. The ECA continues to operate a Spicial Annatorial Economics of the Spicial Annatorial Economics of the Spicial Annatorial Economics of the Spicial Annatorial Economics of a Spicial Economics of the Spicial Annatorial Economics of a spicial Annatorial Economics of a spicial Economics of the Spicial Economics of the Spicial Economics of the Spicial Institution of the Spicial Institution and the Spicial Institution of the Principle Institution of the Spicial Institution of Principle Institution of the Spicial Institution of Spicial Ins	No comments
					Page-Sheet No.		General comment	General comment		23	15	37.39	
Mosaic Fertilizer, LLC Kim Cruz	813-276-8370			For Reviewers Use Only	Document	Hopewell AR Hopewell AR	Hopewell AR	Hope well AR	Hopewell AR	Hopewell AR	Hopewell AR	Hopewell AR Hopewell AR Hopewell AR Hopewell AR	Hopewell AR
					Organization/Discipline	FDEP Bur of Mines EPC	EVSD	EVSD	HC Planning Commission	EPC	EPC	EPC EPC FF &WC FF &WC	EVSD
Applicant Name:	HC Contact Phone No.:	HC Contact Email:	Submittal Due Date:		Reviewer	Robert McClelland Ed Coppock	KM Carter/Kim Cruz	KtM Carter/Kim Cruz	Lizzie Baker	Sara Gonzalez	Sara Gonzalez	Mary Guthrie Ren Cope Bryan Phillips Michaela Bake	Troy Green/David Glicksberg
					Comment No.	1 2	m	4	Ŋ	9	7	8 0 10	12

Attachment 2: Hopewell Mine 2023/2024 Annual Report



Mosaic Fertilizer, LLC Hopewell Mine

2023-2024 Annual Report

July 15, 2024



July 15, 2024

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

Re: Mosaic Fertilizer, LLC (Mosaic) 2023/2024 Hillsborough County Hopewell Mine Annual Report

Dear Ms. Cruz:

Pursuant to Sections 8.02.09 and 8.02.10.B. of the Hillsborough County Land Development Code, Mosaic is electronically filing the 2023/2024 Annual Report of Operations for the Hopewell Mine.

The required annual report filing and review fees will be made payable to Hillsborough County Board of County Commissioners. This total includes Hillsborough County Development Services' (HCDS) Phosphate Annual Review fee for Hopewell and the Environmental Protection Commission of Hillsborough County's (EPCHC) annual review and inspection fees. In addition, the latest available financial statements and information can be downloaded or viewed at www.mosaicco.com under the category of Investors, sub-category Financial Information. Please note that Mosaic completed mining at the Hopewell Mine in January 2011. Reclamation, however, will continue until complete.

Please contact me at 863-267-4585 if you have any questions or require additional information regarding this submittal.

Sincerely,

Laney McGraw

Mine Permitting Specialist

Cc: Jeffry Greenwell – Hillsborough County Russell Schweiss – Mosaic Gary Blitch – Mosaic

Shelley Thornton – Mosaic Jake Dotson – Mosaic Laura Morris – Mosaic Keith Hancock – Mosaic Eric Michel – Mosaic Sam Upton – Mosaic Sandy Adams – Mosaic

Hopewell Mine Annual Report of Operations (For Report Period July 1, 2023 to June 30, 2024)

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SECTION 1 REPORT FORMS

CERTIFICATE OF ASSISTANT CORPORATE SECRETARY OF MOSAIC FERTILIZER, LLC AS TO AUTHORIZATION

The undersigned, Beth A. Paulson, does hereby certify that she is the duly elected Assistant Corporate Secretary of Mosaic Fertilizer, LLC, a Delaware limited liability company (the "Company") and further certifies as follows:

- 1. Russell T. Schweiss is the Sr. Director, Land and Resource Strategies for the Company.
- 2. In his capacity as Sr. Director, Land and Resource Strategies, Russell T. Schweiss is authorized to sign any and all documents relating to and including, but not limited to:
 - a) zoning and permit applications, and other related reports and plans that are executed or filed on behalf of the Company with any city, county, regional, state or federal governmental agency or regulatory authority; and
 - b) plans for reclamation, requests for release of reclamation obligations, and other related reports and plans that are executed or filed on behalf of the Company with any city, county, regional, state or federal governmental agency or regulatory authority.
- 3. The signature appearing below opposite Mr. Schweiss' name is a true and correct specimen of his signature:

NAME	TITLE	SIGNATURE
Russell T. Schweiss	Sr. Director, Land and Resource Strategies	

In witness whereof, the undersigned has executed this document effective on this 30th day of May 2024.

Beth A. Paulson

Subscribed and sworn to before me this 30th day of May 2024.

Notary Public

Shawna L Bergman
Notary Public
Minnesota
My Coomission Expires January 31, 2028

Combo Phosphate Mining & DRI Annual Report Application



Important Instructions to All Applicants:

Please email your completed application to ZoningIntake-DSD@HCFLGov.net. Incomplete applications will not be accepted.

	Official Use	Only				
Application No:	Intake Date:	Intake Staff Signature:				
	ZHM Date:					
Acreage:	Zoning:	LU:				
Location:						
	Property Info	ormation				
Address: (See Page 4)	Ci	ty/State/Zip:				
		Acreage:				
Current Use:						
	Property Owner	Information				
Name: Mosaic Fertilizer, LLC		Daytime Phone (813)500-6300				
Address: 13830 Circa Cross	ing DriveCity,	/State/Zip: Lithia, Florida 33547				
Email:		Fax Number				
	Applicant Info	ormation				
Name: Russell Schweiss (Au	uthorized Representative)	Daytime Phone_(813)500-6891				
Address: 13830 Circa Crossing Drive City/State/Zip: Lithia, Florida 33547						
		Fax Number				
	Applicant's Representative	(if different than above)				
Name:		Daytime Phone				
	City/					
		ormation				
List the DRI project name and						
	ttal: Anniversary Date: June 30, 20	24 Reporting Period July 1, 2023 to June 30, 20				

I hereby swear or affirm that all the information provided in the submitted application packet is true and accurate, to the best of my knowledge, and authorize the representative listed above to act on my behalf on this application.

Signature of the Applicant

Russell Schweiss (Authorized Representative)

Type or print name

I hereby authorize the processing of this application and recognize that the final action taken on this petition shall be binding to the property as well as to the current and any future owners.

Signature of the Owner(s) - (All parties on the deed must sign)

Russell Schweiss (Authorized Representive)

Type or print name

Identification of Sensitive/Protected Information and Acknowledgement of Public Records



Pursuant to <u>Chapter 119 Florida Statutes</u>, all information submitted to Development Services is considered public record and open to inspection by the public. Certain information may be considered sensitive or protected information which may be excluded from this provision. Sensitive/protected information may include, but is not limited to, documents such as medical records, income tax returns, death certificates, bank statements, and documents containing social security numbers.

While all efforts will be taken to ensure the security of protected information, certain specified information, such as addresses of exempt parcels, may need to be disclosed as part of the public hearing process for select applications. If your application requires a public hearing and contains sensitive/protected information, please contact
<u>Hillsborough County Development Services">https://disclosed.ncb//disclosed.ncb///disclosed.ncb///disclosed.ncb///di</u>

Additionally, parcels exempt under <u>Florida Statutes §119.071(4)</u> will need to contact <u>Hillsborough County Development</u> <u>Services</u> to obtain a release of exempt parcel information.

	ing an exemption from L9 FS?	n public disclosure of selection No	ted information submitted with your application pursuant					
_		ubmitted with application /or protected information.	Hopewell Mine					
	Type of information included and location							
<u> </u>	Does not include sensitive and/or protected information.							
Please note: Ser	nsitive/protected information	on will not be accepted/requeste	d unless it is required for the processing of the application.					
			o determine if the applicant can be processed with the data owledge that any and all information in the submittal will					
become publi	ic information if not re	quired by law to be protec	red.					
Signature:		Aust be signed by applicant or	authorized representative)					
Intake Staff Si	gnature:		Date:					



Affidavit to Authorize Agent (If applicant is other than owner)

State of Florida County of Hillsborough

(See Page 4 to complete statements 1-4)				
(Name of all property owners), being first duly sworn, depos	e(s) and say(s):			
1. That (I am/we are) the owner(s) and record title holder(s)	of the following described property, to wit:			
Address or general location:	Folio No(s): See page 4+			
2. That this property constitutes the property for which a rec				
	(Nature of request)			
is being applied to the Board of County Commissioners, H	illsborough County.			
3. That the undersigned (has/have) appointed N/A				
as (his/their) agent(s) to execute any permits or other doc	cuments necessary to affect such permit.			
 That this affidavit has been executed to induce Hillsboroug described property; 	gh County, Florida, to consider and act on the above-			
5. That (I/we), the undersigned authority, hereby certify that	the foregoing is true and correct.			
Signed (Property Owner)	Signed (Property Owner)			
Russell Schweiss (Authorized Representative)				
Type or Print Name	Type or Print Name			
STATE OF FLORIDA COUNTY OF HILLSBOROUGH	STATE OF FLORIDA COUNTY OF HILLSBOROUGH			
The foregoing instrument was acknowledged before me by	The foregoing instrument was acknowledged before me b			
means of physical presence or online notarization,	means of □ physical presence or □ online notarization,			
this 11th day of July , 2024, by	this, day of,, by			
Russell Schweiss (year) (name of person acknowledging)	(year) (name of person acknowledging)			
Personally Known OR 📮 Produced Identification	☐ Personally Known OR ☐ Produced Identification			
Type of Identification Produced	Type of Identification Produced			
(Signature of Notary taking acknowledgment)	(Signature of Notary taking acknowledgment)			
Sandra A: Adams Type or Print Name of Notary Public	Type or Print Name of Notary Public			
HH051639 10-7-2024	Commission number			
Commission number SANDRA A. ADAMS Notary Public - State of Florida Commission # HH 051639 My Comm. Expires Oct 7, 2024 Bonded through National Notary Assn.	Commission number Expiration date f 4 07/2024			



Property/Project Information Sheet

	Official Use Only
Application No:	
Proposed Project Name (If applicable): Hopewell Mine	Related Applications: N/A
Code Enforcement/Building Code violation No. (if appli	cable):N/A
List each folio within the proposed project along with t	he corresponding information for each (Use additional sheets if

List each folio within the proposed project along with the corresponding information for each (Use additional sheets if necessary).

Folio Number	Owner(s) Name(s) as listed on the deed	Acreage	Current Zoning	Future Land Use Category	S/T/R**
0928940300	MOSAIC FERTILIZER LLC	76.7	PD	A/M	26/29S/22E
0930120000	SIZEMORE BROTHERS LLC	0.3	AR	R-1	27/29S/22E
0930170000	SOBER FAMILY PROPERTIES II LLC	40.1	PD	A/M	27/29S/22E
0930170025	SOBER FAMILY PROPERTIES II LLC	71.4	PD	A/M; R-1	27/29S/22E
0930170050	BARTOW MINING INC	98.8	PD	A/M	27/29S/22E
0930170100	MOSAIC FERTILIZER LLC	152.7	PD	A/M	27/29S/22E
0930200000	AARON ROBERT A	0.04	AR	R-1	27/29S/22E
0930200100	OLIVIER HOLDINGS LLC	0.2	AR	R-1	27/29S/22E
0930220000	TOOLE BENJAMIN L SR	0.1	AS-1	R-1	27/29S/22E
0930250000	COBB MARILYN C	0.1	AS-1	R-1	27/29S/22E
0930260000	WASHINGTON ADOLPHUS R	0.1	AS-1	R-1	27/29S/22E
0930350000	S&H MATHIS LLC	14.1	AM; PD	A/M	27/29S/22E
0930370000	SOBER FAMILY PROPERTIES II LLC	171.9	PD	A/M	28/29S/22E
0930380000	ASTIN STRAWBERRY PROPERTY MANA	57.2	PD	A/M	28/29S/22E
0930380100	CONRAD RAYMOND E LIFE ESTATE	22.0	AR	A/R	28/29S/22E
0930390000	ASTIN STRAWBERRY PROPERTY MANA	117.5	PD	A/M	28/29S/22E
0930400000	MOSAIC FERTILIZER LLC	210.2	PD	A/M	28/29S/22E
0930840000	CHAVEZ-GUTIERREZ MANUEL	0.2	AR; PD	A/M; A/R	29/29S/22E
	Total Acreage:	1033.64			

^{*} If Current Zoning is PD, list PD application number as well.

^{**} Section / Township / Range



Property/Project Information Sheet

	Official Use Only
Application No:	
Proposed Project Name (If applicable): Hopewell Mine	Related Applications: N/A
Code Enforcement/Building Code violation No. (if appli	cable):N/A
List each folio within the proposed project along with t	he corresponding information for each (Use additional sheets if

List each folio within the proposed project along with the corresponding information for each (Use additional sheets if necessary).

Folio Number	Owner(s) Name(s) as listed on the deed	Acreage	Current Zoning	Future Land Use Category	S/T/R**
0930960000	DAVID CRUM FAMILY TRUST	3.0	AM	A/M	31/29S/22E
0931010000	MOSAIC FERTILIZER LLC	194.8	PD	A/M	32/29S/22E
0931010100	HILLSBOROUGH CATTLEMEN FOUNDAT	1.2	AM	A/M	32/29S/22E
0931020100	CRUM DAVID C TRUSTEE	56.3	PD	A/M	32/29S/22E
0931030000	MOSAIC FERTILIZER LLC	633.7	PD	A/M	33/29S/22E
0931050000	MOSAIC FERTILIZER LLC	645.1	AM; PD	A/M	34/29S/22E
0931110000	CHUMLEY THERESA	2.1	PD	A/M	35/29S/22E
0931120000	MOSAIC FERTILIZER LLC	516.4	AM; PD	A/M	35/29S/22E
0931150100	MOSAIC FERTILIZER LLC	72.3	AM	A/M	35/29S/22E
0931210000	MATTANIAH LIMITED PARTNERSHIP	0.9	AM	A/M	1/30S/22E
0931220000	MOSAIC FERTILIZER LLC	441.1	AM	A/M	1/30S/22E
0931250000	HILLSBOROUGH COUNTY	2.0	AM	A/M	2/30S/22E
0931260000	HILLSBOROUGH COUNTY	3.3	AM	A/M	2/30S/22E
0931270000	MOSAIC FERTILIZER LLC	5.2	AM	A/M	2/30S/22E
0931280000	MOSAIC FERTILIZER LLC	458.0	AM; PD	A/M	3/30S/22E
0931290000	HILLSBOROUGH COUNTY	1.0	AM	A/M	3/30S/22E
0931290010	HILLSBOROUGH COUNTY	0.4	PD	A/M	3/30S/22E
0931290100	HILLSBOROUGH COUNTY	0.9	AM	A/M	3/30S/22E
	Total Acreage:	3037.7			

^{*} If Current Zoning is PD, list PD application number as well.

