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Attachment F

COMPENSATORY MITIGATION PLAN (revised November 15, 2018):
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ONA MINE

COMPENSATORY MITIGATION PLAN

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1.0 *DRAFT COMPENSATORY MITIGATION PLAN*

Under 33 C.F.R. § 332.4(c)(2), a Compensatory Mitigation Plan must include the following elements:

- Objectives. A description of the resource types and amounts provided, method of compensation, and the manner in which the proposed compensatory mitigation will meet the needs of the watershed.
- Site Selection. A description of the factors considered during the site selection process such as watershed needs, onsite alternatives where applicable, and practicability of accomplishing the resource restoration, establishment, enhancement or preservation.
- Site Protection Instrument. A description of the legal instrument that will ensure long term protection of the compensatory mitigation site.
- Baseline Information. A description of the ecological characteristics of the compensatory mitigation site.
- Determination of Credits. A description of the number of credits to be provided, including an explanation of the rationale for the credit calculations.
- Mitigation Work Plan. Detailed written specifications for the compensatory mitigation project.
- Maintenance Plan. A description and schedule of maintenance requirements to ensure the performance standards are met.
- Performance Standards. Ecologically based standards to determine whether the compensatory mitigation project is accomplishing its objectives.
- Monitoring Requirements. A description of the parameters to be monitored to determine whether the compensatory mitigation project is on track to meet the performance standards and if adaptive management is needed.
- Long Term Management Plan. A description of how the compensatory mitigation project will be managed after the performance standards have been achieved.
- Adaptive Management Plan. A management strategy to address unforeseen changes in conditions at the compensatory mitigation project site.
- Financial Assurances. A description of financial assurances demonstrating that they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successful in terms of meeting the performance standards.

Each of these required plan components is described below. Certain plan components consist of reclaiming land on the Ona Mine following ore extraction under Florida's reclamation rules to fulfill, in part, Mosaic's federal compensatory mitigation

requirements. Although reclamation work will occur concurrently with federal compensatory mitigation, and therefore there may be references to reclamation activities in the following sections where such activities affect federal compensatory mitigation, this Ona Mine Federal Compensatory Mitigation Plan only addresses wetland and stream mitigation required by USACE.

1.1 *OBJECTIVES*

When evaluating mitigation options, a watershed approach must be used to establish compensatory mitigation requirements to the extent practicable and appropriate. Where an appropriate watershed plan is available, the watershed approach should be based on that plan (33 C.F.R. § 332.3(c)(1)). For the Myakka and Peace Rivers, watershed mitigation needs have been identified and are well understood due to publication of the Charlotte Harbor National Estuary Program's (CHNEP) Comprehensive Conservation Management Plan (CCMP), most recently updated in March 2013[(1)] the Peace River Cumulative Impact Study (PRCIS) by FDEP in 2007[(2)] and the Myakka and Peace River Comprehensive Watershed Management Plans developed by the Southwest Florida Water Management District (SWFWMD).[(3)] The CCMP meets the definition of a watershed plan.

Specifically within the CCMP, four "Priority Problems" are identified, which are described below:

1. Water quality degradation: pollution from agricultural and urban runoff, point-source discharges, septic systems and wastewater treatment systems, atmospheric deposition, groundwater, and other sources;
2. Hydrologic alterations: adverse changes to amounts, locations, and timing of freshwater flows, the hydrologic function of floodplain systems, and natural river flows;
3. Fish and wildlife habitat loss: degradation and elimination of headwater streams and other habitats, conversion of natural shorelines caused by development, cumulative impacts of docks and boats, invasion of exotic species, and cumulative and future impacts; and
4. Stewardship gaps: limitations in people's knowledge of choices and management decisions that will lead to sustainability within their community. These gaps include overarching issues such as public outreach, advocacy, and data management.

Fifteen short-term "Program Objectives" and 76 "Priority Actions" were established by CHNEP to address the Priority Problems. Mosaic's Ona Mine Federal Compensatory Mitigation Plan adopts a watershed approach by implementing, in part, the following Priority Actions:

[1] Available at www.chnep.org.CCMP.
[2] Available at www.dep.state.fl.us/water/mines.
[3] Available at www.swfwmd.state.fl.us/documents.

- Reduce non-point source pollutants associated with stormwater runoff (WQ-D);
- Implement projects to improve or protect water quality to offset anthropogenic impacts elsewhere (WQ-E);
- Improve minimum flows and levels in the Peace River (HA-E);
- Protect headwater tributaries from elimination and restore these tributary courses and their floodplains where opportunities exist (HA-C);
- Restore lands with changed hydroperiods and reverse historic removal of flood storage capacity (HA-N);
- Restore freshwater wetlands (FW-C);
- Restore native habitat communities (FW-F);
- Work with mining companies to increase the acreage protected under conservation easements (FW-H); and
- Remove exotic vegetation (FW-L).

Table 4-8-A-xiii and Table 4-8-A-xi provides a general breakdown of the wetland resource types and acreages and stream linear feet. Functional units that will be provided by mitigation type (e.g., enhancement, establishment, and preservation) are calculated in Section 1.5.2 below.

1.2 *MITIGATION SITE SELECTION*

Ona onsite and offsite mitigation sites as shown on Figure 10 were selected based on availability and what would be environmentally preferable. Also considered were the location of the compensation sites relative to the impact site and the significance of the mitigation sites within the watershed. The offsite mitigation sites are uniquely situated within Mosaic holdings allowing them to provide a greater ecological benefit to the watershed as a whole. The onsite and offsite mitigation projects provide an additional 6,951 acres of restoration activities adjacent to existing Mosaic conservation lands, including preservation and reclaimed areas, providing a corridor between the existing and proposed habitats. The mitigation sites provide a benefit on a watershed scale, producing desirable mitigation ratios, are ecologically suitable, providing valuable corridors and are co-located to state lands in some instances.

1.2.1 <u>OFFSITE PAYNE CREEK RESTORATION SITE</u>

The Payne Creek Offsite Restoration Site is located approximately eight miles north of the Ona Mine. Because this site is located upstream of the Ona Mine, its beneficial effects would immediately apply to any potential impacts in the Peace River at its confluence with Hickory or Oak Creeks.

The Payne Creek site is regionally significant and its restoration would directly address CHNEP's CCMP Priority Action HA-C as well as all of the other actions listed above. The proposed restoration would increase the headwaters addressed by this Priority Action by approximately 2.8 miles.

Significant ecosystem benefits would also be derived from the greater hydrological diversity of wetland types proposed and the fact that the entire upstream flow from the natural headwaters of Payne Creek would be routed through mitigation wetlands as opposed to some of it being diverted through a canal. The hydrobiologic diversity of the proposed design includes seepage swamps, short hydroperiod wet prairies, deep marshes and sloughs with longer hydroperiods, headwater depression marshes, sawgrass marshes, and riparian bottomland swamps with alluvial stream channels. In essence, this plan would fully restore a nearly 3 mile long gap in an otherwise continuous natural bottomland system along the Payne Creek riparian corridor from its headwaters to its confluence with the Peace River. The result would be a completely un-ditched riparian system along one of the major tributaries of the Peace River that would span 20 linear miles from the headwaters to the river consisting of 506.6 acres of wetland establishment, 14,755.00 linear feet of stream establishment, and associated native habitat upland buffers. Please refer to Map 4-8-A-iv for a depiction of this site, as well as Appendix 2-4-A-i for UMAM datasheets and Table 4-8-A-xiv for a summary of the UMAM scoring.

1.2.2 OFFSITE BOWLEGS CREEK ENHANCEMENT SITE

The Bowlegs Creek Offsite Enhancement Site is located approximately 16 miles northeast of the Ona Mine. Because this stream is located upstream of the Ona Mine, its beneficial effects would immediately apply to any potential impacts in the Peace River at its confluence with Hickory or Oak Creeks.

The Bowlegs Creek site is regionally significant and its restoration would directly address all of the CCMP Priority Actions listed above. The proposed restoration would improve the functionality of headwaters addressed by Priority Action HA-C by 0.65 square miles.

The site consists of a palustrine (non-riparian) landscape situated along the southern boundary of the floodplain junction of Bowlegs Creek with the Peace River. These two riparian corridors provide major regional habitat linkages and portions of their bottomlands are incorporated into IHN/Florida Forever lands adjacent to the property. The Peace River corridor is a major north-south flyway for a variety of neotropical migratory birds providing rather continuous linkage from Charlotte Harbor to the Green Swamp. Many terrestrial and aquatic vertebrate species can utilize the corridor as well. This is a riparian corridor, dominated by bottomland swamps. Stream flow has been diminished due to groundwater pumping, with the most impacted area located upstream of the site. The vast majority of historic palustrine habitats along the riparian corridor have been converted to other land uses. Thus, this project provides a much-needed palustrine habitat node linked to an extensive riparian corridor habitat network across the Peace River watershed.

Significant ecosystem benefits will be derived by the enhancement and protection of this habitat node adjacent to two of the region's longest wildlife corridors. These include increases in native biodiversity, but also include benefits related to stream hydrology and water quality derived from the longer flow paths and reduced runoff coefficients associated with the proposed natural channel design and conversion of pasture to native

woodlands. The resultant longer flow durations should benefit aquatic fauna onsite and downstream. The project proposes 39.8 acres of wetland establishment, 80 acres of forested wetland preservation, 115.4 acres of wetland enhancement, 5,507 linear feet of stream establishment and restoration, and 335.3 acres of native habitat upland buffers. Please refer to Map 4-8-A-v for a depiction of this site, as well as Appendix 2-4-A-i for UMAM datasheets and Table 4-8-A-xvi for a summary of the UMAM scoring.

1.2.3 OFFSITE HORSE CREEK-PAYNE CREEK PRESERVATION SITE

The Offsite Horse Creek-Payne Creek Preservation Sites lay approximately two-miles north of the Ona mine and abuts both Horse Creek and Payne Creek in the Peace River Basin. Because these streams are located upstream of the Ona Mine, their beneficial effects would immediately apply to any potential impacts in the Peace River at their respective confluences.

This project is regionally significant and its preservation would directly address CHNEP's CCMP Priority Action HA-C and FW-H, as well as all of the other actions listed above. The proposed restoration would increase the headwaters addressed by this Priority Action by approximately 3.5 miles.

The project proposes to preserve a variety of wetlands, uplands, and streams comprising a total of 905.7 acres along Payne Creek and Horse Creek in the Peace River watershed. The project includes 573.6 acres of wetland mitigation, as well as 332.1 acres of native upland buffer that will be protected in perpetuity by a conservation easement. The preservation of this area serves to buffer these creeks by precluding future encroachment from development. Please refer to Map 4-8-A-vii for a depiction of this site, as well as Appendix 2-4-A-i for UMAM datasheets and Table 4-8-A-xxiii for a summary of the UMAM scoring.

1.2.4 OFFSITE PEACE RIVER NORTH PRESERVATION SITE

The Offsite Peace River North Preservation Site is located approximately 13 miles northeast of the Ona Mine. Because this site is located upstream of the Ona Mine, its beneficial effects would immediately apply to any potential impacts in the Peace River at its confluence with Hickory and Oak Creeks.

The Peace River North site is regionally significant and its preservation would directly address CHNEP's CCMP Priority Action HA-C and FW-H, as well as all of the other actions listed above. The proposed restoration would increase the headwaters addressed by this Priority Action by approximately 1.8 miles.

The project proposes to preserve a variety of wetlands, uplands, and streams comprising a total of 575.8 acres along the Peace River. The project includes 446.1 acres of wetland mitigation, as well as 129.7 acres of native upland buffer that will be protected in perpetuity by a conservation easement. The preservation of this area serves to form a newly protected corridor along nearly two-miles of the upper Peace River and buffers the river by precluding future encroachment from development. Please refer to Map 4-8-A-ix

for a depiction of this site, as well as Appendix 2-4-A-i for UMAM datasheets and Table 4-8-A-xix for a summary of the UMAM scoring.

1.2.5 OFFSITE PEACE RIVER SOUTH PRESERVATION SITE

The Offsite Peace River South Preservation Site is located approximately 12 miles north of the Ona Mine. Because this site is located upstream of the Ona Mine, its beneficial effects would immediately apply to any potential impacts in the Peace River at its confluence with Hickory and Oak Creeks.

The Peace River South Preservation Site is regionally significant and its preservation would directly address CHNEP's CCMP Priority Action HA-C and FW-H, as well as all of the other actions listed above. The proposed restoration would increase the headwaters addressed by this Priority Action by approximately 1.3 miles.

The project known as Peace River South proposes to preserve a variety of wetlands, uplands, and streams comprising a total of 364.6 acres along the Peace River. The project includes 236.8 acres of wetland mitigation, as well as 127.8 acres of native upland buffer that will be protected in perpetuity by a conservation easement. The preservation of this area serves to form a newly protected corridor along 1.3 miles of the upper Peace River and buffers the river by precluding future encroachment from development. Please refer to Map 4-8-A-ix for a depiction of this site, as well as Appendix 2-4-A-i for UMAM datasheets and Table 4-8-A-xx for a summary of the UMAM scoring.

1.2.6 OFFSITE WEST FORK HORSE CREEK RESTORATION SITE

The Offsite WFHC Restoration Site abuts the northwest portion Ona Mine. Because this site is located upstream of the Ona Mine, its beneficial effects would immediately apply to any potential impacts in the Peace River at its confluence with Horse Creek.

The WFHC Restoration site is regionally significant and its preservation would directly address CHNEP's CCMP Priority Action HA-C and FW-H, as well as all of the other actions listed above. The proposed restoration would increase the headwaters addressed by this Priority Action by approximately 0.4 miles.

The project proposes to establish, enhance and preserve a variety of wetlands, uplands, and streams comprising a total of 146.7 acres along the WFHC in the Peace River watershed. The project includes 100.3 acres of wetland mitigation (Phase A-1: 63.5 acres, Phase B: 36.8 acres), as well as 46.4 acres of native upland buffer (Phase A-1: 17 acres, Phase B: 29.4 acres) that will be protected in perpetuity by a conservation easement. The preservation of this area serves to provide permanently protected wildlife habitat along the upper reaches of WFHC buffering the creek by precluding future encroachment from development. Please refer to Appendix 4-1-F for the implementation work plan for the enhancement and establishment wetlands, Map 4-8-A-x for a depiction of this site, as well as Appendix 2-4-A-i for UMAM datasheets and Table 4-8-A-xxi for a summary of the UMAM scoring.

1.2.7 OFFSITE SOUTH PASTURE EXTENSION ESTABLISHMENT SITE

The Offsite South Pasture Extension Establishment Site is contiguous to the north of the Ona Mine as shown on Map 4-8-A-ii. Because this site is located upstream of the Ona Mine, its beneficial effects would immediately apply to any potential impacts in the Peace River at its confluence with Horse Creek. The South Pasture Extension site is regionally significant and its restoration would directly address CHNEP's CCMP Priority Action HA-C as well as all of the other actions listed above.

The project proposes to establish a variety of wetlands and uplands comprising a total of 308.4 acres in the Peace River watershed. The project includes 166.6 acres of wetland mitigation, as well as 141.8 acres of native upland buffer that will be protected in perpetuity by a conservation easement. These establishment wetlands serve to provide valuable wildlife habitat that will be permanently from habitat conversion or development. Please refer to Appendix 4-1-G for the implementation work plan, Map 4-8-A-ii for a depiction of this site, as well as Appendix 2-4-A-i for UMAM datasheets and Table 4-8-A-xvii for a summary of the UMAM scoring.

1.2.8 ONSITE MITIGATION

The Ona Mine is the site proposed for completing significant elements of the federal compensatory mitigation. Onsite mitigation elements would include advance and concurrent restoration, establishment, and preservation on the portions of the mine to be avoided by mining operations and re-establishment of wetlands and streams on lands disturbed by mining operations.

Locating the compensatory mitigation site on the impact site would optimize the potential for offsetting unavoidable impacts from permitted activities. The compensatory mitigation would be commensurate with the amount and type of impact. From a landscape perspective, no offsite option would more closely offset aquatic resource functional losses. Because the compensation site would match the impact site, selection of the impact site for compensatory mitigation is the only mitigation option that would match the significance of the impacts from a watershed perspective. Onsite mitigation would address CCMP Priority Actions WQ-D, WQ-E, HA-C, HA-N, FW-C, FW-F, and FW-L.

1.3 *LONG-TERM SITE PROTECTION INSTRUMENT*

Mosaic's Ona Mine Draft Federal Compensatory Mitigation Plan includes the use of perpetual conservation easements to provide added long term protection to and sustainability of all mitigation areas. Conservation Easements are expressly authorized under Florida law (Section 704.06, Florida Statutes), and provide the long term protection required by the 2008 Compensatory Mitigation Rule 33C.F.R. § 332.7(a). Appendix 4-4-A provides a draft Conservation Easement template for review and comment.

Consistent with 33 CFR 332.7, the proposed Conservation Easement would include the following requirements, rights and obligations:

- Identifies USACE as the named third-party beneficiary to enforce the terms of the Conservation Easement (Paragraphs 5 and 9);
- Prohibits incompatible land uses that might jeopardize the objectives of the compensatory mitigation project (Paragraph 3);
- Establishes baseline conditions, maintenance practices and responsibilities to maintain the compensatory mitigation projects in the preserved, enhanced, restored, or created condition required by the FDEP and USACE permits (Paragraphs 2 and 3), with specific maintenance and management practices specified in a written Baseline Documentation Report attached and incorporated into the Conservation Easement (as Exhibit C);
- Provides notice requirements and timing, including written notice to the USACE at least 60 days before any action is taken to amend, alter, release, or revoke the Conservation Easement (Paragraph 5); and
- Requires implementation of adaptive management procedures to remedy adverse unforeseen circumstances.

In general, there are four phases for developing and recording Conservation Easements proposed for the Ona Mine that corresponds to the type of compensatory mitigation. Maps 4-8-C-i, 4-8-C-ii, 4-8-C-iii, and 4-8-C-v depict the Conservations Easements proposed for Phases A-1, A-3, B and A-2, respectively. Those types or phases are discussed below:

Phase A-1 – An approved conservation easement over existing wetlands and uplands in the preservation areas within the Ona Mine Boundary, Horse Creek-Payne Creek Preservation, Peace River North Preservation, Peace River South Preservation, and West Fork Horse Creek Preservation will be executed within 30 days of initiation of authorized activities.

Mosaic proposes to prepare an initial baseline documentation report for the preservation areas (Phase A-1). This initial baseline document will be submitted within one year of the execution of the conservation easement.

Phase A-2 – An approved conservation easement over wetlands and uplands that are required by the FDEP ERP to be enhanced in the preservation areas (Phase A-2) will be executed within 30 days of initiation of authorized activities. An updated baseline documentation report will be provided upon regulatory release of enhancement work. The Phase A-2 conservation easement areas are not required by the federal compensatory mitigation plan, solely FDEP ERP mitigation.

Phase B – The Phase B Conservation Easements include Off-Site mitigation areas Payne Creek Restoration, Bowlegs Creek Enhancement, South Pasture Extension Establishment and West Fork Horse Creek Enhancement and Establishment (areas not included as Preservation as Phase A-1). The Phase B Conservation Easements

will be executed after regulatory release of restoration, establishment, and/or enhancement work is concluded on each project individually.

Mosaic proposes to prepare an initial baseline documentation report for the mitigation wetlands (Phase B). This initial baseline document will be submitted within one year of the execution of the conservation easement.

Phase A-3 – The Phase A-3 Conservation Easement contains all of the USACE wetland mitigation areas created/re-established on mined and reclaimed land within the Ona Mine Boundary and an associated upland buffer. Due to the uncertainty of the final/exact boundaries of the mitigation areas, it is not possible to prepare the necessary elements of a Conservation Easement (e.g. legal description, survey, etc.) for the property until after completion of the required mitigation activities. Consequently, the Phase A-3 Conservation Easement for mitigation wetlands outside of the preservation area and corridor crossings will be executed in phases based on mitigation success within each Mitigation Unit identified on Map 4-8-E. This conservation easement will be executed within one year from the date that the USACE releases all of the mitigation wetlands within each Mitigation Unit from all mitigation requirements.

Mosaic proposes to prepare an initial baseline documentation report for the mitigation wetlands (Phase A-3) for each Mitigation Unit. This initial baseline document will be submitted within one year of the execution of the conservation easement.

Appendix 4-4-A contains the suggested conservation easement template that would be applied to balance conservation principles with sustainable uses. Appendix 4-4-C contains the proposed Long Term Management Plan.

1.4 *BASELINE INFORMATION*

Available information for offsite preservation or enhancement areas are described in sections 1.2.1-1.2.7 above and in Appendices 4-1-B, 4-1-C, 4-1-F and 4-1-G. Offsite enhancement and establishment baseline conditions will be collected upon completion of those activities and release of the wetlands from monitoring requirements as required in recent permits. The remaining information discussed in this section refers to baseline conditions of the onsite areas within the proposed Ona Mine boundary.

1.4.1 LAND COVERS AND USES

The existing vegetative covers on the Ona Mine site are presented on Table 2-1-A-i and illustrated spatially on Map 2-1-A-ii by applying the Florida Land Use, Cover, and Forms Classification System (FLUCFCS).[(4)] As shown thereon, approximately 42 percent of the property has been converted from native vegetative cover into pastures, row-crop fields, groves, roads, or livestock watering ponds. Native upland cover (i.e., rangeland

[4] Florida Department of Transportation. 1999. *Florida Land Use, Cover, and Forms Classification System*.

and forests) is present on approximately 41 percent of the site and wetland vegetative cover (USACE jurisdictional and non-jurisdictional) is present on approximately 17 percent of the site. As explained below, the wetland vegetative covers shown on Table 2-1-A-i are not equivalent to the USACE jurisdiction (Table 2-2-A-i) as described in Section 1.4.2.

The historic and current physical land use is primarily agricultural, with most of the property used for cattle grazing. The utility corridor along CR 663 where a natural gas pipeline and two electrical transmission lines are located has been mapped based upon the vegetative cover present on the land surface.

1.4.2 WATERS OF THE UNITED STATES

The pre-mining land uses and vegetative cover within wetlands and other waters of the United States subject to USACE jurisdiction are presented on Table 2-2-A-i and illustrated spatially on Map 2-2-A-i. As shown thereon, approximately 22 percent of the site is to be subject to USACE jurisdiction.

Map 2-2-A-i and Table 2-2-A-i are based on the USACE validation of the jurisdictional delineation.

Reference numbers assigned to each wetland area subject to USACE jurisdiction are shown on Map 2-2-A-i. Each jurisdictional wetland area was assessed using the Florida Uniform Mitigation Assessment Method (UMAM) to quantify functional values. Streams were evaluated separately as described below. The UMAM database is presented in Appendix 2-4-A-i on the enclosed CD and Map 2-4-A illustrates the existing UMAM values spatially.

As shown on Table 4-8-A-iii(F)&(H) the functional values provided by USACE jurisdictional areas on the Ona Mine vary widely. As would be expected, areas converted to residential or agricultural uses provide lower functional value than do jurisdictional areas of native cover. Similarly, areas subject to USACE jurisdictional due to soils and hydrology (i.e., upland rangeland or forest communities) generally provide lower functional values than vegetated wetland community types (i.e., mixed wetland hardwood forests or freshwater marshes).

Based upon observations of current conditions and historical aerial photographs, it is obvious that many shrub-dominated (i.e., FLUCFCS code 647) areas were historically freshwater marshes or wet prairies that have been ditched and drained, converted to pasture or cropland, or not allowed to burn. Because the original status of most shrub wetlands on site was herbaceous wetlands, Mosaic's reclamation and mitigation plan will mainly establish herbaceous wetlands rather than shrub-dominated wetlands, and deeper marshes will include planting of scattered buttonbush (*Cephalanthus occidentalis*) to provide a desirable shrub layer, that is better representative of native marshes.

1.4.3 STREAMS AND DRAINAGE

The Ona Mine is drained by: Troublesome, Hickory, Oak, Brady, Brushy, and Horse Creeks, the West Fork of Horse Creek, and a headwater marsh of the Myakka River (listed in order from east to west). Appendix 2-8-B documents that none of these streams are navigable on or in the vicinity of the Ona Mine. Map 2-2-A-ii illustrates the streams on the Ona Mine and Map 2-9-A illustrates the drainage sub-basins. Table 2-2-B-i provides a summary of the stream avoidance and disturbance under Mosaic's Revised Proposed Action, and Appendix 2-2-B-i presents data about each of the stream segments shown on Map 2-2-A-ii.

Physical, biological, and water chemistry data were collected in stream segments on the Ona Mine to provide documentation of baseline conditions and reference reach information. Map 2-3-B shows the location of water quality, flow, and biological sampling stations. Monitoring stations were located by applying the following criteria:

- Physical: The location and length of each stream channel was mapped. FDEP's Stream and River Habitat Assessment Procedure[(5)] was applied to every natural and ditched natural stream reach. Classification cross-sections were measured on a sub-set of natural streams across the site to determine the distribution of Rosgen[(6)] Level-II classes. A set of reference reaches was selected and surveyed to provide morphological data for the design of streams to be re-established during reclamation. Stage level recorders were installed as shown on Map 2-3-B.
- Biology: FDEP Stream Condition Index (SCI) and BioRecon[(7)] Procedures were applied at all water chemistry stations plus additional locations in headwater, first and second order streams.
- Water Chemistry: Water quality samples were collected at all points where principal streams flow off the Ona Mine boundaries.

Refer to attached Appendix 2-2-B-i for stream plan details.

1.4.3.1 Stream Channel Mapping and Assessment

The centerlines of all natural streams, whether channelized or not, were mapped on the ground using a differential global positioning system (dGPS) to record stream channel locations and lengths. Map 2-2-A-ii illustrates the stream channels spatially. Refer to Section 2.0 in Appendix 2-2-B-i for additional details regarding stream mapping. Mapped stream channels on the Ona Mine were classified using the Florida Land Use, Cover, and Forms Classification System (FLUCFCS). Under Rule 62C-16.0051, F.A.C.,

[5] FDEP, 2013. Department of Environmental Protection Standard Operating Procedures for Field Activities.
[6] Rosgen, D.R. 1996. *Applied River Morphology*.
[7] FDEP, 2013. Department of Environmental Protection Standard Operating Procedures for Field Activities.

the land use classifications according to FLUCFCS are listed below. Refer to Appendix 2-2-B-i for additional details regarding FLUCFCS stream classification.

- 511 for natural streams
- 512 for ditched natural streams
- 513 for manmade ditches in wetlands
- 514 for manmade ditches in uplands

Streams were also classified by applying the Rosgen Level II morphological classification system, which is based on the degree of valley entrenchment and channel shape defined by the width-to-depth ratio. Refer to Appendix 2-2-B-i for additional details regarding the Rosgen Level II classification.

The in-stream and adjacent riparian habitat was assessed in all natural and channelized natural streams on the Ona Mine using FDEP's Stream and River Habitat Assessment Procedure (HA). Streams on the Ona Mine also were assessed using the Strahler protocol[8]. Refer to Appendix 2-2-B-i for additional detail regarding stream assessments. Table 2-2-E details the land uses within a 60-foot wide buffer area, which include uplands as well as wetlands.

1.4.3.2 Stream Flow Patterns

Stream flows have been continuously gauged by Mosaic in cooperation with SWFWMD on the Ona Mine since 1999 in Hickory, Oak and Brushy Creeks and the West Fork of Horse Creek.[9] Map 2-3-B illustrates the locations of these monitoring stations. Appendix 2-2-B-iii presents stage hydrographs recorded at these locations.

Text Table CMP-1			
SWFWMD Gauging Stations			
SWFWMD Gauging Station No.	Stream Name	Location	Period of Record
23941	Hickory Creek	SR 64	12/1999 to Present
23920	Oak Creek	CR 663	12/1999 to Present
23925	Brushy Creek	1 mile So. SR 64	12/1999 to Present
23950	West Fork Horse	Owen Roberts Rd.	12/1999 to Present

[8] Strahler, A.N. (1952), Hyposmetric (Area-Altitude) analysis of erosional topography, bulletin, Geological Society of America 63, 1117-142.

[9] Data may be obtained at:
http://www8.swfwmd.state fl.us/WMIS/ResourceData/ExtDefault.aspx?reset=n&function=return

USGS has maintained a gauging station on Horse Creek at SR 64 since 1977 (i.e., gauge 02297155). USGS also established gages for short periods of time on Oak Creek, West Fork Horse Creek, and Hickory Creek near the south boundary of the Ona Tract (i.e., generally at SR 64). Those gauges were maintained for approximately two water years or less. The following table summarizes USGS gage information:

Text Table CMP-2				
USGS Gauging Stations				
USGS Gauging Station No.	Stream Name	Drainage Area (mi^2)	Location	Period of Record
02297155	Horse Creek	42	SR 64	10/77 – Present
02295755	Hickory Creek	3.75	SR 64	2/83 – 9/84
02297153	West Fork Horse Creek	14	Owen Roberts Road	10/92 – 9/94
02295850	Oak Creek	15	South of Ona	7/81 – 9/83

Collectively, data from the SWFWMD and USGS gauging stations documents Horse Creek meets the 2013 AEIS definition of perennial. The remaining streams, West Fork Horse Creek, Brushy, Oak, and Hickory, meet the 2013 AEIS definition of intermittent at the locations shown on Map 2-3-B. Although not gauged, Brady Creek also meets the definition of intermittent in the downstream reaches near the confluence with Brushy Creek.

Mosaic installed 18 low-flow stage level recorders in the summer of 2009 on stream reaches to provide information about the flow patterns on the typical first and second order headwater stream reaches on the Ona Mine. Map 2-3-B shows the location of the 2009 low-flow monitoring stations. Appendix 2-2-B-i presents hydrographs of stage levels of stream flows at these locations.

Appendix 2-2-B-i also classifies the stream segments on the Ona Mine as perennial, intermittent, or ephemeral. At the 23 locations described above where gauging data is available, the streams were classified based on the historical stage data. All remaining stream segments were classified by applying a method based on research conducted by Kiefer[10] and unpublished data collected by AMEC on behalf of FDEP.[11] Application

[10] Kiefer, J.H. 2010. Hydrobiogeomorphology of fluvial systems in peninsular Florida: implications to classification, conservation, and restoration. Ph.D. Dissertation. University of Florida.

[11] FDEP. 2013. Technical Support for Nutrient Concentration Sensitivities Associated With Different Types of Florida Freshwater Streams. Florida Department of Environmental Protection. February 2013.

of the gauging data and the Kiefer method results in the following classifications: perennial – 3 percent; intermittent – 22 percent; and ephemeral – 75%.

1.4.3.3 Flood Mapping

A modeling analysis of flood flows generated by the 25-year and 100-year storm events was conducted to generate maps of the areal extent of inundation associated with each storm event. Maps 2-8-A and 2-8-B present the results of the modeling analyses. Appendix 2-8-A contains the flood mapping study.

1.5 *DETERMINATION OF CREDITS/SUFFICIENCY*

FAEIS Section 5.2 specifies the sufficiency of mitigation proposed by Mosaic must be evaluated separately for streams, herbaceous wetlands, and forested wetlands; account for and offset lost wetland functions due to temporal lag between the time wetland disturbances and the corresponding mitigation would occur, including consideration of advanced or concurrent mitigation; and assessed by applying UMAM functional assessments to impact and mitigation sites. USACE's Regulatory Source Book provides additional guidance on applying UMAM.

The mitigation plan provides appropriate and practicable compensatory mitigation for aquatic resource impacts consistent with the 2008 Compensatory Mitigation Rule. The mitigation plan is consistent with the technical state-of-the-art science in wetland and stream restoration; results in a high likelihood of ecological success and sustainability; is focused on watershed/regional as well as local benefits; and is environmentally preferable to alternative types and sites.

The following determinations of sufficiency are based upon the baseline conditions described above and the mitigation performance standards described in Section 1.8 below. Stream mitigation is addressed separately from wetland mitigation. Consistent with the AEIS guidance, streams, herbaceous wetlands, and forested wetlands are accounted for separately. UMAM is the functional assessment applied to measure wetland mitigation sufficiency. FDEP's Stream and River Habitat Assessment Procedure (HA) is the functional assessment method applied to measure stream mitigation sufficiency.

1.5.1 <u>STREAM MITIGATION CREDITS</u>

Stream mitigation credits would be generated by the offsite and onsite mitigation projects described in Section 1.2 above. The offsite mitigation projects that would generate stream mitigation credits are the re-establishment of 14,755 linear feet of stream channels to replace Payne Creek and headwater first order tributaries on the Fort Green Mine and the rehabilitation of 5,507 linear feet of degraded first and second order tributaries to Bowlegs Creek within the Bowleg's Creek Enhancement Site. Onsite mitigation would include preservation of 120,856 and establishment of 54,326 linear feet of stream.

Avoided streams on the Ona Mine, including Horse Creek and its West Fork tributary, Brushy Creek, Oak Creek, and unnamed tributaries would be preserved and protected from degradation by a conservation easement. Protection of the riparian habitat from physical disturbance would maintain the existing riparian zone buffer width and vegetation quality, which would prevent erosion from causing bank instability and habitat smothering. Those portions of the riparian corridor subject to USACE Section 404 jurisdiction would be also afforded regulatory protection in addition to the perpetual conservation easement.

Absent preservation, upland areas are vulnerable to destruction and/or adverse impacts from land-clearing, agricultural crop production and development like nearby areas. Over time, the conservation easement protection could reasonably be expected to prevent a reduction in buffer zone width and riparian zone vegetation quality, and an increase in eroded bank lengths. Other adverse results could occur, but are not considered reasonably foreseeable for purposes of conservatively estimating mitigation credits justified by preservation.

In the pre-mining condition, water chemistry in streams has been influenced by the use of mineralized groundwater for irrigation and row-crop and citrus fertilization practices. Table 2-3-B demonstrates all streams received high concentrations of nutrients in runoff and moderate levels of specific conductance.

Water chemistry would improve during and after completion of reclamation/mitigation. The re-establishment of natural systems (including native upland buffers and riparian corridors) adjacent to each re-established stream channel would result in reduced nutrient levels, especially nitrogen, and specific conductance over time, both of which are water chemistry parameters of concern to CHNEP. Properly-sized stream channels would result in increased dissolved oxygen levels. At a minimum, water quality leaving the Ona Mine will meet water quality standards.

In the pre-mining condition, the BioRecon and SCI scores of many streams to be disturbed onsite fell within the “Impaired” categorization under these metrics. Appendix 2-2-B-i contains the SCI results.

In the post-mitigation condition for the onsite and offsite areas, the species diversity and richness of the macroinvertebrate community would exceed or be within the range of values documented in reference streams based upon literature values for similar stream systems in central Florida, and all functional feeding guilds of macroinvertebrates found in reference streams would be present. Improvement in the biological indices would result from the in-stream habitat designed and constructed in the re-established stream channels. Habitat features to be included include planting of canopy species to create shaded streams, placement of large woody debris in the re-established channels, and creation of instream pools and meander bends by excavation or stump placement to add cover, among others.

Properly sized channels would more fully support fish and macroinvertebrate communities with appropriate levels of sediment transport and periodic overbank storm event responses to transport detritus into the channels and subsequently downstream for consumption by fish and other aquatic organisms. It should be noted, however, that the streams to be re-established would largely consist of headwater first and second order segments with small contributing watersheds. Flow patterns would be ephemeral or intermittent, which will result in lower SCI scores when compared to larger perennial streams because flow duration would be insufficient to support long-lived taxa and the taxa sources would be greatly influenced by the proximal in-line and headwater wetlands.

In the pre-mining condition as described in Section 1.4 above, the instream and adjacent riparian habitat in stream segments to be disturbed by mining measured between 17 and 158 units, as measured using the HA procedure (Appendix 2-2-B-i). Thirteen percent of these segments fell within the poor range or marginal range, with 87 percent within the suboptimal range.

In the post-mitigation condition for the onsite and offsite areas, all re-established streams would have instream and adjacent riparian habitat within the suboptimal range. Thus, the re-establishment of streams as mitigation would result in improvement of the physical habitat on a site-wide basis.

Stream mitigation work for the offsite projects would occur in advance of or concurrent with physical disturbance of streams on the Ona Mine, with the exception of onsite re-establishment following mining and restoration of the three corridor crossings.

1.5.1.1 Stream Functional Analysis

Compensation for unavoidable impacts to streams is separately demonstrated by the type-for-type stream restoration as detailed in the Stream Work Plan (Appendix 2-2-B-i) and the Stream Functional Assessment summarized in Table 4-8-A-xi of the Compensatory Mitigation Plan. Similar to wetlands mitigation sufficiency demonstrated above, Mosaic has used a functional assessment approach to demonstrate the adequacy of its stream mitigation plan for the onsite and offsite areas. A numerical spreadsheet model has been developed utilizing the HA procedure described above. Stream mitigation is calculated on a linear foot basis as compared to the acreage basis used for wetlands. Channel centerline length is used to calculate both impacts and mitigation so as to properly account for sinuosity. Stream acreage is not utilized when designing mitigation for stream impacts, nor for calculating the sufficiency of the mitigation, for the following reasons:

- Stream acreage does not account for stream channel length because valley length is the only measurement available to calculate acres, thereby failing to account for stream sinuosity;

- Stream width is often greater than morphologically appropriate due to

historical impacts including cattle and vehicle trail crossings, historical erosion, and, in some cases, artificial channelization;

- The bankfull width of a stream sized properly is based upon, among other factors, the drainage area; therefore, stream width cannot be increased or decreased independent of other geomorphic variables; and

- Streams are linear surface water features with ecological values more dependent on longitudinal features than cross-section features (e.g., riffle-pool habitat).

- Mitigation to compensate for artificially wide existing channels could result in creation of stream channels that would not experience bankfull events, thereby increasing the likelihood of erosion over time into undesirable morphological characteristics;

The Stream Condition Index, or SCI, is one of the principal tools FDEP has developed to assess whether streams are healthy or impaired under the Clean Water Act total mass daily load program and Numeric Nutrient Criteria (FAEIS pages 3-113 through 3-116). In addition to macroinvertebrate sampling, the SCI procedure includes applying the HA, which FDEP derived from EPA's Rapid Bio-assessment Protocols.

The HA evaluates four primary and four secondary habitat components. The primary habitat components are:

- Substrate Diversity - number of productive habitats present = 1 – 20;
- Substrate Availability - % of major productive habitats present = 1 – 20;
- Water Velocity – score on velocity between < 0.05 m/sec and > 1.0 m/sec = 1 – 20; and
- Habitat Smothering - % of habitat affected by sand, silt, or algae = 1 – 20.

The secondary habitat components are:

- Artificial Channelization – degree sinuosity reduced by dredging = 1 – 20;
- Bank Full Stability – location of bank full indicators on each bank = 1 – 20;
- Riparian Buffer Zone Width – width of native habitat along each bank = 1 – 20; and
- Riparian Zone Vegetation Quality - % of native habitat in riparian zone = 1 – 20.

The scores range from a minimum score possible of 12 and a maximum score possible of 160. FDEP classifies stream habitat as follows:

- Optimal = 121 – 160,
- Suboptimal = 81 – 120,
- Marginal = 41 – 80, and
- Poor = ≤ 40.

Mosaic has applied the HA as the metric to numerically account for functional losses and gains associated with stream habitat impacts and mitigation. Comparison of FDEP's procedure to others demonstrates the FDEP procedure properly applies EPA's Rapid Bio-assessment Protocol. In addition, the validity of SCI, along with the FDEP Habitat Assessment Procedure, was carefully reviewed during the recent numeric nutrient criteria rulemaking.

Stream functional losses are calculated by applying the following equation:

Function Loss (FL) = ESL x (HAS/160) x TL

Where: ESL: = Existing stream segment length;
HAS = Habitat Assessment score (maximum possible = 160); and
TL = Temporal lag factor

Stream lengths and HA scores for impact areas are provided on Table 4-8-A-vii. The temporal lag factor is applied to calculate actual functional loss to reflect stream function removal over a period of 25 years rather than penalizing for complete functional loss upon permit approval. The Temporal Lag Factor used for the functional loss calculations are shown on Table 4-8-A-i.

Stream functional gains are calculated by applying the following equation:

$$\frac{(HAS/160*CSL)*TL}{R}$$

Where:
CSL = Created stream length;
HAS = Documented or Predicted Habitat Assessment score;
R = Risk factor; and
TL = Temporal lag factor

The following explain the HAS, R, and TL factors applied:

Stream lengths and HA scores for stream mitigation areas are provided on Table 4-8-A-viii, Table 4-8-A-x, 4-8-A-xiv, and 4-8-A-xv. Table 4-8-A-x reflects that preservation areas would be provided prior to mining, therefore Risk and Temporal Lag are appropriately set at 1. The Preservation Streams were scored similarly to the Preservation wetlands concepts. "Without project" scoring in Table 4-8-A-x is based on the premise that the existing condition of the avoided/preservation areas (i.e. upland buffers, riparian areas and the preserved streams) would not be protected from degradation from non-corps regulated activities and/or exempt agricultural activities. For example, without the project and associated CE, no regulatory obstacles prevent 1) the surrounding uplands and non-jurisdictional wetlands from being converted to a more intensive land use (i.e., pasture, row crops, etc.), 2) the surrounding uplands and non-

jurisdictional wetlands from being ditched resulting in an altered hydroperiod and/or degradation of water quality causing habitat smothering, changes within water velocity within the streams, 3) the logging of forested wetlands and their surrounding native forested uplands that could compromise the riparian buffer, changes in bank stability, and 4) the composition and diversity of desirable species may be compromised as the surrounding landscape is altered to create crops, pastureland or other similar uses. Unregulated activities could have an indirect adverse effect on the avoided/preservation streams, causing a reduction in the stream habitat. Table 4-8-A-viii describes the expected quality (including time lag and risk) of the established streams (further described below).

Predicted Habitat Assessment (HA) Scores

Mosaic has assigned either the actual documented HA scores (for impact areas) or, for created systems, a reasonably expected functional stream habitat value of 105 out of a possible 160, which is within the range of the suboptimal category (suboptimal ranges between 86 and 128) and consistent with USACE guidance on recent mine permit applications. The selected stream reference systems that will be utilized to determine success standards also fall within the suboptimal range. This score is also consistent with streams already established elsewhere on Mosaic property. Habitat Assessments conducted at Bryant's Branch, LMR-8, and Maron Run, streams established following phosphate ore extraction at Mosaic's Fort Meade, Four Corners, and South Fort Meade Mines are shown below. The following data in Text Table CMP-5 compares these results to the results projected for the streams to be established on the Ona Mine and on the Payne Creek and Bowlegs Creek offsite project areas.

Text Table CMP-5						
Phosphate Ore Extractions						
Parameter	BB	LMR-8	MR	Average	SPE	% Achieved
SD	16	13	5	10	10	100
SA	15	20	18	17	12	71
WV	12	14	14	13	11	85
HS	10	17	15	12	16	133
AC	10	18	10	10	16	160
RBS	10	9	10	10	6	60
LBS	10	9	10	10	6	60
RBW	10	10	10	10	10	100
LBW	10	10	10	10	10	100
RBQ	10	4	5	6	4	57
LBQ	10	4	5	6	4	57
Total Score	**123**	**128**	**112**	**121**	**105**	**90**

Note: Totals affected by averaging.

The increased functional values projected for habitat smothering and artificial channelization at Ona over Bryant's Branch and Maron Run are attributable to the use of geotextile fabric to control erosion and preconstruction modeling of stream reaches to be re-established. These design techniques have been proven at other Mosaic stream creation sites, but were not employed at Bryant's Branch or Maron Run.

For these reasons, Mosaic has assigned an average lift in functional stream habitat of 105 out of a possible 160 to the onsite and offsite stream systems, which is within the range of the suboptimal category (suboptimal ranges between 81 and 120). The basis for this scoring is provided in Text Table CMP-6 below.

Text Table CMP-6	
Onsite and Offsite Stream Re-Establishment Scores	
Habitat Assessment Parameter	**Score/Possible Score**
Substrate Diversity (SD)	10/20
Substrate Availability (SA)	12/20
Water Velocity (WV)	11/20
Habitat Smothering (HS)	16/20
Artificial Channelization (AC)	16/20
Right Bank Stability (RBS)	6/10
Left Bank Stability (LBS)	6/10
Right Riparian Buffer Width (RBW)	10/10
Left Riparian Buffer Width (LBW)	10/10
Right Riparian Buffer Quality (RBQ)	4/10
Left Riparian Buffer Quality (LBQ)	4/10
Total Score	**105/160**

These scores are based upon the projected stream condition three years following channel construction and, therefore, reflect immaturity of the stream system vegetative structure. Examples of increased function expected to occur as the vegetation matures with time include substrate diversity and availability that will increase, habitat smothering that will decrease, and bank stability and riparian buffer vegetation quality that will increase.

Stream Mitigation Risk Factors (R)

Two types of risks are associated with stream establishment: (1) risk of failing to reach the target habitat assessment score; and (2) the risk of degradation over time after the target habitat assessment score has been achieved. A risk factor of 1.11 was used in the

calculations to account for risks associated with proposed secondary uses within those areas, Mosaic's mitigation and long term management plans minimize both of these risks by employing the measures described in the following subsections.

The stream channel design described in Appendix 2-2-B-i of the Stream Work Plan eliminates the risk of failure to reach the target habitat functional value. This sequence results in an iterative and adaptive process that requires Mosaic to continue to modify the design until success is achieved, should initial efforts fail to reach the target. Coupled with the stream design modeling tools available to properly size the stream channel geometry and plan form, the risk associated with this sequential approach is not whether success will be achieved, but rather whether additional time beyond three years will be required.

In addition, there are a number of proven stream restoration tools that are applicable to created streams not yet achieving success criteria. These include adding large woody debris to create instream habitat, pool, or added sinuosity; planting trees or installing additional or different geotextile fabric in streambanks; excavating additional pools; removal of excessive sedimentation; and supplemental planting in the riparian buffer. As a result, should a given stream segment fail to reach the design target, it is unlikely that the design team would need to "start over" to correct any deficiencies.

The risk is further reduced because all of the stream mitigation would take place in a controlled watershed that is isolated by the ditch and berm severance from the receiving stream. Mosaic can, therefore, control the flow rate in the stream by pumping mine recirculation system water through the created channel in pulses or continuously to test stream channel performance in terms of bank full events, erosion or accretion, stream flow velocities, etc. Construction of stream channels in the isolated environment Mosaic creates with the ditch and berm system essentially results in an in place "test cell" that is in stark contrast to attempts to restore existing degraded streams in situ in terms of risks of failure and consequences to the downstream, offsite aquatic environment

The comparison between Mosaic's historic performance at Bryant's Branch, LMR-8, and Maron Run and the projections for the Ona Mine correspond to a risk factor of 0.90 (or 1.11). This means there is only a 10 percent probability that Mosaic's future performance would fail to achieve results similar to its track record. This same risk factor of 1.11 for stream establishment was also applied to the offsite Payne Creek and Bowlegs Creek projects.

Degradation risk relates to the reduction of the functional value in the future following achievement of the success criteria and release of the financial responsibility instrument. On Ona, this would be minimized by a 60-foot wide protected buffer on each side of the created streams. Table 4-5-A details the buffers, which include uplands as well as wetlands. The restrictive provisions of the conservation easement would apply to the created stream channels because of their location within Post Reclamation Conservation

Easements shown Appendix 4-4-C. Stream buffers provided in the Conservation Easements of the offsite mitigation at Bowlegs Creek and Payne Creek are typically extensive, well in excess of 60 feet (Exhibits 7a –through 7e in Appendix 4-1-B, and Exhibits D-1-A through D-1-E in Appendix D of Appendix 4-1-C).

Stream Temporal Lag Factor

Similar to the wetland mitigation temporal lag factors described below, Time Lag factors in Table 4-8-A-i were utilized in the calculation to convert the functional stream habitat lift generated by the created streams to facilitate evaluating whether mitigation more than offsets the functional loss created by mining. Table 4-8-A-viii assumes no functional habitat value is credited until the created stream is approved to be connected to the undisturbed downstream network, meaning that the hydrology and water quality performance standards have been met and the mitigation sequence has advanced to final pre-release monitoring. Under this assumption, zero value is applied until the reconnection dates listed on Table 4-8-A-viii are reached. Once reconnected, the projected habitat values are applied.

The Stream Work Plan includes thorough descriptions of the proposed stream impacts. The plan summarizes the impact and creation of mitigation of streams in the form of linear feet (Appendix 2-2-B-i.), and the quality of the streams proposed for impact (Table 4-8-A-vii). The quality, amount and type of the streams proposed for creation are provided in Table 4-8-A-viii. As indicated in the Stream Work Plan, more linear feet of natural, intact stream channel will exist on site post-reclamation than presently exists. Ditched, agriculturally impacted streams on site will either be restored or enhanced in accordance with the Stream Work Plan. Also a minimum 120 foot buffer will remain protected in perpetuity as indicated on Table 4-5-A and the Mitigation Categories Map (Map 4-8-A-i).

The USACE Stream Mitigation will offset 41,377.2 units of loss (100,767 linear feet) with 41,580.5 units of lift associated with preservation and creation, for a surplus of 203.3 units that will be unavailable for compensation for any other future impacts. Table 4-8-A-xiii demonstrates the sufficiency of the Stream Mitigation plan using the functional assessment approach described above.

Offsite stream establishment will occur as part of the Payne Creek and Bowlegs Creek projects. The streams at these projects will be constructed following issuance of the Ona Permit and will have a 2-year reconnection timeframe based on design elements that currently exist in the project area, such as hydrology. Therefore, the temporal lag factor used for offsite stream establishment corresponds with the Ona Year 2 herbaceous wetland lag factor of 0.9031. The Bowlegs Creek and Payne Creek stream mitigation plans can be found in Appendices 4-1-B and 4-1-C, respectively.

1.5.1.2 Restoration of Access Corridor Crossings

Selection of temporary mine access corridor crossing locations aligned with existing roads minimizes the effects of crossing construction. Removal of the temporary sand fill and geotextile fabric would expose the existing stream channels and banks. Planting plans in these locations would be designed to more closely replicate the adjacent vegetative communities so as to blend into the adjoining preservation areas. Benefits to the aquatic ecosystem associated with this method include replacement of the canopy to provide stream shading and creation of a continuous wildlife corridor, among others. Plans to construct roads for post-reclamation agricultural uses at these same locations preclude restoration of conditions that would generate a net improvement in stream habitat. For these reasons, restoration of the access corridor crossings would return the riparian buffer zone width and vegetation quality to, on average, current conditions. Because the impacts are temporary and limited, these restoration practices will offset the temporary impacts.

1.5.2 WETLAND MITIGATION CREDITS

In the following Sections, Mosaic has applied a functional values balancing model using numerical mitigation worksheets developed by the USACE Jacksonville District for wetlands disturbed by mining and subsequently re-established onsite and offsite.[12] UMAM, an USACE-accepted aquatic site assessment technique, is used to calculate functional losses and relative functional gains. Information about the model is available on the Jacksonville District website.

The UMAM model quantitatively evaluates the onsite mining and reclamation by aggregating all impacts (or debits) and mitigation (or credits) that would occur on the 22,483-acre mine over a 47-year mining and mitigation time horizon (i.e., 26 years of mining disturbance; 6 years of post-construction mitigation; and 15 years of growth to reach expected conditions). For the offsite projects where there are no mining impacts, the UMAM model evaluates the mitigation that would occur over the offsite mitigation time horizon (i.e. one to two years of construction followed by three to 15 years of growth to reach expected conditions). Factoring in all of the considerations presented in the USACE guidance, the mitigation "balance sheet" for the proposed Ona Mine would consist of balancing, or "netting", the following "debits" and "credits", which should be greater than zero to demonstrate that "no net loss" of wetland functional capacity would occur:

- **"Debits"** (i.e., Wetland Impacts) are the sum of impacts to wetlands that will be cleared and drained prior to mining or construction of access corridors.
- **"Credits"** (i.e., Wetland Mitigation) are the sum of re-establishing wetlands; and the lift generated by restoration of offsite properties and avoided lands and from granting conservation easement protection of avoided lands and properties.

[12] Calculating Mitigation; Version 4.0; PowerPoint presentation by Robert Barron USACE Jacksonville District.

An overall summary of the results of this model can be found on Table 4-8-A-xiii.

1.5.2.1 Description of UMAM Quantitative Model

The UMAM scoring methodology is based on a review of three categories of wetland functions, including Location and Landscape Support, Water Environment, and Community Structure.

Location and Landscape support is the value of the functions of the wetland to wildlife by the landscape position of the wetland and its relationship with surrounding areas. The Location and Landscape Support category takes into account a broad scope, accounting for not only areas immediately adjacent to a wetland, but surrounding landscapes and barriers (i.e., roads, development, agricultural activity) that affect wildlife utilization.

Water Environment is a parameter that scores the hydrology and water quality of a given wetland and the benefit provided to fish and wildlife. Factors that may influence water quality include: whether or not a system is directly ditched; adjacency to ditches; lack of a contributing basin; or degraded water quality due to cattle or adjacent agricultural practices.

The Community Structure parameter assesses the vegetation and physical structure of the vegetative community in relation to how that vegetation supports the functions that benefit fish and wildlife utilizing the wetland. Vegetation is the base of the food web in any community and provides many additional structural habitat features for fish and wildlife.

Each of the three UMAM categories is scored on a scale of zero to 10 based on approximately ten different indicators listed in subsection 62-345.500(6) F.A.C. The sum of the scores is then divided by 30, resulting in a numerical score between 0 and 1. Therefore, the overall wetland score can be thought of as a percentage of full function. A perfect score of 1 indicates that the assessment area is functioning at the maximum, or 100%, level.

Each wetland is scored in a “without” (i.e., without impact or without mitigation) or current condition and a “with” (i.e., with impacts or with mitigation) scenario. The difference of the scores of each is known as the delta, or change in function (Δ). In simplest terms, the delta is the change in the percentage of value that a wetland provides under either impact or mitigation scenarios. For impacts, the change in function will be negative (-Δ). Conversely, for mitigation areas, the change in function will be positive (+Δ).

For mitigation wetlands (onsite and offsite), the mitigation delta must be adjusted to account for time-lag (the period of time between when functions are lost and when those functions are replaced by the mitigation) and risk (the uncertainty of mitigation success). Time-lag adjustments are based on the values presented in USACE Jacksonville District guidance based on a 3% discount, depending on the expected time needed for the

mitigation wetland to reach maturation. Risk is applied on a quarter-point increment from a scale of 1 (no risk) to 3 (high risk). The result of applying time-lag and risk on the mitigation delta is known as the Relative Functional Gain (RFG).

Each polygon affected by the impact or mitigation proposed, is evaluated using UMAM. The functional loss of each polygon is summed to calculate the functional loss (i.e. debits) for the site. The relative functional gain for each onsite and offsite mitigation polygon is summed to calculate the relative functional gain of the mitigation (i.e. credits). Mitigation is sufficient if the aggregate functional gain is greater than the functional loss. The following Sections describe each of the parameters used to calculate either functional loss or relative functional gain.

1.5.2.1.1 Wetland Polygons (P)

Map 2-2-A-ii illustrates all of the existing USACE jurisdictional wetland polygons present on the Ona Mine. Certain polygons would be affected by mining and others would be avoided and protected from disturbance by a perpetual conservation easement. Map 2-2-A-ii illustrates the areas to be disturbed by mining operations; all wetland polygons within mined or disturbed areas have been listed on Table 4-8-A-iii(F)&(H), which also includes the mining year disturbed. Map 4-8-C illustrates the areas to be protected by a conservation easement. Appendices 4-1-B and 4-1-C illustrate the mitigation wetland polygons for the offsite Bowlegs Creek and Payne Creek projects, respectively.

1.5.2.1.2 Risk Factors

Below is an overview of risk as outlined in 62-345.600(2) F.A.C., which was adopted by the USACE when they recommended that UMAM be used for federal wetland regulatory purposes starting August 1, 2005. This overview is then followed by a specific discussion of how each mitigation category was scored, and finally how each major habitat within the establishment mitigation category was scored.

Mitigation risk accounts for the degree of uncertainty that the proposed conditions will be achieved, resulting in a reduction in the ecological value of the mitigation assessment area. In general, mitigation projects which require longer periods of time to replace lost functions or to recover from potential perturbations will be considered to have higher risk than those which require shorter periods of time. Each assessment area is scored on a scale from 1 (for no or *de minimis* risk) to 3 (high risk), on quarter- point (0.25) increments. A score of one is typically applied to mitigation conducted in an ecologically viable landscape and deemed successful or clearly trending towards success prior to impacts, whereas a score of three would indicate an extremely low likelihood of success based on the ecological factors below (62-345.600(2) F.A.C.). This language supports the scoring of onsite preservation as a risk of one because this mitigation type already exists in an ecologically-viable landscape and the mitigation will already exist prior to impacts. This language also supports a risk factor of 1.25 for enhancement, as it was a previously existing wetland footprint, has a strong likelihood of success, will be conducted prior to

mining, while acknowledging a risk for invasive species vulnerability (described below) during establishment.
A single risk score must be determined and assigned to each UMAM Assessment Area, considering the applicability and relative significance of the factors provided in 62-345.600(2)(a-f), based upon consideration of the likelihood and the potential severity of reduction in ecological value due to these factors. The risk score has a significant effect on the overall Functional Gain (FG) attained by the proposed mitigation. For instance, a risk score of 1.5 effectively eliminates one-third of the FG from the proposed mitigation and a risk score of 2.0 eliminates half, regardless of any other factor such as temporal lag.

The six specific factors to be considered in risk scoring outlined in 62-345.600(2)(a-f), F.A.C. are listed below, along with specific information regarding how the proposed project relates to each. Details on how the proposed conditions will be achieved and maintained onsite and offsite are found throughout the application materials. This information includes, but is not limited to the presentation of a detailed integrated groundwater/surface water model, commitment to the use of native topsoil or muck when available, the use of sand tailings as the substrate for all wetland reclamation, as well as preservation and/or creation of upland vegetative buffers that exceed any state or federal width requirements. Furthermore, every onsite and offsite area included as federal mitigation is proposed for permanent protection that includes perpetual management and a commitment to maintain baseline conditions.

Hydrologic Vulnerability - 62-345.600(2)(a)

This factor requires consideration of the "vulnerability of the mitigation to and the extent of the effect of different hydrologic conditions than those proposed". Specifically, the degree of dependence on mechanical or artificial means (i.e. pumps or adjustable weirs) to achieve proposed hydrologic conditions, effects of water withdrawals, diversion or drainage features, reliability of the hydrologic data, modeling, and design, and the hydrologic complexity of the proposed community must be considered. Systems with relatively simple and predictable hydrology would entail less risk than complex hydrological systems.

The CMP includes no dependence on artificial means to achieve hydrology and no post-reclamation water withdrawals are proposed as part of the post-reclamation landscape. The artificial drainage features (ditches) that currently exist in the landscape will be eliminated through mining and reclamation and no ditches are proposed to be reclaimed. Further, the permanent protection provided will prohibit ditching within the mitigation wetlands in perpetuity.

Finally, the design of the reclamation plan includes extensive modeling of pre and post- mining hydrology and topography to ensure that the reclaimed systems will function as designed and that drainage basins will function similar to pre-mining basins to maintain or improve pre-mining watershed

flow regimes. Results of the integrated modeling indicate that the proposed mitigation takes into account watershed needs and will result in ecologically self-sustaining mitigation.

The post-mining hydrologic modeling reports will be utilized to ensure that tailings are placed and graded to the correct depth and extent to ensure that the hydrologic regimes for reclaimed wetlands are successful in supporting and sustaining the target wetland types within the onsite areas. All wetlands will be monitored for hydrologic performance and vegetative composition after they are constructed.

The majority of offsite areas rely on observable hydrologic conditions sourced from existing streamflow and groundwater flow sources. There are limited potential variabilities in tailings or overburden placement associated with these projects and post-mining hydrology modeling is generally not required.

Exceptions apply to the Payne Creek project's wetlands occurring within and adjacent to mined areas that are yet to be fully configured with reclamation materials, specifically the in-line wetland complex consisting of polygons W6, W7, W8, W14, W15, W16, W17, W18 and W19 (refer to Appendix D-1 of Appendix 4-1-C, Exhibits D-1-D and D-1-E for a map of locations). Those particular Payne Creek sites will be assessed and modeled as per the onsite wetlands.

Even so, the post-reclamation hydrology of those wetlands will largely come from eliminating the Payne Creek bypass canal and redirecting the full volume of Payne Creek's streamflow through the project instead. Further, the areas located west, south, and east of the in-line wetlands discussed will retain their existing lithology, which has already been modeled. For these reasons, the hydrologic risk of all the offset areas is deemed to be low.

Based on the information provided above, hydrologic vulnerability was considered low risk for all mitigation types, however Mosaic agreed to consider hydrologic vulnerability within "stand-alone" wet prairies and seepage wetlands as moderate because of the low tolerance for variability/error within these systems. See sub-section 1.6.2.1.3 in this document for further discussion regarding seepage wetland modeling and how that applies to onsite and offsite mitigation areas.

<u>Vegetative Vulnerability - 62-345.600(2)(b)</u>

This factor requires consideration of "the vulnerability of the mitigation to the establishment and long-term viability of plant communities other than that proposed, and the potential reduction in ecological value which might result,

considering the compatibility of the site soils and hydrologic conditions with the proposed plant community, planting plans, and track record for community or plant establishment method." This factor is essentially the risk that the proposed wetland will transition to an upland, or a type of wetland community that was not proposed because of improper hydrology or soils. It is separate and distinct from vulnerability to colonization by invasive or exotic species, which is considered in the next section.

As noted in the hydrologic vulnerability section above, extensive modeling has been conducted in preparing the CMP and designing post reclamation habitats and further modeling will be conducted to ensure proper hydrology for the species proposed. In addition, Mosaic has committed to employing the best available technology to provide viable growing medium. Specifically, the CMP states that forested and herbaceous wetlands will be created on sand tailings and then graded and capped with suitable wetland topsoil/muck, if available, or other suitable organic matter with specific depths and structure to be determined by habitat type. To create microhabitat and habitat heterogeneity within the wetlands, the created systems will be graded to provide a range of habitat types and distinct zonation, from seasonal to permanent inundation. Direct transfer of small shrubs and trees from the future mining areas will be utilized to the extent practicable. Any planted vegetation will be consistent with the species diversity and density of the targeted wetland community type. Species will be selected on design elevations of constructed wetlands and comparisons with similar wetlands proposed for impact.

The offsite Bowlegs project was designed to utilize existing soil substrates. Payne Creek was as well, but will entail more earthwork akin to reclamation in portions of the project. Those earthwork areas will receive soil treatments similar to those proposed for onsite reclamation.

The specific details for wetland reclamation and offsite mitigation are presented within the Mitigation Work Plan (Section 1.6 of the CMP), including construction methods for forested wetlands and herbaceous wetlands. A detailed list of vegetation to be utilized in the onsite reclamation by habitat type and planting depth is presented in Tables 4-3-A through 4-4-E. Offsite plant lists are located in Table 3 of Appendix 4-1-C and Table 2 of Appendix 4-1-B.

Mosaic has a history of creating viable plant communities using similar planting plans and techniques as those proposed in the CMP. Permit conditions for the onsite and offsite areas will include requirements for percent cover and species composition, where appropriate, and will also limit intervention by Mosaic for two years prior to release from monitoring thereby increasing the likelihood that the mitigation, as described in the CMP, will be self-sustaining.

Based on the information provided above, vegetative vulnerability was considered low risk for most herbaceous wetlands, but moderate for wet prairies because of the low tolerance for hydrologic variability/error and moderate for all forested systems based on the time necessary to reach maturity.

