

COVER SHEET

Responsible Agency: U.S. Army Corps of Engineers (USACE)

Title: Final Areawide Environmental Impact Statement (AEIS) on Phosphate Mining in the Central Florida Phosphate District (CFPD)

Location: Charlotte, DeSoto, Hardee, Hillsborough, Lee, Manatee, Polk, and Sarasota Counties, Florida

For additional information or for copies of this Draft AEIS, contact:

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This document is also available on the AEIS website (<http://www.phosphateaeis.org/>).

Abstract: The USACE has received four applications for Department of the Army permits under Section 404 of the Clean Water Act (CWA) from Mosaic Fertilizer, LLC (Mosaic) and CF Industries, Inc. (CF Industries) (the Applicants) for four proposed phosphate mining projects. The specific projects being reviewed by the USACE, and the Department of the Army permit application numbers, are Mosaic's Desoto Mine (SAJ-2011-01968), Mosaic's Ona Mine (SAJ-2011-01869), Mosaic's Wingate East extension of the Wingate Creek Mine (SAJ-2009-03221), and CF Industries' South Pasture Mine Extension (SAJ-1993-01395). The USACE has identified and assessed alternatives in this *Final AEIS*: (1) a No Action Alternative, (2) an Applicant's Preferred Alternative for the Desoto location, (3) an Applicant's Preferred Alternative at the Ona location, (4) an Applicant's Preferred Alternative at the Wingate East location, (5) an Applicant's Preferred Alternative at the South Pasture Mine Extension location, and four additional offsite locations identified as Alternatives 6 through 9. Under the No Action Alternative, the mining that has already been authorized in the CFPD would continue as scheduled under currently approved state and Federal permits. The evaluations under this AEIS were performed with the assumption that once existing mining was completed, there would be no future mining authorized by the USACE. The Applicants would have the option to pursue mining that does not involve the discharge of dredged or fill material into waters of the United States. Under the other alternatives, mining could continue until as late as 2060.

The geographic scope varies with the resource being evaluated. In general, the affected environment includes the area within the CFPD, an area of approximately 1.32 million acres (or +/-2,100 square miles) in Hardee, Hillsborough, Manatee, Polk, Sarasota and DeSoto Counties, the Peace and Myakka, River watersheds downstream of the CFPD, areas of the listed counties outside of the CFPD, and areas within Charlotte and Lee Counties. Analyses indicate that the environmental impacts of the proposed mine projects are closely tied to the number of acres proposed to be mined, with alternatives proposing the largest amount of mining having the largest environmental impacts for most of the areas of concern. The primary discriminators are ecological resources including waters of the United States, groundwater quality and levels, surface water quality and quantity, and regional economic effects. Mitigation plans are being evaluated as part of permit review actions that could offset many of the potential environmental impacts.

Public Involvement: In preparation of this *Final AEIS*, the USACE considered comments received from the public during the scoping period (February 18, 2011 to April 30, 2011). The availability of the Draft AEIS was published in the Federal Register on June 1, 2012 and two public meetings were held to receive comments on the 19th and 21st of June in Lakeland and Punta Gorda, respectively. The period for receiving comments was extended from 45 days to 60 days and ended on July 30, 2012. There will be a 30-day waiting period (40 CFR 1506.10) after publication of the *Final AEIS*.



DEPARTMENT OF THE ARMY
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April 26, 2013

Tampa Regulatory Office

TO WHOM IT MAY CONCERN:

Pursuant to the National Environmental Policy Act (NEPA) and the U.S. Army Corps of Engineers Regulation (33 CFR 230.18), this letter constitutes the Notice of Availability of the Final Areawide Environmental Impact Statement (AEIS) on Phosphate Mining in the Central Florida Phosphate District. A copy of the Final AEIS is attached. The Final AEIS is also downloadable from the AEIS project website at <http://www.phosphateaeis.org>. Printed copies of the Final AEIS also will be available for review in the reference section of the public libraries identified in Chapter 10 of the Final AEIS and on the website.

