

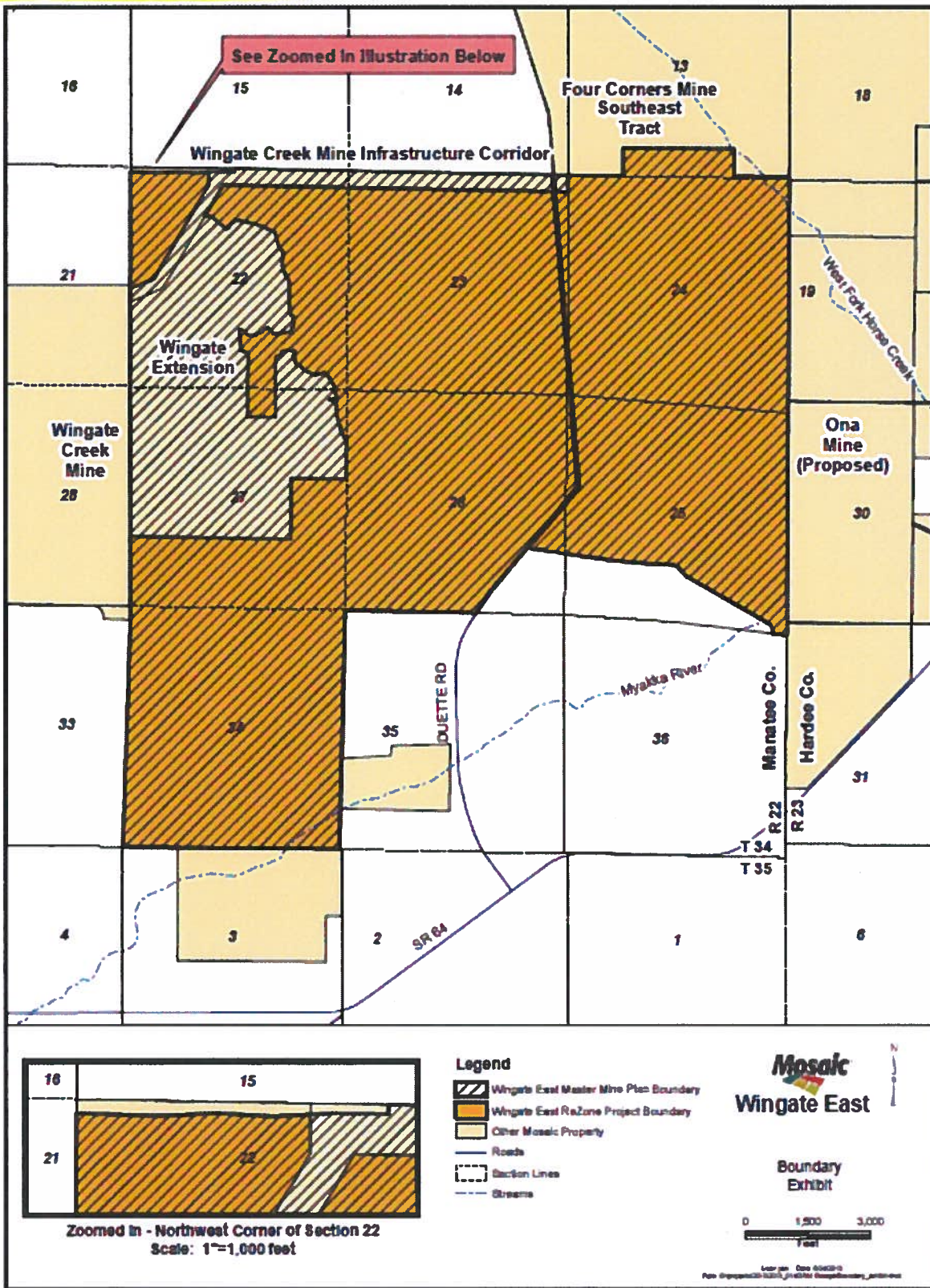
Mosaic Wingate East

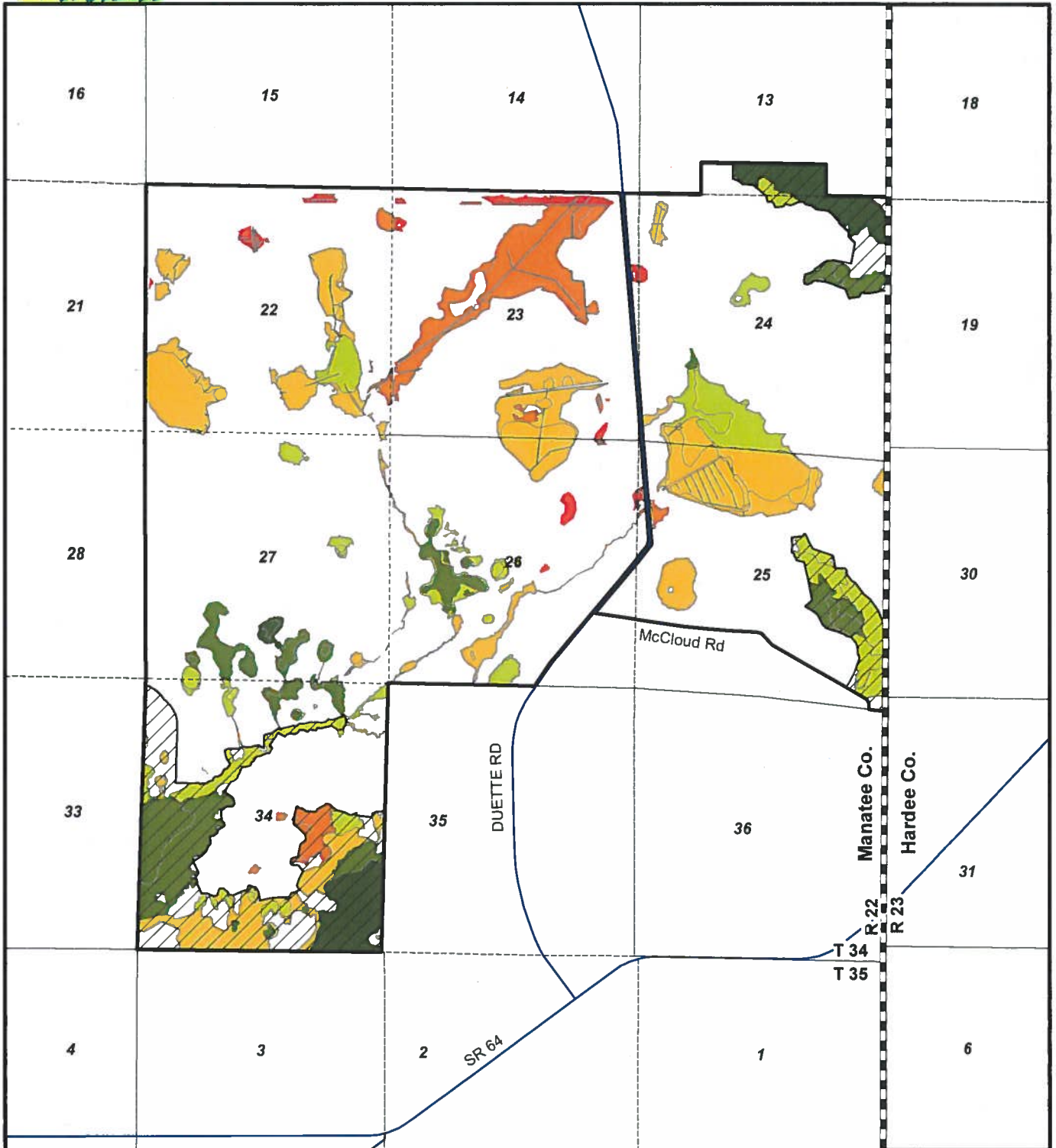
Case Summary Crosswalk to Exhibits

Case Summary Issues	Exhibit	Notes
REQUEST, LOCATIONAL INFORMATION AND LAND USE CHARACTERISTICS (pg. 1)	<i>The following exhibits are attached to Crosswalk for easy reference:</i>	
1. Project limits \pm 3,837 acres inclusive of Wingate Extension (661 ac.) and Wingate Corridor (\pm 102 ac.)	R-17-017, Figure A Boundary Exhibit	
2. Approve impacts to 686 ac. jurisdictional waters including 649 ac. of wetland habitats	Exhibit H; Map 1 Existing UMAM Scores	
3. Use the Wingate Creek Mine Beneficiation Plant and other mine infrastructure elements such as truck routes for shipping and well water withdrawals	Exhibit B, Map H-6 Clay Settling Area Locations	
4. Construct a clay settling area, WE-1	Exhibit B; Map A-3 Setbacks, Map H-6 Clay Settling Area Locations, Table 3-4-A Clay Settling Area Summary	
5. Approve waste clay disposal plan for WE-1 and modify waste clay disposal plan for the use of clay settling areas (FM-1 & FM-2) at the Southeast Tract	Exhibit B; Map H-6 Clay Settling Area Locations, Waste Clay Disposal Schedule in Appendix 3-4-A	
6. Special approval to mine and disturb within the Peace River Watershed Overlay District	Exhibit B; Map C-4 Proposed Mining in Peace River Basin; R-17-017 Condition 26 a.-c.	
7. Amend the Wingate Extension Environmental Monitoring Program	Exhibit C; Map-Exhibit C Environmental Monitoring Map	
8. Modify the Wingate Extension Reclamation Plan to include Wingate East Mine	Exhibit G; Table 24-1, Map H-9 Post Reclamation Land Use	
9. Relocate the Wingate Corridor and continue its use until FM-1 and FM-2 are reclaimed.	Exhibit B; Map H-6 Clay Settling Area Locations; Map A-3i Setbacks Adjacent to Duette Preserve	

10. Setback reduction from 200' to 140' along both sides of Duette Road	Exhibit B; Map A-3 Setbacks; R-17-017 Condition 2.b. & Condition 20.e.	
11. Setback reduction from offsite wetland on Duette Park	Exhibit B; Map A-3i Setbacks Adjacent to Duette Preserve; R-17-017 Condition 2.a and Condition 20.d.	
12. Setback reduction along Duette Park from 500' to 100' for slurry pipes and pumps.	Exhibit B; Map A-3i; R-17-017 Condition 20.c.	
Case Summary Issues	Exhibit	Notes
MITIGATING FACTORS (pg. 4-5)	<i>The following exhibits are attached to Crosswalk for easy reference:</i>	
General Mining - C.1 [isolator/deflector berm; slurry pipelines adjacent to Lake Manatee Watershed]	Exhibit B, Map A-3i Setbacks Adjacent to Duette Preserve; Exhibit B, Appendix 10-C	
General Mining - C.2 [residential setbacks]	Exhibit B, Map A-3 Setbacks	
General Mining - C.3 [use of CSA FM-1 and FM-2 Southeast Tract]	Exhibit B, Map H-6 Clay Settling Area Locations	
Special Approval - C.4 [mining in the Peace River Watershed Overlay District]	Exhibit B; Map C-4 Proposed Mining in Peace River Basin; R-17-017 Condition 26 a.-c.	
Jurisdictional Waters - C-5 [wetland impacts]	Exhibit H; Map 1 Existing UMAM Scores, Figure 1A Location Map	
Jurisdictional Waters - C.6 [impacts to linear stream channels]	Exhibit I; Stream Order Map	
Listed Species - C.7 [listed species and Wildlife Habitat Management Plan]	Exhibit G; Listed Species Map	
Additional Items - C.8 [Texaco Tract Wetland Contract]	Ord. 08-32, Exhibit G Description of Encumbered Property	
Additional Items - C.9 [Stream 100 impacts to 25 yr floodplain]	Exhibit I; Figure 8; R-17-017 Condition 25 a.-d.	