Invasive Species Vulnerability - 62-345.600(2)(c)

This factor requires consideration of "the vulnerability of the mitigation to colonization by invasive exotic or other invasive species, considering the location of recruitment sources, the suitability of the site for establishment of these species, [and] the degree to which the functions provided by plant community would be affected."

As discussed in the section above, all established onsite wetlands will be reclaimed to maximize direct transfer of muck from mined wetlands for use in creating an appropriate growing medium to the extent practicable. The CMP dictates that any stockpiled muck must be stockpiled in a manner to minimize both oxidation and colonization by nuisance species. In the event that insufficient wetland muck or topsoil is available, Mosaic will coordinate the use of other appropriate materials with USACE. Only wetland topsoil that is reasonably free of any nuisance or exotic vegetation will be used in reclamation.

As a maintenance practice, equipment that has been, or potentially been, operated in nuisance/exotic infested areas will be cleaned prior to being brought on-site to control the accidental introduction of undesirable seeds.

Subsequent to establishment, onsite and offsite mitigation maintenance will include at least semi- annual inspections of wetlands for the presence of nuisance and exotic species and other protective measures (i.e. fencing) identified as needed during establishment of wetlands. Nuisance and exotic vegetation identified during the inspections will be controlled by appropriate methods, such as herbicide application, fire, hydrologic, or mechanical means to limit their cover to less than 5 percent and to remove exotic species when present in each mitigation area. Manual or chemical treatment of nuisance and exotic species will be implemented at least annually when cover of undesirable vegetation in any mitigation area increases to more than five percent cover or if invasive exotic species are present. Manual or chemical treatment will also be implemented if cogon grass (*Imperata cylindrica*) coverage exceeds 5 percent on reclaimed sites or five percent within 300 feet of any mitigation wetland or other surface water.

While the potential for existing or new nuisance/exotic species invasion exists in all habitat types, the techniques employed by the applicant and the enforceable conditions that will ultimately exist in the permit will drastically reduce the risk of such occurrences on the Ona Mine. Permit conditions will

include a requirement for semi-annual monitoring, limiting the percent cover of nuisance and exotic species prior to monitoring release, and also limiting intervention by Mosaic (i.e. supplemental planting, herbicide, etc.) for two years prior to release from monitoring.

Based on the information provided above, invasive species vulnerability was considered moderate risk for all mitigation types.

Water Quality Degradation Vulnerability - 62-345.600(2)(d)

This factor requires the consideration of "the vulnerability of the mitigation to degraded water quality, considering factors such as current and future adjacent land use, and construction, operation, and maintenance of surface water treatment systems, to the extent that ecological value is affected by these changes."

The Ona CMP has been designed to maintain and improve the quality and quantity of aquatic resources within the Peace River Watershed. Mining and reclamation will eliminate agricultural ditching, which will reduce flashy contributions of agricultural stormwater that is currently common within the landscape. Furthermore, there is a significant increase in width of (native) vegetated buffer in the post-reclamation landscape relative to many wetlands proposed for impact, which should improve the onsite and downstream water quality. In fact, the proposed buffer of wetlands and streams in the Ona CMP is over three times wider than that recommended by the National Resource Conservation Service for protection of stream water quality (FAEIS pg. 5-33).

Section 4.4.4 of the FAEIS stated that no significant water quality impacts would be expected as part of the Ona Mine and the ERP constitutes water quality certification for the project. The post reclamation landscape and the offsite mitigation areas will include a vast area of wetlands and upland buffers under permanent protection that will drastically reduce the likelihood of future water quality degradation.

Based on the information provided above, water quality degradation vulnerability was considered low risk for all mitigation types.

Secondary Impact Vulnerability - 62-345.600(2)(e)

This factor requires the consideration of "the vulnerability of the mitigation to secondary impacts due to its location, considering potential land use changes in surrounding area, existing protection provided to surrounding areas by easements, restrictive covenants, or federal, state, or local regulations, and the extent to which these factors influence the long term viability of functions provided by the mitigation site."

The selection of each wetland onsite and offsite for federal mitigation included an analysis of the vulnerability to secondary impacts. The wetlands proposed for mitigation are part of a vast network of consolidated reclaimed uplands and wetland habitat that complements the onsite preservation and provides an expanded wildlife corridor connecting onsite and offsite habitats. Wetlands that were considered to be most vulnerable to secondary impact because of their proximity to future development corridors – or a general isolated location – were excluded from the CMP as mitigation. The proposed permanent protection via a Conservation Easement includes all CMP onsite and offsite mitigation wetlands as well as an upland buffer that extends, in most cases, well beyond the limits of the wetland.

Based on the information provided above, secondary impact vulnerability was considered low risk for all mitigation types.

Direct Impact Vulnerability - 62-345.600(2)(f)

This factor requires the consideration of "the vulnerability of the mitigation to direct impacts, considering its location and existing and proposed protection provided to the mitigation site by easements, restrictive covenants, or federal, state, or local regulations, and the extent to which these measures influence the long term viability of the mitigation site." Mosaic has agreed to protect all onsite and offsite mitigation wetlands using a Conservation Easement. All direct dredging, filling, tree clearing, or other habitat alteration not associated with land management are prohibited. The USACE will have the right to enforce this restriction through granting of the CE.

Based on the information provided above, direct impact vulnerability was considered low risk for all mitigation types.

Text Table CMP-7 below provides a risk consideration summary calculation for the types of mitigation provided in this plan. In this calculation, a consideration determined to be low risk is assigned a score of one, moderate risk is assigned a score of two and high risk is assigned a score of three. The subsequent risk calculation demonstrates that the overall risk scores assigned for each general habitat type are appropriate for the type of mitigation offered, given the methods employed and the commitments outlined in the CMP and application materials.

Text Table CMP-7				
Risk Considerations per 62-345.600(2)(a-f), F.A.C.	Herbaceous		Forested	
	Typical	Wet Prairie (643)	Typical	Bay Swamps (611)
Hydrologic Vulnerability	1	1	1	2
Vegetative Vulnerability	1	2	2	2
Invasive Species Vulnerability	2	2	2	2
Water Quality Vulnerability	1	1	1	1
Secondary Impact Vulnerability	1	1	1	1
Direct Impact Vulnerability	1	1	1	1
Sum of Scores	7	8	8	9
Calculated (avg) Risk Score	1.17	1.33	1.33	1.5
Assigned Risk Score	1.25	1.5	1.5	1.75

The risk factors above were also used to calculate UMAM credits for the Payne Creek and Bowlegs Creek offsite mitigation projects. The risk factors used for the UMAM assessment of establishment wetlands for the offsite projects were 1.25 for marshes, 1.50 for wet prairies, 1.50 for mixed forested wetlands, and 1.75 for bay swamps. The risk factors used for wetland enhancements at the Bowlegs Creek offsite project were 1.25 for marshes and wet prairies, and 1.50 for mixed forested wetlands and bay swamps. The risk associated with wet prairies and bay swamps is lower for enhancement than for establishment because the locations of these enhancements, as determined from field visits, are areas where the hydrology is already present. Seepage slopes which would be suitable sites for planting bays but currently lack a desirable wetland community structure were observed in the field. Because the hydrology is already established, a lower risk score than that used for establishment is reasonable. Wetland preservation areas were not discounted for risk (utilized a risk of 1).

1.5.2.1.3 Time Lag (T-Factor)

A Time Lag Factor (also referred to as a Temporal Lag Factor) is used in the functional loss (FL) calculations to account for the duration of time a wetland is impacted due to mining. A Time Lag Factor is also used in the relative functional gain (RFG) calculations to account for the time it takes for a wetland (once built) to reach full functionality. Time lag was considered as part of all impact and mitigation types and was used in the final calculation of Functional Loss and Functional Gain for all Assessment Areas (AAs).

The FAEIS Table 5-1 temporal loss worksheet does not directly apply to Ona impacts because the USACE worksheet assumes all impacts occur during the same year, whereas mitigation is completed (i.e., defined as totally successful) over a number of years. The Ona temporal loss calculations were modeled after the South Pasture Extension Mine

calculations, as directed by the USACE Jacksonville District. In the case of Ona, the impacts would occur in discrete mining blocks over approximately 26 years, as compared to one year.

In order to account for the onsite temporal impacts, Mosaic's functional analysis treats Ona as one ecosystem whose existing aquatic resource functional values are assumed to continue to be provided until the year when mining disturbance would occur. At that time, if the wetland polygon is proposed to be directly or indirectly affected, the functional values are eliminated. Table 4-8-A-i details the T-Factors used in the onsite functional loss analysis.

The same approach is used to account for the time lag associated with compensatory mitigation in the years following permit issuance. Table 4-8-A-ii(F)&(H) presents the T-Factors for establishments of forested and herbaceous mitigation wetland. These factors reflect the results of applying USACE guidance for re-establishment of forested and herbaceous wetlands, respectively. Partial credit would be granted for Location/Landscape Support, Water Environment and Community Structure upon completion of reclamation activities. In herbaceous systems, within three years of the completion of physical work, the vegetation will be mature and full credit for these parameters is allotted then. However, full mitigation is credited upon the fifteenth year after the completion of planting in a forested system.

Groundcover is projected to be fully functioning in 10 years and canopy cover is projected to be fully functioning in 15 years. Wildlife utilization likewise follows the 15-year schedule. While groundcover would be established during the year built, the planting of shade tolerant target species beginning in year seven as the canopy begins to close is why 10 years are allowed; prior to canopy closure, the groundcover is not expected to be comprised of the shade tolerant species present in forested wetlands. For these reasons, the temporal lag factors assume the target functional capacity of the mitigation wetlands is reached 15 years following construction.

In summary, the temporal lag factors applied in the Ona functional analysis apply the same approach, formulas and discount factors as the USACE Jacksonville District mitigation worksheets.

All lag factors begin with the "year built", which is the year physical re-vegetation efforts are completed, as shown on Map 4-1. The time-lag factor is based upon the average UMAM functional values Mosaic is proposing to achieve. Mosaic has demonstrated the ability to create wetlands with a UMAM score of 0.73-0.80, in line with the target average scores of 0.77-0.78.

There is no time-lag involved with the preservation portion of the onsite mitigation plan because the RFG is derived from preserving the parcel in its existing condition. There is no lag in time for vegetative communities to develop or mature.

The Payne Creek and Bowlegs Creek offsite projects are proposed to be constructed immediately following issuance of all required Ona Mine permits. Construction of the wetlands is expected to be completed within one year, with the exception of WC-4 at Bowlegs Creek, which will require two years of pre-construction activities to eradicate undesirable species prior to construction. The temporal lag factor used for offsite wetland establishment and enhancement therefore corresponds with the Ona Year 0 lag factor for the majority of the wetlands, which is 0.9784 for herbaceous wetlands and 0.9363 for forested wetlands (acknowledging community development timeframes). The Year 2 lag factor of 0.9031 was used for WC-4. Wetland preservation areas were not discounted for time lag (utilized a time lag of 1).

1.5.2.2 Application of UMAM Quantitative Model

The following sections describe how the above described UMAM Quantitative Model was applied to the proposed Ona Mine.

1.5.2.2.1 Functional Loss Due to Mining Disturbance

Applying the UMAM rule and USACE guidance documents, Table 4-8-A-iii(F)&(H) present calculations for mining impacts.

1.5.2.2.2 Relative Functional Gain: Onsite Re-Establishment of Wetlands

The UMAM projected mitigation deltas presented below for the various onsite mitigation community types proposed are based upon several factors. First, FDEP independently evaluated numerous, existing Mosaic mitigation wetlands for purposes of establishing UMAM values for created wetlands on reclaimed phosphate mines (FAEIS page 5-19). Second, Mosaic compared the mitigation release/success criteria to be imposed by Section 1.8 the scoring criteria presented in Rule 62-345.500, F.A.C., as described below. The results of these analyses were that the values shown below are consistent with existing mitigation wetlands created by Mosaic.

Mosaic projects the functional capacities of the community types proposed as onsite mitigation to be as follows, based upon the UMAM scoring guidance provided in Chapter 62-345, F.A.C.:

- Location and Landscape Support: The mitigation wetlands on the Ona Mine will be generally clustered along the post reclamation main drainage features, and become part of the Integrated Habitat Network (IHN) in the Horse Creek, Brushy Creek, Oak Creek, and Hickory Creek systems. Re-established wetlands will be buffered with either preserved or reclaimed native upland systems (300, 400 FLUCFCS), consistent with 62C-16.0051(6)(c), F.A.C. In general, wildlife utilization both onsite and offsite will be maintained or improved. No significant residential or urban development is proposed or expected to affect wetland creation areas. The site uplands will provide adequate buffer support for the reclaimed wetlands. For these reasons, location scores ranged from 4 to 9 for the ‘with mitigation” score in accordance with the criteria set forth in 62-

345.500(6)(a), F.A.C. These scores are also consistent with the current scoring for similarly situated existing wetlands prior to proposed impacts.

- Water Environment: The watershed approach to wetland reclamation will be used to restore the landscape to a functioning mosaic of wetlands, uplands, and streams built around the backbone of natural preserved tributaries and wildlife corridors. This will be done by providing the appropriate topography and soils for the re-established wetlands and supporting uplands. Many years of site-wide hydrology and water quality data were used in the development of the reclamation plan. The post mining/pre-reclamation hydrology modeling will be done to ensure that the mitigation wetlands and supporting uplands have the appropriate topographic zonation, hydrology, soil moisture and hydroperiod. The stream restoration plan will replace ditched streams with natural channels to create a net increase in natural channels in the post reclamation condition. Regional ditching will be reduced in the post reclamation landscape and the site hydrology will better approximately pre-development conditions. In addition, all wetlands and streams will have a minimum of 120 feet greenbelt of native vegetation to protect water quality. For these reasons, re-established wetlands are expected to provide slightly greater than moderate beneficial hydrologic functions or perform at least 80 percent of optimal ecological value for wildlife and downstream wetlands, therefore a water environment score of 8 is appropriate for the "with mitigation" score.

- Community Score: The mitigation wetlands will be topsoiled to the extent that the desirable wetland topsoil is available (topsoil that has an extensive seed bank of exotic and nuisance species will be avoided). The majority of the re-established wetlands will receive desirable topsoil material, thus providing the root and seed source for a wide variety of wetland plants. When native topsoil is not available, sand tailings will be used to approximate native subsoil. This will be followed up by planting nursery stock to fill in the plant diversity and appropriateness. Direct seeding may also be used to re-establish appropriate wetland upland communities. The mitigation process manages the plants during the establishment phase, using adaptive management to adjust the site to ensure success according to the Section 1.8 Performance Standards. Exotic and nuisance plant species maintenance will begin immediately after initial establishment of the reclamation wetlands. Maintenance activities will continue in wetlands after success criteria have been achieved and until they have been released from monitoring. Exotic and nuisance species will be managed according to the conditions of the easement for the area shown on Map 4-8-C. The recent reclamation history in the phosphate industry shows that the vegetative communities will develop into mature systems with time, and will provide the structure necessary to support the full assemblage of wildlife that inhabit the region. These communities are expected to fulfill the foraging, shelter, breeding, and mitigation needs of the wildlife that inhabit them. For these reasons, re-established wetlands are expected to provide slightly greater than moderate beneficial functions or perform at least 80 percent of optimal ecological value for

wildlife, therefore a community structure scores of 7-8 is appropriate for the 'with mitigation" score in accordance with the criteria set forth in 62-345.500(6)(c), F.A.C.

Tables 4-8-A-v(F)&(H) present the wetland establishment relative functional gain calculations. The net benefit would be 227.5 forested credits and 389.8 herbaceous credits. Please note that the credits do not account for onsite herbaceous establishment within the preservation areas, which is discussed in Section 1.5.2.2.5 below.

1.5.2.2.3 Relative Functional Gain: Onsite Preservation Areas

Conservation easement protection would be applied to all preservation areas. The areas selected for conservation easement protection addressed in this section are the high quality wetlands and uplands located in Key Landscape Systems 1, 2, and 3. The floodplains of Horse Creek and its West Fork tributary are addressed below. No risk or temporal loss would be applied to this preservation because this component (in the form of a conservation easement) of the mitigation would be completed prior to disturbing wetlands on the Ona Mine.

The mitigation credit that will be achieved by the proposed conservation easements is based on 62-345.500(3), F.A.C. and is expressed as the difference between the With Mitigation [62-345.200(11), F.A.C.] assessment and the Without Preservation [62.345.200(12), F.A.C.] assessment.

The preservation of native upland buffers around wetland preservation areas provides vital protection of wetland functions. The amount of lift generated by uplands is supported by the fact that wetlands are protected from loss by Chapter 62-343, F.A.C., while uplands are afforded little to no existing protection. In addition, lands already converted to agricultural uses have lost most of their functional value in relation to protecting wetland function. In Hardee County, the Unified Land Development Code allows native upland communities within the floodplains to be developed, provided certain floodplain development conditions for structures are met, with no restrictions for agricultural activities. Consistent with 62-345.500(3)(b), F.A.C. procedures, the potential lift credited to the conservation easement is based on the reasonable likelihood of a conversion of uplands adjoining the wetlands. This conversion was assumed to be clearing for pasture, row crops, or other intense agricultural use because no restrictions on such activities exist under Federal, State or Local regulations. The lift gained by the placement of a conservation easement over the preserved wetlands is based on the following delta for the difference between the "without preservation" and "with preservation" scenario:

- Location and Landscape Support – The likely "without preservation" condition reasonably assumes the clearing of the uplands for agricultural purposes and the potential spread of exotic invasive plant species such as Old world climbing fern, cogon grass, Caesar-weed, tropical soda apple, etc. The resultant "without preservation" scores range from 5 to 9, based on the degree of connectivity with

wetland corridors and the general juxtaposition of the surrounding habitats. Greater development pressure from agriculture may also be expected because of the existing and proposed conservation easements in the adjoining mine areas. If not protected by conservation easement, the conversion of native uplands to agriculture will diminish the "corridor" effect of the major streams in these locations and further reduce the functional value of the wetlands in these areas. Cattle densities may achieve levels higher than would be regulated under a conservation easement. The "with preservation" condition would ensure that exotic invasive plant species remain at or below baseline conditions (well below what would be expected if land alteration were to occur) and that the adjacent uplands would not be cleared for any purpose, maintaining or improving current ecological values to wildlife and wetlands because of post-reclamation consolidation of native habitats.

- Water Environment – "Without preservation", cattle densities may increase to levels higher than would be regulated under a conservation easement. Additionally, the potential clearing of native uplands in between the wetlands and the associated agricultural use of those uplands would have a detrimental effect on the hydrology in the adjacent wetlands due to field irrigation, flashy runoff, sedimentation from fields, and interruption of groundwater from ditching in the uplands. The "with preservation" condition would ensure that cattle are maintained at sustainable densities within preservation areas (based on level of CE tier described in Appendix 4-4-C) according to levels approved by USACE for preserved lands. In addition, the surrounding areas will be reclaimed without extensive ditch networks and the stream flow is predicted to be similar to pre-clearing and agricultural conservation.
- Community Structure – The clearing of the adjacent uplands would produce an edge effect to allow the invasion of nuisance vines, and exotic invasive plant species. The potential degradation of the Community Structure due to the loss of a native upland buffer in the "without preservation" scenario would reduce the ecological value to fish and wildlife. In general, the scores approved by the FDEP in the field were slightly reduced to reflect this reduction if the areas are not preserved. This is also consistent with an analysis conducted comparing community structure scores in natural landscape positions with those scores in agricultural landscapes.

Table 4-8-A-xii(F)&(H) present the wetland preservation relative functional gain calculations. The net benefit would be 191.5 forested credits and 65.6 herbaceous credits.

1.5.2.2.4 Preservation Adjustment Factor (PAF) Basis

Section 332.3(h) of the CMR dictates that preservation may be used to provide compensatory mitigation for activities authorized by DA permits when the five specific criteria listed below are met.

(i) The resources to be preserved provide important physical, chemical, or biological functions for the watershed
(ii) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the district engineer must use appropriate quantitative assessment tools, where available
(iii) Preservation is determined by the district engineer to be appropriate and practicable
(iv) The resources are under threat of destruction or adverse modifications
(v) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust)

The importance of the resources and their contributions related to (i), (ii), (iii), and (v) are described in the above sections of the CMP and related to priorities of the CHNEP CCMP. Additionally, Mosaic's proposed onsite and offsite preservation also meets item (iv) as described below.

Conservation easement protection would prevent aquatic resource degradation principally by precluding the conversions of adjacent uplands into agricultural or residential uses on the avoided and reclaimed lands subject to easement protection. Application of the UMAM to these potential land use changes would prevent the following losses in aquatic resource functions in the wetlands to be protected by easements.

The existing condition of the proposed onsite and offsite preservation areas (i.e. upland buffers, riparian areas and the preserved wetlands) would not be protected from degradation from non-corps regulated activities and/or exempt agricultural activities without the Conservation Easement proposed as part of this project. For example, without the project, no regulatory obstacles prevent 1) the surrounding uplands and non-jurisdictional wetlands from being converted to a more intensive land use (i.e., pasture, row crops, etc.), 2) the surrounding uplands and non- jurisdictional wetlands from being ditched resulting in an altered hydroperiod and/or degradation of water quality, 3) the logging of forested wetlands and their surrounding native forested uplands that could compromise community structure, and 4) the composition and diversity of desirable species that may be compromised as the surrounding landscape is altered to create crops, pastureland or other similar use.

Unregulated activities could have an indirect adverse effect on the avoided/preservation wetlands. In addition, no current restrictions exist on grazing or hunting activities and no land management is required without the mechanisms outlined as a part of this project. While the unregulated activities described above would not totally eliminate the functions provided by the wetlands within the preservation area, they could significantly reduce the value of these functions. The UMAM analysis includes application of the "indirect adverse modifications to the resource" concept, as well as the potential for the unregulated activities described above to adversely affect the aquatic resources. The "without project" and "with project" scores were applied as directed by the USACE

Mining Team. These considerations are included in Part II of the UMAM data sheets and specifics on how these concepts were applied are described below.
Table 4-8-A-xii(F)&(H) includes the "Current" scores of each onsite Assessment Area designated as wetland preservation. Note the Community Structure and Water Environment scores in the "With Mitigation" condition are identical to those in the "Current" condition. This indicates that, although Mosaic has committed to significant actions adjacent to the preservation areas that will serve to promote natural ecological and hydrologic conditions, no UMAM "Lift" is attributed to these actions. Increases in the overall scores from the "Current" condition may be attributed to the co-located preserved uplands, and not to reclamation or a direct enhancement of the Preservation wetlands. The uplands provide buffers to protected wetlands/streams as well as wildlife habitat/connectivity, consistent with the Compensatory Mitigation Rule (CMR). The CMR does recognize that mitigation credit is appropriate when uplands provide essential services to protected wetlands and must be awarded when upland buffers are required. Note that the "Current" scores do not factor into the UMAM calculation for preservation. After uplands were removed from the dataset, the determination of credit from preservation was done in accordance with Chapter 62-345.500(3)(a) which states the following:

> *When assessing preservation, the "with mitigation" assessment shall consider the potential of the assessment area to perform current functions in the long term, considering the protection mechanism proposed, and the "without preservation" assessment shall evaluate the assessment area's functions considering the extent and likelihood of what activities would occur if it were not preserved, the temporary or permanent effects of those activities, and the protection provided by existing easements, restrictive covenants, or state, federal, and local rules, ordinances and regulations.*
>
> *The gain in ecological value is determined by the mathematical difference between the Part II scores for the "with mitigation" and "without preservation" (the delta) multiplied by a preservation adjustment factor. The preservation adjustment factor shall be scored on a scale from 0 (no preservation value) to 1 (optimal preservation value), on one-tenth increments. The score shall be assigned based on the applicability and relative significance of the following considerations:*
>
> *(1) Management techniques to promote natural ecological conditions such as fire patterns or the exclusion of invasive exotic species.*
>
> The Long-Term Management Plan and permit conditions propose exotic and nuisance species maintenance at very low, sustainable levels in all preservation areas. Natural fire patterns, or suitable management tools to mimic natural fires, will be introduced, where possible, in appropriate upland habitats. Forested wetlands are not fire dependent. The Long-Term Management Plan will be recorded with the conservation easement.

(2) The ecological and hydrological relationship of areas to be preserved.

The preservation areas include West Fork Horse Creek, Horse Creek, Brushy Creek, Oak Creek, and Hickory Creek as well as unnamed tributaries to these systems that are all ecologically and hydrologically connected to the Peace River corridor. Wetland habitats on site are a mix of herbaceous and forested communities providing a link to downstream habitats such as the Peace River and the Charlotte Harbor estuary. Upland habitat is scattered among and between wetlands, creating numerous edges for wetland dependent species interaction.

(3) The scarcity of the habitat provided and the degree to which listed species use the area.

The preservation areas provide scarce habitat in the context of a complex native landscape that includes numerous stream habitats integrated with wetlands and upland buffers. Much of this habitat within the basin has been converted to agriculture or has been affected by adjacent agricultural activity. Listed species observed on site included but are not limited to several species of wading birds, woodstork, crested caracara, American alligators, Sherman's fox squirrel, gopher tortoise, Florida burrowing owl, and Florida sandhill crane. Habitat scarcity and listed species support are high for the entire site, and the importance of the site as a buffer to the tributaries of the Peace River adds to the desirability of preserving the mitigation site.

(4) The proximity of the site to preserved or targeted habitats.

The preservation areas within Ona are an important portion of the Integrated Habitat Network, providing valuable habitat linkage throughout the region.

(5) Extent and likelihood of adverse impacts if not preserved.

Consistent with the USACE application of the UMAM rule, the Ona "without preservation" assessment considered an assessment area's functions, including the type, extent and likelihood of activities that would occur if the area were not preserved, the temporary or permanent effects of those activities, and the protection provided by existing easements, restrictive covenants, or applicable rules, ordinances and regulations.

"Without project" scoring is based on the idea that the existing condition of the avoided/preservation areas (i.e. upland buffers, riparian areas and the preserved wetlands) would not be protected from degradation from non-corps regulated activities and/or exempt agricultural activities. For example, without the project, no federal regulatory obstacles prevent 1) the surrounding uplands and non-jurisdictional wetlands from being converted to a more intensive land use (i.e., pasture, raw crops, etc.), 2) the surrounding uplands and non-jurisdictional

wetlands from being ditched resulting in an altered hydroperiod and/or degradation of water quality, 3) the logging of forested wetlands and their surrounding native forested uplands that could compromise community structure, and 4) the composition and diversity of desirable species that may be compromised as the surrounding landscape is altered to create crops, pastureland or other similar use.
Unregulated activities could have an indirect adverse effect on the avoided/preservation wetlands.

The PAF was uniformly assigned a value of 1.0 for all wetland preservation areas without any existing protections mechanisms attributed to the USACE based on the five considerations outlined above. The Horse Creek- Payne Creek Preservation areas and portions of the Ghost Offsite preservation area have a minor level of existing protections and were assigned a reduced 0.5 PAF to reflect improvements such as adding USACE as the named third-party beneficiary to enforce the terms of the Conservation Easement, baseline documentation report requirements, and annual monitoring and maintenance requirements.

1.5.2.2.5 Relative Functional Gain: Onsite Establishment Within all Preservation Areas

Applying the UMAM rule and USACE guidance documents, relative functional gain (credits) have been assigned as a result of wetland establishment within the avoided and preserved areas. Section 1.6 describes the methods to be used to establish wetlands in the Preservation Areas.

The wetland establishment that is proposed to occur within the preservation footprint will be conducted in a manner consistent with all onsite wetland establishments, therefore the risk and temporal lag values were calculated equivalently. Based on these considerations, the relative functional gain of the 16.3 acres equals 7.71 units as shown in Table 4-8-A-v(H).

1.5.2.2.6 Relative Functional Gain of Offsite Mitigation Projects

Discussion of the relative functional gain proposed for each offsite mitigation project can be found in the Appendices 4-1-B and 4-1-C and summarized on Tables 4-8-A-xiv, 4-8-A-xvi, 4-8-A-xvii, and 4-8-A-xviii, 4-8-A-xx, 4-8-A-xxi, and 4-8-A-xxiii.

1.6 *MITIGATION WORK PLAN*

The implementation of the Compensatory Mitigation Plan will be carried out according to the Ona Mitigation Work Plan. These individual plans are summarized below. Appendices 4-1-A, 4-1-B, 4-1-C, 4-1-F and 4-1-G present the physical work plans to implement the onsite Preservation Enhancements (Note: Onsite enhancements within the preservation areas are solely required by the FDEP ERP and not included as mitigation within the federal compensatory mitigation plan), and the offsite mitigation projects.

Appendix 4-4-A presents a draft conservation easement template; administrative work required to complete the conservation easement protection proposed includes completion of the permitting process for the Ona Mine, recording the easement pursuant to its provisions, and ensuring compliance with the easement provisions and the Long Term Management Plan (Conservation Easement Management Plan) (Appendix 4-4-C).

The remainder of the physical mitigation work consists of re-establishing streams and wetlands following ore extraction. The following sub-sections describe the work that will be completed to re-establish the streams and wetlands shown on Map 4-8-A-i through iii and 4-8-C-ii and 4-8-C-v that are part of the Ona Mine Federal Compensatory Mitigation Plan. Across the remainder of the Ona Mine, reclamation and state mitigation required by FDEP Rules 62C-16, 62-330, and 62-345, F.A.C., will be occurring concurrently. Although reclamation and state mitigation required by FDEP are activities that will occur concurrently with Federal Compensatory Mitigation, there may be references to reclamation activities in the sub-sections below where such activities also constitute Federal Compensatory Mitigation, this Mitigation Work Plan only addresses wetland and stream mitigation as required by USACE.

1.6.1 WETLAND WORK PLAN

Wetland re-establishment is a major component of Mosaic's Ona Mine Federal Compensatory Mitigation Plan and is shown on Map 4-8-A-i. As shown on this map, the Ona Mine Federal Compensatory Mitigation Plan would include re-establishment of three types of herbaceous wetland communities and seven types of forested wetland communities. One principal benefit of re-establishment, as compared to other mitigation type alternatives, is the flexibility to match the type of communities to be re-established to the type of communities disturbed.

In herbaceous wetlands, wet prairies would be re-established to mitigate for not only wet prairie impacts, but also impacts to pastures, row crop fields, palmetto prairies, and other shrub and brush rangeland communities subject to USACE jurisdiction. Thus, mitigation through the re-establishment of wet prairie would properly account for these marginally-wet community types. The acreage of improved pasture subject to USACE jurisdiction would be mitigated through the establishment of freshwater marsh to reflect the community types present prior to historic ditching and draining of the Ona Mine.

Likewise, in forested wetlands, the acreage of mesic communities subject to USACE jurisdiction (e.g., woodland pasture, temperate hardwoods, and live oak forests) would be mitigated through the establishment of mixed hardwood wetland forests. The inclusion of laurel oak, dwarf palmetto, and south Florida slash pine in the approved planting list (Table 4-3-B) provides flexibility for creating mesic and hydric zones within the wetland hardwood forests to be established. The same principles apply to hardwood-conifer mixed forests.

The re-establishment plan will account for shrub marshes (e.g., buttonbush dominated) and bay swamps, separately. Marsh communities that have developed a sub-canopy, and in some cases a canopy layer of vegetation due to lack of fire, would mainly be mitigated

as marshes with desirable shrub layer species planted as well (Table 4-3-G). Accordingly, shrub communities are considered part of the herbaceous mitigation establishment component. Other types of mitigation do not offer such flexibility.

Mosaic has taken advantage of the flexibility associated with wetland re-establishment to distribute the mitigation wetlands across the Ona Mine to improve the overall aquatic habitat, provide additional buffering and functionality to the onsite preserve areas, and connect the mitigation to the regional ecosystem via Horse Creek and its West Fork tributary, Brushy Creek, Oak Creek, and unnamed tributaries. Mosaic has strategically selected its mitigation sites to implement a watershed approach.

The above wetland re-establishment will be further complemented by the onsite Preservation Enhancement Plan required by the FDEP ERP (Appendix 4-1-A). Approximately 408 acres, or 11 percent of the Preservation Areas have been converted to improved pastures, partially cleared to provide woodland pasture, or excavated to form livestock water supply ponds or ditches in uplands and wetlands. Mosaic has developed this plan to improve the functional value of the Preservation Areas through restoration of uplands and wetlands, enhancement of uplands and wetlands, and establishment of wetlands. In addition to converting existing pastures into native habitat, Mosaic will restore approximately 51 acres of degraded rangeland into pine flatwoods and rehabilitate over 60 acres of overgrown, degraded palmetto prairie habitat located in the Preservation Area west of Brushy Creek. Site-specific work plan elements have been developed to restore the agricultural lands to native habitat while meeting these criteria. Maps PWP-1 through PWP-6, in Appendix 4-1-A, illustrate the work plan elements. Most do not require excavation or grading to accomplish changes in topography and are limited to converting vegetative cover from pasture to native habitat.

Herbaceous and forested wetlands will also be established offsite as described in Appendices 4-1-B, 4-1-C, 4-1-F and 4-1-G. These projects provide significant ecosystem benefits from the hydrological diversity of wetland types proposed, within riparian, palustrine depression, and seepage slope hydrogeomorphic settings. Wet prairie, emergent marsh, bay swamp, mixed hardwood and coniferous swamp, and cypress swamp communities are to be enhanced and established. The offsite projects will also implement a watershed approach, with ties to three of the largest tributaries to the Peace River. The Payne Creek project restores wetlands and streams along a portion of Payne Creek bypassed by a canal, thus repairing the last remaining and largest habitat discontinuity along that large and direct tributary to the Peace River. The Payne Creek project also establishes streams and riparian wetlands that are tributaries to Payne Creek.

The Bowlegs project repairs the stream and wetlands along the last remaining ditched portion of Maron Run, which is a perennial tributary to Bowlegs Creek. This project also improves several un-named streams and their riparian wetlands that are tributaries to Bowlegs Creek and one to the Peace River. Bowlegs Creek is one of the largest tributaries to the Peace River, receiving some drainage as far west as the Lake Wales Ridge. Thus, the offsite projects complete portions of historically damaged perennial

streams and their appurtenant wetlands, making the regional habitat network more continuous.

The West Fork Horse Creek project includes preservation of the riparian corridors and enhancement and wetland establishment to improve the physical, biological, and chemical conditions onsite and downstream in the West Fork Horse Creek, a tributary to the Peace River.

When coupled with the onsite preservation, onsite wetland establishment within preserve areas, onsite in-kind stream re-establishment, and offsite plan elements, the in-kind wetland establishment plan elements are consistent with 33 C.F.R. § 332.3 and the watershed needs identified in the CCMP because:

- The re-establishment plan elements would reduce non-point source pollutants associated with stormwater runoff (CHNEP Priority Action WQ-D);
- The re-establishment plan elements would improve and protect water quality to offset other anthropogenic impacts (CHNEP Priority Action WQ-E);
- The re-establishment plan elements would establish and maintain a more natural seasonal variation in freshwater flows by eliminating ditches and reducing peak runoff rates (CHNEP Priority Action HA-E);
- The re-establishment plan elements would restore and protect freshwater wetlands on at least an acre-for-acre basis (CHNEP Priority Action FW-C);
- The re-establishment plan elements would restore and protect aquatic and terrestrial native habitat (CHNEP Priority Action FW-F); and
- The re-establishment plan elements would increase the acreage of land protected under conservation easements (CHNEP Priority Action FW-H).

1.6.2 WETLAND RE-ESTABLISHMENT WORK TASKS

Mosaic's compensatory mitigation plan includes the re-establishment of 1,882 acres of herbaceous wetlands and 1,324 acres of forested wetlands on the Ona Mine site. Offsite wetland establishment includes approximately 418 acres of herbaceous wetlands and 88.6 acres of forested wetlands for the Payne Creek project, approximately 37 acres of herbaceous wetlands and 199 acres of forested wetlands for the Bowlegs Creek project, approximately 102 acres of herbaceous wetlands and 471 acres of forested wetlands for the Horse Creek-Payne Creek project, approximately 0.4 acres of herbaceous wetlands and 446 acres of forested wetlands for the Peace River North project, 237 acres of forested wetlands for the Peace River South project, approximately 14 acres of herbaceous wetlands and 86 acres of forested wetlands for the West Fork Horse Creek project and approximately 167 acres of herbaceous wetlands for the South Pasture Extension project.. In the sections that follow, Mosaic describes a series of technical procedures and requirements that reflect the state-of-the-art, some of which were developed by Mosaic and others developed by third-party wetland creation experts.

Wetland re-establishment onsite would occur on lands backfilled with tailings sand separated from the ore matrix at the beneficiation plant. Maps 4-4 and 4-8-A-i document all mitigation wetlands would be re-established on the sand backfill landform shown on Map 4-4.

Onsite mitigation work on wetlands to be re-established would begin when tailings backfill has been placed. Mitigation work would consist of analysis of the subsurface lithology and hydrology, placement or development of suitable soils, and vegetation re-establishment.

1.6.2.1 Development of Final Designs

Successful re-establishment of mitigation wetlands is largely attributable to creating surficial aquifer hydraulic conductivities and gradients that mimic native conditions. Creation of suitable hydraulic conductivities and gradients is controlled by the land surface elevation, topographic gradients, and placement of relatively impermeable overburden and relatively permeable tailing sands. Due to the volumes of these materials available at the Ona mitigation site, together with the pre-mining surficial aquifer metrics measured during the baseline pre-mining monitoring program, a high probability of mimicking pre-mining aquifer performance characteristics at the onsite mitigation sites exists.

The first step is to prepare soil lithology maps illustrating “as built” post-mining subsurface conditions prior to backfilling the mined voids with sand. The actual post-mining lithology maps would be used as input data for three modeling efforts.

Mitigation wetlands will also be established within offsite project areas Offsite project information design is available in Appendices 4-1-B, 4-1-C, 4-1-F and 4-1-G.

1.6.2.1.1 Cut and Fill Onsite Topographic Modeling

The first modeling effort would be to apply a “cut and fill” model to calculate the volume of sand needed to be imported from the beneficiation plant or one of the tailing stockpiles to result in the design elevation and topography for each mitigation area and its contributing watershed. A variety of cut and fill models are commercially available as this calculation is a standard protocol in all civil engineering earthwork projects. Mosaic uses GIS linked software to accomplish this task and will continue to upgrade its systems as new software becomes available.

1.6.2.1.2 Onsite Wetland Hydroperiod Modeling

Mosaic has developed a wetland water balance model to simulate interactions between surface water, the vadose zone, and the water table that control wetland hydrology in terms of hydroperiod depths and durations. Mosaic’s wetland establishment experience has led to a thorough understanding of wetland hydrology and the variables that control the hydrologic performance of wetlands re-established on mined land. Based upon initial modeling results, it may be necessary to adjust the wetland bottom elevation (shallower

or deeper), the side slopes (to widen or narrow vegetative zones within the wetland fringe), the wetland outlet elevation, or the subsurface lithology (to increase or decrease the rate at which water will flow through the vadose zone). Design would be adjusted (if necessary) in order to meet desired hydroperiod targets for each wetland type.

In order to provide reasonable assurance that the currently proposed grading plan and sub-surface lithologies will be capable of providing hydroperiod depths and durations within the ranges specified above, each onsite mitigation wetland will be modeled prior to construction. Appendix 2-2-A-vi presents an example of the model that may be used.

1.6.2.1.3 Seepage Slope Wetland Modeling

In certain mitigation wetlands where seepage from the reclaimed upland watershed would provide the water supply critical to vegetative community support (e.g., bay swamps), the wetland hydroperiod modeling would be supported by groundwater modeling using the MODFLOW model developed by the U.S. Geological Survey or an equivalent model. Seepage modeling can be conducted in three dimensions or in one or more two-dimensional cross-sections. Based upon modeling results, it may be necessary to conduct some rough grading of the overburden prior to placement of the tailing sand in order to result in a lithology that would provide seepage to the mitigation wetland.

If the modeling results confirm the surficial aquifer hydraulic conductivities and gradients are appropriate, mitigation work would progress by grading the mitigation areas to the design elevations and implementing the soil amendment process described below and the hydrology monitoring plans described in Section 1.9. If the modeling results identify unacceptable surficial aquifer hydraulic conductivities and/or gradients, additional earthwork to change the distribution of overburden and tailings sand would be undertaken, followed by repeating the modeling efforts described above. This cycle would continue until acceptable modeling results were achieved.

This step was already accomplished for the seepage wetland establishment proposed at the Bowlegs Creek offsite projects. Hydrus 2D modeling assessments were made of the proposed seepage faces using input derived from borings of the actual soils and lithology occurring onsite.

Wetlands W4 and W12 of the Payne Creek project's seepage wetlands are also to be constructed within existing lithology that was represented in Hydrus 2D simulations using data from soil borings. These will not be remodeled. However, the recharge and seepage zones of proposed Payne Creek bay swamps W7 and W16 are subject to future reclamation activities and the onsite modeling protocol will be applied to those wetlands.

1.6.2.2 Onsite Topsoil Placement or Amendments

Prior to clearing wetlands, wetland topsoil (muck) or sod would be removed from the site for use in wetland vegetation development. Wetland topsoil or sod will not be collected from wetlands that are vegetatively degraded (i.e., those having a minimal cover of desirable species). The timing between the clearing of donor sites and the completion of

onsite wetland re-establishment would be optimized to provide greater opportunities for transfer of wetland topsoil and live materials (stumps, shrubs, small trees) directly from the donor site to the mitigation site. If no contoured mitigation site is available to receive the wetland topsoil, it could be stored and covered with overburden so as to minimize oxidation and colonization by nuisance species. Only wetland topsoil reasonably free of nuisance and exotic plant species would be applied to wetland mitigation areas.

After mining operations and backfilling with sand tailings and/or overburden are completed, forested wetland mitigation areas (i.e., FLUCFCS 611, 617, and 630) would be graded and capped with several inches of wetland topsoil in order to achieve the final design elevations. In the event that insufficient wetland topsoil is available, materials such as mulch or other appropriate organic material will be used, denser plantings or native seed application may occur if low native seed germination is anticipated from the soil, and herbicide will be applied to aid in native plant recruitment. All reclaimed bay swamps will receive a minimum of one foot of muck or a combination of muck and mulch or other appropriate organic material.

Herbaceous wetlands (i.e., FLUCFCS 641) would be capped with several inches of wetland topsoil. All wet prairie (i.e., FLUCFCS 643) areas would receive several inches of wet prairie topsoil or sod unless suitable material is not available within a reasonable hauling distance. Direct transfer will be used where feasible.

Mr. Joseph Shuster, a professional soil scientist who has extensive experience in evaluating soils beneath created wetland mitigation areas, analyzed the substrate beneath high quality, functioning, mitigation sites created historically at Mosaic mine sites. His analysis concluded that the soil drainage class is the most important design variable when designing mitigation using muck, sand tailings, and overburden growing mediums on phosphate mined areas. The proper drainage class can be assured through the use of quantitative surface and groundwater models as described above.

He concluded when muck is available, it creates conditions similar to native Florida soils. Figure 5-A illustrates how the use of muck has led to topsoil development at the Alderman Creek Bay Swamp mitigation site. Figure 5-B illustrates how commercial sod harvesters can be used to transfer topsoil to herbaceous wetland mitigation areas.

When muck is not available, alternative methods to create a suitable growing medium successfully used by Mosaic at wetland establishment sites include composting and green manure. Figure 5-C illustrates how Mosaic has successfully used compost to create organic matter at the Maron Run mitigation site. Figure 5-D illustrates how Mosaic has successfully used green manure at the Trib A mitigation site. Mr. Shuster's analysis demonstrated that the soil creation methods utilized by Mosaic represent best available technology.

In uplands, topsoil also would be segregated and reapplied to reclamation sites designated to become palmetto prairie or pine flatwoods. In addition, a permeable sand tailings layer

would be placed immediately beneath the topsoil to recreate soil drainage and lithology characteristics similar to native palmetto prairie/pine flatwoods habitat. As with wetlands, the suitability of topsoil transfer would be dependent upon the degree of nuisance and exotic species present at the donor site. In areas designated to be reclaimed to xeric oak scrub communities, the same procedures would be applied, however, the sand tailing layer thickness would be increased.

Within 60 days following completion of topsoil placement and grading, the final contours of each mitigation wetland would be surveyed utilizing a 50-foot grid interval and spot elevations to a minimum of 0.1-foot. An as-built contour map would be generated to show one-foot contours in the surrounding uplands, 0.5-foot contours in wetlands, and the spot elevations measured.

1.6.2.3 Development of Vegetation Communities

Following completion of onsite topsoil placement, Mosaic would plant herbaceous, shrub, and tree species listed on Tables 4-3-A through 4-4-E in the densities, species richness, and dominance associated with each community type shown on Map 4-2-A-ii. As noted previously, shrub marshes would be planted such that no overstory would result, although a shrub layer will be present. In mitigation areas where topsoil is placed as discussed above, planting would supplement the vegetation that emerges from the topsoil, if necessary, to achieve densities, species richness, and dominance associated with each planned community type.

In addition to these basic standards, the following special planting procedures are included in Mosaic's plan for the onsite communities:

- Shade tolerant herbaceous vegetation would be planted after establishment of the canopy and sub-canopy in forested mitigation areas;
- Marshes and wet prairies would be constructed to maintain or improve the diversity of existing community types to support a wide range of wildlife species including birds, reptiles, and amphibians;
- Marshes would be established with hydroperiods ranging from ephemeral through seasonally and permanently flooded, with slopes gradual enough to support wide transition zones with a diversity of vegetation exhibiting distinct zonation patterns;
- Marsh fringes would be "rim-mulched" with wet prairie, pine flatwoods, or palmetto prairie topsoil or sod or planted with wet prairie forbs and grasses; and
- Areas surrounding wet prairies would be planted with native grasses such as creeping bluestem (*Schizachyrium scoparium*), sand cordgrass (*Spartina bakeri*), blue maidencane (*Amphicarpum muhlenbergianum*), brushy broom grass (*Andropogon glomeratus*), lovegrass (*Eragrostis spp.*), and eastern gamma grass (*Tripsacum dactyloides*) to prevent or minimize invasion by non-native and/or range grasses.

Planting would occur in three phases. Phase A planting would occur as soon as the grading and muck/topsoil addition has been completed; species planted would consist of those tolerant of a relatively wide range of hydroperiod depths and durations. Phase B planting would not occur until two years of hydrological monitoring confirms that the wetland design is properly functioning in terms of hydroperiod depths and durations; Phase B species would consist of those requiring more precise, or specific hydroperiods (e.g., marsh fringes or wet prairies). Phase C planting applies only to forested wetlands; species consist of shade adapted shrub and groundcover strata that would be planted only after canopy closure begins, which typically occurs several years after initial planting.

Similar to stream re-establishment sites, wetland re-establishment sites would be graded and planted while the protective, perimeter berms remain in place. This BMP allows flexibility to artificially hydrate the mitigation site to "jump start" growth of the plant communities. Typically, however, irrigation of mitigation wetlands is not necessary because final grading, muck placement, and/or planting is scheduled to occur at the beginning of the summer wet season, such that natural rainfall provides the requisite hydration. Hydroperiod depths and durations typically become re-established during the first wet season following grading.

Re-establishment of marshes and wet prairies using the best practices listed above would result in a more diverse post-mitigation landscape due to a range of hydroperiod depths and durations. The intention for re-establishing native upland buffers around the mitigation marshes and wet prairies is likewise to provide increased wildlife habitat. The use of upland topsoils from native cover donor sites is a proven method to establish transition buffer zones between marshes and wet prairies and other upland community types.

Plantings will also occur at the offsite mitigation areas. At Bowlegs Creek and Payne Creek, wetland establishment areas will be planted with desirable vegetation characteristic of the target communities, as provided in Appendix 4-1-B and Appendix 4-1-C, respectively. The proposed planting plans include diverse assemblages of plants that will create groundcover, understory, and canopy habitats. Wetland enhancement areas at Bowlegs Creek will include supplemental plantings to create the target habitat. Because the associations between the land surface elevations, seasonal high water, wetland edge, and hydroperiod can be determined by observing the existing wetland communities and channels, the planned vegetation communities have an inherently high likelihood of establishment and potential for sustainable self-organization at the offsite project areas.

Mosaic will follow diligent and aggressive standard operating procedures (SOPs) for nuisance vegetation maintenance through a multi-year establishment period, including Richardson and Murawski's (2012) "Management of Nuisance and Exotic Vegetation on Phosphate Mined Lands in Florida" and Richardson's (2013) "Control and Management of Cogongrass and Other Exotic Grasses on Disturbed Lands in Florida." Mosaic will select from among these methods on a case-by-case basis, choosing the most cost-effective remedies necessary to meet permit conditions. Mosaic's experience is that

aggressive efforts to control nuisance and exotic species, including cogon grass in adjacent uplands, is a very effective way to ensure mitigation success. Use of chemical, mechanical, fire, hydrologic, and manual techniques to control and remove nuisance and exotic species, especially during the initial plant establishment period, provides the planted native species the "head start" needed to out-compete nuisance and exotic species and achieve re-vegetation success. A detailed approach for eradicating cogon grass is provided in the offsite mitigation reports. Supplemental plantings will be made as needed.

1.6.3 STREAM WORK PLAN

Federal Compensatory stream re-establishment for the onsite areas is shown on Map 4-8-A-i and Appendix 2-2-B-i. The Stream Report provides specific details regarding the construction methodology to be employed for the restoration of functioning streams on the Ona Mine and the restoration of the required stream crossing. It was developed with the goals of avoiding, minimizing, and compensating for the mining impacts to lotic systems, preserving the highest quality systems, and replacing and improving the functions of streams proposed for impact. Over 22 miles of stream will be preserved prior to mining and another 11.6 miles of stream will be created for the purpose of mitigation. In total, over 33-miles of miles of stream will be provided as USACE mitigation and placed under Conservation Easement (including a 120 ft buffer of the centerline) in the post-reclamation condition.

One principal benefit of stream re-establishment is the opportunity to properly locate, size, and design the stream valleys and channels to fit the entire post-reclamation and sub-basin landscape design.

The morphological design parameters described in Appendix 2-2-B-i are state-of-the-art in stream channel restoration. Application of these factors would result in first- and second-order re-established stream channels across the post-reclamation landscape that would be sized and shaped to:

- Result in channel velocities that are neither erosive nor accretive;
- Experience out-of-bank flood flows into the adjacent floodplains to store floodwaters and generate downstream carbon and detrital transport;
- Provide in-stream aquatic habitat such as pool and riffle complexes and meander bends and pools; and
- Result in competent and stable stream banks.

The use of onsite stream re-establishment as compensatory mitigation also provides the opportunity to create functional streams across the post-reclamation landscape. Similar to wetlands establishment described above, replication of existing channels is not appropriate. Instead, Mosaic has located established channels that fit within the post-reclamation topography and drainage sub-basins. This design approach results in a distribution of streams across the Ona Mine so as to improve the physical, biological, and chemical conditions onsite and downstream in Horse Creek and its West Fork tributary,

Brushy Creek, Oak Creek, and unnamed tributaries. Section 1.5.1 explains these benefits and quantifies the increased functional values that would result from onsite stream establishment.

Streams will also be established offsite as part of the Payne Creek Restoration and the Bowlegs Creek Enhancement projects. Offsite stream establishment includes approximately 14,755 linear feet at Payne Creek and 5,507 linear feet at Bowlegs Creek. These projects provide significant ecosystem benefits and net increases in natural stream linear footage. The offsite projects implement a watershed approach.

When coupled with the onsite preservation, onsite wetland establishment within preserve areas, onsite in-kind wetland re-establishment, and offsite mitigation plan elements, the in-kind stream establishment plan elements are consistent with 33 C.F.R. § 332.3 and the watershed needs identified in the CCMP because:

- The length of stream channels on the Ona Mitigation Site is sufficient to result in watershed scale benefits from the work;
- No stream mitigation bank credits are available in the Myakka and Peace River watersheds;
- The stream plan elements would reduce non-point source pollutants by replacing erosive channels with properly sized natural design channels (CHNEP Priority Action WQ-D);
- The stream plan elements would improve and protect water quality through the establishment of wetlands/riparian vegetation and/or conservation easements to offset anthropogenic impacts elsewhere (CHNEP Priority Action WQ-E);
- The stream plan elements would re-establish and maintain more natural, seasonal flow patterns (CHNEP Priority Action HA-E);
- The stream plan elements would restore lands with changed hydroperiods and reverse historic removal of flood storage capacity (CHNEP Priority Action HA-N);
- The stream plan elements would restore freshwater riparian wetlands (CHNEP Priority Action FW-C):
- The stream plan elements would restore riparian native habitat corridors (CHNEP Priority Action FW-F); and
- The stream plan elements would increase the acreage of land protected by conservation elements.

1.6.4 STREAM RE-ESTABLISHMENT WORK TASKS

Mosaic's Ona Onsite Mitigation Plan includes the re-establishment of approximately 54,326 linear feet of streams (Table 4-8-A-viii). Map 4-8-A-i illustrates the location of

the planned post-reclamation stream valleys proposed to be credited as Federal Compensatory Mitigation.

Appendix 2-2-B-i, which is attached, presents the stream design guidance. The design guidance prescribes 29 design parameters for each of the stream segments shown on Map 4-3-A, including specifications for valley design, channel design, and physical habitat creation. Table 4-8-A-viii (summary) presents the stream reconnection schedule.

The offsite stream establishment includes approximately 5,507 linear feet at Bowlegs Creek and 14,755 linear feet at Payne Creek. Stream design guidance is provided in Appendix 4-1-B and Appendix 4-1-C, respectively.

1.6.4.1 Stream Re-Establishment Methodology

Stream channel segments would be constructed within certain wetland communities described in the proceeding Section. As such, the riparian areas beyond the stream channel banks would be established as mitigation wetlands such that the two mitigation components (i.e., wetlands and stream channels) would be co-located in a single mitigation area.

All stream segments would be constructed in accordance with the design guidance and criteria set forth in Appendix 2-2-B-i. An experienced stream restoration specialist would be retained by Mosaic as staff or consultant through the entire stream creation period-from final design through construction and monitoring to provide guidance and conduct regular inspections.

Similar to onsite stream establishment, offsite stream segments would be constructed in accordance with the design guidance and criteria set forth in Appendix 4-1-B for the Bowlegs Creek offsite project and Appendix 4-1-C for the Payne Creek offsite project.

1.6.4.2 Development of Final Design Drawings

Once the lithologic and topographic maps developed in accordance with plan element 4.6.2.1 above are completed, the final onsite stream design construction drawings would be prepared. This step would consist of: (1) analyzing the lithologic and topographic "as built" conditions and revising design parameters to reflect as built conditions; (2) preparing plan, cross-section, and profile view drawings for use in the field; and (3) conducting confirmation hydrologic modeling. The following sections illustrate how these steps will be implemented by following the example of stream LMR-8 recently successfully re-established at another Mosaic mine site; note that LMR-8 is not an USACE compensatory stream mitigation site.

1.6.4.2.1 Analysis of As-Built Conditions

Upon completion of tailings backfill, rough grading, and topsoil placement and amendment, a topographic survey of the LMR-8 watershed was prepared. From this data, the following final stream design guidance metrics were developed:

- Watershed Area = 0.088 square miles;
- Upstream Elevation = 103.19 feet (NGVD);
- Downstream Elevation = 98.14 feet (NGVD);
- Elevation Change = 5.05 feet;
- Valley Length = 700 feet;
- Valley Slope = 0.74 percent;
- Rosgen Level II Class = E5;
- Sinuosity, Average = 1.34;
- Stream Length = 938 feet;
- Stream Slope = 0.55 percent;
- Bankfull Cross Sectional Area = 2.03 square feet;
- Width/Depth Ratio = 10;
- Bankfull Width = 4.5 feet;
- Bankfull Depth = 0.45 feet;
- Maximum Depth = 0.51 feet;
- Bottom Width = 3.49 feet;
- Entrenchment Ratio = 10;
- Minimum Radius of Curvature = 6.0 feet; and
- Maximum Radius of Curvature = 20.0 feet.

1.6.4.2.2 Preparation of Design Drawings

Based upon these as built metrics, a set of construction design drawings were prepared. Appendix 4-6-B-i contains the drawings for reference. These photographs illustrate the constructed stream channel and the installation of large woody debris and planting of instream and riparian wetland vegetation.

Stream LMR-8
during construction

Placement of large
woody debris in the
LMR-8 channel

1.6.4.2.3 Hydrologic Analysis

Following completion of the design drawings, Mosaic would model all final stream channel designs using a continuous time step model (e.g., HSPF plus HEC-RAS) to determine whether the projected bankfull discharges, bankfull mean velocities, and frequency of bankfull events are adequate, based on actual field conditions at the locations of the stream segments to be constructed.

1.6.4.2.4 Current Conditions

Physical construction of LMR-8 began in October 2009. A total of 1,358 feet of stream channel was established, consisting of three pools and three run/riffle complexes. During the initial monitoring conducted in 2012, the stream was rated healthy using the SCI metric and sub-optimal using the Stream and River Assessment Procedure (Appendix 4-6-B-ii).

The dimensions of LMR-8 have deviated slightly from the design, as the channel was deeper and wider than the design dimensions. However, the width to depth ratio is very similar to the design value. This adjustment is due to immaturity of the riparian plant community. The channel will stabilize after this initial adjustment period and as the riparian plant community matures. Despite the dimensional changes in width and depth, the channel cross-sectional area is still capable of conveying the expected bankfull discharge. Overall the channel has remained stable without channel migration and no avulsion.

Flow stage monitoring indicates that reclaimed stream LMR-8 is an intermittent stream with a period of no-flow conditions during the dry season and sustained low flow during the rainy season. Due to the beginning and ending dates of the initial monitoring period, flow stage monitoring has not been conducted throughout an entire dry season. Based on observations during installation in March 2012, equipment inspections and adjustments in April 2012, and data download in mid-May, it appears the no-flow period is

approximately 60 to 90 days. Future monitoring will better characterize the no-flow period.

High flows, including bankfull and greater flows, are short-duration flows typically lasting less than 24 hours. High flows are dominated by runoff associated with rainfall events, including connected wetland outflows. Long-duration, persistent flows are low (less than 0.2-foot of water depth) and most likely due to seasonal groundwater contributions and wetland outflow. These flow conditions are typical for seasonal headwater streams in the flatwoods ecoregion of central Florida.

1.6.4.3 Corridor Crossing Restoration

All restoration work would be conducted during dry months such as April, May, October, and November when rainfall amounts are minimal so as to minimize the potential for water quality (i.e., turbidity) impacts.

Restoration steps would essentially be the reverse of the construction steps and will occur in the following sequence:

- Turbidity barriers would be installed upstream and downstream of the structure to be removed;
- All mining infrastructure would be dismantled and removed (e.g., power lines, pipelines, light and safety features, etc.);
- Where applicable, all bridge structures, decks, culverts, and supporting pilings would be dismantled and removed;

- All sand tailings fill would be excavated, using trackhoes and dump trucks, hauled to a reclamation area, and utilized as reclamation fill;
- The underlying geotextile fabric would be removed and disposed of in accordance with solid waste regulations; and
- Vegetation would be planted as shown on Map 4-2-A-ii and Tables 4-3-A through 4-3-J and 4-4-A through E, as applicable.

Because the geotextile fabric is placed over the original grade, only limited earthwork would be required to accomplish the restoration. Upon establishment of the vegetation, the turbidity barriers would be removed. The photographs below illustrate the recent restoration of a similar crossing at the South Fort Meade mine in Polk County.

Above: Restored Crossing of Stephens Branch at the South Fort Meade Mine

1.6.5 WATER QUALITY

Water quality onsite and offsite during mitigation construction would be maintained by implementing the following Best Management Practices (BMPs):

1. Temporary erosion control measures would be implemented prior to and during construction and permanent control measures would be implemented within seven days of completion of construction activity;
2. Turbidity barriers would be installed and maintained at all locations where the possibility of transferring suspended solids into a receiving waterbody exists and will remain in place at all locations until construction is complete, soils are stabilized, and vegetation has become established, after which the barriers will be removed;
3. Stabilization measures would be initiated for erosion and sediment control on disturbed areas as soon as practicable on portions of the site where construction activities have been completed;

4. The ditch and berm system would remain in place until reclamation and mitigation has been completed, all applicable monitoring indicates that no violations of state water quality standards are expected to occur, and the mitigation wetlands are adequately stabilized and sufficiently acclimated to ambient hydrological conditions. At that time, the ditch and berm would be restored to grade and revegetated to vegetative community types shown on Map 4-2-A-ii;
5. BMPs for turbidity and erosion control would be implemented and maintained at all times to prevent siltation and turbid discharges. Methods will include, but are not limited to, the use of staking hay bales, staked filter cloth, silt-control polymers, sodding, seedling, mulching, and the deployment of turbidity screens around the immediate project site, as appropriate for each area;
6. During all phases of ditch and berm removal, erosion control procedures would be followed and erosion and turbidity control devices will be inspected and maintained daily and after each rainfall event (> ½-inch). Erosion and turbidity control devices will be inspected and maintained on a regular basis during all phases of mining operations and reclamation and mitigation;
7. Erosion control devices would remain in place until all areas are sufficiently stabilized to prevent erosion, siltation, and turbid discharges; and
8. There would be no offsite discharges of wastewater except as specifically authorized by the Industrial Wastewater Facility.

1.6.6 CONSTRUCTION SCHEDULE AND SEQUENCE

Mining operations and reclamation/onsite mitigation activities would be completed according to the following schedule below. The sequence of construction work is also outlined.

1.6.6.1 Schedule

Text Table CMP-8A	
Typical Onsite Reclamation/Mitigation Sequence	
Activity	**Relative Time Frame**
Commencement of severance/ site preparation	No more than six months prior to mining operations except for the purpose of directly transferring topsoil/muck to a contoured mitigation site
Final grading, including muck placement	No later than 18 months after completion of mining operations, including backfilling with sand tailings
Phase A planting (species that tolerate a wider range of water levels)	No later than six months after final grading or one year after muck placement
Hydrological assessment	For two years after contouring
Phase B planting (species that tolerate a more narrow range of water levels)	Up to 12 months after the completion of the hydrological assessment

Notes:

1. Within 60 days of final grading, the final contours of each mitigation wetland or floodplain area will be surveyed in accordance with general survey procedures utilizing a 50-foot grid and spot elevations to 0.1 of a foot. An as-built contour map will be generated to show one-foot contours for uplands, 0.5 of a foot contours in wetlands/surface waters and the 0.1 of a foot spot elevations, extending at least 200 feet in to the adjacent uplands. The contour map(s) will reference NGVD.

2. The final contours of each restored crossing area will be surveyed in accordance with general survey procedures utilizing a 50-foot grid and showing elevations to 0.1 foot. Within 60 days of final grading, both a cross-section and topographic map of the crossing site extending the width of the 25-year floodplain, showing sampled points and 0.5-foot contours referenced to NGVD will be prepared.

The schedule above represents the maximum amount of time that would elapse between completing the mining operations use of a reclamation unit until the mitigation area is planted, which would be not more than two years. Once planting of Phase A species is completed, monitoring and maintenance would begin.

Offsite mitigation activities would be completed according to the following schedule below. The sequence of construction work is also outlined. The schedule represents the maximum amount of time that would elapse between permit issuance until the mitigation area is planted, which would be not more than two years. Once planting of Phase A species is completed, monitoring and maintenance would begin.