Any comments you may have must be submitted within 30 days of the date on which the NOA appears in the Federal Register, which is expected to be on May 3, 2013. Comments may be provided in writing to the letterhead address or by email to teamaeis@phosphateaeis.org.

Questions concerning the project, or requests for additional copies of the Final AEIS should be directed to John Fellows, by phone at 813-769-7070, or email at john.p.fellows@usace.army.mil. Thank you for your interest in the Final AEIS.

Sincerely,

A handwritten signature in cursive script that reads "Kevin D. O'Kane".

Kevin D. O'Kane
Chief, Tampa Section

Enclosure

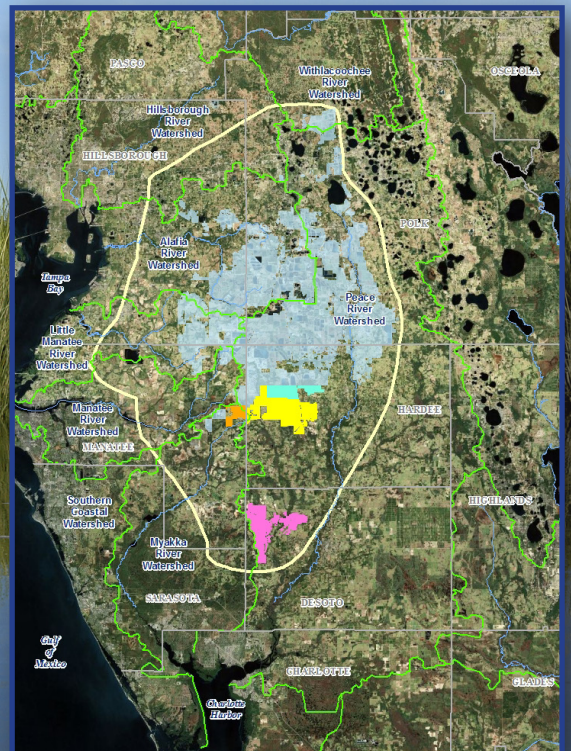
FINAL

AREAWIDE ENVIRONMENTAL IMPACT STATEMENT ON PHOSPHATE MINING IN THE CENTRAL FLORIDA PHOSPHATE DISTRICT



**US Army Corps
of Engineers®**
Jacksonville District

APRIL 2013



VOLUME 1 OF 3

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- C Aerial Photographs of Alternatives
- D Surface Water Quality Evaluations for the Final AEIS on Phosphate Mining in the CFPD
- E Ecological Resource Impact Analysis Methods and Supplemental Data for the Final AEIS on Phosphate Mining in the CFPD
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List of Acronyms

1		
2	AEIS	Areawide Environmental Impact Statement
3	AFT	American Farmland Trust
4	AMO	Atlantic Multidecadal Oscillation
5	ATSDR	Agency for Toxic Substances and Disease Registry
6	BG	billion gallons; block group
7	BioRecon	bioreconnaissance
8	BMAP	Basin Management Action Plan
9	BMP	best management practice
10	BoCC	Board of County Commissioners
11	BOT	Board of Trustees
12	BRC	Bureau of Radiation Control
13	CAA	Clean Air Act
14	CAAA	Clean Air Act Amendments
15	CARL	Conservation and Recreational Lands
16	CCMP	Comprehensive Conservation Management Plan
17	CEQ	Council on Environmental Quality
18	CF Industries	CF Industries, Inc.
19	CFPD	Central Florida Phosphate District
20	CFR	Code of Federal Regulations
21	cfs	cubic feet per second
22	cfsm	cubic feet per second per square mile
23	CHNEP	Charlotte Harbor National Estuary Program
24	CIR	color infrared
25	CIS	Cumulative Impact Study
26	CLIP	Critical Lands and Waters Identification Project
27	cm	centimeter
28	CO	carbon monoxide