Figure A- Boundary Exhibit





Legend

- County Lines
- Section Lines
- Roads
- Wingate East Boundary
- Avoided Areas

Current UMAM Summary Scores

- 0.20 - 0.29
- 0.30 - 0.39
- 0.40 - 0.49
- 0.50 - 0.59
- 0.60 - 0.69
- 0.70 - 0.79
- 0.80 - 0.89

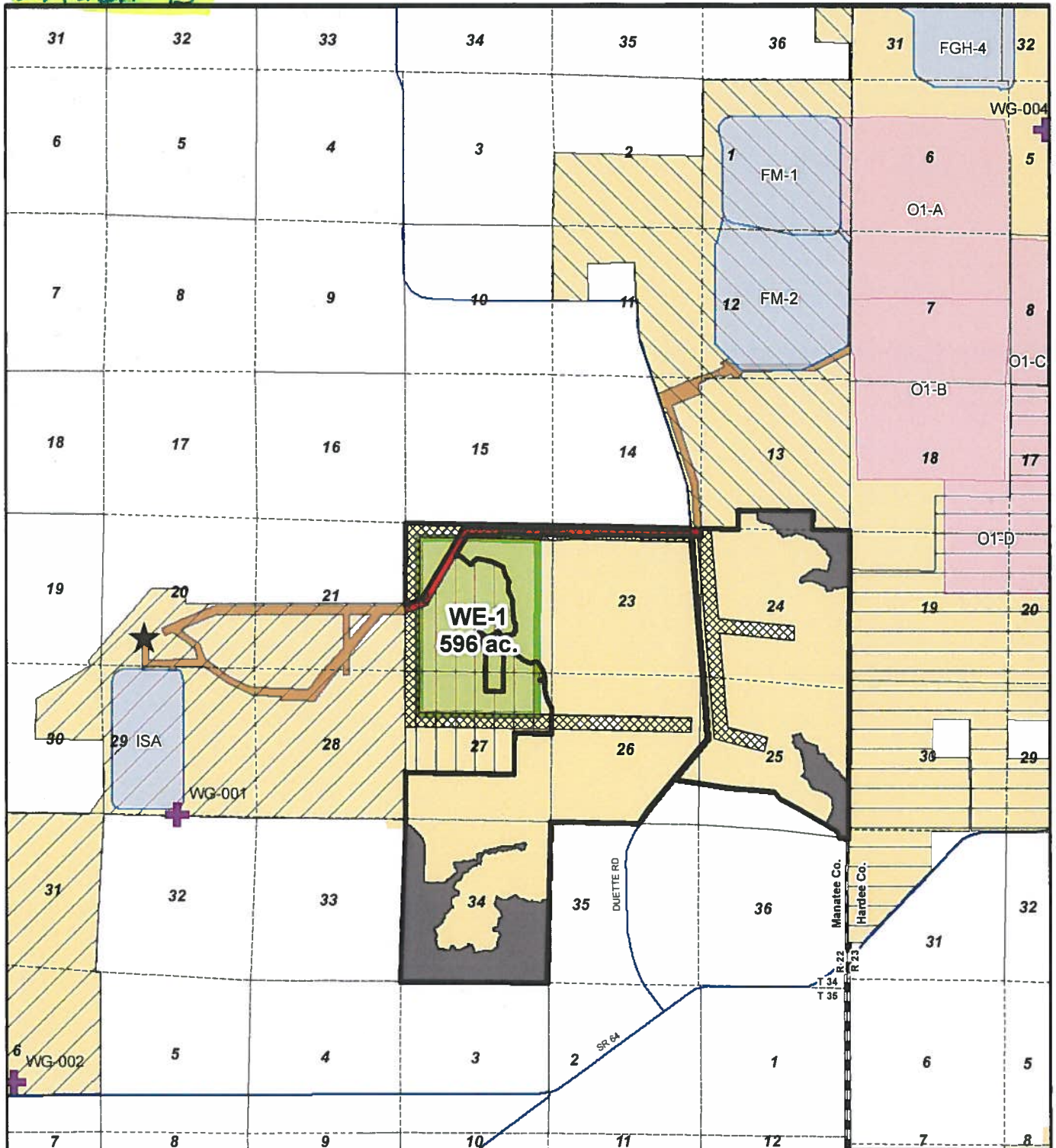


Wingate East
Manatee County
Master Mine Plan

Map 1
Existing UMAM Scores



Exhibit B



Legend

- Wingate East Boundary
- Southeast Tract Boundary (SAJ-1992-01545)
- Wingate Creek Mine Boundary
- Wingate Extension Boundary (SAJ-2011-00106)
- Wingate to Southeast Tract Corridor (SAJ-2007-6503)
- Ona Boundary (Proposed SAJ-2011-01869)
- Other Mosaic Property
- Section Lines
- County Lines
- Roads
- Wingate Plant (Existing)
- Existing NPDES Outfalls
- Existing Corridors
- Corridors (Proposed)
- Wingate East Clay Settling Areas (Proposed)
- Clay Settling Areas (Active)
- Ona Clay Settling Areas (Proposed)
- Avoided Area / Native Soils



Wingate East
Manatee County
Master Mine Plan
 Map H-6
Clay Settling Area
Locations

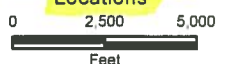
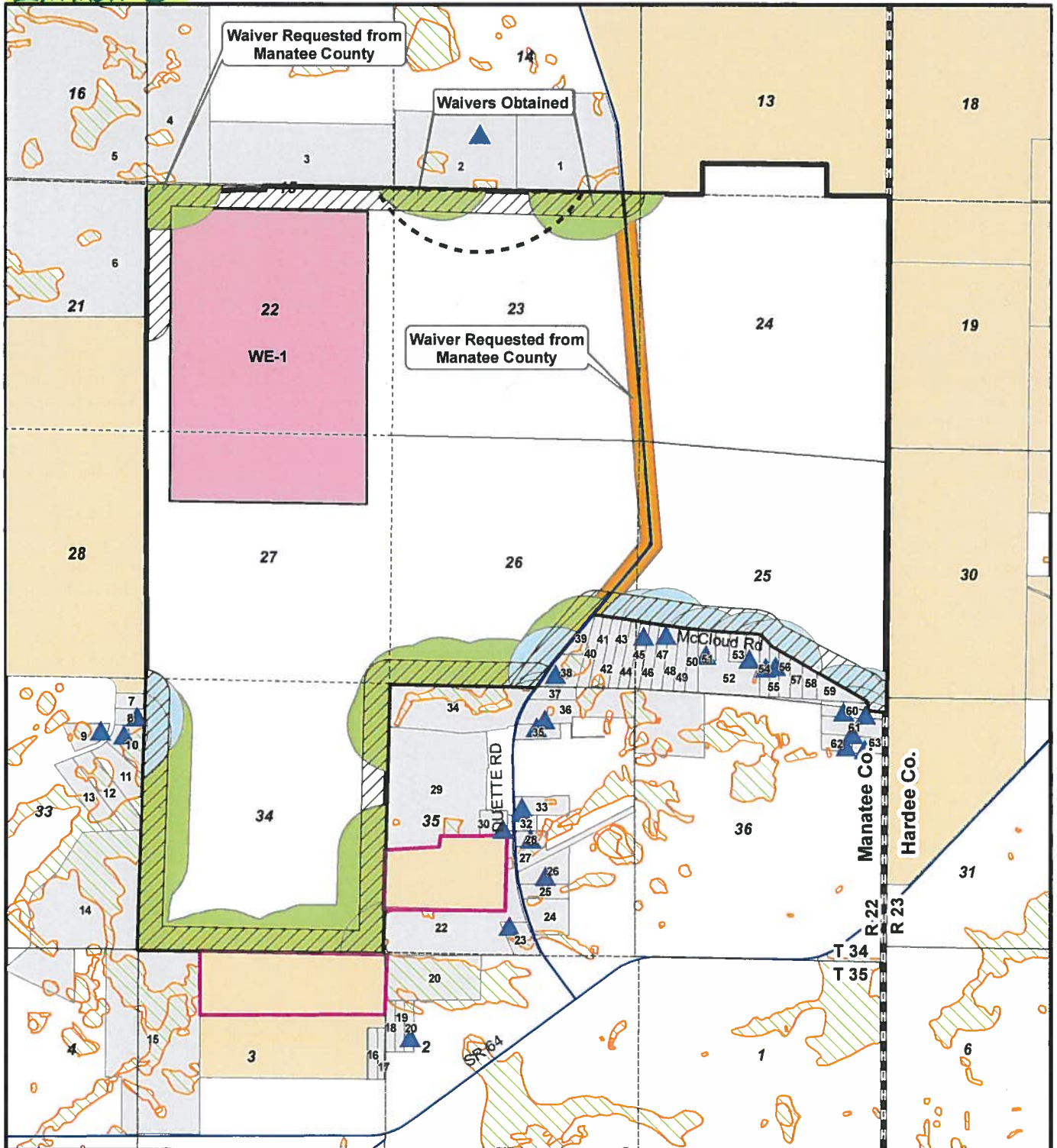


Exhibit B



Legend

- County Lines
- Section Lines
- Roads
- Wingate East Boundary
- Off Site Mitigation Project Parcels
- WE-1 Clay Settling Area
- Habitable Structures within 1000'
- SWFWMD Offsite Wetlands
- Adjacent Parcels
- Mosaic Property
- 200' ROW Setback
- 500' Adjacent Property Setback
- 1000' Habitable Structure Setback
- 1000' Wetland Setback
- 2500' Habitable Structure Setback for CSA

Setback	Proposed Activity
500' from Adjacent Property to Duette	BMP / Corridor Area - 100' from boundary - including: ditches, berms, roads, pumps, deflection berms, pipelines
1000' from Wetland	Clay Settling Area in addition to the BMP / Corridor Activities proposed in the 500' Setback
200' from Duette Right-of-Way	BMP / Corridor Area adjacent to ROW; Overburden Stripping (i.e. mine cut) 140' from ROW



Wingate East Manatee County Master Mine Plan Map A-3 Setbacks





Exhibit B

Table 3-4-A

Clay Settling Area Summary

Characteristics	Clay Settling Areas		
	FM-1*	FM-2*	WE-1**
Total Footprint (Acres)	384	463	596
% Within the Wingate East Mine Boundary	0%	0%	33%
Effective Area (Acres)	275	378	436
Dam Height (Feet)	40	40	50
Approximate Dam Elevation (feet, NGVD)	164	164	162
Effective Depth (Feet)	64.6	71.5	124.2
Approximate Natural Ground Elevation (Ft.)	NA	124	112
Approximate Final Height Above Grade (Ft.)	29.7	28.1	25.0
Effective Volume (Acre-Feet)	17,760	27,036	54,122

Clay Disposal by Mine Area:	Wingate East Ponds	Manson Jenkins Ponds	Total
Dry Clay Tons (million)	8.6	17.0	25.5
% of total (clay)	34%	67%	100%
CSA Footprint % of Total Wingate East Mine Boundary	5%	NA	NA

* Located on the Manson Jenkins (Fort Green) Mine

** Portions of proposed WE pond are within Wingate Extension Mine boundary

Received July 20, 2015
FDEP-MMP, Tallahassee

Exhibit B - Appendix 3-4-A

Settling Area	Effective Area (Ac)	Maximum Depth (Feet)	Calendar Year of Filing																												Ultimate Storage (Millions)	Current Dry Clay Ton x10 ⁶ Through Mar 2014	Dry Clay Tons x10 ⁶ Between Apr 2014 & Dec 2037	Settled Clay Thickness 10 years after the end of disposal (Feet)	Settled Height Above Grade 10 years after the end of disposal (Feet)								
			NOV 08-JUN 10	JUN 10-MAY 11	JUN 11-MAY 12	JUN 12-MAY 13	JUN 13-MAR 14	APR 14-DEC 14	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036						2037							
FM-1	275	64.6	11.6	29.5	38.1	44.5	45.5	45.0	42.6	40.8	39.2	38.1	37.1	36.1	35.5	34.7	34.2	33.7	33.2	32.7	36.5	41.6	47.1	51.0	57.0	62.8	64.6			64.6	32.4%	9.831	5.041	4.790	59.3	29.7							
FM-2	378	71.5	0.728†	1.201†	0.840†	1.630†	1.213	1.011	19.0	25.5	29.4	38.5	47.5	54.2	58.6	60.2	64.6	67.0	69.1	71.5	0.600	0.716	0.692	0.614	0.812	0.784	0.312			0.261	30.7%	13.986	0.560	13.426	64.6	28.1							
WE-1	436	124.2					0.560	0.882	1.275	1.031	0.799	1.386	1.317	1.117	0.777	0.491	0.779	0.554	0.566	0.562	1/22	3.0	5.2	8.0	10.0	12.5	13.7	17.0	19.5	22.4	26.0	29.5	43.1	53.0	58.6	90.2	124.2	32.8%	22.129	0.000	22.129	104.2	25.0
Tons of Dry Clay Produced x 10 ⁶			0.728	1.201	0.840	1.630	1.203	0.882	1.275	1.031	0.799	1.386	1.317	1.117	0.777	0.983	1.279	1.109	1.133	1.090	0.947	1.431	1.383	1.228	1.623	1.568	2.947	2.698	1.965	5.468	4.910			45.946	5.601	40.345							