^{**} Section / Township / Range



Property/Project Information Sheet

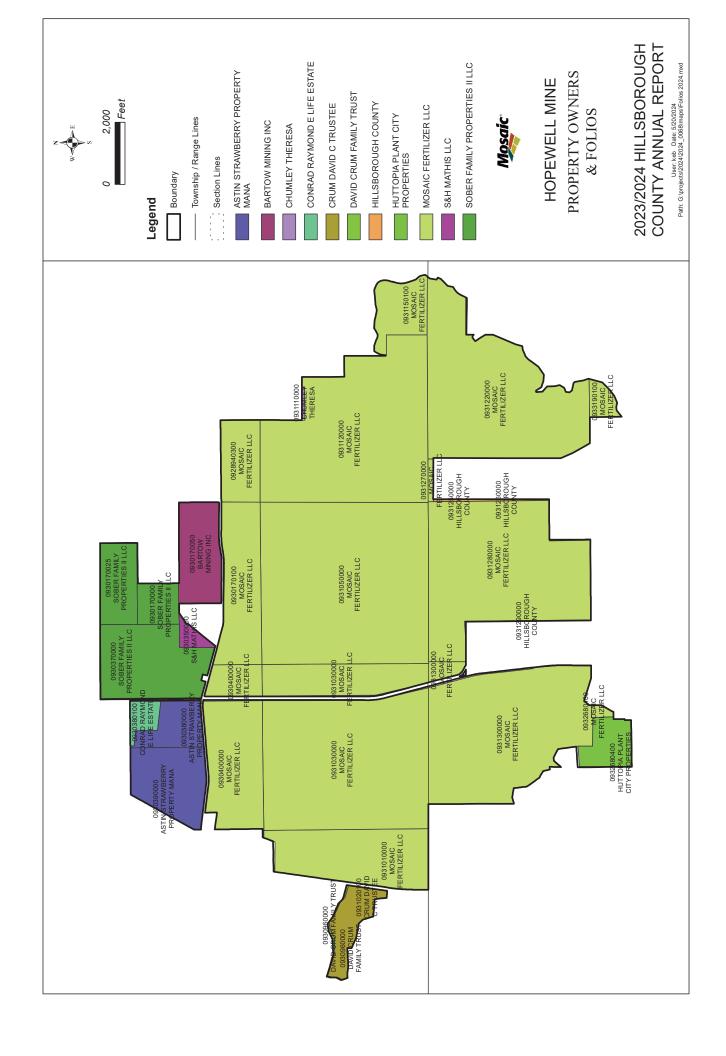
	Official Use Only						
Application No:							
Proposed Project Name (If applicable): Hopewell Mine	Related Applications: N/A						
Code Enforcement/Building Code violation No. (if applicable): N/A							
ist each folio within the proposed project along with the corresponding information for each (Use additional sheets if							

List each folio within the proposed project along with the corresponding information for each (Use additional sheets if necessary).

Folio Number	Owner(s) Name(s) as listed on the deed	Acreage	Current Zoning	Future Land Use Category	S/T/R**
0931300000	MOSAIC FERTILIZER LLC	447.5	PD	A/M; A/R	4/30S/22E
0931300300	MCISAAC FREDERICK A LIFE ESTAT	0.9	PD	A/M	4/30S/22E
0931400000	MCISAAC FREDERICK A LIFE ESTAT	0.1	AM	A/M	4/30S/22E
0931400500	MCISAAC FREDERICK A LIFE ESTAT	0.4	AR	A/M; A/R	4/30S/22E
0932680100	MOSAIC FERTILIZER LLC	5.4	PD	A/R	9/30S/22E
0932680400	HUTTOPIA PLANT CITY PROPERTIES	51.2	PD	A/M; A/R	9/30S/22E
0932820400	HUTTOPIA PLANT CITY PROPERTIES	0.2	PD	A/R	9/30S/22E
0933190100	MOSAIC FERTILIZER LLC	20.5	AM	A/M	11/30S/22E
0933210000	HILLSBOROUGH COUNTY	0.1	AM	A/M	11/30S/22E
	Total Acreage:	526.3			

^{*} If Current Zoning is PD, list PD application number as well.

^{**} Section / Township / Range



SECTION 2 REPORT OF OPERATIONS & FINANCIAL RESPONSIBILITY

MOSAIC FERTILIZER, LLC.

HOPEWELL MINE ANNUAL REPORT HILLSBOROUGH COUNTY REPORT OF OPERATIONS TO JUNE 30, 2024

(FOR THE REPORT PERIOD OF JULY 1, 2023 THROUGH JUNE 30, 2024)

Mosaic is submitting the Annual Report for 2023/2024 in accordance with the Hillsborough County Land Development Code (LDC), Section 8.02.09 and 8.02.10B., for review of compliance with mining permit conditions at the Hopewell Mine. This report consists of two sections:

Summary of mine operations for the report year.

Summary of 2023/2024 projected mine operations.

Map 1 (attached) shows the areas mined. Map 2 depicts reclamation programs as designated by the FDEP, Map 3 shows waste clay disposal areas, Map 4 is an aerial photograph of the mine site, Map 5 shows reclamation status, and Maps 6 and 6A show approved Hillsborough County Development Services (HCDS) reclamation releases by LRU and mining unit respectively. The location of the reclaimed Significant Upland Wildlife (SUWH) is shown on Map 7. All maps are provided in Appendix 4.

Table 1 summarizes Mosaic's current financial responsibility as required by the Hillsborough County Land Development Code, Section 8.02.10.

As a result of this report, Mosaic is listing the following MUs (Table 1) and LRUs (Table 2) totaling 2024 acres as formally released by Hillsborough County Development Services for this year and previous years as follows:

Table 1

Mining Unit	Total Acres	Released Acres	Unreleased Acres	Final Release Date
*	587	116	471	
HMU 1	240	238	2	
HMU 10	644	25	619	
HMU 2	102	102	0	2016
HMU 3	450	19	431	
HMU 4	68	68	0	Prior to 2006
HMU 5	469	453	16	
HMU 6	104	104	0	2006
HMU 7	153	153	0	6/9/2020
HMU 8	350	351	0	6/9/2020
HMU 9	140	111	29	
HMU8A	643	284	358	
Grand Total	3,950	2,024	1,926	

Table 2

	1 abic 2	
LRU	ACRES	Release Date
IMC-HW-EC(2)	262	Previous Release
IMC-HW-EC(3)	64	Previous Release
IMC-HW-NPA(1)	49	Previous Release
IMC-HW-NPA(6)	107	Previous Release
IMC-HW-NPA(5)	139	Previous Release
IMC-HW-NPA(3)	259	Previous Release
IMC-HW-EC(4)	194	8/13/2019
IMC-HW-EC(7)	517	8/13/2019
IMC-HW-NPA(4)	167	8/13/2019
ND	< 0.5	8/13/2019
NOR-H-A	< 0.5	8/13/2019
NOR-H-D	4	8/13/2019
IMC-HW-EC(5)	24	6/9/2020
IMC-HW-EC(6)	50	6/9/2020
IMC-HW-NPA(8)	3	6/9/2020
IMC-HW-NPA(7)	175	6/9/2020
IMC-HW-NPA(6)	< 0.5	6/9/2020
ND	4	6/9/2020
NOR-H-B	5	6/9/2020
Grand Total	2,024	

Fully Released Mining Unit
*Previous Released Areas Outside Mining Units

Preservation, non-disturbed, and non-mandatory lands are not required to be released by FDEP, however Mosaic requests release of these areas from Hillsborough County if they are located within a Mining Unit (MU). These areas are not a part of FDEP's Logical Reclamation Units (LRU) or Reclamation Parcels (RP); however, they are located within MUs and adjacent to LRU/RP boundaries and meet the criteria for release from Hillsborough County. A map exhibiting all previous approved reclamation releases to date and areas that are eligible for release this reporting year is included in Appendix 4.

A check will be made payable to Hillsborough County Board of Commissioners in the amount required by the Hillsborough County Land Development Code. This amount will conform to the Hillsborough County fee schedule and include the Environmental Protection Commission fee for annual report review and bimonthly inspections.

Respectfully submitted, Mosaic Fertilizer, LLC

SUMMARY OF 2023/2024 MINE OPERATIONS

Final mining for the Hopewell mine was completed on January 16, 2011. As such, there have been no additional acres mined since that time. Therefore, all mining at Hopewell is complete. The plant site demolition was completed in November/December 2011, and all product removal from the plant stockpile was completed in April 2012. The plant site and stockpile areas have been contoured and grassed as of June 2012.

MONITORING:

Environmental monitoring has proceeded as required by Hopewell Operating Permit and the Hillsborough County Land Development Code, (see Appendix 6).

RECLAMATION:

The following ongoing supplemental reclamation activities occurred during this reporting period (Jul 1, 2023-Jun 30, 2024):

WETLAND PLANTING PROGRESS

Supplemental plantings within Wetland D occurred in the past year.

Hopewell, HP-EC(6) Flucfcs: 610 Acreage: 20.3 Wetland D	Size	Qty.
American Elm	1 gal.	750
Water Oak	1 gal.	1,300
Water Hickory	1 gal.	650
Dahoon Holly	1 gal.	650
Loblolly Bay	1 gal.	600
Sweet Bay	1 gal.	600
Swamp Tupelo	1 gal.	600
Cabbage Palm	1 gal.	600

INITIAL WETLAND PLANTING PROGRESS

None – All wetlands have been initially planted.

RECLAMATION OF SIGNIFICANT UPLAND WILDLIFE HABITAT

Hopewell Mining Unit 9 was approved by the Hillsborough County Board of County Commissioners on August 26, 2003 (application number 202.01P). Condition number 2 of the approval references reclamation of significant upland habitat to be constructed within MU 8A (S34 and 35; T29S; R22E), see Map 7.

This 4.0-acre site was constructed by use of direct topsoil relocation in 2005. The site was initially planted in September 2005 and due to the prolonged drought conditions,

supplemental planting was performed in September 2008, 2009, and 2010. The eighteenth annual quantitative monitoring report was completed in August 2023 (see Appendix 5). Several of the success criteria have been met within the Hopewell Mine SUWH. The total desirable vegetative cover, not including exotic and nuisance species, is 52.4%, and (6) six tree and shrub species listed in the tree, shrub, and herbaceous tables were observed. Nuisance species cover is at 20.6 % observed, and bare ground and leaf litter accounted for 6.1 % of the total cover. Maintenance will continue to assure that nuisance/exotic species remain below the 10% specified in the permit. The permit criterion requiring a minimum of 80% relative cover by species listed in the tree, shrub, and herbaceous tables is currently at 52.4%. This area was last inspected by the County on May 18, 2018.

REQUEST FOR MINE UNIT RECLAMATION RELEASE

Hillsborough County and Mosaic are working to clarify the location and amount of acreage identified as released by Hillsborough County identified in this AR. Mosaic will request reclamation releases outside of the annual report period (Spring and Fall).

SUMMARY OF 2024/2025 PROJECTED RECLAMATION OPERATIONS

The following ongoing reclamation activities that are expected to occur during 2024/2025 are routine monitoring and maintenance and supplemental plantings as needed. Repair of wetland connection areas as needed.

SUMARY OF DEVELOPMENT ORDER CONDITIONS

IV. Specific Conditions

2. This operating permit shall remain in effect for a period of thirty-five (35) years from and after the date of its issuance provided that this term may be extended by the Board upon finding of excusable delay in any proposed mining or reclamation activity.

During this reporting period, the mine operated as approved. As mentioned previously in this report, all mining ceased at the Hopewell Mine on January 16, 2011. Resolution Number R06-249 extended the operating permit by a period of five (5) years, or until June 23, 2018, unless amended.

3. Consumptive use of water shall not exceed a combined average annual withdrawal of 3,082,000 gallons of water per day with a maximum combined withdrawal rate not to exceed 5,624,000 gallons during a single day, in accordance with SWFWMD Water Use Permit.

The average annual withdrawal during this report period was 0 gallons of water per day.

5. Per approved Resolution Number R06-249, the area to be mined shall not exceed three thousand fifty (3,050) acres.

The cumulative acres mined at the end of this reporting period was 2,526 acres. Again, Hopewell mining was completed in January 2011.

6. The cumulative average of the area mined shall not exceed one hundred (100) acres per year and the total acres mined in any one year shall not exceed one hundred twenty-five (125) acres.

During the life of the Hopewell Mine, the cumulative average of area mined was approximately 95 acres per year. All yearly totals were under or met the 125-acre annual mining limitation.

13. The total area of settlement ponds and associated dams shall not exceed one thousand six hundred (1,600) acres and the "effective" pond area (within the centerline of the dam) shall not exceed one thousand three hundred sixty (1,360) acres.

Clay Settling Areas HL-1, HL-2, HL-3, and HL-4 have a total area of approximately 1,215 acres and a total effective flooded area of 1,060 acres. Reclamation activities for the HL-1, HL-2, and HL-4 clay settling areas are complete and have received FDEP release. Reclamation of HL-3 was completed in April 2016, and abandonment was obtained from the FDEP Industrial Wastewater Group.

17. As amended by the BOCC on March 12, 2002, Hopewell Mine can ship phosphate product by either rail or truck pursuant to Resolution #R02-042 approving Personal Appearance PRS #01-0009 and the Phosphate Mining Application #1000.13P amending the General Site Plan (CU 82-223) and the Operating Permit #82-1.

Since all mining has now ceased at the Hopewell Mine, there was no product shipped from the mine during this reporting period.