Text Table CMP-8B	
Typical Offsite Mitigation Sequence	
Activity	**Relative Time Frame**
Site preparation	Following permit issuance
Final grading, including muck placement	No later than two years after permit issuance
Phase A planting (species that tolerate a wider range of water levels)	No later than six months after final grading or one year after muck placement
Hydrological assessment	For two years after contouring
Phase B planting (species that tolerate a more narrow range of water levels)	Up to 12 months after the completion of the hydrological assessment

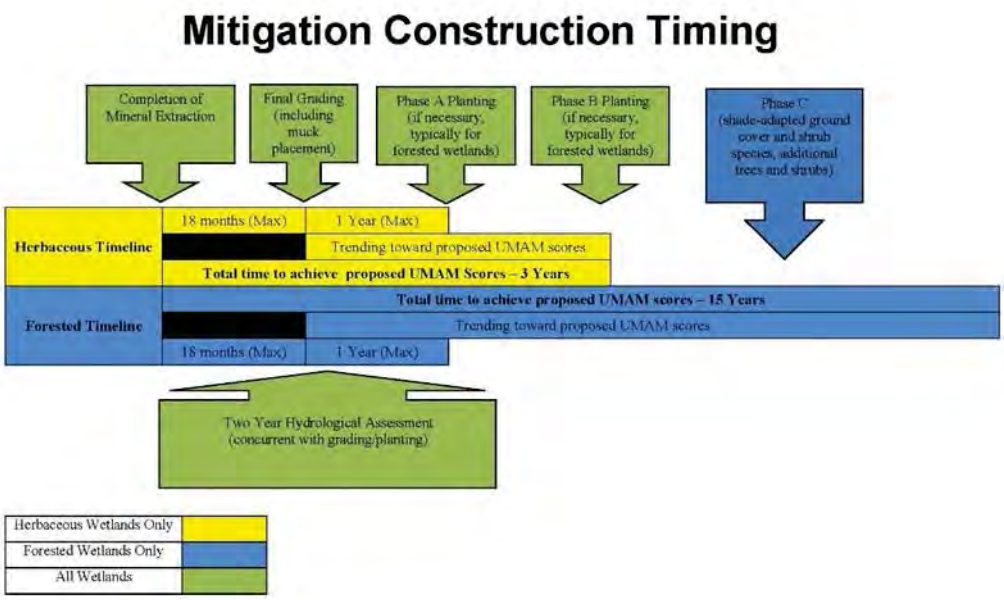
1.6.6.2 Mitigation/Reclamation Sequence

Most of the construction actions are described in the preceding sections. Once construction of the onsite and offsite mitigation areas is completed and the timeline enters the stabilization period, the sequence would become iterative rather than sequential. Beginning with the completion of construction and continuing through final release, each phase is essentially a series of "do-loops" where remedial actions must be implemented in the event the mitigation area is not progressing or performing according to plan.

For example, during the stabilization phase, remedial actions would need to be designed and implemented if erosion is causing turbidity or stream flows or wetland hydroperiods are deviating from the model predictions. Also, supplemental planting and control of unacceptable plant species would be implemented.

Once approval has been received to remove the ditch and berm system, remedial actions would be limited to steps to facilitate vegetative community development patterns trending towards success. In rare instances, however, remedial actions to address hydrology or water quality issues may be necessary, depending upon monitoring results. The most likely measures would be limited to supplemental planting and weed control.

The final phase prior to the release petition would not include any remedial actions, only monitoring and inspecting. The release petition would document two years without remedial actions to meet eligibility requirements.



1.7 *MAINTENANCE PLAN*

A maintenance plan would be implemented by Mosaic to ensure the constructed onsite and offsite mitigation sites meet USACE mitigation requirements and the performance criteria in Section 1.8 below and in accordance with the construction sequence provided in Section 1.6.6 above. Plan elements include:

- Inspections;
- Nuisance/exotic species control/removal; and
- Supplemental tree and herbaceous plantings.

Frequent inspections by the responsible Mosaic reclamation specialists and ecologists would be coupled with the monitoring programs defined in Section 1.9 to assess the need for maintenance actions or corrective or adaptive management steps. The mitigation maintenance will include at least semi-annual inspections of wetlands and other surface waters for the presence of nuisance and exotic species and other protective measures (i.e. fencing) identified as needed during establishment of wetlands. Nuisance and exotic vegetation identified during the inspections will be controlled by appropriate methods, such as herbicide application, fire, hydrologic, or mechanical means to limit their cover to less than five (5) percent and to remove exotic species when present in each mitigation area. Manual or chemical treatment of nuisance and exotic species will be implemented at least annually when cover of undesirable vegetation in any mitigation area increases to more than five (5) percent cover or if invasive exotic species are present. Manual or chemical treatment will also be implemented if cogon grass (*Imperata cylindrica*) coverage exceeds five (5) percent within 300 feet of any mitigation wetland or other surface water.

Mosaic is responsible for all costs associated with the maintenance activities for wetlands that have yet to be released and transitioned into long term management and provides financial assurance (as discussed in Section 1.12) on a three year rolling average.

1.8 *PERFORMANCE STANDARDS*

To meet the objectives of the approved final CMP, the Permittee shall achieve the following performance standards 33 CFR §332.4(c)(9) for the onsite and offsite areas:

Wetland Performance Standards

Preserved Wetlands:

a. The Permittee shall maintain the baseline hydrology of the preserved wetlands, as documented by the Ecological Baseline Report described in the Long Term Management Plan, in perpetuity.

b. The Permittee shall maintain the Community Structure UMAM scores of the preserved wetlands, as detailed in Table 4-8-A-xii(F)&(H) of the CMP, in perpetuity. For those wetlands with a Community Structure of 6 or greater, the Permittee shall specifically maintain less than five (5) percent cover of Category I and II invasive exotic plant species, pursuant to the most current list established by the Florida Exotic Pest Plant Council at http://www.fleppc.org, and the nuisance species, dogfennel (*Eupatorium capillifolium*), Bermudagrass (*Cynodon* spp.), Bahiagrass (*Paspalum notatum*), and cattail (*Typha* spp.), and no more than ten (10) percent cover by non-native range grasses other than Bermuda grass and Bahia grass.
Preserved Upland Buffers:

c. Within each preserved upland buffer area, there shall be less than five (5) percent cover of Category I and II invasive exotic plant species, pursuant to the most current list established by the Florida Exotic Pest Plant Council at http://www.fleppc.org, and the nuisance species, dogfennel, Bermudagrass, Bahiagrass, and cattail, and no more than ten (10) percent cover by non-native range grasses other than Bermuda grass and Bahia grass.

d. The Permittee shall maintain the preserved upland buffers as native habitat consistent with the unimproved pasture (212), woodland pasture (213), rangeland (300 series) or upland forest (400 series) vegetation covers in FLUCCS, as shown in Map 4-8-A-I of the CMP. There will be no conversion from existing 300 or 400 series land uses to 200 series land uses, or from existing 212 or 213 series land uses to more intensive land uses such as improved pasture (211) within the preserved upland buffers. The Permittee shall cease any management activities associated with more intensive land uses such as improved pasture, including but not limited to planting non-native forage species and application of fertilizer. Any supplemental plantings in the upland buffers shall be native species consistent with rangeland (300 series) or upland forest (400 series) vegetation

covers in FLUCCS. Other uses not specifically authorized in the Long-Term Management Plan, such as agricultural activities including silviculture or other significant tree removal (as determined by the USACE), replacement of any native habitat with non-native habitat, and placing of additional internal fencing, roadways or firebreaks (unless related to habitat management in support of the primary purpose of providing compensatory mitigation), will also be prohibited in the preserved uplands. The Permittee shall maintain and monitor the wetland and upland buffer preservation areas in accordance with the Long-Term Management Plan (Appendix 4-4-C).

Established/Re-established Wetlands – Herbaceous:

a. Each mitigation area shall meet the criteria for Corps-jurisdictional wetlands in accordance with the 1987 Wetland Delineation Manual and the Atlantic and Gulf Coastal Plain Regional Supplement, Version 2.0, November 2010. In addition, each mitigation area shall meet the criteria for waters of the United States in accordance with the most current federal regulations and guidance on determining the extent of waters of the United States.

b. Each mitigation area shall have at least 80 percent cover by wetland species (i.e., FAC or wetter) appropriate for each wetland type (by FLUCCS code). Each mitigation area shall be planted with sufficient herbaceous species to establish the densities and species richness and dominance characteristics appropriate for each community type. No single species shall constitute more than 30% of the relative cover unless other scientific literature supports a species composition at greater than 30%.

c. Within each mitigation area, there shall be less than five (5) percent cover of Category I and II invasive exotic plant species, pursuant to the most current list established by the Florida Exotic Pest Plant Council at http://www.fleppc.org, and the nuisance species, dogfennel, Bermudagrass, Bahiagrass, and cattail, and no more than ten (10) percent cover by non-native range grasses other than Bermuda grass and Bahia grass.

d. Within each mitigation area, hydrology establishment shall result in soils that are, at a minimum, saturated to the surface between 5 and 12.5 percent of the growing season.

The Permittee shall achieve the above performance standards within each established/reestablished herbaceous mitigation area by the end of a five-year monitoring period (starting from the time of completion of mining operations at the location of each mitigation area, including backfilling with sand tailings), with no maintenance during the fifth year of monitoring. In the event that the above performance standards have not been achieved in that timeframe, the Permittee shall undertake a remediation program approved by the Corps in accordance with the adaptive management section of the CMP and the Mitigation Adaptive Management/Alternatives Special Condition of the DA permit.

Established/Reestablished Wetlands – Forested:

a. Each mitigation area shall meet the criteria for Corps-jurisdictional wetlands in accordance with the 1987 Wetland Delineation Manual and the Atlantic and Gulf Coastal Plain Regional Supplement, Version 2.0, November 2010. In addition, each mitigation area shall meet the criteria for waters of the United States in accordance with the most current federal regulations and guidance on determining the extent of waters of the United States.

b. Within each mitigation area, there shall be less than five (5) percent cover of Category I and II invasive exotic plant species, pursuant to the most current list established by the Florida Exotic Pest Plant Council at http://www.fleppc.org, and the nuisance species, dogfennel, Bermudagrass, Bahiagrass, and cattail, and no more than ten (10) percent cover by non-native range grasses other than Bermuda grass and Bahia grass.

c. Within each mitigation area, hydrology establishment shall result in soils that are, at a minimum, saturated to the surface between 5 and 12.5 percent of the growing season.

d. Bay swamp wetlands (FLUCCS 611) shall have an average of at least 400 live trees per acre that are at least 12 feet tall, with no less than 200 trees per acre in any area greater than one acre in size; a dominance (>50% by number) of bay trees (*Magnolia virginiana* or *Gordonia lasianthus*) in the canopy layer; and at least 100 shrubs per acre consisting of at least five of the shrub species for the FLUCCS 611 community type as listed in Table 4-3-A of the Wetland Work Plan.

e. Gum swamp wetlands (FLUCCS 613), shall have an average of at least 400 live trees per acre that are at least 12 feet tall, with no less than 200 trees per acre in any area greater than one acre in size; a dominance (>50% by number) of swamp tupelo (*Nyssa sylvatica var. biflora*) in the canopy layer; and at least 100 shrubs per acre consisting of at least five of the shrub species for the FLUCCS 613 community type as listed in Table 4-3-A of the Wetland Work Plan.

f. Inland pond and slough wetlands (FLUCCS 616) shall have an average of at least 400 live trees per acre that are at least 12 feet tall, with no less than 200 trees per acre in any area greater than one acre in size; a dominance (>50% by number) of popash (*Fraxinus caroliniana*) in the canopy layer; and at least 100 shrubs per acre consisting of at least five of the shrub species for the FLUCCS 616 community type as listed in Table 4-3-J of the Wetland Work Plan.

g. Mixed wetland hardwood wetlands (FLUCCS 617) shall have an average of at least 400 live trees per acre that are at least 12 feet tall, with no less than 200 trees per acre in any area greater than one acre in size; at least 100 shrubs per acre consisting of at least five of the shrub species for the FLUCCS 617 community type as listed in Table 4-

3-C of the Wetland Work Plan; and shall not have a dominance (>50% by number) of any one tree species in the canopy layer.

h. Coniferous wetlands (FLUCCS 620) shall have an average of at least 150 live trees per acre that are at least 12 feet tall, with no less than 50 trees per acre in any area greater than one acre in size; a dominance (>50% by number) of slash pine (*Pinus elliottii*) in the canopy layer; at least 300 shrubs per acre consisting of at least five of the shrub species for the FLUCCS 620 community type as listed in Table 4-3-D of the Wetland Work Plan; and a dominance in the groundcover by native species typical of hydric pine flatwoods with a least ten (10) percent cover by wiregrass (*Aristida stricta var beyrichiana*). For the Bowlegs offsite project, Cypress (FLUCCS 621) shall have at least 50% dominance of cypress trees by number, and 624 (Cypress-Pine-Cabbage Palm) shall have at least 50% dominance of the sum of cypress, slash pine, and cabbage palm trees by number.

i. Hydric pine flatwood wetlands (FLUCCS 625) shall have an average of at least 150 live trees per acre that are at least 12 feet tall, with no less than 50 trees per acre in any area greater than one acre in size; a dominance (>50% by number) of slash pine (*Pinus elliottii*) in the canopy layer; at least 300 shrubs per acre consisting of at least five of the shrub species for the FLUCCS 625 community type as listed in Table 4-3-D of the Wetland Work Plan; and a dominance in the groundcover by native species typical of hydric pine flatwoods with a least ten (10) percent cover by wiregrass (*Aristida stricta var beyrichiana*).

j. Hydric pine savanna wetlands (FLUCCS 626) shall have an average of at least 50 live trees per acre that are at least 12 feet tall, with no less than 50 trees per acre in any area greater than one acre in size; a dominance (>50% by number) of slash pine in the canopy layer; at least 100 shrubs per acre consisting of at least five of the shrub species for the FLUCCS 626 community type as listed in Table 4-3-D of the Wetland Work Plan; and a dominance in the groundcover by native species typical of hydric pine savannas with a least ten (10) percent cover by wiregrass.

k. Wetland mixed hardwood-coniferous forest wetlands (FLUCCS 630) shall have an average of at least 400 live trees per acre that are at least 12 feet tall, with no less than 200 trees per acre in any area greater than one acre in size. Neither pines nor hardwoods shall account for more than 66% (by number) of the canopy, and no species shall account for more than 40% (by number) of the canopy. There will be at least 100 shrubs per acre consisting of at least five of the shrub species for the FLUCCS 630 community type as listed in Table 4-3-E of the Wetland Work Plan, and a dominance in the groundcover by native species typical of wetland mixed hardwood-coniferous forests.

The Permittee shall achieve the above standards within each established/reestablished forested mitigation area for 3 consecutive years within the last 5 years of required monitoring with no maintenance during the final 2 years before a request for a determination of performance achievement can be made. This would assure standards

were met and the mitigation is viable within the last 5 years of monitoring. The permittee shall implement the adaptive management plan as necessary to achieve mitigation success. In the event that the trees' growth or mortality would not lead to meet the above performance standards within a 15-year timeframe (starting from the time of completion of mining operations at the location of each mitigation area, including backfilling with sand tailings), the Permittee shall undertake a remediation program approved by the Corps in accordance with the adaptive management section of the CMP and the Mitigation Adaptive Management/Alternatives Special Condition of the DA permit.

Stream Performance Standards

Stream Preservation:

a. The Permittee shall maintain the stream segments' FDEP visual habitat assessment scores (HAS) shown in Table 4B of the CMP in perpetuity. Along with each segment's channel, the Permittee shall preserve a minimum buffer width of 60 feet on each side of the channel. The buffers shall be native wetland or upland [rangeland (FLUCCS 300 series) or upland forest (FLUCCS 400 series)] communities, and have less than five (5) percent cover of Category I and II invasive exotic plant species, pursuant to the most current list established by the Florida Exotic Pest Plant Council at http://www.fleppc.org, and the nuisance species, dogfennel, Bermudagrass, Bahiagrass, and cattail, and no more than ten (10) percent cover by non-native range grasses other than Bermuda grass and Bahia grass. Any supplemental plantings in the buffers shall be native species consistent with the onsite wetland or upland habitats, based on FLUCCS classification codes.

The Permittee shall monitor the stream and riparian buffer preservation/enhancement areas in accordance with the Long-Term Management Plan.

Stream Establishment:

a. The Permittee shall create Rosgen Type "C5" and "E5" stream segments with the specific characteristics (drainage area, average bankfull cross-sectional area, average bankfull width, bankfull thalweg depth, hydraulic depth, width/depth ratio, pool depth, Rosgen class, sinuosity, stream length, bed slope, flood-prone width, and functional process zone type) described for each stream segment in Table 15A-F of the Stream Work Plan. Each segment shall also have the stream design habitat amendments described in Stream Work Plan. For the Bowlegs and Payne Creek offsite projects, the streams shall be established as a Rosgen Type "C5", "E5", or "B5."

b. Each ephemeral or intermittent stream segment shall contain macroinvertebrate species richness and diversity within the range of or which exceeds the reference stream segments.

c. Each stream segment shall have a minimum FDEP visual habitat assessment score (HAS) of 105 with a minimum buffer width of 60 feet on each side and stable stream banks. The buffers shall be native wetland or upland [rangeland (FLUCCS 300 series) or upland forest (FLUCCS 400 series)] communities, and have less than five (5) percent cover of Category I and II invasive exotic plant species, pursuant to the most current list established by the Florida Exotic Pest Plant Council at http://www.fleppc.org, and the nuisance species, dogfennel, Bermudagrass, Bahiagrass, and cattail, and no more than ten (10) percent cover by non-native range grasses other than Bermuda grass and Bahia grass. Any supplemental plantings in the buffers shall be native species consistent with the onsite wetland or upland habitats, based on FLUCCS classification codes.

The Permittee shall achieve the above performance standards within each established stream segment by the end of a ten-year monitoring period (starting from the time of completion of mining operations at the location of each mitigation area, including backfilling with sand tailings), with at least five consecutive years of successfully meeting the performance standards. In the event that the above performance standards have not been achieved in that timeframe, the Permittee shall undertake a remediation program approved by the Corps in accordance with the adaptive management section of the CMP and the Mitigation Adaptive Management/Alternatives Special Condition of the DA permit.

1.8.1 OTHER PERFORMANCE STANDARDS

Other performance standards associated with the onsite plan would include:

- Removal of all debris, litter, unusable materials, as well as all footings, poles, pilings, and cables;
- Removal of all equipment and man-made structures; and
- Establishment of slopes gentler than four feet horizontal to one foot vertical (4:1), with the exception of design stream banks and existing slopes to remain in place.

1.9 *MONITORING PLAN AND REQUIREMENTS*

Success of restoration efforts will be determined by implementing a comprehensive and extensive monitoring program that will be designed to gather sufficient data to demonstrate appropriate ecological conditions. 33 CFR §332.4(c)(10) for the onsite and offsite areas.

Transects will be established in areas to be monitored, with periodic sampling points (the number of transects and sampling points will be based on area size) at which the following will be noted:

- Percent cover by desirable species by stratum
- Percent cover by exotic or nuisance species

- Dominant species (planted or recruited at 5 percent cover or greater), with an estimate of cover of each
- Water depth relative to zonation
- Soil monitoring relative to muck depth, color, texture, litter accumulation and moisture
- The health and viability of the four trees nearest the point (forested areas only) by measuring DBH and height
- Tree density (forested areas only)

The mitigation wetland monitoring data will be summarized into a report that will include the above information as well as observed wildlife usage, an overall ecological evaluation, and any actions that may be required to improve the system. To the extent practicable, reports will be tabular in form for ease of review and year-to-year comparisons. Nuisance vegetation monitoring will consist of quarterly or semi-annual inspections of wetlands. Chemical or manual removal of the exotic species will occur semi-annually within all reclaimed wetlands until success has been obtained and the wetlands released.

For mitigation stream projects, visual monitoring shall be conducted along the entire length of each reach to document observable stream conditions associated with sediment transport and stream stability, such as bank instability, instability/failure of instream structures, structure piping, headcuts, lateral bank migration and excessive sediment deposition or degradation of the channel. Digital photographs of observed and noted problems will be taken.

Mitigation streams shall be surveyed annually to assess morphological stability. Three 100-meter reaches shall be surveyed for every 1,000 meters of stream length. Surveying shall be conducted for 10 years, with monitoring events occurring on years 1, 2, 3, 5, 7, and 10. Survey monitoring data shall be used to calculate all morphological parameters contained in Tables 15A-15E of Appendix 2-2-B-i.

Macroinvertebrate sampling shall be conducted annually for mitigation streams, providing flow conditions are sufficient, for at least three years prior to release. The three samples do not have to be in consecutive years to allow for sampling under suitable flow conditions. The macroinvertebrate sampling will be compared to macroinvertebrate sampling data collected at reference streams of comparable size, morphology, and drainage area. Macroinvertebrate reference data will establish the reference conditions that will be used to evaluate the macroinvertebrate community of the reclaimed streams.

Monitoring and reporting will be conducted consistent with the DA Permit.

1.10 *LONG-TERM MANAGEMENT PLAN*

The Long-Term Management Plan (Appendix 4-4-C) provides specific protective measures and management strategies to be used for the monitoring and maintenance of

the various onsite and offsite mitigation habitats to ensure that long-term sustainability of the mitigation areas once the performance standards contained in this CMP have been achieved. 33 CFR §332.4(c)(11).

As required by 33 CFR § 332.7(b), the compensatory mitigation has been designed, to the maximum extent practicable, to be self-sustaining once the performance standards have been achieved and the entire mine area released from further permit requirements. Therefore, little to no active long-term management is anticipated to be required beyond the operational life of the project.

The Management Plan is intended to assure that the performance standards set forth in the CMP are sustained in perpetuity. Specific management techniques outlined in the Management Plan include prescribed fire and physical and chemical control of nuisance/exotic species and controlled grazing, as approved by the USACE. Additional protection measures including fencing, signage, and maintenance of other existing manmade features such as access gates and crossings are also provided in the plan. A Conservation Easement template has been provided in Appendix 4-4-A. Mosaic will also provide a financial assurance mechanism for the long-term management of the required compensatory mitigation in Appendix 4-4-C.

1.11 *ADAPTIVE MANAGEMENT PLAN*

To ensure the onsite and offsite mitigation meets the required performance standards, Mosaic acknowledges that an adaptive management approach will be an integral part of the CMP implementation. 33 CFR §332.4(c)(12).

As described in the Monitoring Requirements section of the CMP and as required by the DA permit, Mosaic will implement a comprehensive and extensive monitoring program designed to gather sufficient data to evaluate the progress of wetland and stream mitigation areas towards achievement of performance standards in Section 1.8. Mosaic will also implement corresponding mitigation compliance reporting in accordance with the requirements of the DA permit.

If monitoring or compliance inspections identify performance deficiencies such as inappropriate hydrology or exotic/nuisance vegetation, or if the USACE otherwise determines that the mitigation is not progressing towards achievement of performance standards, Mosaic will promptly assess the mitigation to determine the cause(s) of the problem(s), and develop and implement a site-specific adaptive management/corrective action plan that addresses specific construction, maintenance, and/or enhancement measures to achieve the design objectives. Examples of corrective actions may include but would not be limited to adjusting wetland hydrology, supplemental plantings, or changing the exotic and nuisance species control frequency or methods. Mosaic shall submit any such adaptive management plan to the USACE for approval prior to implementation, and include a description of the implementation and results in the annual monitoring reporting.

As also required by the DA permit, Mosaic will monitor and provide annual reports on the construction compliance, including the acreage and location of mitigation areas implemented during the reporting period and cumulatively. If the site has areas that are determined to be different from the originally permitted mitigation area boundaries or community types, Mosaic shall request a permit modification to delineate the correct boundaries and/or community types and requisite functional assessment adjustments.

1.12 *FINANCIAL RESPONSIBILITY*

Mosaic has provided a financial assurance mechanism sufficient to ensure satisfactory completion of the compensatory mitigation for the Ona Mine project as required by the USACE permit 33 CFR §332.4(c)(13).

A copy of the final and accepted financial assurance documents, including the financial assurance instrument and the initial cost estimate will be provided in a separate submittal. A condition in the USACE permit shall require the proposed mitigation financial assurance to be in place and funded prior to commencing the permitted activity.

Summarized, Mosaic will provide a financial responsibility mechanism equal to 110 percent (%) of the estimated mitigation costs for wetlands and other surface waters projected to be impacted in the first three years of operation, including monitoring and maintenance. Further, the financial responsibility is required to be updated yearly to cover, on a rolling basis, the cost of mitigation activities proposed to be undertaken over the next three year period, with a 10% contingency factor for any adaptive management that might be required. The mitigation cost per acre for the wetland types would be adjusted annually either by recalculating the cost of constructing, managing, and monitoring the mitigation in current dollars or using an inflation factor based on the annual Construction Cost Index, as presented in the first issue of the Engineering News Record published in December of each year. The mechanism will be updated with revised costs until mitigation is released and transitioned into Long Term Management.

There will always be sufficient funds to cover the mitigation for completed impacts to waters of the United States. Financial assurances will be phased out as each mitigation area is deemed successful by the USACE, consistent with 33 CFR § 332.3(n)(4). These measures will ensure a high level of confidence that the onsite and offsite mitigation will be successfully completed in accordance with the performance standards 33 CFR § 332.4(13); § 332.3(n).

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Table 2-1-A-i — Site Land Use Summary - Vegetation Cover

Land Use (FLUCFCS, 1999 FDOT)	Description	Pre-Total	Avoided	Avoided and Enhanced*	Creation within Avoided	Mined/ Disturbed	Reclaimed	Post Total
111	Fixed Single Family Homes	10.1	0 0	0.0	0 0	10.1	0.0	0 0
180	Recreational (Hunting Camp)	1.8	1 8	0.0	0 0	0.0	0.0	1 8
Subtotal FLUCFCS 100's		**11.9**	**1.8**	**0.0**		**10.1**	**0.0**	**1.8**
211	Improved Pasture	8121.0	10.4	0.0	0 0	7,806.3	7250 9	7,261.3
212	Unimproved Pastures	13.0	0 0	0.0	0 0	13.0	0.0	0 0
213	Woodland Pasture	725.2	19 5	0.0	0 0	627.6	1209.1	1,228.6
214	Row Crops	186.0	0 0	0.0	0 0	186.0	0.0	0 0
221	Citrus Groves	208.5	0.1	0.0	0 0	208.5	0.0	0.1
260	Other Open Land	4.3	0 0	0.0	0 0	4.3	0.0	0 0
Subtotal FLUCFCS 200's		**9,258.0**	**30.0**	**0.0**		**8,845.7**	**8,460.0**	**8,490.0**
310	Dry Prairie	33.6	0 0	0.0	0 0	33.6	0.0	0 0
320	Shrub and Brushland	0.0	0 0	0.0	0 0	0.0	185.1	185.1
321	Palmetto Prairie	2500.8	411.3	135.1	0 0	2,089.4	1235 2	1,781.6
329	Other Shurbs and Brush	224.8	5.1	0.0	0 0	173.8	0.0	5.1
330	Mixed Range Land	99.5	5.4	0.0	0 0	94.1	78.2	83.6
Subtotal FLUCFCS 300's		**2,858.7**	**421.8**	**135.1**		**2,390.9**	**1,498.5**	**2,055.4**
410	Upland Coniferous Forests	0	0 0	0	0 0	0.0	669.8	669.8
411	Pine Flatwoods	1337.6	349.8	84.4	0 0	987.7	288.7	722.9
413	Sand Pine	25.6	0 0	0.0	0 0	25.6	0.0	0 0
421	Xeric Oak Forests	0	0 0	0.0	0 0	0.0	126.5	126.5
425	Temperate Hardwood Forests	1010	478 2	35.9	0 0	531.3	242.6	756.7
427	Live Oak Forests	1573.5	539.9	111.0	0 0	1,032.9	758.9	1,409.8
432	Sand Live Oak	698.8	18 5	0.0	0 0	680.4	234.8	253.3
434	Hardwood-Conifer Mixed	1693.8	494.2	42.8	0 0	1,199.5	1869 9	2,406.9
Subtotal FLUCFCS 400's		**6,339.3**	**1,880.6**	**274.1**		**4,457.4**	**4,191.2**	**6,345.9**
513	Wetland Cut Ditch	16.6	0.1	0.0	0 0	15.5	0.0	0.1
514	Upland Cut Ditch	55.2	0 6	0.0	0 0	52.8	0.0	0 6
522	Lakes 100-500 ac.	0	0 0	0.0	0 0	0.0	389.9	389.9
534	Reservoirs - 10 ac. (Cattle ponds)	30.1	0.7	0.0	0 0	28.3	0.0	0.7
Subtotal FLUCFCS 500's		**101.9**	**1.4**	**0.0**		**96.6**	**389.9**	**391.3**
611	Bay Swamp	288.6	131.8	0.0	0 0	156.8	181.0	312.8
613	Gum Swamp	1.1	0 0	0.0	0 0	1.1	5.1	5.1
616	Inland Ponds and Sloughs	118	69.7	0.0	0 0	48.3	95.4	165.1
617	Mixed Wetland Hardwoods	766.2	375.3	1.3	0 0	390.1	1111.7	1,488.3
620	Wetland Coniferous	9.6	0.4	0.0	0 0	9.1	17.4	17.8
625	Hydric Pine Flatwoods	0	0 0	0.0	0 0	0.0	39.7	39.7
630	Wetland Forested Mixed	2.9	2 5	1.2	0 0	0.3	281.3	285.0
Subtotal Forested Wetlands		**1,186.4**	**579.7**	**2.5**		**605.7**	**1,731.6**	**2,313.8**
641	Freshwater Marsh	1857.3	196.1	1.2	1 6	1,661.1	2172 8	2,371.7
643	Wet Prairie	138.3	7 6	5.4	14.7	130.8	212.6	240.3
647	Shrubby Wetland	700.1	149.8	0.6	0 0	549.6	92.8	243.2
649	Wet Palmetto Prairie	0	0 0	0.0	0 0	0.0	29.0	29 0
Subtotal Herbaceous Wetlands		**2,695.7**	**353.5**	**7.2**	**16.3**	**2,341.5**	**2,507.2**	**2,884.2**
Subtotal FLUCFCS 600's		**3,882.1**	**933.2**	**9.7**	**16.3**	**2,947.2**	**4,238.8**	**5,198.0**
743	Spoil Area	23.3	0 3	0.0	0 0	23.0	0.0	0 3
814	Road	7.8	0.4	0.0	0 0	7.5	0.0	0.4
Subtotal 700's and 800's		**31.1**	**0.7**	**0.0**		**30.5**	**0.0**	**0.7**
TOTALS		**22,483.0**	**3,269.5**	**418.9**	**16.3**	**18,778.4**	**18,778.4**	**22,483.1**

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

* This column represents the final land use/vegetation cover within the avoided areas. These areas are currently agricultural habitats that will be enhanced to native communities once the activities proposed in Appendix 4-1-A are complete. Mitigation credit for these areas is limited to that which is obtained from protection and long-term management.

Table 2-2-A-i	USACE Wetland Impact Summary by Land Use						
Land Use (FLUCFCS, 1999 FDOT)	**Pre-Total**	**Avoided**	**Avoided and Enhanced***	**Creation within Avoided**	**Mined / Disturbed**	**Reclaimed**	**Post Total**
Herbaceous Wetlands							
(180) Recreational	0.10	0.05	0.0	0 0	0.0	0.0	0.05
(211) Improved Pastures	136.8	0.5	0.0	0.0	128.8	0.0	129.3
(212) Unimproved Pastures	1.0	0.0	0.0	0 0	1.0	0.0	1.0
(213) Woodland Pastures	101.0	13.3	0.0	0.0	82.7	0.0	96.0
(214) Row Crops	0.1	0.0	0.0	0 0	0.1	0.0	0.1
(320) Shrub and Brushland	0.0	0.0	0.0	0 0	0.0	0.0	0.0
(321) Palmetto Prairies	15.7	12.5	0.4	0 0	4.3	2.2	19.4
(329) Other Shrubs and Brush	10.7	0.0	0.0	0 0	10.7	0.0	10.7
(641) Freshwater Marshes	1406.4	194.2	2.3	1.6	1240.1	1,783.7	3220.3
(643) Wet Prairies	88.8	7.6	4.3	14.7	83.8	102.2	197.8
(647) Shrubby Wetland	629.6	149.8	0.6	0.0	480.5	91.6	722.4
(649) Wet Palmetto Prairie	0.0	0.0	0.0	0 0	0.0	29.0	29.0
Sub-Total Herbaceous Wetlands	**2,390.2**	**377.8**	**7.5**	**16.3**	**2,032.1**	**2,008.7**	**4426.1**
Forested Wetlands							
(411) Pine Flatwoods	90.7	53.3	1.0	0.0	40.1	0.2	94.6
(425) Temperate Hardwood	470.2	219.9	0.7	0.0	249.3	0.1	470.0
(427) Live Oak	239.0	97.0	1.6	0.0	139.9	12.3	250.8
(434) Hardwood-Conifer Mixed	507.4	163.0	3.4	0.0	350.9	15.2	532.4
(611) Bay Swamps	287.9	131.4	0.0	0.0	156.6	100.5	388.5
(613) Gum Swamps	0.7	0.0	0.0	0 0	0.7	5.1	5.8
(616) Inland Ponds and Sloughs	117.5	69.7	0.0	0 0	47.9	94.4	212.0
(617) Mixed Wetland Hardwoods	731.1	368.2	0.6	0.0	363.4	928.7	1660.8
(620) Wetland Coniferous	9.0	0.4	0.0	0 0	8.8	6.6	15.8
(625) Hydric Pine Flatwoods	0.0	0.0	0.0	0 0	0.0	36.9	36.9
(626) Hydric Pine Savanna	0.0	0.0	0.0	0 0	0.0	1.0	1.0
(630) Wetland Forested Mixed	2.9	2.6	1.0	0 0	0.3	262.5	266.5
Sub-Total Forested	**2,456.4**	**1,105.4**	**8.4**	**0.0**	**1,357.9**	**1,463.5**	**3,935.2**
Sub-Total Forested and Herbaceous	**4,846.6**	**1,483.2**	**15.9**	**16.3**	**3,389.9**	**3,488.5**	**8,361.3**
Open Water							
(513) Ditched Wetlands	15.6	0.0	0.0	0.0	14.45	0.0	14.5
(514) Upland Cut Ditches	12.4	0.0	0.0	0.0	11.46	0.0	11.5
(522) Lakes 100-500 ac.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(534) Reservoirs - 10 ac. (cattle ponds)	10.7	0.71	0.0	0.0	10.32	0.0	11.0
Sub-Total Water	**38.7**	**0.8**	**0.0**	**0.0**	**36.2**	**0.0**	**37.0**
Grand Total	**4,885.3**	**1,484.0**	**15.9**	**16.3**	**3,426.1**	**3,488.5**	**8,398.3**

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

* This column represents the final land use/vegetation cover within he avoided areas. These areas are currently agricultural habitats that will be enhanced to native communities once the activities proposed in Appendix 4-1-A are complete. Mitigation credit for these areas is limited to that which is obtained from protection and long-term management.

Table 2-2-B-i	Stream Impact Summary			
	Pre-Total (linear feet)	Avoided (linear feet)	Impacted (linear feet)	Total (linear feet)
Natural Stream Channel (511)	177,869.81	112,082.28	65,787.52	177,869.81
Ditched Stream Channel (512)	43,752.64	8,773.36	34,979.28	43,752.64
Total On-site:	**221,622.44**	**120,855.65**	**100,766.80**	**221,622.44**

Table 2-2-E Land Cover within 60 feet of Existing Streams

NAME	180	211	213	214	321	329	330	411	425	427	434	513	514	534	611	616	617	630	641	643	647	743	814
100A	0.57		2.92						14.4		5.51		0.03						0.16				
100B		0.22	8.93					0.33	0.15	6.31	4.62		0.02				0.18		0.11				
100C		0.01	2.44						0.39	3.74			0.04				0.00		0.08				
100D									3.67	0.11						0.78	2.26						
100E										0.12						0.17	2.72						
100F																0.02	1.95						
100G																0.27	0.20						
101A									1.32		0.59												
102A										0.70													
103A		0.45	0.59					0.39			1.36								0.10				
104A			0.20								2.05								0.00				
105A			0.14					0.00	0.47	1.37	5.72						0.00		0.61				
105C								0.01		0.00	4.11	0.01											0.04
105D											0.77		0.01								0.34		
105F											2.31										0.08		
105H											1.97						0.26				0.03		
105I								8.35			0.28						0.11						
105J					0.80						0.28						0.14						
105L											3.91								0.22		0.05		
105M					0.14			1.55															
105O								0.04	0.03		0.87				0.23								
105P					0.30			0.19							1.73								
105S											0.51		0.02				0.10				0.04		
105U										0.00	0.59						0.25		0.10		0.00		
105V								0.34			1.44										0.00		
106A					0.20					3.28	0.53					0.29	0.27		0.02				
106B											0.82												
106C		0.10	0.27			0.12					2.27								0.01				
106D		0.30	1.00							0.13	0.42		0.02						0.41				

Table 2-2-E Land Cover within 60 feet of Existing Streams

NAME	180	211	213	214	321	329	330	411	425	427	434	513	514	534	611	616	617	630	641	643	647	743	814
106G									0.80	0.21	0.17		0.01				0.02				0.01		
107A		0.12							0.17	2.21									0.44				
107B		1.15								0.86							0.13		0.30				
107E		2.28								1.13							0.29		0.25				
109B									0.20	1.34									0.09				
111A									0.47	0.98						0.66	0.05						
111B																1.03	0.85		0.00				
111C									0.31							0.15	1.90						
111D									1.97							0.20	2.10						
111E		0.03	1.87						1.19		0.15					0.07							
111F			0.13						0.26	0.66	1.30		0.00						0.27				
111G		0.39	0.06							0.69									0.05				
111H		2.62								0.08			0.00						0.35				
111I									0.32	0.41							0.66						
111J			0.23								0.82												
111K									0.12	0.97							0.12						
112A					0.28			2.52		2.89	7.21						0.36						
112B		1.76							0.05	2.55			1.48	0.08	1.87		0.04		0.04				
112F											0.11				1.10								
112G		0.05									1.01				0.67								
112H		0.66								0.11	0.23				0.00								
112I		0.46								1.22												0.00	
112J		0.12							0.11	0.25													
112M								0.56	0.15	0.33	0.76								0.13				
112P		0.24							0.47	0.04									0.01				
112Q		0.00							0.58	0.12					0.04								
112R								0.10		0.03	1.07								0.27				
112S		1.13									0.45	0.19	0.01		0.02				0.15		0.49		
113A					1.49			0.42		0.17	0.05					0.26	1.28				0.62		

Table 2-2-E Land Cover within 60 feet of Existing Streams

NAME	180	211	213	214	321	329	330	411	425	427	434	513	514	534	611	616	617	630	641	643	647	743	814
113B					1.49					0.52	1.19												
114A					0.95				0.05	1.29									0.20		0.08		
200A								0.04	0.51		4.01												
200B											1.69								0.13				
200C											2.36												
200D											1.67		0.02										
200E									0.17	1.17			0.02						0.08				
201A		0.43			0.88					0.38		0.02									0.05		
201B			0.03						0.02	1.21													
201C			0.25							0.68							0.02		0.01				
203A		0.67	0.92														0.23		0.13				
203B										1.56	0.06						0.18				0.38		
204A											2.26								0.15				
300			3.13									0.04									0.12		
300A		3.03	0.13						1.04	0.26		0.06							0.58				
300B										2.22									0.18				
300C										2.17									0.14		0.30		
300D									5.11	3.34	3.68										0.03		
300E								0.15			9.37								0.51		0.10		
300F		0.22						0.10	0.00	0.65	2.13					0.01	0.53						
300H											0.56					0.28	0.26				0.06		
300I		0.26									2.70								0.32				
301A									0.03	1.45									0.13		0.48		
301B					0.26						5.57								0.11				
301C								1.80		2.59	0.51								0.17				
301D					2.39	0.32													0.75				
301E								0.43			0.44						0.25		0.35		0.03		
301F								0.77			0.29								0.35				
301G					2.93			2.69	2.18		0.36								0.55				

Table 2-2-E Land Cover within 60 feet of Existing Streams

NAME	180	211	213	214	321	329	330	411	425	427	434	513	514	534	611	616	617	630	641	643	647	743	814
301H		0.00			0.48				0.91	0.70									0.18		0.05		
301I		0.20			0.07				3.11	0.13		0.01							0.08		0.26		
301J					0.17						0.65				0.79								
301K					4.14										0.31				0.31		1.31		
301L									0.18	2.24											0.13		
301M					2.70				4.03	0.11									0.02				
302A					0.26				0.17	4.12							0.36		0.05				
302B					0.02			1.12			0.63												
302C											0.71												
302D					0.70			0.40			1.19								0.05	0.02			
302E								3.24			1.95								0.27				
302F					0.10			0.19			0.77								0.06				
302G			0.02		2.68			0.37			0.56								0.05		0.05		
302J								0.29			1.03								0.05				
303A											3.05												
303B					0.03			0.86			4.44		0.00						0.31				
303C		0.31			1.00			1.77			10.2		0.03						0.02				
303D					0.02		0.19	4.27			0.15	0.03	0.02						0.04				
303E		0.55			0.06			0.40		0.84	3.65		0.01								0.33		
303F		0.25								0.59	0.52										0.18		
303G								1.28			1.39						0.02						
303H								0.85		0.08	1.17						0.27		0.01				
303I			0.00		0.55			0.48			0.49												
303J					0.09			0.10									0.71		0.11				
304A					1.45			1.70		0.30	0.23						0.95			0.01			0.01
305A					0.57				1.23	0.04									0.22				
305B					0.44				0.21	0.01											0.60		
305D					0.25				0.13	0.52									0.47		0.15		
306A		0.93							0.33	0.46	0.02	0.02					0.43		0.03				

Table 2-2-E Land Cover within 60 feet of Existing Streams

NAME	180	211	213	214	321	329	330	411	425	427	434	513	514	534	611	616	617	630	641	643	647	743	814
307B			0.04								0.02						1.23						
310A										0.75	0.41								0.10				
400A		0.15	2.02							3.63													
400B		0.34								0.50		0.04											
400C		0.10	1.53						0.04	0.00		0.02		0.10					0.19				
400D			0.11	0.08	0.02			0.16		2.95											0.18		
400E				0.01						2.88									0.01				
400F										2.45					0.72								
400G		1.15				0.10	0.19			2.90		0.10			0.14				0.25				
401A			0.00							0.81													
402A					0.53			0.00		0.98									0.04	0.27	0.15		
403A												0.08							0.17		0.61		
407A		0.02								0.65				0.00			0.20		0.29				
407B		0.00				0.02											1.17		0.08				
500A		0.95	0.47		0.55		0.02	0.12	19.2	37.4	0.33		0.00		0.12		11.12						0.05
501A									0.53	1.51											0.26		
501B		0.05				0.12			0.05	0.02	2.61		0.01										
502A		0.66	1.20		0.00				10.8	12.8	5.38		0.03	0.10			2.71						
502B										1.45							0.27						
502C		0.12	1.22						0.08		0.22	0.01					0.21						
502D		0.12									0.93												
502E									1.23		0.02						0.39						
502F		0.01	0.10						0.00		0.45						5.13						
502H																	0.56						
502I								2.64	0.01		0.27						8.24						
502J											0.05						2.93						
502K		0.28	0.03								0.27						1.39						
502L		0.01									0.21						0.31						
502M																	0.44						

Table 2-2-E Land Cover within 60 feet of Existing Streams

NAME	180	211	213	214	321	329	330	411	425	427	434	513	514	534	611	616	617	630	641	643	647	743	814
502N											0.65						0.39						
502O										0.66					0.07								
5002P										0.89													
502Q										0.80													
502R										0.86													
502S											0.45												
502T		0.06	0.05									0.01			0.14		1.94						
502U		0.14							0.23	0.62													
502V																	1.35						
502Y											1.30						0.11						
504A		0.08								0.67	0.06						0.19						
505A										0.60							0.30						
505B										0.01							0.42						
505C										0.00							0.51						
506A		2.22			2.02			0.03		0.39			0.03							0.00	0.05		
506B					0.04					0.10							0.41		0.11				
507A		0.15								1.08			0.01										
508A		2.08	0.91				0.58			1.12			0.03						0.11				
509A										0.51							0.11						
510A		2.87						0.92				0.00	0.01						0.02				
511A		2.73								2.59		0.00	0.00						0.04				
512A		4.15							0.26	0.44									0.08				
513A		1.81							0.29	1.55			0.02				0.91			0.22			
514A		0.30	0.20						2.03	5.75			0.03				2.02				0.09		
515A			0.43																				
515B-1		0.11	0.24		0.00					1.09			0.02										
516A									1.43	0.12													
516B		0.20							0.39	0.23	1.04				0.39		0.60						
516C									0.22	0.04	0.76												

Table 2-2-E Land Cover within 60 feet of Existing Streams

NAME	180	211	213	214	321	329	330	411	425	427	434	513	514	534	611	616	617	630	641	643	647	743	814
516E									0.91								0.22						
517A									0.57	0.33					0.12								
518A		0.18							0.06	1.32					0.08		0.37						
518B		1.15								0.00			0.24		0.67								
519A					0.11				0.09						0.26		0.26						
520A								0.27		0.08							0.70						
520B								0.29			0.92												
521A																	1.07	0.05					
521B								0.40	1.18									0.35					
522A								1.85									0.40		0.05				
523A								0.39	0.42		3.57						2.96						
523B								0.37			2.12												
523D								0.21			0.53						0.16						
523G											0.35						0.22						
523H											1.73						0.01		0.11				
523I		0.26			1.45						0.02			0.02			0.28		0.11				
524A					0.90				0.26	0.77										0.11			
525A										0.98	0.08												
526A									0.30								1.35						
528A		0.10								1.07													

Table 2-6-A	State and Federal Listed Wildlife Observed on Site (2005-2014)

Common Name	Scientific Name	Current Designated Status FWC	Current Designated Status USFWS
Amphibians			
Gopher frog	*Rana capito*	SSC	NL
Reptiles			
American alligator	*Alligator mississippiensis*	FT(S/A)	T(S/A)
Eastern indigo snake	*Drymarchon corais couperi*	FT	T
Gopher tortoise	*Gopherus polyphemus*	ST	NL
Birds			
Florida burrowing owl	*Athene cunicularia floridana*	SSC	NL
Crested caracara	*Caracara cheriway*	FT	T
Little blue heron	*Egretta caerulea*	SSC	NL
Tricolored heron	*Egretta tricolor*	SSC	NL
Snowy egret	*Egretta thula*	SSC	NL
White ibis	*Eudocimus albus*	SSC	NL
Southeastern American kestrel	*Falco sparverius paulus*	ST	NL
Florida sandhill crane	*Grus canadensis pratensis*	ST	NL
Bald eagle §	*Haliaeetus leucocephalus*	§	§
Wood stork	*Mycteria americana*	FT	T
Mammals			
Sherman's fox squirrel	*Sciurus niger shermani*	SSC	NL
Florida mouse	*Podomys floridanus*	SSC	NL

NOTES:

1. FWC = Florida Fish and Wildlife Conservation Commission – USFWS = United States Fish and Wildlife Service

2. The FWC maintains the State list of animals designated as Federally-designated Endangered or Threatened, State-designated Threatened, or State –designated Species of Special Concern (SSC). All Federally listed species that occur in Florida are now included on Florida's list as Federally-designated Endangered or Federally–designated Threatened species. In addition, the State has a listing process to identify species that are not federally listed but at risk of extinction. These species will be called State-designated Threatened.

3. SSC = Species of Special Concern
   FE = Federally Endangered.
   FT = Federally Threatened.
   FT(S/A) = Federally Threatened due to Similarity of Appearance.
   ST = State Threatened
   NL = not listed

4. §Bald eagle was delisted; however, it is still protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act

Table 2-6-B Federal and State Listed Wildlife Species with the Potential to Occur On-Site

Common Name	Scientific Name	Current Designated Status FWC	Current Designated Status USFWS	Likelihood of Occurrence†
Amphibians				
Gopher frog	*Rana capito*	SSC	NL	P / Observed
Reptiles				
American alligator	*Alligator mississippiensis*	FT(S/A)	T(S/A)	P / Observed
Eastern indigo snake	*Drymarchon corais couperi*	FT	T	P / Observed
Gopher tortoise	*Gopherus polyphemus*	ST	NL	P / Observed
Florida pine snake	*Pituophus melanoleucus mugitis*	SSC	NL	LP / Suitable habitat present
Birds				
Wood stork	*Mycteria americana*	FT	T	P / Observed foraging; No nesting observed
Red-cockaded woodpecker	*Picoides borealis*	FE	E	U / No known occurrences in Manatee County; Marginal habitat on site; Species specific survey did not document RCWs
Bald eagle	*Haliaeetus leucocephalus*	§	§	P / Observed; 2 documented active nests in 2011/2012 nesting season
Northern crested caracara	*Caracara cheriway*	FT	T	P / Observed foraging; No nesting observed
Florida Scrub-jay	*Aphelocoma coerulescens*	FT	T	U / Existing families have been translocated to the Mosaic Wellfield under Permit No. TE236128-0
Little blue heron	*Egretta caerulea*	SSC	NL	P / Observed foraging; No nesting observed
Tricolored heron	*Egretta tricolor*	SSC	NL	P / Observed foraging; No nesting observed
Snowy egret	*Egretta thula*	SSC	NL	P / Observed foraging; No nesting observed
Florida sandhill crane	*Grus canadensis pratensis*	ST	NL	P / Observed foraging; No nesting observed but likely with appropriate hydrologic conditions
White ibis	*Eudocimus albus*	SSC	NL	P / Observed
Southeastern American kestrel	*Falco sparverius paulus*	ST	NL	P / Observed nesting
Florida burrowing owl	*Athene cunicularia floridana*	SSC	NL	P / Observed
Mammals				
Florida panther	*Felis concolor coryi*	FE	E	U / Not in Panther Focus Area, No documented sightings
Sherman's fox squirrel	*Sciurus niger shermani*	SSC	NL	P / Observed
Florida mouse	*Podomys floridanus*	SSC	NL	P / Observed

NOTES

1. FWC = Florida Fish and Wildlife Conservation Commission – USFWS = United States Fish and Wildlife Service

2. The FWC maintains the State list of animals designated as Federally-designated Endangered or Threatened, State-designated Threatened, or State –designated Species of Special Concern (SSC). All Federally listed species that occur in Florida are now included on Florida's list as Federally-designated Endangered or Federally–designated Threatened species. In addition, the State has a listing process to identify species that are not federally listed but at risk of extinction. These species will be called State-designated Threatened.

3. SSC = Species of Special Concern
   FE = Federally Endangered.
   FT = Federally Threatened.
   FT(S/A) = Federally Threatened due to Similarity of Appearance.
   ST = State Threatened
   NL = not listed

4. †Likelihood of Occurrence: P = present, LP = likely present, L = low, U = unlikely

5. §Bald eagle was delisted; however, it is still protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act

Table 3-4-A Clay Settling Area Summary

Characteristics	Clay Settling Areas											
	FGH-4*	O-1A*	O-1B*	O-1C	O1 D	O-2	O-3	O-4A	O-4B	O-4C	O4 D	WE-2**
Total Footprint (Acres)	513	871	799	597	542	893	1209	653	794	583	571	652
% Within the Ona Mine Boundary	0%	0%	0%	61%	94%	95%	98%	100%	100%	100%	100%	0%
Effective Area (Acres)	415	701	611	437	389	582	904	455	582	396	389	509
Dam Height (Feet)	NA	48	49	48	52	37	50	60	65	64	57	NA
Approximate Dam Elevation (feet, NGVD)	NA	165	165	165	165	154	154	154	154	154	154	NA
Effective Depth (Feet)	NA	63.4	82.2	83.3	89.9	74.2	95.0	105.0	105.0	105.0	102.0	NA
Approximate Natural Ground Elevation (Ft.)	NA	120	115	115	115	120	105	95	90	90	95	NA
Approximate Final Height Above Grade (Ft.)	NA	35	40	40	40	24	39	49	54	54	49	NA
Effective Volume (Acre-Feet)	22,244	44,483	50,231	36,374	35,000	43,202	85,852	47,769	61,105	41,629	39,700	41,212

Clay disposal by Mine Area:	Ona Ponds	Ft. Green Ponds	Wingate Pond**	Total
Dry Clay Tons (million)	171.4	70.6	8.9	251
% of total (clay)	68%	28%	4%	100%
Total Area - Acres+	5,513	1,932	NA	7,445
% total CSA Area+	74%	26%	NA	NA
CSA Footprint % of Total Ona Mine Boundary	25%	NA	NA	NA

* Located on the Ft. Green Mine

** Located on the Wingate East Mine

+ Does not include FGH-4 or WE-2

All values are rounded to display as appropriate

Table 4-3-A-i	Proposed* Plantings in Bay Swamps (FLUCFCS 611)

Scientific Name	Common Name	Stratum	Zone
Blechnum serrulatum	Swamp fern	Groundcover	1 & 2
Osmunda cinnamomea	Cinnamon fern	Groundcover	1 & 2
Osmunda regalis var. spectabilis	Royal fern	Groundcover	1 & 2
Peltandra virginica	Green arrow arum	Groundcover	2
Saururus cernuus	Lizard's tail	Groundcover	1 & 2
Clematis crispa	Swamp leather-flower	Groundcover	1
Boehmeria cylindrica	False nettle	Groundcover	1
Thelypteris interrupta *Thelypteris kunthii* *Thelypteris palustris var. pubescens*	Shield fern	Groundcover	1 & 2
Woodwardia areolata *Woodwardia virginica*	Chain fern	Groundcover	1 & 2
Cornus foemina	Swamp dogwood	Shrub	1
Ilex cassine	Dahoon holly	Shrub	1
Itea virginica	Virginia willow	Shrub	1
Lyonia lucida	Fetterbush	Shrub	1
Rhododendron viscosum	Swamp azalea	Shrub	1
Vaccinium corymbosum	Highbush blueberry	Shrub	1
Viburnum nudum	Possum haw	Shrub	1
Acer rubrum	Red maple	Tree	1
Viburnum obovatum	Backhaw v burnum	Shrub	1
Celtis laevigata	Hackberry	Tree	1
Cephalanthus occidentalis	Buttonbush	Shrub	2
Gordonia lasianthus	Loblolly bay	Tree	1
Magnolia virginiana	Sweetbay	Tree	1
Liquidambar styraciflua	Sweetgum	Tree	1
Nyssa sylvatica var. biflora	Swamp tupelo (Blackgum)	Tree	2
Persea palustris	Swamp bay	Tree	1 & 2
Pinus elliottii	Slash pine	Tree	1
Quercus laurifolia	Laurel oak	Tree	1
Quercus nigra	Water oak	Tree	1
Ulmus americana	American elm	Tree	1

Notes:

- Other native species, excluding atypical “weedy” generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- A dominance of bay will be planted, while other species will be utilized to obtain diversity.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or top-soiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others, as approved by FDEP.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona Mine.
- Zone 1 = drier/higher regions.
- Zone 2 = wetter/lower regions.
- Species such as *Salix caroliniana* (Carolina willow), *Myrica cerifera* (wax myrtle), and *Juncus effusus* (Soft rush) are components of native wetlands within the Ona Mine site. These species will not be planted, however, they are native and it is anticipated that they come in naturally.

* Commercially available, substitution of differing species may occur.

Table 4-3-A-ii	Proposed* Plantings in Gum Swamps and Inland Ponds & Sloughs (FLUCFCS 613 and 616)		
Scientific Name	**Common Name**	**Stratum**	**Zone**
Amphicarpum muhlenbergianum	Blue maidencane	Herb	1 & 2
Carex spp.	Carex	Herb	1 & 2
Cladium jamaicense	Sawgrass	Herb	2
Crinum americanum	Spider lily	Herb	2
Cyperus spp. *Rhynchospora* spp.	Sedges	Herb	1 & 2
Eleocharis baldwinii	Road grass	Herb	1 & 2
Osmunda cinnamomea	Cinnamon fern	Herb	1 & 2
Panicum hemitomon	Maidencane	Herb	1 & 2
Panicum rigidulum	Redtop panicum	Herb	1
Polygonum punctatum	Smartwessd	Herb	2
Pontederia cordata	Pickerelweed	Herb	2
Sagittaria lancifolia	Lance-leaf arrowhead	Herb	2
Saururus cernuus	Lizards tail	Herb	1 & 2
Spartina bakeri	Sand cord grass	Herb	1 & 2
Thalia geniculate	Alligator flag	Herb	2
Woodwardia virgincia	Virginia chain fern	Herb	1
Xyris spp.	Yellow-eyed grass	Herb	1
Cephalanthus occidentalis	Buttonbush	Shrub	2
Cornus foemina	Swamp dogwood	Shrub	1
Itea virginica	Virginia willow	Shrub	1
Lyonia lucida	Fetterbush	Shrub	1
Vaccinium corymbosum	Highbush blueberry	Shrub	1
Viburnum obovatum	Walter's viburnum	Shrub	1
Acer rubrum	Red maple	Tree	1 & 2
Fraxinus caroliniana	Popash	Tree	2
Gordonia lasianthus	Loblolly bay	Tree	1
Ilex cassine	Dahoon holly	Tree	1
Liquidambar styraciflua	Sweetgum	Tree	1
Magnolia viginiana	Sweetbay	Tree	1 & 2
Nyssa sylvatica var. *biflora*	Black gum	Tree	2
Persea palustris	Swamp bay	Tree	1 & 2
Pinus elliottii	Slash pine	Tree	1
Quercus laurifolia	Laurel oak	Tree	1

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- A dominance of bay will be planted, while other species will be utilized to obtain diversity.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or top-soiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others, as approved by FDEP.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona Mine.
- Zone 1 = drier/higher regions.
- Zone 2 = wetter/lower regions.
- Species such as *Salix caroliniana* (Carolina willow), *Myrica cerifera* (wax myrtle), and *Juncus effusus* (Soft rush) are components of native wetlands within the Ona Mine site. These species will not be planted, however, they are native and it is anticipated that they come in naturally.

* Commercially available, substitution of differing species may occur.

Table 4-3-B	Proposed* Plantings in Mixed Wetland Hardwoods (FLUCFCS 617)		
Scientific Name	**Common Name**	**Stratum**	**Zone**
Blechnum serrulatum	Swamp fern	Herb	2
Osmunda cinnamomea	Cinnamon fern	Herb	1 & 2
Osmunda regalis var. spectabilis	Royal fern	Herb	2
Peltandra virginica	Green arum	Herb	2
Saururus cernuus	Lizard's tail	Herb	
Thelypteris interrupta	Shield fern	Herb	1 & 2
Thelypteris kunthii			
Thelypteris palustris var. pubescens			
Woodwardia virginica	Virginia chainfern	Herb	2
Woodwardia areolata	Netted chainfern	Herb	2
Cephalanthus occidentalis	Buttonbush	Shrub	2
Cornus foemina	Swamp dogwood	Shrub	2
Ilex cassine	Dahoon holly	Shrub	2
Itea virginica	Virginia willow	Shrub	2
Rhododendron viscosum	Swamp azalea	Shrub	2
Sabal minor	Dwarf palmetto	Shrub	1
Vaccinium corymbosum	Blueberry	Shrub	1 & 2
Viburnum nudum	Possum haw	Shrub	1 & 2
Serenoa repens	Saw palmetto	Shrub	1
Viburnum obovatum	Walter's viburnum	Shrub	1
Acer rubrum	Red maple	Tree	1 & 2
Celtis laevigata	Hackberry	Tree	1
Fraxinus caroliniana	Popash	Tree	2
Gordonia lasianthus	Loblolly bay	Tree	2
Liquidambar styraciflua	Sweetgum	Tree	1
Magnolia virginiana	Sweetbay	Tree	2
Nyssa sylvatica var. biflora	Swamp tupelo	Tree	2
Persea palustris	Swamp bay	Tree	2
Pinus elliottii	Slash pine	Tree	1
Quercus laurifolia	Laurel oak	Tree	1 & 2
Quercus nigra	Water oak	Tree	1
Rhapidophyllum Hystrix	Needle Palm	Tree	*
Ulmus americana	American Elm	Tree	1
Quercus virginiana	Live Oak	Tree	1
Sabal palmetto	Sabal palm	Tree	1

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or top-soiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others, as approved by FDEP.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona Mine.
- Zone 1 = drier/higher regions.
- Zone 2 = wetter/lower regions.
- Species such as *Salix caroliniana* (Carolina willow), *Myrica cerifera* (wax myrtle), and *Juncus effusus* (Soft rush) are components of native wetlands within the Ona Mine site. These species will not be planted, however, they are native and it is anticipated that they come in naturally.

* Commercially available, substitution of differing species may occur.

Table 4-3-C-i	Proposed* Plantings in Wetland Coniferous Forest (FLUCFCS 620)	
Scientific Name	**Common Name**	**Stratum**
Canna flacida	Golden canna	Herb
Iris hexagona	Iris	Herb
Lachnanthes caroliniana	Redroot	Herb
Ludwigia repens	Red ludwigia	Herb
Nymphoides aquatica	Floating Hearts	Herb
Osmunda spp.	Cinnamon/royal/netted chain ferns	Herb
Panicum hemitomon	Maidencane	Herb
Peltandra virginica	Green arum	Herb
Polygonum punctatum	Smartweed	Herb
Pontederia cordata	Pickerelweed	Herb
Sagittaria lancifolia	Arrowhead	Herb
Saururus cernuus	Lizard's tail	Herb
Scirpus spp. (except californicus)	Bulrush	Herb
Spartina bakeri	Cordgrass	Herb
Thalia geniculata	Alligator flag	Herb
Cephalanthus occidentalis	Buttonbush	Shrub
Cornus foemina	Swamp dogwood	Shrub
Ilex cassine	Dahoon holly	Shrub
Itea virginica	Virginia willow	Shrub
Rhodendron viscosum	Swamp azalea	Shrub
Sabal minor	Dwarf palmetto	Shrub
Vaccinium sp.	Blueberry	Shrub
Viburnum nudum	Possum haw	Shrub
Viburnum obovatum	Backhaw viburnum	Shrub
Acer rubrum	Red maple	Tree
Celtis laevigata	Hackberry	Tree
Liquidambar styraciflua	Sweetgum	Tree
Nyssa Salvatica var. biflora	Blackgum	Tree
Quercus laurifolia	Laural oak	Tree
Quercus nigra	Water oak	Tree
Pinus elliottii	Slash pine	Tree
Ulmus americana	American elm	Tree

Notes:

- Other native species, excluding atypical “weedy” generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- Slash Pine will dominate the tree species. Other species will be utilized to increase diversity within the wetland system.
- If available, native topsoil will be used as a source for initial groundcover.
- Topsoiling, seeding or planting (a diverse combination of any of the native species listed in the above table and/or others as approved by FDEP) will result in the desired vegetative community.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona Mine

* Commercially available, substitution of differing species may occur

Table 4-3-C-ii	Proposed* Plantings in Hydric Pine Flatwoods (FLUCFCS 625)	
Scientific Name	**Common Name**	**Zone**
Agalinis fasciculata	False foxglove	1
Agalinis linifolia	Flaxleaf false foxglove	1
Andropogon glomeratus	Bushy bluestem	1
Andropogon virginicus	Broomsedge bluestem	1
Aristida stricta var. beyrichiana	Wiregrass	1
Symphyotrichum subulatum	Annual saltmarsh aster	1
Axonopus furcatus	Big carpetgrass	1
Cyperus haspan	Sedge	1
Cyperus spp.	Sedge	1
Eriocaulon decangulare	Tenangle pipewort	1
Fuirena scirpoidea	Southern umbrellasedge	1
Hypericum brachyphyllum	Coastalplain St. John's-wort	1
Hypericum fasciculatum	Peelbark St. John's-wort	1
Juncus scirpoides	Needlepod rush	1
Ludwigia suffruticosa	Shrubby primerosewillow	1&2
Lachnocaulon anceps	Whitehead bogbutton	1
Leersia hexandra	Southern cutgrass	1&2
Amphicarpum muhlenbergianum	Blue maidencane	1
Ctenium aromaticum	Toothache grass	1
Lachnanthes caroliana	Redroot	1&2
Panicum longifolium	Panicgrass	1
Panicum rigidulum	Redtop panicum	1
Panicum tenerum	Bluejoint panicum	1
Paspalum laeve	Field paspalum	1
Pluchea rosea	Rosy camphorweed	1
Polygonum punctatum	Dotted smartweed	1&2
Rhexia mariana	Pale meadowbeauty	1
Rhynchospora cephalantha	Beaksedge	1&2
Rhynchospora decurrens		
Rhynchospora fascicularis		
Rhynchospora microcarpa		
Rhynchospora microcephala		
Xyris elliottii	Yellow-eyed grass	1
Xyris fimbriata	Yellow-eyed grass	1
Lyonia lucida	Fetterbush	1
Serenoa repens	Saw palmetto	1
Ilex glabra	Gallberry	1
Pinus palustris	Long-leaf pine	1
Pinus elliottii	Slash pine	1

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- Pine will dominate the tree species. Other species will be utilized to increase diversity within the wetland system.
- If available, native topsoil will be used as a source for initial groundcover.
- Topsoiling, seeding or planting a diverse combination of any of the native species listed in the above table and/or others, as approved by FDEP will result in the desired vegetative community.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona Mine
- Species such as *Salix caroliniana* (Carolina willow), *Myrica cerifera* (wax myrtle), and *Juncus effusus* (Soft rush) are components of native wetlands within the Ona Mine site. These species will not be planted, however, they are native and it is anticipated that they come in naturally.