GENERAL NOTES:

† Historic Tonnage Estimated by Ardaman Based on the Results of Field Sampling and Laboratory Testing

DREDGED MATERIAL DISPOSAL NOTES:

(0.729) Amount of Ona Mine Clay Deposited in Settling Area WE-1
 (1.200) Amount of ISA Clay Deposited in Settling Area WE-1



Waste Clay Disposal Schedule

Ardaman & Associates, Inc.
 Geotechnical, Environmental and Materials Consultants

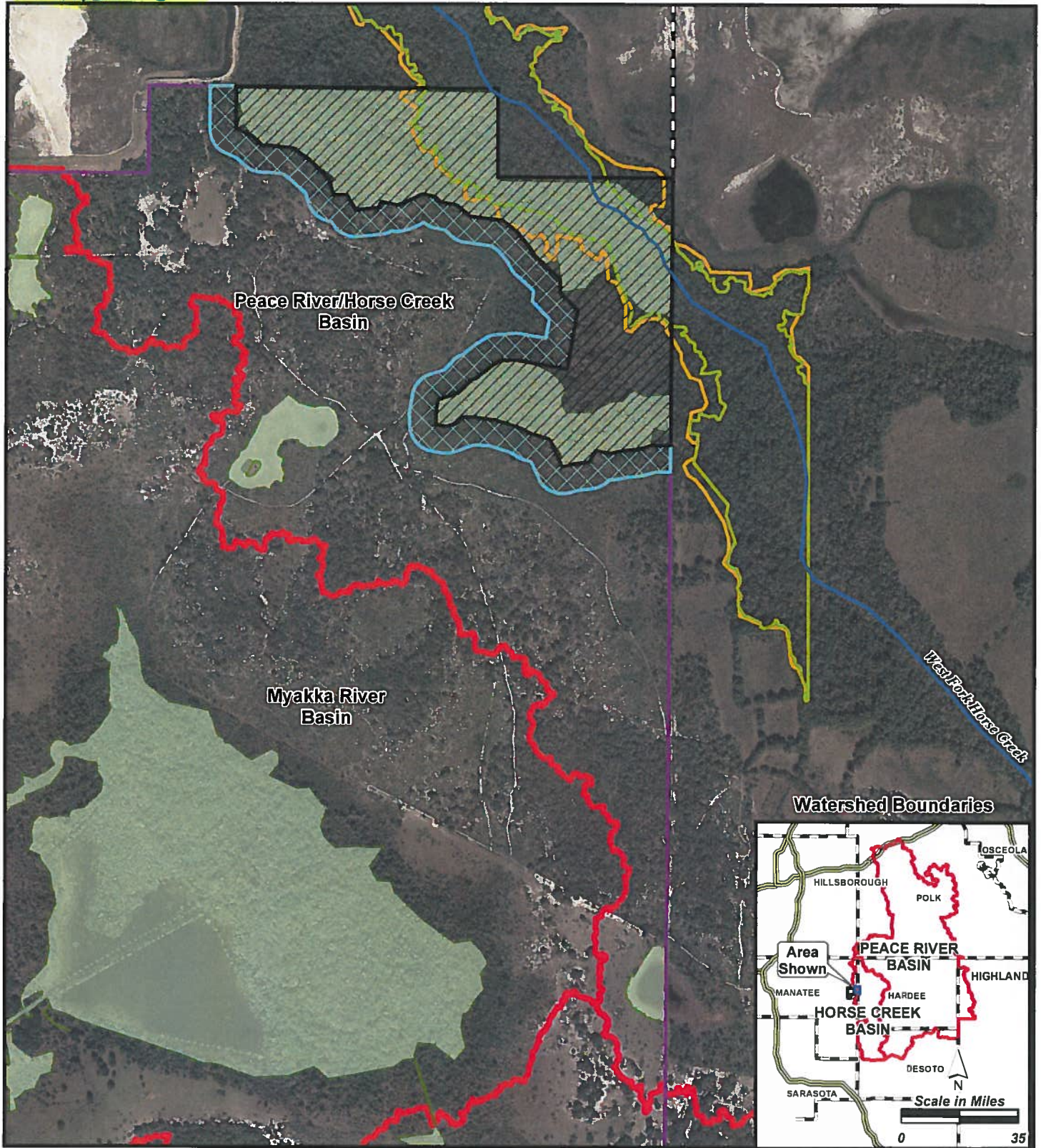
LIFE OF MINE WASTE DISPOSAL PLAN

Mosaic
 MOSAIC FERTILIZER, L.L.C.
 WINGATE EAST MINE
 MANATEE COUNTY, FLORIDA

DRAWN BY: KL CHECKED BY: KL DATE: 11/18/14

FILE NO: 14-13-0098 APPROVED BY: *[Signature]* FIGURE: 6

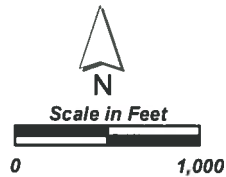
Exhibit B



Legend

- Avoided Area
- BMP Area (~200 feet wide)
- Mining Area
- Wingate East Boundary
- Jurisdictional Areas
- 25 Year Floodplain
- 100 Year Floodplain
- Watershed Basins (Ardaman)
- Streams and Waterways (SWFWMD)
- County Lines

Note: Proposed Ditch in BMP Area will be located a minimum of 50 feet from the avoided wetlands in the Peace River Basin.



Map C-4 Proposed Mining in Peace River Basin

24. Mine Cuts: In order to maintain groundwater levels and base flows to No Mine Areas* and/or unmined wetlands and establish appropriate hydroperiods for reclaimed wetlands, the Developer* shall, as specified in the Operating Permit, align mine cuts to facilitate flow where practicable, cut down the overburden rows, or provide a sufficient layer of sand tailings (minimum 5 feet) overtopping the overburden rows, as determined by the use of MIKE-SHE or other mutually acceptable integrated surface and groundwater model. Details regarding the mining techniques to be utilized and demonstration of compliance will be specified in the Operating Permit.

25. Floodplains:

- a. No mining activities shall occur below the 25-Year Floodplain* elevation of Stream 100, except for a temporary stream crossing, unless the applicant provides site-specific mitigating measures for water quantity and water quality, such as an alternate flow way or other hydrologic supplementation, during Operating Permit application.
- b. No mining activities shall occur in wetlands functionally integrated with the 25-Year Floodplain* of Stream 100, in Sections 27 and 34, Range 22E, Township 34S, until such time as it has been demonstrated that wetlands on the Altman Tract, Parcel No. 4* have been reclaimed to the same quality of wetlands as agreed in the Texaco Tract Wetland Contract, Section 6.E.(3) of Ordinance 08-32 and in accordance with the objective criteria and standards found in the Ordinance 04-39.
- c. Pre-mining and post-reclamation Habitat Assessment of Stream 100 shall be performed to verify no detrimental impacts to the floodplain or stream. Pre-mining Habitat Assessment shall be conducted in accordance with appropriate FDEP standard operating procedures and submitted to the County together with Operating Permit application. Habitat Assessments shall be performed annually and submitted to the County together with the annual progress report. Post-reclamation Habitat Assessment shall be performed once reclamation is complete and the floodplain system has been reconnected to downstream waters.
- d. Hydrologic Conditions: There shall be no adverse hydroperiod alteration in the 25-year Floodplain of Stream 100 or the 100-year Floodplain of the upper Myakka River or the 100-year Floodplain of the Peace River. Natural hydroperiods, normal pool elevations, and seasonal water fluctuations will be established, substantially maintained and monitored as set forth in the Environmental Monitoring Program (Exhibit C).

26. Peace River Watershed Overlay District:

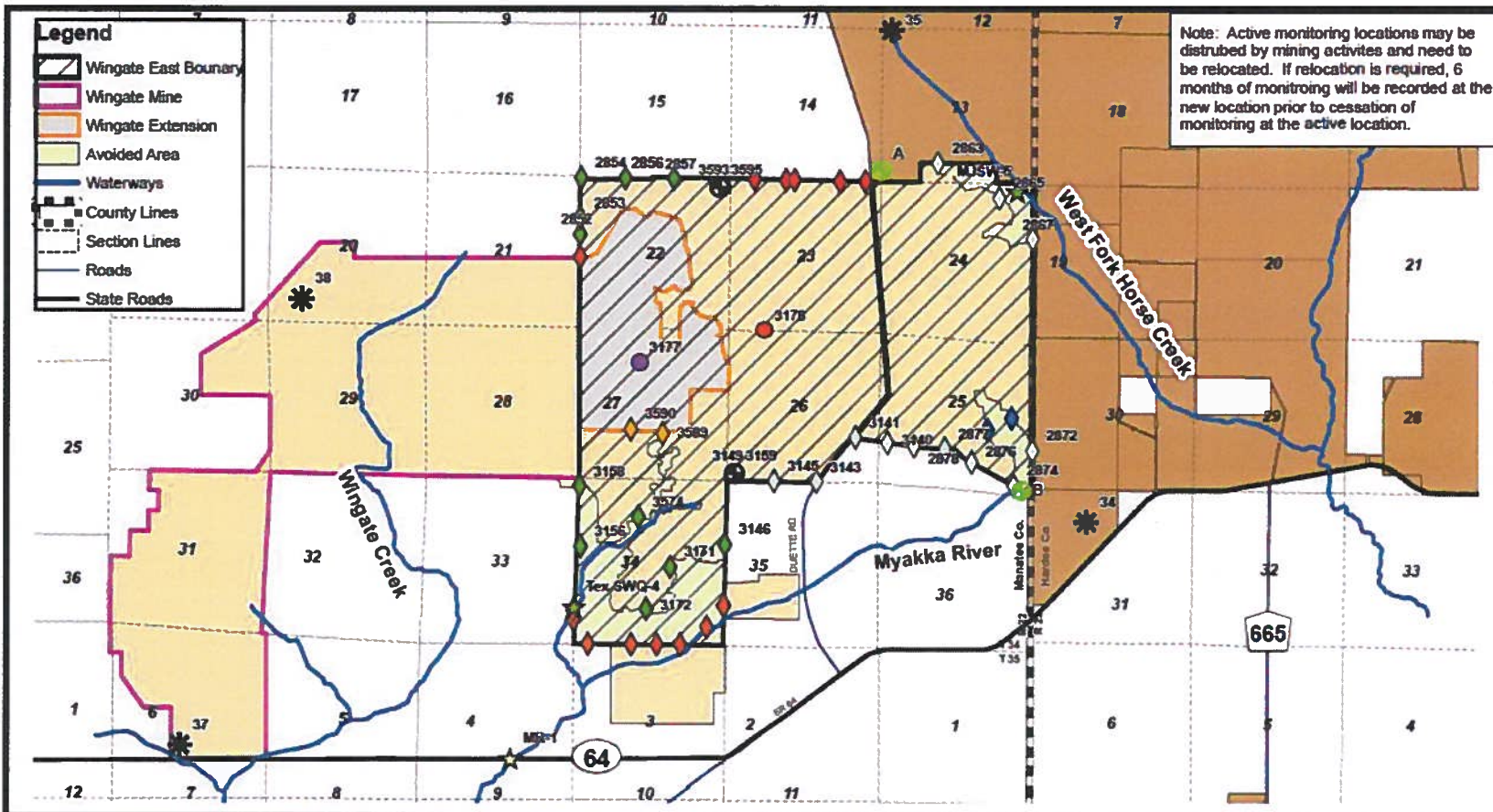
- a. Mining activities within the Peace River Watershed Overlay District shall employ BMPs and Best Possible Technologies (BPTs), as described in Exhibit D.
- b. Within the Peace River Watershed Overlay District, the reclamation schedule will be accelerated by placing the sand tailing fill after each area is mined, immediately followed by final grading and revegetation, so that the total time each [mining]

block is disturbed from start of mining to being effectively reclaimed is about three years.