ESTIMATED FINANCIAL RESPONSIBILITY MOSAIC FERTILIZER, LLC HOPEWELL MINE REPORTING PERIOD JULY 1, 2023 TO JUNE 30, 2024

A.	Estimated	Financial	Responsi	bility Pr	ior to Ju	ly l	, 2023
----	-----------	-----------	----------	-----------	-----------	------	--------

	I.	Areas Mined and Red	claimed through	Permanent Revegetation:			
		a. Lands Mined				2526.0 ac.	
		Lands Mined Rel	eased (by FDEP))		(1,928.6) ac.	
		Lands Reclaimed	through Revege	tation - Not Released (b, c and d)		(608.0) ac.	
		Settling Areas on	Unmined Lands	/Pre-1975 Mined Areas(*)		550.0 ac.	
						539.4 ac.	
		539.40	X	\$7,393			\$3,987,784
		b. Reclamation Com	plete through Pe	ermanent Revegetation (Less EPC Mitigat	ion)		
		and in One-Year	Establishment (N				
		0	X	5% <u>(**)</u> of \$7393 = \$370			0
		c. Reclamation Com	iplete Beyond O	ne Year Establishment Period (Mined Onl	y)		
		582.4	X	\$0			0
		(25.6)		(Less EPC Mitigation)			
						and the second	
		•	•	Wetland Mitigation - Constructed and No		` '	
		1.) Constructed and I		25.6		\$7,393	\$189,261
		2.) Mitigation to be C	Constructed	0	X	\$7,393	\$0
		ECTIMATED TOTA	AL LIADILITY	THEODICH HILV 1 2022			¢4 177 045
		ESTIMATED TOTA	L LIABILITY	THROOUGH JULY 1, 2023			\$4,177,045
	II.	Largest Canacity Cla	v Settling Area i	s Included in the Hillsborough			
	11.	County Mines Finance		· ·			
		County Willes Filland	ziai Responsioni	ıty			
3	Estimate	ed Financial Responsib	sility July 1 202	3 to June 30, 2024 (****)			
•	I.	Area to be Mined (Pr					
	1.	0	X	\$7,393 <u>(*****)</u>			\$0
		·	21	*·,~/~ <u>\</u>			
	ES	TIMATED TOTAL L	IABILITY THR	OUGH JUNE 30, 2024			\$4,177,045
				,			

- $(*) \ \ \text{INCLUDES UNMINED AREAS OR NON-MANDATORY AREAS UNDER CLAY SETTLING AREAS}.$
- (**) 5% AS DESCRIBED IN LDC Sec. 8.02.10.C.1.a
- (***) 219.2 ACRES OF EPC MITIGATION WITHIN LANDS MINED
- (****) ALL HOPEWELL MINING CEASED ON JANUARY 16, 2011
- (*****) \$7,393 PER ACRE AS CALCULATED BY DECEMBER WEEK 1 2023 2.6% COST CONSTRUCTION INDEX PERCENT CHANGE *2022/2023 COST PER ACRE OF \$7,206

Hopewell Mine 2023/2024 Mining Summary

MINED UNMINED	UNMINED		H							
COVERED	COVERED		\neg							
(acres) BY CSA (acres)	BY CSA (acres)			TOTAL						
2526.0 550.0				3076.0						
2526.0 550.0				3076.0						
REVEGETATION SUMMARY										
FDEP RELEASED	FDEP RELEAS	FDEP RELEAS	AS	ED		<u> </u>	EDC Motland Mitigation		BA	RECLAMATION
			_	Program		4	r c Metianu mitigation	7	NI	COMPLETE BEYOND
Mined (A) Dist. Reclamation Program		Dist.		Released Total	Other Rel.	Total	Constructed	Wetlands	1 YR EST (A)	1 YR EST (B)
						Required	Not Released [C]	Released		
IMC-HW-EC(1) - HMU 3 99.5 41.8				141.3		18.9		18.9		317.3
IMC-HW-EC(2) - HMU 5 129.3 132.3				261.6		20.0		20.0		
IMC-HW-EC(3) - HMU 5 15.1 49.0		49.0		64.1						
IMC-HW-EC(4) - HMU 8A 92.3 32.8				193.8	68.7	24.6	,	24.6		•
IMC-HW-EC(5) - HMU 8A 55.2 11.2				76.4	10.0	40.0		40.0		9.66
IMC-HW-EC(6) - MU 8A/9 214.8 42.2				281.0	24.0	75.2	23.6	51.7		147.0
IMC-HW-EC(7) - HMU 3/8/8A 337.4 33.7				516.8	145.7	3.0		3.0		
IMC-HW-NPA(1) - HMU 1 0.1				48.7	0.7					
IMC-HW-NPA(2) - HMU 1/5 61.1		1.19		508.7	436.6					
IMC-HW-NPA(3) - HMU 2/4 212.3 17.0				258.7	29.4					
IMC-HW-NPA(4) - HMU 2/4 85.8 52.1				167.3	29.4					-
IMC-HW-NPA(5) - HMU 5 90.5 25.7				138.6	22.4	8.8		8.8		
IMC-HW-NPA(6) - HMU 5/6 63.7 47.1				110.8		8.1		8.1		
IMC-HW-NPA(7) - HMU 7 130.9 44.4				175.3		17.4		17.4		•
IMC-HW-NPA(8) - HMU 10 342.9 87.8				452.6	21.9	3.2	2.0	1.2		18.5
HOP TOTAL 1,928.60 678.3		678.3		3,395.7	788.8	219.2	25.6	193.7		582.4
							Total	Completed	Reclamation	582.4

EPC MITIG	EPC MITIGATION SUMMARY							
НОР	Mining Unit	Required Mitigation	Mitigation	Under	To Be			
		Located in Unit	Released	Monitoring	Constr.			
	MU 3 / 7	36.3	36.3	ď				
	MU 5	28.8	28.8	ď				
	9 NM 6	8.1	8.1	Ж				
	MU 8, 8A, 9	142.8	119.3	23.6				
	MU 10	2.0		2.0				
	7 UM	1.2	1.2	Ж				
	нор тотаг	219.2	193.7	25.6				
(1) Include	(1) Includes Non-Disturbed acres also.							

SECTION 3 RECLAMATION RELEASE STATUS



July 15, 2024

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

Re: Mosaic Fertilizer, LLC, Hopewell Mine; Reclamation Release Status

Dear Ms. Cruz,

Mosaic is listing Logical Reclamation Units (LRUs) (also known as Reclamation Parcels (RP)) that have been formally released by Hillsborough County Development Services. These reclamation releases total 2,024.0 acres of previously mined and/or disturbed land at the Hopewell mine. Hillsborough County and Mosaic are working to clarify the location and amount of acreage identified as released by Hillsborough County identified in this AR. All areas that reside within a Mining Unit (MU) boundary, have been released from FDEP, and certificates of completion have been issued by EPC; with the exception of the preservation, non-disturbed (ND), and non-mandatory (NM) areas which are not required to be released by FDEP. Table 1 below lists the MUs and associated acreages that have been agreed upon by Hillsborough County and Mosaic as released. Table 2 reflects the same information listed by LRUs. Maps 6 and 6A in Appendix 4 depict the information provided in the table below.

Table 1

		1 abie 1		
Mining Unit	Total Acres	Released Acres	Unreleased Acres	Final Release Date
*	587	116	471	
HMU 1	240	238	2	
HMU 10	644	25	619	
HMU 2	102	102	0	2016
HMU 3	450	19	431	
HMU 4	68	68	0	Prior to 2006
HMU 5	469	453	16	
HMU 6	104	104	0	2006
HMU 7	153	153	0	6/9/2020
HMU 8	350	351	0	6/9/2020
HMU 9	140	111	29	
HMU8A	643	284	358	
Grand Total	3,950	2,024	1,926	

Fully Released Mining Unit

Table 2

LRU	ACRES	Release Date
IMC-HW-EC(2)	262	Previous Release; UPL 11/1996; WET 3/2004
IMC-HW-EC(3)	64	Previous Release; 11/1996
IMC-HW-NPA(1)	49	Previous Release; 1/1992
IMC-HW-NPA(6)	107	Previous Release; UPL 11/1996; WET 11/2003
IMC-HW-NPA(5)	139	Previous Release; 5/2010
IMC-HW-NPA(3)	259	Previous Release; 7/10/2015
IMC-HW-EC(4)	194	8/13/2019
IMC-HW-EC(7)	517	8/13/2019
IMC-HW-NPA(4)	167	8/13/2019
ND	< 0.5	8/13/2019
NOR-H-A	< 0.5	8/13/2019
NOR-H-D	4	8/13/2019
IMC-HW-EC(5)	24	6/9/2020
IMC-HW-EC(6)	50	6/9/2020
IMC-HW-NPA(8)	3	6/9/2020
IMC-HW-NPA(7)	175	6/9/2020
IMC-HW-NPA(6)	< 0.5	6/9/2020
ND	4	6/9/2020
NOR-H-B	5	6/9/2020
Grand Total	2,024.5	

Mosaic requests reclamation releases outside of the annual report twice a year in the Spring and the Fall. Once approved by the Hillsborough County Board of County Commissioners (BOCC), these release requests will be recorded in the Annual Reports. No LRUs are pending release or were released by Hillsborough County Development Services in Hopewell Mine this reporting year.

Please contact me if you have any questions or need additional information.

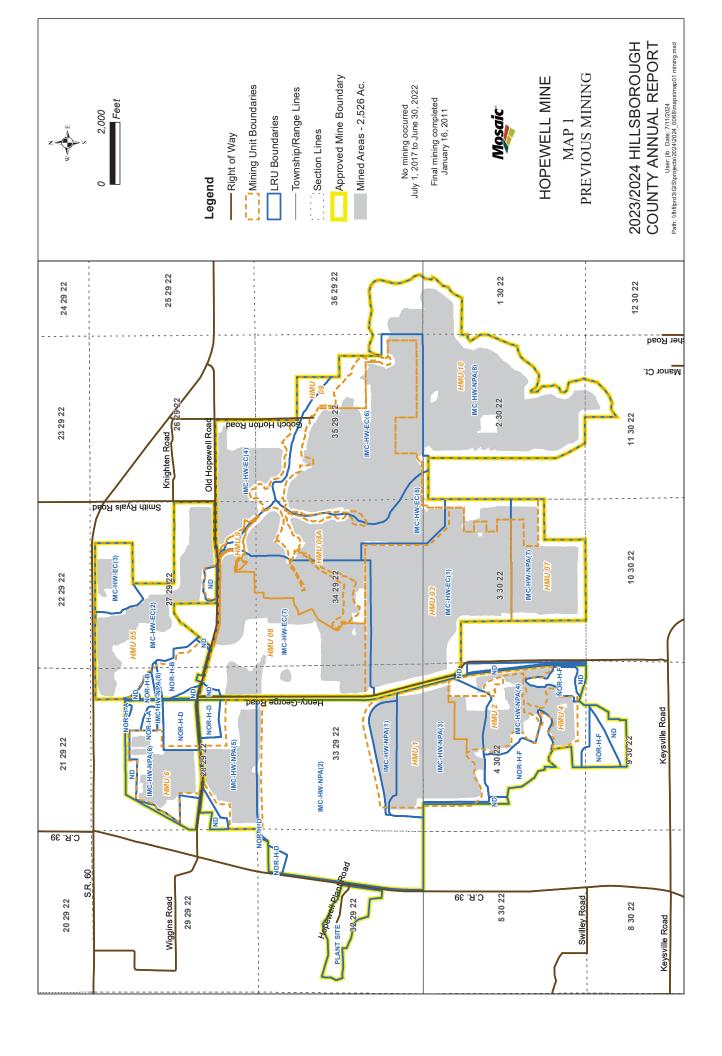
Sincerely,

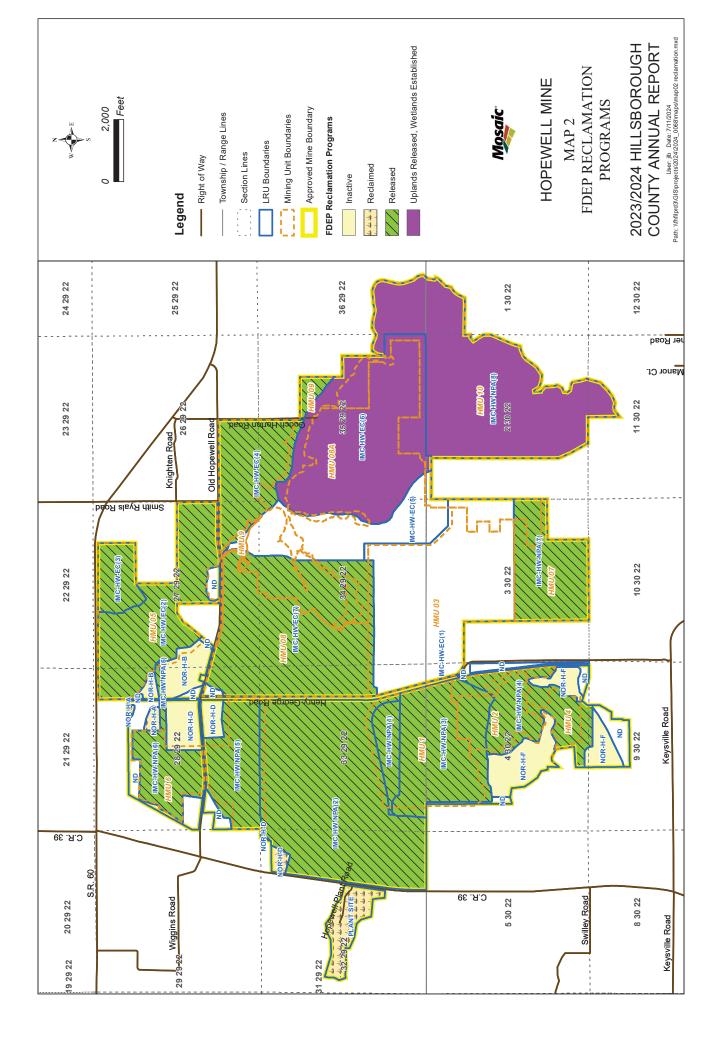
Laney McGraw

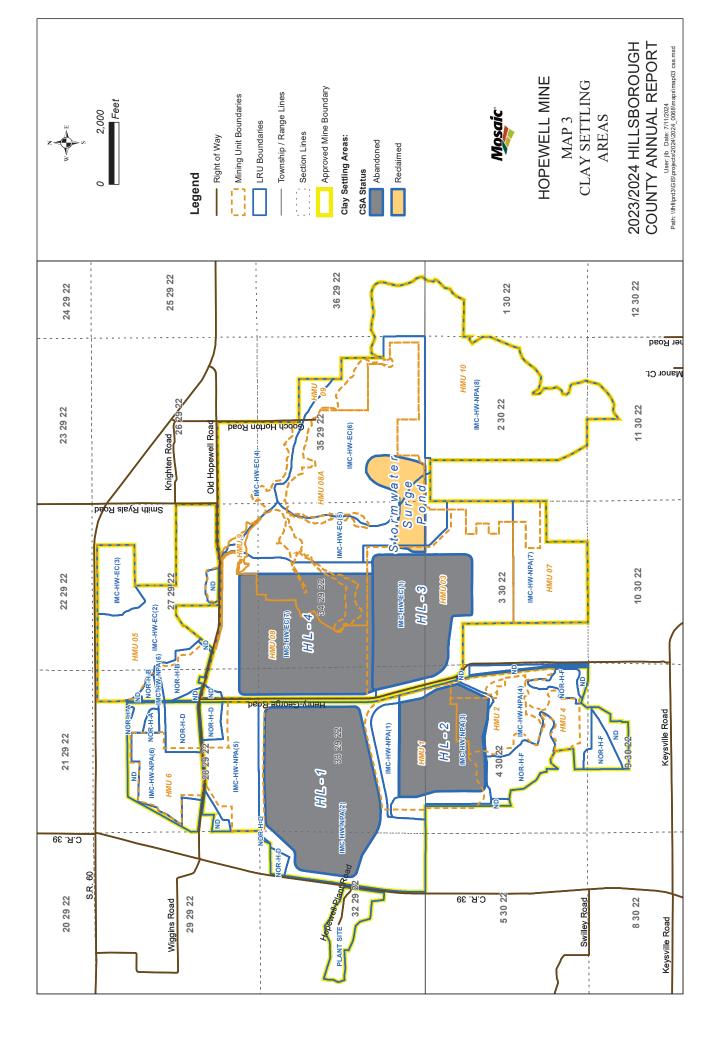
Mine Permitting Specialist

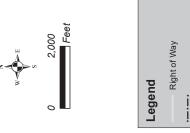
Lansy McGraw

SECTION 4 MAPS









Approved Mine Boundary ____ Approved Mine Boundary Township / Range Lines Mining Unit Boundaries LRU Boundaries Section Lines