* Commercially available, substitution of differing species may occur.

Table 4-3-D	Proposed* Plantings in Mixed Forest Swamps (FLUCFCS 630)		
Scientific Name	**Common Name**	**Stratum**	**Zone**
Axonopus furcatus	Big carpetgrass	Herb	N/A
Andropogon glomeratus	Bushy bluestem	Herb	N/A
Schizachyrium scoparium	Little bluestem	Herb	N/A
Saururus cernuus	Lizard's tail	Herb	N/A
Thelypteris interrupta *Thelypteris kunthii*	Shield fern	Herb	N/A
Woodwardia virginica	Virginia chain fern	Herb	N/A
Bejaria racemosa	Tarflower	Shrub	N/A
Cornus foemina	Swamp dogwood	Shrub	N/A
Hypericum cistifolium	Roundpod St. John's-wort	Shrub	N/A
Hypericum hypericoides	St. Andrew's-cross	Shrub	N/A
Ilex cassine	Dahoon holly	Shrub	N/A
Ilex glabra	Gallberry	Shrub	N/A
Itea virginica	Virginia willow	Shrub	N/A
Lyonia lucida	Fetterbush	Shrub	N/A
Rhododendron viscosum	Swamp azalea	Shrub	N/A
Vaccinium corymbosum	Highbush blueberry	Shrub	N/A
Viburnum nudum	Possum haw	Shrub	N/A
Viburnum obovatum	Walter's viburnum	Shrub	N/A
Acer rubrum	Red maple	Tree	N/A
Celtis laevigata	Hackberry	Tree	N/A
Gordonia lasianthus	Loblolly bay	Tree	N/A
Liquidambar styraciflua	Sweetgum	Tree	N/A
Magnolia virginiana	Sweetbay	Tree	N/A
Nyssa sylvatica var. biflora	Swamp tupelo	Tree	N/A
Persea palustris	Swamp bay	Tree	N/A
Pinus elliottii	Slash pine	Tree	N/A
Quercus laurifolia	Laurel oak	Tree	N/A
Quercus virginiana	Live oak	Tree	N/A
Quercus nigra	Water oak	Tree	N/A
Sabal palmetto	Cabbage palm	Tree	N/A
Ulmus americana	American elm	Tree	N/A

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- A mixture of pine and various other hardwoods will be planted.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or topsoiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others, as approved by FDEP.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona Mine.
- N/A = Not applicable – no planting zones proposed for this flat region
- Species such as *Salix caroliniana* (Carolina willow), *Myrica cerifera* (wax myrtle), and *Juncus effusus* (Soft rush) are components of native wetlands within the Ona Mine site. These species will not be planted, however, they are native and it is anticipated that they come in naturally.

* Commercially available, substitution of differing species may occur.

Table 4-3-E	Proposed* Herbs to be Planted in Freshwater Marsh (FLUCFCS 641)

Scientific Name	Common Name	Zone
Bacopa caroliniana	Blue waterhyssop	1
Bacops monnieri	Herb-of-Grace	1
Bidens laevis	Burrmarigold	1
Canna flaccida	Golden canna	1
Carex spp.	Sedge	1
Cladium jamaicense	Sawgrass	3
Cyperus spp.	Sedge	1
Eleocharis spp.	Spikerush	1&2
Hypericum fasciculatum	Peelbark St. John's-wort	1
Iris virginica	Blueflag iris	1
Leersia hexandra	Southern cutgrass	1
Ludwigia repens	Creeping seedbox	1
Panicum hemitomon	Maidencane	1&2
Polygonum punctatum	Dotted smartweed	1&2
Pontederia cordata	Pickerelweed	2
Rhynchospora corniculata *Rhynchospora inundata*	Horned beaksedges	3
Rhynchospora spp.	Beakrush	1
Sacciolepis striata	American cupscale	1&2
Sagittaria lancifolia	Bulltongue arrowhead	2
Spartina bakeri	Sand cordgrass	1
Thalia geniculata	Alligator flag	3
Xyris spp.	Yellow-eyed grass	1

Notes:

- Other native species, excluding atypical “weedy” generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or top-soiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others, as approved by FDEP.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona Mine.
- Zone 1 = Approximate seasonal high water level (SHL) to normal water level (NWL).
- Zone 2 = Approximate normal water level (NWL) or lower.
- Zone 3 = Only in sloughs or other marshes with unidirectional water flow.
- Species such as *Juncus effusus* (Soft rush) will not be planted, however these herbs are native and may come in naturally.

* Commercially available, substitution of differing species may occur.

Table 4-3-F	Proposed Herbs to be Planted in Wet Prairie Marsh or Ephemeral** Wetlands (FLUCFCS 643)	
Scientific Name	**Common Name**	**Zone**
Agalinis fasciculata	False foxglove	1
Agalinis linifolia	Flaxleaf false foxglove	1
Andropogon glomeratus	Bushy bluestem	1
Andropogon virginicus	Broomsedge bluestem	1
Aristida stricta var. beyrichiana	Wiregrass	1
Symphyotrichum subulatum	Annual saltmarsh aster	1
Axonopus furcatus	Big carpetgrass	1
Cyperus haspan	Sedge	1
Cyperus spp.		
Eriocaulon decangulare	Tenangle pipewort	1
Fuirena scirpoidea	Southern umbrellasedge	1
Hypericum brachyphyllum	Coastalplain St. John’s-wort	1
Hypericum fasciculatum	Peelbark St. John's-wort	1
Juncus scirpoides	Needlepod rush	1
Ludwigia suffruticosa	Shrubby primerosewillow	1&2
Lachnocaulon anceps	Whitehead bogbutton	1
Leersia hexandra	Southern cutgrass	1&2
Ludwigia repens	Creeping seedbox	1
Luziola fluitans	Southern watergrass	2
Panicum hemitomon	Maidencane	1&2
Panicum longifolium	Panicgrass	1
Panicum rigidulum	Redtop panicum	1
Panicum tenerum	Bluejoint panicum	1
Paspalum dissectum	Mudbank crowngrass	1&2
Paspalum distichum	Knotgrass	1
Paspalum laeve	Field paspalum	1
Pluchea baccharis	Rosy camphorweed	1
Polygonum punctatum	Dotted smartweed	1&2
Rhexia mariana	Pale meadowbeauty	1

Table 4-3-F	Proposed Herbs to be Planted in Wet Prairie Marsh or Ephemeral** Wetlands (FLUCFCS 643)	
Scientific Name	**Common Name**	**Zone**
Rhynchospora cephalantha *Rhynchospora decurrens* *Rhynchospora fascicularis* *Rhynchospora microcarpa* *Rhynchospora microcephala*	Beaksedge	1&2
Sabatia grandiflora	Marsh pink	1
Sacciolepis striata	American cupscale	1&2
Sagittaria graminea	Grassy arrowhead	2
Solidago fistulosa	Pinebarren goldenrod	1
Spartina bakeri	Sand cordgrass	1
Xyris elliottii *Xyris fimbriata*	Yellow-eyed grass	1

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or top-soiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others as approved by FDEP.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of Wingate East.
- Zone 1 = Approximate seasonal high water level (SHL) to normal water level (NWL)/ground surface.
- Zone 2 = Deeper pockets below normal ground surface.
- Species such as *Juncus effusus* (Soft rush) will not be planted, however these herbs are native and may come in naturally.

* Commercially available, substitution of differing species may occur.

** Ephemeral wetlands at Wingate East are those isolated wetlands that will have less than 2 ft. of water and/or in which the seasonal low water level is below the bottom of the wetland, thus allowing the wetland to dry out completely during late winter through initiation of rainy season in June.

Table 4-3-G	Proposed* Herbs to be Planted in Shrub Marsh (FLUCFCS 647)	
Scientific Name	**Common Name**	**Zone**
Bidens laevis	Burrmarigold=	1=
Canna flaccida	Golden=canna=	1=
Cephalanthus occidentalis	Buttonbush=	2=
Cyperus spp.	Sedge=	1=
Cladium jamaicense	Sawgrass=	2=
Hypericum fasciulatum	Peelbark=St.=John's-wort=	1=
Ludwigia repens	Creeping=seedbox=	1=
Nyssa sylvatica var. biflora	Swamp=tupelo=	2=
Panicum hemitomon	Maidencane=	1=
Polygonum punctatum	Dotted=smartweed=	1&2=
Pontederia cordata	Pickerelweed=	2=
Sagittaria lancifolia	Bulltongue=arrowhead=	2=
Saururus cernuus	Lizard's=tail=	2=
Spartina bakeri	Sand=cordgrass=	1=
Thalia geniculata	Alligator=flag=	2=

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are= mapped as this same cover type.=
- If available, native topsoil will be used as a source for initial groundcover.=
- Natural recruitment and/or top-soiling, seeding or planting of a diversity of native species may include= any combination of species listed in the above table and/or others, as approved by FDEP.=
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona Mine.=
- Zone 1= Seasonal High water level (SHL) to normal water level (NWL).=
- Zone 2= Normal water level (NWL) to seasonal low water level (SLW).=
- Species such as=*Salix caroliniana* (Carolina willow), *Myrica cerifera* (wax myrtle), and=*Juncus effusu* s (Soft rush) are components of native= wetlands within the Ona Mine site.=These species will not be planted, however, they are native and it is anticipated that they come in naturally.=

* Commercially available, substitution of differing species may occur.=

Table 4-3-J	Proposed* Herbs to be Planted in Wet Palmetto Prairie (FLUCFCS 649)

Scientific Name	Common Name	Zone
Agalinis fasciculata	False foxglove	1
Agalinis linifolia	Flaxleaf false foxglove	1
Andropogon glomeratus	Bushy bluestem	1
Andropogon virginicus	Broomsedge bluestem	1
Aristida stricta var. beyrichiana	Wiregrass	1
Symphyotrichum subulatum	Annual saltmarsh aster	1
Axonopus furcatus	Big carpetgrass	1
Cyperus haspan *Cyperus spp.*	Sedge	1
Eriocaulon decangulare	Tenangle pipewort	1
Fuirena scirpoidea	Southern umbrellasedge	1
Hypericum brachyphyllum	Coastalplain St. John's-wort	1
Hypericum fasciculatum	Peelbark St. John's-wort	1
Juncus scirpoides	Needlepod rush	1
Ludwigia suffruticosa	Shrubby primerosewillow	1&2
Lachnocaulon anceps	Whitehead bogbutton	1
Leersia hexandra	Southern cutgrass	1&2
Amphicarpum muhlenbergianum	Blue maidencane	1
Ctenium aromaticum	Toothache grass	1
Lachnanthes caroliana	Redroot	1&2
Panicum longifolium	Panicgrass	1
Panicum rigidulum	Redtop panicum	1
Panicum tenerum	Bluejoint panicum	1
Paspalum laeve	Field paspalum	1
Pluchea rosea	Rosy camphorweed	1
Polygonum punctatum	Dotted smartweed	1&2
Rhexia mariana	Pale meadowbeauty	1
Rhynchospora cephalantha *Rhynchospora decurrens* *Rhynchospora fascicularis* *Rhynchospora microcarpa* *Rhynchospora microcephala*	Beaksedge	1&2
Xyris elliottii *Xyris fimbriata*	Yellow-eyed grass	1
Lyonia lucida	Fetterbush	1
Ilex glabra	Gallberry	1

Table 4-3-J	Proposed* Herbs to be Planted in Wet Palmetto Prairie (FLUCFCS 649)

Scientific Name	Common Name	Zone

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or top-soiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others as approved by FDEP.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona
- Zone 1 = Approximate seasonal high water level (SHL) to normal water level (NWL)/ground surface.
- Zone 2 = Deeper pockets below normal ground surface.
- Species such as *Salix caroliniana* (Carolina willow), *Myrica cerifera* (wax myrtle), and *Juncus effusus* (Soft rush) are components of native wetlands within the Ona Mine site. These species will not be planted, however, they are native and it is anticipated that they come in naturally.

* Commercially available, substitution of differing species may occur.

Table 4-4-A	Proposed Plantings in Palmetto Prairie (FLUCFCS 321)

Scientific Name	Common Name	Stratum
Asimina reticulata	Netted pawpaw	Shrub
Befaria racemosa	Tarflower	Shrub
Gaylussacia dumosa	Dwarf huckleberry	Shrub
Hypericum tetrapetalum	St. Andrew's Cross	Shrub
Ilex glabra	Gallberry	Shrub
Licania michauxii	Gopher apple	Shrub
Lyonia fruticosa	Staggerbush	Shrub
Lyonia lucida	Shiny lyonia	Shrub
Quercus minima	Dwarf live oak	Shrub
Quercus pumila	Runner oak	Shrub
Rhus copallinum	Winged sumac	Shrub
Serenoa repens	Saw palmetto	Shrub
Vaccinium darrowi	Little blueberry	Shrub
Vaccinium myrsinites	Shiny blueberry	Shrub
Zamia pumila	Coontie	Shrub
Andropogon virginicus	Bluestem	Groundcover
Aristida stricta var. beyrichiana	Wiregrass	Groundcover
Balduina angustifolia	Yellow buttons	Groundcover
Carphephorus corymbosus	Florida paintbrush	Groundcover
Carphephorus paniculatus	Deertongue	Groundcover
Chamaecrista fasciculata	Partridge pea	Groundcover
Commelina erecta	Dayflower	Groundcover
Coreopsis leavenworthii	Leavenworth's tickseed	Groundcover
Culthburtia ornata	Roseling	Groundcover
Elephantopus elatus	Elephant's foot	Groundcover
Eragrostis spp.	Lovegrasses	Groundcover
Eryngium yuccifolium	Button snakeroot	Groundcover
Galactia elliottii	Elliot's milkpea	Groundcover
Helianthus angustifolius	Narrow-leaved sunflower	Groundcover
Liatris spp.	Blazing star	Groundcover
Panicum virgatum	Switch grass	Groundcover
Phoebanthus grandiflorus	Phoebanthus	Groundcover
Pityopsis graminifolia	Silver-leaved goldenaster	Groundcover
Pteridium aquilinum	Bracken fern	Groundcover
Rhynchospora spp.	Beakrushes	Groundcover
Schizachrium stoloniferum	Creeping bluestem	Groundcover
Sorghastrum secundum	Lopsided indiangrass	Groundcover
Stillingia sylvatica	Queen's delight	Groundcover
Xyris spp.	Yellow-eyed grasses	Groundcover

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- A dominance of saw palmetto will be planted, while other species will be utilized to obtain diversity.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or top-soiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others, as approved by FDEP.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona Mine.

* Commercially available, substitution of differing species may occur.

Table 4-4-B-i	Proposed Plantings in Coniferous Forest (FLUCFCS 410)	
Scientific Name	**Common Name**	**Stratum**
Mecardonia acuminata	Purple medardonia	Groundcover
Mimosa quadrivalis	Sensitive briar	Groundcover
Mitreola sessifolia	Miterwort	Groundcover
Palafoxia integrifolia	Coastalplain palafox	Groundcover
Oxypolis filiformis	Water dropwort	Groundcover
Panicum anceps	Beaked panicum	Groundcover
Panicum longifolium	Panic grass	Groundcover
Panicum hians	Gaping panic grass	Groundcover
Panicum verrucosum	Warty panic grass	Groundcover
Panicum virgatum	Switch grass	Groundcover
Paspalum praecox	Early paspalum	Groundcover
Pasplaum setaceum	Thin paspalum	Groundcover
Phoebanthus grandiflorus	Phoebanthus	Groundcover
Physostegia purpurea	Purple dragonhead	Groundcover
Pinguicula lutea	Yellow butterwort	Groundcover
Pinguicula pumila	Small butterwort	Groundcover
Piriqueta caroliniana	Piriqueta	Groundcover
Pityopsis graminifolia	Silver-leaved goldenaster	Groundcover
Pluchea rosea	Rosy camphor weed	Groundcover
Polygala cruciata	Drumheads	Groundcover
Polygala lutea	Orange milkwort	Groundcover
Polygala rugellii	Yellow milkwort	Groundcover
Polygala setacea	Coastalplain milkwort	Groundcover
Pteridium aquilinum	Bracken fern	Groundcover
Pterocaulon pycnostachyum	Rabbit tobaccoa	Groundcover
Rhynchospora spp.	Beakrushes	Groundcover
Sabatia brevifolia	White sabatia	Groundcover
Sacciolepis striata	Cupscale	Groundcover
Schrankia microphylla	Sensitive briar	Groundcover
Scleria ciliata	Fringed Nutrush	Groundcover
Scleria georgiana	Slenderfruit Nutrush	Groundcover
Scleria reticularis	Netted Nutrush	Groundcover
Scleria triglomerata	Tall Nutrush	Groundcover
Sisyrinchium angustifolium	Blue-eyed grass	Groundcover
Smilax auriculata	Greenbrier	Groundcover
Solidago fistulosa	Goldenrod	Groundcover
Solidago odora var. chapmanii	Chapman's goldenrod	Groundcover
Solidago stricta	Slender goldenrod	Groundcover
Sorghastrum secundum	Lopsided indiangrass	Groundcover
Stillingia sylvatica	Queen's delight	Groundcover
Tephrosia hispidula	Spreading hoary-pea	Groundcover

Table 4-4-B-i	Proposed Plantings in Coniferous Forest (FLUCFCS 410)

Scientific Name	Common Name	Stratum
Viola lanceolata	Lanceleaf violet	Groundcover
Viola palmata	Southern coast violet	Groundcover
Xyris spp.	Yellow-eyed grasses	Groundcover

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- A dominance of slash pine and longleaf pine will be planted, while other species may be utilized to obtain diversity.
- Seeding or planting (a diverse combination of any of the native species listed in table above and/or others as approved by FDEP) will result in the desired vegetative community.
- Trees: 300/acre (12 ft. centers) as nursery stock or 1 gallon size.
- Herbaceous: 4,840/acre (3 ft. centers) as 1 gallon size nursery stock or from direct seeding or topsoil.
- To obtain groundcover diversity, a minimum of 5 native grasses or forbs will be planted or seeded.

* Commercially available, substitution of differing species may occur.

Table 4-4-B-ii	Proposed Plantings in Pine Flatwoods (FLUCFCS 411)	
Scientific Name	**Common Name**	**Stratum**
Pinus elliottii var. densa	South Florida slash pine	Tree
Pinus palustris	Longleaf pine	Tree
Asimina reticulata	Netted pawpaw	Shrub
Befaria racemosa	Tarflower	Shrub
Gaylussacia dumosa	Dwarf huckleberry	Shrub
`Hypericum tetrapetalum	St. Andrew's Cross	Shrub
Ilex glabra	Gallberry	Shrub
Licania michauxii	Gopher apple	Shrub
Lyonia fruticosa	Staggerbush	Shrub
Lyonia lucida	Shiny lyonia	Shrub
Myrica cerifera var. pumila	Dwarf wax myrtle	Shrub
Quercus chapmanii	Chapman oak	Shrub
Quercus geminata	Sand live oak	Shrub
Quercus minima	Dwarf live oak	Shrub
Quercus myrtifolia	Myrtle oak	Shrub
Quercus inopina	Scrub oak	Shrub
Quercus pumila	Runner oak	Shrub
Rhus copallinum	Winged sumac	Shrub
Serenoa repens	Saw palmetto	Shrub
Vaccinium darrowi	Little blueberry	Shrub
Vaccinium myrsinites	Shiny blueberry	Shrub
Ximenia Americana	Hogplum	Shrub
Zamia pumila	Coontie	Shrub
Andropogon virginicus	Bluestem	Groundcover
Aristida stricta var. beyrichiana	Wiregrass	Groundcover
Aristida purpurascens	Slim-spike threeawn	Groundcover
Aristida spiciformis	Bottlebrush threeawn	Groundcover
Asclepias pedicellata	Savannah milkweed	Groundcover
Asclepias feayi	Florida milkweed	Groundcover
Asimina reticulata	Netted pawpaw	Groundcover
Aster dumosus	Bush aster	Groundcover
Aster tortifolius	White-topped aster	Groundcover
Axonopus fissifolius	Common carpetgrass	Groundcover
Axonopus furcatus	Big carpetgrass	Groundcover
Balduina angustifolia	Yellow buttons	Groundcover
Bigelowia nudata	Pineland rayless goldenrod	Groundcover
Buchnera americana	Bluehearts	Groundcover
Bulbostylis ciliatifolia	Capillary hairsedge	Groundcover
Carphephorus carnosus	Starclusters	Groundcover
Carphephorus corymbosus	Florida paintbrush	Groundcover
Carphephorus paniculatus	Deertongue	Groundcover

Table 4-4-B-ii	Proposed Plantings in Pine Flatwoods (FLUCFCS 411)	
Scientific Name	**Common Name**	**Stratum**
Carphephorus subtropicanus	Pineland purple	Groundcover
Chamaecrista nictitans	Sensitive partridge pea	Groundcover
Chamaecrista fasciculata	Partridge pea	Groundcover
Chapmannia floridana	Chapman's pea	Groundcover
Chaptalia tomentosa	Pineland daisy	Groundcover
Cnidoscolus stimulosus	Tread softly	Groundcover
Commelina erecta	Dayflower	Groundcover
Coreopsis floridana	Florida tickseed	Groundcover
Coreopsis leavenworthii	Leavenworth's tickseed	Groundcover
Crotolaria rotundifolia	Rabbit bells	Groundcover
Ctenium aromaticum	Toothache grass	Groundcover
Cuthbertia ornata	Roseling	Groundcover
Cyperus haspan	Haspan flatsedge	Groundcover
Cyperus polystachyos	Manyspike flatsedge	Groundcover
Cyperus retrorsus	Pinebarren flatsedge	Groundcover
Dichanthelium ensifolium	Witchgrass	Groundcover
Dichanthelium chamaelonche	Witchgrass	Groundcover
Dichanthelium leucothrix	Witchgrass	Groundcover
Dichanthelium portoricense	Witchgrass	Groundcover
Dichanthelium strigosum	Witchgrass	Groundcover
Elephantopus elatus	Elephant's foot	Groundcover
Eragrostis elliottii	Elliott's lovegrass	Groundcover
Eragrostis spectabilis	Purple lovegrass	Groundcover
Eragrostis virginica	Meadow lovegrass	Groundcover
Erigeron vernus	Fleabane	Groundcover
Eryngium aromaticum	Fragrant eryngium	Groundcover
Eryngium yuccifolium	Button snakeroot	Groundcover
Eupatorium rotundifolium	False hoarhound	Groundcover
Eupatorium mohrii	Mohr's hoarhound	Groundcover
Euphorbia polyphylla	Lesser Florida spurge	Groundcover
Euthamia caroliniana	Flat-topped goldenrod	Groundcover
Fimbristylis puberula	Hairy fimbry	Groundcover
Fimbristylis autumnalis	Slender fimbry	Groundcover
Fuirena breviseta	Saltmarsh umbrellasedge	Groundcover
Fuirena scirpoidea	Southern umbrellasedge	Groundcover
Galactia elliottii	Elliott's milkpea	Groundcover
Galactia regularis	Florida milkpea	Groundcover
Galactia volubilis	Downy milkpea	Groundcover
Gratiola hispida	Rough hedge-hyssop	Groundcover
Gratiola ramosa	Branching hedge-hyssop	Groundcover
Gymnopogon chapmanianus	Chapman's skeletongrass	Groundcover

Table 4-4-B-ii	Proposed Plantings in Pine Flatwoods (FLUCFCS 411)	
Scientific Name	**Common Name**	**Stratum**
Hedyotis uniflora	Clustered bluet	Groundcover
Helianthus angustifolius	Narrow-leaved sunflower	Groundcover
Helianthus radula	Rayless sunflower	Groundcover
Hieracium megacephalon	Hawks beard	Groundcover
Hypoxis juncea	Yellow stargrass	Groundcover
Juncus marginatus	Grassleaf rush	Groundcover
Juncus dichotomus	Forked rush	Groundcover
Juncus scirpoides	Needlepod rush	Groundcover
Lechea torreyi	Piedmont pinweed	Groundcover
Liatris garberi	Garber's blazing star	Groundcover
Liatris gracilis	Slender blazing star	Groundcover
Liatris spicata	Spiked blazing star	Groundcover
Liatris tennuifolia var. quadriflora	Shortleaf blazing star	Groundcover
Linum medium var. texanum	Stiff yellow flax	Groundcover
Lobelia glandulosa	Glades lobelia	Groundcover
Lobelia paludosa	White lobelia	Groundcover
Ludwigia maritma	Seaside primrose willow	Groundcover
Lygodesmia aphylla	Roserush	Groundcover
Marwillia tennuifolia	Barabara's buttons	Groundcover
Mecardonia acuminata	Purple medardonia	Groundcover
Mimosa quadrivalis	Sensitive briar	Groundcover
Mitreola sessifolia	Miterwort	Groundcover
Palafoxia integrifolia	Coastalplain palafox	Groundcover
Oxypolis filiformis	Water dropwort	Groundcover
Panicum anceps	Beaked panicum	Groundcover
Panicum longifolium	Panic grass	Groundcover
Panicum hians	Gaping panic grass	Groundcover
Panicum verrucosum	Warty panic grass	Groundcover
Panicum virgatum	Switch grass	Groundcover
Paspalum praecox	Early paspalum	Groundcover
Pasplaum setaceum	Thin paspalum	Groundcover
Phoebanthus grandiflorus	Phoebanthus	Groundcover
Physostegia purpurea	Purple dragonhead	Groundcover
Pinguicula lutea	Yellow butterwort	Groundcover
Pinguicula pumila	Small butterwort	Groundcover
Piriqueta caroliniana	Piriqueta	Groundcover
Pityopsis graminifolia	Silver-leaved goldenaster	Groundcover
Pluchea rosea	Rosy camphor weed	Groundcover
Polygala cruciata	Drumheads	Groundcover
Polygala lutea	Orange milkwort	Groundcover
Polygala rugellii	Yellow milkwort	Groundcover

Table 4-4-B-ii	Proposed Plantings in Pine Flatwoods (FLUCFCS 411)

Scientific Name	Common Name	Stratum
Polygala setacea	Coastalplain milkwort	Groundcover
Pteridium aquilinum	Bracken fern	Groundcover
Pterocaulon pycnostachyum	Rabbit tobaccoa	Groundcover
Rhynchospora spp.	Beakrushes	Groundcover
Sabatia brevifolia	White sabatia	Groundcover
Sacciolepis striata	Cupscale	Groundcover
Schrankia microphylla	Sensitive briar	Groundcover
Scleria ciliata	Fringed Nutrush	Groundcover
Scleria georgiana	Slenderfruit Nutrush	Groundcover
Scleria reticularis	Netted Nutrush	Groundcover
Scleria triglomerata	Tall Nutrush	Groundcover
Sisyrinchium angustifolium	Blue-eyed grass	Groundcover
Smilax auriculata	Greenbrier	Groundcover
Solidago fistulosa	Goldenrod	Groundcover
Solidago odora var. chapmanii	Chapman's goldenrod	Groundcover
Solidago stricta	Slender goldenrod	Groundcover
Sorghastrum secundum	Lopsided indiangrass	Groundcover
Stillingia sylvatica	Queen's delight	Groundcover
Tephrosia hispidula	Spreading hoary-pea	Groundcover
Viola lanceolata	Lanceleaf violet	Groundcover
Viola palmata	Southern coast violet	Groundcover
Xyris spp.	Yellow-eyed grasses	Groundcover

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- A dominance of slash pine, longleaf pine and saw palmetto will be planted, while other species may be utilized to obtain diversity.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or top-soiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others, as approved by FDEP.
- Target densities of plants will reflect densities present in similar upland communities present within the region of the Ona Mine.

* Commercially available, substitution of differing species may occur.

Table 4-4-C	Proposed Plantings in Xeric Oak Scrub (FLUCFCS 421) and Sand Live Oak (FLUCFCS 432)

Scientific Name	Common Name	Stratum
Asimina obovata	Large flowered pawpaw	Trees and Shrubs
Asimina reticulata	Netted pawpaw	Trees and Shrubs
Befaria racemosa	Tarflower	Trees and Shrubs
Carya floridana	Scrub hickory	Trees and Shrubs
Ceratiola ericoides	Florida rosemary	Trees and Shrubs
Chionanthus pygmaeus	Pygmy fringe tree	Trees and Shrubs
Diospyros virginiana	Persimmon	Trees and Shrubs
Garberia heterophylla	Garberia	Trees and Shrubs
Gaylussacia dumosa	Dwarf huckleberry	Trees and Shrubs
Hypericum reductum	St. John's wort	Trees and Shrubs
Ilex ambigua	Sand holly	Trees and Shrubs
Licania michauxii	Gopher apple	Trees and Shrubs
Lyonia ferruginea	Rusty lyonia	Trees and Shrubs
Lyonia fruticosa	Staggerbush	Trees and Shrubs
Lyonia lucida	Shiny lyonia	Trees and Shrubs
Osmanthus megacarpa	Scrub tea olive	Trees and Shrubs
Pinus clausa	Sand pine	Trees and Shrubs
Pinus elliottii var. densa	South Florida slash pine	Trees and Shrubs
Quercus chapmanii	Chapman's oak	Trees and Shrubs
Quercus geminata	Sand live oak	Trees and Shrubs
Quercus inopina	Scrub oak	Trees and Shrubs
Quercus laevis	Turkey oak	Trees and Shrubs
Quercus minima	Dwarf live oak	Trees and Shrubs
Quercus myrtifolia	Myrtle oak	Trees and Shrubs
Rhus copallina	Shining sumac	Trees and Shrubs
Sabal etonia	Scrub palmetto	Trees and Shrubs
Serenoa repens	Saw palmetto	Trees and Shrubs
Sideroxylon tenax	Tough bumeilia	Trees and Shrubs
Vaccinium arboretum	Sparkleberry	Trees and Shrubs
Vaccinium darrowi	Little blueberry	Trees and Shrubs
Vaccinium myrsinites	Shiny blueberry	Trees and Shrubs
Ximenia americana	Hog plum	Trees and Shrubs
Andropogon floridanum	Florida bluestem	Shrubs/Vines/Groundcover
Aristida gyrans	Corkscrew threeawn	Shrubs/Vines/Groundcover

Table 4-4-C	Proposed Plantings in Xeric Oak Scrub (FLUCFCS 421) and Sand Live Oak (FLUCFCS 432)

Scientific Name	Common Name	Stratum
Aristida stricta var. beyrichiana	Wiregrass	Shrubs/Vines/Groundcover
Asclepias curtissii	Curtiss' milkweed	Shrubs/Vines/Groundcover
Asclepias tuberosa	Butterflyweed	Shrubs/Vines/Groundcover
Balduina angustifolia	Yellow buttons	Shrubs/Vines/Groundcover
Bonamia grandiflora	Florida bonamia	Shrubs/Vines/Groundcover
Bulbostylis warei	Ware's hairsedge	Shrubs/Vines/Groundcover
Carphephorus corymbosus	Florida paintbrush	Shrubs/Vines/Groundcover
Chapmania floridana	Chapman's pea	Shrubs/Vines/Groundcover
Chrysopis floridana	Florida goldenaster	Shrubs/Vines/Groundcover
Cladonia evansii	Lichen	Shrubs/Vines/Groundcover
Cladonia leporina	British red soldiers	Shrubs/Vines/Groundcover
Cladonia prostrata	Lichen	Shrubs/Vines/Groundcover
Cladonia subtenuis	Lichen	Shrubs/Vines/Groundcover
Commelina erecta	Dayflower	Shrubs/Vines/Groundcover
Crataegus michauxii	Michaux's hawthoirn	Shrubs/Vines/Groundcover
Crotolaria rotundifolia	Rabbit bells	Shrubs/Vines/Groundcover
Croton michauxii	Rushfoil	Shrubs/Vines/Groundcover
Dalea feayi	Feay's prairie clover	Shrubs/Vines/Groundcover
Dalea pinnata	Summer farewell	Shrubs/Vines/Groundcover
Eryngium aromaticum	Fragrant eryngium	Shrubs/Vines/Groundcover
Euphorbia polyphylla	Florida spurge	Shrubs/Vines/Groundcover
Froelichia floridana	Cottonweed	Shrubs/Vines/Groundcover
Galactia elliottii	Elliott's milkpea	Shrubs/Vines/Groundcover
Galactia regularis	Milkpea	Shrubs/Vines/Groundcover
Gratiola hispida	Rough hedgehyssop	Shrubs/Vines/Groundcover
Helianthemum nashii	Florida scrub frostweed	Shrubs/Vines/Groundcover
Heterotheca subaxillaris	Camphorweed	Shrubs/Vines/Groundcover
Lechea cernua	Nodding pinweed	Shrubs/Vines/Groundcover
Lechea deckertii	Deckert's pinweed	Shrubs/Vines/Groundcover
Liatris chapmanii	Chapman's blazing star	Shrubs/Vines/Groundcover
Liatris tenuifolia var. quadriflora	Blazing star	Shrubs/Vines/Groundcover
Lupinus diffusus	Skyblue lupine	Shrubs/Vines/Groundcover
Mimosa quadrivalis	Sensitive briar	Shrubs/Vines/Groundcover
Monotropa uniflora	Indianpipe	Shrubs/Vines/Groundcover

Table 4-4-C	Proposed Plantings in Xeric Oak Scrub (FLUCFCS 421) and Sand Live Oak (FLUCFCS 432)

Scientific Name	Common Name	Stratum
Opuntia humifusa	Prickly pear	Shrubs/Vines/Groundcover
Palafoxia feayi	Feay's palafox	Shrubs/Vines/Groundcover
Piloblephis rigida	Pennyroyal	Shrubs/Vines/Groundcover
Pityopsis graminifolia	Silver-leaved aster	Shrubs/Vines/Groundcover
Polygonella ciliata	Hairy jointweed	Shrubs/Vines/Groundcover
Polygonella polygama	October flower	Shrubs/Vines/Groundcover
Polygonella robusta	Sandhill wireweed	Shrubs/Vines/Groundcover
Pteroglossaspis ecristata	Giant orchid	Shrubs/Vines/Groundcover
Rhynchospora megalocarpa	Sandyfield beaksedge	Shrubs/Vines/Groundcover
Rhynchospora megaplumosa	Long-bristled beaksedge	Shrubs/Vines/Groundcover
Selaginella arenicola	Sand spikemoss	Shrubs/Vines/Groundcover
Seymeria pectinata	Piedmont blacksenna	Shrubs/Vines/Groundcover
Sisyrinchium xerophyllum	Scrub blue-eyed grass	Shrubs/Vines/Groundcover
Smilax aruiculata	Greenbrier	Shrubs/Vines/Groundcover
Solidago chapmania	Chapman's goldenrod	Shrubs/Vines/Groundcover
Stillingia sylvatica	Queen's delight	Shrubs/Vines/Groundcover
Stipulicida setacea	Pineland scalypink	Shrubs/Vines/Groundcover
Tephrosia chrysophylla	Scurf hoarypea	Shrubs/Vines/Groundcover
Trichostema dichotomum	Blue curls	Shrubs/Vines/Groundcover
Vitis rotundifolia	Muscadine grape	Shrubs/Vines/Groundcover
Yucca filamentosa	Beargrass	Shrubs/Vines/Groundcover

Notes:

• Other native species, excluding atypical "weedy" generalists, may be added to this list that occur in other areas of the Ona Mine site that are mapped as this same cover type.
• A dominance of xeric oak and sand live oak will be planted, while other species may be utilized to obtain diversity.
• If available, native topsoil will be used as a source for initial groundcover.
• Topsoiling, seeding or planting (a diverse combination of any of the native species listed in table above and/or others as approved by FDEP) will result in the desired vegetative community.
• Target densities of plants will reflect densities present in similar upland communities present within the region of the Ona Mine site.
• Trees: 300/acre (12 ft. centers) as 1 gallon size.
• Shrubs: 200/acre (15 ft. centers) as 1 gallon size.
• Herbaceous: 4,840/acre (3 ft. centers) as 1 gallon size nursery stock or from direct seeding or topsoil.
*Commercially available, substitution of differing species may occur

Table 4-4-D	Proposed Plantings in Live Oak and Temperate Hardwood (FLUCFCS 427 and 425)	
Scientific Name	**Common Name**	**Stratum**
Acer rubrum	Red maple	Trees
Carpinus caroliniana	Musclewood	Trees
Carya glabra	Pignut hickory	Trees
Celtis laevigata	Hackberry	Trees
Cornus florida	Flowering dogwood	Trees
Cratageus flava	Summer hawthorn	Trees
Disopyros virginiana	Persimmon	Trees
Juniperus silicicola	Southern red cedar	Trees
Liquidambar styraciflua	Sweetgum	Trees
Magnolia grandiflora	Grand magnolia	Trees
Morus rubra	Red mulberry	Trees
Persia borbonia	Red bay	Trees
Pinus elliottii	Slash pine	Trees
Prunus angustifolia	Chickasaw plum	Trees
Prunus caroliniana	Cherry laurel	Trees
Prunus serotina	Black cherry	Trees
Quercus geminata	Sand live oak	Trees
Quercus hemisphaerica	Laurel oak	Trees
Quercus laurifolia	Swamp laurel oak	Trees
Quercus nigra	Water oak	Trees
Quercus virginiana	Live oak	Trees
Sabal palmetto	Sabal palm	Trees
Amorpha fruticosa	False indigo bush	Shrubs and Vines
Ampelopsis arborea	Peppervine	Shrubs and Vines
Apios americana	Groundnut	Shrubs and Vines
Ardisia escallonoides	Marlberry	Shrubs and Vines
Berchemia scandens	Rattan vine	Shrubs and Vines
Callicarpa americana	Beautyberry	Shrubs and Vines
Campsis radicans	Trumpet creeper	Shrubs and Vines
Euonymus americanus	American strawberrybush	Shrubs and Vines
Gelsemium sempervirens	Carolina jessamine	Shrubs and Vines
Hypericum hypericoides	St. Andrew's cross	Shrubs and Vines
Ipomoea alba	Moonflower	Shrubs and Vines
Ipomoea pandurata	Man-of-the-earth	Shrubs and Vines
Myrica cerifera	Wax myrtle	Shrubs and Vines
Parthenocissus quinquefolia	Virginia creeper	Shrubs and Vines
Psychotria nervosa	Wild coffee	Shrubs and Vines
Psychotria sulzneri	Shortleaf wild coffee	Shrubs and Vines
Rubus argutus	Sawtooth blackberry	Shrubs and Vines
Serenoa repens	Saw palmetto	Shrubs and Vines
Smilax auriculata	Earleaf greenbrier	Shrubs and Vines
Smilax bona-nox	Saw greenbrier	Shrubs and Vines

Table 4-4-D	Proposed Plantings in Live Oak and Temperate Hardwood (FLUCFCS 427 and 425)	
Scientific Name	**Common Name**	**Stratum**
Smilax glauca	Cat greenbrier	Shrubs and Vines
Smilax pumila	Sarsaparilla vine	Shrubs and Vines
Smilax smallii	Lanceleaf greenbrier	Shrubs and Vines
Toxicodendron radicans	Poison ivy	Shrubs and Vines
Vaccinium corymbosum	Highbush blueberry	Shrubs and Vines
Viburnum obovatum	Blackhaw	Shrubs and Vines
Vitis aestivalis	Summer grape	Shrubs and Vines
Vitis rotundifolia	Muscadine grape	Shrubs and Vines
Acalypha graciliens	Slender threeseed mercury	Groundcover
Andropogon virginicus	Broomsedge	Groundcover
Aristolochia serpentaria	Virginia snakeroot	Groundcover
Aster dumosus	Rice button aster	Groundcover
Carex longii	Long's sedge	Groundcover
Chasmanthium laxum	Longleaf chasmanthium	Groundcover
Clematis reticulata	Netleaf leather flower	Groundcover
Commelina diffusa	Dayflower	Groundcover
Cyperus croceus	Baldwin's flatsedge	Groundcover
Cyperus poystachyus	Manyspike flatsedge	Groundcover
Desmodium incanum	Creeping beggarweed	Groundcover
Desmodum paniculatum	Panicledleaf ticktrefoil	Groundcover
Dichanthelium commutatum	Variable witchgrass	Groundcover
Dichanthelium laxiflorum	Openflower witchgrass	Groundcover
Digitaria serotina	Blanket crabgrass	Groundcover
Drymaria cordata	Drymaria	Groundcover
Elephantopus elatus	Elephant's foot	Groundcover
Erigeron quercifolius	Oakleaf fleabane	Groundcover
Galactia elliotti i	Elliott's milkpea	Groundcover
Galactia regularis	Eastern milkpea	Groundcover
Galactia volubilis	Downy milkpea	Groundcover
Galium hispidulum	Coastal bedstraw	Groundcover
Galium pilosum	Hairy bedstraw	Groundcover
Hedyotis uniflora	Clustered diamond-flower	Groundcover
Hypoxis curtissii	Common yellow stargrass	Groundcover
Lactuca floridana	Woodland lettuce	Groundcover
Matelea gonocarpos	Angularfruit milkvine	Groundcover
Melothria pendula	Creeping cucumber	Groundcover
Mikania cordifolia	Florida keys hempvine	Groundcover
Mitchella repens	Partidgeberry	Groundcover
Oplismenus setarius	Basketgrass	Groundcover
Panicum anceps	Beaked panicum	Groundcover
Paspalum conjugatum	Sour paspalum	Groundcover
Paspalum setaceum	Thin paspalum	Groundcover

Table 4-4-D	Proposed Plantings in Live Oak and Temperate Hardwood (FLUCFCS 427 and 425)	
Scientific Name	**Common Name**	**Stratum**
Psilotum nudum	Whisk fern	Groundcover
Pteridium aquilinum	Bracken fern	Groundcover
Ruellia caroliniana	Carolina wild petunia	Groundcover
Salvia lyrata	Lyre-leaved sage	Groundcover
Sambucus canadensis	Elderberry	Groundcover
Sanicula canadensis	Canadian blacksnakeroot	Groundcover
Solidago canadensis	Canada goldenrod	Groundcover
Solidago fistulosa	Pinebarren goldenrod	Groundcover
Thelypteris kunthii	Southern shield fern	Groundcover
Thelypteris resinifera	Glandular maiden fern	Groundcover
Tillandsia fasciculata	Cardinal airplant	Groundcover
Tillandsia recurvata	Ball moss	Groundcover
Tillandsia setacea	Southern needleleaf	Groundcover
Tillandsia usneoides	Spanish moss	Groundcover
Tillandsia utriculata	Giant airplant	Groundcover
Verbesina virginica	White crownbeard	Groundcover
Viola sororia	Common blue violet	Groundcover

Notes:

- Other native species, excluding atypical “weedy” generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- A dominance of a variety of live oak, laurel oak and other oak species will be planted, while other species may be utilized to obtain diversity.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or topsoiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others as approved by FDEP.
- Target densities of plants will reflect densities present in similar wetland communities present within the region of the Ona Mine.

* Commercially available, substitution of differing species may occur.

Table 4-4-E	Proposed Plantings in Hardwood-Conifer Mixed (FLUCFCS 434)

Scientific Name	Common Name	Stratum
Acer rubrum	Red maple	Trees
Carpinus caroliniana	Musclewood	Trees
Carya glabra	Pignut hickory	Trees
Celtis laevigata	Hackberry	Trees
Cornus florida	Flowering dogwood	Trees
Cratageus flava	Summer hawthorn	Trees
Disopyros virginiana	Persimmon	Trees
Juniperus silicicola	Southern red cedar	Trees
Liquidambar styraciflua	Sweetgum	Trees
Magnolia grandiflora	Grand magnolia	Trees
Morus rubra	Red mulberry	Trees
Persia borbonia	Red bay	Trees
Pinus elliottii var. densa	South Florida slash pine	Trees
Pinus palustris	Longleaf pine	Trees
Prunus angustifolia	Chickasaw plum	Trees
Prunus caroliniana	Cherry laurel	Trees
Prunus serotina	Black cherry	Trees
Quercus geminata	Sand live oak	Trees
Quercus hemisphaerica	Laurel oak	Trees
Quercus laurifolia	Swamp laurel oak	Trees
Quercus nigra	Water oak	Trees
Quercus virginiana	Live oak	Trees
Sabal palmetto	Sabal palm	Trees
Amorpha fruticosa	False indigo bush	Shrubs and Vines
Ampelopsis arborea	Peppervine	Shrubs and Vines
Apios americana	Groundnut	Shrubs and Vines
Ardisia escallonoides	Marlberry	Shrubs and Vines
Asimina reticulata	Netted pawpaw	Shrubs and Vines
Befaria racemosa	Tarflower	Shrubs and Vines
Berchemia scandens	Rattan vine	Shrubs and Vines
Callicarpa americana	Beautyberry	Shrubs and Vines
Campsis radicans	Trumpet creeper	Shrubs and Vines
Euonymus americanus	American strawberrybush	Shrubs and Vines
Gaylussacia dumosa	Dwarf huckleberry	Shrubs and Vines

Table 4-4-E	Proposed Plantings in Hardwood-Conifer Mixed (FLUCFCS 434)

Scientific Name	Common Name	Stratum
Gaylussacia nana	Dangleberry	Shrubs and Vines
Gelsemium sempervirens	Carolina jessamine	Shrubs and Vines
Hypericum cistifolium	Roundpod St. John's wort	Shrubs and Vines
Hypericum hypericoides	St. Andrew's cross	Shrubs and Vines
Hypericum reductum	Atlantic St. John's wort	Shrubs and Vines
Hypericum tetrapetalum	St. Andrew's Cross	Shrubs and Vines
Ilex glabra	Gallberry	Shrubs and Vines
Licania michauxii	Gopher apple	Shrubs and Vines
Lyonia fruticosa	Staggerbush	Shrubs and Vines
Lyonia lucida	Shiny lyonia	Shrubs and Vines
Myrica cerifera var. pumila	Dwarf wax myrtle	Shrubs and Vines
Myrica cerifera	Wax myrtle	Shrubs and Vines
Parthenocissus quinquefolia	Virginia creeper	Shrubs and Vines
Psychotria nervosa	Wild coffee	Shrubs and Vines
Psychotria sulzneri	Shortleaf wild coffee	Shrubs and Vines
Quercus minima	Dwarf live oak	Shrubs and Vines
Quercus pumila	Runner oak	Shrubs and Vines
Rubus cuneifolius	Sand blackberry	Shrubs and Vines
Serenoa repens	Saw palmetto	Shrubs and Vines
Smilax auriculata	Earleaf greenbrier	Shrubs and Vines
Smilax bona-nox	Saw greenbrier	Shrubs and Vines
Smilax glauca	Cat greenbrier	Shrubs and Vines
Smilax pumila	Sarsaparilla vine	Shrubs and Vines
Smilax smallii	Lanceleaf greenbrier	Shrubs and Vines
Toxicodendron radicans	Poison ivy	Shrubs and Vines
Vaccinium corymbosum	Highbush blueberry	Shrubs and Vines
Vaccinium darrowi	Little blueberry	Shrubs and Vines
Vaccinium myrsinites	Shiny blueberry	Shrubs and Vines
Viburnum obovatum	Blackhaw	Shrubs and Vines
Vitis aestivalis	Summer grape	Shrubs and Vines
Vitis rotundifolia	Muscadine grape	Shrubs and Vines
Ximenia Americana	Hogplum	Shrubs and Vines
Acalypha graciliens	Slender threeseed mercury	Groundcover
Amphicarpum muhlenbergianum	Blue maidencane	Groundcover

Table 4-4-E	Proposed Plantings in Hardwood-Conifer Mixed (FLUCFCS 434)

Scientific Name	Common Name	Stratum
Andropogon brachystachyus	Short-spike bluestem	Groundcover
Andropogon glomeratus	Big chalky bluestem	Groundcover
Andropogon gyrans	Elliott's bluestem	Groundcover
Andropogon ternarius	Splitbeard bluestem	Groundcover
Andropogon virginicus	Bluestem	Groundcover
Aristida purpurascens	Slim-spike threeawn	Groundcover
Aristida spiciformis	Bottlebrush threeawn	Groundcover
Aristida stricta var. beyrichiana	Wiregrass	Groundcover
Asimina reticulata	Netted pawpaw	Groundcover
Aster dumosus	Bush aster	Groundcover
Aster tortifolius	White-topped aster	Groundcover
Axonopus fissifolius	Common carpetgrass	Groundcover
Axonopus furcatus	Big carpetgrass	Groundcover
Buchnera americana	Bluehearts	Groundcover
Carex longii	Long's sedge	Groundcover
Chamaecrista fasciculata	Partridge pea	Groundcover
Chamaecrista nictitans	Sensitive partridge pea	Groundcover
Chasmanthium laxum	Longleaf chasmanthium	Groundcover
Clematis reticulata	Netleaf leather flower	Groundcover
Commelina diffusa	Dayflower	Groundcover
Coreopsis leavenworthii	Leavenworth's tickseed	Groundcover
Crotolaria rotundifolia	Rabbit bells	Groundcover
Cuthbertia ornata	Roseling	Groundcover
Cyperus croceus	Baldwin's flatsedge	Groundcover
Cyperus poystachyus	Manyspike flatsedge	Groundcover
Cyperus retrorsus	Pinebarren flatsedge	Groundcover
Desmodium incanum	Creeping beggarweed	Groundcover
Dichanthelium chamaelonche	Witchgrass	Groundcover
Dichanthelium commutatum	Variable witchgrass	Groundcover
Dichanthelium ensifolium	Witchgrass	Groundcover
Dichanthelium laxiflorum	Openflower witchgrass	Groundcover
Dichanthelium leucothrix	Witchgrass	Groundcover
Dichanthelium portoricense	Witchgrass	Groundcover
Dichanthelium strigosum	Witchgrass	Groundcover

Table 4-4-E	Proposed Plantings in Hardwood-Conifer Mixed (FLUCFCS 434)

Scientific Name	Common Name	Stratum
Digitaria serotina	Blanket crabgrass	Groundcover
Diodia virginiana	Virginian buttonweed	Groundcover
Drymaria cordata	Drymaria	Groundcover
Eleocharis baldwinii	Roadgrass	Groundcover
Elephantopus elatus	Elephant's foot	Groundcover
Eragrostis elliottii	Elliott's lovegrass	Groundcover
Eragrostis spectabilis	Purple lovegrass	Groundcover
Eragrostis virginica	Meadow lovegrass	Groundcover
Erigeron quercifolius	Oakleaf fleabane	Groundcover
Erigeron vernus	Fleabane	Groundcover
Eupatorium capillifolium	Dogfennel	Groundcover
Eupatorium mohrii	Mohr's hoarhound	Groundcover
Eupatorium rotundifolium	False hoarhound	Groundcover
Eustachys petraea	Fingergrass	Groundcover
Euthamia caroliniana	Flat-topped goldenrod	Groundcover
Fimbristylis autumnalis	Slender fimbry	Groundcover
Fimbristylis puberula	Hairy fimbry	Groundcover
Galactia elliottii	Elliott's milkpea	Groundcover
Galactia regularis	Florida milkpea	Groundcover
Galactia volubilis	Downy milkpea	Groundcover
Galium hispidulum	Coastal bedstraw	Groundcover
Galium pilosum	Hairy bedstraw	Groundcover
Gratiola hispida	Rough hedge-hyssop	Groundcover
Gratiola pilosa	Shaggy hedge-hyssop	Groundcover
Hedyotis uniflora	Clustered diamond-flower	Groundcover
Helianthus angustifolius	Narrow-leaved sunflower	Groundcover
Hieracium megacephalon	Hawks beard	Groundcover
Hypoxis curtissii	Common yellow stargrass	Groundcover
Hypoxis juncea	Yellow stargrass	Groundcover
Hyptis alata	Musky mint	Groundcover
Juncus dichotomus	Forked rush	Groundcover
Juncus marginatus	Grassleaf rush	Groundcover
Juncus scirpoides	Needlepod rush	Groundcover
Lachnanthes caroliniana	Redroot	Groundcover

Table 4-4-E	Proposed Plantings in Hardwood-Conifer Mixed (FLUCFCS 434)

Scientific Name	Common Name	Stratum
Lactuca floridana	Woodland lettuce	Groundcover
Liatris gracilis	Slender blazing star	Groundcover
Liatris tennuifolia var. quadriflora	Shortleaf blazing star	Groundcover
Ludwigia maritma	Seaside primrose willow	Groundcover
Lygodesmia aphylla	Roserush	Groundcover
Matelea gonocarpos	Angularfruit milkvine	Groundcover
Mecardonia acuminata	Purple medardonia	Groundcover
Melothria pendula	Creeping cucumber	Groundcover
Mikania cordifolia	Florida keys hempvine	Groundcover
Mimosa quadrivalis	Sensitive briar	Groundcover
Mitchella repens	Partidgeberry	Groundcover
Mitreola sessifolia	Miterwort	Groundcover
Oplismenus setarius	Basketgrass	Groundcover
Palafoxia integrifolia	Coastalplain palafox	Groundcover
Panicum anceps	Beaked panicum	Groundcover
Panicum verrucosum	Warty panic grass	Groundcover
Panicum virgatum	Switch grass	Groundcover
Paspalum conjugatum	Sour paspalum	Groundcover
Paspalum praecox	Early paspalum	Groundcover
Paspalum setaceum	Thin paspalum	Groundcover
Phoebanthus grandiflorus	Phoebanthus	Groundcover
Physostegia purpurea	Purple dragonhead	Groundcover
Pinguicula pumila	Small butterwort	Groundcover
Piriqueta caroliniana	Piriqueta	Groundcover
Pityopsis graminifolia	Silver-leaved goldenaster	Groundcover
Pluchea rosea	Rosy camphor weed	Groundcover
Psilotum nudum	Whisk fern	Groundcover
Pteridium aquilinum	Bracken fern	Groundcover
Pterocaulon pycnostachyum	Rabbit tobaccoa	Groundcover
Rhexia cubensis	Meadowbeauty	Groundcover
Rhexia mariana	Pale meadow-beauty	Groundcover
Rhexia nashii	Meadowbeauty	Groundcover
Rhynchospora fascicularis	Fascicled beaksedge	Groundcover
Rhynchospora fernaldii	Fernald’s beaksedge	Groundcover

Table 4-4-E	Proposed Plantings in Hardwood-Conifer Mixed (FLUCFCS 434)

Scientific Name	Common Name	Stratum
Rhynchospora microcarpa	Southern beaksedge	Groundcover
Rhynchospora microcephala	Bunched beaksedge	Groundcover
Rhynchospora plumosa	Plumed beaksedge	Groundcover
Rhynchospora spp.	Beaksedges	Groundcover
Ruellia caroliniana	Carolina wild petunia	Groundcover
Sabatia brevifolia	White sabatia	Groundcover
Sacciolepis striata	Cupscale	Groundcover
Salvia lyrata	Lyre-leaved sage	Groundcover
Sambucus canadensis	Elderberry	Groundcover
Sanicula canadensis	Canadian blacksnakeroot	Groundcover
Schizachyrium stoloniferum	Creeping bluestem	Groundcover
Schrankia microphylla	Sensitive briar	Groundcover
Scleria ciliata	Fringed Nutrush	Groundcover
Scleria georgiana	Slenderfruit Nutrush	Groundcover
Scleria reticularis	Netted Nutrush	Groundcover
Scleria triglomerata	Tall Nutrush	Groundcover
Setaria geniculata	Knotroot foxtail	Groundcover
Sisyrinchium angustifolium	Blue-eyed grass	Groundcover
Smilax auriculata	Greenbrier	Groundcover
Solidago canadensis	Canada goldenrod	Groundcover
Solidago fistulosa	Pinebarren goldenrod	Groundcover
Solidago odora var. chapmanii	Chapman’s goldenrod	Groundcover
Solidago stricta	Slender goldenrod	Groundcover
Sorghastrum secundum	Lopsided indiangrass	Groundcover
Stillingia sylvatica	Queen’s delight	Groundcover
Tephrosia hispidula	Spreading hoary-pea	Groundcover
Thelypteris kunthii	Southern shield fern	Groundcover
Tillandsia fasciculata	Cardinal airplant	Groundcover
Tillandsia recurvata	Ball moss	Groundcover
Tillandsia setacea	Southern needleleaf	Groundcover
Tillandsia usneoides	Spanish moss	Groundcover
Tillandsia utriculata	Giant airplant	Groundcover
Utricularia subulata	Zigzag bladderwort	Groundcover
Verbesina virginica	White crownbeard	Groundcover

Table 4-4-E	Proposed Plantings in Hardwood-Conifer Mixed (FLUCFCS 434)

Scientific Name	Common Name	Stratum
Viola sororia	Common blue violet	Groundcover
Xyris ambigua	Coastalplain yellow-eyed grass	Groundcover
Xyris brevifolia	Shortleaf yellow-eyed grass	Groundcover
Xyris caroliniana	Carolina yellow-eyed grass	Groundcover
Xyris elliottii	Elliott's yellow-eyed grass	Groundcover

Notes:

- Other native species, excluding atypical "weedy" generalists, may be added to this list that occur other areas of the Ona Mine that are mapped as this same cover type.
- A dominance of hardwoods and pines will be planted, while other species may be utilized to obtain diversity.
- If available, native topsoil will be used as a source for initial groundcover.
- Natural recruitment and/or topsoiling, seeding or planting of a diversity of native species may include any combination of species listed in the above table and/or others as approved by FDEP.
- Target densities of plants will reflect densities present in similar upland communities present within the region of the Ona Mine.

* Commercially available, substitution of differing species may occur.