- c. In order to provide the maximum possible protection for the public health, safety and welfare and minimize to the greatest degree possible any adverse impacts to the Peace River Watershed Overlay District, the applicant shall use all available innovative reclamation techniques (topsoiling, muck placement, direct seeding, etc.) for all lands in Sections 13, 24 and 25, Range 22E, Township 34S within the Peace River watershed.

Surface Waters:

27. Water Quality Standards: Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The Developer* shall implement BMPs for erosion and pollution control to prevent violation of state water quality standards.
28. Water Quantity Protection: Appropriate water levels and normal wetland hydroperiods, considering normal seasonal fluctuations and other climatic conditions that may affect the natural system, will be maintained in adjacent unmined wetlands and No Mine Areas* throughout site preparation, during mining operations, and reclamation to ensure that adjacent preserved and/or unmined wetlands and floodplains are not adversely impacted by mining operations. A comprehensive groundwater and surface water level and flow monitoring shall be performed for the life of the mine (through reclamation until release), in accordance with the Environmental Monitoring Program (Exhibit C) and the Integrated Water Use Permit No. 2011400.25 and/or ERP No. 0095520-025, and subsequent permit modifications.
 - a. Prior to any clearing or mining operations, areas to be disturbed shall be severed from adjacent wetlands and waters of the state. This severance includes the construction of an isolation berm and ditch adjacent to, but upland of, the No Mine Areas* and/or undisturbed wetlands unless otherwise described and detailed in Condition C.18, above.
 - b. When adjacent to No Mine Areas*, other surface waters, or offsite private property, monitoring wells and staff gauges shall be installed and water levels shall be monitored as specified in Exhibit C.
 - c. During the dragline mining operations, water table maintenance ditches adjacent to No Mine Areas* shall be charged with water to maintain base flows and/or minimize stress to the vegetation in the No Mine Areas*. Staff gauges will be installed in the water table maintenance ditches and water levels in the water table maintenance ditches shall be maintained at levels sufficient to support the normal seasonal water level fluctuations in the wetlands as determined from the baseline monitoring. Water levels in the water table maintenance ditches shall be monitored daily as specified in Exhibit C.
 - d. Ditch, berm, and retention systems shall be designed and constructed as detailed in the Stormwater Ditch, Berm and Retention System Design Policy (Appendix 3-6-A) prior to initiation of mining operations to manage or prevent discharge from a



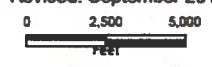
Note: Active monitoring locations may be disturbed by mining activities and need to be relocated. If relocation is required, 6 months of monitoring will be recorded at the new location prior to cessation of monitoring at the active location.

Monitoring Legend

- ◆ Active Piezometer - To Remain Per Encumbrance
- ◆ Proposed Piezometer
- Active Monitoring Well
- To Be Retired
- Retired
- Proposed Monitoring Well Location (To be Field Located)
- ◆ Proposed Piezometer - SWFWMD WUP Network (Shown for Reference)
- ★ Surface Water Monitoring Station - Manatee County
- ★ Surface Water Monitoring Station - FDEP ERP Location - (Shown for Reference)
- ◇ SWFWMD WUP Network - Active (Shown for Reference)
- ◇ SWFWMD WUP Network - Proposed Cease Monitoring (Shown for Reference)
- ✱ Rain Gauges



Wingate East
Mosaic Fertilizer, LLC
Exhibit F
Environmental Monitoring Map
Revised: September 2016



1 in = 5,000 ft

User Jan Date: 9/9/2016
Path: O:\projects\2019\2019_1014\RAW Smass\Figure_F_Env_Monitoring.mxd

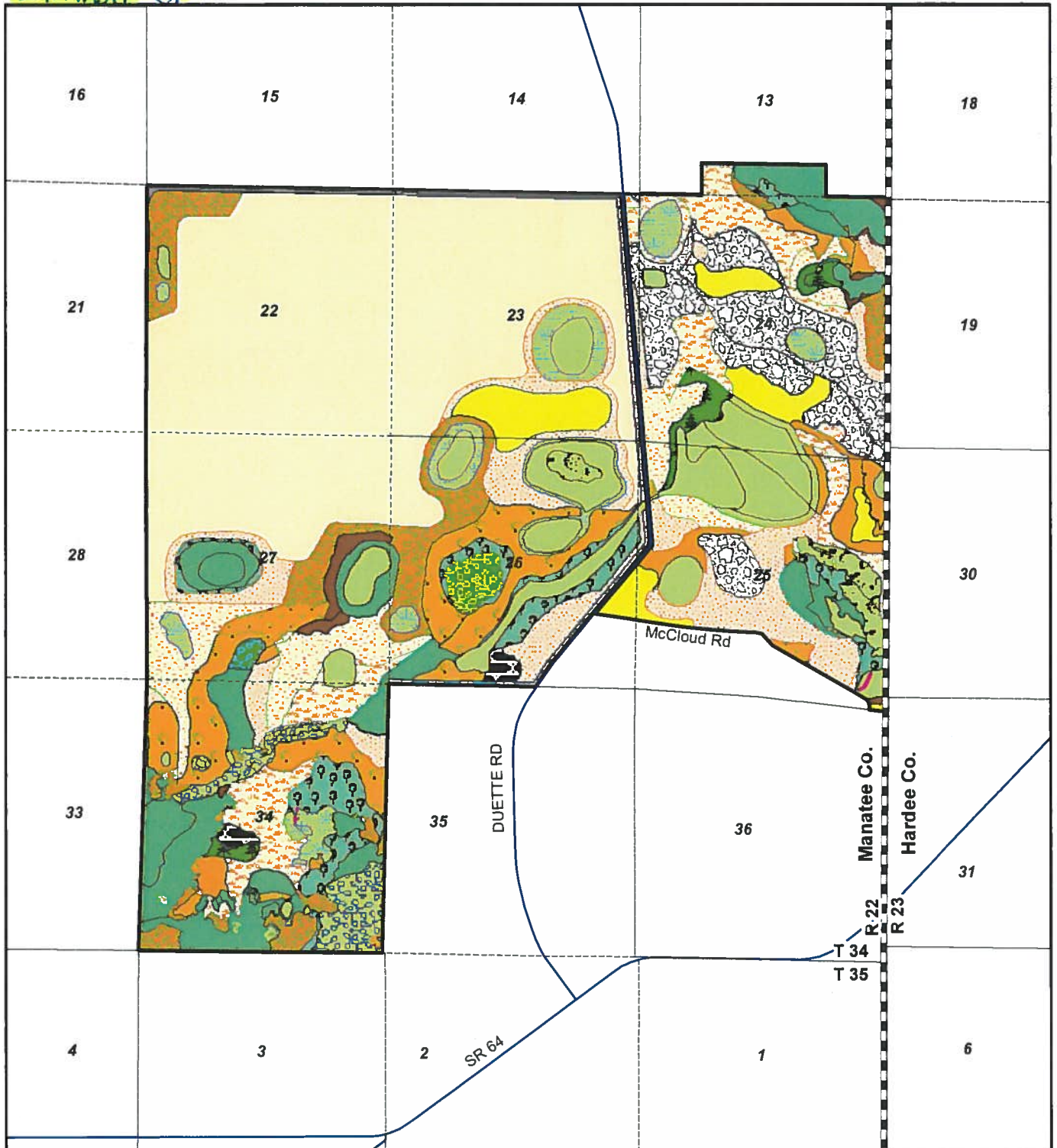
Exhibit C

**Table 24-1
Wingate East Vegetative Cover**

FLUCFCS Code	Description	Related Manatee County Reclamation Manual Plant Communities	Current Acres	Post-Reclamation Acres	Change
211	Improved Pasture	Pastureland	1196.3	1,285.3	89.0
212	Unimproved Pasture	Pastureland	239.3	0.0	(-239.3)
213	Woodland Pasture	Pastureland	45.5	0.0	(-45.5)
310	Dry Prairie	Dry Prairie	65.6	73.0	7.4
321	Palmetto Prairie	Dry Prairie	263.7	250.6	(-13.1)
329	Other Shrubs and Brush	Shrub and Brushland	163.7	200.6	36.9
330	Mixed Rangeland	Mixed Rangeland	321.0	330.2	9.2
411	Pine Flatwood	Pine Flatwoods	220.8	237.8	17.0
419	Other Pines	Pine Flatwoods	17.6	15.9	(-1.7)
421	Xeric Oak	Upland Hardwood Forest	282.9	287.1	4.2
425	Temperate Hardwood	Upland Hardwood Forest	25.7	30.8	5.1
427	Live Oak	Upland Hardwood Forest	30.2	34.4	4.2
432	Sand Live Oak	Upland Hardwood Forest	127.9	135.7	7.8
434	Hardwood-Conifer Mixed	Hardwood-Conifer Mixed	207.2	219.3	12.1
513	Wetland Cut Ditch	Streams and Waterways	14.2	0.2	(-14.0)
514	Upland Cut Ditch	Streams and Waterways	17.8	0.0	(-17.8)
534	Pond	Lakes and Reservoirs	4.5	0.1	(-4.4)
611	Bay Swamp	Wetland Hardwood Forests	20.4	25.9	5.5
613	Gum Swamp	Wetland Hardwood Forests	6.0	8.3	2.3
615	Stream and Lake Swamp	Wetland Hardwood Forests	72.3	78.7	6.4
616	Inland Ponds and Sloughs	Wetland Hardwood Forests	1.8	1.8	0.0
617	Mixed Wetland Hardwoods	Wetland Hardwood Forests	316.3	364.1	47.8
620	Wetland Coniferous	Wetland Hardwood Forests	41.9	5.0	(-36.9)
630	Wetland Forested Mixed	Wetland Forested Mixed	119.1	181.2	62.1
641	Freshwater Marsh	Freshwater Marsh	289.6	335.7	46.1
643	Wet Prairie	Wet Prairie	96.2	132.4	36.2
647	Shrubby Wetland	Wet Prairie	49.6	47.3	(-2.3)
648	Wet Pasture	Wet Prairie	26.5	0.0	(-26.5)
649	Wet Palmetto Prairie	Wet Prairie	1.8	2.3	0.5
743	Spoil Area		3.4	0.0	(-3.4)
814	Road		45.4	14.5	(-30.9)
832	Utility Corridor		7.4	43.3	35.9
Total*			4341.3	4,341.3	

Note: 1. Displayed numbers have been rounded to 1 decimal place.