Aerial Photo Taken: December 2023



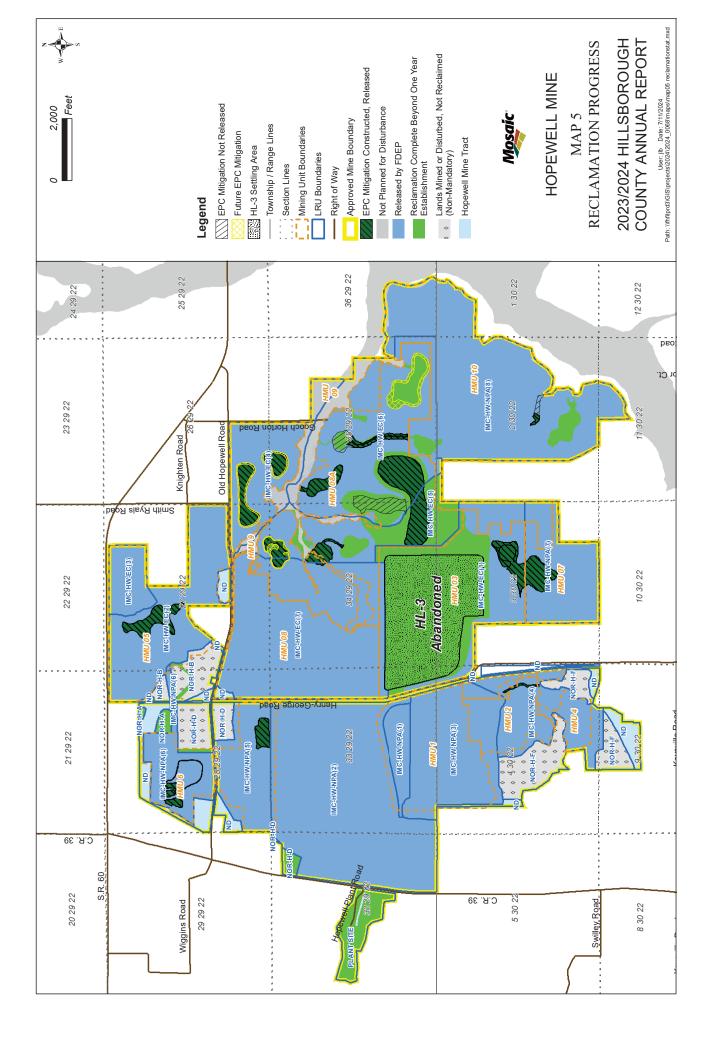
HOPEWELL MINE

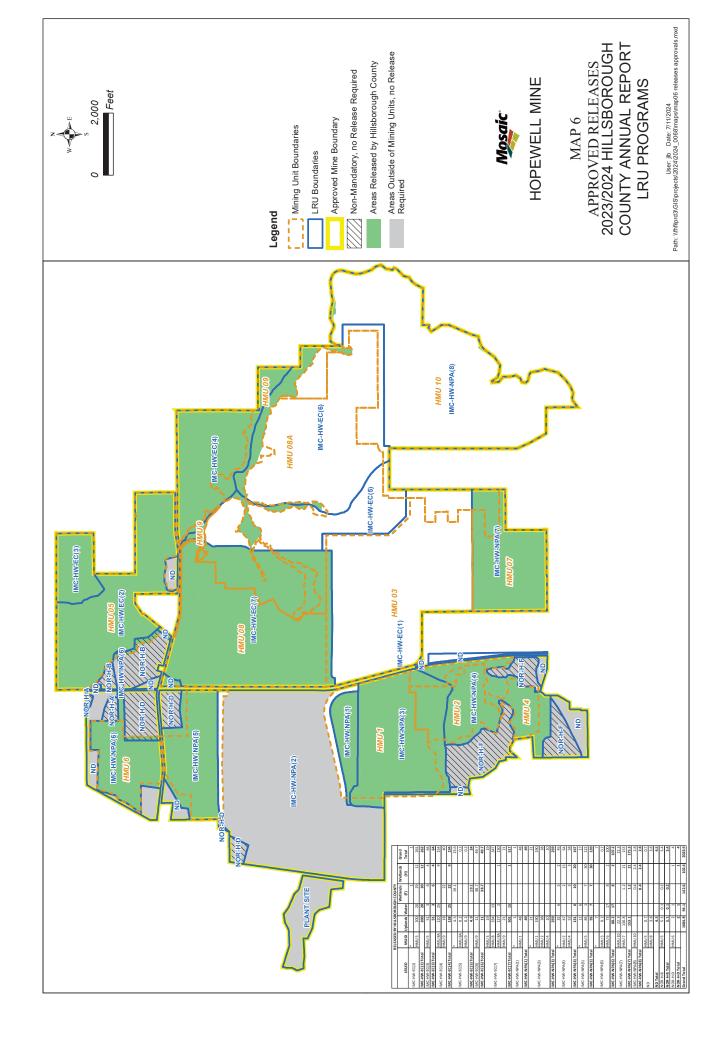
MAP 4 AERIAL PHOTOGRAPH

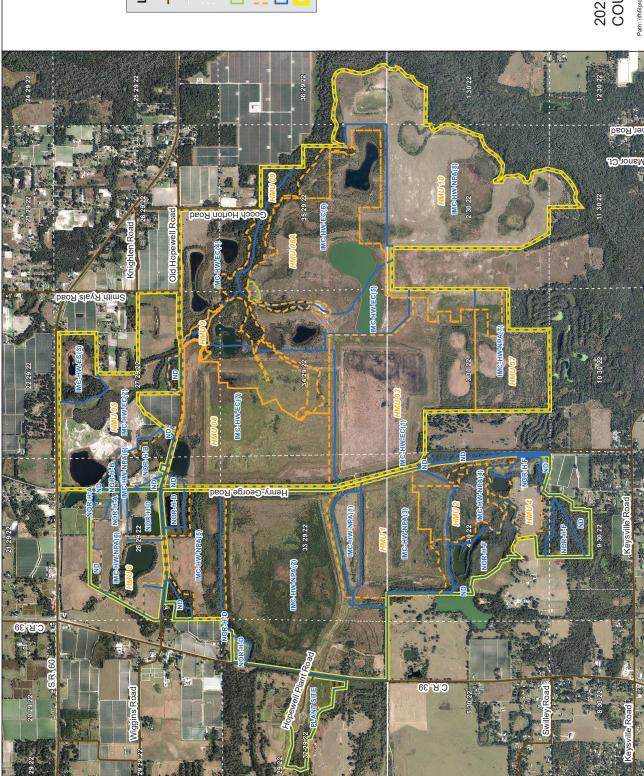
2023/2024 HILLSBOROUGH COUNTY ANNUAL REPORT

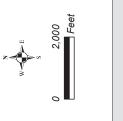
User: jib Date: 7/11/2024 Path: \\f\filiprd3\GiS\projects\2024\2024_0068\maps\map04 aerial.mxd

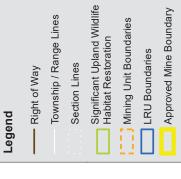












For Detail, see Appendix 5

Aerial Flown: December 2023



HOPEWELL MINE

MAP 7 SUWH RESTORATION

2023/2024 HILLSBOROUGH COUNTY ANNUAL REPORT

SECTION 5 SUWH MONITORING REPORT

HOPEWELL MINE

18TH ANNUAL QUANTITATIVE MONITORING REPORT AUGUST 2023

SIGNIFICANT UPLAND WILDLIFE HABITAT (SUWH) HC PERMIT: PGMD NO. 202.01P

HILLSBOROUGH COUNTY, FLORIDA

Submitted to: HILLSBOROUGH COUNTY DEVELOPMENT SERVICES DEPARTMENT

Prepared for:

Mosaic

13830 Circa Crossing Drive
Lithia, FL 33547

Prepared by:



1907 North US Highway 301 Suite 100 Tampa, FL 33619 (KLF #24001381.001A)

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ONLY THE CLIENT OR ITS DESIGNATED REPRESENTATIVES MAY USE THIS DOCUMENT AND ONLY FOR THE SPECIFIC PROJECT FOR WHICH THIS REPORT WAS PREPARED.

HOPEWELL MINE 18TH ANNUAL QUANTITATIVE MONITORING REPORT AUGUST 2023

SIGNIFICANT UPLAND WILDLIFE HABITAT (SUWH)

HC PERMIT: PGMD NO. 202.01P HILLSBOROUGH COUNTY, FLORIDA

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5.0	RESULTS AND DISCUSSION 5.1 Photographic Documentation 5.2 Trees and Shrubs 5.3 Herbaceous Vegetation 5.4 Additional Species 5.5 Wildlife Utilization		6 6 6 6 7	
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HOPEWELL MINE 18TH ANNUAL QUANTITATIVE MONITORING REPORT AUGUST 2023

SIGNIFICANT UPLAND WILDLIFE HABITAT (SUWH) HC PERMIT: PGMD NO. 202.01P HILLSBOROUGH COUNTY, FLORIDA

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Figure 2: Transect Location Map

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Table 1: Tree and Shrub Data by Species

Table 2: Summary of Herbaceous Species Cover

Table 3: Herbaceous Cover by Species

Table 4: Additional Species
Table 5: Wildlife Utilization

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Appendix A: Desirable Tree, Shrub, and Herbaceous Species Tables

Appendix B: Planting Lists

Appendix C: Photographic Documentation

HOPEWELL MINE 18TH ANNUAL QUANTITATIVE MONITORING REPORT AUGUST 2023 SIGNIFICANT UPLAND WILDLIFE HABITAT (SUWH) HC PERMIT: PGMD NO. 202.01P HILLSBOROUGH COUNTY, FLORIDA

EXECUTIVE SUMMARY

The eighteenth annual quantitative monitoring event for the Significant Upland Wildlife Habitat (SUWH) was performed on August 23, 2023. Pursuant to The Hillsborough County Development Services Department (HC) permit: PGMD NO. 202.01P, the SUWH reclamation area will be considered successful when the following conditions are met:

HC Permit: PGMD NO. 202.01P, PACTS #5924 Success Criteria	Current Status of Mitigation Site	Success Criteria Demonstrated
The plant species composition of the reclaimed mesic hammock community is similar in species richness and diversity to natural mesic hammocks within the same drainage basin. The diversity of species shall be at least 75% of the total species listed in the tree, shrub, and herbaceous tables (Appendix A). Additionally, there must be at least four species of trees within the canopy (Appendix A).	Percent of Species Listed in Tree, Shrub, and Herbaceous Table: 24/69 = 34.8% - Twenty-one of the species listed in Appendix A were located inside the designated transects (including tree, shrub, and herbaceous species). Number of Tree Species: six, all found within the designated transects.	No Yes (Yr. 13)

HOPEWELL MINE 18TH ANNUAL QUANTITATIVE MONITORING REPORT AUGUST 2023 SIGNIFICANT UPLAND WILDLIFE HABITAT (SUWH) HC PERMIT: PGMD NO. 202.01P HILLSBOROUGH COUNTY, FLORIDA

EXECUTIVE SUMMARY (Continued)

HC Permit: PGMD NO. 202.01P, PACTS #5924 Success Criteria	Current Status of Mitigation Site	Success Criteria Demonstrated
	Total Vegetative Cover: 93.9%	Yes (Yr. 16)
Vegetative cover is greater than 40% of total cover, bare ground (including leaf litter) is greater than 20%, and at least 80% of the vegetative cover consists of	Total Cover of Bare Ground/Leaf Litter: 6.1%	No
species listed in the tree, shrub, and herbaceous tables (Appendix A).	Relative Percent Cover of Desirable Herbaceous Species Listed in Tables: 52.4%	No
Nuisance species remains below 10% cover, without maintenance, for at least one year.	Total Cover of Nuisance Species: 20.6%	No

HOPEWELL MINE 18TH ANNUAL QUANTITATIVE MONITORING REPORT AUGUST 2023 SIGNIFICANT UPLAND WILDLIFE HABITAT (SUWH) HC PERMIT: PGMD NO. 202.01P HILLSBOROUGH COUNTY, FLORIDA

1.0 INTRODUCTION

This report represents the results for the 2023 quantitative monitoring event for the SUWH, HC Permit: PGMD NO. 202.01P, reclamation project. The Hillsborough County Development Services Department (HC) Permit PGMD No. 202.01P was issued to Mosaic Fertilizer, LLC. The Hopewell Mine SUWH area is located in Section 34 and 35, Township 29 South, Range 22 East, Hillsborough County, Florida (Figure 1).