Table 4-5-A Land Cover within 60 feet of Mitigation Streams

NAME	180	211	213	214	321	329	330	410	411	425	427	434	513	514	534	611	613	616	617	625	630	641	643	647	743	814
BA-MA																		0.03	6.06			0.63				
BA-T3																			6.99			0.62				
BA-T4											0.02											0.62				
BA-T6A																			1.77			0.23				
BU-M1											0.00	0.13						0.16	1.20		12.69					
BU-T10					0.19						0.14								3.35			0.51				
BU-T12												1.07							1.62			0.13				
BU-T13					0.31						0.24	0.13							0.94			0.02				
BU-T3A					0.34							0.23					0.44		3.00		3.47					
BU-T3B																	0.50		1.94			0.21				
BU-T5					0.00														3.61			0.26				
H-M1											0.10	0.54							12.3				0.13			
H-T2A											0.05	0.24							2.61			0.12				
H-T2B																					0.13	0.14				
H-T3											0.15	0.07							1.35			0.14				
H-T4A											0.00					4.40			0.49							
H-T5											0.26					0.50			0.77							
O-MA																			6.61			0.10				
O-T3C					2.51																0.06					
O-T3D					2.49																	1.13				
O-T3E					1.17																0.77	0.19				
O-T3F									2.26			0.54							0.27			0.22				
O-T3G									0.03			0.08							2.77							
O-T3H					1.37																	0.37				
O-T4C									0.10	0.09	0.09								3.06			0.02				
O-T6B												0.46								3.93	0.30	0.04				
O-T8A					1.03				0.00			0.04								0.13	1.30	0.18				
O-T8B					1.10																	0.46				
O-T8C					1.53																	0.55				
O-T8F1					3.19				0.09	1.15									2.40		0.91	0.25				
O-T8F2					2.63					0.61									0.71			0.23				
O-T8G					0.54						1.84								0.20							
WF-T3A												0.11							3.72							

Table 4-5-A Land Cover within 60 feet of Mitigation Streams

NAME	180	211	213	214	321	329	330	410	411	425	427	434	513	514	534	611	613	616	617	625	630	641	643	647	743	814
WF-T3B																			5.53			0.25				
WF-T3C								0.13											0.91		2.37					
100A	0.48		0.08							14.5		8.35									0.10	0.16				
100B		0.13	1.13						0.33			9.73							0.02			0.05	0.27			
100D										3.67	0.11							0.78	2.26							
100E											0.12							0.17	2.72							
100F																		0.02	1.95							
100G																		0.27	0.20							
101A										1.32		0.59														
102A										0.70																
103A			0.10									1.11										0.10				
104A			0.03									2.22										0.00				
105A			0.00						0.00	0.47	1.37	5.85							0.00			0.61				
105C											0.00	3.64														
105D												0.41												0.23		
105F												2.31												0.08		
105H												1.97							0.26					0.03		
105I									8.35			0.28							0.11							
105J					0.80							0.28							0.14							
105L												3.91										0.22		0.05		
105M					0.14				1.55																	
105O									0.04	0.03		0.87				0.23										
105P					0.30				0.19							1.73										
105V									0.34			1.44												0.00		
109B										0.17	0.20															
111A										0.47	0.98							0.66	0.05							
111B																		1.03	0.85			0.00				
111C										0.31								0.15	1.90							
111D										1.97								0.20	2.10							
111E			1.69		0.03					1.19	0.17	0.15						0.07								
111F										0.26		0.63														
111I										0.32	0.41								0.66							
111J			0.23									0.82														

Table 4-5-A Land Cover within 60 feet of Mitigation Streams

NAME	180	211	213	214	321	329	330	410	411	425	427	434	513	514	534	611	613	616	617	625	630	641	643	647	743	814
111K										0.12	0.97								0.12							
112A									1.39										0.36							
113A											0.09							0.26	1.03							
114A										0.05	0.40													0.08		
300B											2.22											0.18				
300C											2.17											0.14		0.30		
300D										2.16		0.08												0.03		
301A										0.03	1.45											0.13		0.48		
301B					0.26							5.57										0.11				
301C									1.80		2.59	0.51										0.17				
301E									0.43			0.44							0.25			0.06		0.03		
301J					0.17							0.65				0.79										
301K					0.45											0.31										
302A					0.26					0.17	4.12								0.36			0.05				
310A											0.75	0.41										0.10				
400A			0.36								5.43															
400B											0.69															
401A											0.81															
500A		0.16	0.03		1.05		0.02		0.21	17.4	37.3	0.33		0.00		0.12			11.2							0.05
501A										0.53	1.51													0.26		
502A		0.08	0.01		0.00				0.17	12.3	12.9	5.38		0.01	0.10				2.71							
502B											1.45								0.27							
502C			0.01							1.29	0.07	0.21	0.00						0.10							
502D										0.11		0.93														
502E										1.23		0.02							0.39							
502F										0.10		0.45							2.78							
502H																			0.56							
502I									2.64	0.01		0.27							8.24							
502J												0.05							2.93							
502K										0.22		0.27							1.39							
502L										0.01		0.21							0.31							
502M																			0.44							
502N												0.61							0.30							

Table 4-5-A Land Cover within 60 feet of Mitigation Streams

NAME	180	211	213	214	321	329	330	410	411	425	427	434	513	514	534	611	613	616	617	625	630	641	643	647	743	814
502O											0.66					0.07										
502P											0.89															
502Q											0.80															
502R											0.86															
502S												0.45														
502T										0.03			0.01						0.16							
502U					0.14					0.23	0.62															
502V																			1.34							
504A											0.76	0.06							0.19							
505A											0.60								0.30							
505B											0.01								0.42							
505C											0.00								0.51							
506A					0.83						0.49															
507A											1.24															
508A			0.01				0.38				1.74															
509A											0.51								0.11							
510A					0.43						0.97															
511A					0.53						1.50															
512A		0.85			0.71					0.26	0.44															
513A		0.07								0.00	0.73								0.21							
514A			0.20		0.02					0.00	2.22								0.24							
515A			0.43																							
515B-1			0.21		0.02						0.61															
516A										1.43	0.12															
516B									0.20	0.39	0.23	1.04				0.39			0.60							
516C										0.22	0.04	0.76														
516E										0.91									0.22							
517A										0.57	0.33					0.12										
518A					0.16					0.06	1.34					0.08			0.37							
518B					1.07						0.00					0.67										
519A					0.11					0.09						0.26			0.26							
520A									0.27		0.08								0.70							
520B									0.29			0.92														

Table 4-5-A Land Cover within 60 feet of Mitigation Streams

NAME	180	211	213	214	321	329	330	410	411	425	427	434	513	514	534	611	613	616	617	625	630	641	643	647	743	814
521A																			1.07		0.05					
521B									0.40	1.18											0.35					
522A									1.85										0.40			0.05				
523A									0.10	0.42		0.99							2.96							
524A					0.90					0.26	0.77												0.11			
525A											0.98	0.08														
526A										0.30									1.35							
528A											1.07												0.10			

Table 4-8-A-i	Temporal Lag Factor for Wetland Functional Loss		
Action	Year	Mine Year	Discount Percentage
T0 = Permit issued - Start of Impacts	2016	0	1.0000
	2017	1	0.9612
	2018	2	0.9235
	2019	3	0.8870
	2020	4	0.8515
	2021	5	0.8170
	2022	6	0.7835
	2023	7	0.7510
	2024	8	0.7195
Start of Reclamation	2025	9	0.6889
	2026	10	0.6591
	2027	11	0.6303
	2028	12	0.6022
	2029	13	0.5750
	2030	14	0.5486
	2031	15	0.5230
	2032	16	0.4981
	2033	17	0.4739
	2034	18	0.4504
	2035	19	0.4276
	2036	20	0.4055
	2037	21	0.3840
	2038	22	0.3632
	2039	23	0.3429
	2040	24	0.3232
Impacts Complete	2041	25	0.3042
	2042	26	N/A
	2043	27	N/A
	2044	28	N/A
	2045	29	N/A
	2046	30	N/A
Reclamation Complete	2047	31	N/A
	2048	32	N/A
	2049	33	N/A
	2050	34	N/A
	2051	35	N/A
	2052	36	N/A
	2053	37	N/A
	2054	38	N/A
	2055	39	N/A
	2056	40	N/A
	2057	41	N/A
	2058	42	N/A
	2059	43	N/A
	2060	44	N/A
	2061	45	N/A
Tmax = 47 yrs (15 years after Reclamation Completion)	2062	46	N/A

Table 4-8-A-ii(H)	Temporal Lag Factor for Herbaceous Wetland Establishment on Mined Lands		
Action	Year	Mine Year	Discount Percentage
T0 = Permit issued - Start of Impacts	2016	0	0.9784
	2017	1	0.9402
	2018	2	0.9031
	2019	3	0.8672
	2020	4	0.8322
	2021	5	0.7983
	2022	6	0.7654
	2023	7	0.7334
	2024	8	0.7024
	2025	9	0.6723
	2026	10	0.6430
	2027	11	0.6146
	2028	12	0.5871
	2029	13	0.5603
Start of Herbaceous Reclamation	2030	14	0.5343
	2031	15	0.5091
	2032	16	0.4846
	2033	17	0.4608
	2034	18	0.4377
	2035	19	0.4153
	2036	20	0.3935
	2037	21	0.3724
	2038	22	0.3519
	2039	23	0.3319
	2040	24	0.3126
Impacts Complete	2041	25	0.2938
	2042	26	0.2756
	2043	27	0.2579
	2044	28	0.2407
	2045	29	0.2240
	2046	30	0.2078
Herbaceous Reclamation Complete	2047	31	0.1921
	2048	32	N/A
	2049	33	N/A
	2050	34	N/A
	2051	35	N/A
	2052	36	N/A
	2053	37	N/A
	2054	38	N/A
	2055	39	N/A
	2056	40	N/A
	2057	41	N/A
	2058	42	N/A
	2059	43	N/A
	2060	44	N/A
	2061	45	N/A
Tmax = 47 yrs (15 years after All Reclamation Completion)	2062	46	N/A

Table 4-8-A-ii(F)	Temporal Lag Factor for Forested Wetland Establishment on Mined Lands		
Action	Year	Mine Year	Discount Percentage
T0 = Permit issued - Start of Impacts	2016	0	0.9363
	2017	1	0.8994
	2018	2	0.8635
	2019	3	0.8287
	2020	4	0.7949
	2021	5	0.7621
	2022	6	0.7302
	2023	7	0.6993
	2024	8	0.6692
	2025	9	0.6401
	2026	10	0.6117
	2027	11	0.5843
	2028	12	0.5576
Start of Forested Reclamation	2029	13	0.5317
	2030	14	0.5065
	2031	15	0.4821
	2032	16	0.4584
	2033	17	0.4353
	2034	18	0.4301
	2035	19	0.4058
	2036	20	0.3824
	2037	21	0.3498
	2038	22	0.3299
	2039	23	0.3106
	2040	24	0.2919
Impacts Complete	2041	25	0.2737
	2042	26	0.2561
	2043	27	0.2390
	2044	28	0.2223
	2045	29	0.2088
	2046	30	0.1905
Forested Reclamation Complete	2047	31	0.1753
	2048	32	N/A
	2049	33	N/A
	2050	34	N/A
	2051	35	N/A
	2052	36	N/A
	2053	37	N/A
	2054	38	N/A
	2055	39	N/A
	2056	40	N/A
	2057	41	N/A
	2058	42	N/A
	2059	43	N/A
	2060	44	N/A
	2061	45	N/A
Tmax = 47 yrs (15 years after All Reclamation Completion)	2062	46	N/A

Table 4-8-A-iii(H)	Mining Impacts by Year for Herbaceous Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2016	Mined	19-4	641	0.33	4	6	5	0.50	0.1630	1.0000	0.1630
2017	Disturbed	19-4	641	0.90	4	6	5	0.50	0.4476	0.9612	0.4303
2017	Mined	8-1	643	3.16	6	5	4	0.50	1.5803	0.9612	1.5189
2017	Mined	8-2	643	10.25	7	6	5	0.60	6.1475	0.9612	5.9090
2017	Mined	WFHC-319-2D	211	0.14	5	8	7	0.67	0.0916	0.9612	0.0881
2018	Mined	17-5A	641	0.50	7	7	7	0.70	0.3503	0.9235	0.3235
2018	Mined	17-5B	643	0.10	7	7	7	0.70	0.0716	0.9235	0.0635
2018	Mined	17-5C	641	0.36	7	7	7	0.70	0.2515	0.9235	0.2231
2018	Mined	17-5F-211	211	0.32	7	7	7	0.70	0.2268	0.9235	0.2094
2019	Mined	17-5B	643	0.16	7	7	7	0.70	0.1140	0.8870	0.1011
2019	Mined	17-5C	641	0.77	7	7	7	0.70	0.5399	0.8870	0.4789
2019	Mined	17-5D	641	0.25	7	7	7	0.70	0.1742	0.8870	0.1545
2019	Mined	17-5K	647	8.38	7	7	7	0.70	5.8694	0.8870	5.2061
2019	Mined	20-12G	641	2.11	4	7	6	0.57	1.1971	0.8870	1.0618
2019	Mined	20-14	211	0.10	4	5	4	0.43	0.0442	0.8870	0.0392
2019	Mined	20-14-514	514	0.01	4	5	4	0.43	0.0057	0.8870	0.0051
2019	Mined	20-15	211	0.02	4	6	6	0.53	0.0126	0.8870	0.0112
2019	Mined	20-16	211	0.10	4	6	6	0.53	0.0510	0.8870	0.0452
2019	Mined	20-17	211	0.06	4	6	6	0.53	0.0335	0.8870	0.0297
2019	Mined	20-2B	641	1.52	5	6	5	0.53	0.8109	0.8870	0.7193
2019	Mined	20-2B-514	514	0.00	5	6	5	0.53	0.0000	0.8870	0.0000
2019	Mined	20-9A-514	514	0.28	5	6	6	0.57	0.1562	0.8870	0.1386
2019	Mined	BRU-323-6C	647	0.98	6	7	7	0.67	0.6509	0.8870	0.5774
2019	Mined	BRU-323-6F	641	0.76	6	7	7	0.67	0.5072	0.8870	0.4499
2019	Mined	OAK-417-1A	641	1.15	7	8	8	0.77	0.8831	0.8870	0.7833
2019	Mined	OAK-417-1B	643	0.59	7	8	8	0.77	0.4494	0.8870	0.3986
2019	Mined	OAK-417-2A	641	0.71	7	7	8	0.73	0.5203	0.8870	0.4615
2019	Mined	OAK-417-2B	641	0.49	7	7	8	0.73	0.3595	0.8870	0.3188
2019	Mined	OAK-418-13	513	0.13	4	6	6	0.53	0.0704	0.8870	0.0624
2019	Mined	OAK-418-13-514	514	0.00	4	6	6	0.53	0.0010	0.8870	0.0009
2019	Mined	OAK-418-13A	641	3.47	4	6	6	0.53	1.8518	0.8870	1.6425
2019	Mined	OAK-418-13A-514	514	0.00	4	6	6	0.53	0.0013	0.8870	0.0012
2019	Mined	OAK-418-13B	641	0.38	4	6	6	0.53	0.2027	0.8870	0.1798

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2019	Mined	OAK-418-13B-514	514	0.00	4	6	6	0.53	0.0000	0.8870	0.0000
2019	Mined	OAK-418-16	513	0.08	5	6	4	0.50	0.0389	0.8870	0.0345
2019	Mined	OAK-418-16A	641	0.18	5	6	4	0.50	0.0907	0.8870	0.0805
2019	Mined	OAK-418-16B	641	0.33	5	6	4	0.50	0.1669	0.8870	0.1480
2019	Mined	OAK-418-24C	641	0.26	6	6	7	0.63	0.1663	0.8870	0.1475
2019	Mined	OAK-418-24D	211	0.90	6	6	7	0.63	0.5698	0.8870	0.5054
2019	Mined	OAK-419-3A	647	3.12	7	7	7	0.70	2.1856	0.8870	1.9386
2019	Mined	OSW-I-306A-211	211	0.08	8	5	7	0.67	0.0505	0.8870	0.0448
2019	Mined	OSW-I-306A-211A	641	0.00	8	5	7	0.67	0.0005	0.8870	0.0005
2020	Mined	20-2B	641	0.70	5	6	5	0.53	0.3719	0.8515	0.3167
2020	Mined	20-2D	534	0.38	5	6	5	0.53	0.2051	0.8515	0.1747
2020	Mined	20-9A	211	0.05	5	6	6	0.57	0.0302	0.8515	0.0257
2020	Mined	20-9A-514	514	0.07	5	6	6	0.57	0.0392	0.8515	0.0334
2020	Mined	20-9B	513	0.03	5	6	6	0.57	0.0176	0.8515	0.0150
2020	Mined	4-10	643	0.16	8	9	8	0.83	0.1352	0.8515	0.1151
2020	Mined	4-12A	534	0.13	6	7	7	0.67	0.0880	0.8515	0.0749
2020	Mined	4-12B	641	19.29	6	7	7	0.67	12.8605	0.8515	10.9507
2020	Mined	4-12C	534	0.14	6	7	7	0.67	0.0959	0.8515	0.0817
2020	Mined	4-23	321	0.00	7	3	4	0.47	0.0007	0.8515	0.0006
2020	Mined	4-28C	641	0.68	8	8	7	0.77	0.5229	0.8515	0.4452
2020	Mined	9-2	647	0.01	6	6	7	0.63	0.0071	0.8515	0.0060
2020	Mined	BRU-310-4	641	4.91	7	7	6	0.67	3.2719	0.8515	2.7860
2020	Mined	BRU-310-4-514	514	0.00	7	7	6	0.67	0.0025	0.8515	0.0021
2020	Mined	BRU-310-5	641	1.16	4	7	6	0.57	0.6552	0.8515	0.5579
2020	Mined	BRU-310-5X	513	0.08	4	7	6	0.57	0.0455	0.8515	0.0388
2020	Mined	BRU-310-5X-514	514	0.24	4	7	6	0.57	0.1364	0.8515	0.1161
2020	Mined	BRU-310-6	641	0.36	9	8	8	0.83	0.2972	0.8515	0.2531
2020	Mined	BRU-310-7	641	0.64	9	9	7	0.83	0.5334	0.8515	0.4542
2020	Mined	BRU-311-1A	641	3.10	5	8	6	0.63	1.9626	0.8515	1.6712
2020	Mined	BRU-311-3	641	0.16	7	7	8	0.73	0.1153	0.8515	0.0982
2020	Mined	BRU-311-8A	641	0.51	8	8	8	0.80	0.4093	0.8515	0.3485
2020	Mined	BRU-313-24A	641	23.93	7	8	7	0.73	17.5456	0.8515	14.9400
2020	Mined	BRU-313-24B	647	1.12	7	8	7	0.73	0.8230	0.8515	0.7008
2020	Mined	BRU-313-24C	641	9.78	7	8	7	0.73	7.1725	0.8515	6.1074
2020	Mined	BRU-313-24C-211	211	0.14	7	8	7	0.73	0.1025	0.8515	0.0873

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2020	Mined	BRU-314-28	641	2.12	5	6	6	0.57	1.2036	0.8515	1.0248
2020	Mined	BRU-314-2A	514	0.00	8	7	7	0.73	0.0004	0.8515	0.0003
2020	Mined	BRU-324-14B	211	0.31	5	5	4	0.47	0.1463	0.8515	0.1246
2020	Mined	BRU-324-14C	641	0.20	5	5	4	0.47	0.0939	0.8515	0.0799
2020	Mined	BRU-324-3	641	2.77	5	7	7	0.63	1.7557	0.8515	1.4949
2020	Mined	BRU-324-6B	641	0.64	5	5	5	0.50	0.3214	0.8515	0.2737
2020	Mined	BRU-324-7	641	3.22	5	6	5	0.53	1.7170	0.8515	1.4620
2020	Mined	BRU-324-7X-534	534	0.13	5	6	5	0.53	0.0671	0.8515	0.0571
2020	Mined	BRU-324-7X-641	641	0.24	5	6	5	0.53	0.1282	0.8515	0.1091
2020	Mined	BRU-419-1	641	1.34	7	7	8	0.73	0.9857	0.8515	0.8393
2020	Mined	OAK-417-10	211	0.26	8	8	6	0.73	0.1927	0.8515	0.1641
2020	Mined	OAK-417-12	641	0.30	9	8	6	0.77	0.2285	0.8515	0.1946
2020	Mined	OAK-417-28	641	0.81	7	6	6	0.63	0.5121	0.8515	0.4360
2020	Mined	OAK-420-30B	647	0.64	8	8	7	0.77	0.4879	0.8515	0.4154
2020	Mined	OAK-420-5A-211	211	0.42	5	5	5	0.50	0.2099	0.8515	0.1788
2020	Mined	OSW-I-112B	514	0.17	6	5	4	0.50	0.0839	0.8515	0.0714
2020	Mined	OSW-I-112O	641	0.01	5	4	2	0.37	0.0027	0.8515	0.0023
2020	Mined	OSW-I-300I-211	211	0.15	8	5	6	0.63	0.0918	0.8515	0.0782
2020	Mined	OSW-I-306A-211	211	0.00	8	5	7	0.67	0.0001	0.8515	0.0001
2020	Mined	OSW-I-523I-211	641	0.02	8	5	6	0.63	0.0103	0.8515	0.0088
2020	Mined	OSW-I-523I-321	321	0.07	8	5	6	0.63	0.0430	0.8515	0.0366
2020	Mined	OSW-I-523I-321A	641	0.05	8	5	6	0.63	0.0316	0.8515	0.0269
2021	Mined	16-22	211	7.12	4	3	3	0.33	2.3743	0.8170	1.9398
2021	Mined	16-22-514	514	0.07	4	3	3	0.33	0.0227	0.8170	0.0185
2021	Disturbed	16-23	514	0.16	4	3	3	0.33	0.0535	0.8170	0.0437
2021	Mined	4-10	643	3.82	8	9	8	0.83	3.1798	0.8170	2.5979
2021	Mined	4-11A	641	2.39	7	6	6	0.63	1.5160	0.8170	1.2385
2021	Mined	4-12B	641	8.70	6	7	7	0.67	5.7999	0.8170	4.7385
2021	Mined	4-24	641	0.55	4	6	5	0.50	0.2774	0.8170	0.2266
2021	Mined	4-6	641	0.81	4	7	6	0.57	0.4613	0.8170	0.3769
2021	Mined	9-2	647	0.51	6	6	7	0.63	0.3218	0.8170	0.2629
2021	Mined	BRU-314-13	641	0.22	6	6	7	0.63	0.1406	0.8170	0.1149
2021	Mined	BRU-314-6B	514	0.00	8	5	5	0.60	0.0002	0.8170	0.0002
2021	Mined	BRU-324-14B	211	0.08	5	5	4	0.47	0.0387	0.8170	0.0317
2021	Mined	BRU-418-21A	641	1.80	4	6	5	0.50	0.8984	0.8170	0.7340

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2021	Mined	BRU-418-21B-211	211	1.24	4	6	5	0.50	0.6177	0.8170	0.5047
2021	Mined	BRU-418-21B-514	514	0.00	4	6	5	0.50	0.0003	0.8170	0.0002
2021	Mined	BRU-419-1	641	0.10	7	7	8	0.73	0.0710	0.8170	0.0580
2021	Mined	BRU-419-22A	647	15.97	6	7	7	0.67	10.6439	0.8170	8.6961
2021	Mined	BRU-419-22B	641	14.11	6	7	7	0.67	9.4092	0.8170	7.6873
2021	Mined	BRU-419-22D	647	2.29	6	7	7	0.67	1.5235	0.8170	1.2447
2021	Mined	BRU-419-22E	647	0.64	6	7	7	0.67	0.4237	0.8170	0.3462
2021	Mined	BRU-419-22G	647	1.76	6	7	7	0.67	1.1723	0.8170	0.9577
2021	Mined	OAK-417-11	641	0.50	8	8	6	0.73	0.3630	0.8170	0.2966
2021	Mined	OAK-417-12	641	4.28	9	8	6	0.77	3.2803	0.8170	2.6800
2021	Mined	OAK-417-18	641	0.15	8	7	6	0.70	0.1048	0.8170	0.0856
2021	Mined	OAK-417-6A	641	0.36	8	8	8	0.80	0.2881	0.8170	0.2354
2021	Mined	OAK-417-6C	647	0.01	8	8	8	0.80	0.0043	0.8170	0.0035
2021	Mined	OAK-417-6D	647	0.22	8	8	8	0.80	0.1780	0.8170	0.1454
2021	Mined	OAK-418-14	641	3.88	4	6	5	0.50	1.9422	0.8170	1.5868
2021	Mined	OAK-420-5A	641	3.03	5	5	5	0.50	1.5132	0.8170	1.2363
2021	Mined	OAK-420-5A-211	211	0.20	5	5	5	0.50	0.0979	0.8170	0.0800
2021	Mined	OAK-420-5X	641	0.09	5	5	5	0.50	0.0455	0.8170	0.0372
2021	Mined	OAK-420-6	647	0.67	4	6	5	0.50	0.3333	0.8170	0.2723
2021	Mined	OAK-420-6X	647	0.02	4	6	5	0.50	0.0119	0.8170	0.0098
2021	Mined	OSW-I-112B	514	0.75	6	5	4	0.50	0.3734	0.8170	0.3051
2022	Mined	4-1	641	8.47	4	7	7	0.60	5.0850	0.7835	3.9841
2022	Mined	4-15A	641	8.31	9	8	8	0.83	6.9249	0.7835	5.4257
2022	Mined	4-17A	641	5.58	8	8	7	0.77	4.2802	0.7835	3.3535
2022	Mined	4-18A	641	1.42	9	8	7	0.80	1.1341	0.7835	0.8885
2022	Mined	4-20	641	0.58	4	7	7	0.60	0.3504	0.7835	0.2746
2022	Mined	4-24	641	3.53	4	6	5	0.50	1.7633	0.7835	1.3816
2022	Mined	4-6	641	2.49	4	7	6	0.57	1.4090	0.7835	1.1039
2022	Mined	4-7L	641	0.52	7	8	9	0.80	0.4169	0.7835	0.3266
2022	Mined	BRA-419-5	641	1.52	4	6	5	0.50	0.7589	0.7835	0.5946
2022	Mined	BRU-310-13A-514	514	0.03	7	8	8	0.77	0.0226	0.7835	0.0177
2022	Mined	BRU-310-1E	211	0.67	7	8	8	0.77	0.5110	0.7835	0.4004
2022	Mined	BRU-314-13	641	1.43	6	6	7	0.63	0.9060	0.7835	0.7099
2022	Mined	BRU-314-46	514	0.02	7	4	4	0.50	0.0116	0.7835	0.0091
2022	Mined	BRU-315-11	211	0.50	5	6	4	0.50	0.2514	0.7835	0.1970

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2022	Mined	BRU-315-11X	513	0.09	5	6	4	0.50	0.0444	0.7835	0.0348
2022	Mined	BRU-315-12	641	1.54	4	6	5	0.50	0.7685	0.7835	0.6021
2022	Mined	BRU-315-14A	641	0.43	4	5	5	0.47	0.2026	0.7835	0.1587
2022	Mined	BRU-315-14B	211	0.52	4	5	5	0.47	0.2406	0.7835	0.1885
2022	Mined	BRU-315-1I	514	0.00	6	7	7	0.67	0.0031	0.7835	0.0024
2022	Mined	BRU-315-1L	211	1.72	6	7	7	0.67	1.1444	0.7835	0.8967
2022	Mined	BRU-315-6	641	0.23	6	4	4	0.47	0.1079	0.7835	0.0846
2022	Mined	BRU-419-22A	647	2.18	6	7	7	0.67	1.4520	0.7835	1.1376
2022	Mined	BRU-419-22B	641	2.34	6	7	7	0.67	1.5595	0.7835	1.2219
2022	Mined	OAK-417-18	641	7.02	8	7	6	0.70	4.9109	0.7835	3.8477
2022	Mined	OAK-417-19	643	0.00	8	8	9	0.83	0.0040	0.7835	0.0031
2022	Mined	OAK-417-26A	641	0.59	9	8	6	0.77	0.4542	0.7835	0.3559
2022	Mined	OAK-417-26B	643	0.15	9	8	6	0.77	0.1187	0.7835	0.0930
2022	Mined	OAK-417-5C	321	0.63	8	8	8	0.80	0.5024	0.7835	0.3936
2022	Mined	OAK-417-6A	641	6.32	8	8	8	0.80	5.0570	0.7835	3.9621
2022	Mined	OAK-417-6B	647	6.02	8	8	8	0.80	4.8175	0.7835	3.7745
2022	Mined	OAK-417-6C	647	2.77	8	8	8	0.80	2.2144	0.7835	1.7350
2022	Mined	OAK-417-6D	647	0.08	8	8	8	0.80	0.0638	0.7835	0.0500
2022	Mined	OAK-418-14	641	4.19	4	6	5	0.50	2.0973	0.7835	1.6433
2022	Mined	OAK-418-18	647	0.19	5	4	4	0.43	0.0820	0.7835	0.0642
2022	Mined	OAK-418-19A-514	514	0.14	7	6	5	0.60	0.0844	0.7835	0.0661
2022	Mined	OAK-418-19B	211	0.23	7	6	5	0.60	0.1404	0.7835	0.1100
2022	Mined	OAK-418-22A	211	0.05	5	3	3	0.37	0.0188	0.7835	0.0147
2022	Mined	OAK-418-22B	211	0.06	5	3	3	0.37	0.0205	0.7835	0.0160
2022	Mined	OAK-418-22X	513	0.02	5	3	3	0.37	0.0069	0.7835	0.0054
2022	Mined	OAK-418-23	641	4.46	7	7	5	0.63	2.8268	0.7835	2.2148
2022	Mined	OAK-418-23-514	514	0.01	7	7	5	0.63	0.0091	0.7835	0.0072
2022	Mined	OAK-418-24A	641	4.66	6	6	7	0.63	2.9537	0.7835	2.3142
2022	Mined	OAK-418-24B	643	0.11	6	6	7	0.63	0.0671	0.7835	0.0526
2022	Mined	OAK-418-3A	641	1.73	7	6	4	0.57	0.9788	0.7835	0.7669
2022	Mined	OAK-418-5-514	514	0.16	4	4	4	0.40	0.0636	0.7835	0.0498
2022	Mined	OAK-418-8	513	0.09	4	4	4	0.40	0.0341	0.7835	0.0267
2022	Mined	OAK-418-8-514	514	0.14	4	4	4	0.40	0.0570	0.7835	0.0446
2022	Mined	OAK-418-8A	641	0.23	4	5	4	0.43	0.0996	0.7835	0.0780
2022	Mined	OAK-418-8B	641	1.33	4	5	4	0.43	0.5763	0.7835	0.4515

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2022	Mined	OAK-418-9A	641	3.52	5	7	7	0.63	2.2279	0.7835	1.7455
2022	Mined	OAK-418-9B	647	3.64	5	7	7	0.63	2.3063	0.7835	1.8070
2022	Mined	OAK-420-3A	647	4.85	7	7	6	0.67	3.2319	0.7835	2.5322
2022	Mined	OAK-420-3B	641	7.75	7	7	6	0.67	5.1640	0.7835	4.0460
2022	Mined	OAK-420-6	647	6.26	4	6	5	0.50	3.1305	0.7835	2.4527
2022	Mined	OSW-I-112B	514	0.70	6	5	4	0.50	0.3493	0.7835	0.2737
2022	Mined	OSW-I-305C	321	0.10	8	6	5	0.63	0.0662	0.7835	0.0518
2022	Mined	OSW-I-305C-643	643	0.00	8	6	5	0.63	0.0024	0.7835	0.0019
2022	Disturbed	WFHC-319-5	643	0.25	7	6	8	0.70	0.1766	0.7835	0.1383
2023	Mined	15-2A	213	0.34	5	5	4	0.47	0.1567	0.7510	0.1177
2023	Mined	15-2C	643	0.90	5	5	4	0.47	0.4206	0.7510	0.3159
2023	Mined	4-12B	641	0.03	6	7	7	0.67	0.0196	0.7510	0.0147
2023	Mined	4-14B	647	0.93	8	7	7	0.73	0.6817	0.7510	0.5119
2023	Mined	4-14C	641	2.15	8	7	7	0.73	1.5738	0.7510	1.1819
2023	Mined	4-15A	641	0.05	9	8	8	0.83	0.0448	0.7510	0.0337
2023	Mined	4-17A	641	0.70	8	8	7	0.77	0.5383	0.7510	0.4043
2023	Mined	4-28C	641	0.39	8	8	7	0.77	0.2965	0.7510	0.2227
2023	Mined	4-7L	641	0.02	7	8	9	0.80	0.0154	0.7510	0.0116
2023	Mined	BRA-419-5	641	0.75	4	6	5	0.50	0.3735	0.7510	0.2805
2023	Mined	BRU-310-10A	641	0.88	7	7	6	0.67	0.5895	0.7510	0.4427
2023	Mined	BRU-310-11-514	514	0.01	7	6	6	0.63	0.0081	0.7510	0.0061
2023	Mined	BRU-310-2A	641	0.44	9	9	7	0.83	0.3629	0.7510	0.2725
2023	Mined	BRU-310-4	641	0.01	7	7	6	0.67	0.0073	0.7510	0.0055
2023	Mined	BRU-310-7	641	0.69	9	9	7	0.83	0.5790	0.7510	0.4348
2023	Mined	BRU-310-9	641	0.87	7	7	7	0.70	0.6102	0.7510	0.4582
2023	Mined	BRU-314-50	534	0.10	6	6	7	0.63	0.0647	0.7510	0.0486
2023	Mined	BRU-315-11	211	0.63	5	6	4	0.50	0.3144	0.7510	0.2361
2023	Mined	BRU-315-11X	513	0.06	5	6	4	0.50	0.0282	0.7510	0.0212
2023	Mined	BRU-315-1C	647	1.24	6	7	7	0.67	0.8292	0.7510	0.6228
2023	Mined	BRU-315-1H	647	0.70	6	7	7	0.67	0.4686	0.7510	0.3519
2023	Mined	BRU-315-1K	211	0.15	6	7	7	0.67	0.1013	0.7510	0.0761
2023	Mined	BRU-315-1L	211	5.89	6	7	7	0.67	3.9268	0.7510	2.9490
2023	Mined	BRU-315-1X-534	534	0.20	6	7	7	0.67	0.1304	0.7510	0.0979
2023	Mined	BRU-315-4	329	9.24	6	6	4	0.53	4.9279	0.7510	3.7008
2023	Mined	BRU-315-9A	213	0.46	5	4	3	0.40	0.1854	0.7510	0.1392

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2023	Disturbed	BRU-326-33X	513	0.10	7	7	7	0.70	0.0684	0.7510	0.0514
2023	Disturbed	BRU-326-7A	647	0.81	7	7	8	0.73	0.5944	0.7510	0.4464
2023	Disturbed	BRU-326-7B	647	0.62	7	7	8	0.73	0.4578	0.7510	0.3438
2023	Disturbed	BRU-326-7X	513	0.06	7	7	8	0.73	0.0445	0.7510	0.0334
2023	Disturbed	BRU-326-9X	513	0.01	9	8	7	0.80	0.0061	0.7510	0.0046
2023	Mined	OAK-417-19	643	3.87	8	8	9	0.83	3.2246	0.7510	2.4217
2023	Disturbed	OAK-417-23A	641	2.94	6	6	6	0.60	1.7647	0.7510	1.3253
2023	Disturbed	OAK-417-23B	647	2.60	6	6	6	0.60	1.5625	0.7510	1.1734
2023	Mined	OAK-418-23	641	0.00	7	7	5	0.63	0.0002	0.7510	0.0001
2023	Mined	OAK-418-24A	641	1.46	6	6	7	0.63	0.9271	0.7510	0.6962
2023	Mined	OAK-418-24B	643	0.95	6	6	7	0.63	0.6026	0.7510	0.4525
2023	Mined	OAK-418-24C	641	6.84	6	6	7	0.63	4.3350	0.7510	3.2556
2023	Mined	OAK-418-24D	211	0.27	6	6	7	0.63	0.1740	0.7510	0.1307
2023	Disturbed	OAK-420-20A	647	1.19	7	7	6	0.67	0.7910	0.7510	0.5940
2023	Mined	OAK-420-23A	641	1.09	7	7	7	0.70	0.7628	0.7510	0.5728
2023	Mined	OAK-420-24A	641	5.28	7	7	7	0.70	3.6972	0.7510	2.7766
2023	Disturbed	OAK-420-24B-641	641	0.43	7	7	7	0.70	0.3034	0.7510	0.2278
2023	Disturbed	OAK-420-36A	211	0.00	7	5	6	0.60	0.0012	0.7510	0.0009
2023	Mined	OAK-420-3A	647	3.58	7	7	6	0.67	2.3863	0.7510	1.7921
2023	Mined	OAK-420-3B	641	0.32	7	7	6	0.67	0.2126	0.7510	0.1596
2023	Mined	OAK-420-43B	514	0.02	6	3	3	0.40	0.0077	0.7510	0.0058
2023	Mined	OAK-420-43X	514	0.00	6	3	3	0.40	0.0011	0.7510	0.0008
2023	Disturbed	OAK-420-45	211	0.02	4	6	5	0.50	0.0119	0.7510	0.0090
2023	Disturbed	OSW-I-303C-211	211	0.10	6	4	7	0.57	0.0554	0.7510	0.0416
2023	Mined	OSW-I-303C-434B	514	0.10	6	4	7	0.57	0.0545	0.7510	0.0409
2023	Mined	OSW-I-303C-514	514	0.00	6	4	7	0.57	0.0000	0.7510	0.0000
2023	Disturbed	OSW-I-303F-211	211	0.01	7	5	7	0.63	0.0086	0.7510	0.0065
2023	Mined	OSW-I-305B	647	0.05	6	6	4	0.53	0.0252	0.7510	0.0189
2023	Mined	OSW-I-305C	321	0.00	8	6	5	0.63	0.0028	0.7510	0.0021
2023	Mined	OSW-I-523I-321	321	0.06	8	5	6	0.63	0.0363	0.7510	0.0272
2023	Disturbed	WFHC-329-9A	211	0.35	4	7	6	0.57	0.1982	0.7510	0.1489
2023	Disturbed	WFHC-329-9C	647	1.27	4	7	6	0.57	0.7206	0.7510	0.5412
2024	Mined	16-22	211	0.08	4	3	3	0.33	0.0254	0.7195	0.0183
2024	Mined	BRA-324-22	641	3.35	4	4	6	0.47	1.5636	0.7195	1.1250
2024	Mined	BRA-325-24	641	1.25	7	7	5	0.63	0.7927	0.7195	0.5703

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2024	Mined	BRA-325-27A	213	0.24	7	7	6	0.67	0.1606	0.7195	0.1155
2024	Mined	BRA-325-27C	641	0.87	7	7	6	0.67	0.5804	0.7195	0.4176
2024	Mined	BRA-325-27D-213	213	0.23	7	7	6	0.67	0.1507	0.7195	0.1084
2024	Disturbed	BRA-431-32D-514	514	0.21	8	6	6	0.67	0.1428	0.7195	0.1027
2024	Mined	BRU-315-16	211	0.01	6	5	3	0.47	0.0051	0.7195	0.0037
2024	Mined	BRU-315-1X-513	513	0.03	6	7	7	0.67	0.0225	0.7195	0.0162
2024	Mined	BRU-315-4	329	0.88	6	6	4	0.53	0.4712	0.7195	0.3390
2024	Mined	BRU-315-7X	513	0.06	6	7	8	0.70	0.0386	0.7195	0.0278
2024	Mined	BRU-315-7X-514	514	0.11	6	7	8	0.70	0.0785	0.7195	0.0565
2024	Mined	BRU-315-8	211	0.51	6	5	3	0.47	0.2383	0.7195	0.1715
2024	Mined	BRU-418-1	641	1.87	4	5	6	0.50	0.9338	0.7195	0.6719
2024	Mined	BRU-418-1X-534	534	0.29	4	5	6	0.50	0.1459	0.7195	0.1050
2024	Mined	BRU-418-1X-641	641	0.00	4	5	6	0.50	0.0004	0.7195	0.0003
2024	Mined	HC-328-7A	641	0.05	6	7	7	0.67	0.0365	0.7195	0.0263
2024	Disturbed	HC-331-1-211	211	0.17	4	5	4	0.43	0.0743	0.7195	0.0534
2024	Disturbed	HC-331-1-514	514	0.09	4	5	4	0.43	0.0386	0.7195	0.0278
2024	Mined	HC-331-2	641	0.02	4	5	4	0.43	0.0090	0.7195	0.0065
2024	Mined	OAK-416-10	643	0.41	7	7	8	0.73	0.3039	0.7195	0.2186
2024	Mined	OAK-416-10-514	514	0.00	7	7	8	0.73	0.0000	0.7195	0.0000
2024	Mined	OAK-416-11-514	514	0.02	8	7	6	0.70	0.0123	0.7195	0.0088
2024	Mined	OAK-416-12A	647	3.81	7	7	6	0.67	2.5429	0.7195	1.8296
2024	Mined	OAK-416-12B-647	647	0.14	7	7	6	0.67	0.0918	0.7195	0.0660
2024	Disturbed	OAK-416-19X	513	0.04	7	6	6	0.63	0.0230	0.7195	0.0165
2024	Disturbed	OAK-416-6	211	0.03	7	3	4	0.47	0.0140	0.7195	0.0101
2024	Mined	OAK-416-7	641	2.94	7	7	8	0.73	2.1574	0.7195	1.5522
2024	Mined	OAK-416-7-514	514	0.04	7	7	8	0.73	0.0269	0.7195	0.0194
2024	Mined	OAK-417-6A	641	1.10	8	8	8	0.80	0.8769	0.7195	0.6309
2024	Mined	OAK-417-6B	647	0.98	8	8	8	0.80	0.7825	0.7195	0.5630
2024	Mined	OAK-418-5	513	0.23	4	4	4	0.40	0.0921	0.7195	0.0663
2024	Mined	OAK-418-5-514	514	0.04	4	4	4	0.40	0.0149	0.7195	0.0107
2024	Mined	OAK-418-5A	641	0.96	4	4	4	0.40	0.3830	0.7195	0.2756
2024	Mined	OAK-418-5B	641	0.46	4	4	4	0.40	0.1821	0.7195	0.1310
2024	Mined	OAK-418-5C	641	0.48	4	4	4	0.40	0.1909	0.7195	0.1373
2024	Mined	OAK-418-5X	534	0.33	4	4	4	0.40	0.1337	0.7195	0.0962
2024	Disturbed	OAK-421-18A	647	4.35	7	7	6	0.67	2.8978	0.7195	2.0850

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2024	Mined	OAK-421-18B-514	514	0.00	7	7	6	0.67	0.0021	0.7195	0.0015
2024	Mined	OAK-421-19-514	514	0.00	8	7	5	0.67	0.0005	0.7195	0.0003
2024	Mined	OAK-421-1A	641	4.37	8	8	9	0.83	3.6379	0.7195	2.6175
2024	Mined	OAK-421-1C	647	0.19	8	8	9	0.83	0.1605	0.7195	0.1155
2024	Mined	OAK-421-20	641	7.06	8	8	9	0.83	5.8828	0.7195	4.2327
2024	Mined	OAK-421-21B	641	0.23	8	8	7	0.77	0.1751	0.7195	0.1260
2024	Mined	OAK-421-21C	641	0.70	8	8	7	0.77	0.5350	0.7195	0.3850
2024	Mined	OAK-421-29	641	1.32	8	8	6	0.73	0.9716	0.7195	0.6991
2024	Mined	OAK-421-2X	513	0.01	8	6	7	0.70	0.0069	0.7195	0.0050
2024	Mined	OAK-421-38	321	0.00	8	8	8	0.80	0.0002	0.7195	0.0002
2024	Mined	OAK-421-39A	641	1.30	8	8	8	0.80	1.0438	0.7195	0.7510
2024	Mined	OAK-421-8X	513	0.00	8	7	7	0.73	0.0011	0.7195	0.0008
2024	Mined	OAK-428-10A	641	0.69	8	8	8	0.80	0.5556	0.7195	0.3997
2024	Mined	OAK-428-10B	641	0.53	8	8	8	0.80	0.4268	0.7195	0.3071
2024	Mined	OAK-428-10C	643	4.61	8	8	8	0.80	3.6884	0.7195	2.6538
2024	Disturbed	OAK-428-27A	641	0.21	8	8	7	0.77	0.1647	0.7195	0.1185
2024	Disturbed	OAK-428-27B	641	0.66	8	8	7	0.77	0.5097	0.7195	0.3667
2024	Mined	OAK-428-27C	641	1.10	8	8	7	0.77	0.8466	0.7195	0.6091
2024	Mined	OAK-428-27D-641	641	0.00	8	8	7	0.77	0.0003	0.7195	0.0002
2024	Mined	OAK-428-27I-643	643	0.00	8	8	7	0.77	0.0004	0.7195	0.0003
2024	Mined	OAK-428-3	321	0.17	7	4	4	0.50	0.0847	0.7195	0.0610
2024	Mined	OAK-428-4	641	0.15	9	7	8	0.80	0.1232	0.7195	0.0886
2024	Mined	OAK-428-9A	641	2.72	9	9	9	0.90	2.4461	0.7195	1.7599
2024	Mined	OAK-428-9B	329	0.30	9	9	9	0.90	0.2716	0.7195	0.1954
2024	Mined	OSW-I-107E-211	211	0.24	5	5	6	0.53	0.1285	0.7195	0.0925
2024	Mined	OSW-I-111G-211	211	0.32	7	3	3	0.43	0.1393	0.7195	0.1002
2024	Mined	OSW-I-203A-211	211	0.06	4	7	3	0.47	0.0273	0.7195	0.0197
2024	Mined	OSW-I-203A-211A	641	0.03	4	7	3	0.47	0.0129	0.7195	0.0092
2024	Mined	OSW-I-301D	321	0.40	9	6	8	0.77	0.3048	0.7195	0.2193
2024	Mined	OSW-I-301D-329	329	0.03	9	6	8	0.77	0.0239	0.7195	0.0172
2024	Mined	OSW-I-301G-321	321	0.09	8	6	8	0.73	0.0677	0.7195	0.0487
2024	Mined	OSW-I-302D-321	321	0.05	8	6	7	0.70	0.0338	0.7195	0.0243
2024	Disturbed	WFHC-319-4	211	0.00	7	6	8	0.70	0.0000	0.7195	0.0000
2024	Disturbed	WFHC-319-8-514	514	0.06	7	8	8	0.77	0.0496	0.7195	0.0357
2024	Mined	WFHC-329-18B	647	1.17	5	8	7	0.67	0.7776	0.7195	0.5595

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2024	Mined	WFHC-329-19	641	0.52	5	7	6	0.60	0.3148	0.7195	0.2265
2024	Mined	WFHC-329-20	641	0.67	5	8	6	0.63	0.4263	0.7195	0.3068
2024	Disturbed	WFHC-329-4-514	514	0.14	6	7	7	0.67	0.0937	0.7195	0.0674
2024	Mined	WFHC-329-8C	211	0.42	5	8	6	0.63	0.2664	0.7195	0.1917
2024	Mined	WFHC-329-8D	211	0.11	5	8	6	0.63	0.0683	0.7195	0.0492
2024	Mined	WFHC-329-9A	211	0.17	4	7	6	0.57	0.0974	0.7195	0.0701
2024	Disturbed	WFHC-329-9C	647	0.23	4	7	6	0.57	0.1281	0.7195	0.0922
2024	Disturbed	WFHC-330-21A	213	0.13	6	8	8	0.73	0.0918	0.7195	0.0660
2024	Disturbed	WFHC-330-21X	514	0.01	6	8	8	0.73	0.0101	0.7195	0.0073
2024	Mined	WFHC-330-5B-213	213	0.07	6	8	8	0.73	0.0514	0.7195	0.0370
2024	Mined	WFHC-330-5B-211	211	0.51	6	8	8	0.73	0.3720	0.7195	0.2677
2024	Mined	WFHC-330-5X	513	0.02	6	8	8	0.73	0.0124	0.7195	0.0089
2024	Mined	WFHC-330-6B	641	0.24	6	8	8	0.73	0.1781	0.7195	0.1282
2024	Mined	WFHC-330-6D	647	1.20	6	8	8	0.73	0.8834	0.7195	0.6356
2024	Disturbed	WFHC-330-6X	513	0.00	6	8	8	0.73	0.0011	0.7195	0.0008
2024	Disturbed	WFHC-330-7A	514	0.00	7	8	8	0.77	0.0007	0.7195	0.0005
2024	Disturbed	WFHC-330-7B	211	0.56	7	8	8	0.77	0.4319	0.7195	0.3108
2024	Disturbed	WFHC-330-7B-514	514	0.44	7	8	8	0.77	0.3393	0.7195	0.2441
2024	Disturbed	WFHC-330-7C	211	0.14	7	8	8	0.77	0.1103	0.7195	0.0793
2025	Disturbed	16-6A	211	0.00	6	8	7	0.70	0.0004	0.6889	0.0003
2025	Mined	BRA-324-22	641	0.58	4	4	6	0.47	0.2728	0.6889	0.1879
2025	Mined	BRA-325-24	641	1.20	7	7	5	0.63	0.7579	0.6889	0.5221
2025	Mined	BRA-325-25	641	4.74	7	7	7	0.70	3.3196	0.6889	2.2869
2025	Mined	BRA-325-25X	513	0.00	7	7	7	0.70	0.0013	0.6889	0.0009
2025	Mined	BRA-325-26A	647	1.28	7	6	6	0.63	0.8085	0.6889	0.5570
2025	Mined	BRA-325-26B	213	0.30	7	6	6	0.63	0.1884	0.6889	0.1298
2025	Mined	BRA-325-26C	641	0.29	7	6	6	0.63	0.1868	0.6889	0.1287
2025	Mined	BRA-325-27A	213	1.71	7	7	6	0.67	1.1369	0.6889	0.7832
2025	Mined	BRA-325-27B	641	0.17	7	7	6	0.67	0.1156	0.6889	0.0796
2025	Mined	BRA-325-5X	513	0.03	7	7	7	0.70	0.0184	0.6889	0.0127
2025	Mined	BRU-323-28A	647	1.77	6	6	6	0.60	1.0599	0.6889	0.7302
2025	Mined	BRU-323-28B	647	0.10	6	6	6	0.60	0.0608	0.6889	0.0419
2025	Mined	BRU-323-29A	641	14.21	6	7	7	0.67	9.4724	0.6889	6.5256
2025	Mined	BRU-323-29C	647	0.27	6	7	7	0.67	0.1818	0.6889	0.1252
2025	Mined	BRU-324-14A	641	0.46	5	5	4	0.47	0.2168	0.6889	0.1494

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2025	Mined	BRU-324-14B	211	0.10	5	5	4	0.47	0.0465	0.6889	0.0320
2025	Mined	BRU-324-14C	641	0.01	5	5	4	0.47	0.0057	0.6889	0.0039
2025	Mined	HC-328-12B	641	5.77	4	7	8	0.63	3.6530	0.6889	2.5165
2025	Mined	HC-328-6B	647	0.56	6	6	5	0.57	0.3169	0.6889	0.2183
2025	Mined	HC-328-7A	641	14.41	6	7	7	0.67	9.6041	0.6889	6.6163
2025	Mined	HC-328-7B	647	0.81	6	7	7	0.67	0.5389	0.6889	0.3712
2025	Mined	HC-331-1	641	0.46	4	5	4	0.43	0.1999	0.6889	0.1377
2025	Disturbed	HC-331-1-211	211	0.87	4	5	4	0.43	0.3777	0.6889	0.2602
2025	Disturbed	HC-331-1-514	514	0.38	4	5	4	0.43	0.1663	0.6889	0.1146
2025	Mined	HC-331-2	641	0.48	4	5	4	0.43	0.2065	0.6889	0.1422
2025	Disturbed	HC-331-3	641	0.78	4	4	4	0.40	0.3107	0.6889	0.2140
2025	Mined	HIC-427-21F	647	2.82	6	7	7	0.67	1.8793	0.6889	1.2946
2025	Mined	HIC-427-21X	513	0.02	6	7	7	0.67	0.0146	0.6889	0.0100
2025	Mined	HIC-427-22A	641	11.78	6	7	6	0.63	7.4589	0.6889	5.1385
2025	Mined	HIC-427-22A-211	211	1.84	6	7	6	0.63	1.1655	0.6889	0.8029
2025	Mined	HIC-427-22B	513	0.20	6	7	6	0.63	0.1298	0.6889	0.0894
2025	Mined	HIC-427-22C	513	0.07	6	7	6	0.63	0.0435	0.6889	0.0300
2025	Disturbed	HIC-427-22D	513	0.24	6	7	6	0.63	0.1546	0.6889	0.1065
2025	Disturbed	HIC-427-22E	647	3.57	6	7	6	0.63	2.2636	0.6889	1.5594
2025	Mined	HIC-427-22F	647	0.56	6	7	6	0.63	0.3535	0.6889	0.2435
2025	Disturbed	HIC-427-22G	647	5.44	6	7	6	0.63	3.4451	0.6889	2.3733
2025	Mined	HIC-427-22H-534	534	0.13	6	7	6	0.63	0.0798	0.6889	0.0550
2025	Mined	HIC-427-22I	641	2.52	6	7	6	0.63	1.5941	0.6889	1.0982
2025	Mined	HIC-427-22J-641	641	0.08	6	7	6	0.63	0.0508	0.6889	0.0350
2025	Mined	HIC-427-50	534	0.15	6	7	7	0.67	0.1018	0.6889	0.0701
2025	Mined	MYA-330-10	643	1.10	7	4	4	0.50	0.5508	0.6889	0.3794
2025	Mined	MYA-330-5D	513	0.07	8	7	7	0.73	0.0487	0.6889	0.0335
2025	Mined	MYA-330-5X	513	0.01	8	7	7	0.73	0.0097	0.6889	0.0067
2025	Mined	MYA-330-5X-514	514	0.03	8	7	7	0.73	0.0185	0.6889	0.0128
2025	Mined	MYA-330-6B	513	0.04	5	4	4	0.43	0.0166	0.6889	0.0114
2025	Mined	MYA-330-6B-514	514	0.03	5	4	4	0.43	0.0141	0.6889	0.0097
2025	Mined	MYA-330-6C	643	0.34	5	4	4	0.43	0.1460	0.6889	0.1006
2025	Mined	MYA-330-7	647	2.47	8	7	8	0.77	1.8912	0.6889	1.3028
2025	Mined	MYA-330-8	641	7.59	8	6	8	0.73	5.5637	0.6889	3.8328
2025	Mined	MYA-330-9	647	4.41	8	7	8	0.77	3.3841	0.6889	2.3313

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2025	Mined	OAK-428-38	647	4.36	6	7	4	0.57	2.4687	0.6889	1.7007
2025	Mined	OAK-428-40B	647	0.60	8	8	8	0.80	0.4771	0.6889	0.3287
2025	Mined	OAK-428-43A	647	0.26	8	8	7	0.77	0.1965	0.6889	0.1354
2025	Mined	OAK-428-43B	641	1.06	8	8	7	0.77	0.8092	0.6889	0.5575
2025	Mined	OAK-428-43D	641	2.61	8	8	7	0.77	2.0045	0.6889	1.3809
2025	Mined	OSW-I-107E-211	211	0.03	5	5	6	0.53	0.0174	0.6889	0.0120
2025	Mined	OSW-I-107E-211A	641	0.03	5	5	6	0.53	0.0149	0.6889	0.0103
2025	Mined	OSW-I-107E-427	211	0.09	5	5	6	0.53	0.0494	0.6889	0.0340
2025	Mined	OSW-I-107E-427B	641	0.03	5	5	6	0.53	0.0154	0.6889	0.0106
2025	Mined	OSW-I-107F	211	0.11	5	2	3	0.33	0.0373	0.6889	0.0257
2025	Mined	OSW-I-2217	641	0.04	7	2	1	0.33	0.0149	0.6889	0.0102
2025	Mined	OSW-I-501C-211	211	0.22	6	5	5	0.53	0.1174	0.6889	0.0808
2025	Mined	OSW-I-501C	514	0.10	6	5	5	0.53	0.0555	0.6889	0.0382
2026	Disturbed	29-10B	641	0.82	6	7	6	0.63	0.5186	0.6591	0.3418
2026	Mined	29-7A	534	0.29	7	6	6	0.63	0.1820	0.6591	0.1199
2026	Mined	29-7B	641	0.63	7	6	6	0.63	0.3991	0.6591	0.2631
2026	Mined	29-7G	643	0.77	7	6	6	0.63	0.4867	0.6591	0.3208
2026	Mined	29-7H	647	3.22	7	6	6	0.63	2.0364	0.6591	1.3422
2026	Mined	BRA-324-19	641	8.12	4	7	7	0.60	4.8716	0.6591	3.2109
2026	Mined	BRA-325-26A	647	1.55	7	6	6	0.63	0.9801	0.6591	0.6460
2026	Mined	BRA-325-26B	213	2.49	7	6	6	0.63	1.5772	0.6591	1.0395
2026	Mined	BRA-325-26X	513	0.03	7	6	6	0.63	0.0170	0.6591	0.0112
2026	Mined	BRA-325-28	514	0.01	8	7	7	0.73	0.0054	0.6591	0.0035
2026	Mined	BRA-325-28X	514	0.19	8	7	7	0.73	0.1428	0.6591	0.0941
2026	Mined	BRA-325-5X	513	0.02	7	7	7	0.70	0.0165	0.6591	0.0109
2026	Mined	BRA-430-1A	647	3.99	8	7	6	0.70	2.7937	0.6591	1.8413
2026	Mined	BRA-430-1B	641	0.25	8	7	6	0.70	0.1716	0.6591	0.1131
2026	Mined	BRA-430-1C	641	10.69	8	7	6	0.70	7.4829	0.6591	4.9320
2026	Mined	BRU-323-10A	641	2.66	6	6	5	0.57	1.5090	0.6591	0.9946
2026	Mined	BRU-323-10C	211	0.16	6	6	5	0.57	0.0894	0.6591	0.0589
2026	Mined	BRU-323-16B	641	2.60	6	7	5	0.60	1.5571	0.6591	1.0263
2026	Mined	BRU-323-17A	641	1.69	6	6	5	0.57	0.9564	0.6591	0.6303
2026	Mined	BRU-323-17C	211	1.39	6	6	5	0.57	0.7856	0.6591	0.5178
2026	Mined	BRU-323-27	641	3.07	6	7	6	0.63	1.9466	0.6591	1.2830
2026	Mined	BRU-323-28A	647	0.20	6	6	6	0.60	0.1223	0.6591	0.0806

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2026	Mined	BRU-323-28B	647	2.17	6	6	6	0.60	1.3016	0.6591	0.8579
2026	Mined	BRU-323-28F	211	0.62	6	6	6	0.60	0.3725	0.6591	0.2455
2026	Mined	BRU-323-29A	641	3.55	6	7	7	0.67	2.3660	0.6591	1.5595
2026	Mined	BRU-323-29B	641	12.47	6	7	7	0.67	8.3133	0.6591	5.4793
2026	Mined	BRU-323-29C	647	0.79	6	7	7	0.67	0.5237	0.6591	0.3452
2026	Mined	BRU-323-50	534	0.14	6	7	7	0.67	0.0942	0.6591	0.0621
2026	Mined	BRU-323-6C	647	4.07	6	7	7	0.67	2.7149	0.6591	1.7894
2026	Mined	BRU-323-6D	641	0.21	6	7	7	0.67	0.1432	0.6591	0.0944
2026	Mined	BRU-323-6E	647	1.54	6	7	7	0.67	1.0288	0.6591	0.6781
2026	Mined	BRU-323-6G	641	1.40	6	7	7	0.67	0.9342	0.6591	0.6158
2026	Mined	BRU-324-14B	211	0.54	5	5	4	0.47	0.2510	0.6591	0.1655
2026	Mined	BRU-324-14C	641	0.45	5	5	4	0.47	0.2095	0.6591	0.1381
2026	Mined	BRU-324-14X	534	0.21	5	5	4	0.47	0.0996	0.6591	0.0656
2026	Disturbed	BRU-326-47	213	0.00	8	5	6	0.63	0.0012	0.6591	0.0008
2026	Mined	BRU-326-52	213	0.04	7	7	7	0.70	0.0262	0.6591	0.0173
2026	Mined	BRU-419-1	641	0.68	7	7	8	0.73	0.4955	0.6591	0.3266
2026	Mined	HC-327-10A	641	14.91	6	7	6	0.63	9.4427	0.6591	6.2237
2026	Disturbed	HC-327-13A	647	1.87	4	6	6	0.53	0.9983	0.6591	0.6580
2026	Disturbed	HC-327-13B	643	1.83	4	6	6	0.53	0.9774	0.6591	0.6442
2026	Mined	HC-327-13B-514	514	0.01	4	6	6	0.53	0.0072	0.6591	0.0047
2026	Mined	HC-328-13A	647	1.16	4	7	6	0.57	0.6589	0.6591	0.4343
2026	Disturbed	HC-328-13B	643	1.38	4	7	6	0.57	0.7820	0.6591	0.5154
2026	Mined	HC-328-13X	534	0.24	4	7	6	0.57	0.1346	0.6591	0.0887
2026	Disturbed	HC-328-14A	647	0.37	5	6	5	0.53	0.1991	0.6591	0.1312
2026	Disturbed	HC-328-14B	641	2.04	5	6	5	0.53	1.0874	0.6591	0.7167
2026	Mined	HIC-427-21X	513	0.00	6	7	7	0.67	0.0016	0.6591	0.0011
2026	Disturbed	HIC-427-22E	647	0.68	6	7	6	0.63	0.4296	0.6591	0.2832
2026	Mined	MYA-330-1	643	0.98	4	4	4	0.40	0.3927	0.6591	0.2588
2026	Mined	MYA-330-12	643	0.34	7	2	3	0.40	0.1365	0.6591	0.0900
2026	Mined	MYA-330-12X	513	0.12	7	2	3	0.40	0.0478	0.6591	0.0315
2026	Mined	MYA-330-1X	513	0.08	4	4	4	0.40	0.0334	0.6591	0.0220
2026	Mined	MYA-330-1X-514	514	0.02	4	4	4	0.40	0.0092	0.6591	0.0061
2026	Mined	MYA-330-2	643	0.79	4	4	4	0.40	0.3180	0.6591	0.2096
2026	Mined	MYA-330-2X	513	0.03	4	4	4	0.40	0.0134	0.6591	0.0088
2026	Mined	MYA-330-2X-514	514	0.04	4	4	4	0.40	0.0159	0.6591	0.0105

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2026	Mined	MYA-330-4A	643	3.43	5	4	4	0.43	1.4881	0.6591	0.9808
2026	Mined	MYA-330-4B	513	0.01	5	4	4	0.43	0.0041	0.6591	0.0027
2026	Mined	MYA-330-4B-514	514	0.29	5	4	4	0.43	0.1249	0.6591	0.0823
2026	Mined	MYA-330-5C-514	514	0.30	8	7	7	0.73	0.2207	0.6591	0.1455
2026	Mined	MYA-330-5D	513	0.26	8	7	7	0.73	0.1881	0.6591	0.1240
2026	Mined	MYA-330-5X	513	0.02	8	7	7	0.73	0.0133	0.6591	0.0088
2026	Mined	MYA-330-6A	643	0.03	5	4	4	0.43	0.0125	0.6591	0.0082
2026	Mined	MYA-330-6B	513	0.03	5	4	4	0.43	0.0138	0.6591	0.0091
2026	Mined	MYA-330-6B-514	514	0.09	5	4	4	0.43	0.0399	0.6591	0.0263
2026	Mined	MYA-330-6C	643	0.03	5	4	4	0.43	0.0114	0.6591	0.0075
2026	Mined	OAK-428-17	641	0.44	8	6	6	0.67	0.2954	0.6591	0.1947
2026	Mined	OAK-428-18	643	0.41	8	8	9	0.83	0.3413	0.6591	0.2249
2026	Mined	OAK-428-18-321	321	0.59	8	8	9	0.83	0.4922	0.6591	0.3244
2026	Disturbed	OAK-428-19	641	0.99	8	9	8	0.83	0.8265	0.6591	0.5447
2026	Mined	OAK-428-21B	647	3.33	7	6	6	0.63	2.1109	0.6591	1.3913
2026	Mined	OAK-428-21C	641	2.19	7	6	6	0.63	1.3885	0.6591	0.9151
2026	Mined	OAK-428-22A	641	0.60	6	7	5	0.60	0.3577	0.6591	0.2357
2026	Mined	OAK-428-22F	641	0.51	6	7	5	0.60	0.3043	0.6591	0.2006
2026	Disturbed	OAK-428-30	321	0.00	9	9	9	0.90	0.0005	0.6591	0.0003
2026	Disturbed	OSW-I-1343	213	0.11	7	4	4	0.50	0.0565	0.6591	0.0372
2026	Disturbed	OSW-I-2034	213	0.00	7	4	3	0.47	0.0001	0.6591	0.0001
2026	Mined	OSW-I-2035-514	514	0.01	7	4	2	0.43	0.0022	0.6591	0.0015
2026	Mined	OSW-I-301G-321	321	0.11	8	6	8	0.73	0.0800	0.6591	0.0527
2026	Disturbed	OSW-I-301K	321	0.19	7	6	9	0.73	0.1373	0.6591	0.0905
2026	Mined	OSW-I-426-213	213	0.00	7	4	4	0.50	0.0014	0.6591	0.0009
2026	Disturbed	OSW-I-506A-211	211	0.19	7	6	7	0.67	0.1283	0.6591	0.0846
2026	Mined	OSW-I-506A-321	211	0.06	7	6	7	0.67	0.0392	0.6591	0.0259
2026	Mined	OSW-I-506A-321A	321	0.20	7	6	7	0.67	0.1348	0.6591	0.0889
2026	Mined	OSW-I-506A-514	514	0.00	7	6	7	0.67	0.0015	0.6591	0.0010
2026	Disturbed	OSW-I-88A	213	0.23	7	4	4	0.50	0.1137	0.6591	0.0750
2027	Mined	BRA-419-13A	641	1.34	7	7	5	0.63	0.8481	0.6303	0.5345
2027	Mined	BRA-419-13B	211	0.52	7	7	5	0.63	0.3288	0.6303	0.2072
2027	Mined	BRA-419-16X	513	0.01	7	7	6	0.67	0.0035	0.6303	0.0022
2027	Mined	BRA-419-9A	641	2.62	8	8	7	0.77	2.0100	0.6303	1.2669
2027	Mined	BRA-419-9C	647	1.82	8	8	7	0.77	1.3916	0.6303	0.8771

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2027	Mined	BRA-430-1A	647	7.01	8	7	6	0.70	4.9058	0.6303	3.0921
2027	Mined	BRA-430-1B	641	6.09	8	7	6	0.70	4.2645	0.6303	2.6879
2027	Mined	BRA-430-1C	641	0.22	8	7	6	0.70	0.1566	0.6303	0.0987
2027	Mined	BRA-430-37E	647	0.64	8	8	9	0.83	0.5312	0.6303	0.3348
2027	Mined	BRA-430-39A	647	1.17	8	7	6	0.70	0.8178	0.6303	0.5155
2027	Mined	BRA-430-39B	641	0.22	8	7	6	0.70	0.1550	0.6303	0.0977
2027	Disturbed	BRU-311-4A-647	647	0.21	9	9	8	0.87	0.1830	0.6303	0.1154
2027	Mined	BRU-311-9A	647	4.51	8	7	8	0.77	3.4561	0.6303	2.1784
2027	Mined	BRU-314-2A	514	0.00	8	7	7	0.73	0.0000	0.6303	0.0000
2027	Mined	BRU-314-2D	641	0.44	8	7	7	0.73	0.3196	0.6303	0.2014
2027	Mined	BRU-314-2F-I	641	0.06	8	7	7	0.73	0.0424	0.6303	0.0268
2027	Mined	BRU-323-24	641	0.46	7	6	6	0.63	0.2919	0.6303	0.1840
2027	Mined	BRU-323-24C-641	641	0.02	7	3	3	0.43	0.0087	0.6303	0.0055
2027	Mined	BRU-323-25	641	0.28	7	5	6	0.60	0.1707	0.6303	0.1076
2027	Mined	BRU-323-31A	213	1.07	8	7	7	0.73	0.7841	0.6303	0.4942
2027	Mined	BRU-323-31B	641	1.40	8	7	7	0.73	1.0271	0.6303	0.6474
2027	Mined	BRU-323-31C-641	641	0.00	8	7	7	0.73	0.0003	0.6303	0.0002
2027	Mined	BRU-323-31D-641	641	0.00	8	7	7	0.73	0.0006	0.6303	0.0004
2027	Mined	BRU-323-32	641	0.84	7	6	6	0.63	0.5330	0.6303	0.3360
2027	Mined	BRU-323-34B	641	0.70	7	3	3	0.43	0.3013	0.6303	0.1899
2027	Mined	BRU-323-39B	641	0.01	8	7	8	0.77	0.0075	0.6303	0.0047
2027	Mined	BRU-323-43B	641	0.05	8	7	7	0.73	0.0390	0.6303	0.0246
2027	Mined	BRU-323-50	534	0.07	6	7	7	0.67	0.0442	0.6303	0.0278
2027	Mined	BRU-323-6B	641	0.80	6	7	7	0.67	0.5326	0.6303	0.3357
2027	Mined	BRU-323-6C	647	2.84	6	7	7	0.67	1.8964	0.6303	1.1953
2027	Mined	BRU-323-6D	641	0.50	6	7	7	0.67	0.3348	0.6303	0.2111
2027	Mined	BRU-323-6E	647	0.10	6	7	7	0.67	0.0642	0.6303	0.0404
2027	Mined	BRU-323-6F	641	0.57	6	7	7	0.67	0.3824	0.6303	0.2410
2027	Mined	BRU-326-11A	641	0.31	7	6	6	0.63	0.1952	0.6303	0.1230
2027	Mined	BRU-326-12A	641	0.11	7	5	6	0.60	0.0633	0.6303	0.0399
2027	Mined	BRU-326-4B	641	0.40	8	6	6	0.67	0.2653	0.6303	0.1672
2027	Mined	BRU-326-5	643	0.79	8	6	6	0.67	0.5238	0.6303	0.3301
2027	Mined	BRU-326-6B	641	0.42	7	7	5	0.63	0.2632	0.6303	0.1659
2027	Mined	HC-327-10A	641	3.54	6	7	6	0.63	2.2449	0.6303	1.4150
2027	Mined	HC-327-10B	647	1.49	6	7	6	0.63	0.9444	0.6303	0.5952