List of Acronyms

1	CSA	clay settling area
2	CSP	Conservation Security Program
3	CUP	Consumptive Use Permit
4	CWA	Clean Water Act
5	CZMA	Coastal Zone Management Act
6	DA	Department of the Army
7	DAEIS	Draft Areawide Environmental Impact Statement
8	DAP	diammonium phosphate
9	dBA	decibels A-weighted
10	DFIRM	Digital Flood Insurance Rate Map
11	DNR	Department of Natural Resources
12	DO	dissolved oxygen
13	DWRM2	District-Wide Regulation Model Version 2
14	EFH	essential fish habitat
15	EIS	environmental impact statement
16	ELAPP	Environmental Lands Acquisition and Protection Program
17	EMP	Environmental Management Plan
18	EO	Executive Order
19	ERDC	Engineer Research and Development Center
20	ERP	Environmental Resource Permit
21	ESA	Endangered Species Act
22	ET	evapotranspiration
23	F.A.C.	Florida Administrative Code
24	FAS	Floridan aquifer system
25	FCMP	Florida Coastal Management Program
26	FDAB	Future Development Area Boundary
27	FDACS	Florida Department of Agriculture and Consumer Services
28	FDEP	Florida Department of Environmental Protection

List of Acronyms

1	FDER	Florida Department of Environmental Regulation
2	FDOH	Florida Department of Health
3	FDOT	Florida Department of Transportation
4	FEMA	Federal Emergency Management Agency
5	FF	Florida Forever
6	FFBOT	Florida Forever Board of Trustees
7	FFWCC	Florida Fish and Wildlife Conservation Commission
8	FGDL	Florida Geographic Data Library
9	FGS	Florida Geological Survey
10	FHM	FIPR Institute Hydrologic Model
11	FIPR Institute	Florida Industrial and Phosphate Research Institute
12	FIRM	flood insurance rate map
13	FLUCCS	Florida Land Use and Cover Classification System
14	FMSF	Florida Master Site File
15	FNAI	Florida Natural Areas Inventory
16	FOB	free on board
17	fpm	feet per minute
18	F.S.	Florida Statutes
19	ft/d	feet per day
20	FY	fiscal year
21	GHG	greenhouse gas
22	GIS	geographic information system
23	gpm	gallons per minute
24	GPS	global positioning system
25	HBMP	Hydrobiological Monitoring Program
26	HCSP	Horse Creek Stewardship Program
27	HEC-RAS	Hydrologic Engineering Center River Analysis System
28	HID	hydrologic impact distance

List of Acronyms

1	HUC	Hydrologic Unit Code
2	IAS	Intermediate aquifer system
3	ICRP	International Commission on Radiological Protection
4	ICU	Intermediate Confining Unit
5	I-4	Interstate 4
6	I-75	Interstate 75
7	IFA	International Fertilizer Industry Association
8	IHN	Integrated Habitat Network
9	IMC	IMC-Agrico Company
10	in/yr	inches per year
11	IWHRS	Integrated Wildlife Habitat Ranking System
12	kWh	kilowatt hour
13	LEDPA	least environmentally damaging practicable alternative
14	LESA	Land Evaluation Site Assessment
15	LIDAR	light detection and ranging
16	m	meter
17	MANPHO	Mandatory Phosphate Program
18	MAP	monoammonium phosphate
19	MARS	Manatee Agricultural Reuse System
20	MCL	maximum contaminant level
21	MFL	minimum flows and levels
22	MG	million gallons
23	mg/L	milligrams per liter
24	mgd	million gallons per day
25	MIA	Most Impacted Area
26	Mosaic	Mosaic Fertilizer, LLC
27	mrem/yr	millirems per year
28	MSHA	Mine Safety and Health Administration