Significant Upland	Wildlife Habitat	Annual Event	Acreage
SUWH	Mesic Hammock	Eighteenth	4.0
	4.0		

2.0 CONSTRUCTION SUMMARY

Mining was completed in early 2004. Sand-tailings were pumped into the area for the remainder of 2004 and for part of 2005. Contouring was completed in March of 2005. An approved donor mesic hammock site was selected and the area was burned in preparation for the topsoil removal. The soil and the remaining incinerated organic matter were then transferred to the newly contoured mesic site. A total of 1,200 trees and 3,520 shrubs were planted on September 23, 2005 (Appendix B). A supplemental planting of 7,277 shrubs and herbaceous plants were installed on September 5, 2008. A total of 9,594 herbaceous plants were installed during 2009 and a total of 1,200 trees, 1,600 shrubs, and 1,250 herbaceous plants were installed in 2010. A prescribed burn was conducted May 2015 to help promote native vegetation germination and clear dead leaf litter.

3.0 SUCCESS CRITERIA

Pursuant to the HC Permit No. PGMD NO. 202.01P, the SUWH site shall be considered successful when the following conditions have been met:

• The plant species composition of the reclaimed mesic hammock community is similar in species richness and diversity to natural mesic hammocks within the same drainage basin. The diversity of species shall be at least 75% of the total species listed in the tree, shrub, and herbaceous tables (Appendix A). Additionally, there must be at least four species of tree within the canopy.

- The vegetative cover is greater than 40% of total cover, bare ground (including leaf litter) is greater than 20%, and at least 80% of the vegetative cover consists of the species listed in the tree, shrub, and herbaceous tables (Appendix A).
- Nuisance species remains below 10% cover, without maintenance, for at least one year.

4.0 METHODOLOGY

Vegetative sampling was conducted along two permanent transects within the SUWH site (Figure 2). Transect lengths were 265 and 300 feet. Transect beginning points, intermediate points every 100 feet, and end points were marked with three-meter PVC poles. The data were entered directly into a pocket PC and downloaded onto a computer for analysis.

Taxonomy and nomenclature of species followed Wunderlin and Hansen (2011). Wetland indicator status was assigned pursuant to Section 62-340, Florida Administrative Code (F.A.C.). Species were classified as *nuisance* according to both the Florida Invasive Species Council's List- Category I and II (FISC, 2019) and the Noxious Weed List per Chapter 5B-57.007, (F.A.C.). Species were classified as *exotic* according to those listed as non-native by The Atlas of Florida Vascular Plants (Wunderlin and Hansen, 2023).

4.1 Photographic Documentation

Photographs were taken at the beginning and end of each transect facing into the site to document the overall appearance of the area. The ID, transect number, and compass bearing were recorded for each photograph.

4.2 Tree/Shrub Sampling

Belt transects were utilized to calculate tree density and consisted of double PVC poles along the length of each transect designating the belt width of approximately 32.8 feet (10 meters). Sub-meter GPS units were utilized to calculate transect length and sample acreage.

Transect ID	Transect Length (ft.)	Acreage (ac)
1	265	
2	300	0.41
Total	565	

Trees and shrubs located within each belt transect were painted with tree paint for identification and monitored to calculate density and condition. Canopy layer species included all planted trees and shrubs greater than 18 inches tall. Trees under 18 inches tall were also noted but were not included in tree density calculations.

Additional tree and shrub species observed outside the designated transects were identified and recorded if rooted within the boundaries of the SUWH site, but they were not included in density calculations.

4.3 Herbaceous Sampling

To facilitate an intensive, accurate, and repeatable sampling program, the "line strip" elongated quadrat technique was utilized (Bonham, 1989). A series of 10.76 ft² (1m²) quadrats were established every 50 feet on each transect, with the number of quadrats being dependent on transect length.

Ground stratum is defined as all herbaceous species and those woody species that are shorter than 18 inches. Ground stratum was sampled by recording the estimated percent cover of each species. Creeping and matting vegetation was included if the shoots were rooted within the reclaimed area. Data for all quadrats were combined to determine dominant (most abundant) and subdominant (total cover $\geq 5\%$) species.

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

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

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Total Percent Cover = \sum Average Percent Cover of All Species
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The percent of total species listed in the tables of desirable species was determined with the following formula:

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

4.4 Wildlife Utilization

Wildlife species observed during the monitoring event were identified. Evidence of wildlife, including tracks, calls, and scat were also recorded.

5.0 RESULTS AND DISCUSSION

Quantitative monitoring at the SUWH site was conducted on August 23, 2023, by Kleinfelder ecologists Mikaela Morolla and Connor Wilson. Weather conditions were cloudy with temperatures in the low 90s (° Fahrenheit).

5.1 Photographic Documentation

Photographs were taken at the beginning and end of each transect and are presented in Appendix C.

5.2 Trees and Shrubs

Six tree species and three shrub species were recorded within the belt transects (Table 1) for a total of 35 individual trees and shrubs. The dominant species was saw palmetto (*Serenoa repens*), which made up 48.6% of the total trees and shrubs observed within the two transects. All species recorded are found in the Desirable Tree, Shrub, and Herbaceous Species Tables in Appendix A.

5.3 Herbaceous Vegetation

Twenty-eight herbaceous species were recorded within the sampling area in the SUWH (Table 2). Total herbaceous species cover was 93.9%. Of the 43 herbaceous species listed in the Desirable Tree, Shrub, and Herbaceous Species Tables (Appendix A – Table C), twelve were observed within the SUWH sample quadrats. These twelve species accounted for 49.1% of the total cover and 52.4% of the relative cover.

The most abundant species was natalgrass (*Melinis repens*) with 18.1% cover. The dominant desirable species that were listed in the Desirable Tree, Shrub, and Herbaceous Species Table were thin paspalum (*Paspalum setaceum*) with 16.0% cover and broomsedge (*Andropogon virginicus*) with 12.8% cover. The subdominant species were watergrass (*Bulbostylis barbata*; 8.8%), Baldwin flatsedge (*Cyperus croceus*; 5.4%) and southern crabgrass (*Digitaria ciliaris*; 5.4%) and (Table 3). Eight desirable herbaceous species that were listed in the Desirable Tree, Shrub, and Herbaceous Species Table were recorded or observed reproducing naturally within the wetland (Tables 3 and 4).

Seven native herbaceous species were recorded that were not listed in the Desirable Tree, Shrub, and Herbaceous Species Tables. These species accounted for 5.3% of the total cover. The dominant species was dogfennel (*Eupatorium capillifolium*) with 2.3% total cover (Table 3).

Six exotic species were recorded within the sampling quadrats and accounted for 18.9% of the total cover. The most abundant exotic species was watergrass with 8.8% total cover (Table 3).

Three nuisance species were recorded within the sampling quadrats accounting for 20.6% of the total cover. The most abundant nuisance species was natal grass with 18.1% total cover (Table 3).

Bare ground and leaf litter accounted for 6.1% of the total cover.

5.4 Additional Species

Four additional species were observed within the SUWH (Table 4), including three species found in the Desirable Tree, Shrub, and Herbaceous Species Tables (Appendix A – Table C), and one exotic species.

5.5 Wildlife Utilization

Twenty-nine wildlife species have been observed at the Hopewell Mine SUWH since the baseline survey. One wildlife species was observed during the current monitoring event, including one reptile species that had been previously observed (Table 5).

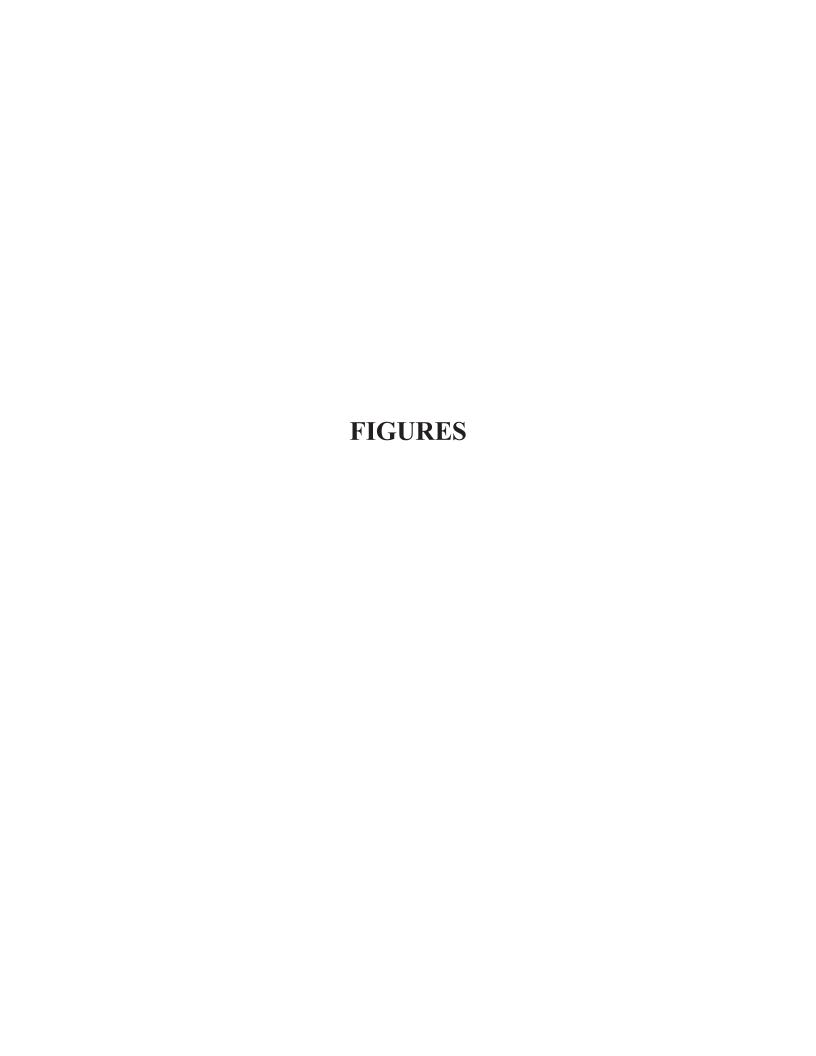
6.0 PROBLEM AREAS

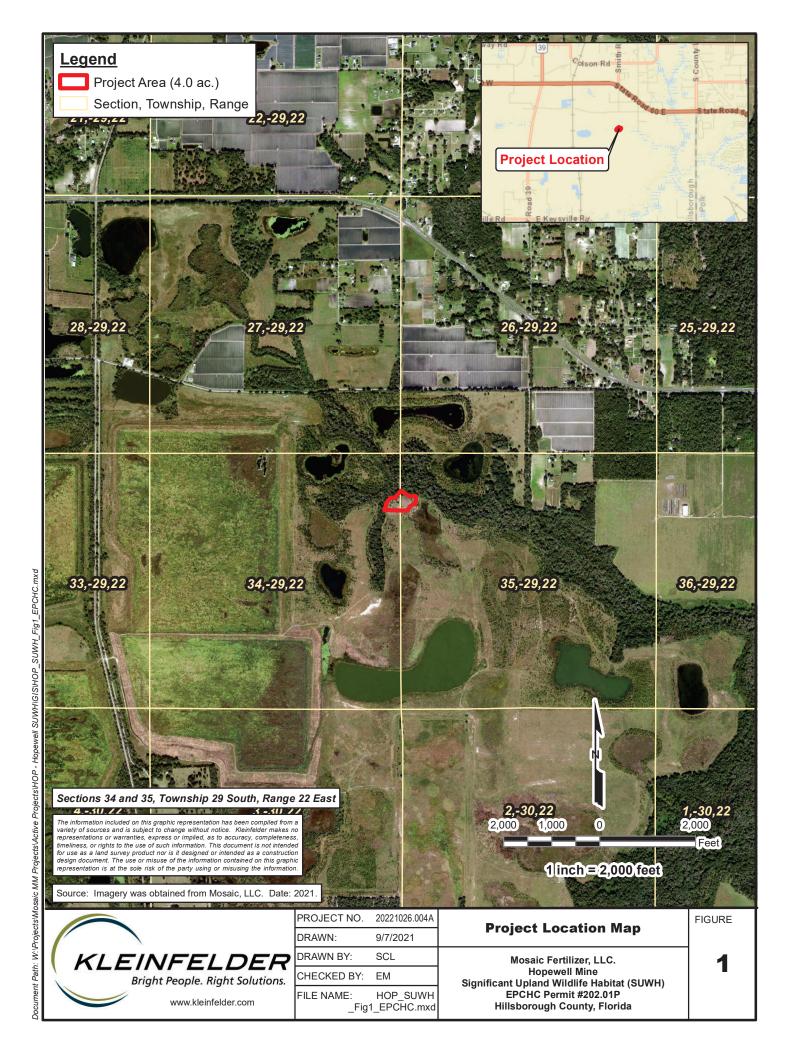
The SUWH did not meet success criteria for the required 75% species diversity, 20% relative bare ground cover, 80% relative cover of desirable herbaceous species, nor total nuisance species cover success criterion.

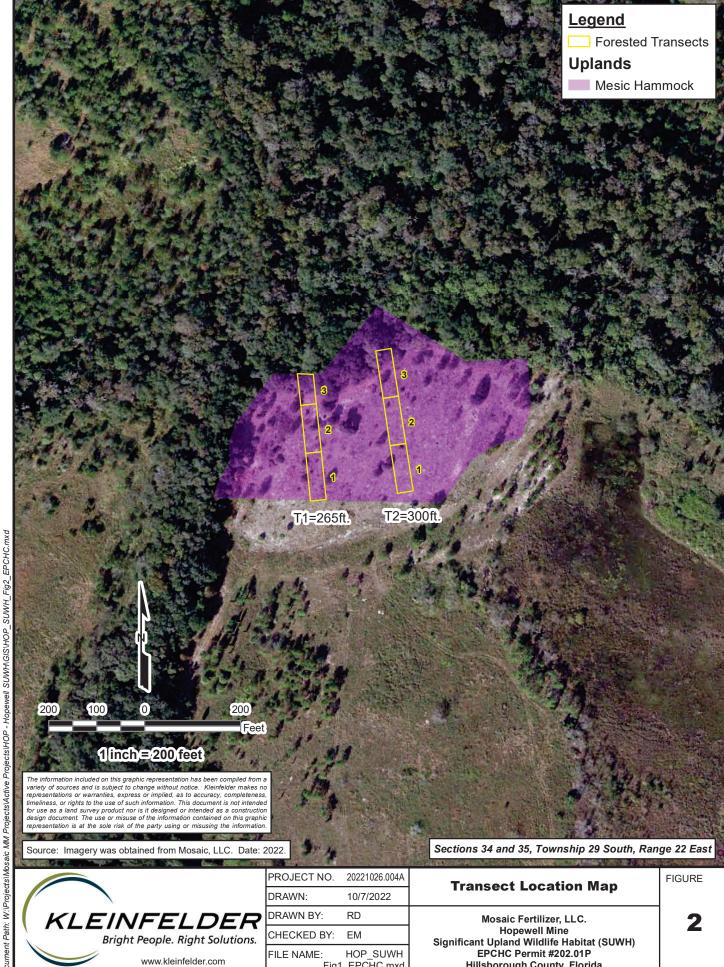
A qualitative survey was conducted concurrently with the quantitative monitoring event and appeared consistent overall with the quantitative data.