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2027	Disturbed	HC-327-13A	647	0.57	4	6	6	0.53	0.3053	0.6303	0.1924
2027	Disturbed	HC-327-13B	643	3.54	4	6	6	0.53	1.8856	0.6303	1.1885
2027	Disturbed	HC-327-14	641	1.69	4	7	7	0.60	1.0115	0.6303	0.6375
2027	Mined	HC-327-15	647	0.78	6	7	6	0.63	0.4916	0.6303	0.3099
2027	Disturbed	HC-327-16	641	11.07	5	7	6	0.60	6.6439	0.6303	4.1876
2027	Disturbed	HIC-427-1A-212	212	1.04	3	5	5	0.43	0.4491	0.6303	0.2830
2027	Mined	MYA-330-6A	643	0.42	5	4	4	0.43	0.1829	0.6303	0.1153
2027	Mined	MYA-330-6B	513	0.08	5	4	4	0.43	0.0331	0.6303	0.0208
2027	Mined	MYA-330-6B-514	514	0.12	5	4	4	0.43	0.0516	0.6303	0.0325
2027	Mined	MYA-330-6C	643	0.56	5	4	4	0.43	0.2439	0.6303	0.1537
2027	Mined	MYA-330-7	647	0.73	8	7	8	0.77	0.5614	0.6303	0.3538
2027	Mined	MYA-330-8	641	2.48	8	6	8	0.73	1.8194	0.6303	1.1467
2027	Mined	MYA-330-9	647	0.93	8	7	8	0.77	0.7147	0.6303	0.4505
2027	Mined	OAK-421-30	641	0.00	9	8	8	0.83	0.0017	0.6303	0.0011
2027	Mined	OAK-421-35D	321	0.07	8	8	7	0.77	0.0499	0.6303	0.0315
2027	Mined	OAK-421-35D-513	513	0.01	8	8	7	0.77	0.0038	0.6303	0.0024
2027	Mined	OAK-421-35D-514	514	0.01	8	8	7	0.77	0.0069	0.6303	0.0043
2027	Mined	OAK-421-37	641	0.15	9	8	8	0.83	0.1244	0.6303	0.0784
2027	Mined	OAK-422-14	211	1.64	4	2	2	0.27	0.4376	0.6303	0.2758
2027	Mined	OAK-422-14X	513	0.08	4	2	2	0.27	0.0217	0.6303	0.0137
2027	Mined	OAK-422-18B	211	0.08	5	6	6	0.57	0.0459	0.6303	0.0289
2027	Mined	OAK-422-19B	211	0.96	5	6	5	0.53	0.5115	0.6303	0.3224
2027	Mined	OAK-422-28	647	0.08	5	6	5	0.53	0.0440	0.6303	0.0277
2027	Mined	OAK-428-16B	641	0.59	7	5	6	0.60	0.3528	0.6303	0.2224
2027	Mined	OAK-428-22A	641	0.03	6	7	5	0.60	0.0184	0.6303	0.0116
2027	Mined	OAK-428-22F	641	0.30	6	7	5	0.60	0.1787	0.6303	0.1126
2027	Mined	OAK-428-4	641	1.01	9	7	8	0.80	0.8109	0.6303	0.5111
2027	Mined	OAK-428-6	641	0.79	9	8	8	0.83	0.6585	0.6303	0.4151
2027	Mined	OAK-428-8A	641	4.34	8	7	6	0.70	3.0400	0.6303	1.9161
2027	Mined	OAK-428-8B	647	0.46	8	7	6	0.70	0.3232	0.6303	0.2037
2027	Mined	OAK-428-8B-321	321	0.25	8	7	6	0.70	0.1726	0.6303	0.1088
2027	Mined	OSW-I-112B	514	1.19	6	5	4	0.50	0.5948	0.6303	0.3749
2027	Disturbed	OSW-I-113A-411	647	0.02	8	7	9	0.80	0.0127	0.6303	0.0080
2027	Mined	OSW-I-2212C	641	0.25	8	7	7	0.73	0.1834	0.6303	0.1156
2027	Mined	OSW-I-280	213	0.05	7	4	4	0.50	0.0272	0.6303	0.0171

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2027	Mined	OSW-I-301D	321	0.06	9	6	8	0.77	0.0458	0.6303	0.0289
2027	Mined	OSW-I-301G-321	321	0.15	8	6	8	0.73	0.1098	0.6303	0.0692
2027	Mined	OSW-I-301M-321	321	0.10	9	6	8	0.77	0.0735	0.6303	0.0463
2027	Mined	OSW-I-301M-425A	321	0.00	9	6	8	0.77	0.0008	0.6303	0.0005
2027	Mined	OSW-I-394A	213	0.15	7	4	4	0.50	0.0773	0.6303	0.0487
2027	Mined	OSW-I-394C	514	0.03	7	4	4	0.50	0.0174	0.6303	0.0110
2027	Mined	OSW-I-426-213	213	0.01	7	4	4	0.50	0.0064	0.6303	0.0040
2027	Mined	OSW-I-426-514	514	0.01	7	4	4	0.50	0.0059	0.6303	0.0037
2027	Mined	OSW-I-426-641	641	0.00	7	4	4	0.50	0.0000	0.6303	0.0000
2027	Mined	OSW-I-81A	211	0.02	7	4	4	0.50	0.0086	0.6303	0.0054
2027	Mined	OSW-I-81B	213	0.56	7	4	4	0.50	0.2805	0.6303	0.1768
2028	Mined	BRA-419-10	641	1.26	6	5	5	0.53	0.6713	0.6022	0.4042
2028	Mined	BRA-419-13A	641	1.07	7	7	5	0.63	0.6778	0.6022	0.4081
2028	Mined	BRA-419-5	641	4.77	4	6	5	0.50	2.3838	0.6022	1.4355
2028	Mined	BRA-419-5X	534	0.27	4	6	5	0.50	0.1360	0.6022	0.0819
2028	Mined	BRA-419-9A	641	9.44	8	8	7	0.77	7.2398	0.6022	4.3598
2028	Mined	BRA-419-9B	647	16.47	8	8	7	0.77	12.6244	0.6022	7.6024
2028	Mined	BRA-419-9C	647	0.03	8	8	7	0.77	0.0249	0.6022	0.0150
2028	Disturbed	BRU-314-21	641	2.71	8	9	7	0.80	2.1675	0.6022	1.3052
2028	Disturbed	BRU-314-40	647	1.55	6	8	7	0.70	1.0830	0.6022	0.6522
2028	Disturbed	BRU-314-40C	641	3.83	6	8	7	0.70	2.6780	0.6022	1.6127
2028	Mined	BRU-314-40E	647	2.16	6	8	7	0.70	1.5125	0.6022	0.9108
2028	Mined	BRU-323-12A	641	5.37	7	7	6	0.67	3.5783	0.6022	2.1549
2028	Mined	BRU-323-12B	647	4.00	7	7	6	0.67	2.6664	0.6022	1.6057
2028	Mined	BRU-323-15A	641	1.81	7	7	7	0.70	1.2681	0.6022	0.7637
2028	Mined	BRU-323-15C	211	1.21	7	7	7	0.70	0.8467	0.6022	0.5099
2028	Mined	BRU-323-19	641	0.22	6	6	5	0.57	0.1259	0.6022	0.0758
2028	Mined	BRU-323-20A	641	1.18	7	5	6	0.60	0.7100	0.6022	0.4276
2028	Mined	BRU-323-20B	211	0.29	7	5	6	0.60	0.1718	0.6022	0.1035
2028	Mined	BRU-323-23	641	0.81	7	7	7	0.70	0.5704	0.6022	0.3435
2028	Mined	BRU-323-26-213	213	0.08	7	6	6	0.63	0.0493	0.6022	0.0297
2028	Mined	BRU-323-26-641	641	1.93	7	6	6	0.63	1.2242	0.6022	0.7372
2028	Mined	BRU-323-33A	641	0.47	7	5	5	0.57	0.2654	0.6022	0.1598
2028	Mined	BRU-323-33C	213	0.00	7	5	5	0.57	0.0005	0.6022	0.0003
2028	Mined	BRU-323-3A	647	3.50	7	7	5	0.63	2.2188	0.6022	1.3361

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2028	Mined	BRU-323-3C	211	1.69	7	7	5	0.63	1.0677	0.6022	0.6430
2028	Mined	BRU-323-41B	641	3.36	8	7	6	0.70	2.3522	0.6022	1.4165
2028	Mined	BRU-323-41C-514	514	0.00	8	7	6	0.70	0.0000	0.6022	0.0000
2028	Mined	BRU-323-41C-641	641	0.00	8	7	6	0.70	0.0023	0.6022	0.0014
2028	Mined	BRU-323-42A	211	1.11	7	7	6	0.67	0.7405	0.6022	0.4459
2028	Mined	BRU-323-42B	211	0.17	7	7	6	0.67	0.1145	0.6022	0.0690
2028	Mined	BRU-323-42C	641	0.11	7	7	6	0.67	0.0727	0.6022	0.0438
2028	Mined	BRU-323-42F-211	211	0.00	7	7	6	0.67	0.0001	0.6022	0.0001
2028	Mined	BRU-323-42X-211	211	0.01	7	7	6	0.67	0.0055	0.6022	0.0033
2028	Mined	BRU-323-48	211	0.00	8	4	2	0.47	0.0001	0.6022	0.0000
2028	Mined	BRU-324-15B	211	0.05	7	4	5	0.53	0.0279	0.6022	0.0168
2028	Mined	BRU-324-21C	211	0.00	7	4	4	0.50	0.0000	0.6022	0.0000
2028	Mined	BRU-324-40A	213	0.02	8	4	4	0.53	0.0125	0.6022	0.0075
2028	Mined	BRU-324-40X-213	213	0.03	8	3	3	0.47	0.0152	0.6022	0.0092
2028	Mined	BRU-324-44B	213	0.14	7	4	4	0.50	0.0696	0.6022	0.0419
2028	Mined	BRU-324-44X-213	213	0.69	8	3	4	0.50	0.3427	0.6022	0.2064
2028	Mined	BRU-324-44X-514	514	0.02	8	3	4	0.50	0.0105	0.6022	0.0063
2028	Mined	BRU-324-45	213	0.03	8	3	3	0.47	0.0151	0.6022	0.0091
2028	Disturbed	BRU-326-16	647	1.59	9	7	8	0.80	1.2717	0.6022	0.7658
2028	Mined	BRU-326-21A	641	0.37	8	8	7	0.77	0.2866	0.6022	0.1726
2028	Mined	BRU-326-21B	647	1.75	8	8	7	0.77	1.3424	0.6022	0.8084
2028	Mined	BRU-326-34A	641	0.70	8	8	7	0.77	0.5393	0.6022	0.3247
2028	Mined	HC-326-29A	647	2.48	6	7	6	0.63	1.5682	0.6022	0.9444
2028	Mined	HC-326-29B	211	0.90	6	7	6	0.63	0.5685	0.6022	0.3424
2028	Mined	HC-326-29C	329	0.27	6	7	6	0.63	0.1696	0.6022	0.1021
2028	Mined	HC-326-29D	647	3.88	6	7	6	0.63	2.4602	0.6022	1.4816
2028	Mined	HC-326-29X	534	0.20	6	7	6	0.63	0.1247	0.6022	0.0751
2028	Mined	HC-326-30A	641	1.94	6	8	7	0.70	1.3577	0.6022	0.8176
2028	Mined	HC-326-30B	647	0.71	6	8	7	0.70	0.4961	0.6022	0.2987
2028	Mined	OAK-421-35A	641	0.96	8	8	7	0.77	0.7339	0.6022	0.4420
2028	Mined	OAK-421-35D	321	0.10	8	8	7	0.77	0.0802	0.6022	0.0483
2028	Mined	OAK-422-14	211	0.02	4	2	2	0.27	0.0043	0.6022	0.0026
2028	Mined	OAK-422-16	211	0.58	4	2	2	0.27	0.1548	0.6022	0.0932
2028	Mined	OAK-422-17B	647	0.23	5	7	5	0.57	0.1316	0.6022	0.0792
2028	Mined	OAK-422-18X	513	0.10	5	6	6	0.57	0.0552	0.6022	0.0332

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2028	Mined	OAK-422-19A	647	0.06	5	6	5	0.53	0.0342	0.6022	0.0206
2028	Mined	OAK-422-19B	211	1.32	5	6	5	0.53	0.7046	0.6022	0.4243
2028	Mined	OAK-422-19B-647	647	0.00	5	6	5	0.53	0.0000	0.6022	0.0000
2028	Mined	OAK-422-19C	647	8.94	5	6	5	0.53	4.7677	0.6022	2.8711
2028	Mined	OAK-422-19X-513	513	0.13	5	6	5	0.53	0.0675	0.6022	0.0407
2028	Mined	OAK-422-19X-534	534	0.21	5	6	5	0.53	0.1125	0.6022	0.0678
2028	Mined	OAK-422-26A	641	0.12	7	7	4	0.60	0.0701	0.6022	0.0422
2028	Mined	OAK-422-26C	641	0.21	7	7	4	0.60	0.1261	0.6022	0.0759
2028	Mined	OAK-422-26D	647	0.19	7	7	4	0.60	0.1147	0.6022	0.0691
2028	Mined	OAK-422-26E	647	0.30	7	7	4	0.60	0.1817	0.6022	0.1094
2028	Mined	OAK-422-28	647	0.31	5	6	5	0.53	0.1662	0.6022	0.1001
2028	Mined	OSW-I-108B	647	0.00	7	4	6	0.57	0.0000	0.6022	0.0000
2028	Mined	OSW-I-11	213	0.01	7	4	4	0.50	0.0061	0.6022	0.0037
2028	Mined	OSW-I-13	213	0.02	7	4	2	0.43	0.0105	0.6022	0.0063
2028	Mined	OSW-I-13-514	514	0.00	7	4	2	0.43	0.0002	0.6022	0.0001
2028	Mined	OSW-I-2010	213	0.00	7	4	2	0.43	0.0018	0.6022	0.0011
2028	Mined	OSW-I-2066	641	0.22	8	3	3	0.47	0.1016	0.6022	0.0612
2028	Mined	OSW-I-2214	211	0.00	7	4	3	0.47	0.0002	0.6022	0.0001
2028	Mined	OSW-I-254B	641	0.00	7	4	4	0.50	0.0018	0.6022	0.0011
2028	Mined	OSW-I-301I-647	647	0.01	5	5	8	0.60	0.0071	0.6022	0.0043
2028	Mined	OSW-I-81A	211	0.00	7	4	4	0.50	0.0017	0.6022	0.0010
2028	Mined	OSW-I-81B	213	0.27	7	4	4	0.50	0.1349	0.6022	0.0812
2028	Mined	OSW-I-84A	213	0.11	7	4	4	0.50	0.0549	0.6022	0.0331
2028	Mined	OSW-I-9A	211	0.02	7	4	2	0.43	0.0083	0.6022	0.0050
2028	Mined	OSW-I-9B	213	0.30	7	4	2	0.43	0.1310	0.6022	0.0789
2028	Mined	OSW-I-9C	641	0.00	7	4	2	0.43	0.0011	0.6022	0.0007
2029	Disturbed	16-11A	643	0.18	5	5	5	0.50	0.0892	0.5750	0.0513
2029	Disturbed	16-11C	211	0.17	5	5	5	0.50	0.0872	0.5750	0.0502
2029	Disturbed	16-17	211	0.08	4	3	3	0.33	0.0257	0.5750	0.0148
2029	Disturbed	16-21	211	1.31	4	3	3	0.33	0.4375	0.5750	0.2515
2029	Mined	17-7A	211	0.19	7	7	6	0.67	0.1272	0.5750	0.0732
2029	Mined	17-7B	641	0.94	7	7	6	0.67	0.6281	0.5750	0.3611
2029	Mined	20-12G	641	0.00	4	7	6	0.57	0.0002	0.5750	0.0002
2029	Mined	20-12X	513	0.00	4	7	6	0.57	0.0003	0.5750	0.0002
2029	Mined	20-13A	211	0.70	4	5	4	0.43	0.3038	0.5750	0.1747

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2029	Mined	20-13B	641	1.73	4	5	4	0.43	0.7485	0.5750	0.4304
2029	Mined	20-13C	641	0.41	4	5	4	0.43	0.1786	0.5750	0.1027
2029	Mined	20-13G	641	0.07	4	5	4	0.43	0.0310	0.5750	0.0178
2029	Mined	20-13I	534	0.32	4	5	4	0.43	0.1372	0.5750	0.0789
2029	Mined	8-2-534	534	0.01	7	6	5	0.60	0.0086	0.5750	0.0049
2029	Disturbed	BRA-431-7A	641	2.14	6	7	6	0.63	1.3581	0.5750	0.7809
2029	Mined	BRU-314-30	641	1.24	7	7	7	0.70	0.8665	0.5750	0.4983
2029	Mined	BRU-323-17A	641	0.04	6	6	5	0.57	0.0203	0.5750	0.0117
2029	Mined	BRU-323-18	213	2.26	6	5	5	0.53	1.2065	0.5750	0.6937
2029	Mined	BRU-323-19	641	2.02	6	6	5	0.57	1.1469	0.5750	0.6595
2029	Mined	BRU-323-21	643	1.78	7	7	7	0.70	1.2467	0.5750	0.7168
2029	Mined	BRU-323-21X	534	0.33	7	7	7	0.70	0.2279	0.5750	0.1311
2029	Mined	BRU-323-33A	641	0.33	7	5	5	0.57	0.1886	0.5750	0.1084
2029	Mined	BRU-323-33C	213	0.09	7	5	5	0.57	0.0535	0.5750	0.0308
2029	Mined	BRU-323-37	211	0.04	5	4	2	0.37	0.0136	0.5750	0.0078
2029	Mined	BRU-323-3A	647	1.22	7	7	5	0.63	0.7742	0.5750	0.4451
2029	Mined	BRU-323-42A	211	0.38	7	7	6	0.67	0.2507	0.5750	0.1442
2029	Mined	BRU-323-42B	211	1.19	7	7	6	0.67	0.7956	0.5750	0.4575
2029	Mined	BRU-323-42C	641	0.24	7	7	6	0.67	0.1625	0.5750	0.0934
2029	Mined	BRU-323-42D	641	1.19	7	7	6	0.67	0.7921	0.5750	0.4554
2029	Mined	BRU-323-42E	641	0.22	7	7	6	0.67	0.1498	0.5750	0.0861
2029	Mined	BRU-323-47A	213	0.00	8	3	2	0.43	0.0002	0.5750	0.0001
2029	Mined	BRU-323-47B	641	0.01	8	3	2	0.43	0.0057	0.5750	0.0033
2029	Mined	BRU-323-7A	641	7.45	7	7	7	0.70	5.2184	0.5750	3.0006
2029	Mined	BRU-323-7B	647	1.40	7	7	7	0.70	0.9767	0.5750	0.5616
2029	Mined	BRU-323-7D	641	1.16	7	7	7	0.70	0.8096	0.5750	0.4655
2029	Mined	BRU-324-1A	213	0.01	8	4	4	0.53	0.0058	0.5750	0.0033
2029	Mined	BRU-324-40X-213	213	0.00	8	3	3	0.47	0.0003	0.5750	0.0002
2029	Mined	BRU-324-44B	213	0.24	7	4	4	0.50	0.1185	0.5750	0.0681
2029	Mined	BRU-324-44X-213	213	0.18	8	3	4	0.50	0.0910	0.5750	0.0523
2029	Mined	BRU-324-44X-514	514	0.00	8	3	4	0.50	0.0021	0.5750	0.0012
2029	Mined	BRU-324-45	213	0.07	8	3	3	0.47	0.0331	0.5750	0.0190
2029	Disturbed	BRU-326-28	641	0.02	7	7	8	0.73	0.0131	0.5750	0.0075
2029	Disturbed	BRU-336-28A	641	1.05	8	7	7	0.73	0.7675	0.5750	0.4413
2029	Disturbed	BRU-336-3	641	0.68	5	6	6	0.57	0.3835	0.5750	0.2205

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2029	Disturbed	HC-326-29D	647	1.94	6	7	6	0.63	1.2286	0.5750	0.7065
2029	Mined	HC-326-29D	647	5.33	6	7	6	0.63	3.3732	0.5750	1.9396
2029	Disturbed	HC-326-30A	641	3.78	6	8	7	0.70	2.6428	0.5750	1.5196
2029	Disturbed	HC-326-30B	647	1.54	6	8	7	0.70	1.0751	0.5750	0.6182
2029	Disturbed	HC-326-31A	643	1.50	6	8	7	0.70	1.0526	0.5750	0.6053
2029	Disturbed	HC-326-31B	647	1.38	6	8	7	0.70	0.9657	0.5750	0.5553
2029	Mined	OAK-420-25	641	1.59	9	8	7	0.80	1.2750	0.5750	0.7331
2029	Mined	OAK-420-26	643	0.51	9	8	7	0.80	0.4115	0.5750	0.2366
2029	Mined	OAK-420-27A	641	4.80	8	8	8	0.80	3.8421	0.5750	2.2092
2029	Mined	OAK-420-30B	647	1.09	8	8	7	0.77	0.8376	0.5750	0.4816
2029	Mined	OAK-420-8	641	4.02	8	8	8	0.80	3.2188	0.5750	1.8508
2029	Mined	OAK-420-9D	641	0.32	8	8	7	0.77	0.2438	0.5750	0.1402
2029	Mined	OAK-420-9E	641	0.24	8	8	7	0.77	0.1873	0.5750	0.1077
2029	Mined	OAK-421-10B	641	3.81	8	7	7	0.73	2.7914	0.5750	1.6051
2029	Mined	OAK-421-10B-514	514	0.00	8	7	7	0.73	0.0004	0.5750	0.0002
2029	Mined	OAK-421-11B	641	7.35	8	8	8	0.80	5.8782	0.5750	3.3800
2029	Mined	OAK-421-14	641	4.71	8	8	8	0.80	3.7658	0.5750	2.1653
2029	Mined	OAK-421-14-211	211	0.64	8	8	8	0.80	0.5102	0.5750	0.2934
2029	Mined	OAK-421-15B	641	0.69	9	7	6	0.73	0.5073	0.5750	0.2917
2029	Mined	OAK-421-16A	641	8.50	9	7	7	0.77	6.5200	0.5750	3.7490
2029	Mined	OAK-421-16B	647	4.31	9	7	7	0.77	3.3047	0.5750	1.9002
2029	Mined	OAK-421-16B-321	321	0.16	9	7	7	0.77	0.1244	0.5750	0.0715
2029	Mined	OAK-421-21A	641	0.65	8	8	7	0.77	0.4958	0.5750	0.2851
2029	Mined	OAK-421-21B	641	0.23	8	8	7	0.77	0.1740	0.5750	0.1001
2029	Mined	OAK-421-21D-321	321	0.00	8	8	7	0.77	0.0005	0.5750	0.0003
2029	Mined	OAK-421-22A-321	321	0.15	8	8	8	0.80	0.1214	0.5750	0.0698
2029	Mined	OAK-421-22B	641	6.13	8	8	8	0.80	4.9018	0.5750	2.8185
2029	Mined	OAK-421-22C-514	514	0.00	8	8	8	0.80	0.0000	0.5750	0.0000
2029	Mined	OAK-421-23	641	4.43	8	8	8	0.80	3.5445	0.5750	2.0381
2029	Mined	OAK-421-23-514	514	0.00	8	8	8	0.80	0.0033	0.5750	0.0019
2029	Mined	OAK-421-30	641	2.24	9	8	8	0.83	1.8633	0.5750	1.0714
2029	Mined	OAK-421-35A	641	0.86	8	8	7	0.77	0.6560	0.5750	0.3772
2029	Mined	OAK-421-35B-514	514	0.00	8	8	7	0.77	0.0001	0.5750	0.0000
2029	Mined	OAK-421-35C	643	0.25	8	8	7	0.77	0.1899	0.5750	0.1092
2029	Mined	OAK-421-36A	641	0.45	9	6	6	0.70	0.3136	0.5750	0.1803

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2029	Mined	OAK-421-37	641	2.29	9	8	8	0.83	1.9073	0.5750	1.0967
2029	Disturbed	OAK-428-30	321	0.06	9	9	9	0.90	0.0547	0.5750	0.0314
2029	Mined	OAK-428-4	641	0.00	9	7	8	0.80	0.0001	0.5750	0.0000
2029	Mined	OSW-I-106C-211	213	0.03	6	6	7	0.63	0.0214	0.5750	0.0123
2029	Mined	OSW-I-106D-213	213	0.03	6	6	3	0.50	0.0130	0.5750	0.0075
2029	Mined	OSW-I-106D-641	641	0.01	6	6	3	0.50	0.0034	0.5750	0.0020
2029	Mined	OSW-I-2214	211	0.02	7	4	3	0.47	0.0096	0.5750	0.0055
2029	Mined	OSW-I-254A	211	0.00	7	4	4	0.50	0.0014	0.5750	0.0008
2029	Mined	OSW-I-26	213	0.04	7	4	3	0.47	0.0171	0.5750	0.0098
2029	Mined	OSW-I-301M-321	321	0.00	9	6	8	0.77	0.0016	0.5750	0.0009
2029	Mined	OSW-I-302G	321	0.23	9	6	8	0.77	0.1766	0.5750	0.1016
2029	Mined	OSW-I-302H	647	0.00	9	6	7	0.73	0.0026	0.5750	0.0015
2029	Disturbed	OSW-I-502G	211	0.01	5	6	4	0.50	0.0052	0.5750	0.0030
2029	Disturbed	OSW-I-508A-211	211	0.35	4	6	4	0.47	0.1611	0.5750	0.0926
2029	Mined	OSW-I-508A-211A	641	0.00	4	6	4	0.47	0.0002	0.5750	0.0001
2029	Disturbed	OSW-I-508A-213	213	0.05	4	6	4	0.47	0.0212	0.5750	0.0122
2029	Disturbed	OSW-I-510A	211	0.20	4	5	5	0.47	0.0926	0.5750	0.0533
2029	Mined	OSW-I-510A-514	514	0.00	4	5	5	0.47	0.0000	0.5750	0.0000
2029	Disturbed	OSW-I-512A	211	0.05	5	6	6	0.57	0.0289	0.5750	0.0166
2029	Disturbed	OSW-I-515B-2-213	213	0.05	7	6	6	0.63	0.0328	0.5750	0.0189
2029	Disturbed	OSW-I-515B-2-514	514	0.02	7	6	6	0.63	0.0109	0.5750	0.0062
2029	Disturbed	OSW-I-518B	514	0.64	6	6	6	0.60	0.3850	0.5750	0.2214
2029	Disturbed	WFHC-319-2A	211	0.96	5	8	7	0.67	0.6407	0.5750	0.3684
2029	Mined	WFHC-319-2D	211	0.40	5	8	7	0.67	0.2636	0.5750	0.1516
2029	Disturbed	WFHC-319-4	211	0.05	7	6	8	0.70	0.0384	0.5750	0.0221
2030	Disturbed	17-7B	641	2.50	7	7	6	0.67	1.6642	0.5486	0.9130
2030	Mined	20-2A	641	2.56	5	6	5	0.53	1.3643	0.5486	0.7484
2030	Mined	20-2B	641	0.11	5	6	5	0.53	0.0592	0.5486	0.0325
2030	Mined	8-2	643	3.47	7	6	5	0.60	2.0850	0.5486	1.1438
2030	Mined	8-2-534	534	0.09	7	6	5	0.60	0.0510	0.5486	0.0280
2030	Disturbed	BRA-431-10A	641	0.07	6	5	6	0.57	0.0388	0.5486	0.0213
2030	Disturbed	BRA-431-50-211	211	0.75	6	7	6	0.63	0.4761	0.5486	0.2612
2030	Disturbed	BRA-431-50-513	513	0.14	6	7	6	0.63	0.0869	0.5486	0.0477
2030	Disturbed	BRA-431-51	211	0.41	6	7	6	0.63	0.2586	0.5486	0.1419
2030	Disturbed	BRA-431-57-643	643	0.21	5	5	4	0.47	0.0980	0.5486	0.0538

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2030	Disturbed	BRA-431-59-211	211	0.01	6	7	6	0.63	0.0035	0.5486	0.0019
2030	Disturbed	BRA-431-9A	641	0.16	6	6	6	0.60	0.0945	0.5486	0.0518
2030	Disturbed	BRA-431-9X	513	0.01	6	6	6	0.60	0.0050	0.5486	0.0027
2030	Disturbed	OAK-405-3A	641	3.68	6	5	6	0.57	2.0859	0.5486	1.1443
2030	Mined	OAK-405-3B	534	0.22	6	5	6	0.57	0.1262	0.5486	0.0692
2030	Disturbed	OAK-405-3C	513	0.06	6	5	6	0.57	0.0313	0.5486	0.0172
2030	Disturbed	OAK-405-3D	647	1.47	6	5	6	0.57	0.8304	0.5486	0.4556
2030	Mined	OAK-405-3D	647	0.10	6	5	6	0.57	0.0552	0.5486	0.0303
2030	Disturbed	OAK-405-3E	647	1.37	6	5	6	0.57	0.7755	0.5486	0.4254
2030	Disturbed	OAK-405-3F	641	1.11	6	5	6	0.57	0.6304	0.5486	0.3458
2030	Disturbed	OAK-405-3G	641	1.15	6	5	6	0.57	0.6541	0.5486	0.3588
2030	Disturbed	OAK-405-3H	647	4.40	6	5	6	0.57	2.4958	0.5486	1.3692
2030	Disturbed	OAK-405-3I	647	1.17	6	5	6	0.57	0.6633	0.5486	0.3639
2030	Disturbed	OAK-405-3J	211	0.59	6	5	6	0.57	0.3318	0.5486	0.1820
2030	Disturbed	OAK-405-9H-641	641	1.61	7	8	8	0.77	1.2322	0.5486	0.6760
2030	Mined	OAK-416-12A	647	9.52	7	7	6	0.67	6.3499	0.5486	3.4835
2030	Disturbed	OAK-416-13A	641	1.81	8	7	6	0.70	1.2656	0.5486	0.6943
2030	Disturbed	OAK-416-13B	647	0.56	8	7	6	0.70	0.3888	0.5486	0.2133
2030	Mined	OAK-416-14A-641	641	4.33	7	6	7	0.67	2.8878	0.5486	1.5843
2030	Mined	OAK-416-14A-514	514	0.01	7	6	7	0.67	0.0044	0.5486	0.0024
2030	Mined	OAK-416-14B-514	514	0.00	7	6	7	0.67	0.0002	0.5486	0.0001
2030	Mined	OAK-416-14X	513	0.02	7	6	7	0.67	0.0158	0.5486	0.0087
2030	Mined	OAK-416-20	641	2.48	7	6	6	0.63	1.5725	0.5486	0.8627
2030	Disturbed	OAK-416-3E	647	10.94	7	7	6	0.67	7.2948	0.5486	4.0019
2030	Mined	OAK-416-3X	513	0.03	7	7	6	0.67	0.0199	0.5486	0.0109
2030	Disturbed	OAK-416-6	211	0.20	7	3	4	0.47	0.0941	0.5486	0.0516
2030	Disturbed	OAK-416-8	641	2.46	7	9	9	0.83	2.0530	0.5486	1.1262
2030	Disturbed	OAK-416-8-321	321	0.16	7	9	9	0.83	0.1322	0.5486	0.0725
2030	Mined	OAK-420-10	641	0.15	4	5	4	0.43	0.0654	0.5486	0.0359
2030	Mined	OAK-420-11	641	1.96	7	7	6	0.67	1.3077	0.5486	0.7174
2030	Mined	OAK-420-30B	647	0.35	8	8	7	0.77	0.2673	0.5486	0.1466
2030	Mined	OAK-420-32	647	2.87	7	7	6	0.67	1.9130	0.5486	1.0495
2030	Mined	OAK-420-9A-641	641	0.00	8	8	7	0.77	0.0003	0.5486	0.0001
2030	Mined	OAK-420-9A-321	321	0.15	8	8	7	0.77	0.1144	0.5486	0.0627
2030	Mined	OAK-420-9B-641	641	0.81	8	8	7	0.77	0.6238	0.5486	0.3422

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2030	Mined	OAK-420-9C	641	0.28	8	8	7	0.77	0.2177	0.5486	0.1194
2030	Mined	OAK-420-9F	641	0.70	8	8	7	0.77	0.5393	0.5486	0.2959
2030	Mined	OAK-420-9G	641	0.20	8	8	7	0.77	0.1513	0.5486	0.0830
2030	Mined	OAK-420-9J	641	0.78	8	8	7	0.77	0.6014	0.5486	0.3299
2030	Mined	OAK-421-3-514	514	0.00	7	6	6	0.63	0.0001	0.5486	0.0000
2030	Mined	OAK-421-4	641	2.28	8	7	6	0.70	1.5972	0.5486	0.8762
2030	Mined	OAK-421-4X	534	0.11	8	7	6	0.70	0.0803	0.5486	0.0441
2030	Mined	OAK-421-5	641	3.19	7	8	8	0.77	2.4491	0.5486	1.3436
2030	Mined	OB-405-5A	211	0.58	5	5	5	0.50	0.2901	0.5486	0.1591
2030	Mined	OB-405-5B	534	0.26	5	5	5	0.50	0.1293	0.5486	0.0709
2030	Mined	OB-405-5C	513	0.41	5	5	5	0.50	0.2042	0.5486	0.1120
2030	Mined	OB-405-5D	211	1.68	5	5	5	0.50	0.8404	0.5486	0.4611
2030	Disturbed	OB-405-5E	534	0.17	5	5	5	0.50	0.0849	0.5486	0.0466
2030	Disturbed	OB-405-5F	647	26.56	5	5	5	0.50	13.2821	0.5486	7.2865
2030	Mined	OSW-I-201A-211	647	0.01	5	5	5	0.50	0.0026	0.5486	0.0014
2030	Mined	OSW-I-303C-434B	514	0.35	6	4	7	0.57	0.1965	0.5486	0.1078
2030	Disturbed	OSW-I-512A	211	0.14	5	6	6	0.57	0.0768	0.5486	0.0422
2030	Mined	OSW-I-518B	514	0.07	6	6	6	0.60	0.0430	0.5486	0.0236
2031	Mined	BRA-429-9A	641	1.79	8	7	6	0.70	1.2511	0.5230	0.6543
2031	Mined	BRA-430-14B	641	0.42	8	8	9	0.83	0.3522	0.5230	0.1842
2031	Mined	BRA-430-14C	641	9.55	8	8	9	0.83	7.9564	0.5230	4.1612
2031	Mined	BRA-430-14D	647	0.35	8	8	9	0.83	0.2918	0.5230	0.1526
2031	Mined	BRA-430-46A	641	2.31	8	8	7	0.77	1.7714	0.5230	0.9265
2031	Mined	BRA-430-46B	647	0.01	8	8	7	0.77	0.0070	0.5230	0.0037
2031	Mined	BRA-431-22X	513	0.03	8	6	6	0.67	0.0179	0.5230	0.0093
2031	Mined	BRA-431-23A	641	1.72	8	7	7	0.73	1.2613	0.5230	0.6596
2031	Mined	BRA-431-23D-514	514	0.05	8	7	7	0.73	0.0371	0.5230	0.0194
2031	Mined	BRA-431-24A-514	514	0.00	8	7	6	0.70	0.0008	0.5230	0.0004
2031	Mined	BRA-431-24B	641	3.48	8	7	6	0.70	2.4371	0.5230	1.2746
2031	Mined	BRA-431-24X-513	513	0.05	8	7	6	0.70	0.0318	0.5230	0.0166
2031	Mined	BRA-431-24X-514	514	0.02	8	7	6	0.70	0.0172	0.5230	0.0090
2031	Mined	BRA-431-26A-641	641	3.30	8	6	6	0.67	2.1991	0.5230	1.1501
2031	Mined	BRA-431-26X	513	0.02	8	6	6	0.67	0.0127	0.5230	0.0066
2031	Mined	BRA-431-32B	641	0.69	8	6	6	0.67	0.4607	0.5230	0.2410
2031	Mined	BRA-431-32D-514	514	0.00	8	6	6	0.67	0.0002	0.5230	0.0001

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2031	Mined	BRA-431-32X	513	0.03	8	6	6	0.67	0.0178	0.5230	0.0093
2031	Mined	BRA-431-33A	643	0.36	8	8	6	0.73	0.2624	0.5230	0.1372
2031	Mined	BRA-431-41	641	4.34	8	8	7	0.77	3.3269	0.5230	1.7399
2031	Mined	BRA-431-46C	647	1.02	8	7	6	0.70	0.7170	0.5230	0.3750
2031	Mined	BRA-431-47-534	534	0.13	8	6	6	0.67	0.0838	0.5230	0.0438
2031	Mined	BRA-431-50-211	211	0.19	6	7	6	0.63	0.1202	0.5230	0.0629
2031	Mined	BRA-431-50-513	513	0.12	6	7	6	0.63	0.0733	0.5230	0.0384
2031	Mined	BRA-431-52A	641	0.31	8	6	5	0.63	0.1985	0.5230	0.1038
2031	Mined	BRA-431-53	211	0.56	6	7	6	0.63	0.3551	0.5230	0.1857
2031	Mined	BRA-431-56-513	513	0.10	8	6	5	0.63	0.0623	0.5230	0.0326
2031	Mined	BRA-431-56-641	641	1.58	8	6	5	0.63	1.0031	0.5230	0.5246
2031	Mined	BRA-431-56X	513	0.08	8	6	5	0.63	0.0482	0.5230	0.0252
2031	Mined	BRA-431-59-211	211	0.13	6	7	6	0.63	0.0810	0.5230	0.0424
2031	Mined	BRA-431-6A	641	1.36	7	7	6	0.67	0.9054	0.5230	0.4735
2031	Mined	BRA-431-7A	641	4.19	6	7	6	0.63	2.6521	0.5230	1.3871
2031	Mined	BRU-336-10A	641	2.40	5	7	7	0.63	1.5200	0.5230	0.7949
2031	Mined	BRU-336-10B	211	1.09	5	7	7	0.63	0.6929	0.5230	0.3624
2031	Mined	BRU-336-10B-513	513	0.01	5	7	7	0.63	0.0087	0.5230	0.0046
2031	Mined	BRU-336-10X-534	534	0.12	5	7	7	0.63	0.0773	0.5230	0.0404
2031	Mined	BRU-336-10X-641	641	0.07	5	7	7	0.63	0.0427	0.5230	0.0223
2031	Mined	BRU-336-22	641	1.36	8	8	8	0.80	1.0844	0.5230	0.5671
2031	Mined	BRU-336-24	641	0.67	8	7	6	0.70	0.4719	0.5230	0.2468
2031	Mined	BRU-336-28A	641	12.24	8	7	7	0.73	8.9743	0.5230	4.6935
2031	Mined	BRU-431-14	641	5.55	4	6	5	0.50	2.7741	0.5230	1.4508
2031	Mined	HIC-427-14A	641	1.38	7	8	7	0.73	1.0115	0.5230	0.5290
2031	Mined	HIC-427-14B	647	0.68	7	8	7	0.73	0.5009	0.5230	0.2620
2031	Mined	HIC-427-18-513	513	0.05	6	2	4	0.40	0.0204	0.5230	0.0107
2031	Mined	HIC-427-18	647	0.42	6	2	4	0.40	0.1698	0.5230	0.0888
2031	Mined	HIC-427-18X-513	513	0.08	6	2	4	0.40	0.0300	0.5230	0.0157
2031	Mined	HIC-427-18X-647	647	0.02	6	2	4	0.40	0.0082	0.5230	0.0043
2031	Mined	HIC-427-18X-514	514	0.13	6	2	4	0.40	0.0517	0.5230	0.0270
2031	Disturbed	HIC-427-24D	641	1.29	6	7	6	0.63	0.8201	0.5230	0.4289
2031	Disturbed	HIC-427-24E	647	0.75	6	7	6	0.63	0.4724	0.5230	0.2471
2031	Mined	HIC-427-24F-641	641	0.23	6	7	6	0.63	0.1481	0.5230	0.0774
2031	Disturbed	HIC-427-24F-647	647	5.92	6	7	6	0.63	3.7519	0.5230	1.9623

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2031	Disturbed	HIC-427-24G	513	0.10	6	7	6	0.63	0.0654	0.5230	0.0342
2031	Mined	HIC-427-24H	513	0.03	6	7	6	0.63	0.0199	0.5230	0.0104
2031	Disturbed	HIC-427-24I	647	1.73	6	7	6	0.63	1.0960	0.5230	0.5732
2031	Mined	HIC-427-24K	211	0.40	6	7	6	0.63	0.2546	0.5230	0.1331
2031	Disturbed	HIC-427-24L	213	1.13	6	7	6	0.63	0.7161	0.5230	0.3745
2031	Mined	HIC-427-24N	213	0.42	6	7	6	0.63	0.2634	0.5230	0.1377
2031	Mined	HIC-427-25D-641	641	0.62	6	7	6	0.63	0.3956	0.5230	0.2069
2031	Disturbed	HIC-427-27A	641	26.84	4	8	8	0.67	17.8919	0.5230	9.3575
2031	Disturbed	HIC-427-27E	213	0.03	4	8	8	0.67	0.0188	0.5230	0.0098
2031	Mined	HIC-427-27E	213	0.40	4	8	8	0.67	0.2655	0.5230	0.1389
2031	Disturbed	HIC-427-27F	211	0.29	4	8	8	0.67	0.1958	0.5230	0.1024
2031	Mined	HIC-427-27G	213	0.05	4	8	8	0.67	0.0357	0.5230	0.0187
2031	Mined	HIC-427-27G-514	514	0.16	4	8	8	0.67	0.1086	0.5230	0.0568
2031	Disturbed	HIC-427-3	647	0.90	6	5	5	0.53	0.4813	0.5230	0.2517
2031	Mined	HIC-427-3	647	10.65	6	5	5	0.53	5.6809	0.5230	2.9711
2031	Disturbed	HIC-427-51	534	0.14	6	7	6	0.63	0.0863	0.5230	0.0451
2031	Mined	HIC-427-9A	641	0.46	6	6	5	0.57	0.2630	0.5230	0.1375
2031	Disturbed	HIC-427-9C	211	0.12	6	6	5	0.57	0.0654	0.5230	0.0342
2031	Mined	HIC-427-9D	641	1.98	6	6	5	0.57	1.1207	0.5230	0.5861
2031	Mined	HIC-427-9D-534	534	0.24	6	6	5	0.57	0.1337	0.5230	0.0699
2031	Mined	HIC-427-9X	513	0.16	6	6	5	0.57	0.0928	0.5230	0.0485
2031	Disturbed	OAK-405-9H-641	641	5.03	7	8	8	0.77	3.8544	0.5230	2.0158
2032	Mined	BRA-429-11A	641	0.36	8	6	6	0.67	0.2433	0.4981	0.1212
2032	Mined	BRA-430-13	641	1.80	8	6	6	0.67	1.1988	0.4981	0.5971
2032	Mined	BRA-430-14C	641	3.81	8	8	9	0.83	3.1739	0.4981	1.5809
2032	Mined	BRA-430-14D	647	0.12	8	8	9	0.83	0.0987	0.4981	0.0492
2032	Mined	BRA-430-14E	647	0.11	8	8	9	0.83	0.0930	0.4981	0.0463
2032	Mined	BRA-430-15	641	0.38	8	8	5	0.70	0.2630	0.4981	0.1310
2032	Mined	BRA-430-16	641	0.44	8	8	6	0.73	0.3193	0.4981	0.1590
2032	Mined	BRA-430-18	641	5.94	8	7	7	0.73	4.3589	0.4981	2.1712
2032	Mined	BRA-430-19C	641	1.48	8	7	7	0.73	1.0860	0.4981	0.5409
2032	Mined	BRA-430-20A	641	0.34	8	7	6	0.70	0.2406	0.4981	0.1198
2032	Mined	BRA-430-21A	641	0.40	7	4	4	0.50	0.2017	0.4981	0.1005
2032	Mined	BRA-430-21X	534	0.17	7	4	4	0.50	0.0841	0.4981	0.0419
2032	Mined	BRA-430-22A	641	2.63	8	8	7	0.77	2.0174	0.4981	1.0048

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2032	Mined	BRA-430-23A	643	0.81	9	9	8	0.87	0.7001	0.4981	0.3487
2032	Disturbed	BRA-430-24	641	3.66	8	8	7	0.77	2.8025	0.4981	1.3959
2032	Mined	BRA-430-26	641	0.04	7	7	6	0.67	0.0238	0.4981	0.0119
2032	Mined	BRA-430-27	641	0.08	8	7	7	0.73	0.0551	0.4981	0.0275
2032	Mined	BRA-430-28A	647	6.92	6	7	6	0.63	4.3819	0.4981	2.1826
2032	Mined	BRA-430-28B	641	1.95	6	7	6	0.63	1.2329	0.4981	0.6141
2032	Mined	BRA-430-28C	641	0.49	6	7	6	0.63	0.3072	0.4981	0.1530
2032	Mined	BRA-430-28D	641	0.36	6	7	6	0.63	0.2290	0.4981	0.1141
2032	Disturbed	BRA-430-28X	513	0.08	6	7	6	0.63	0.0493	0.4981	0.0245
2032	Mined	BRA-430-29A	641	3.49	8	7	6	0.70	2.4455	0.4981	1.2181
2032	Mined	BRA-430-29C	647	1.31	8	7	6	0.70	0.9143	0.4981	0.4554
2032	Mined	BRA-430-30A	643	0.30	8	7	6	0.70	0.2086	0.4981	0.1039
2032	Mined	BRA-430-30B-514	514	0.02	8	7	6	0.70	0.0169	0.4981	0.0084
2032	Mined	BRA-430-31	641	1.45	8	8	9	0.83	1.2087	0.4981	0.6021
2032	Mined	BRA-430-33A	641	0.52	8	7	6	0.70	0.3659	0.4981	0.1823
2032	Mined	BRA-430-35A	641	1.30	6	7	8	0.70	0.9122	0.4981	0.4544
2032	Disturbed	BRA-430-35B	647	1.06	6	7	8	0.70	0.7392	0.4981	0.3682
2032	Disturbed	BRA-430-35D	641	1.96	6	7	8	0.70	1.3689	0.4981	0.6819
2032	Disturbed	BRA-430-35E	647	2.06	6	7	8	0.70	1.4408	0.4981	0.7176
2032	Mined	BRA-430-42	641	0.34	7	7	7	0.70	0.2371	0.4981	0.1181
2032	Mined	BRA-430-43D	647	1.57	8	7	7	0.73	1.1503	0.4981	0.5730
2032	Mined	BRA-430-43G	647	1.44	8	7	7	0.73	1.0544	0.4981	0.5252
2032	Mined	BRA-430-44	641	0.54	8	8	7	0.77	0.4120	0.4981	0.2052
2032	Mined	BRA-430-46A	641	3.93	8	8	7	0.77	3.0153	0.4981	1.5019
2032	Mined	BRA-430-46B	647	1.66	8	8	7	0.77	1.2733	0.4981	0.6342
2032	Mined	BRA-430-47	641	0.86	8	8	7	0.77	0.6555	0.4981	0.3265
2032	Mined	BRA-430-48	641	0.31	8	7	6	0.70	0.2181	0.4981	0.1087
2032	Mined	BRA-430-49	641	0.34	8	7	6	0.70	0.2386	0.4981	0.1188
2032	Mined	BRA-430-50	643	0.48	8	7	6	0.70	0.3381	0.4981	0.1684
2032	Disturbed	BRA-431-2A	641	1.99	6	7	8	0.70	1.3930	0.4981	0.6939
2032	Disturbed	BRA-431-2B	647	2.18	6	7	8	0.70	1.5285	0.4981	0.7614
2032	Disturbed	BRA-431-3	641	0.10	4	5	7	0.53	0.0511	0.4981	0.0255
2032	Disturbed	BRA-439-33B-514	514	0.13	8	7	6	0.70	0.0906	0.4981	0.0451
2032	Disturbed	BRU-325-18	641	0.10	7	7	6	0.67	0.0644	0.4981	0.0321
2032	Disturbed	BRU-325-19	211	0.94	3	5	3	0.37	0.3431	0.4981	0.1709

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2032	Mined	HIC-427-14A	641	7.00	7	8	7	0.73	5.1300	0.4981	2.5553
2032	Mined	HIC-427-14B	647	0.12	7	8	7	0.73	0.0896	0.4981	0.0446
2032	Mined	HIC-427-15A	647	0.99	8	8	7	0.77	0.7594	0.4981	0.3782
2032	Mined	HIC-427-15B	643	5.05	8	8	7	0.77	3.8741	0.4981	1.9297
2032	Mined	HIC-427-15C	641	1.07	8	8	7	0.77	0.8239	0.4981	0.4104
2032	Mined	HIC-427-16	641	3.11	8	9	7	0.80	2.4871	0.4981	1.2388
2032	Mined	HIC-427-24F-647	647	0.50	6	7	6	0.63	0.3142	0.4981	0.1565
2032	Mined	HIC-427-24N	213	0.75	6	7	6	0.63	0.4730	0.4981	0.2356
2032	Mined	HIC-427-25A	211	0.89	6	7	6	0.63	0.5618	0.4981	0.2798
2032	Mined	HIC-427-25A-213	213	0.47	6	7	6	0.63	0.2980	0.4981	0.1485
2032	Mined	HIC-427-25B	534	0.10	6	7	6	0.63	0.0663	0.4981	0.0330
2032	Mined	HIC-427-25C	513	0.05	6	7	6	0.63	0.0301	0.4981	0.0150
2032	Mined	HIC-427-25D	513	0.01	6	7	6	0.63	0.0052	0.4981	0.0026
2032	Disturbed	HIC-427-25D-641	641	18.34	6	7	6	0.63	11.6133	0.4981	5.7846
2032	Mined	HIC-427-25D-213	213	0.21	6	7	6	0.63	0.1306	0.4981	0.0650
2032	Mined	HIC-427-25E	211	0.02	6	7	6	0.63	0.0097	0.4981	0.0049
2032	Disturbed	HIC-427-25F	513	0.13	6	7	6	0.63	0.0834	0.4981	0.0415
2032	Disturbed	HIC-427-25I	513	0.03	6	7	6	0.63	0.0202	0.4981	0.0100
2032	Disturbed	HIC-427-25J	211	0.92	6	7	6	0.63	0.5808	0.4981	0.2893
2032	Mined	HIC-427-25J-641	641	0.58	6	7	6	0.63	0.3675	0.4981	0.1830
2032	Mined	HIC-427-27A	641	16.44	4	8	8	0.67	10.9612	0.4981	5.4598
2032	Mined	HIC-427-27C	211	1.34	4	8	8	0.67	0.8924	0.4981	0.4445
2032	Mined	HIC-427-27D	534	0.31	4	8	8	0.67	0.2033	0.4981	0.1013
2032	Mined	HIC-427-27E	213	0.22	4	8	8	0.67	0.1453	0.4981	0.0724
2032	Mined	HIC-427-27G	213	0.00	4	8	8	0.67	0.0026	0.4981	0.0013
2032	Mined	HIC-427-27H	641	0.03	4	8	8	0.67	0.0195	0.4981	0.0097
2032	Mined	HIC-427-27I	213	0.69	4	8	8	0.67	0.4616	0.4981	0.2299
2032	Mined	HIC-427-7A	647	2.63	8	8	5	0.70	1.8436	0.4981	0.9183
2032	Mined	OAK-405-10A	643	0.00	7	7	6	0.67	0.0015	0.4981	0.0007
2032	Mined	OAK-405-10B	647	2.02	7	7	6	0.67	1.3474	0.4981	0.6711
2032	Mined	OAK-405-11A	513	0.02	7	7	8	0.73	0.0137	0.4981	0.0068
2032	Mined	OAK-405-11B-213	213	6.49	7	7	8	0.73	4.7561	0.4981	2.3690
2032	Mined	OAK-405-11B-641	641	0.00	7	7	8	0.73	0.0001	0.4981	0.0000
2032	Mined	OAK-405-11C	641	1.84	7	7	8	0.73	1.3487	0.4981	0.6718
2032	Mined	OAK-405-11D	641	0.74	7	7	8	0.73	0.5416	0.4981	0.2698

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2032	Mined	OAK-405-11E-213	213	0.02	7	7	8	0.73	0.0115	0.4981	0.0057
2032	Mined	OAK-405-11E-641	641	2.12	7	7	8	0.73	1.5530	0.4981	0.7736
2032	Mined	OAK-405-13A	211	0.56	7	6	6	0.63	0.3566	0.4981	0.1776
2032	Mined	OAK-405-13B	641	1.70	7	6	6	0.63	1.0754	0.4981	0.5357
2032	Mined	OAK-405-13C	513	0.11	7	6	6	0.63	0.0670	0.4981	0.0334
2032	Mined	OAK-405-13D	641	2.26	7	6	6	0.63	1.4340	0.4981	0.7143
2032	Mined	OAK-405-1D	211	0.02	4	5	5	0.47	0.0091	0.4981	0.0045
2032	Mined	OAK-405-1G	647	6.40	4	5	5	0.47	2.9851	0.4981	1.4869
2032	Mined	OAK-405-1G-514	514	0.02	4	5	5	0.47	0.0081	0.4981	0.0040
2032	Mined	OAK-405-3E	647	0.24	6	5	6	0.57	0.1333	0.4981	0.0664
2032	Mined	OAK-405-3F	641	2.07	6	5	6	0.57	1.1742	0.4981	0.5848
2032	Mined	OAK-405-9A-641	641	0.10	7	8	8	0.77	0.0759	0.4981	0.0378
2032	Mined	OAK-405-9A	643	4.49	7	8	8	0.77	3.4446	0.4981	1.7157
2032	Mined	OAK-405-9A-647	647	0.01	7	8	8	0.77	0.0051	0.4981	0.0025
2032	Mined	OAK-405-9B-641	641	10.30	7	8	8	0.77	7.8954	0.4981	3.9327
2032	Mined	OAK-405-9B-643	643	0.32	7	8	8	0.77	0.2450	0.4981	0.1220
2032	Mined	OAK-405-9C-641	641	0.06	7	8	8	0.77	0.0456	0.4981	0.0227
2032	Mined	OAK-405-9D-641	641	9.27	7	8	8	0.77	7.1090	0.4981	3.5410
2032	Mined	OAK-405-9D-643	643	0.06	7	8	8	0.77	0.0478	0.4981	0.0238
2032	Mined	OAK-405-9E	513	0.18	7	8	8	0.77	0.1351	0.4981	0.0673
2032	Mined	OAK-405-9F	647	10.10	7	8	8	0.77	7.7444	0.4981	3.8575
2032	Mined	OAK-405-9G	647	0.76	7	8	8	0.77	0.5816	0.4981	0.2897
2032	Disturbed	OAK-405-9H-641	641	34.17	7	8	8	0.77	26.1955	0.4981	13.0480
2032	Mined	OAK-405-9I	647	1.45	7	8	8	0.77	1.1087	0.4981	0.5522
2032	Mined	OAK-405-9J	647	0.42	7	8	8	0.77	0.3217	0.4981	0.1602
2032	Mined	OAK-405-9K	647	0.11	7	8	8	0.77	0.0853	0.4981	0.0425
2032	Mined	OAK-405-9M	513	0.59	7	8	8	0.77	0.4513	0.4981	0.2248
2032	Mined	OAK-405-9O	641	0.08	7	8	8	0.77	0.0634	0.4981	0.0316
2032	Mined	OSW-I-1340	213	0.56	6	4	3	0.43	0.2427	0.4981	0.1209
2032	Mined	OSW-I-307A-211	211	0.02	4	4	2	0.33	0.0052	0.4981	0.0026
2032	Mined	OSW-I-307A	647	0.02	4	4	2	0.33	0.0063	0.4981	0.0032
2032	Mined	OSW-I-402B-641	641	0.04	7	6	5	0.60	0.0214	0.4981	0.0107
2033	Mined	BRA-430-25	641	4.62	6	7	7	0.67	3.0808	0.4739	1.4600
2033	Mined	BRA-430-25-514	514	0.00	6	7	7	0.67	0.0002	0.4739	0.0001
2033	Mined	BRA-430-26	641	2.75	7	7	6	0.67	1.8320	0.4739	0.8682

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2033	Mined	BRA-430-27	641	0.47	8	7	7	0.73	0.3447	0.4739	0.1634
2033	Mined	BRA-430-40	211	0.50	7	6	4	0.57	0.2808	0.4739	0.1331
2033	Mined	BRA-430-41	641	2.23	7	7	6	0.67	1.4888	0.4739	0.7055
2033	Mined	BRA-430-7B	641	1.03	7	8	8	0.77	0.7934	0.4739	0.3760
2033	Mined	BRU-325-14A	641	0.79	4	7	5	0.53	0.4225	0.4739	0.2002
2033	Mined	BRU-325-14B	211	3.37	4	7	5	0.53	1.7987	0.4739	0.8524
2033	Mined	BRU-325-16	641	25.33	6	7	7	0.67	16.8894	0.4739	8.0039
2033	Mined	BRU-325-16X	534	0.17	6	7	7	0.67	0.1105	0.4739	0.0524
2033	Disturbed	BRU-325-37	514	0.05	8	5	6	0.63	0.0293	0.4739	0.0139
2033	Disturbed	BRU-325-37X	514	0.00	8	5	6	0.63	0.0007	0.4739	0.0003
2033	Disturbed	HIC-426-15A	641	3.31	6	7	7	0.67	2.2054	0.4739	1.0451
2033	Disturbed	HIC-426-15A-211	211	0.25	6	7	7	0.67	0.1647	0.4739	0.0781
2033	Disturbed	HIC-426-3	641	1.48	5	6	5	0.53	0.7878	0.4739	0.3733
2033	Disturbed	HIC-426-3-514	514	0.21	5	6	5	0.53	0.1125	0.4739	0.0533
2033	Disturbed	HIC-426-6	643	1.32	5	5	4	0.47	0.6160	0.4739	0.2919
2033	Disturbed	HIC-427-25D-641	641	1.39	6	7	6	0.63	0.8835	0.4739	0.4187
2033	Disturbed	HIC-427-25E	211	1.20	6	7	6	0.63	0.7616	0.4739	0.3609
2033	Mined	HIC-427-25E-514	514	0.00	6	7	6	0.63	0.0023	0.4739	0.0011
2033	Disturbed	HIC-427-25F	513	0.02	6	7	6	0.63	0.0141	0.4739	0.0067
2033	Disturbed	HIC-427-25I	513	0.05	6	7	6	0.63	0.0305	0.4739	0.0145
2033	Mined	HIC-427-25J	211	0.17	6	7	7	0.67	0.1142	0.4739	0.0541
2033	Mined	OAK-404-13B	641	0.46	6	6	6	0.60	0.2756	0.4739	0.1306
2033	Mined	OAK-404-14A-213	213	0.00	6	6	6	0.60	0.0001	0.4739	0.0000
2033	Mined	OAK-404-14A-641	641	0.56	6	6	6	0.60	0.3352	0.4739	0.1589
2033	Mined	OAK-404-14B-213	213	0.14	6	6	6	0.60	0.0865	0.4739	0.0410
2033	Mined	OAK-404-14B-641	641	0.01	6	6	6	0.60	0.0033	0.4739	0.0016
2033	Mined	OAK-404-14E	641	4.04	6	6	6	0.60	2.4235	0.4739	1.1485
2033	Mined	OAK-404-14F	641	1.55	6	6	6	0.60	0.9330	0.4739	0.4421
2033	Mined	OAK-404-14G	641	2.54	6	6	6	0.60	1.5246	0.4739	0.7225
2033	Mined	OAK-404-14H	534	0.31	6	6	6	0.60	0.1883	0.4739	0.0892
2033	Mined	OAK-404-14I	647	0.19	6	6	6	0.60	0.1150	0.4739	0.0545
2033	Mined	OAK-404-14J	213	1.44	6	6	6	0.60	0.8615	0.4739	0.4082
2033	Mined	OAK-404-15	513	0.49	7	6	6	0.63	0.3114	0.4739	0.1476
2033	Mined	OAK-404-15A	643	3.54	7	6	6	0.63	2.2402	0.4739	1.0616
2033	Mined	OAK-404-15B	513	0.07	7	6	6	0.63	0.0421	0.4739	0.0200