List of Acronyms

1	MSL	mean sea level
2	mt	metric ton or tonne
3	Mt	million metric tons
4	NAAQS	National Ambient Air Quality Standards
5	NAD 1983	North American Datum of 1983
6	NAGPRA	Native American Graves Protection and Repatriation Act
7	NCEE	National Center for Environmental Economics
8	NCRP	National Council on Radiation Protection & Measurement
9	NEP	National Estuary Program
10	NEPA	National Environmental Policy Act
11	NGO	non-governmental organization
12	NHD	National Hydrography Dataset
13	NIR	near infrared
14	NISC	National Invasive Species Council
15	NMFS	National Marine Fisheries Service
16	NNC	numeric nutrient criteria
17	NOA	Notice of Availability
18	NOAA	National Oceanic and Atmospheric Administration
19	NOI	Notice of Intent
20	NORM	naturally occurring radioactive material
21	NO ₂	nitrogen dioxide or nitrite nitrogen
22	NPDES	National Pollutant Discharge Elimination System
23	NPK	nitrogen-phosphorus-potassium
24	NRCS	Natural Resources Conservation Service
25	NRHP	National Register of Historic Places
26	NTB-WUCA	Northern Tampa Bay Water Use Caution Area
27	OFW	Outstanding Florida Waters
28	O ₃	ozone

List of Acronyms

1	pCi/g	picoCuries per gram
2	pCi/L	picoCuries per liter
3	PEIS	programmatic environmental impact statement
4	PM	particulate matter
5	PM10	particulate matter with an aerodynamic diameter less than 10 microns
6	PM2.5	particulate matter with an aerodynamic diameter less than 2.5 microns
7	PMAP	powdered monoammonium phosphate
8	ppm	parts per million
9	ppt	parts per thousand
10	PRCIS	Peace River Cumulative Impacts Study
11	PRG	Peace River Greenway
12	PRMRWSA	Peace River Manasota Regional Water Supply Authority
13	RV	recreational vehicle
14	P ₂ O ₅	phosphorus pentoxide
15	RACEC	Rural Areas of Critical Economic Concern
16	RCRA	Resource Conservation and Recovery Act
17	ROD	Record of Decision
18	ROD/SOF	Record of Decision/Statement of Findings
19	ROMP	Regional Observation and Monitor-well Program
20	SAS	Surficial aquifer system
21	SBEP	Sarasota Bay Estuary Program
22	SCI	Stream Condition Index
23	SFA	Sustainable Fisheries Act
24	SFWMD	South Florida Water Management District
25	SHCA	Strategic Habitat Conservation Area
26	SHPO	State Historic Preservation Office
27	SIP	State Implementation Plan
28	SMCL	Secondary Maximum Contaminant Level

List of Acronyms

1	SOF	Statement of Findings
2	SOP	standard operating procedure
3	SO ₂	sulfur dioxide
4	sq. mi.	square mile
5	SWFWMD	Southwest Florida Water Management District
6	SWIMAL	Saltwater Intrusion Minimum Aquifer Level
7	SWUCA	Southern Water Use Caution Area
8	TAF	Technical Advisory Forum
9	TBNEP	Tampa Bay National Estuary Program
10	TDS	total dissolved solids
11	TENORM	technologically enhanced naturally occurring radioactive material
12	TKN	total Kjeldahl nitrogen
13	TMDL	Total Maximum Daily Load
14	TN	total nitrogen
15	TP	total phosphorus
16	TPH	tons per hour
17	T&E	threatened and endangered
18	UF-BEBR	University of Florida Bureau of Economic and Business Research
19	UF-IFAS	University of Florida – Institute of Food and Agricultural Sciences
20	UMAM	Uniform Mitigation Assessment Method
21	USAC	U.S. Agrichemicals
22	USACE	U.S. Army Corps of Engineers
23	USBM	U.S. Bureau of Mines
24	U.S.C.	United States Code
25	USDA	U.S. Department of Agriculture
26	USEPA	U.S. Environmental Protection Agency
27	USF	University of South Florida
28	USFWS	U.S. Fish and Wildlife Service

List of Acronyms

1	USGS	U.S. Geological Survey
2	UTM	Universal Transverse Mercator
3	WBID	Water Body Identification
4	WHRS	Wildlife Habitat Ranking System
5	WMD	water management district
6	WQC	water quality certification
7	WRAP	Wetland Rapid Assessment Procedure
8	WUCA	Water Use Caution Area
9	WUP	water use permit
10	$\mu\text{S}/\text{cm}$	microSiemens per centimeter
11	$\mu\text{mho}/\text{cm}$	micromhos per centimeter