2. If the value shows "0.0" then the value is less than 0.05 acres, and if "0.1", it is equal to or more than 0.05 acres



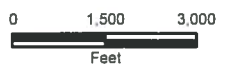
Legend

- | | | | |
|----------------------------------|------------------------------|---------------------------------|---|
| County Lines | 329 - Other Shrubs and Brush | 434 - Hardwood - Conifer Mixed | 620 - Wetland Coniferous Forests |
| Section Lines | 330 - Mixed Rangeland | 513 - Ditched Wetlands | 630 - Wetland Forested Mixed |
| Roads | 411 - Pine Flatwoods | 534 - Res < 10 ac (cattle Pond) | 641 - Fresh Water Marshes |
| Wingate East Boundary | 419 - Other Pines | 611 - Bay Swamps | 643 - Wet Prairies |
| Post Reclamation Land Use | 421 - Xeric Oaks | 613 - Gum Swamps | 647 - Shrubby Wetland |
| 211 - Improved Pastures | 425 - Temperate Hardwood | 615 - Streams and Lake Swamps | 649 - Wet Palmetto Prairie |
| 310 - Dry Prairie | 427 - Live Oak | 616 - Inland Ponds and Sloughs | 814 - Roads |
| 321 - Palmetto Prairies | 432 - Sand Live Oak | 617 - Mixed Wetland Hardwoods | 832 - Electrical Power Transmission Lines |



**Wingate East
Manatee County
Master Mine Plan**

**Map H-9
Post Reclamation Land Use**



Setback	Proposed Activity
500' from Adjacent Property to Duette	BMP / Corridor Area - 100' from boundary - including: ditches, berms, roads, pumps, deflection berms, pipelines
1000' from Wetland	Clay Settling Area in addition to the BMP / Corridor Activities proposed in the 500' Setback

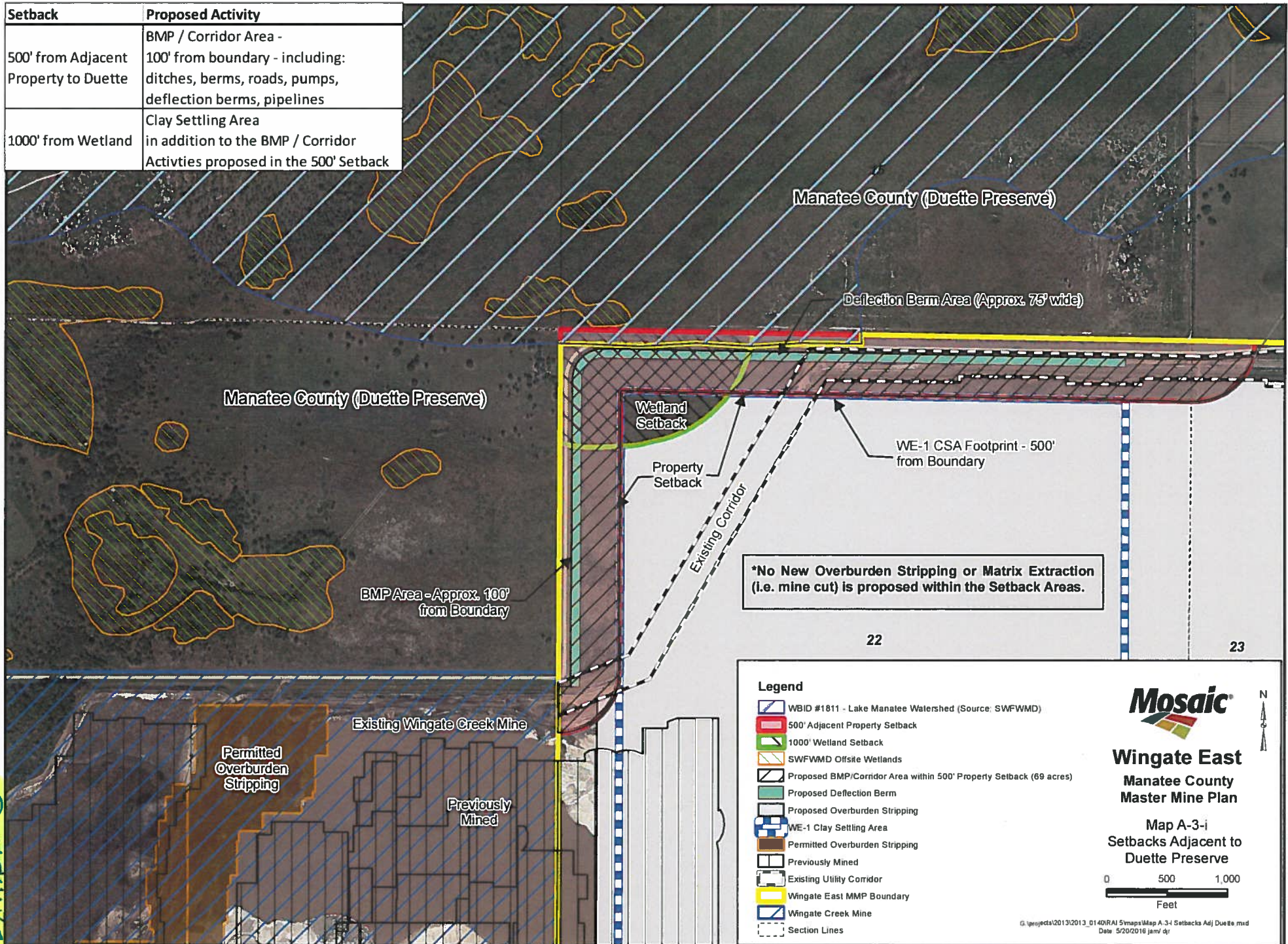
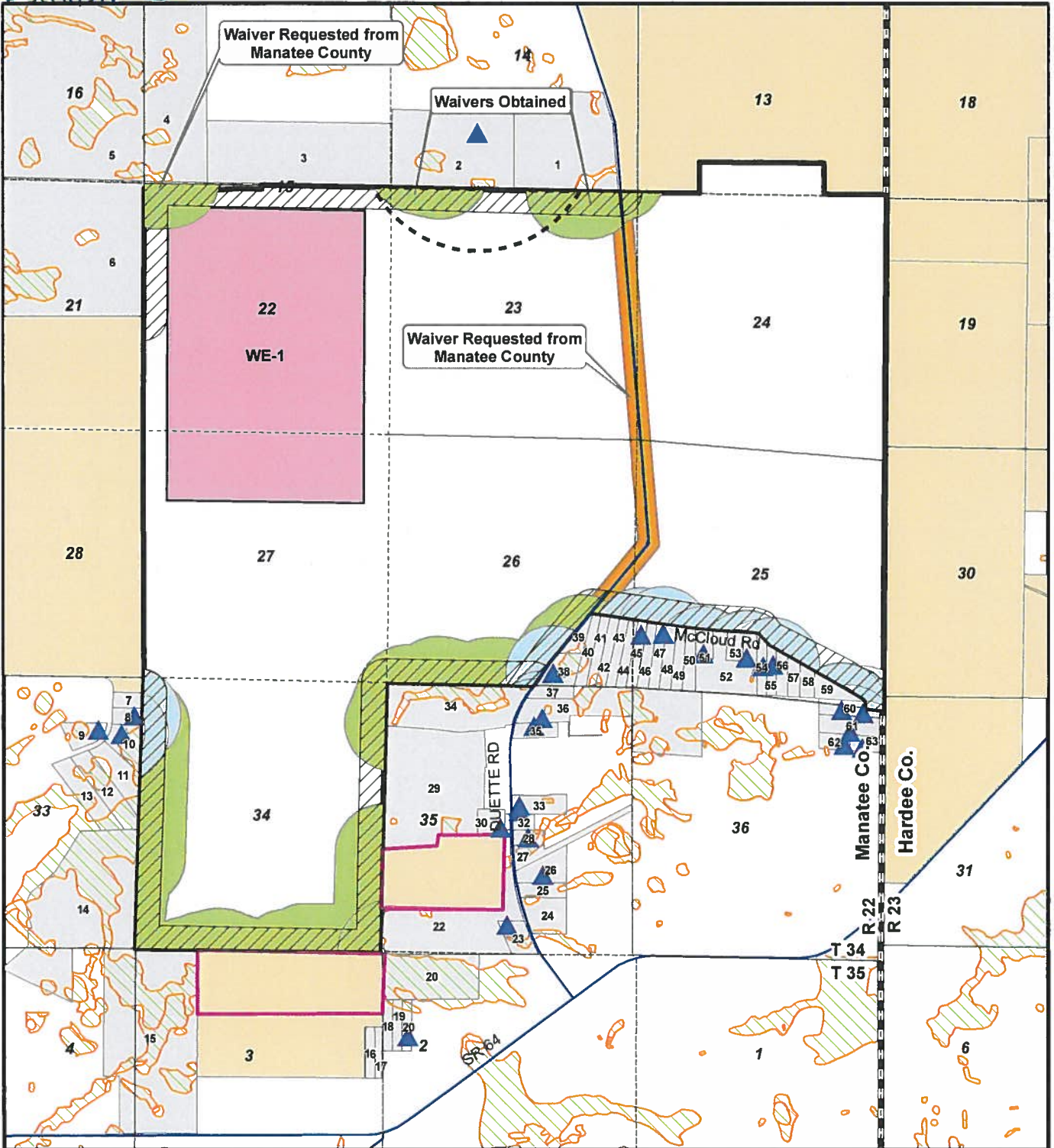


Exhibit B

Exhibit B



Legend

- County Lines
- Section Lines
- Roads
- Wingate East Boundary
- Off Site Mitigation Project Parcels
- WE-1 Clay Settling Area
- Habitable Structures within 1000'
- SWFWMD Offsite Wetlands
- Adjacent Parcels
- Mosaic Property
- 200' ROW Setback
- 500' Adjacent Property Setback
- 1000' Habitable Structure Setback
- 1000' Wetland Setback
- 2500' Habitable Structure Setback for CSA

Setback	Proposed Activity
500' from Adjacent Property to Duette	BMP / Corridor Area - 100' from boundary - including: ditches, berms, roads, pumps, deflection berms, pipelines
1000' from Wetland	Clay Settling Area in addition to the BMP / Corridor Activities proposed in the 500' Setback
200' from Duette Right-of-Way	BMP / Corridor Area adjacent to ROW; Overburden Stripping (i.e. mine cut) 140' from ROW



Wingate East
Manatee County
Master Mine Plan
Map A-3
Setbacks



SECTION C. MASTER MINING PLAN CONDITIONS OF APPROVAL.

General Conditions

1. **Project Terms:** The Wingate East Mine* is approved for mining and reclamation, as conditioned and limited herein as follows and detailed in Exhibit B, Mining Plan and Exhibit G, Reclamation Plan. A recompiled Master Mining Plan shall be submitted within three months after the adoption of the Master Mining Plan Resolution, compiling any changes directed by the Board or other agency including detailed maps, updated tables, revised BPT* requirements, and other materials that are required by Section IV.A and Section V of Ordinance 04-39* and submit three (3) copies of the said documentation to the Director*, in accordance with item 5, below.

Wingate East Parcel	Total Area	Mined/Disturbed	Not Mined/Disturbed
Overall Acreage	4,341 acres	3,837 acres	106 acres (uplands only)
Pre-mining wetlands	1,041 acres	649 acres*	392 acres
Post-mining wetlands	1,182 acres	Wetland mitigation 790 acres	Mitigation + preservation = 1,182 acres

*Includes 62 acres of wetland impacts previously approved in Resolution R-08-009, Southeast Tract Mine and Resolution R-12-01, Wingate Extension.

2. **Mining and Reclamation Schedule:** It is expressly recognized that the mining blocks, rates and schedules provided in the application for the Master Mining Plan are estimates based upon the average rate anticipated. Accordingly, mining blocks and rates may vary depending upon market conditions. However, reclamation and revegetation shall proceed immediately after mining activities cease and in no case shall exceed the schedules for reclamation outlined in Table 35-5. Actual mining and reclamation acreages will be documented in the annual reports submitted to the Director. Refer to Exhibit B for information on mining sequences and Exhibit G for information on reclamation sequences, post-reclamation land use and topography.
 - a. No overburden removal or matrix extraction will occur within 500 feet of Duette Park or within 1000 feet of wetlands contained on Duette Park.
 - b. Mining adjacent to Duette Road shall proceed as depicted on Map H-3 and Figure 5-B and detailed in Mine-Cut Highwall Slope and Crest Stability Analyses Duette Road Setback Waiver Request (see Exhibit F). Backfilling of lands on one side of the roadway, to the prescribed setback distance of 200 feet, shall be completed before mining and dewatering may occur on the other side.
 - c. No Mine Areas* comprising uplands, wetlands, and floodplains will provide refuge for fauna displaced by mining operations and will provide a source for faunal and vegetative recolonization.