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2033	Mined	OAK-404-15C	647	0.39	7	6	6	0.63	0.2445	0.4739	0.1159
2033	Mined	OAK-404-15D	513	0.38	7	6	6	0.63	0.2426	0.4739	0.1150
2033	Mined	OAK-404-15D-514	514	0.32	7	6	6	0.63	0.2036	0.4739	0.0965
2033	Mined	OAK-404-15E	643	4.93	7	6	6	0.63	3.1212	0.4739	1.4791
2033	Mined	OAK-404-15F	641	1.34	7	6	6	0.63	0.8477	0.4739	0.4017
2033	Mined	OAK-404-15G	534	0.28	7	6	6	0.63	0.1764	0.4739	0.0836
2033	Mined	OAK-404-1A	641	8.60	6	5	4	0.50	4.2998	0.4739	2.0377
2033	Mined	OAK-404-1B-641	641	0.00	6	5	4	0.50	0.0007	0.4739	0.0003
2033	Mined	OAK-404-1B-647	647	0.01	6	5	4	0.50	0.0031	0.4739	0.0015
2033	Mined	OAK-404-1C-647	647	0.69	6	5	4	0.50	0.3450	0.4739	0.1635
2033	Mined	OAK-404-1D	641	1.82	6	5	4	0.50	0.9100	0.4739	0.4312
2033	Mined	OAK-404-1E	641	1.35	6	5	4	0.50	0.6734	0.4739	0.3191
2033	Mined	OAK-404-1F-641	641	0.00	6	5	4	0.50	0.0008	0.4739	0.0004
2033	Mined	OAK-404-1F-647	647	1.21	6	5	4	0.50	0.6035	0.4739	0.2860
2033	Mined	OAK-404-1H	211	0.13	6	5	4	0.50	0.0660	0.4739	0.0313
2033	Mined	OAK-404-20B	647	4.33	7	6	7	0.67	2.8855	0.4739	1.3674
2033	Mined	OAK-404-20C-213	213	0.07	7	6	7	0.67	0.0481	0.4739	0.0228
2033	Disturbed	OAK-404-20C	647	12.58	7	6	7	0.67	8.3881	0.4739	3.9751
2033	Mined	OAK-404-21C	213	2.14	7	6	6	0.63	1.3567	0.4739	0.6430
2033	Mined	OAK-404-21C-647	647	0.01	7	6	6	0.63	0.0051	0.4739	0.0024
2033	Mined	OAK-404-22C	643	0.14	7	5	5	0.57	0.0780	0.4739	0.0369
2033	Mined	OAK-404-24	643	1.99	7	9	8	0.80	1.5932	0.4739	0.7550
2033	Disturbed	OAK-404-25	643	1.41	7	8	8	0.77	1.0773	0.4739	0.5105
2033	Mined	OAK-404-2C	641	0.58	5	5	4	0.47	0.2728	0.4739	0.1293
2033	Mined	OAK-404-6A	641	7.28	6	6	7	0.63	4.6126	0.4739	2.1859
2033	Mined	OAK-404-6B	513	0.07	6	6	7	0.63	0.0446	0.4739	0.0211
2033	Mined	OAK-404-6D-647	647	16.10	6	6	7	0.63	10.1967	0.4739	4.8322
2033	Mined	OAK-404-6E-213	213	0.00	6	6	7	0.63	0.0005	0.4739	0.0002
2033	Mined	OAK-404-6E-641	641	3.25	6	6	7	0.63	2.0578	0.4739	0.9752
2033	Mined	OAK-404-6F	647	1.61	6	6	7	0.63	1.0213	0.4739	0.4840
2033	Mined	OAK-404-7A-213	213	18.64	6	6	7	0.63	11.8040	0.4739	5.5939
2033	Mined	OAK-404-7A-641	641	0.01	6	6	7	0.63	0.0051	0.4739	0.0024
2033	Mined	OAK-404-8A	647	0.33	6	6	6	0.60	0.1959	0.4739	0.0928
2033	Mined	OAK-404-8B	641	1.72	6	6	6	0.60	1.0326	0.4739	0.4894
2033	Mined	OAK-404-8C	647	0.69	6	6	6	0.60	0.4163	0.4739	0.1973

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2033	Mined	OAK-404-8D	641	0.28	6	6	6	0.60	0.1689	0.4739	0.0800
2033	Mined	OAK-404-8E	641	0.15	6	6	6	0.60	0.0888	0.4739	0.0421
2033	Mined	OAK-404-8F	534	0.21	6	6	6	0.60	0.1269	0.4739	0.0602
2033	Mined	OAK-404-8G	641	5.97	6	6	6	0.60	3.5800	0.4739	1.6966
2033	Mined	OAK-404-8H	643	0.22	6	6	6	0.60	0.1331	0.4739	0.0631
2033	Mined	OAK-404-8J	643	0.61	6	6	6	0.60	0.3639	0.4739	0.1724
2033	Mined	OAK-404-8K	641	0.39	6	6	6	0.60	0.2330	0.4739	0.1104
2033	Mined	OAK-404-8L	641	0.86	6	6	6	0.60	0.5162	0.4739	0.2446
2033	Mined	OAK-404-8M	641	0.31	6	6	6	0.60	0.1860	0.4739	0.0881
2033	Mined	OAK-404-9B	513	0.55	6	6	6	0.60	0.3273	0.4739	0.1551
2033	Mined	OAK-404-9B-514	514	0.15	6	6	6	0.60	0.0875	0.4739	0.0414
2033	Mined	OAK-405-13B	641	0.78	7	6	6	0.63	0.4924	0.4739	0.2334
2033	Mined	OAK-405-13C	513	0.04	7	6	6	0.63	0.0236	0.4739	0.0112
2033	Mined	OAK-405-13D	641	1.09	7	6	6	0.63	0.6904	0.4739	0.3272
2033	Mined	OAK-405-13E	211	0.22	7	6	6	0.63	0.1369	0.4739	0.0649
2033	Mined	OAK-405-13F-213	213	0.20	7	6	6	0.63	0.1271	0.4739	0.0602
2033	Mined	OAK-405-13F-641	641	0.00	7	6	6	0.63	0.0000	0.4739	0.0000
2033	Mined	OAK-405-14	211	1.11	4	2	2	0.27	0.2960	0.4739	0.1403
2033	Mined	OAK-405-15A	643	0.36	7	6	7	0.67	0.2382	0.4739	0.1129
2033	Mined	OAK-405-15C	213	1.59	7	6	7	0.67	1.0581	0.4739	0.5014
2033	Mined	OAK-405-15D	513	0.14	7	6	7	0.67	0.0914	0.4739	0.0433
2033	Mined	OAK-405-15D-213	213	0.13	7	6	7	0.67	0.0875	0.4739	0.0415
2033	Mined	OAK-405-15D-514	514	0.04	7	6	7	0.67	0.0256	0.4739	0.0121
2033	Mined	OAK-405-15E	647	2.01	7	6	7	0.67	1.3370	0.4739	0.6336
2033	Mined	OAK-405-15F	213	0.91	7	6	7	0.67	0.6071	0.4739	0.2877
2033	Mined	OAK-405-16A	641	0.62	7	7	8	0.73	0.4556	0.4739	0.2159
2033	Mined	OAK-405-16B	641	0.96	7	7	8	0.73	0.7011	0.4739	0.3323
2033	Mined	OAK-405-1A	211	0.39	4	5	5	0.47	0.1834	0.4739	0.0869
2033	Mined	OAK-405-1B	534	0.21	4	5	5	0.47	0.0969	0.4739	0.0459
2033	Mined	OAK-405-1C	211	0.39	4	5	5	0.47	0.1813	0.4739	0.0859
2033	Mined	OAK-405-1D	211	0.18	4	5	5	0.47	0.0838	0.4739	0.0397
2033	Mined	OAK-405-1D-647	647	6.58	4	5	5	0.47	3.0697	0.4739	1.4547
2033	Mined	OAK-405-1E	211	0.64	4	5	5	0.47	0.2978	0.4739	0.1411
2033	Mined	OAK-433-14B	213	0.00	5	6	4	0.50	0.0007	0.4739	0.0003
2033	Disturbed	OAK-433-18A	211	5.38	5	6	4	0.50	2.6908	0.4739	1.2752

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2033	Mined	OAK-433-18A-641	641	0.00	5	5	4	0.47	0.0002	0.4739	0.0001
2033	Disturbed	OAK-433-18C-211	211	1.92	5	5	4	0.47	0.8967	0.4739	0.4249
2033	Disturbed	OAK-433-18D-211	211	0.02	5	5	4	0.47	0.0101	0.4739	0.0048
2033	Disturbed	OAK-433-18D-641	641	1.00	5	5	4	0.47	0.4661	0.4739	0.2209
2033	Disturbed	OAK-433-18E	641	2.31	5	5	4	0.47	1.0799	0.4739	0.5118
2033	Disturbed	OAK-433-18X-513	513	0.55	5	5	4	0.47	0.2580	0.4739	0.1223
2033	Disturbed	OAK-433-18X-534	534	0.33	5	5	4	0.47	0.1539	0.4739	0.0729
2033	Mined	OAK-433-19	641	2.10	5	6	4	0.50	1.0489	0.4739	0.4971
2033	Mined	OSW-I-103A-211	211	0.01	4	5	7	0.53	0.0072	0.4739	0.0034
2033	Mined	OSW-I-1327	647	0.04	7	4	2	0.43	0.0193	0.4739	0.0091
2033	Disturbed	OSW-I-1330	211	0.06	6	4	2	0.40	0.0226	0.4739	0.0107
2033	Mined	OSW-I-1340	213	0.41	6	4	3	0.43	0.1778	0.4739	0.0843
2033	Mined	OSW-I-1342	641	0.09	6	4	2	0.40	0.0359	0.4739	0.0170
2033	Mined	OSW-I-2158	213	0.05	6	1	2	0.30	0.0150	0.4739	0.0071
2033	Mined	OSW-I-2161	647	0.08	7	1	4	0.40	0.0314	0.4739	0.0149
2033	Mined	OSW-I-2162	641	0.06	7	1	4	0.40	0.0254	0.4739	0.0120
2033	Mined	OSW-I-2163	641	0.03	7	1	4	0.40	0.0124	0.4739	0.0059
2033	Mined	OSW-I-2164	641	0.05	7	1	4	0.40	0.0211	0.4739	0.0100
2033	Mined	OSW-I-2165	641	0.04	7	1	4	0.40	0.0141	0.4739	0.0067
2033	Mined	OSW-I-2166	641	0.03	6	1	4	0.37	0.0120	0.4739	0.0057
2033	Mined	OSW-I-2167	641	0.02	6	1	4	0.37	0.0056	0.4739	0.0026
2033	Mined	OSW-I-2168	641	0.01	6	1	4	0.37	0.0052	0.4739	0.0025
2033	Mined	OSW-I-2169	641	0.01	6	1	4	0.37	0.0031	0.4739	0.0015
2033	Mined	OSW-I-2170	641	0.01	6	1	4	0.37	0.0039	0.4739	0.0019
2033	Mined	OSW-I-2171	641	0.01	6	1	4	0.37	0.0041	0.4739	0.0019
2033	Mined	OSW-I-2172	641	0.04	6	1	4	0.37	0.0151	0.4739	0.0071
2033	Mined	OSW-I-2173	647	0.05	7	1	4	0.40	0.0194	0.4739	0.0092
2033	Mined	OSW-I-2174	647	0.03	7	1	4	0.40	0.0121	0.4739	0.0057
2033	Mined	OSW-I-307A-211	211	0.00	4	4	2	0.33	0.0001	0.4739	0.0001
2033	Mined	OSW-I-308A	213	1.24	6	4	2	0.40	0.4945	0.4739	0.2343
2033	Mined	OSW-I-360	213	0.12	6	4	2	0.40	0.0473	0.4739	0.0224
2033	Mined	OSW-I-360-514	514	0.00	6	4	2	0.40	0.0012	0.4739	0.0006
2033	Mined	OSW-I-462	641	0.03	6	4	2	0.40	0.0119	0.4739	0.0056
2033	Mined	OSW-I-98	213	0.93	7	4	2	0.43	0.4023	0.4739	0.1907
2034	Mined	BRA-325-28X	514	0.13	8	7	7	0.73	0.0949	0.4504	0.0428

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2034	Mined	BRA-325-5B	641	0.66	7	7	7	0.70	0.4592	0.4504	0.2068
2034	Mined	BRA-430-12A	641	1.14	7	6	7	0.67	0.7619	0.4504	0.3431
2034	Mined	BRA-430-13	641	3.22	8	6	6	0.67	2.1441	0.4504	0.9657
2034	Mined	BRA-430-38C	641	0.17	8	7	6	0.70	0.1167	0.4504	0.0526
2034	Mined	BRA-430-39A	647	7.56	8	7	6	0.70	5.2917	0.4504	2.3834
2034	Mined	BRA-430-39B	641	0.06	8	7	6	0.70	0.0413	0.4504	0.0186
2034	Mined	BRA-430-41	641	0.18	7	7	6	0.67	0.1194	0.4504	0.0538
2034	Mined	BRA-430-42	641	0.73	7	7	7	0.70	0.5086	0.4504	0.2291
2034	Mined	BRA-430-45	647	0.40	8	7	7	0.73	0.2951	0.4504	0.1329
2034	Mined	BRA-430-7A-534	534	0.01	7	8	8	0.77	0.0044	0.4504	0.0020
2034	Mined	BRA-430-7A-647	647	7.47	7	8	8	0.77	5.7269	0.4504	2.5794
2034	Mined	BRA-430-7B-534	534	0.01	7	8	8	0.77	0.0081	0.4504	0.0037
2034	Mined	BRA-430-7B	641	10.10	7	8	8	0.77	7.7424	0.4504	3.4872
2034	Mined	BRA-430-7D	647	0.47	7	8	8	0.77	0.3628	0.4504	0.1634
2034	Mined	BRA-430-7E	641	1.27	7	8	8	0.77	0.9719	0.4504	0.4377
2034	Mined	BRA-430-7X-534	534	0.17	7	8	8	0.77	0.1311	0.4504	0.0590
2034	Mined	BRA-430-7X-641	641	0.00	7	8	8	0.77	0.0007	0.4504	0.0003
2034	Mined	BRA-430-7X-647	647	0.00	7	8	8	0.77	0.0020	0.4504	0.0009
2034	Disturbed	BRA-431-10A	641	0.24	6	5	6	0.57	0.1343	0.4504	0.0605
2034	Disturbed	BRA-431-47-514	514	0.00	8	6	6	0.67	0.0027	0.4504	0.0012
2034	Disturbed	BRA-431-9A	641	0.45	6	6	6	0.60	0.2684	0.4504	0.1209
2034	Disturbed	BRA-431-9X	513	0.18	6	6	6	0.60	0.1070	0.4504	0.0482
2034	Mined	BRU-325-20A	641	5.24	5	6	6	0.57	2.9708	0.4504	1.3380
2034	Mined	BRU-325-20B	647	3.29	5	6	6	0.57	1.8640	0.4504	0.8395
2034	Mined	BRU-325-21	641	0.72	4	6	4	0.47	0.3340	0.4504	0.1504
2034	Mined	BRU-325-21X	534	0.28	4	6	4	0.47	0.1307	0.4504	0.0589
2034	Mined	BRU-325-22B	211	1.93	4	6	5	0.50	0.9636	0.4504	0.4340
2034	Mined	BRU-325-9A	641	1.07	5	7	6	0.60	0.6423	0.4504	0.2893
2034	Mined	HIC-414-8A	641	0.03	5	6	6	0.57	0.0186	0.4504	0.0084
2034	Mined	HIC-414-8E	211	0.07	5	6	6	0.57	0.0399	0.4504	0.0180
2034	Mined	HIC-423-13A-211	211	0.21	7	7	6	0.67	0.1374	0.4504	0.0619
2034	Mined	HIC-423-14	641	1.11	7	8	7	0.73	0.8109	0.4504	0.3652
2034	Mined	HIC-423-21	641	0.91	7	7	6	0.67	0.6072	0.4504	0.2735
2034	Mined	HIC-423-22B	641	0.36	7	8	6	0.70	0.2510	0.4504	0.1130
2034	Mined	HIC-423-22C	647	0.21	7	8	6	0.70	0.1493	0.4504	0.0672

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2034	Mined	HIC-426-4A	641	7.84	5	8	7	0.67	5.2244	0.4504	2.3531
2034	Mined	HIC-426-4B	647	3.12	5	8	7	0.67	2.0833	0.4504	0.9383
2034	Mined	HIC-426-4C	647	0.09	5	8	7	0.67	0.0596	0.4504	0.0268
2034	Mined	HIC-426-4C-214	214	0.12	5	8	7	0.67	0.0783	0.4504	0.0353
2034	Mined	HIC-426-4D	211	1.12	5	8	7	0.67	0.7485	0.4504	0.3371
2034	Mined	HIC-427-10	647	5.08	7	7	6	0.67	3.3894	0.4504	1.5266
2034	Mined	HIC-427-16	641	0.02	8	9	7	0.80	0.0139	0.4504	0.0063
2034	Disturbed	OAK-404-10A	213	1.40	6	6	6	0.60	0.8426	0.4504	0.3795
2034	Disturbed	OAK-404-10B	641	21.11	6	6	6	0.60	12.6685	0.4504	5.7059
2034	Mined	OAK-404-10C	513	0.15	6	6	6	0.60	0.0888	0.4504	0.0400
2034	Disturbed	OAK-404-10D	211	3.26	6	6	6	0.60	1.9546	0.4504	0.8803
2034	Disturbed	OAK-404-10E-211	211	0.01	6	6	6	0.60	0.0037	0.4504	0.0017
2034	Disturbed	OAK-404-10E-641	641	0.58	6	6	6	0.60	0.3475	0.4504	0.1565
2034	Mined	OAK-404-11	211	0.16	5	7	6	0.60	0.0957	0.4504	0.0431
2034	Mined	OAK-404-13B	641	1.70	6	6	6	0.60	1.0224	0.4504	0.4605
2034	Mined	OAK-404-15	513	0.23	7	6	6	0.63	0.1431	0.4504	0.0645
2034	Disturbed	OAK-404-16	213	2.65	7	7	7	0.70	1.8578	0.4504	0.8367
2034	Disturbed	OAK-404-17A	641	12.23	7	7	8	0.73	8.9707	0.4504	4.0404
2034	Mined	OAK-404-17B	647	1.84	7	7	8	0.73	1.3491	0.4504	0.6076
2034	Disturbed	OAK-404-18	213	0.24	7	7	7	0.70	0.1647	0.4504	0.0742
2034	Disturbed	OAK-404-20C	647	3.73	7	6	7	0.67	2.4866	0.4504	1.1200
2034	Mined	OAK-404-22A	641	2.35	7	5	5	0.57	1.3310	0.4504	0.5995
2034	Mined	OAK-404-22B	641	0.11	7	5	5	0.57	0.0605	0.4504	0.0272
2034	Mined	OAK-404-22C	643	2.21	7	5	5	0.57	1.2498	0.4504	0.5629
2034	Mined	OAK-404-22D	211	1.73	7	5	5	0.57	0.9786	0.4504	0.4408
2034	Disturbed	OAK-404-26A	213	1.41	7	4	6	0.57	0.8016	0.4504	0.3610
2034	Disturbed	OAK-404-26C	213	0.46	7	4	6	0.57	0.2601	0.4504	0.1172
2034	Disturbed	OAK-404-26C-647	647	0.04	7	4	6	0.57	0.0232	0.4504	0.0105
2034	Mined	OAK-404-27	641	0.13	7	4	3	0.47	0.0606	0.4504	0.0273
2034	Mined	OAK-404-7A-213	213	4.44	6	6	7	0.63	2.8104	0.4504	1.2658
2034	Mined	OAK-404-9A	641	0.22	6	6	6	0.60	0.1315	0.4504	0.0592
2034	Mined	OAK-404-9B	513	0.53	6	6	6	0.60	0.3169	0.4504	0.1427
2034	Mined	OAK-404-9C	641	4.09	6	6	6	0.60	2.4523	0.4504	1.1045
2034	Disturbed	OAK-433-14B	213	0.35	5	6	4	0.50	0.1741	0.4504	0.0784
2034	Disturbed	OAK-433-5A-641	641	0.00	5	6	6	0.57	0.0002	0.4504	0.0001

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2034	Disturbed	OAK-433-5A-647	647	0.71	5	6	6	0.57	0.4042	0.4504	0.1821
2034	Disturbed	OAK-433-5D-641	641	0.09	5	6	6	0.57	0.0491	0.4504	0.0221
2034	Mined	OSW-I-1328	213	1.33	7	4	2	0.43	0.5745	0.4504	0.2588
2034	Mined	OSW-I-2173	647	0.00	7	1	4	0.40	0.0003	0.4504	0.0001
2034	Mined	OSW-I-2209	213	0.18	6	4	2	0.40	0.0714	0.4504	0.0321
2034	Mined	OSW-I-332	213	0.00	7	4	2	0.43	0.0006	0.4504	0.0003
2034	Mined	OSW-I-448	213	0.00	7	4	2	0.43	0.0012	0.4504	0.0006
2034	Mined	OSW-I-456	213	0.74	6	4	2	0.40	0.2955	0.4504	0.1331
2035	Mined	BRA-324-29A	641	1.68	6	6	8	0.67	1.1184	0.4276	0.4782
2035	Mined	BRA-324-29A-211	211	0.84	6	6	8	0.67	0.5582	0.4276	0.2387
2035	Mined	BRA-324-29A-514	534	0.27	6	6	8	0.67	0.1804	0.4276	0.0771
2035	Mined	BRA-324-29A-534	534	0.35	6	6	8	0.67	0.2331	0.4276	0.0997
2035	Mined	BRA-324-29B	641	0.28	6	6	8	0.67	0.1836	0.4276	0.0785
2035	Mined	BRA-324-29B-211	211	0.10	6	6	8	0.67	0.0682	0.4276	0.0292
2035	Mined	BRA-324-29B-514	514	0.07	6	6	8	0.67	0.0477	0.4276	0.0204
2035	Mined	BRA-325-27D-213	213	1.60	7	7	6	0.67	1.0650	0.4276	0.4554
2035	Mined	BRA-431-12A	641	1.03	7	7	6	0.67	0.6848	0.4276	0.2928
2035	Mined	BRA-431-47-514	514	0.00	8	6	6	0.67	0.0006	0.4276	0.0003
2035	Mined	BRA-431-52A	641	0.57	8	6	5	0.63	0.3587	0.4276	0.1534
2035	Mined	BRA-431-9A	641	1.47	6	6	6	0.60	0.8819	0.4276	0.3771
2035	Mined	BRA-431-9X	513	0.09	6	6	6	0.60	0.0568	0.4276	0.0243
2035	Mined	BRU-324-28	641	0.38	7	4	4	0.50	0.1890	0.4276	0.0808
2035	Mined	BRU-325-2	641	6.40	7	5	5	0.57	3.6274	0.4276	1.5511
2035	Mined	BRU-325-20A	641	2.16	5	6	6	0.57	1.2255	0.4276	0.5240
2035	Mined	BRU-325-20B	647	0.71	5	6	6	0.57	0.3996	0.4276	0.1709
2035	Mined	BRU-325-21	641	0.07	4	6	4	0.47	0.0328	0.4276	0.0140
2035	Mined	BRU-325-22A	641	1.57	4	6	5	0.50	0.7829	0.4276	0.3348
2035	Mined	BRU-325-22B	211	4.36	4	6	5	0.50	2.1807	0.4276	0.9325
2035	Mined	BRU-325-22B-514	514	0.02	4	6	5	0.50	0.0115	0.4276	0.0049
2035	Mined	BRU-325-6B	641	2.23	7	6	6	0.63	1.4095	0.4276	0.6027
2035	Mined	BRU-325-7A	514	0.03	5	6	5	0.53	0.0149	0.4276	0.0064
2035	Mined	BRU-325-7B	641	2.06	5	6	5	0.53	1.0975	0.4276	0.4693
2035	Mined	BRU-325-8	641	0.86	5	7	5	0.57	0.4881	0.4276	0.2087
2035	Mined	BRU-325-9A	641	1.98	5	7	6	0.60	1.1903	0.4276	0.5090
2035	Mined	HIC-414-5	641	4.48	4	5	5	0.47	2.0920	0.4276	0.8946

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2035	Mined	HIC-414-5X	534	0.15	4	5	5	0.47	0.0685	0.4276	0.0293
2035	Mined	HIC-414-7	641	2.40	4	7	6	0.57	1.3619	0.4276	0.5824
2035	Mined	HIC-414-8A	641	2.97	5	6	6	0.57	1.6832	0.4276	0.7197
2035	Mined	HIC-414-8E	211	0.46	5	6	6	0.57	0.2615	0.4276	0.1118
2035	Mined	HIC-414-8F	641	2.27	5	6	6	0.57	1.2882	0.4276	0.5509
2035	Mined	HIC-414-8G	211	8.62	5	6	6	0.57	4.8833	0.4276	2.0881
2035	Mined	HIC-414-9	641	4.17	5	6	6	0.57	2.3619	0.4276	1.0099
2035	Mined	HIC-423-10	641	7.02	7	6	5	0.60	4.2094	0.4276	1.7999
2035	Mined	HIC-423-10X	513	1.22	7	6	5	0.60	0.7350	0.4276	0.3143
2035	Mined	HIC-423-10X-514	514	0.03	7	6	5	0.60	0.0160	0.4276	0.0069
2035	Mined	HIC-423-12	641	4.51	7	8	7	0.73	3.3057	0.4276	1.4135
2035	Mined	HIC-423-14	641	2.55	7	8	7	0.73	1.8676	0.4276	0.7986
2035	Mined	HIC-423-16A	641	3.66	6	8	8	0.73	2.6865	0.4276	1.1487
2035	Mined	HIC-423-16B	643	1.03	6	8	8	0.73	0.7535	0.4276	0.3222
2035	Mined	HIC-423-23A	647	0.86	6	8	8	0.73	0.6291	0.4276	0.2690
2035	Mined	HIC-423-23B	641	2.40	6	8	8	0.73	1.7578	0.4276	0.7516
2035	Mined	HIC-423-4B	641	4.84	7	8	7	0.73	3.5514	0.4276	1.5186
2035	Mined	HIC-423-4X	513	0.10	7	8	7	0.73	0.0720	0.4276	0.0308
2035	Mined	HIC-423-4X-514	514	0.00	7	8	7	0.73	0.0003	0.4276	0.0001
2035	Mined	HIC-423-5	211	0.31	6	4	4	0.47	0.1442	0.4276	0.0617
2035	Mined	HIC-423-8	647	2.67	7	6	6	0.63	1.6907	0.4276	0.7229
2035	Mined	HIC-423-9X-513	513	0.04	7	6	6	0.63	0.0236	0.4276	0.0101
2035	Mined	OAK-404-10B	641	0.50	6	6	6	0.60	0.2970	0.4276	0.1270
2035	Mined	OAK-404-1A	641	1.02	6	5	4	0.50	0.5090	0.4276	0.2176
2035	Mined	OAK-404-2C	641	16.83	5	5	4	0.47	7.8526	0.4276	3.3578
2035	Mined	OAK-404-2D	641	0.69	5	5	4	0.47	0.3217	0.4276	0.1375
2035	Mined	OAK-404-6A	641	5.51	6	6	7	0.63	3.4882	0.4276	1.4915
2035	Mined	OAK-404-6B	513	0.88	6	6	7	0.63	0.5598	0.4276	0.2394
2035	Mined	OAK-404-7A-213	213	2.23	6	6	7	0.63	1.4123	0.4276	0.6039
2035	Mined	OAK-404-9A	641	0.03	6	6	6	0.60	0.0162	0.4276	0.0069
2035	Mined	OAK-404-9B	513	0.09	6	6	6	0.60	0.0534	0.4276	0.0228
2035	Disturbed	OAK-432-11A	641	0.41	4	7	7	0.60	0.2439	0.4276	0.1043
2035	Disturbed	OAK-432-11B	647	0.68	4	7	7	0.60	0.4079	0.4276	0.1744
2035	Mined	OAK-433-13	647	3.00	5	7	6	0.60	1.8005	0.4276	0.7699
2035	Mined	OAK-433-14A	211	0.01	5	6	4	0.50	0.0044	0.4276	0.0019

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2035	Mined	OAK-433-14B	213	7.06	5	6	4	0.50	3.5294	0.4276	1.5092
2035	Mined	OAK-433-18C-211	211	1.02	5	5	4	0.47	0.4781	0.4276	0.2044
2035	Mined	OAK-433-18C-213	213	0.00	5	5	4	0.47	0.0018	0.4276	0.0008
2035	Mined	OAK-433-18X-513	513	0.14	5	5	4	0.47	0.0644	0.4276	0.0275
2035	Mined	OAK-433-20B	641	0.05	5	6	6	0.57	0.0309	0.4276	0.0132
2035	Mined	OAK-433-5A-641	641	0.00	5	6	6	0.57	0.0003	0.4276	0.0001
2035	Mined	OAK-433-5B	641	0.87	5	6	6	0.57	0.4939	0.4276	0.2112
2035	Mined	OAK-433-5C	641	0.45	5	6	6	0.57	0.2555	0.4276	0.1092
2035	Mined	OAK-433-5D-641	641	0.18	5	6	6	0.57	0.1010	0.4276	0.0432
2035	Mined	OB-432-15	641	0.16	7	7	8	0.73	0.1181	0.4276	0.0505
2035	Mined	OSW-I-2035-641	641	0.00	7	4	2	0.43	0.0000	0.4276	0.0000
2035	Mined	OSW-I-2035-514	514	0.00	7	4	2	0.43	0.0021	0.4276	0.0009
2035	Mined	OSW-I-2042	641	0.11	7	4	3	0.47	0.0503	0.4276	0.0215
2035	Mined	OSW-I-2196	213	1.28	5	4	2	0.37	0.4687	0.4276	0.2004
2035	Mined	OSW-I-288	213	0.06	5	4	2	0.37	0.0236	0.4276	0.0101
2035	Mined	OSW-I-426-514	514	0.11	7	4	4	0.50	0.0567	0.4276	0.0243
2035	Mined	OSW-I-426-641	641	0.00	7	4	4	0.50	0.0016	0.4276	0.0007
2035	Mined	OSW-I-88C	514	0.00	7	4	4	0.50	0.0014	0.4276	0.0006
2035	Mined	OSW-I-88D	641	0.04	7	4	4	0.50	0.0181	0.4276	0.0078
2036	Disturbed	BRU-313-29X	513	0.04	8	7	6	0.70	0.0271	0.4055	0.0110
2036	Mined	BRU-324-11	641	2.18	8	8	8	0.80	1.7405	0.4055	0.7058
2036	Mined	BRU-324-13	641	6.13	6	7	6	0.63	3.8837	0.4055	1.5749
2036	Mined	BRU-324-13X	534	0.19	6	7	6	0.63	0.1219	0.4055	0.0494
2036	Mined	BRU-324-15B	211	0.12	7	4	5	0.53	0.0637	0.4055	0.0258
2036	Mined	BRU-324-16	641	20.46	8	7	8	0.77	15.6874	0.4055	6.3613
2036	Mined	BRU-324-16X-513	513	0.08	8	7	8	0.77	0.0648	0.4055	0.0263
2036	Mined	BRU-324-16X-534	534	0.14	8	7	8	0.77	0.1046	0.4055	0.0424
2036	Mined	BRU-324-17A	641	0.00	7	8	7	0.73	0.0009	0.4055	0.0004
2036	Mined	BRU-324-20	647	0.60	8	8	7	0.77	0.4577	0.4055	0.1856
2036	Mined	BRU-324-21A-213	213	0.00	7	4	4	0.50	0.0003	0.4055	0.0001
2036	Mined	BRU-324-21A-641	641	0.35	7	4	4	0.50	0.1761	0.4055	0.0714
2036	Mined	BRU-324-21C	211	0.62	7	4	4	0.50	0.3116	0.4055	0.1264
2036	Mined	BRU-324-24B	641	5.97	7	5	5	0.57	3.3858	0.4055	1.3729
2036	Mined	BRU-324-24X-513	513	0.34	7	5	5	0.57	0.1951	0.4055	0.0791
2036	Mined	BRU-324-24X-514	514	0.00	7	5	5	0.57	0.0005	0.4055	0.0002

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2036	Mined	BRU-324-44A	211	0.01	7	4	4	0.50	0.0043	0.4055	0.0018
2036	Mined	BRU-324-44B	213	0.01	7	4	4	0.50	0.0059	0.4055	0.0024
2036	Mined	BRU-324-44X-211	211	0.05	8	3	4	0.50	0.0245	0.4055	0.0100
2036	Mined	BRU-324-44X-514	514	0.03	8	3	4	0.50	0.0150	0.4055	0.0061
2036	Mined	HIC-422-15A	211	0.28	6	6	5	0.57	0.1560	0.4055	0.0633
2036	Mined	HIC-422-15B	647	1.15	6	6	5	0.57	0.6535	0.4055	0.2650
2036	Disturbed	HIC-422-4A	647	2.69	3	5	6	0.47	1.2541	0.4055	0.5085
2036	Disturbed	HIC-422-4A-211	211	0.20	3	5	6	0.47	0.0916	0.4055	0.0372
2036	Disturbed	HIC-422-4C	641	0.51	3	5	6	0.47	0.2385	0.4055	0.0967
2036	Disturbed	HIC-422-4X	513	0.29	3	5	6	0.47	0.1340	0.4055	0.0543
2036	Mined	HIC-422-4X-514	514	0.33	3	5	6	0.47	0.1518	0.4055	0.0615
2036	Mined	HIC-423-10	641	0.03	7	6	5	0.60	0.0167	0.4055	0.0068
2036	Mined	HIC-423-19	641	0.08	6	4	4	0.47	0.0360	0.4055	0.0146
2036	Mined	HIC-423-22A	647	0.23	7	8	6	0.70	0.1583	0.4055	0.0642
2036	Mined	HIC-423-22B	641	0.88	7	8	6	0.70	0.6140	0.4055	0.2490
2036	Mined	HIC-423-27A	211	0.23	6	4	2	0.40	0.0901	0.4055	0.0365
2036	Mined	HIC-423-27B	211	0.38	6	4	2	0.40	0.1511	0.4055	0.0613
2036	Mined	HIC-423-7A	641	1.21	6	6	6	0.60	0.7234	0.4055	0.2934
2036	Mined	HIC-423-7B	211	0.59	6	6	6	0.60	0.3556	0.4055	0.1442
2036	Mined	HIC-423-7B-514	514	0.00	6	6	6	0.60	0.0000	0.4055	0.0000
2036	Mined	HIC-423-9X-513	513	0.14	7	6	6	0.63	0.0912	0.4055	0.0370
2036	Mined	HIC-423-9X-534	534	0.11	7	6	6	0.63	0.0682	0.4055	0.0277
2036	Mined	OAK-432-11A	641	1.60	4	7	7	0.60	0.9591	0.4055	0.3889
2036	Mined	OAK-432-11B	647	0.93	4	7	7	0.60	0.5603	0.4055	0.2272
2036	Mined	OAK-432-12A-641	641	2.27	5	5	4	0.47	1.0575	0.4055	0.4288
2036	Mined	OAK-432-12C	211	5.18	5	5	4	0.47	2.4184	0.4055	0.9806
2036	Mined	OAK-432-12C-514	514	0.01	5	5	4	0.47	0.0052	0.4055	0.0021
2036	Disturbed	OAK-432-12D	641	1.69	5	5	4	0.47	0.7882	0.4055	0.3196
2036	Disturbed	OAK-432-12I	211	0.28	5	5	4	0.47	0.1316	0.4055	0.0533
2036	Disturbed	OAK-432-12X-513	513	0.08	5	5	4	0.47	0.0387	0.4055	0.0157
2036	Mined	OB-432-15	641	11.40	7	7	8	0.73	8.3604	0.4055	3.3902
2036	Mined	OB-432-16	647	6.90	6	7	6	0.63	4.3721	0.4055	1.7729
2036	Mined	OB-432-18A	647	3.73	7	7	6	0.67	2.4874	0.4055	1.0087
2036	Mined	OB-432-20B	647	3.05	6	7	6	0.63	1.9335	0.4055	0.7841
2036	Disturbed	OSW-I-102	211	0.05	5	3	2	0.33	0.0168	0.4055	0.0068

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2036	Mined	OSW-I-1324	213	0.41	5	4	2	0.37	0.1519	0.4055	0.0616
2036	Mined	OSW-I-2057	213	0.16	5	4	2	0.37	0.0593	0.4055	0.0241
2036	Mined	OSW-I-394A	213	0.01	7	4	4	0.50	0.0036	0.4055	0.0015
2036	Mined	OSW-I-394C	514	0.29	7	4	4	0.50	0.1473	0.4055	0.0597
2036	Mined	OSW-I-419A	514	0.08	7	4	3	0.47	0.0364	0.4055	0.0148
2036	Mined	OSW-I-419B	641	0.11	7	4	3	0.47	0.0512	0.4055	0.0208
2036	Mined	OSW-I-420	514	0.11	7	4	3	0.47	0.0490	0.4055	0.0199
2036	Mined	OSW-I-420-641	641	0.00	7	4	3	0.47	0.0000	0.4055	0.0000
2036	Mined	OSW-I-426-514	514	0.03	7	4	4	0.50	0.0128	0.4055	0.0052
2036	Mined	OSW-I-81A	211	0.07	7	4	4	0.50	0.0366	0.4055	0.0148
2036	Mined	OSW-I-81B	213	0.05	7	4	4	0.50	0.0270	0.4055	0.0109
2036	Mined	OSW-I-9A	211	0.00	7	4	2	0.43	0.0010	0.4055	0.0004
2036	Mined	OSW-I-9C	641	0.00	7	4	2	0.43	0.0019	0.4055	0.0008
2037	Mined	BRU-313-29X	513	0.02	8	7	6	0.70	0.0125	0.3840	0.0048
2037	Mined	BRU-324-1A	213	0.26	8	4	4	0.53	0.1406	0.3840	0.0540
2037	Mined	BRU-324-1B	641	0.00	8	4	4	0.53	0.0015	0.3840	0.0006
2037	Mined	BRU-324-2	641	7.50	5	6	5	0.53	3.9992	0.3840	1.5357
2037	Mined	BRU-324-33	641	1.59	5	6	6	0.57	0.9021	0.3840	0.3464
2037	Mined	BRU-324-40A	213	0.00	8	4	4	0.53	0.0013	0.3840	0.0005
2037	Mined	BRU-324-45	213	0.07	8	3	3	0.47	0.0330	0.3840	0.0127
2037	Mined	BRU-324-6B	641	1.17	5	5	5	0.50	0.5843	0.3840	0.2244
2037	Mined	BRU-324-6X	641	0.04	5	5	5	0.50	0.0217	0.3840	0.0083
2037	Mined	BRU-324-8	641	2.10	8	6	7	0.70	1.4696	0.3840	0.5643
2037	Mined	BRU-324-8-514	514	0.03	8	6	7	0.70	0.0177	0.3840	0.0068
2037	Mined	HIC-422-15A	211	0.01	6	6	5	0.57	0.0046	0.3840	0.0018
2037	Mined	HIC-422-15B	647	0.36	6	6	5	0.57	0.2064	0.3840	0.0792
2037	Mined	HIC-422-24	641	1.42	7	8	7	0.73	1.0428	0.3840	0.4004
2037	Disturbed	HIC-422-4A	647	0.11	3	5	6	0.47	0.0518	0.3840	0.0199
2037	Mined	HIC-422-4B	641	0.02	3	5	6	0.47	0.0104	0.3840	0.0040
2037	Mined	HIC-422-4D	211	0.42	3	5	6	0.47	0.1942	0.3840	0.0746
2037	Disturbed	HIC-422-4X	513	0.19	3	5	6	0.47	0.0866	0.3840	0.0333
2037	Mined	HIC-422-4X-514	514	0.42	3	5	6	0.47	0.1957	0.3840	0.0751
2037	Mined	OAK-432-12C	211	3.01	5	5	4	0.47	1.4068	0.3840	0.5402
2037	Mined	OAK-432-12D	641	2.61	5	5	4	0.47	1.2178	0.3840	0.4676
2037	Mined	OAK-432-12E	641	1.42	5	5	4	0.47	0.6638	0.3840	0.2549

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2037	Mined	OAK-432-12F	647	0.09	5	5	4	0.47	0.0417	0.3840	0.0160
2037	Mined	OAK-432-12H	211	1.19	5	5	4	0.47	0.5557	0.3840	0.2134
2037	Disturbed	OAK-432-12I	211	0.00	5	5	4	0.47	0.0012	0.3840	0.0005
2037	Mined	OAK-432-12X-513	513	0.70	5	5	4	0.47	0.3287	0.3840	0.1262
2037	Mined	OAK-432-21	641	2.51	5	6	6	0.57	1.4213	0.3840	0.5458
2037	Mined	OB-431-31	641	0.02	9	7	6	0.73	0.0136	0.3840	0.0052
2037	Disturbed	OB-431-48	647	1.76	8	8	6	0.73	1.2925	0.3840	0.4963
2037	Disturbed	OB-431-50	641	0.37	8	7	6	0.70	0.2587	0.3840	0.0994
2037	Mined	OB-431-53	641	0.25	8	8	8	0.80	0.1989	0.3840	0.0764
2037	Mined	OB-432-16	647	0.29	6	7	6	0.63	0.1865	0.3840	0.0716
2037	Mined	OB-432-18A	647	2.66	7	7	6	0.67	1.7749	0.3840	0.6816
2037	Mined	OB-432-18B	211	0.41	7	7	6	0.67	0.2760	0.3840	0.1060
2037	Mined	OB-432-20B	647	1.83	6	7	6	0.63	1.1579	0.3840	0.4446
2037	Mined	OB-432-22A	641	0.60	8	7	4	0.63	0.3781	0.3840	0.1452
2037	Mined	OB-432-23	641	3.50	8	7	6	0.70	2.4474	0.3840	0.9398
2037	Mined	OB-432-27-514	514	0.16	7	7	6	0.67	0.1088	0.3840	0.0418
2037	Disturbed	OSW-I-102	211	0.10	5	3	2	0.33	0.0341	0.3840	0.0131
2037	Mined	OSW-I-107B-211	211	0.00	5	5	4	0.47	0.0000	0.3840	0.0000
2037	Mined	OSW-I-107B-211A	641	0.09	5	5	4	0.47	0.0420	0.3840	0.0161
2037	Mined	OSW-I-107B-427	211	0.00	5	5	4	0.47	0.0004	0.3840	0.0002
2037	Mined	OSW-I-107C	211	0.26	5	4	2	0.37	0.0937	0.3840	0.0360
2037	Disturbed	OSW-I-111G-641	641	0.00	7	3	3	0.43	0.0000	0.3840	0.0000
2037	Mined	OSW-I-2057	213	0.23	5	4	2	0.37	0.0862	0.3840	0.0331
2037	Mined	OSW-I-2077	641	0.01	7	5	5	0.57	0.0067	0.3840	0.0026
2037	Mined	OSW-I-422	641	0.09	7	5	5	0.57	0.0508	0.3840	0.0195
2038	Mined	HIC-422-4A	647	2.10	3	5	6	0.47	0.9786	0.3632	0.3554
2038	Mined	HIC-422-4A-211	211	0.00	3	5	6	0.47	0.0021	0.3632	0.0007
2038	Mined	HIC-422-4B	641	1.49	3	5	6	0.47	0.6936	0.3632	0.2519
2038	Mined	HIC-422-4D	211	0.23	3	5	6	0.47	0.1073	0.3632	0.0390
2038	Mined	HIC-422-4X	513	0.30	3	5	6	0.47	0.1393	0.3632	0.0506
2038	Mined	OAK-432-12C	211	2.50	5	5	4	0.47	1.1655	0.3632	0.4233
2038	Mined	OAK-432-12D	641	7.74	5	5	4	0.47	3.6122	0.3632	1.3119
2038	Mined	OAK-432-12E	641	3.33	5	5	4	0.47	1.5520	0.3632	0.5637
2038	Mined	OAK-432-12F	647	2.60	5	5	4	0.47	1.2122	0.3632	0.4403
2038	Mined	OAK-432-12H	211	1.41	5	5	4	0.47	0.6571	0.3632	0.2387

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2038	Mined	OAK-432-12X-513	513	0.74	5	5	4	0.47	0.3455	0.3632	0.1255
2038	Mined	OAK-432-12X-534	534	0.03	5	5	4	0.47	0.0130	0.3632	0.0047
2038	Mined	OB-431-29-641	641	0.02	7	7	7	0.70	0.0125	0.3632	0.0046
2038	Mined	OB-431-31	641	0.71	9	7	6	0.73	0.5221	0.3632	0.1896
2038	Mined	OB-432-25A	641	0.79	7	7	4	0.60	0.4762	0.3632	0.1729
2038	Mined	OB-432-25B	213	1.38	7	7	4	0.60	0.8273	0.3632	0.3005
2038	Mined	OB-432-28	641	0.10	6	7	5	0.60	0.0582	0.3632	0.0211
2038	Mined	OB-432-29	211	0.68	7	7	4	0.60	0.4090	0.3632	0.1485
2038	Mined	OB-432-43	641	0.45	7	6	4	0.57	0.2539	0.3632	0.0922
2038	Mined	OB-432-44	641	0.88	7	6	4	0.57	0.4997	0.3632	0.1815
2038	Mined	OSW-I-2025-534	534	0.01	5	3	2	0.33	0.0025	0.3632	0.0009
2038	Mined	OSW-I-2025-641	641	0.00	5	3	2	0.33	0.0001	0.3632	0.0000
2038	Mined	OSW-I-2026	211	0.14	5	3	2	0.33	0.0463	0.3632	0.0168
2038	Mined	OSW-I-99	213	0.55	5	4	2	0.37	0.2010	0.3632	0.0730
2039	Mined	BRU-313-3A	641	7.19	7	7	8	0.73	5.2704	0.3429	1.8072
2039	Mined	BRU-313-3B	213	1.52	7	7	8	0.73	1.1171	0.3429	0.3831
2039	Mined	BRU-313-3C	641	2.48	7	7	8	0.73	1.8192	0.3429	0.6238
2039	Mined	BRU-313-3D	213	0.19	7	7	8	0.73	0.1426	0.3429	0.0489
2039	Mined	BRU-313-3E	641	0.04	7	7	8	0.73	0.0300	0.3429	0.0103
2039	Mined	BRU-313-50	534	0.15	7	7	8	0.73	0.1115	0.3429	0.0382
2039	Mined	OAK-432-12D	641	2.88	5	5	4	0.47	1.3447	0.3429	0.4611
2039	Mined	OAK-432-12I	211	0.46	5	5	4	0.47	0.2166	0.3429	0.0743
2039	Mined	OAK-432-12X-513	513	0.02	5	5	4	0.47	0.0075	0.3429	0.0026
2039	Mined	OAK-432-12X-534	534	0.48	5	5	4	0.47	0.2221	0.3429	0.0762
2039	Mined	OB-431-48	647	3.30	8	8	6	0.73	2.4227	0.3429	0.8308
2039	Mined	OB-431-49C	211	0.21	6	6	5	0.57	0.1182	0.3429	0.0405
2039	Mined	OB-431-50	641	0.36	8	7	6	0.70	0.2549	0.3429	0.0874
2039	Mined	OB-431-51	641	0.60	7	7	6	0.67	0.3992	0.3429	0.1369
2039	Mined	OB-432-28	641	2.01	6	7	5	0.60	1.2045	0.3429	0.4130
2039	Mined	OB-432-28-514	514	0.00	6	7	5	0.60	0.0017	0.3429	0.0006
2039	Mined	OB-432-29	211	0.03	7	7	4	0.60	0.0199	0.3429	0.0068
2039	Mined	OB-432-43	641	0.04	7	6	4	0.57	0.0222	0.3429	0.0076
2039	Mined	OSW-I-102	211	0.16	5	3	2	0.33	0.0536	0.3429	0.0184
2039	Mined	OSW-I-111G-641	641	0.07	7	3	3	0.43	0.0287	0.3429	0.0098
2039	Mined	OSW-I-2024	211	0.01	5	3	2	0.33	0.0017	0.3429	0.0006

Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2039	Mined	OSW-I-2025-534	534	0.00	5	3	2	0.33	0.0012	0.3429	0.0004
2039	Mined	OSW-I-2025-641	641	0.00	5	3	2	0.33	0.0013	0.3429	0.0004
2041	Disturbed	HC-328-12B	641	2.69	4	7	8	0.63	1.7016	0.3042	0.5176
				2060.3							**778.9**

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2017	Mined	WFHC-319-2C	617	0.04	5	8	7	0.67	0.0238	0.9612	0.0229
2018	Mined	17-5E	425	3.02	7	7	7	0.70	2.1163	0.9235	1.9544
2018	Mined	17-5F-425	425	0.03	7	7	7	0.70	0.0177	0.9235	0.0164
2018	Mined	17-5G	611	0.06	7	7	7	0.70	0.0452	0.9235	0.0417
2019	Mined	17-5E	425	5.76	7	7	7	0.70	4.0321	0.8870	3.5765
2019	Mined	17-5G	611	7.13	7	7	7	0.70	4.9936	0.8870	4.4293
2019	Mined	17-5H	611	0.06	7	7	7	0.70	0.0390	0.8870	0.0346
2019	Mined	17-5I	425	0.07	7	7	7	0.70	0.0483	0.8870	0.0428
2019	Mined	17-5J	425	0.07	7	7	7	0.70	0.0463	0.8870	0.0411
2019	Mined	17-5L	425	3.04	7	7	7	0.70	2.1305	0.8870	1.8898
2019	Mined	20-12B	617	1.32	4	7	6	0.57	0.7492	0.8870	0.6645
2019	Mined	BRU-315-38A	617	0.19	7	8	7	0.73	0.1409	0.8870	0.1249
2019	Mined	BRU-323-1A	425	1.12	7	7	6	0.67	0.7450	0.8870	0.6608
2019	Mined	OAK-417-3	620	1.47	7	8	8	0.77	1.1252	0.8870	0.9981
2019	Mined	OAK-419-3B	617	3.06	7	7	7	0.70	2.1389	0.8870	1.8972
2019	Mined	OAK-419-3C	434	1.07	7	7	7	0.70	0.7473	0.8870	0.6629
2019	Mined	OAK-419-3D	616	0.51	7	7	7	0.70	0.3570	0.8870	0.3167
2019	Mined	OAK-420-29	616	0.09	7	7	7	0.70	0.0664	0.8870	0.0589
2019	Mined	OAK-420-9A-434	434	5.30	8	8	7	0.77	4.0668	0.8870	3.6072
2019	Mined	OSW-I-300I-434	434	0.06	8	5	6	0.63	0.0350	0.8870	0.0311
2019	Mined	OSW-I-306A-425	425	0.00	8	5	7	0.67	0.0000	0.8870	0.0000
2020	Mined	17-9A	617	0.90	7	8	7	0.73	0.6597	0.8515	0.5617
2020	Mined	17-9C	617	0.04	7	8	7	0.73	0.0286	0.8515	0.0244
2020	Mined	4-14A	617	0.51	8	7	7	0.73	0.3711	0.8515	0.3160
2020	Mined	4-28A	411	0.52	8	8	7	0.77	0.4010	0.8515	0.3415
2020	Mined	4-28A-434	434	1.24	8	8	7	0.77	0.9475	0.8515	0.8068
2020	Mined	4-28D	617	0.13	8	8	7	0.77	0.1034	0.8515	0.0880
2020	Mined	BRU-310-3	434	1.77	8	6	6	0.67	1.1779	0.8515	1.0030
2020	Mined	BRU-310-8	434	1.09	7	7	7	0.70	0.7613	0.8515	0.6483

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2020	Mined	BRU-311-8B	425	0.28	8	8	8	0.80	0.2211	0.8515	0.1883
2020	Mined	BRU-314-2E	427	1.15	8	7	7	0.73	0.8410	0.8515	0.7162
2020	Mined	BRU-315-15A	611	19.78	6	8	8	0.73	14.5029	0.8515	12.3492
2020	Mined	BRU-315-15B	434	0.71	6	8	8	0.73	0.5230	0.8515	0.4453
2020	Mined	BRU-315-38A	617	7.36	7	8	7	0.73	5.3969	0.8515	4.5954
2020	Mined	BRU-315-38B	434	3.15	7	8	7	0.73	2.3069	0.8515	1.9643
2020	Mined	BRU-323-1A	425	0.17	7	7	6	0.67	0.1123	0.8515	0.0956
2020	Mined	BRU-419-22F	434	0.20	6	7	7	0.67	0.1352	0.8515	0.1151
2020	Mined	OAK-417-8A-425	425	0.00	8	9	9	0.87	0.0000	0.8515	0.0000
2020	Mined	OAK-417-8A-427	427	1.54	8	9	9	0.87	1.3349	0.8515	1.1366
2020	Mined	OAK-417-8A-617	617	65.35	8	9	9	0.87	56.6336	0.8515	48.2235
2020	Mined	OAK-417-8B	425	1.59	8	9	9	0.87	1.3772	0.8515	1.1727
2020	Mined	OAK-417-8C	617	7.33	8	9	9	0.87	6.3504	0.8515	5.4073
2020	Mined	OAK-420-1B	427	1.19	8	7	7	0.73	0.8738	0.8515	0.7440
2020	Mined	OAK-420-29	616	0.35	7	7	7	0.70	0.2457	0.8515	0.2092
2020	Mined	OAK-420-30A	617	0.24	8	8	7	0.77	0.1843	0.8515	0.1569
2020	Mined	OAK-420-9A-425	425	0.35	8	8	7	0.77	0.2669	0.8515	0.2273
2020	Mined	OAK-420-9A-434	434	5.97	8	8	7	0.77	4.5806	0.8515	3.9003
2020	Mined	OSW-I-300I-434	434	0.22	8	5	6	0.63	0.1421	0.8515	0.1210
2020	Mined	OSW-I-306A-425	425	0.06	8	5	7	0.67	0.0397	0.8515	0.0338
2020	Mined	OSW-I-511A	427	0.03	4	6	7	0.57	0.0152	0.8515	0.0129
2021	Disturbed	16-10B	425	2.68	8	8	7	0.77	2.0557	0.8170	1.6795
2021	Disturbed	16-11B	617	0.00	5	5	5	0.50	0.0008	0.8170	0.0006
2021	Mined	4-11B	434	1.02	7	6	6	0.63	0.6458	0.8170	0.5276
2021	Mined	4-11C	434	0.98	7	6	6	0.63	0.6214	0.8170	0.5077
2021	Mined	4-11D	613	0.61	7	6	6	0.63	0.3843	0.8170	0.3139
2021	Mined	4-15B	617	0.53	9	8	8	0.83	0.4407	0.8170	0.3600
2021	Disturbed	4-15C	434	1.31	9	8	8	0.83	1.0889	0.8170	0.8896
2021	Disturbed	4-15K	411	0.17	9	8	8	0.83	0.1402	0.8170	0.1145

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2021	Mined	4-28A	411	0.31	8	8	7	0.77	0.2363	0.8170	0.1931
2021	Mined	4-28A-434	434	2.85	8	8	7	0.77	2.1832	0.8170	1.7837
2021	Mined	4-28B	617	1.93	8	8	7	0.77	1.4778	0.8170	1.2073
2021	Mined	4-3E	411	0.23	7	8	8	0.77	0.1748	0.8170	0.1428
2021	Mined	4-9	411	0.35	9	7	6	0.73	0.2534	0.8170	0.2070
2021	Mined	BRU-314-12	617	0.10	6	7	6	0.63	0.0655	0.8170	0.0535
2021	Mined	BRU-314-2E	427	0.01	8	7	7	0.73	0.0042	0.8170	0.0035
2021	Mined	BRU-314-45	425	0.05	8	5	5	0.60	0.0323	0.8170	0.0264
2021	Mined	BRU-314-6A	425	1.08	8	5	5	0.60	0.6492	0.8170	0.5304
2021	Mined	BRU-419-22C	617	1.04	6	7	7	0.67	0.6953	0.8170	0.5681
2021	Mined	BRU-419-22F	434	2.57	6	7	7	0.67	1.7111	0.8170	1.3980
2021	Mined	BRU-419-22H	427	0.73	6	7	7	0.67	0.4856	0.8170	0.3968
2021	Mined	OAK-417-17A	425	2.37	8	8	7	0.77	1.8203	0.8170	1.4872
2021	Mined	OAK-417-30	411	0.02	8	8	7	0.77	0.0157	0.8170	0.0128
2021	Mined	OAK-417-6E	617	0.23	8	8	8	0.80	0.1830	0.8170	0.1495
2021	Mined	OAK-417-8A	411	0.43	8	9	9	0.87	0.3766	0.8170	0.3076
2021	Mined	OAK-417-8A-617	617	3.22	8	9	9	0.87	2.7910	0.8170	2.2802
2021	Mined	OAK-417-8B	425	0.94	8	9	9	0.87	0.8152	0.8170	0.6661
2021	Mined	OAK-420-5C	617	0.59	5	5	5	0.50	0.2932	0.8170	0.2395
2021	Mined	OSW-I-304A	411	0.49	8	5	5	0.60	0.2954	0.8170	0.2413
2021	Disturbed	OSW-I-44	427	0.05	7	5	3	0.50	0.0226	0.8170	0.0185
2021	Disturbed	OSW-I-513A-427	427	0.14	5	6	7	0.60	0.0856	0.8170	0.0699
2022	Mined	4-11C	434	0.63	7	6	6	0.63	0.3969	0.7835	0.3110
2022	Mined	4-11D	613	0.09	7	6	6	0.63	0.0583	0.7835	0.0457
2022	Mined	4-15B	617	2.82	9	8	8	0.83	2.3536	0.7835	1.8441
2022	Mined	4-15C	434	3.75	9	8	8	0.83	3.1259	0.7835	2.4491
2022	Mined	4-15K	411	0.05	9	8	8	0.83	0.0377	0.7835	0.0296
2022	Mined	4-17B	434	0.77	8	8	7	0.77	0.5908	0.7835	0.4629
2022	Mined	4-18B	434	2.04	9	8	7	0.80	1.6327	0.7835	1.2792
2022	Mined	4-28A-434	434	0.19	8	8	7	0.77	0.1446	0.7835	0.1133
2022	Mined	4-3D	425	0.49	7	8	8	0.77	0.3778	0.7835	0.2960
2022	Mined	4-3E	411	3.51	7	8	8	0.77	2.6935	0.7835	2.1104

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2022	Mined	4-7E	617	1.32	7	8	9	0.80	1.0533	0.7835	0.8253
2022	Mined	4-7K	434	1.04	7	8	9	0.80	0.8324	0.7835	0.6522
2022	Mined	4-7Q	617	0.56	7	8	9	0.80	0.4485	0.7835	0.3514
2022	Mined	4-8	434	0.52	7	4	4	0.50	0.2616	0.7835	0.2050
2022	Mined	4-9	411	0.48	9	7	6	0.73	0.3514	0.7835	0.2753
2022	Mined	BRU-310-13A-611	611	8.96	7	8	8	0.77	6.8697	0.7835	5.3824
2022	Mined	BRU-310-13B	434	0.90	7	8	8	0.77	0.6924	0.7835	0.5425
2022	Mined	BRU-310-1A	434	8.52	7	8	8	0.77	6.5317	0.7835	5.1176
2022	Mined	BRU-310-1B	411	0.84	7	8	8	0.77	0.6443	0.7835	0.5048
2022	Mined	BRU-310-2B	617	0.02	9	9	7	0.83	0.0137	0.7835	0.0108
2022	Mined	BRU-314-12	617	1.19	6	7	6	0.63	0.7520	0.7835	0.5892
2022	Mined	BRU-315-1B	434	0.03	6	7	7	0.67	0.0214	0.7835	0.0168
2022	Mined	BRU-315-1D	611	9.12	6	7	7	0.67	6.0774	0.7835	4.7616
2022	Mined	BRU-315-1I-616	616	1.41	6	7	7	0.67	0.9426	0.7835	0.7385
2022	Mined	OAK-417-17A	425	2.16	8	8	7	0.77	1.6580	0.7835	1.2990
2022	Mined	OAK-417-17B	617	6.31	8	8	7	0.77	4.8372	0.7835	3.7900
2022	Mined	OAK-417-5A	434	3.43	8	8	8	0.80	2.7476	0.7835	2.1528
2022	Mined	OAK-417-5B	617	2.71	8	8	8	0.80	2.1677	0.7835	1.6984
2022	Mined	OAK-417-5D	425	1.41	8	8	8	0.80	1.1289	0.7835	0.8845
2022	Mined	OAK-417-6C-411	411	0.34	8	8	8	0.80	0.2732	0.7835	0.2140
2022	Mined	OAK-418-19A	427	0.72	7	6	5	0.60	0.4299	0.7835	0.3368
2022	Mined	OAK-418-19C	425	0.32	7	6	5	0.60	0.1930	0.7835	0.1512
2022	Mined	OAK-418-3B	425	1.15	7	6	4	0.57	0.6492	0.7835	0.5087
2022	Mined	OAK-418-9C	425	1.54	5	7	7	0.63	0.9763	0.7835	0.7649
2022	Mined	OAK-418-9D	425	0.42	5	7	7	0.63	0.2678	0.7835	0.2098
2022	Mined	OAK-418-9E	425	0.13	5	7	7	0.63	0.0825	0.7835	0.0646
2022	Mined	OAK-428-27J	411	0.38	8	8	7	0.77	0.2886	0.7835	0.2261
2022	Mined	OAK-428-27J-427	427	0.83	8	8	7	0.77	0.6371	0.7835	0.4991
2022	Mined	OSW-I-305C-617	617	0.02	8	6	5	0.63	0.0098	0.7835	0.0077
2022	Mined	OSW-I-523E	411	0.00	7	6	3	0.53	0.0014	0.7835	0.0011
2022	Mined	OSW-I-523H	434	0.00	8	6	4	0.60	0.0011	0.7835	0.0009
2022	Disturbed	WFHC-319-1C	617	4.87	7	9	8	0.80	3.8958	0.7835	3.0524

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2023	Mined	15-2B	425	0.12	5	5	4	0.47	0.0578	0.7510	0.0434
2023	Mined	4-14A	617	4.55	8	7	7	0.73	3.3348	0.7510	2.5044
2023	Mined	4-14D	434	1.59	8	7	7	0.73	1.1646	0.7510	0.8746
2023	Mined	4-15C	434	0.73	9	8	8	0.83	0.6116	0.7510	0.4593
2023	Mined	4-19	434	0.20	9	7	5	0.70	0.1398	0.7510	0.1050
2023	Mined	4-28A-434	434	1.18	8	8	7	0.77	0.9074	0.7510	0.6815
2023	Mined	4-28D	617	0.76	8	8	7	0.77	0.5862	0.7510	0.4402
2023	Mined	4-3C	617	1.62	7	8	8	0.77	1.2417	0.7510	0.9325
2023	Mined	4-3D	425	6.15	7	8	8	0.77	4.7163	0.7510	3.5420
2023	Mined	4-3E	411	4.47	7	8	8	0.77	3.4241	0.7510	2.5715
2023	Mined	4-3H	434	0.39	7	8	8	0.77	0.2967	0.7510	0.2228
2023	Mined	4-7C	617	4.55	7	8	9	0.80	3.6376	0.7510	2.7318
2023	Mined	4-7K	434	1.04	7	8	9	0.80	0.8284	0.7510	0.6221
2023	Mined	4-7Q	617	0.01	7	8	9	0.80	0.0074	0.7510	0.0056
2023	Mined	BRU-310-10B	434	0.26	7	7	6	0.67	0.1709	0.7510	0.1284
2023	Mined	BRU-310-11	425	0.20	7	6	6	0.63	0.1277	0.7510	0.0959
2023	Mined	BRU-310-2B	617	1.11	9	9	7	0.83	0.9235	0.7510	0.6935
2023	Mined	BRU-310-2C	434	0.46	9	9	7	0.83	0.3860	0.7510	0.2899
2023	Mined	BRU-310-8	434	1.78	7	7	7	0.70	1.2490	0.7510	0.9380
2023	Mined	BRU-315-1A	425	9.75	6	7	7	0.67	6.4996	0.7510	4.8812
2023	Mined	BRU-315-1B	434	0.97	6	7	7	0.67	0.6467	0.7510	0.4857
2023	Mined	BRU-315-1D	611	41.74	6	7	7	0.67	27.8293	0.7510	20.8998
2023	Mined	BRU-315-1E	434	7.48	6	7	7	0.67	4.9875	0.7510	3.7456
2023	Mined	BRU-315-1F	411	0.99	6	7	7	0.67	0.6605	0.7510	0.4960
2023	Mined	BRU-315-1F-434	434	7.08	6	7	7	0.67	4.7220	0.7510	3.5462
2023	Mined	BRU-315-1J	434	4.16	6	7	7	0.67	2.7727	0.7510	2.0823
2023	Mined	BRU-315-2	425	1.16	6	8	7	0.70	0.8115	0.7510	0.6095
2023	Mined	BRU-315-9B	425	0.24	5	4	3	0.40	0.0947	0.7510	0.0711
2023	Disturbed	BRU-326-33A	425	1.27	7	7	7	0.70	0.8856	0.7510	0.6651
2023	Disturbed	BRU-326-33B	411	1.11	7	7	7	0.70	0.7747	0.7510	0.5818
2023	Disturbed	BRU-326-7C	425	0.02	7	7	8	0.73	0.0146	0.7510	0.0109
2023	Disturbed	BRU-326-7D	411	1.47	7	7	8	0.73	1.0754	0.7510	0.8076