REFERENCE LITERATURE

- Bonham, Charles D. 1989. Measurements for Terrestrial Vegetation. John Wiley & Sons, Inc. U.S.A. 338 pp.
- FISC. 2019. List of Invasive Plant Species. Florida Invasive Species Council. (http://bugwoodcloud.org/CDN/FISC/plantlists/2019/2019_Plant_List_ABSOLU TE_FINAL.pdf).
- FWC Florida Fish and Wildlife Conservation Commission; Official Lists of Florida's Endangered Species, Threatened Species, and Species of Special Concern (Ch. 68A-27 F.A.C.; updated 05/2023).
- FWS U.S. Fish and Wildlife Service status, Official lists of Threatened and Endangered species updated through the FWS web site last updated on 08/22/2023.
- Wunderlin, Richard P and Bruce F. Hansen. 2011. Guide to the Vascular Plants of Central Florida. University Presses of Florida. Gainesville, Florida. 783 pp.
- Wunderlin, R. P., and B. F. Hansen. 2023. *Atlas of Florida Vascular Plants* (http://www.plantatlas.usf.edu). [S. M. Landry and K. N. Campbell (application development), Florida Center for Community Design and Research.] Institute for Systematic Botany, University of South Florida, Tampa.







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Hopewell Mine Significant Upland Wildlife Habitat (SUWH) EPCHC Permit #202.01P Hillsborough County, Florida



TABLE 1: TREE AND SHRUB DATA BY SPECIES

18TH ANNUAL QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
AUGUST 2023

SCIENTIFIC NAME	COMMON NAME	EPCHC STATUS	TOTAL TREES AND SHRUBS
Tree a	nd Shrub Species Listed in	Tables ¹	
Serenoa repens	Saw palmetto	UPL	17
Sabal palmetto	Cabbage palm	FAC	7
Quercus laurifolia	Laurel oak	FACW	3
Myrica cerifera	Wax myrtle	FAC	2
Pinus palustris	Longleaf pine	UPL	2
Pinus elliottii	Slash pine	UPL	1
Quercus nigra	Water oak	FACW	1
Quercus virginiana	Live oak	UPL	1
Viburnum obovatum	Walter's viburnum	FACW	1
Total Trees and Shrubs Listed in	35		
TOTAL TREES AND SHRUBS	35		

¹Appendix A - Desirable Tree, Shrub, and Herbaceous Species Tables

TABLE 2: SUMMARY OF HERBACEOUS SPECIES COVER 18TH ANNUAL QUANTITATIVE MONITORING SURVEY SIGNIFICANT UPLAND WILDLIFE HABITAT AUGUST 2023

SPECIES CLASSIFICATION	NUMBER OF SPECIES	TOTAL PERCENT COVER	RELATIVE PERCENT COVER
Total Herbaceous Cover	28	93.9	100.0
Desirable Herbaceous Species Listed in Tables ¹	12	49.1	52.4
Other Native Species not Listed in Tables ¹	7	5.3	5.6
Exotic Species	6	18.9	20.1
Nuisance Species	3	20.6	21.9
Total Bare Ground/Dead Litter	-	6.1	_

¹Appendix A - Desirable Tree, Shrub, and Herbaceous Species Tables

TABLE 3: HERBACEOUS COVER BY SPECIES

18TH ANNUAL QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
AUGUST 2023

SCIENTIFIC NAME	COMMON NAME	EPCHC STATUS	FRUIT OR FLOWER	TOTAL PERCEN T COVER	RELATIVE PERCENT COVER
Desirable Herbaceous Species Lis	ted in Tables ¹	•			
Paspalum setaceum	Thin paspalum	FAC	+	16.0	17.0
Andropogon virginicus	Broomsedge	FAC	·	12.8	13.7
Cyperus croceus	Baldwin flatsedge	FAC	‡	5.4	5.8
Digitaria ciliaris	Southern crabgrass	UPL	#	5.4	5.8
Eustachys petraea	Rock fingergrass	FAC	‡	2.9	3.1
Polypremum procumbens	Rustweed	FAC	‡	2.0	2.1
Chamaecrista nictitans	Wild sensitive plant	UPL		1.8	1.9
Eragrostis elliottii	Elliot's lovegrass	FAC	ŧ	1.1	1.2
Scoparia dulcis	Licorice weed	FAC	#	1.0	1.1
Opuntia humifusa	Pricklypear	UPL		0.3	0.3
Bidens alba (synonym B. pilosa)	White beggar-ticks	FAC		0.2	0.2
Commelina erecta	Sandhill dayflower	UPL	+	0.2	0.2
Total Cover of Desirable Herbace	ous Species Listed in Ta	bles	(8)	49.1	52.4
Other Native Species Not Listed in	n Tables ¹		•		
Eupatorium capillifolium	Dogfennel	FAC		2.3	2.4
Croton glandulosus	Vente conmigo	UPL	‡	1.2	1.3
Diodia teres	Poor joe	UPL	· ·	0.8	0.9
Cenchrus spinifex	Coastal sandbur	UPL	‡	0.4	0.4
Sida rhombifolia	Indian hemp	UPL	<u>+</u>	0.3	0.3
Ambrosia artemisiifolia	Common ragweed	UPL	i i	0.2	0.2
Conyza canadensis	Dwarf horseweed	UPL	‡	0.1	0.1
Total Cover of Other Native Spec	'	(4)	5.3	5.6	
Exotic Species					
Bulbostylis barbata	Watergrass	UPL	+	8.8	9.4
Sporobolus indicus	Smutgrass	UPL	‡	3.8	4.0
Richardia brasiliensis	Richardia	UPL	‡	3.5	3.7
Paspalum notatum	Bahia grass	UPL	‡	1.6	1.7
Cynodon dactylon	Bermuda grass	UPL	‡	0.8	0.9
Hyptis verticillata	John Charles	UPL		0.4	0.4
Total Cover of Exotic Species			(5)	18.9	20.1
Nuisance Species					
Melinis repens	Natalgrass	UPL	‡	18.1	19.3
Praxelis clematidea	Praxelis	UPL	‡	2.3	2.4
Urena lobata	Caesarweed	UPL		0.2	0.2
Total Cover of Nuisance Species	(2)	20.6	21.9		
Total Tree, Shrub, and Herbaceo	19	93.9	100.0		
Total Bare Ground/Dead Litter			6.1	-	

¹Appendix A - Desirable Tree, Shrub, and Herbaceous Species Tables

TABLE 4: ADDITIONAL SPECIES

18TH ANNUAL QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
AUGUST 2023

SCIENTIFIC NAME	COMMON NAME	FRUIT OR FLOWER	EPCHC STATUS		
Desirable Species Listed in Tables ¹					
Euthamia caroliniana	Slender goldenrod		FAC		
Smilax sp.	Greenbriar		-		
Vitis rotundifolia	Muscadine grape		-		
Exotic Species	Exotic Species				
Indigofera hirsuta	Hairy indigo		UPL		
Total Additional Species	0	4			
Total Additional Desirable Species Liste	0	3			
Total Additional Exotic Species	0	1			

¹Appendix A - Desirable Tree, Shrub, and Herbaceous Species Tables

TABLE 5: WILDLIFE UTILIZATION

18TH ANNUAL QUANTITATIVE MONITORING SURVEY
SIGNIFICANT UPLAND WILDLIFE HABITAT
AUGUST 2023

SCIENTIFIC NAME	COMMON NAME	FWC STATUS ¹	FWS STATUS ²	OBSERVANCE
	AVIAN	•		'
Ardea alba	Great egret	_	-	
Baeolophus bicolor	Tufted titmouse	-	-	
Buteo lineatus	Red-shouldered hawk	-	-	
Cardinalis cardinalis	Northern cardinal	-	-	
Cathartes aura	Turkey vulture	-	-	
Charadrius vociferus	Killdeer	-	-	
Colinus virginianus	Northern bobwhite	-	-	
Columbina passerina	Common ground dove	-	-	
Coragyps atratus	Black vulture	-	-	
Cyanocitta cristata	Blue jay	-	-	
Eudocimus albus	White ibis	-	-	
Falco sparverius	American kestrel	-	-	
Melanerpes carolinus	Red-bellied woodpecker	-	-	
Mimus polyglottos	Northern mockingbird	-	-	
Setophaga palmarum	Palm warbler	-	-	
Strix varia	Barred owl	-	-	
Sturnella magna	Eastern meadowlark	-	-	
Tachycineta bicolor	Tree swallow	-	-	
Zenaida macroura	Mourning dove	-	-	
	REPTILE		•	•
Anolis carolinensis	Green anole	_	-	**
Anolis sagrei	Brown anole	-	-	
Aspidoscelis sexlineata	Six-line race runner	-	-	
Coluber constrictor	Black racer	-	-	
Gopherus polyphemus	Gopher tortoise	ST	-	
	AMPHIBIA	N		•
Hyla cinerea	Green tree frog	-	-	
	MAMMAI			•
Dasypus novemcinctus	Nine-banded armadillo	-	_	
Odocoileus virginianus	White-tailed deer	-	-	
Procyon lotor	Raccoon	-	-	
Sus scrofa	Wild pig	-	-	

^{*} Species observed for the first time

¹FWC - Florida Fish and Wildlife Conservation Commission; Official Lists of Florida's Endangered Species, Threatened Species, and Species of Special Concern (Ch. 68A-27 F.A.C.; updated 05/2023) [ranking: ST - State-designated Threatened, SSC - State Species of Special Concern, FE - Federally-designated Endangered, FT - Federally-designated Threatened, FT(S/A) - Federally-designated Threatened by Similarity of Appearance]

^{**} Species observed during the current monitoring survey

²FWS - U.S. Fish and Wildlife Service status, Official lists of Threatened and Endangered species updated through the FWS web site - last updated on 08/23/2023. [ranking E - Endangered, T - Threatened, T(S/A) - Threatened by Similarity of Appearance]



APPENDIX A: DESIRABLE TREE, SHRUB, AND HERBACEOUS SPECIES TABLES

Table A: Tree Species Composition -- Minimum of four (4) species

Scientific Name	Common Name
Carya glabra	Pignut Hickory
Diospyros virginiana	Persimon
Ilex cassine	Dahoon Holly
Liquidambar styraciflua	Sweetgum
Persea borbonia	Red Bay
Pinus elliotti	Slash Pine
Pinus palustris	Longleaf Pine
Quercus laurifolia	Laurel Oak
Quercus nigra	Water Oak
Quercus virginiana	Live Oak
Sabal palmetto	Cabbage Palm

Table B: Shrub Species Composition – Minimum of six (6) species

Scientific Name	Common Name
Asimina reticulata	Flatwoods pawpaw
Baccharis spp.	Salt Bush
Callicarpa americana	Beautyberry
Gaylussacia dumosa	Dwarf Huckleberry
Ilex glabra	Gallberry
Lyonia fruticosa	Shiny lyonia
Lyonia lucida	Fetterbush
Myrica cerifera	Wax myrtle
Rhus copallinum	Winged sumac
Serenoa repens	Saw palmetto
Styrax americana	Snowbells
Vaccinium myrsinites	Shiny Blueberry
Vaccinium stamineum	Deerberry
Viburnum obovatum	Walter viburnum
Ximenia americana	Hogplum

Table C: Herbaceous Species Composition – Minimum of Fifteen (15) Species

Scientific Name	Common Name	
Andropogon spp.	Broomsedge	
Aristida spp.	Wire Grass	
Aster tortifolius	White-topped aster	
Bidens spp.	Beggarticks	
Carphephorus spp.	Deer-tongue	
Chamaecrista nictitans	Sensitive pea	
Chrysopsis spp.	Goldenaster	
Commelina erecta	Dayflower	
Coreopsis spp.	Tickseed	
Crocanthemum spp.	Frostweed	
Cyperus spp.	Sedge	
Dalea spp.	Summer farewell	
Dicanthelium spp.	Panic grass	
Digitaria spp.	Crabgrass	
Eleocharis baldwinii	Spikerush	
Eragrostis elliottii	Elliot's lovegrass	
Euphorbia spp.	Spurge	
Eustachys petraea	Rock fingergrass	
Euthamia caroliniana	Slender goldenrod	
Galactia spp.	Galactia	
Hedyotis procumbens	Fairy footprints	
Hypericum spp.	St. John's Wort	
Juncus spp.	Rush	
Lachnocaulon anceps	Bog-buttons	
Lechea toreyi	Lechea	
Liatris spp.	Blazing Star	
Opuntia humifusa	Prickly pear cactus	
Osmunda cinnamomea	Cinnamon fern	
Panicum anceps	Beaked panic grass	
Panicum hemitomon	Maidencane	
Paspalum setaceum	Thin paspalum	
Pityopsis graminifolia	Shinners (golden aster)	
Polypremum procumbens	Rustweed	
Sabatia brevifolia	Narrow-leaved sabatia	
Scoparia dulcis	Licorice weed	
Smilax auriculata	Smilax	
Solidago odora	Sweet goldenrod	
Sophronanthe hispida	Scrub-hedge hyssop	
Stillingia sylvatica	Queen's delight	
Stipulicida setacea	Wire plant	
Tephrosia hispidula	Tephrosea	
Trichostema dichotomum	Forked bluecurls	
Vitis rotundifolia	Muscadine grape	

APPENDIX B: PLANTING LISTS

Trees		Number Planted
Species	Common Name	9/23/05
Carya glabra	Pignut Hickory	60
Diospyros virginiana	Persimmon	60
Persea borbonia	Red Bay	60
Pinus elliottii	Slash Pine	120
Pinus palustris	Long Leaf Pine	120
Quercus laurifolia	Laurel Oak	240
Quercus nigra	Water Oak	240
Quercus virginiana	Live Oak	240
Sabal palmetto	Cabbage Palm	60
Total		1200