3. **Compliance with Other Permits and Approvals:** All mining operations shall be conducted in strict compliance with Ordinance 04-39*, the approved Master Mining and Reclamation Plan for the Wingate East Mine*. Developer* shall obtain all the necessary construction and operation permits and approvals required by, and shall fully comply, to

mining setbacks, however, no mining disturbance and no part of the BMP* (perimeter) ditch and berm system may be located in these areas if vegetated with native plant species, except where post-reclamation wetlands are designed to be contiguous with existing wetlands or where post-reclamation stream connections occur. In locations where exotic vegetation is prevalent, the BMP* protection berm may be located in the Buffer Zone*.

- c. During Operating Permit application(s), the applicant shall provide detailed BMP* plans, including Buffer Zones* and areas of wetland and stream connections.
19. Hours of Operations: Hours for operations of the mine are typically 24 hours per day, 7 days per week. Mosaic agrees to abate noise from dredging operations by not using horns for communications on the dredge from 7 PM to 9 AM. Alternatives to horn use for communication will be explored. If there are complaints or concerns on noise or light issues, Wingate East Mine operations personnel can be contacted at 941-322-6801, to promptly investigate and reach a fair resolution in consultation with Manatee County.
20. Setbacks: Minimum mine cut setbacks and setbacks for the perimeter recharge ditch shall be maintained as follows:
- a. 1,000 feet of a habitable structure existing at the time of initial application for Master Mining and Reclamation Plan* approval, unless waived by affected habitable structure owner;
 - b. 500 feet of Developer* (Mosaic Fertilizer, LLC) property line, where setback waivers have not been obtained.
 - c. A setback waiver has been granted along the Developer* / Manatee County property line adjacent to Duette Park. This is in addition to the previous setback waiver granted to the existing utility corridor and drainage ditches as part of the Wingate Corridor Parcel* in Resolution R-08-009. Slurry pipes shall be located interior of the isolator/deflector berm when located adjacent to Duette Park. Details are depicted on Map A-3 and Figure 5-A;
 - d. A setback waiver has been granted for the following mining activities within 1,000 feet of offsite wetland(s) in Duette Park: reduction from 1,000 feet to 100 feet in order to perform mining activities, including constructing clay settling area (CSA) WE-1 and for the placement of slurry pipelines and pumps. No mining extraction of overburden or phosphate ore to occur within 1,000 feet of wetland(s).
 - e. A setback waiver has been granted to the Developer* to 140 feet along the public right-of-way (Duette Road) as described in the Mine-Cut Highwall Slope and Crest Stability Analyses Duette Road Setback Waiver Request (see Exhibit F). Backfilling of lands on one side of the roadway, to the prescribed roadway setback distance of 200 feet, shall be completed before mining and dewatering may occur on the other side. Within the remaining setback area (140 feet along Duette Road), where the Developer* owns property on both sides of the roadway, the Developer* may construct an earthen berm, 6'-8' in height above the roadway elevation. Where the Developer* does not own property on both sides of the roadway, the earthen berm shall be constructed between 80 feet to 50 feet of the right-of-way.
 - f. Nothing in this requirement shall prevent the reduction of setbacks pursuant to Ordinance 04-39*. All such setbacks shall be shown in the Operating Permit and shall be specifically approved by the Board of County Commissioners.

Exhibit B - Appendix 10-C (3 pages)



Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

July 20, 2015
File Number 09-10-0119

Mosaic Fertilizer, LLC
P.O. Box 2000
Mulberry, FL 33860-1100

Attention: Mr. Larry Odom, P.E.

Subject: Diversion Berm, Clay Settling Area WE-1, Mosaic Wingate East Mine, Manatee County, Florida, Mosaic Fertilizer, LLC, Hardee County, Florida.

Gentlemen:

As requested, we have reviewed the alignment of the berm proposed by FED to divert dilute clay slurry released from Clay Settling Area WE-1 in the unlikely event of a dam failure. The berm runs from the northwest corner of the CSA 4,200 feet to the east and 2,550 feet to the south. The ground surface elevation at the NW corner of the CSA is 110 feet (NGVD). The CSA has a design height of 50 feet. The diversion berm is intended to prevent dilute clay slurry from reaching the East Fork of the Manatee River in the unlikely event of a dam break. This report presents our evaluation and recommendation for the height of the berm.

Introduction

Clay settling areas are reservoirs typically constructed by surrounding a mined area with an embankment dam. Chapter 62-672 requires that the reservoir have a minimum of 2 spillways and that the spillways be capable of handling the decant water plus a 12-inch, 24-hr storm event without exceeding the minimum freeboard requirement of 5 feet or allowing the water level in the reservoir to increase by more than one foot in a 24-hr period. Modern earth embankments in the Florida Phosphate Industry after 1972 have a very low probability of failure.

There is generally no inflow from the watershed outside the settling area into the reservoir as is the case for typical fresh water impoundments. Consequently, the relative risk of overtopping for a clay settling area embankment is essentially zero. Likewise, clay settling areas in Florida are not at risk of failure due to earthquake motions.

Based on our 40 years of experience with the design and construction of more than 120 clay settling areas, the foundation soils in both the central and north Florida phosphate mining areas consist almost entirely of sandy soils. The relative risk of an embankment dam constructed on a sand foundation prepared in accordance with the stability requirements of Chapter 62-672 experiencing a sliding failure is essentially zero. The only potential failure mode that is reasonably likely to occur for an embankment dam surrounding a clay settling area is soil piping.

Clay settling areas have a limited life and are susceptible to potential piping only when there is dilute slurry or water in the reservoir. Once the clay slurry has settled out in the reservoir and consolidation has begun, the clay seals any pervious layers in the foundation or embankment and

significantly reduces the probability of a failure. After the initial filling and consolidation period, the risk of a piping failure is significantly reduced for the reason stated above.

Note that essentially all historic clay settling area dam failures occurred prior to 1972 and involved pre-rule, non-designed dams. These failures were typically the result of soil piping, most likely along the spillway outlet conduits. Only one dam that was constructed in accordance with the 1972 FDEP dam design rule failed. Failure occurred by piping along the spillway conduit during initial filling. After this failure, which occurred in 1994, the rule was revised to specifically address design and construction of the spillway conduit, after which there have been no other failures of a settling area dam.

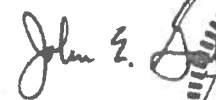
For purposes of this evaluation, we have assumed that the hypothetical dam breach occurs during the initial filling period when clear water is impounded against the compacted section of the embankment dam (typically above the original natural ground level), i.e., when the clear water level is about 12 to 15 feet above the base of the compacted section of the dam and the clay slurry is near this base level. For this reason and the reasons discussed above, we recommend that Mosaic limit the water level in the active settling area to less than Elevation 122 feet (NGVD), i.e., to no more than 12 feet above the elevation of the natural ground surface at the NW corner of the CSA until the clay slurry level is at or above the natural ground surface at this location.

We also recommend that the crest of the diversion berm be constructed at least 12 feet above the natural ground surface elevation at the northwest corner of the CSA, i.e., to an elevation equal to or greater than 122 feet (NGVD).

Detailed plans for the diversion berms adjacent to the proposed CSA should be prepared as part of the application for the approval to construct CSA WE-1. The settling area embankment should be designed in accordance with the requirements of Chapter 62-672 of the Florida Administrative Code. The diversion berm should be designed with inside and outside slopes of 2.5H:1.0V and a crest width of 15 feet.

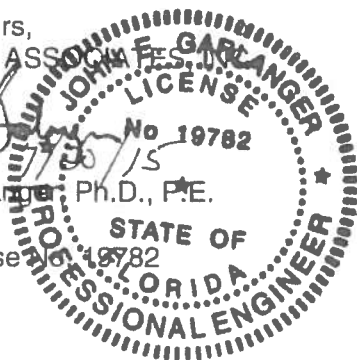
We trust that this report adequately addresses the dam break water containment requirements/issues. If you have any questions, or need additional information, please contact us.

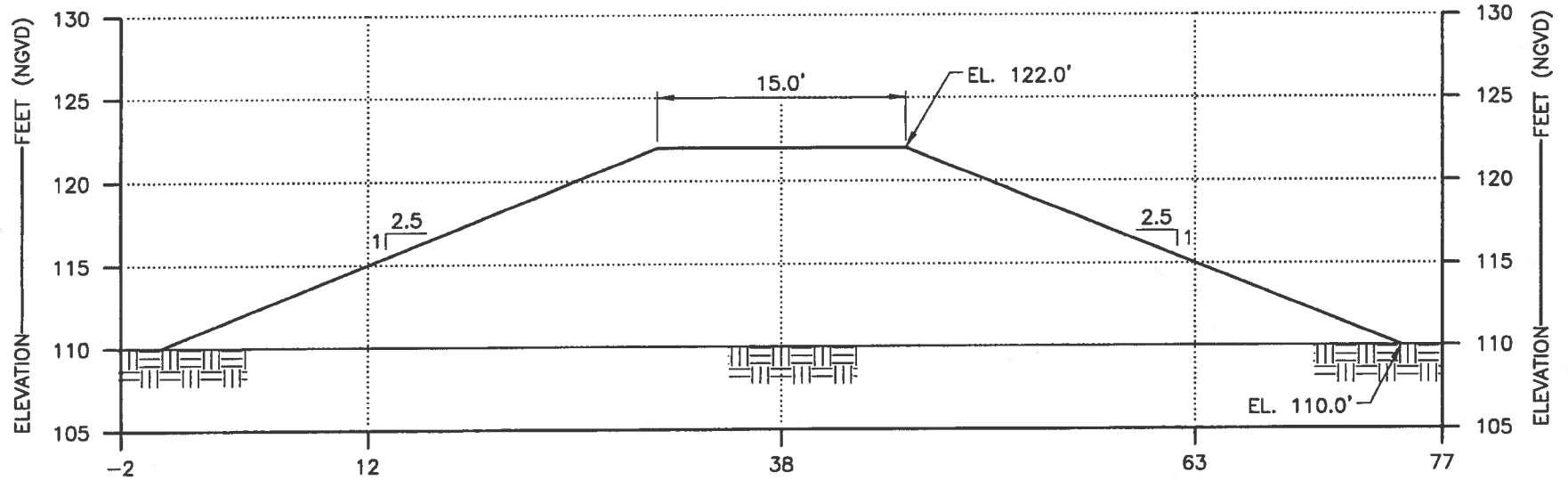
Very truly yours,
ARDAMAN & ASSOCIATES, INC.



John E. Garland, Ph.D., P.E.
Principal
Florida License No. 19782



JEG/jg





DIVERSION BERM

SCALE: 1" = 10'

DIVERSION BERM		
 Ardaman & Associates, Inc. Geotechnical, Environmental and Materials Consultants		
 MOSAIC FERTILIZER, LLC WINGATE EAST MINE MANATEE COUNTY, FLORIDA		
DRAWN BY: RDH	CHECKED BY: <i>[Signature]</i>	DATE: 08/19/15
FILE NO: 09-10-0119J	APPROVED BY: <i>[Signature]</i>	FIGURE:

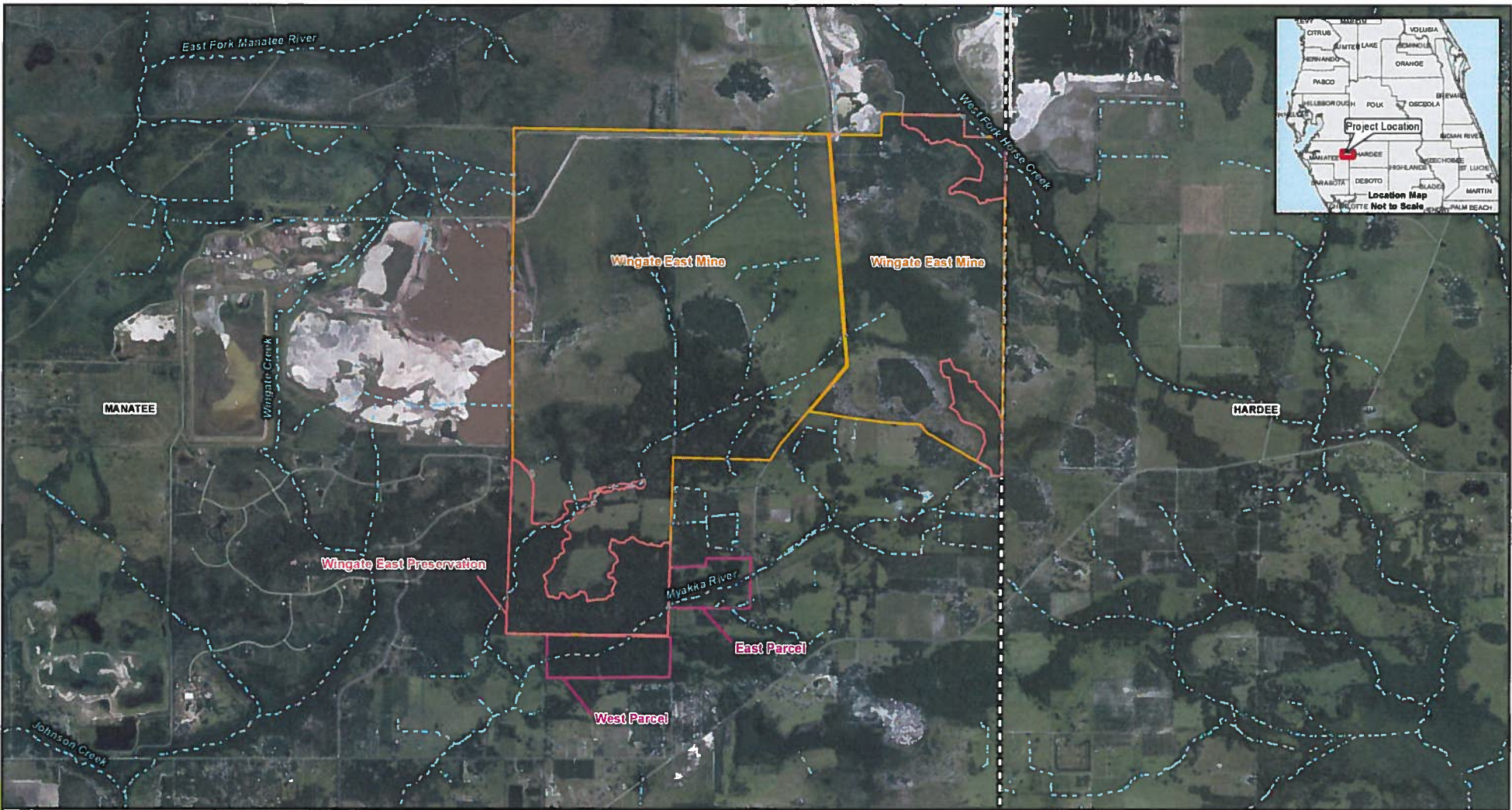


Exhibit H

Notes:

1. Project No. - 800401
2. Data Sources - ESRI Aerial Imagery
3. This map is intended to be used for planning purposes only. It is not a survey.

Rev. 3/2015
 Rev. 1/2016
 Checked by: ml

Explanation of Features	
	Parcel Boundary
	Wingate East Boundary
	Wingate East Preservation
	Drainage Features
	County Boundary

N

0 1,500 3,000

1" = 3000'

**amec
foster
wheeler**

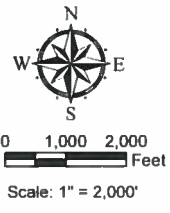
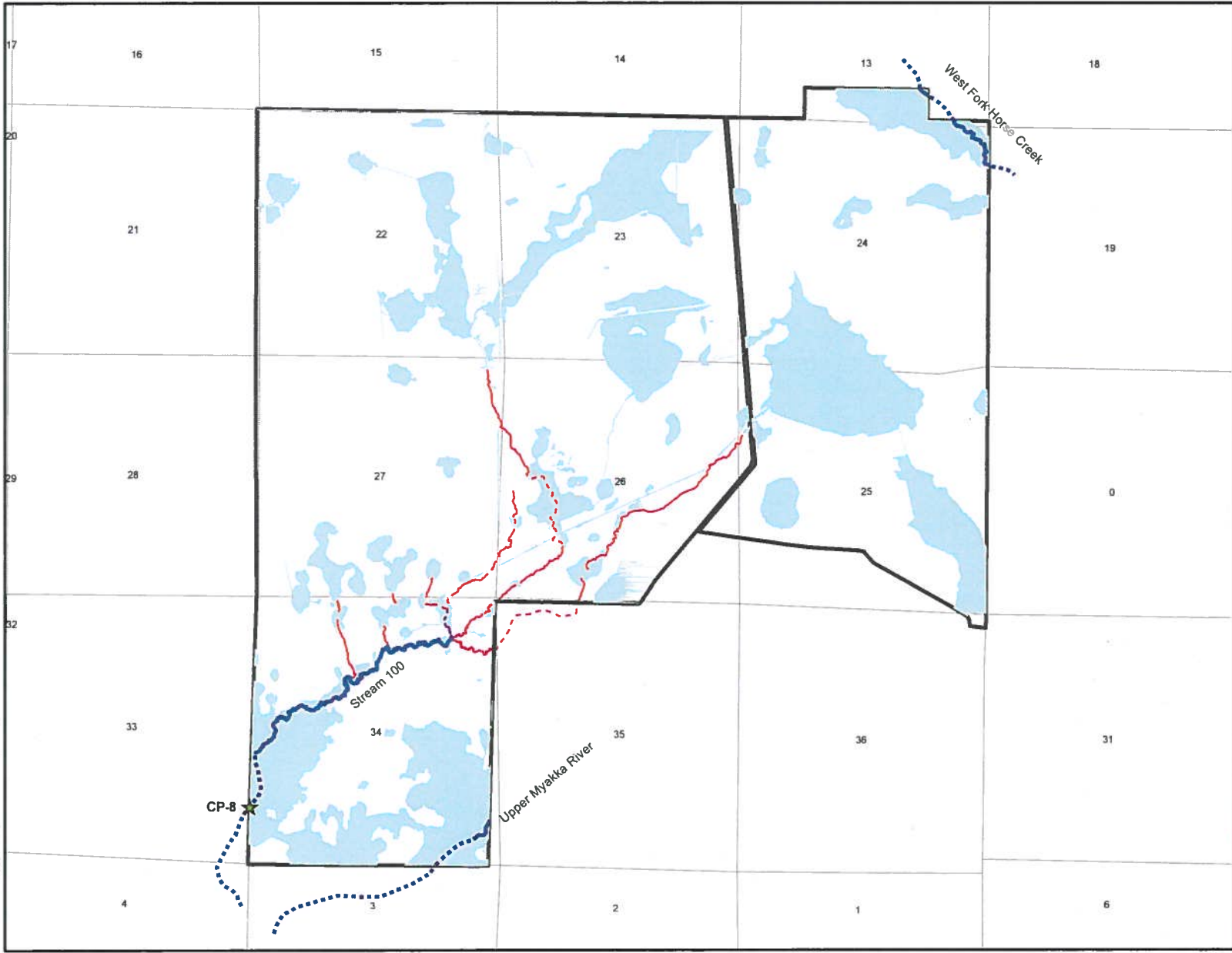
Amec Foster Wheeler
 Environment & Infrastructure, Inc.
 2000 E. Edgewood Drive Ste 4010
 Lakeland, FL 33803
 CA 4392
 (813) 667-2345

NOT FOR CONSTRUCTION

Figure 1A
Location Map
 Myakka River Headwaters Restoration
 Manatee County, FL

File Path: \\server\shared\GIS\Projects\2015\800401\Report\Figure 1A - Location Map.mxd

Exhibit I



- Legend**
- Stream Order**
 - 1st Order
 - 2nd Order
 - 3rd Order
 - - - Estimated Location
 - FDEP Jurisdictional Areas
 - ▭ Wingate East Boundary
 - ★ Critical Point

STREAM ORDER MAP

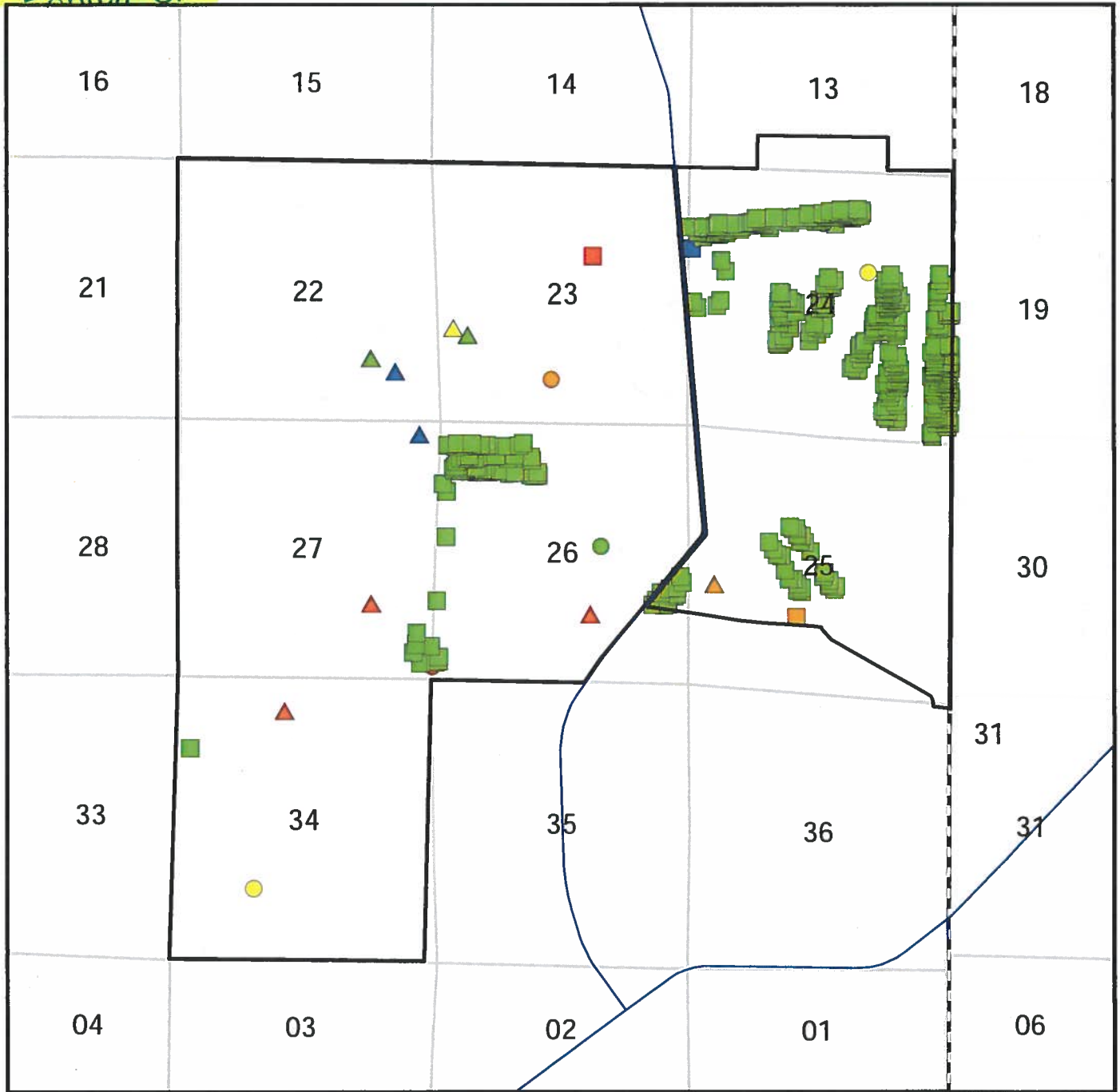
Ardaman & Associates, Inc.
 Geotechnical, Environmental and
 Materials Consultants