Shrubs		Number Planted
Species	Common Name	9/23/05
Callicarpa americana	Beautyberry	176
Ilex glabra	Gallberry	704
Lyonia fruticosa	Shiny Lyonia	704
Lyonia lucida	Fetterbush	704
Rhus copallina	Winged Sumac	176
Serenoa repens	Saw Palmetto	704
Vaccinium myrsinites	Shiny Blueberry	176
Vaccinium stamineum	Deerberry	176
Total		3520

Shrubs/Herbaceous		Number Planted
Species Common Name		9/5/2008
Ilex glabra	Gallberry	1,200
Viburnum obovatum	Walter's viburnmum	1,000
Aristida beyrichiana	Beyrich threeawn	1,300
Andropogon brachystachus	Shortspike bluestem	3,777
Total		7,277

APPENDIX B: PLANTING LISTS

Herbaceous		Number Planted	
Species	Common Name	2009	Size
<i>Aristida stricta</i> var.			
beyrichiana	wiregrass	4,000	5" tubling
Carphephorus paniculatus	deer-tongue	700	quart
Eragrostis sp.	lovegrass	1,500	5" tubling
Monarda punctata	spotted beebalm	200	quart
Opuntia humifusa	pricklypear cactus	530	gallon
Pityopsis graminifolia	narrowleaf silkgrass	600	quart
Polygonella robusta	largeflower jointweed	325	quart
Solidago odora var.			
chapmanii	Chapman's goldenrod	600	quart
Sorghastrum secundum	lopsided indiangrass	1,139	5" tubling
Total		9,594	

Trees		Number Planted
Species	Common Name	7/30/2010
Pinus elliottii	Slash Pine	300
Quercus laurifolia	Laurel Oak	300
Quercus nigra	Water Oak	300
Quercus virginiana	Live Oak	300
Total		1200

Shrubs		Number Planted
Species	Common Name	7/30/2010
Serenoa repens	saw palmetto	1,600
Total		1,600

Herbaceous		Number Planted
Species Common Name		8/20/2010
Carphephorus paniculatus	deer-tongue	300
Chrysopsis mariana	Maryland goldenaster	350
Pityopsis graminifolia	narrowleaf silkgrass	600
Total		1,250

APPENDIX C: PHOTOGRAPHIC DOCUMENTATION SUWH - TRANSECT 1 – FACING NORTH



SUWH – TRANSECT 1 – FACING SOUTH



APPENDIX C: PHOTOGRAPHIC DOCUMENTATION (continued)

SUWH - TRANSECT 2 – FACING NORTH



SUWH - TRANSECT 2 - FACING SOUTH



SECTION 6 ENVIRONMENTAL MONITORING REPORT

Appendix 6 Environmental Monitoring



2023/2024 Annual Report



Hopewell Mine Environmental Monitoring 2023/2024 Report Period

The following environmental monitoring summary covers the reporting period from June 2023 through May 2024. Active mining at the Hopewell facility was completed in January 2011. In a letter dated July 5, 2016, the Florida Department of Environmental Protection (FDEP) inactivated NPDES Permit No. FL0032590. In a letter dated August 1, 2016, Hillsborough County discontinued reporting of flow and water quality requirements at English Creek, the NPDES outfall, and the deep well withdrawal reports (Attached).

RAINFALL

Rainfall is measured daily and downloaded/recorded monthly. Cumulative rainfall measured during the 2023/2024 reporting period (36.4 inches) was 1.4 inches greater than the annual rainfall recorded in the previous reporting year (35.0 inches).

DOMESTIC WASTEWATER DISCHARGE

The Hopewell Mine was served by a septic tank system.

GROUNDWATER PUMPING

The production well and small process well at the Hopewell Mine are no longer under Mosaic control and have been turned back over to the property owner.

SURFICIAL WATER TABLE MONITORING

The following area is designated to fulfill requirements of the groundwater table monitoring and mitigation plan:

Hopewell Permitting

The groundwater elevation data collected at the Hopewell Mine area designated above was consistent for the reporting period 6/1/2023 – 5/31/2024 with the exception of one "DRY" reading in May at the MHW-811 piezometer.

INDUSTRIAL WASTEWATER DISCHARGE AND WATER QUALITY

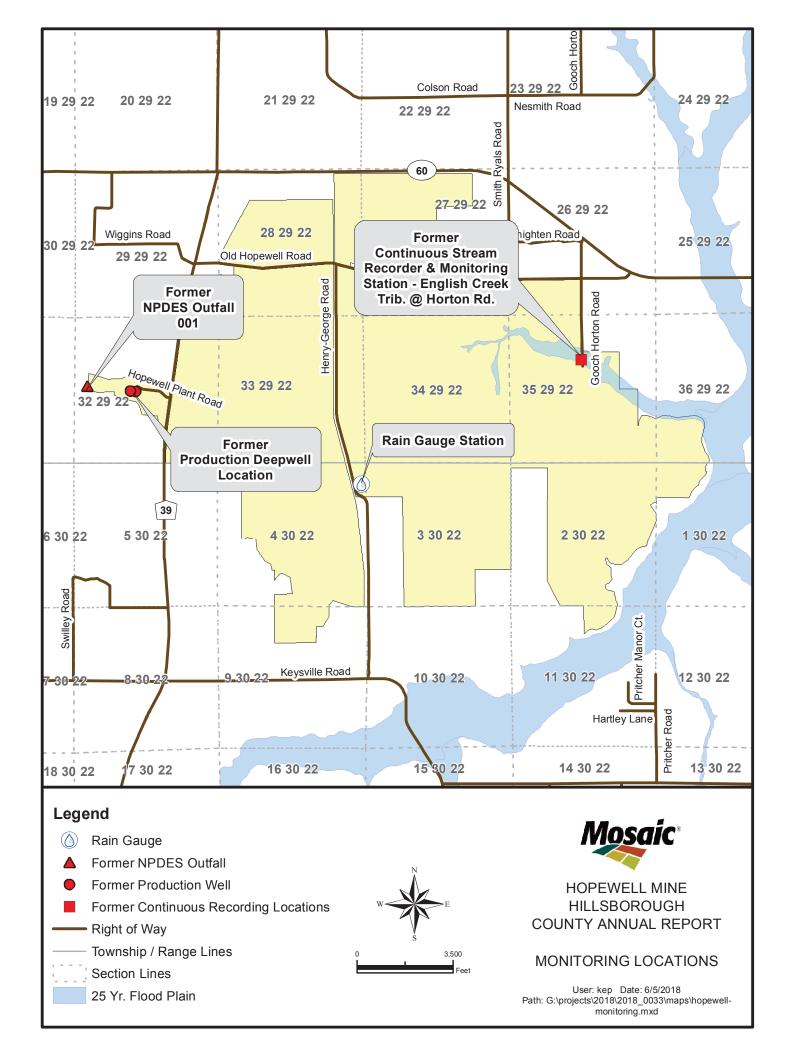
There was one permitted industrial wastewater discharge point within the Hillsborough County mining area. Per FDEP NPDES Permit Number FL0032590, Hopewell Outfall D-001 discharged excess mine recirculation water and storm water through mine cuts into Medard Reservoir (WBID 1592A) that discharges into the Little Alafia River, then into Turkey Creek, a tributary of the Alafia River (Class III Freshwaters). As stated above, this permit was inactivated in July 2016.

SURFACE WATER DISCHARGE AND WATER QUALITY

Both the surface water discharge monitoring and water quality sampling at the tributary to English Creek were discontinued in October 2016.



2023/2024 Annual Report Monitoring Data





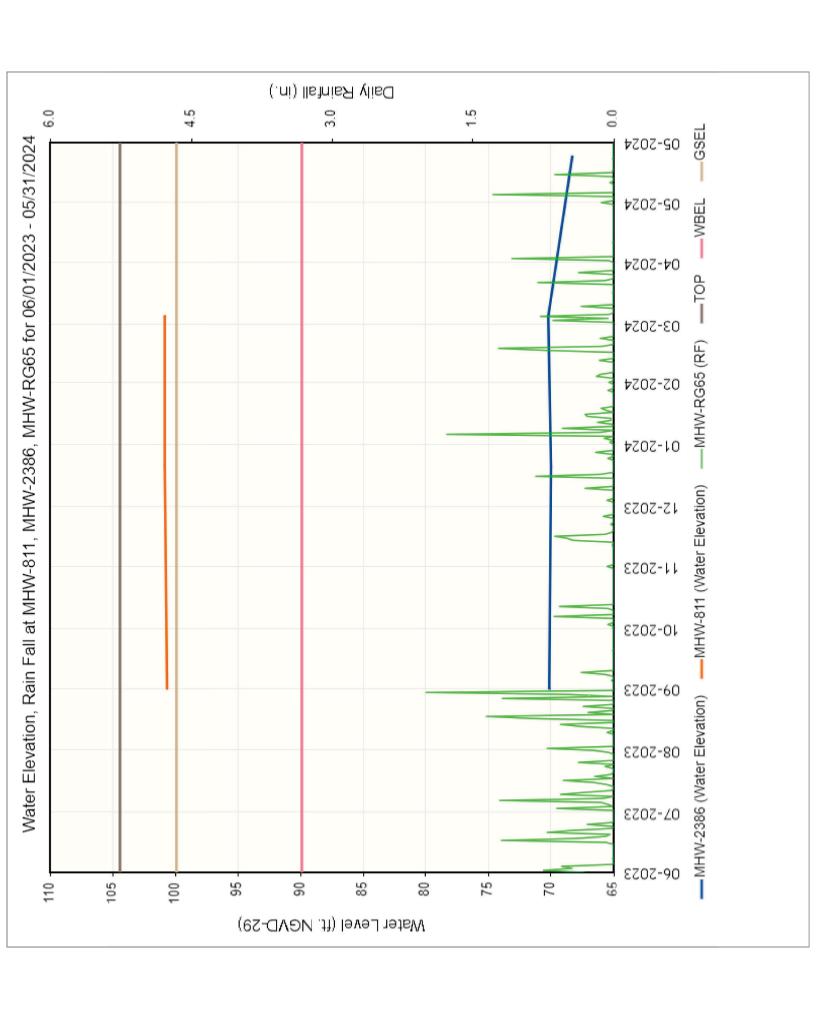
2023/2024 Annual Report

Rainfall Monitoring Data

Mosaic Fertilizer, LLC Hopewell Mine Rainfall Data June 1, 2023 to May 31, 2024

Day												
Ŧ	June	July	August	September	October	November	December	January	February	March	April	May
-	0.31	0	0.21	0	0.01	0.07	0	0	0.05	0	0	0.13
2	0.74	0	0.7	0	0	0	0	0.04	0	0	0.05	0
င	0.44	9.0	0.01	0	90.0	0	0	0.01	0	0.64	1.08	0
4	0.55	0.01	0	0	0	0	0.07	0.1	0.18	90.0	0	0
5	0.01	90.0	0	0.02	0	0	0	0	0.14	0.77	0	1.28
9	0	0.13	0	0	0	0	0	1.77	0	0.04	0	0
7	0	1.21	0	0	0.63	0	0	0.14	0	0	0	0
8	0.01	0.12	0	0.09	0	0	0	0	0	0	0	0
6	0	0	0	0.34	0	0	0	0.54	0	0	0	0
10	0	0.56	0.07	0	0	0	0.3	0.01	0	0.34	0	0
11	0	0.31	0	0	0.06	0.01	0	0.01	0	0	0.01	0.04
12	0	0.02	0	0	0.57	0.01	0	0.17	0.15	0	0	0
13	0	0	0.35	0	0	0	0	0.03	0	0	0	0
14	0	0	0.56	0	0	0.43	0	0.03	0	0	0	0.02
15	0	0.08	0	0	0	0.49	0	0.28	0	0	0	0.62
16	0.08	0.21	0	0	0	0.62	0.82	0.3	0	0	0	0.01
17	1.19	0.53	0.88	0	0	0.09	0.14	0	0.73	0.01	0	0.01
18	0.39	0	1.35	0	0	0.02	0	0.08	1.22	0	0	0
19	0.08	0.2	0	0	0	0	0	0.13	0.12	0	0	0
20	0.04	0.03	0.27	0.01	0	0	0	0	0	0	0	0
21	0.7	0	0.01	0	0	0	0	0	0	0	0	0
22	0.44	0	0	0	0	0.03	0	0	0	0.8	0	0
23	0.01	0.01	0.32	0	0	0	0	0	0.14	0.09	0	0.01
24	0.01	0.09	0.01	0	0	0	0	0	0	0	0	0
25	0.28	0	0	0	0	0	90.0	0	0	0	0	0
26	0.01	0.37	0	0	0	0.11	0	0	0	0	0	0
27	0	0	1.18	0	0	0	0.02	0	0	0.37	0	0
28	0	0	0	0	0	0	0.19	90.00	0	0.01	0	0
29	0	0	0.48	0	0	0	0	0	0	0	0	0
30	0	0	1.99	0	0	0	0	0		0	0	0
31		0.05	0		0		0	0		0		0
Total	5.29	4.59	8.39	0.46	1.33	1.88	1.60	3.70	2.73	3.13	1.14	2.12

inches 36.36 Total rainfall 2023-2024 reporting period = Total rainfall 2022-2023 reporting period =



Mining Unit	Measured Date	Serial ID#	Water Elevation in ft (MSL)
Permitting Hopewell	9/1/2023	2386	70.09
Permitting Hopewell	12/21/2023	2386	69.95
Permitting Hopewell	3/5/2024	2386	70.17
Permitting Hopewell	5/24/2024	2386	68.27
Permitting Hopewell	9/1/2023	811	100.65
Permitting Hopewell	12/21/2023	811	100.82
Permitting Hopewell	3/5/2024	811	100.82
Permitting Hopewell	5/24/2024	811	DRY



2023/2024 Annual Report

Letter Inactivating NPDES Permit No. FL0032590



Florida Department of Environmental Protection

Division of Water Resource Management Phosphate Management Program 13051 N. Telecom Parkway Temple Terrace, FL 33637-0926 Rick Scott Governor

Carlos Lopez-Cantera Lt. Governor

> Jonathan P. Steverson Secretary

July 5, 2016

SENT BY EMAIL TO:

(David.Jellerson@mosaicco.com)

Mr. David B. Jellerson, P.E., Director - Environmental MOSAIC FERTILIZER, L.L.C. 13830 Circa Crossing Drive Lithia, FL 33547-3953

RE: Mosaic Fertilizer, L.L.C. – Hopewell Mine Inactivation of Permit No. FL0032590

Dear Mr. Jellerson,

On June 20, 2016, the Department received a request from Mosaic Fertilizer, L.L.C., (Mosaic) to withdraw the subject National Pollutant Discharge Elimination System (NPDES) surface water discharge permit for the Hopewell Mine. This submittal was made in accordance with General Condition No. 15 in Section IX of the permit.