RIVERINE WETLAND ANALYSIS
 WINGATE EAST
 MOSAIC FERTILIZER, LLC
 MANATEE COUNTY, FL

DRAWN BY: SG	CHECKED BY: NA	DATE: 3/18/16
FILE NO: 09-10-01190	APPROVED BY: JEG	FIGURE: 3

W:\Projects\2009\09-10-Wingate_East_Harings\AUG\BMacLay\03180318\Figure 3 Stream Order Map.mxd

Exhibit G



— Roads (FDOT)

▭ Permit Boundary

▭ County Lines


▭ Section Lines

Species

- American Alligator
- Burrowing Owl
- Catesby's Lily
- Crested Caracara
- Eastern Indigo Snake
- Florida Sandhill Crane
- Florida Scrub-Jay
- Gopher Frog
- Gopher Tortoise Burrow
- Little Blue Heron
- Sherman Fox Squirrel
- Snowy Egret
- Tri-colored Heron
- White Ibis
- Wood Stork

02	01	06	05	04	03	02	01	06	05	04
11	12	07	08	09	10	11	12	07	08	09
14	13	18	17	16	15	14	13	12	11	10
23	24	19	20	21	22	23	24	20	21	22
26	25	30	29	28	27	26	25	24	23	22
35	36	31	32	33	34	35	36	32	33	34
02	01	06	05	04	03	02	01	06	05	04

T35s, R22e T35s, R23e




WINGATE EAST

Mosaic Fertilizer, LLC

WHMP

Listed Species Map



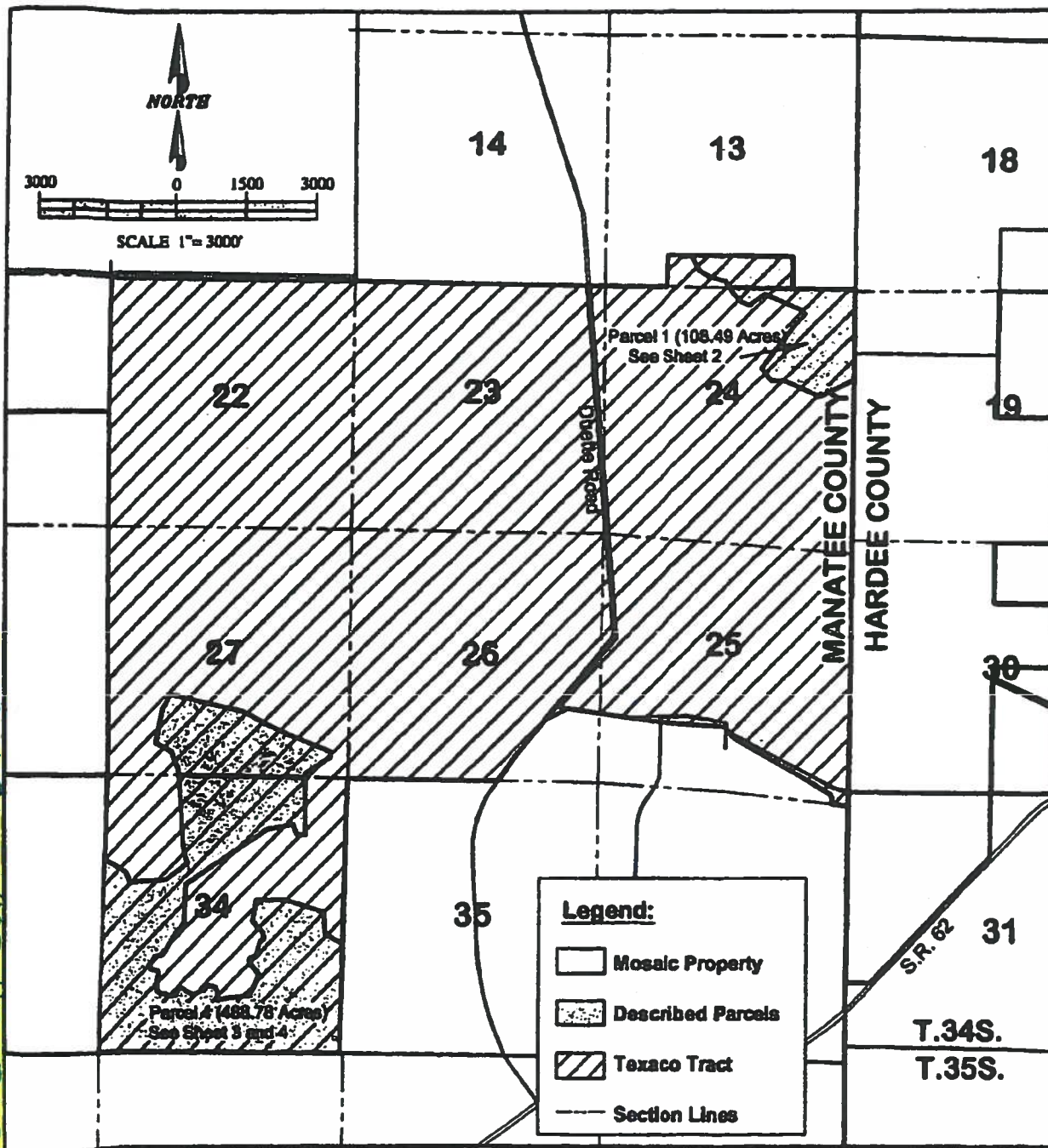
0 750 1,500 3,000
Feet

1 in = 3,000 feet

Date 8/29/2014

P:1003MOS1029-Wingate East
Mine Permitting Assistance/GIS/WHMP LISTED

Ord. 08-32, Exhibit G



Legend:

- Mosaic Property
- Described Parcels
- Texaco Tract
- Section Lines

Description of Encumbered Property
Sections 13, 24, 27 & 34
Township 34 South,
Range 22 East
Wingate Mine - Texaco Tract
 Sheet 1 of 4

- SURVEYOR'S NOTES:**
- This sketch does not represent a survey, no corners were set.
 - All section information shown on this sketch is based on a boundary survey of Wingate Mine, prepared by Pickett & Associates Inc., identified as Project No. 13101, Drawing No. LD2550, dated 5/4/2004.
 - The limits of the wetlands within the Conservation Easement were determined in the field by Environmental Consultants Technology (ECT) and measured using a handheld Global Positioning System (GPS) unit reported to have a positional error not to exceed 1 meter when compared to a true position. The limits of the Conservation Easement as described and shown on this sketch are created to include the limits of wetlands as located by ECT with an additional buffer to the landward extent.



SURVEY AND MAPPING DEPARTMENT
 By: RFD Date: 1/7/2008 Scale: 1" = 3000'
 Parc: www.mosaic.com

PROFESSIONAL LAND SURVEYOR
 Not Valid Without The Signature And The Original Raised Seal Of A Florida Licensed Surveyor or Mapper.

Date: _____
 Rennie T. Hall
 Fla. Cert. No. 3373
 P.O. Box 2000
 Mulberry, Fla. 33860-1100

Not valid unless embossed with raised surveyor's seal.



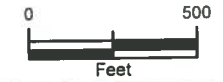
amec foster wheeler
 Amec Foster Wheeler
 Environment & Infrastructure, Inc.
 2000 E. Edgewood Drive Ste #216
 Lakeland, FL 33803
 CA-6382
 (863) 667-2346

FIGURE 8

Wetland Hydrogeomorphic (HGM) Groups
Mosaic Fertilizer, LLC
Manatee County, FL

Explanation of Features

- Stream Order**
- 1
 - 2
 - 3
- Wingate East Boundary
- 500 - Water
- PLSS
- Extent of 25YR Flood Elevation
- Avoided Area
- Wetlands HGM Groups**
- Depressional
 - Riverine
 - Slope



Notes:

1. Project No. 600451
2. Data Source - AmecFW
3. This map is intended to be used for planning purposes only. It is not a survey.

Date: 3/14/2016
 Revised:
 Checked By: JHK

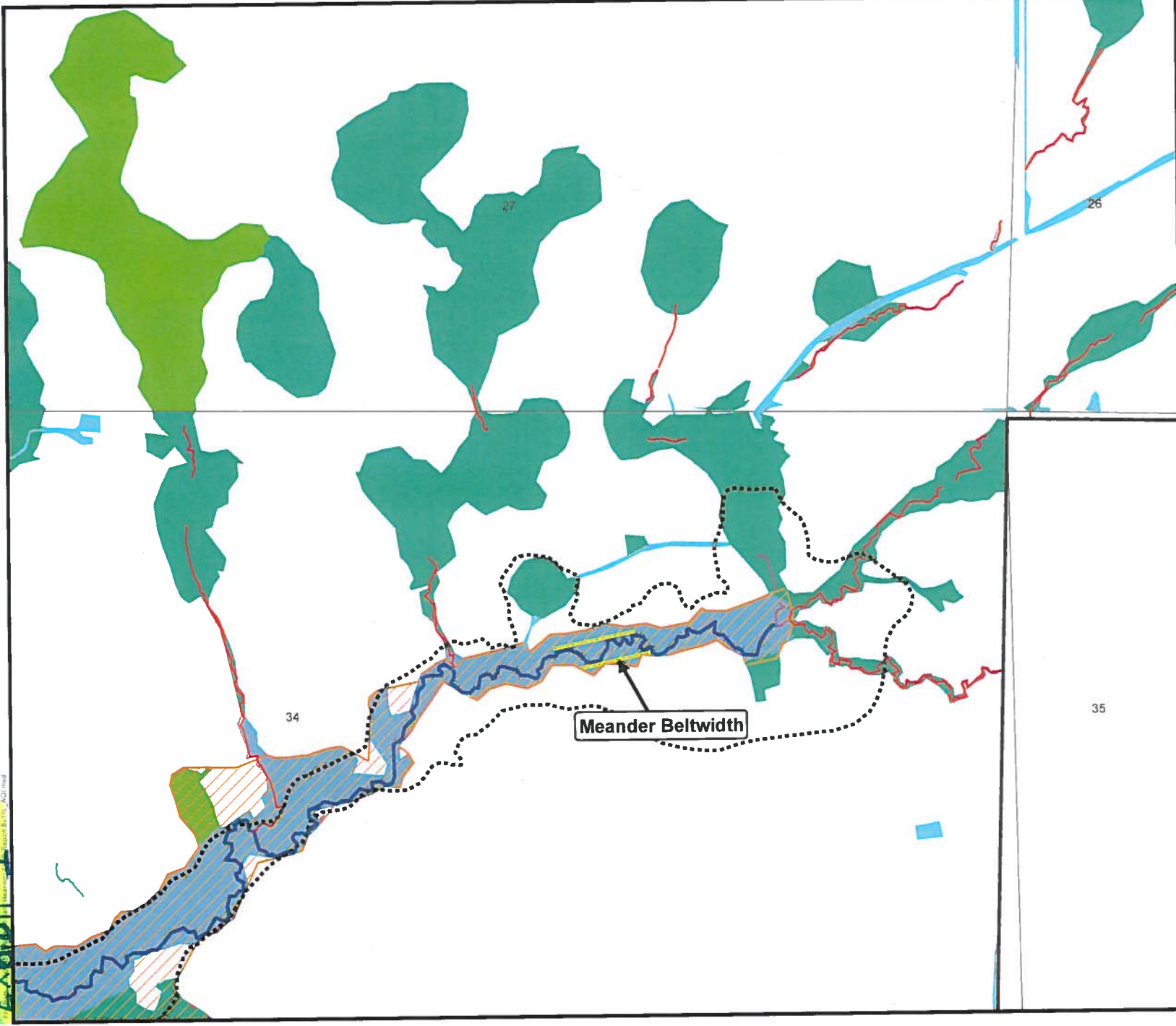


Exhibit I