The Department was previously provided written notice dated June 4, 2014, of Mosaic's intention to abandon the existing NPDES Outfall D-001, remove all monitoring apparatus and related upstream structures, and inactivate the Hopewell Mine wastewater facility following Department approval of Mosaic's request to breach and abandon the last active clay settling area (CSA) HL-3. Mosaic has identified the actions that it will take to safeguard public health and safety during and following inactivation or abandonment in accordance General Condition IX.15 of the subject permit and Rule 62-620.610(15), Florida Administrative Code.

Review of the request, Department files, and site inspections made on March 11, April 26, April 27, and June 21, 2016, do not indicate industrial activity at the former mine site and it is not generating any industrial wastewater. Therefore, the Department has inactivated the NPDES permit associated with the subject facility, and all associated monitoring requirements.

MOSAIC FERTILIZER, L.L.C.

Hopewell Mine

Notice of Permit Withdrawal

Permit No.: FL0032590

PA File No.: FL0032590-010-IWB/MR

Page 2 of 2

Thank you for your continued cooperation. If you have any comments or questions concerning this correspondence, please do not hesitate to contact Mr. Dennis R. Pierson at (813) 470-5914, or by e-mail at Dennis.Pierson@dep.state.fl.us.

Sincerely,

Elsa A. Potts, P.E.

Program Administrator

Ehr a. Patts

Industrial Wastewater Program

Division of Water Resource Management

COPIES SENT BY EMAIL TO:

Monica Sudano, FDEP-DWRM/TLH, (Monica.Sudano@dep.state,fl.us)

Ryan Tickles, Mosaic Fertilizer, LLC, (Ryan.Tickles@Mosaicco.com)

Orlando E. Rivera, FDEP-MMR/TLH (Orlando.Rivera@dep.state.fl.us)



2023/2024 Annual Report

Letter Discontinuing Reporting of Flow and Water Quality Requirements at English Creek, the NPDES Outfall, and the Deep Well Withdrawals



Development Services

August 1, 2016

Board of County Commissioners

Kevin Beckner Victor D. Crist Ken Hagan Al Higginbotham Lesley "Les" Miller Jr. Sandra L. Murman Stacy R. White

County Administrator
Michael S. Merrill

County Administrator Executive Team

Lucia E. Garsys Carl S. Harness Gregory S. Horwedel Ramin Kouzehkanani Liana Lopez Bonnie M. Wise

County Internal Auditor
Michelle Leonhardt

County Attorney
Chip Fletcher

Development Services PO Box 1110 Tampa, FL 33601-1110 Ms. Sandra Patrick Mosaic Fertilizer, LLC 13830 Circa Crossing Drive, Lithia, FL 33547

SUBJECT: MOSAIC FERTILIZER, L.L.C. JULY 19, 2016 REQUESTS TO CEASE

SOME AND CHANGE OTHER MONITORING STATIONS OF THE

HOPEWELL MINE IN ASSOCIATION WITH FDEP NPDES SURFACE WATER DISCHARGE PERMIT NO. FL0032590

Dear Ms. Patrick:

Development Services Department staff have completed their review of the above referenced request. Your request to cease monitoring of and changes in monitoring of certain environmental monitoring stations identified in the 1982 Hopewell Mine Master Mining and Reclamation Plan is acceptable and via this letter is administratively approved.

This approval specifically approves changes at:

- Station 1 (Rain Gauge) change location of rain gauge to NW corner of the HL-3 Clay Settling Area or other location where it can be accessed from the main roads.
- Station 2 (English Creek Station) discontinue providing the County with flow (continuous recorder) and water quality information, as all mining activity is complete.
- Station 3 (North of Old Hopewell Rd.) The areas north of Old Hopewell Rd. (MU5 and MU6) were mined in 1993/1994 and reclaimed by 1998. Mosaic suspended monitoring at this station in July 2004. Hillsborough County released the uplands in December 2004 and the Environmental Protection Commission released all mitigation wetlands by May 2006. No more monitoring is expected to occur at this location.
- Station 4 (NPDES Outfall) discontinue providing the County with flow (continuous recorder) and water quality information, as the FDEP NPDES permit # FL0032590 has been inactivated.

Ms. Sandy Patrick August 1, 2016 Page 2 of 2

• Station 5 (Deep Wells) – discontinue providing the County with deep well water withdrawal reports. Mosaic is working with the leased site owner and SWFWMD to transition this permit to the lease holder or abandon the SWFWMD deep water wells.

The Florida Department of Environmental Protection reviewed, commented and approved this Mosaic request to withdrawal the Hopewell NPDES surface water discharge permit in a letter to Mosaic dated July 5, 2016. The Environmental Protection Commission of Hillsborough County (EPC) also reviewed this request and submitted an email comment and approval on July 19, 2016. See these approvals as an attachment to this letter.

The applicant is put on notice that approval of this Monitoring Program modification is not tacit approval of any future Mining Units. Activities engaged in pursuant to this approval constitutes applicant's acceptance and approval of civil penalty assessments and other penalties and remedies contained in 11.06.00 of the Land Development Code.

Pursuant to Section 8.02.03, mining and mining-related activities require review and approval by the Board. Engaging in any mining activity or operation beyond the scope of this approval, without an operating permit or other relevant approvals, is a violation of the Hillsborough County Phosphate Mining Regulations and will subject the applicant and/or project to applicable penalties and remedies contained in 11.06.00 of the Land Development Code.

Nothing stated herein shall be construed to be a waiver of any present or subsequently enacted federal, state, or local law, ordinance, or regulation, which as such is deemed fully applicable to the activities regulated herein.

Please call me at (813) 276-8370 if you have any questions.

Sincerely,

Mike Stevenson, P.G., Senior Hydrologist

Natural Resources Development Review

Development Services Department

MS cc Jackie Jordan, EPC



Florida Department of Environmental Protection

Division of Water Resource Management
Phosphate Management Program
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926

Rick Scott Governor

Carlos Lopez-Cantera Lt. Governor

> Jonathan P. Steverson Secretary

July 5, 2016

SENT BY EMAIL TO: (David.Jellerson@mosaicco.com)

Mr. David B. Jellerson, P.E., Director - Environmental MOSAIC FERTILIZER, L.L.C. 13830 Circa Crossing Drive Lithia, FL 33547-3953

RE: Mosaic Fertilizer, L.L.C. - Hopewell Mine

Inactivation of Permit No. FL0032590

Dear Mr. Jellerson,

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MOSAIC FERTILIZER, L.L.C.

Hopewell Mine

Notice of Permit Withdrawal

Permit No.: FL0032590

PA File No.: FL0032590-010-IWB/MR

Page 2 of 2

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Sincerely,

Elsa A. Potts, P.E.

Program Administrator

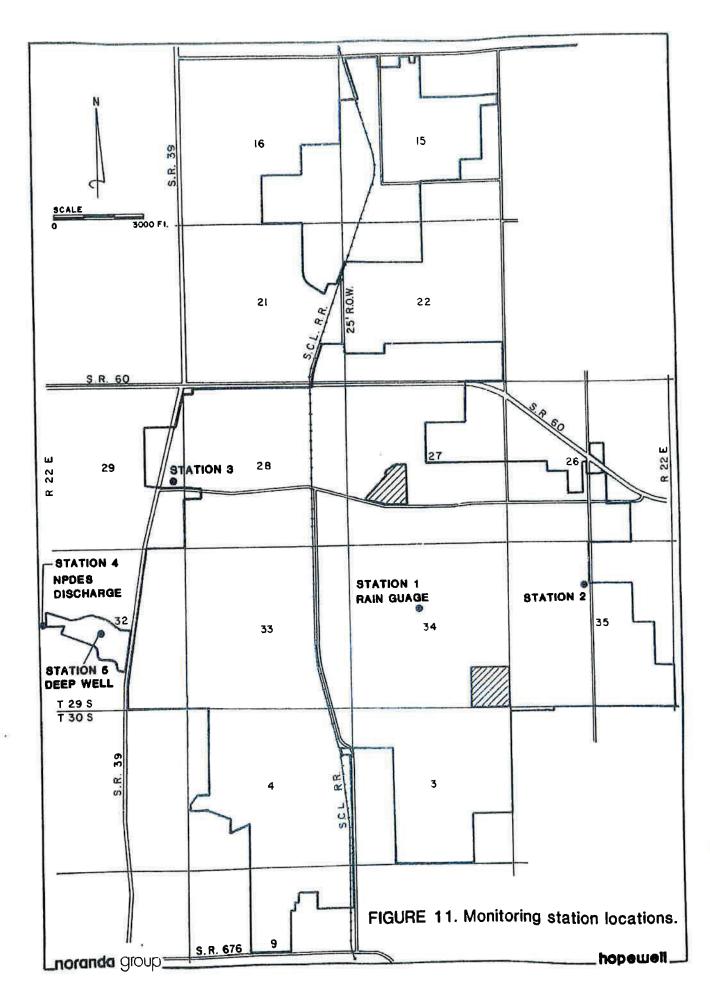
Ehr a. Pats

Industrial Wastewater Program

Division of Water Resource Management

COPIES SENT BY EMAIL TO:

Monica Sudano, FDEP-DWRM/TLH, (Monica.Sudano@dep.state,fl.us)
Ryan Tickles, Mosaic Fertilizer, LLC, (Ryan.Tickles@Mosaicco.com)
Orlando E. Rivera, FDEP-MMR/TLH (Orlando.Rivera@dep.state.fl.us)



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11. Descriptions and locations of any proposed monitoring systems or devices to be installed to observe the effects of the proposed mining and reclamation operations on environmental phenomena, to include for each station: (i) the type of device or procedure to be installed or followed; (ii) the schedule to be followed; and (iii) a proposal for the compilation of data and the submission of reports.

The location of the monitoring stations proposed for this operation are illustrated on Figure 11. The following describes the stations in terms of their purpose, type of device, and schedule of operation.

Station 1. A continuous recording rain gauge is located near the center of the property at Station 1. This gauge was installed in April, 1980, and will be maintained throughout the life of the mine.

Station 2. Station 2 is located on an unnamed tributary of English Creek at the point where the flow discharges from the property. The station includes a continuous stream height recorder and a surface water quality monitoring location. The recorder was installed in April, 1980, to record water flow leaving the property.

Monitoring at this location will continue throughout the mining activity and measure the following parameters on

a monthly basis.

. :4

Flow (continuously)
pH
Dissolved Oxygen
Fluoride
Nitrogen, Total as N
Phosphorus, Total as P
Phosphorus, Total as PO4
Solids, Total Suspended at 105°C
Turbidity (NTU)

Station 3. This station is located on a man-made ditch passing through the northwest corner of the property. It

will be activated at least three years prior to mining activities in the drainage basin, and contain a recording stream recorder and monthly water quality analysis the same as Station #2.

The County was granted this drainage easement on December 8, 1966, and recorded in Official Records Book 1747, page 439 and modified by the Board of County Commissioners on January 3, 1968, as recorded in Official Records Book 1848, page 341. This easement states "to the effect that the County will not assert any rights with respect to the easement that interferes with any mining, post-mining, and related activities and reclamation operations, and the easement is in all respects inferior the full rights of the owner of the lands."

Station 4. This station is located at the west boundary of the property at the NPDES and DER discharge point. A Stevens continuous recording water level recorder will monitor the discharge flow, and a continuous water sampler will composite the discharge for chemical analysis. This analysis will include pH, Total Suspended Solids, Radium-226, Fluoride, and Phosphorus according to the NPDES and DER discharge limitations.

Station 5. The existing deep well which provides water for the beneficiation operation, is equipped with a totalizer meter. Water withdrawal reports are submitted to SWFWMD on a monthly basis.

Reporting

Data derived from this monitoring network will be transmitted to Hillsborough County on a routine monthly basis for water quality and the deep well pumpage.

Stevenson, John Michael

From: Jordan, Jaclyn <jordanj@epchc.org>

Sent: Tuesday, July 19, 2016 3:12 PM Stevenson, John Michael

Cc: Vorstadt, William

Subject: RE: Hopewell Monitoring Network Request

Attachments: 07-19-16_HC_MMRP_Monitoring Network Request.pdf

Good Afternoon Mike,

I spoke with Sandy this morning. Based on the information provided and our discussion last week here at our office, EPC does not have any objections to the requests made. Please let us know if you need anything additional from us.

Thank you, Jackie



Jackie Jordan

Environmental Scientist
Wetlands Management Division
Environmental Protection Commission
813-627-2600 ext. 1358
jordani@epchc.org
"Environmental Excellence in a Changing World"

From: Patrick, Sandra L - FishHawk [mailto:Sandra.Patrick@mosaicco.com]

Sent: Tuesday, July 19, 2016 2:59 PM

To: Stevenson, John Michael

Cc: Jordan, Jaclyn

Subject: Hopewell Monitoring Network Request

Hi Mike,

In response to your great questions concerning my initial foray into the Hopewell monitoring program, I continued to push through lots of binders and bothered many people, but was able to obtain some answers. Therefore, attached is Mosaic's official request to modify and discontinue the monitoring network initially established at Hopewell, as required by the MMRP of 1982. A short historical summary of Station 3 is now included. I'm also copying Jackie Jordan (EPC) so she will stay informed on activities there or provide comments as desired. Based on my discussion with her today, she doesn't believe a specific sign-off is required by EPC, but may be given just to close that loop. As previously discussed, other similar requests have been handled by the County administratively, so you expect to handle this one likewise. If that's not the case, please let me know so we can discuss other options.

If you have any questions or need additional information, please don't hesitate to contact me.

Best Regards, Sandy



Sandra Patrick, CEP | Senior Ecologist - Permitting Department

Mosaic Fertilizer, LLC | 13830 Circa Crossing Drive | Lithia, Florida 33547

O: 813.500.6913 | C: 863.860.1072 | | E: sandra.patrick@mosaicco.com | W: www.mosaicco.com

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