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2023	Disturbed	BRU-326-9	434	0.65	9	8	7	0.80	0.5214	0.7510	0.3915
2023	Mined	OAK-419-3B	617	0.50	7	7	7	0.70	0.3479	0.7510	0.2613
2023	Mined	OAK-419-3C	434	0.45	7	7	7	0.70	0.3156	0.7510	0.2370
2023	Disturbed	OAK-420-20B	427	2.52	7	7	6	0.67	1.6767	0.7510	1.2592
2023	Mined	OAK-420-20B-434	434	0.00	7	7	6	0.67	0.0007	0.7510	0.0006
2023	Mined	OAK-420-23B	434	0.66	7	7	7	0.70	0.4603	0.7510	0.3457
2023	Mined	OAK-420-24A-411	411	0.04	7	7	7	0.70	0.0268	0.7510	0.0202
2023	Mined	OAK-420-24B	411	2.69	7	7	7	0.70	1.8861	0.7510	1.4164
2023	Mined	OAK-420-35	434	0.73	6	3	3	0.40	0.2919	0.7510	0.2192
2023	Disturbed	OAK-420-36B	434	0.00	7	5	6	0.60	0.0009	0.7510	0.0007
2023	Mined	OAK-420-38	434	0.05	6	3	3	0.40	0.0204	0.7510	0.0153
2023	Mined	OAK-420-39	434	1.73	6	3	3	0.40	0.6915	0.7510	0.5193
2023	Mined	OAK-420-41	434	0.01	6	3	3	0.40	0.0030	0.7510	0.0023
2023	Mined	OAK-420-43A	434	0.02	6	3	3	0.40	0.0083	0.7510	0.0062
2023	Mined	OAK-420-9H	434	1.40	8	8	7	0.77	1.0704	0.7510	0.8039
2023	Mined	OAK-420-9I	434	1.27	8	8	7	0.77	0.9706	0.7510	0.7289
2023	Mined	OSW-I-112I	427	0.54	6	6	7	0.63	0.3403	0.7510	0.2556
2023	Mined	OSW-I-112K	427	0.19	7	5	5	0.57	0.1065	0.7510	0.0800
2023	Disturbed	OSW-I-303C-434	434	3.76	6	4	7	0.57	2.1328	0.7510	1.6017
2023	Mined	OSW-I-303E	411	0.13	8	7	7	0.73	0.0939	0.7510	0.0705
2023	Mined	OSW-I-303E-434	434	0.47	8	7	7	0.73	0.3468	0.7510	0.2605
2023	Disturbed	OSW-I-303F-434A	427	0.02	7	5	7	0.63	0.0152	0.7510	0.0114
2023	Disturbed	OSW-I-303F-434	434	0.54	7	5	7	0.63	0.3399	0.7510	0.2553
2023	Mined	OSW-I-523B	434	0.13	9	6	3	0.60	0.0756	0.7510	0.0568
2023	Mined	OSW-I-523H	434	0.34	8	6	4	0.60	0.2012	0.7510	0.1511
2023	Disturbed	WFHC-329-9B	411	0.04	4	7	6	0.57	0.0232	0.7510	0.0175
2023	Disturbed	WFHC-329-9B-434	434	0.00	4	7	6	0.57	0.0007	0.7510	0.0006
2024	Disturbed	16-20B	611	0.00	6	7	7	0.67	0.0006	0.7195	0.0004
2024	Mined	4-3E	411	1.27	7	8	8	0.77	0.9726	0.7195	0.6998
2024	Mined	BRA-325-5A	617	10.64	7	7	7	0.70	7.4464	0.7195	5.3577
2024	Mined	BRA-325-5C	616	0.22	7	7	7	0.70	0.1546	0.7195	0.1112
2024	Mined	BRU-315-1D	611	26.85	6	7	7	0.67	17.9024	0.7195	12.8808

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2024	Mined	BRU-315-1F-434	434	0.06	6	7	7	0.67	0.0422	0.7195	0.0304
2024	Mined	BRU-315-7	617	2.26	6	7	8	0.70	1.5805	0.7195	1.1372
2024	Disturbed	HC-328-9	434	1.89	6	5	5	0.53	1.0099	0.7195	0.7266
2024	Mined	OAK-416-11	411	1.56	8	7	6	0.70	1.0928	0.7195	0.7863
2024	Mined	OAK-416-12B-434	434	2.03	7	7	6	0.67	1.3544	0.7195	0.9745
2024	Disturbed	OAK-416-19	411	4.03	7	6	6	0.63	2.5541	0.7195	1.8377
2024	Mined	OAK-416-21	411	0.00	7	6	5	0.60	0.0010	0.7195	0.0007
2024	Mined	OAK-417-3	620	0.01	7	8	8	0.77	0.0059	0.7195	0.0042
2024	Mined	OAK-417-5A	434	1.93	8	8	8	0.80	1.5472	0.7195	1.1132
2024	Mined	OAK-417-8A-617	617	5.80	8	9	9	0.87	5.0261	0.7195	3.6163
2024	Mined	OAK-417-8X	617	0.07	8	9	9	0.87	0.0616	0.7195	0.0443
2024	Disturbed	OAK-421-18B	434	4.02	7	7	6	0.67	2.6816	0.7195	1.9294
2024	Mined	OAK-421-19	427	0.27	8	7	5	0.67	0.1820	0.7195	0.1310
2024	Mined	OAK-421-1B	411	0.48	8	8	9	0.83	0.3987	0.7195	0.2869
2024	Mined	OAK-421-2	425	1.61	8	6	7	0.70	1.1302	0.7195	0.8132
2024	Mined	OAK-421-21D	434	2.13	8	8	7	0.77	1.6319	0.7195	1.1741
2024	Mined	OAK-421-22A	434	0.01	8	8	8	0.80	0.0070	0.7195	0.0050
2024	Mined	OAK-421-38-434	434	4.59	8	8	8	0.80	3.6731	0.7195	2.6428
2024	Mined	OAK-421-39B	411	0.24	8	8	8	0.80	0.1891	0.7195	0.1361
2024	Mined	OAK-421-8A-411	411	0.42	8	7	7	0.73	0.3083	0.7195	0.2218
2024	Disturbed	OAK-421-8A	434	14.84	8	7	7	0.73	10.8828	0.7195	7.8302
2024	Disturbed	OAK-421-8B	617	8.73	8	7	7	0.73	6.4017	0.7195	4.6060
2024	Disturbed	OAK-428-2	434	2.19	7	4	4	0.50	1.0937	0.7195	0.7869
2024	Mined	OAK-428-27D	434	0.37	8	8	7	0.77	0.2811	0.7195	0.2023
2024	Mined	OAK-428-27E	434	0.23	8	8	7	0.77	0.1776	0.7195	0.1278
2024	Disturbed	OAK-428-27F-411	411	0.04	8	8	7	0.77	0.0341	0.7195	0.0245
2024	Disturbed	OAK-428-27F	434	0.50	8	8	7	0.77	0.3844	0.7195	0.2766
2024	Disturbed	OAK-428-27G	434	0.22	8	8	7	0.77	0.1664	0.7195	0.1197
2024	Mined	OAK-428-27I-434	434	0.00	8	8	7	0.77	0.0002	0.7195	0.0001
2024	Disturbed	OAK-428-27J	411	0.87	8	8	7	0.77	0.6673	0.7195	0.4801
2024	Disturbed	OAK-428-27K	411	1.32	8	8	7	0.77	1.0095	0.7195	0.7263
2024	Mined	OAK-428-27L	411	0.00	8	8	7	0.77	0.0002	0.7195	0.0001

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2024	Disturbed	OAK-428-27M	411	0.92	8	8	7	0.77	0.7029	0.7195	0.5057
2024	Mined	OAK-428-3-434	434	0.00	7	4	4	0.50	0.0004	0.7195	0.0003
2024	Mined	OSW-I-107E-427A	427	0.17	5	5	6	0.53	0.0898	0.7195	0.0646
2024	Mined	OSW-I-111G	427	0.08	7	3	3	0.43	0.0335	0.7195	0.0241
2024	Mined	OSW-I-203A-213	617	0.09	4	7	3	0.47	0.0412	0.7195	0.0297
2024	Disturbed	OSW-I-301F	411	0.34	8	6	5	0.63	0.2159	0.7195	0.1553
2024	Mined	OSW-I-301G-321A	411	0.00	8	6	8	0.73	0.0022	0.7195	0.0015
2024	Mined	OSW-I-301G-411	411	0.38	8	6	8	0.73	0.2799	0.7195	0.2014
2024	Disturbed	OSW-I-302B-411	411	0.07	7	4	3	0.47	0.0306	0.7195	0.0220
2024	Disturbed	OSW-I-302B-411A	434	0.00	7	4	3	0.47	0.0000	0.7195	0.0000
2024	Disturbed	OSW-I-302B-434	434	0.56	7	4	3	0.47	0.2628	0.7195	0.1891
2024	Mined	OSW-I-302D-434	434	0.18	8	6	7	0.70	0.1281	0.7195	0.0922
2024	Mined	OSW-I-302E	434	0.02	8	7	9	0.80	0.0178	0.7195	0.0128
2024	Disturbed	OSW-I-303G-411	434	0.00	7	5	7	0.63	0.0000	0.7195	0.0000
2024	Disturbed	OSW-I-303G-434	434	0.05	7	5	7	0.63	0.0293	0.7195	0.0211
2024	Mined	OSW-I-303H-411A	434	0.00	8	6	9	0.77	0.0006	0.7195	0.0004
2024	Mined	OSW-I-303H-434	434	0.46	8	6	9	0.77	0.3528	0.7195	0.2539
2024	Disturbed	WFHC-319-1C	617	0.00	7	9	8	0.80	0.0031	0.7195	0.0023
2024	Disturbed	WFHC-319-8	617	2.54	7	8	8	0.77	1.9481	0.7195	1.4016
2024	Mined	WFHC-329-14	617	0.76	6	8	8	0.73	0.5557	0.7195	0.3998
2024	Disturbed	WFHC-329-15	425	3.93	5	8	6	0.63	2.4874	0.7195	1.7897
2024	Mined	WFHC-329-17	611	1.83	5	8	8	0.70	1.2820	0.7195	0.9224
2024	Mined	WFHC-329-18A	617	1.27	5	8	7	0.67	0.8460	0.7195	0.6087
2024	Mined	WFHC-329-4	434	7.47	6	7	7	0.67	4.9784	0.7195	3.5820
2024	Disturbed	WFHC-329-8A	434	4.74	5	8	6	0.63	2.9992	0.7195	2.1580
2024	Mined	WFHC-329-8E	434	1.12	5	8	6	0.63	0.7101	0.7195	0.5109
2024	Disturbed	WFHC-329-9B	411	0.34	4	7	6	0.57	0.1920	0.7195	0.1382
2024	Disturbed	WFHC-329-9B-434	434	0.65	4	7	6	0.57	0.3701	0.7195	0.2663
2024	Mined	WFHC-330-11	611	0.81	6	5	4	0.50	0.4073	0.7195	0.2930
2024	Mined	WFHC-330-12	611	1.60	6	8	8	0.73	1.1730	0.7195	0.8440
2024	Mined	WFHC-330-21B	611	0.00	6	8	8	0.73	0.0034	0.7195	0.0025
2024	Disturbed	WFHC-330-21C	617	0.04	6	8	8	0.73	0.0321	0.7195	0.0231

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2024	Disturbed	WFHC-330-5B-611	611	2.41	6	8	8	0.73	1.7703	0.7195	1.2737
2024	Disturbed	WFHC-330-6C	617	12.18	6	8	8	0.73	8.9328	0.7195	6.4272
2024	Mined	WFHC-330-9A	434	1.36	6	8	7	0.70	0.9542	0.7195	0.6866
2024	Mined	WFHC-330-9B	611	0.97	6	8	7	0.70	0.6759	0.7195	0.4863
2024	Mined	WFHC-330-9C	425	0.69	6	8	7	0.70	0.4825	0.7195	0.3472
2025	Mined	BRA-325-5A	617	29.47	7	7	7	0.70	20.6305	0.6889	14.2123
2025	Mined	BRA-325-5C	616	0.34	7	7	7	0.70	0.2376	0.6889	0.1637
2025	Mined	HC-328-18	434	2.93	6	7	7	0.67	1.9555	0.6889	1.3472
2025	Mined	HC-328-4	434	29.23	6	7	8	0.70	20.4635	0.6889	14.0973
2025	Mined	HC-328-6A	425	0.43	6	6	5	0.57	0.2424	0.6889	0.1670
2025	Mined	HC-328-6C	620	4.26	6	6	5	0.57	2.4137	0.6889	1.6628
2025	Mined	HC-328-9	434	0.93	6	5	5	0.53	0.4971	0.6889	0.3424
2025	Mined	HIC-427-21A	425	1.92	6	7	7	0.67	1.2770	0.6889	0.8797
2025	Mined	HIC-427-21C	425	1.27	6	7	7	0.67	0.8444	0.6889	0.5817
2025	Mined	HIC-427-21D	425	1.98	6	7	7	0.67	1.3193	0.6889	0.9089
2025	Mined	HIC-427-21E	617	1.31	6	7	7	0.67	0.8735	0.6889	0.6017
2025	Mined	HIC-427-21G	617	4.44	6	7	7	0.67	2.9613	0.6889	2.0400
2025	Disturbed	HIC-427-22H	425	1.05	6	7	6	0.63	0.6675	0.6889	0.4598
2025	Mined	HIC-427-22J-425	425	2.04	6	7	6	0.63	1.2946	0.6889	0.8919
2025	Mined	MYA-330-5C	617	7.15	8	7	7	0.73	5.2397	0.6889	3.6097
2025	Mined	OAK-428-39	425	0.75	7	8	7	0.73	0.5472	0.6889	0.3769
2025	Mined	OAK-428-40A	425	3.30	8	8	8	0.80	2.6418	0.6889	1.8200
2025	Mined	OAK-428-43C	617	3.34	8	8	7	0.77	2.5583	0.6889	1.7624
2025	Mined	OAK-428-43C-425	425	0.34	8	8	7	0.77	0.2607	0.6889	0.1796
2025	Mined	OSW-I-301L	427	1.34	7	6	8	0.70	0.9378	0.6889	0.6460
2025	Mined	OSW-I-301N	427	0.18	8	5	5	0.60	0.1104	0.6889	0.0760
2026	Disturbed	29-10A	617	3.01	6	7	6	0.63	1.9052	0.6591	1.2557
2026	Disturbed	29-10D	427	0.35	6	7	6	0.63	0.2191	0.6591	0.1444
2026	Mined	29-7C	411	0.62	7	6	6	0.63	0.3952	0.6591	0.2605
2026	Mined	29-7D	617	1.48	7	6	6	0.63	0.9369	0.6591	0.6175
2026	Mined	29-7E	611	2.20	7	6	6	0.63	1.3947	0.6591	0.9193
2026	Mined	29-7F	411	4.34	7	6	6	0.63	2.7472	0.6591	1.8107

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2026	Mined	BRA-325-5A	617	2.79	7	7	7	0.70	1.9543	0.6591	1.2881
2026	Mined	BRA-419-15	611	0.86	8	9	9	0.87	0.7448	0.6591	0.4909
2026	Mined	BRA-419-23	427	0.66	8	8	5	0.70	0.4640	0.6591	0.3058
2026	Mined	BRA-430-36	427	0.91	8	7	5	0.67	0.6044	0.6591	0.3984
2026	Mined	BRA-430-37B	427	0.84	8	8	9	0.83	0.6980	0.6591	0.4601
2026	Mined	BRA-430-37C	427	1.45	8	8	9	0.83	1.2119	0.6591	0.7988
2026	Disturbed	BRU-322-14B	425	0.00	7	7	7	0.70	0.0003	0.6591	0.0002
2026	Mined	BRU-323-10B	425	1.00	6	6	5	0.57	0.5674	0.6591	0.3740
2026	Mined	BRU-323-16A	617	1.41	6	7	5	0.60	0.8481	0.6591	0.5590
2026	Mined	BRU-323-17B	434	0.55	6	6	5	0.57	0.3125	0.6591	0.2059
2026	Mined	BRU-323-28C	425	3.10	6	6	6	0.60	1.8594	0.6591	1.2255
2026	Mined	BRU-323-28D	434	3.71	6	6	6	0.60	2.2247	0.6591	1.4663
2026	Mined	BRU-323-28E	425	2.68	6	6	6	0.60	1.6096	0.6591	1.0609
2026	Mined	BRU-323-36	427	3.21	6	5	6	0.57	1.8212	0.6591	1.2004
2026	Mined	BRU-323-6A	434	0.10	6	7	7	0.67	0.0649	0.6591	0.0428
2026	Mined	HC-327-11A	611	1.36	6	8	6	0.67	0.9089	0.6591	0.5990
2026	Mined	HC-327-11B	434	1.07	6	8	6	0.67	0.7159	0.6591	0.4718
2026	Disturbed	HIC-427-21D	425	0.83	6	7	7	0.67	0.5549	0.6591	0.3657
2026	Mined	HIC-427-21G	617	0.14	6	7	7	0.67	0.0913	0.6591	0.0602
2026	Mined	MYA-330-4C	617	0.01	5	4	4	0.43	0.0053	0.6591	0.0035
2026	Mined	MYA-330-5A	617	0.02	8	7	7	0.73	0.0140	0.6591	0.0092
2026	Mined	MYA-330-5C	617	2.97	8	7	7	0.73	2.1802	0.6591	1.4370
2026	Mined	OAK-428-22C	425	1.78	6	7	5	0.60	1.0665	0.6591	0.7029
2026	Disturbed	OSW-I-1343A	434	0.46	7	4	4	0.50	0.2315	0.6591	0.1526
2026	Mined	OSW-I-2035-427	427	0.00	7	4	2	0.43	0.0018	0.6591	0.0012
2026	Mined	OSW-I-301G-425	425	0.33	8	6	8	0.73	0.2434	0.6591	0.1604
2026	Mined	OSW-I-426	427	0.51	7	4	4	0.50	0.2546	0.6591	0.1678
2026	Mined	OSW-I-426-434	434	0.06	7	4	4	0.50	0.0300	0.6591	0.0198
2026	Mined	OSW-I-88B	427	0.23	7	4	4	0.50	0.1155	0.6591	0.0761
2027	Mined	BRA-419-14A	617	1.48	8	7	7	0.73	1.0833	0.6303	0.6828
2027	Mined	BRA-419-14B	617	1.02	8	7	7	0.73	0.7512	0.6303	0.4735
2027	Mined	BRA-419-15	611	2.79	8	9	9	0.87	2.4186	0.6303	1.5244

Table 4-8-A-iii(F)		Mining Impacts by Year for Forested Wetlands									
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2027	Mined	BRA-419-16	427	8.04	7	7	6	0.67	5.3575	0.6303	3.3768
2027	Mined	BRA-419-17	617	0.36	7	7	7	0.70	0.2511	0.6303	0.1582
2027	Mined	BRA-419-18	617	0.60	7	8	7	0.73	0.4403	0.6303	0.2775
2027	Mined	BRA-430-37A	617	1.64	8	8	9	0.83	1.3643	0.6303	0.8599
2027	Mined	BRA-430-37C	427	1.88	8	8	9	0.83	1.5680	0.6303	0.9883
2027	Mined	BRA-430-37D	427	1.06	8	8	9	0.83	0.8814	0.6303	0.5556
2027	Mined	BRA-430-39C	425	0.11	8	7	6	0.70	0.0775	0.6303	0.0489
2027	Mined	BRA-430-6	616	0.23	8	8	8	0.80	0.1869	0.6303	0.1178
2027	Disturbed	BRU-311-4A	617	0.02	9	9	8	0.87	0.0210	0.6303	0.0133
2027	Mined	BRU-314-2E	427	1.18	8	7	7	0.73	0.8628	0.6303	0.5438
2027	Disturbed	BRU-314-47	411	0.20	8	9	7	0.80	0.1565	0.6303	0.0986
2027	Mined	BRU-323-22	434	1.38	7	7	6	0.67	0.9186	0.6303	0.5790
2027	Mined	BRU-323-24C-427	427	0.12	7	3	3	0.43	0.0531	0.6303	0.0334
2027	Mined	BRU-323-31C-616	616	0.30	8	7	7	0.73	0.2188	0.6303	0.1379
2027	Mined	BRU-323-31D-617	617	0.29	8	7	7	0.73	0.2120	0.6303	0.1336
2027	Mined	BRU-323-34A	425	0.35	7	3	3	0.43	0.1528	0.6303	0.0963
2027	Mined	BRU-323-35	411	0.08	8	8	7	0.77	0.0635	0.6303	0.0401
2027	Mined	BRU-323-39A	616	1.44	8	7	8	0.77	1.1078	0.6303	0.6983
2027	Mined	BRU-323-42	427	0.07	7	7	6	0.67	0.0494	0.6303	0.0312
2027	Mined	BRU-323-43A	617	0.02	8	7	7	0.73	0.0142	0.6303	0.0089
2027	Mined	BRU-323-6A	434	0.47	6	7	7	0.67	0.3134	0.6303	0.1976
2027	Mined	BRU-324-48	427	0.00	8	3	3	0.47	0.0006	0.6303	0.0004
2027	Mined	BRU-326-10C	427	0.02	8	8	7	0.77	0.0148	0.6303	0.0093
2027	Mined	BRU-326-11B	616	0.30	7	6	6	0.63	0.1886	0.6303	0.1189
2027	Mined	BRU-326-12B	616	0.13	7	5	6	0.60	0.0781	0.6303	0.0492
2027	Mined	BRU-326-43	427	0.00	8	5	6	0.63	0.0000	0.6303	0.0000
2027	Mined	BRU-326-44	427	0.00	8	5	6	0.63	0.0010	0.6303	0.0006
2027	Mined	BRU-326-45	427	0.03	8	5	6	0.63	0.0213	0.6303	0.0134
2027	Mined	BRU-326-4A	616	0.47	8	6	6	0.67	0.3122	0.6303	0.1968
2027	Mined	BRU-326-4C	434	0.29	8	6	6	0.67	0.1915	0.6303	0.1207
2027	Mined	BRU-326-6A	617	0.18	7	7	5	0.63	0.1140	0.6303	0.0719
2027	Mined	HC-327-11A	611	1.74	6	8	6	0.67	1.1626	0.6303	0.7328

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2027	Mined	HC-327-11B	434	1.37	6	8	6	0.67	0.9150	0.6303	0.5767
2027	Disturbed	HIC-427-1A	617	2.11	3	5	5	0.43	0.9131	0.6303	0.5755
2027	Mined	HIC-427-1A-617	617	0.01	3	5	5	0.43	0.0042	0.6303	0.0026
2027	Mined	MYA-330-5C	617	0.12	8	7	7	0.73	0.0911	0.6303	0.0575
2027	Mined	OAK-422-18A	425	1.06	5	6	6	0.57	0.5994	0.6303	0.3778
2027	Mined	OAK-428-14	425	2.37	9	8	6	0.77	1.8193	0.6303	1.1467
2027	Mined	OAK-428-22C	425	0.22	6	7	5	0.60	0.1293	0.6303	0.0815
2027	Mined	OAK-428-48A	425	0.87	6	7	5	0.60	0.5222	0.6303	0.3291
2027	Mined	OAK-428-48B	425	0.22	6	7	5	0.60	0.1339	0.6303	0.0844
2027	Mined	OSW-I-106A	427	0.70	7	6	9	0.73	0.5099	0.6303	0.3214
2027	Mined	OSW-I-2212A	616	0.06	8	7	7	0.73	0.0463	0.6303	0.0292
2027	Mined	OSW-I-2212B	617	0.05	8	7	7	0.73	0.0367	0.6303	0.0231
2027	Mined	OSW-I-301G-425	425	0.38	8	6	8	0.73	0.2770	0.6303	0.1746
2027	Mined	OSW-I-301M-425	425	0.67	9	6	8	0.77	0.5175	0.6303	0.3262
2027	Mined	OSW-I-394B	425	0.04	7	4	4	0.50	0.0223	0.6303	0.0141
2027	Mined	OSW-I-414	427	0.01	7	5	5	0.57	0.0080	0.6303	0.0050
2027	Mined	OSW-I-426	427	1.96	7	4	4	0.50	0.9795	0.6303	0.6174
2027	Mined	OSW-I-426-434	434	0.41	7	4	4	0.50	0.2058	0.6303	0.1297
2027	Mined	OSW-I-81C	427	0.01	7	4	4	0.50	0.0046	0.6303	0.0029
2027	Disturbed	WFHC-319-1C	617	0.00	7	9	8	0.80	0.0009	0.6303	0.0005
2028	Mined	BRA-419-12-611	611	5.41	7	8	9	0.80	4.3270	0.6022	2.6057
2028	Mined	BRA-419-12-617	617	1.81	7	8	9	0.80	1.4478	0.6022	0.8719
2028	Mined	BRA-419-16	427	4.31	7	7	6	0.67	2.8739	0.6022	1.7307
2028	Mined	BRA-419-17	617	1.02	7	7	7	0.70	0.7168	0.6022	0.4317
2028	Mined	BRA-419-18	617	1.98	7	8	7	0.73	1.4527	0.6022	0.8748
2028	Mined	BRA-419-19	434	5.02	8	7	6	0.70	3.5164	0.6022	2.1176
2028	Mined	BRA-419-20	434	1.06	8	7	7	0.73	0.7744	0.6022	0.4663
2028	Mined	BRA-419-21	617	5.89	8	7	7	0.73	4.3205	0.6022	2.6018
2028	Disturbed	BRU-313-29A	616	0.57	8	7	6	0.70	0.4000	0.6022	0.2409
2028	Disturbed	BRU-314-34	616	2.29	9	6	7	0.73	1.6777	0.6022	1.0103
2028	Disturbed	BRU-314-37	425	0.58	9	6	6	0.70	0.4060	0.6022	0.2445
2028	Disturbed	BRU-314-40C-425	425	0.00	6	8	7	0.70	0.0000	0.6022	0.0000

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2028	Disturbed	BRU-314-40D	616	0.52	6	8	7	0.70	0.3664	0.6022	0.2206
2028	Mined	BRU-323-13	616	2.78	7	7	7	0.70	1.9465	0.6022	1.1722
2028	Mined	BRU-323-14	425	0.79	7	6	6	0.63	0.5009	0.6022	0.3016
2028	Mined	BRU-323-15B	616	2.97	7	7	7	0.70	2.0818	0.6022	1.2537
2028	Mined	BRU-323-22	434	5.39	7	7	6	0.67	3.5917	0.6022	2.1629
2028	Mined	BRU-323-33B	616	0.26	7	5	5	0.57	0.1470	0.6022	0.0885
2028	Mined	BRU-323-3B	425	0.58	7	7	5	0.63	0.3661	0.6022	0.2205
2028	Disturbed	BRU-323-41C	425	2.02	8	7	6	0.70	1.4105	0.6022	0.8494
2028	Mined	BRU-323-42F-616	616	0.19	7	7	6	0.67	0.1277	0.6022	0.0769
2028	Mined	BRU-323-42X-616	616	0.00	7	7	6	0.67	0.0001	0.6022	0.0000
2028	Mined	BRU-324-15A	616	0.06	7	4	5	0.53	0.0337	0.6022	0.0203
2028	Mined	BRU-324-40B	425	0.01	8	4	4	0.53	0.0057	0.6022	0.0034
2028	Mined	BRU-324-40X-425	425	0.11	8	3	3	0.47	0.0525	0.6022	0.0316
2028	Mined	BRU-326-34C	617	0.91	8	8	7	0.77	0.6986	0.6022	0.4207
2028	Mined	OAK-421-35B	425	2.07	8	8	7	0.77	1.5860	0.6022	0.9551
2028	Mined	OAK-421-35B-427	427	0.35	8	8	7	0.77	0.2689	0.6022	0.1619
2028	Mined	OAK-422-18A	425	5.73	5	6	6	0.57	3.2452	0.6022	1.9543
2028	Mined	OAK-422-26B	425	1.46	7	7	4	0.60	0.8779	0.6022	0.5287
2028	Mined	OSW-I-106C-434	434	0.05	6	6	7	0.63	0.0304	0.6022	0.0183
2028	Disturbed	OSW-I-2185	425	0.00	8	4	4	0.53	0.0023	0.6022	0.0014
2028	Mined	OSW-I-301H	425	0.00	8	6	8	0.73	0.0005	0.6022	0.0003
2028	Mined	OSW-I-301I	425	0.02	5	5	8	0.60	0.0110	0.6022	0.0066
2029	Disturbed	16-11B	617	0.67	5	5	5	0.50	0.3338	0.5750	0.1919
2029	Mined	17-9A	617	1.30	7	8	7	0.73	0.9509	0.5750	0.5468
2029	Mined	17-9B	425	0.77	7	8	7	0.73	0.5639	0.5750	0.3243
2029	Mined	20-18B	427	0.00	6	6	6	0.60	0.0011	0.5750	0.0006
2029	Mined	BRA-419-12-611	611	3.16	7	8	9	0.80	2.5257	0.5750	1.4523
2029	Mined	BRA-419-12-617	617	0.88	7	8	9	0.80	0.7061	0.5750	0.4060
2029	Mined	BRA-419-16	427	0.27	7	7	6	0.67	0.1786	0.5750	0.1027
2029	Mined	BRA-419-20	434	3.71	8	7	7	0.73	2.7229	0.5750	1.5656
2029	Mined	BRA-419-21	617	0.90	8	7	7	0.73	0.6620	0.5750	0.3807
2029	Disturbed	BRA-431-32A	434	0.18	8	6	6	0.67	0.1223	0.5750	0.0703

Table 4-8-A-iii(F)		Mining Impacts by Year for Forested Wetlands									
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2029	Disturbed	BRA-431-32C	616	0.52	8	6	6	0.67	0.3450	0.5750	0.1984
2029	Disturbed	BRA-431-32D	425	0.97	8	6	6	0.67	0.6440	0.5750	0.3703
2029	Disturbed	BRA-431-42	425	0.51	8	8	6	0.73	0.3751	0.5750	0.2157
2029	Disturbed	BRA-431-48	425	0.01	5	5	4	0.47	0.0037	0.5750	0.0021
2029	Disturbed	BRA-431-49	425	0.25	7	7	6	0.67	0.1645	0.5750	0.0946
2029	Disturbed	BRA-431-7B	434	0.42	6	7	6	0.63	0.2635	0.5750	0.1515
2029	Disturbed	BRA-431-7C	434	0.53	6	7	6	0.63	0.3342	0.5750	0.1921
2029	Mined	BRU-314-29	425	1.15	6	6	4	0.53	0.6157	0.5750	0.3540
2029	Mined	BRU-323-35	411	0.38	8	8	7	0.77	0.2907	0.5750	0.1672
2029	Mined	BRU-323-42F-616	616	0.20	7	7	6	0.67	0.1326	0.5750	0.0763
2029	Mined	BRU-323-7C	425	0.77	7	7	7	0.70	0.5377	0.5750	0.3092
2029	Disturbed	BRU-336-27A	616	0.52	8	7	7	0.73	0.3811	0.5750	0.2191
2029	Disturbed	BRU-336-27B	616	0.46	8	7	7	0.73	0.3369	0.5750	0.1937
2029	Disturbed	BRU-336-46	425	0.80	8	7	7	0.73	0.5837	0.5750	0.3356
2029	Mined	OAK-420-1B	427	0.87	8	7	7	0.73	0.6392	0.5750	0.3675
2029	Mined	OAK-420-25-411	411	0.21	9	8	7	0.80	0.1690	0.5750	0.0972
2029	Mined	OAK-420-27B	434	0.76	8	8	8	0.80	0.6052	0.5750	0.3480
2029	Mined	OAK-420-27C	620	0.97	8	8	8	0.80	0.7744	0.5750	0.4453
2029	Mined	OAK-420-30A	617	3.96	8	8	7	0.77	3.0347	0.5750	1.7450
2029	Mined	OAK-420-9A-425	425	0.02	8	8	7	0.77	0.0171	0.5750	0.0099
2029	Mined	OAK-420-9A-427	427	0.42	8	8	7	0.77	0.3221	0.5750	0.1852
2029	Mined	OAK-420-9A-434	434	22.93	8	8	7	0.77	17.5768	0.5750	10.1067
2029	Mined	OAK-421-10A	411	0.26	8	7	7	0.73	0.1885	0.5750	0.1084
2029	Mined	OAK-421-10C	425	0.71	8	7	7	0.73	0.5230	0.5750	0.3007
2029	Mined	OAK-421-10D	411	0.13	8	7	7	0.73	0.0965	0.5750	0.0555
2029	Mined	OAK-421-11A	425	2.58	8	8	8	0.80	2.0627	0.5750	1.1860
2029	Mined	OAK-421-15A	425	0.83	9	7	6	0.73	0.6061	0.5750	0.3485
2029	Mined	OAK-421-16C	427	1.33	9	7	7	0.77	1.0194	0.5750	0.5861
2029	Mined	OAK-421-21D	434	2.20	8	8	7	0.77	1.6877	0.5750	0.9704
2029	Mined	OAK-421-22A	434	1.74	8	8	8	0.80	1.3883	0.5750	0.7983
2029	Mined	OAK-421-22C	617	0.76	8	8	8	0.80	0.6100	0.5750	0.3507
2029	Mined	OAK-421-35B	425	1.44	8	8	7	0.77	1.1025	0.5750	0.6339

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2029	Mined	OAK-421-35B-427	427	0.08	8	8	7	0.77	0.0623	0.5750	0.0358
2029	Mined	OAK-421-36B	617	0.83	9	6	6	0.70	0.5816	0.5750	0.3344
2029	Mined	OAK-421-36C	617	0.17	9	6	6	0.70	0.1200	0.5750	0.0690
2029	Mined	OAK-421-36X	617	0.09	9	6	6	0.70	0.0595	0.5750	0.0342
2029	Mined	OAK-421-8A	434	0.00	8	7	7	0.73	0.0029	0.5750	0.0017
2029	Mined	OAK-421-9	434	1.18	8	7	7	0.73	0.8688	0.5750	0.4995
2029	Mined	OAK-429-8-425	425	0.51	8	7	6	0.70	0.3578	0.5750	0.2057
2029	Mined	OAK-429-8-427	427	0.00	8	7	6	0.70	0.0028	0.5750	0.0016
2029	Mined	OSW-I-106C-434	434	0.44	6	6	7	0.63	0.2807	0.5750	0.1614
2029	Mined	OSW-I-106D	434	0.10	6	6	3	0.50	0.0512	0.5750	0.0295
2029	Disturbed	OSW-I-2001	425	0.00	8	5	3	0.53	0.0006	0.5750	0.0004
2029	Disturbed	OSW-I-202A	425	0.24	7	5	5	0.57	0.1377	0.5750	0.0792
2029	Mined	OSW-I-300D-427	427	0.27	8	5	7	0.67	0.1814	0.5750	0.1043
2029	Mined	OSW-I-300D-427A	434	0.00	8	5	7	0.67	0.0032	0.5750	0.0019
2029	Mined	OSW-I-300D-434	425	0.00	8	5	7	0.67	0.0002	0.5750	0.0001
2029	Mined	OSW-I-301M-427	427	0.11	9	6	8	0.77	0.0868	0.5750	0.0499
2029	Mined	OSW-I-302G-434	434	0.00	9	6	8	0.77	0.0002	0.5750	0.0001
2029	Mined	OSW-I-302H-425	425	0.00	9	6	7	0.73	0.0030	0.5750	0.0017
2029	Mined	OSW-I-302I	425	0.07	9	6	7	0.73	0.0482	0.5750	0.0277
2029	Mined	OSW-I-303I-411	434	0.00	8	6	9	0.77	0.0015	0.5750	0.0008
2029	Disturbed	OSW-I-511A	427	0.60	4	6	7	0.57	0.3425	0.5750	0.1969
2029	Disturbed	OSW-I-514A	427	0.05	7	8	7	0.73	0.0336	0.5750	0.0193
2029	Disturbed	WFHC-319-1C	617	0.05	7	9	8	0.80	0.0364	0.5750	0.0209
2029	Mined	WFHC-319-2B	620	2.11	5	8	7	0.67	1.4077	0.5750	0.8094
2029	Mined	WFHC-319-2C	617	6.99	5	8	7	0.67	4.6577	0.5750	2.6782
2029	Mined	WFHC-319-2E	617	0.02	5	8	7	0.67	0.0120	0.5750	0.0069
2029	Mined	WFHC-319-2X	617	0.05	5	8	7	0.67	0.0318	0.5750	0.0183
2030	Disturbed	BRA-431-47-434	434	4.91	8	6	6	0.67	3.2727	0.5486	1.7954
2030	Disturbed	BRA-431-48	425	0.05	5	5	4	0.47	0.0229	0.5486	0.0126
2030	Disturbed	BRA-431-49	425	1.26	7	7	6	0.67	0.8424	0.5486	0.4621
2030	Disturbed	BRA-431-57-434	434	0.12	5	5	4	0.47	0.0578	0.5486	0.0317
2030	Disturbed	BRA-431-59-434	434	0.10	6	7	6	0.63	0.0608	0.5486	0.0333

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2030	Disturbed	BRA-431-9B	434	0.46	6	6	6	0.60	0.2753	0.5486	0.1510
2030	Mined	OAK-416-12B-411	411	1.01	7	7	6	0.67	0.6716	0.5486	0.3685
2030	Mined	OAK-416-12B-434	434	5.14	7	7	6	0.67	3.4283	0.5486	1.8807
2030	Mined	OAK-416-14A-427	427	0.01	7	6	7	0.67	0.0047	0.5486	0.0026
2030	Mined	OAK-416-14B	425	0.90	7	6	7	0.67	0.6013	0.5486	0.3299
2030	Mined	OAK-416-14E	427	2.79	7	6	7	0.67	1.8591	0.5486	1.0199
2030	Disturbed	OAK-416-3A	427	3.03	7	7	6	0.67	2.0224	0.5486	1.1095
2030	Disturbed	OAK-416-3C	427	5.90	7	7	6	0.67	3.9341	0.5486	2.1582
2030	Mined	OAK-416-3D	427	3.46	7	7	6	0.67	2.3058	0.5486	1.2650
2030	Disturbed	OAK-416-4	617	14.72	8	7	7	0.73	10.7923	0.5486	5.9207
2030	Mined	OAK-420-31	434	0.23	8	8	7	0.77	0.1726	0.5486	0.0947
2030	Mined	OAK-420-33	434	4.50	7	7	6	0.67	3.0030	0.5486	1.6475
2030	Mined	OAK-420-34	434	0.00	6	3	3	0.40	0.0002	0.5486	0.0001
2030	Mined	OAK-420-9A-434	434	29.06	8	8	7	0.77	22.2823	0.5486	12.2241
2030	Mined	OAK-420-9B-434	434	0.03	8	8	7	0.77	0.0244	0.5486	0.0134
2030	Mined	OAK-420-9H	434	0.30	8	8	7	0.77	0.2280	0.5486	0.1251
2030	Mined	OAK-420-9I	434	0.00	8	8	7	0.77	0.0021	0.5486	0.0011
2030	Mined	OAK-421-3	427	0.38	7	6	6	0.63	0.2409	0.5486	0.1322
2030	Mined	OAK-421-40	434	2.92	8	7	7	0.73	2.1413	0.5486	1.1747
2030	Mined	OAK-421-44	427	0.09	6	5	5	0.53	0.0467	0.5486	0.0256
2030	Mined	OSW-I-303C-411	411	0.18	6	4	7	0.57	0.1027	0.5486	0.0563
2030	Mined	OSW-I-303C-411A	434	0.00	6	4	7	0.57	0.0000	0.5486	0.0000
2030	Mined	OSW-I-303C-434A	411	0.00	6	4	7	0.57	0.0012	0.5486	0.0007
2030	Mined	OSW-I-303C-434	434	1.35	6	4	7	0.57	0.7630	0.5486	0.4186
2030	Mined	OSW-I-303E	411	0.62	8	7	7	0.73	0.4575	0.5486	0.2510
2030	Mined	OSW-I-303E-434	434	0.27	8	7	7	0.73	0.1982	0.5486	0.1087
2030	Mined	OSW-I-303H-411	411	0.42	8	6	9	0.77	0.3194	0.5486	0.1752
2031	Mined	BRA-429-9B	425	0.36	8	7	6	0.70	0.2545	0.5230	0.1331
2031	Mined	BRA-430-14A	427	1.98	8	8	9	0.83	1.6486	0.5230	0.8622
2031	Mined	BRA-430-14F	617	0.34	8	8	9	0.83	0.2835	0.5230	0.1483
2031	Mined	BRA-430-14G	427	0.04	8	8	9	0.83	0.0355	0.5230	0.0185
2031	Mined	BRA-430-46C	427	0.02	8	8	7	0.77	0.0147	0.5230	0.0077

Table 4-8-A-iii(F)		Mining Impacts by Year for Forested Wetlands									
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2031	Mined	BRA-431-22	434	0.15	8	6	6	0.67	0.1027	0.5230	0.0537
2031	Mined	BRA-431-23B	434	0.11	8	7	7	0.73	0.0778	0.5230	0.0407
2031	Mined	BRA-431-23C	434	0.09	8	7	7	0.73	0.0645	0.5230	0.0337
2031	Mined	BRA-431-23D	434	0.47	8	7	7	0.73	0.3421	0.5230	0.1789
2031	Mined	BRA-431-24A	434	6.86	8	7	6	0.70	4.8003	0.5230	2.5106
2031	Mined	BRA-431-24C	434	0.56	8	7	6	0.70	0.3943	0.5230	0.2062
2031	Mined	BRA-431-24D	434	1.28	8	7	6	0.70	0.8943	0.5230	0.4677
2031	Mined	BRA-431-24E	434	0.59	8	7	6	0.70	0.4123	0.5230	0.2156
2031	Mined	BRA-431-24X-434	434	0.25	8	7	6	0.70	0.1779	0.5230	0.0930
2031	Mined	BRA-431-26A	427	0.80	8	6	6	0.67	0.5317	0.5230	0.2781
2031	Mined	BRA-431-26A-434	434	0.02	8	6	6	0.67	0.0112	0.5230	0.0059
2031	Mined	BRA-431-26B	425	1.49	8	6	6	0.67	0.9904	0.5230	0.5180
2031	Mined	BRA-431-32A	434	8.90	8	6	6	0.67	5.9336	0.5230	3.1033
2031	Mined	BRA-431-32C	616	0.03	8	6	6	0.67	0.0192	0.5230	0.0100
2031	Mined	BRA-431-32D	425	3.12	8	6	6	0.67	2.0783	0.5230	1.0869
2031	Mined	BRA-431-32E	434	0.79	8	6	6	0.67	0.5236	0.5230	0.2738
2031	Mined	BRA-431-33B	434	0.89	8	8	6	0.73	0.6557	0.5230	0.3429
2031	Mined	BRA-431-42	425	0.23	8	8	6	0.73	0.1653	0.5230	0.0865
2031	Mined	BRA-431-46A	434	0.18	8	7	6	0.70	0.1286	0.5230	0.0672
2031	Mined	BRA-431-46B	434	0.13	8	7	6	0.70	0.0908	0.5230	0.0475
2031	Mined	BRA-431-47	425	3.13	8	6	6	0.67	2.0883	0.5230	1.0922
2031	Mined	BRA-431-47-434	434	29.24	8	6	6	0.67	19.4963	0.5230	10.1966
2031	Mined	BRA-431-49	425	3.14	7	7	6	0.67	2.0919	0.5230	1.0941
2031	Mined	BRA-431-50-425	425	0.04	6	7	6	0.63	0.0224	0.5230	0.0117
2031	Mined	BRA-431-52B	434	0.21	8	6	5	0.63	0.1325	0.5230	0.0693
2031	Mined	BRA-431-54-411	411	0.22	8	6	6	0.67	0.1488	0.5230	0.0778
2031	Mined	BRA-431-54	425	0.19	8	6	6	0.67	0.1266	0.5230	0.0662
2031	Mined	BRA-431-54-434	434	0.00	8	6	6	0.67	0.0005	0.5230	0.0002
2031	Mined	BRA-431-55-411	411	0.13	8	6	6	0.67	0.0874	0.5230	0.0457
2031	Mined	BRA-431-55-434	434	0.21	8	6	6	0.67	0.1399	0.5230	0.0732
2031	Mined	BRA-431-58	434	0.34	6	7	6	0.63	0.2154	0.5230	0.1127
2031	Mined	BRA-431-58C	425	0.48	6	7	6	0.63	0.3034	0.5230	0.1587

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2031	Mined	BRA-431-58D	434	0.09	6	7	6	0.63	0.0599	0.5230	0.0313
2031	Mined	BRA-431-58E	434	0.29	6	7	6	0.63	0.1867	0.5230	0.0976
2031	Mined	BRA-431-58F	434	0.07	6	7	6	0.63	0.0450	0.5230	0.0235
2031	Mined	BRA-431-59-434	434	0.02	6	7	6	0.63	0.0135	0.5230	0.0070
2031	Mined	BRA-431-6B	434	0.20	7	7	6	0.67	0.1338	0.5230	0.0700
2031	Mined	BRA-431-7B	434	0.73	6	7	6	0.63	0.4624	0.5230	0.2418
2031	Mined	BRA-431-7C	434	0.20	6	7	6	0.63	0.1248	0.5230	0.0653
2031	Mined	BRA-431-9B	434	0.10	6	6	6	0.60	0.0603	0.5230	0.0315
2031	Mined	BRU-336-23	427	2.41	8	6	6	0.67	1.6097	0.5230	0.8419
2031	Mined	BRU-336-27A	616	0.10	8	7	7	0.73	0.0714	0.5230	0.0374
2031	Mined	BRU-336-46	425	1.41	8	7	7	0.73	1.0352	0.5230	0.5414
2031	Disturbed	HIC-427-2	617	1.58	5	6	6	0.57	0.8941	0.5230	0.4676
2031	Disturbed	HIC-427-24A	617	7.17	6	7	6	0.63	4.5398	0.5230	2.3743
2031	Disturbed	HIC-427-24B-425	425	0.26	6	7	6	0.63	0.1649	0.5230	0.0862
2031	Disturbed	HIC-427-24B-427	427	0.12	6	7	6	0.63	0.0741	0.5230	0.0387
2031	Disturbed	HIC-427-24J	617	0.84	6	7	6	0.63	0.5291	0.5230	0.2767
2031	Mined	HIC-427-25A-427	427	0.30	6	7	6	0.63	0.1870	0.5230	0.0978
2031	Mined	HIC-427-5	617	2.24	6	7	6	0.63	1.4164	0.5230	0.7408
2031	Disturbed	OAK-405-9P	425	3.06	7	8	8	0.77	2.3429	0.5230	1.2253
2031	Disturbed	OAK-429-15	425	0.72	8	7	5	0.67	0.4775	0.5230	0.2497
2031	Mined	OAK-429-8-425	425	1.56	8	7	6	0.70	1.0950	0.5230	0.5727
2031	Mined	OAK-429-8-427	427	0.17	8	7	6	0.70	0.1171	0.5230	0.0613
2031	Disturbed	OAK-429-8-434	434	0.26	8	7	6	0.70	0.1835	0.5230	0.0960
2031	Mined	OSW-I-200A	434	1.79	8	4	7	0.63	1.1336	0.5230	0.5929
2031	Mined	OSW-I-200C	434	0.29	8	4	7	0.63	0.1817	0.5230	0.0950
2031	Mined	OSW-I-202A	425	0.38	7	5	5	0.57	0.2147	0.5230	0.1123
2031	Mined	OSW-I-2219	434	0.00	8	5	7	0.67	0.0014	0.5230	0.0007
2031	Mined	OSW-I-300D2	434	0.18	8	5	7	0.67	0.1184	0.5230	0.0619
2031	Mined	OSW-I-300D-427	427	1.00	8	5	7	0.67	0.6670	0.5230	0.3489
2031	Mined	OSW-I-300D-427A	434	0.90	8	5	7	0.67	0.6008	0.5230	0.3142
2032	Disturbed	BRA-429-11B	617	0.38	8	6	6	0.67	0.2541	0.4981	0.1266
2032	Mined	BRA-430-14G	427	0.99	8	8	9	0.83	0.8276	0.4981	0.4122

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2032	Mined	BRA-430-17E	425	0.62	8	7	6	0.70	0.4330	0.4981	0.2157
2032	Mined	BRA-430-19A	616	1.08	8	7	7	0.73	0.7896	0.4981	0.3933
2032	Mined	BRA-430-19B	616	0.27	8	7	7	0.73	0.1998	0.4981	0.0995
2032	Mined	BRA-430-19D	425	1.32	8	7	7	0.73	0.9658	0.4981	0.4811
2032	Mined	BRA-430-20B	427	0.27	8	7	6	0.70	0.1908	0.4981	0.0950
2032	Mined	BRA-430-21B	434	0.88	7	4	4	0.50	0.4408	0.4981	0.2196
2032	Mined	BRA-430-22B	425	1.47	8	8	7	0.77	1.1299	0.4981	0.5628
2032	Mined	BRA-430-23B	427	0.36	9	9	8	0.87	0.3107	0.4981	0.1548
2032	Mined	BRA-430-28A-425	425	1.41	6	7	6	0.63	0.8935	0.4981	0.4450
2032	Mined	BRA-430-29B	425	1.05	8	7	6	0.70	0.7354	0.4981	0.3663
2032	Mined	BRA-430-30B	434	0.37	8	7	6	0.70	0.2566	0.4981	0.1278
2032	Mined	BRA-430-32	427	0.36	8	8	7	0.77	0.2792	0.4981	0.1391
2032	Disturbed	BRA-430-34	434	2.40	6	7	7	0.67	1.5977	0.4981	0.7958
2032	Disturbed	BRA-430-35C	425	0.53	6	7	8	0.70	0.3726	0.4981	0.1856
2032	Disturbed	BRA-430-35F	427	0.26	6	7	8	0.70	0.1811	0.4981	0.0902
2032	Mined	BRA-430-43A	617	7.69	8	7	7	0.73	5.6360	0.4981	2.8073
2032	Mined	BRA-430-43B	425	2.83	8	7	7	0.73	2.0764	0.4981	1.0342
2032	Mined	BRA-430-43C	425	1.82	8	7	7	0.73	1.3367	0.4981	0.6658
2032	Mined	BRA-430-43E	630	0.30	8	7	7	0.73	0.2182	0.4981	0.1087
2032	Mined	BRA-430-46C	427	1.32	8	8	7	0.77	1.0107	0.4981	0.5034
2032	Disturbed	BRA-430-51-425	425	4.94	8	6	6	0.67	3.2909	0.4981	1.6392
2032	Disturbed	BRA-430-51-427	427	0.07	8	6	6	0.67	0.0449	0.4981	0.0223
2032	Mined	BRA-430-52A	434	2.26	8	6	7	0.70	1.5808	0.4981	0.7874
2032	Mined	BRA-430-52B	425	1.67	8	6	7	0.70	1.1674	0.4981	0.5815
2032	Disturbed	BRA-431-2C	434	0.66	6	7	8	0.70	0.4633	0.4981	0.2308
2032	Mined	BRA-439-33B	425	0.57	8	7	6	0.70	0.3976	0.4981	0.1980
2032	Mined	BRA-439-33B-434	434	0.27	8	7	6	0.70	0.1869	0.4981	0.0931
2032	Mined	HIC-427-25A-427	427	0.21	6	7	6	0.63	0.1331	0.4981	0.0663
2032	Mined	HIC-427-5	617	0.75	6	7	6	0.63	0.4768	0.4981	0.2375
2032	Mined	HIC-427-7B	425	1.06	8	8	5	0.70	0.7414	0.4981	0.3693
2032	Mined	HIC-427-8	427	4.11	7	7	5	0.63	2.6012	0.4981	1.2957
2032	Mined	OAK-405-9C-425	425	1.89	7	8	8	0.77	1.4491	0.4981	0.7218

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2032	Mined	OAK-405-9D-425	425	0.08	7	8	8	0.77	0.0645	0.4981	0.0321
2032	Mined	OAK-405-9H-425	425	0.01	7	8	8	0.77	0.0094	0.4981	0.0047
2032	Mined	OAK-405-9L	617	0.33	7	8	8	0.77	0.2541	0.4981	0.1266
2032	Mined	OAK-405-9N	617	0.94	7	8	8	0.77	0.7200	0.4981	0.3586
2032	Mined	OAK-405-9P	425	1.42	7	8	8	0.77	1.0868	0.4981	0.5413
2032	Disturbed	OSW-I-103A-434	434	0.04	4	5	7	0.53	0.0238	0.4981	0.0118
2032	Disturbed	OSW-I-1331	427	0.00	6	5	5	0.53	0.0000	0.4981	0.0000
2032	Mined	OSW-I-1338	427	0.29	6	4	4	0.47	0.1367	0.4981	0.0681
2032	Disturbed	OSW-I-200D	434	0.11	8	4	4	0.53	0.0567	0.4981	0.0282
2032	Mined	OSW-I-402B	425	0.01	7	6	5	0.60	0.0068	0.4981	0.0034
2033	Mined	BRA-430-17B	434	0.61	8	7	6	0.70	0.4304	0.4739	0.2040
2033	Mined	BRA-430-17C	434	1.33	8	7	6	0.70	0.9312	0.4739	0.4413
2033	Mined	BRA-430-17E	425	0.15	8	7	6	0.70	0.1021	0.4739	0.0484
2033	Mined	BRA-430-52A	434	0.60	8	6	7	0.70	0.4209	0.4739	0.1995
2033	Mined	BRA-430-52B	425	1.27	8	6	7	0.70	0.8908	0.4739	0.4221
2033	Disturbed	HIC-423-26	617	2.60	6	6	5	0.57	1.4757	0.4739	0.6994
2033	Disturbed	HIC-426-15B	427	1.05	6	7	7	0.67	0.6969	0.4739	0.3303
2033	Mined	HIC-426-18	427	0.05	6	4	4	0.47	0.0218	0.4739	0.0103
2033	Mined	HIC-427-8	427	0.39	7	7	5	0.63	0.2484	0.4739	0.1177
2033	Mined	OAK-404-19	425	1.99	7	7	7	0.70	1.3915	0.4739	0.6594
2033	Mined	OAK-404-1B	425	6.63	6	5	4	0.50	3.3138	0.4739	1.5704
2033	Mined	OAK-404-1C-425	425	0.00	6	5	4	0.50	0.0017	0.4739	0.0008
2033	Mined	OAK-404-20A	617	0.42	7	6	7	0.67	0.2816	0.4739	0.1335
2033	Mined	OAK-404-6C	425	0.97	6	6	7	0.63	0.6159	0.4739	0.2919
2033	Mined	OAK-404-6D-425	425	0.00	6	6	7	0.63	0.0011	0.4739	0.0005
2033	Mined	OAK-405-15B	617	1.65	7	6	7	0.67	1.1014	0.4739	0.5220
2033	Mined	OAK-405-16C	425	1.97	7	7	8	0.73	1.4442	0.4739	0.6844
2033	Mined	OAK-433-12	617	0.56	5	7	5	0.57	0.3189	0.4739	0.1511
2033	Mined	OSW-I-103A-434	434	0.01	4	5	7	0.53	0.0067	0.4739	0.0032
2033	Mined	OSW-I-1338	427	0.48	6	4	4	0.47	0.2232	0.4739	0.1058
2034	Mined	BRA-325-5A	617	3.48	7	7	7	0.70	2.4355	0.4504	1.0969
2034	Mined	BRA-430-12B-425	425	1.13	7	6	7	0.67	0.7506	0.4504	0.3381

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2034	Mined	BRA-430-12B-427	427	0.58	7	6	7	0.67	0.3892	0.4504	0.1753
2034	Mined	BRA-430-17A	427	3.50	8	7	6	0.70	2.4497	0.4504	1.1034
2034	Mined	BRA-430-17B	434	0.10	8	7	6	0.70	0.0675	0.4504	0.0304
2034	Mined	BRA-430-17C	434	0.13	8	7	6	0.70	0.0914	0.4504	0.0412
2034	Mined	BRA-430-17D	427	1.30	8	7	6	0.70	0.9111	0.4504	0.4104
2034	Mined	BRA-430-17E	425	4.78	8	7	6	0.70	3.3457	0.4504	1.5069
2034	Mined	BRA-430-17F	425	0.10	8	7	6	0.70	0.0682	0.4504	0.0307
2034	Mined	BRA-430-37A	617	0.06	8	8	9	0.83	0.0503	0.4504	0.0226
2034	Mined	BRA-430-38B	425	1.45	8	7	6	0.70	1.0164	0.4504	0.4578
2034	Mined	BRA-430-39C	425	1.32	8	7	6	0.70	0.9257	0.4504	0.4169
2034	Mined	BRA-430-39D	427	1.26	8	7	6	0.70	0.8802	0.4504	0.3964
2034	Mined	BRA-430-43A	617	0.14	8	7	7	0.73	0.1037	0.4504	0.0467
2034	Mined	BRA-430-43E	630	0.00	8	7	7	0.73	0.0015	0.4504	0.0007
2034	Mined	BRA-430-6	616	7.98	8	8	8	0.80	6.3831	0.4504	2.8749
2034	Mined	BRA-430-7C	425	1.58	7	8	8	0.77	1.2112	0.4504	0.5455
2034	Disturbed	BRA-431-10B	434	0.32	6	5	6	0.57	0.1785	0.4504	0.0804
2034	Disturbed	BRA-431-12B	434	0.08	7	7	6	0.67	0.0521	0.4504	0.0235
2034	Disturbed	BRA-431-47-434	434	1.17	8	6	6	0.67	0.7813	0.4504	0.3519
2034	Disturbed	BRA-431-9B	434	0.03	6	6	6	0.60	0.0176	0.4504	0.0079
2034	Mined	HIC-414-8B	427	0.19	5	6	6	0.57	0.1057	0.4504	0.0476
2034	Mined	HIC-423-13A	425	1.19	7	7	6	0.67	0.7964	0.4504	0.3587
2034	Mined	HIC-427-8	427	12.55	7	7	5	0.63	7.9468	0.4504	3.5792
2034	Disturbed	OAK-433-5A	617	2.92	5	6	6	0.57	1.6548	0.4504	0.7453
2034	Disturbed	OAK-433-5D-617	617	0.00	5	6	6	0.57	0.0016	0.4504	0.0007
2035	Mined	BRA-325-27D-617	617	0.01	7	7	6	0.67	0.0055	0.4276	0.0023
2035	Mined	BRA-325-5A	617	0.05	7	7	7	0.70	0.0338	0.4276	0.0145
2035	Mined	BRA-431-10B	434	0.24	6	5	6	0.57	0.1382	0.4276	0.0591
2035	Mined	BRA-431-12B	434	0.70	7	7	6	0.67	0.4662	0.4276	0.1993
2035	Mined	BRA-431-12X	434	0.06	7	7	6	0.67	0.0416	0.4276	0.0178
2035	Mined	BRA-431-47-434	434	1.14	8	6	6	0.67	0.7572	0.4276	0.3238
2035	Mined	BRA-431-52B	434	0.06	8	6	5	0.63	0.0385	0.4276	0.0165
2035	Mined	BRA-431-9B	434	0.06	6	6	6	0.60	0.0351	0.4276	0.0150

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2035	Mined	BRA-431-9C	434	0.24	6	6	6	0.60	0.1414	0.4276	0.0605
2035	Mined	BRU-325-1	616	1.01	7	6	5	0.60	0.6089	0.4276	0.2604
2035	Mined	BRU-325-3	616	0.83	8	6	6	0.67	0.5523	0.4276	0.2362
2035	Mined	BRU-325-6A	425	0.43	7	6	6	0.63	0.2706	0.4276	0.1157
2035	Mined	HIC-414-4	427	0.44	4	5	6	0.50	0.2188	0.4276	0.0936
2035	Mined	HIC-414-8B	427	4.81	5	6	6	0.57	2.7278	0.4276	1.1664
2035	Mined	HIC-414-8D	427	1.09	5	6	6	0.57	0.6205	0.4276	0.2653
2035	Mined	HIC-423-1	425	5.78	7	8	8	0.77	4.4310	0.4276	1.8947
2035	Mined	HIC-423-13A	425	1.20	7	7	6	0.67	0.8025	0.4276	0.3432
2035	Mined	HIC-423-13B	425	1.22	7	7	6	0.67	0.8141	0.4276	0.3481
2035	Mined	HIC-423-15	425	1.51	6	7	6	0.63	0.9579	0.4276	0.4096
2035	Mined	HIC-423-2A	427	0.09	7	8	8	0.77	0.0691	0.4276	0.0296
2035	Mined	HIC-423-2B	617	2.42	7	8	8	0.77	1.8523	0.4276	0.7920
2035	Mined	HIC-423-3	427	8.86	7	6	6	0.63	5.6125	0.4276	2.3999
2035	Mined	HIC-423-4A	617	0.27	7	8	7	0.73	0.1982	0.4276	0.0848
2035	Mined	HIC-423-4C	427	0.70	7	8	7	0.73	0.5104	0.4276	0.2183
2035	Mined	HIC-423-9C	427	1.70	7	6	6	0.63	1.0738	0.4276	0.4591
2035	Mined	HIC-427-8	427	0.47	7	7	5	0.63	0.2953	0.4276	0.1263
2035	Mined	OAK-404-1B	425	1.70	6	5	4	0.50	0.8483	0.4276	0.3627
2035	Mined	OAK-404-1G	425	0.25	6	5	4	0.50	0.1262	0.4276	0.0539
2035	Disturbed	OAK-432-13A	425	1.87	4	5	4	0.43	0.8122	0.4276	0.3473
2035	Disturbed	OAK-432-13A-427	427	0.62	4	5	4	0.43	0.2705	0.4276	0.1157
2035	Mined	OAK-433-12	617	3.24	5	7	5	0.57	1.8347	0.4276	0.7845
2035	Mined	OAK-433-14C	617	0.01	5	6	4	0.50	0.0048	0.4276	0.0020
2035	Mined	OAK-433-5A	617	14.72	5	6	6	0.57	8.3417	0.4276	3.5669
2035	Mined	OAK-433-5D-617	617	0.00	5	6	6	0.57	0.0001	0.4276	0.0001
2035	Mined	OSW-I-2035-427	427	0.01	7	4	2	0.43	0.0050	0.4276	0.0021
2035	Mined	OSW-I-2210	425	0.59	7	4	3	0.47	0.2755	0.4276	0.1178
2035	Disturbed	OSW-I-337	427	0.08	4	3	5	0.40	0.0333	0.4276	0.0143
2035	Mined	OSW-I-426-616	616	0.00	7	4	4	0.50	0.0010	0.4276	0.0004
2035	Mined	OSW-I-427	427	0.06	7	4	4	0.50	0.0305	0.4276	0.0130
2035	Mined	OSW-I-88B	427	0.00	7	4	4	0.50	0.0013	0.4276	0.0005

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2036	Disturbed	BRU-313-15	425	0.08	9	7	7	0.77	0.0618	0.4055	0.0250
2036	Disturbed	BRU-313-29A	616	3.00	8	7	6	0.70	2.1015	0.4055	0.8521
2036	Mined	BRU-324-12	427	1.32	9	7	6	0.73	0.9669	0.4055	0.3921
2036	Mined	BRU-324-15A	616	0.30	7	4	5	0.53	0.1586	0.4055	0.0643
2036	Mined	BRU-324-17B	427	3.65	7	8	7	0.73	2.6752	0.4055	1.0848
2036	Mined	BRU-324-21B	425	0.35	7	4	4	0.50	0.1731	0.4055	0.0702
2036	Mined	BRU-324-24A	427	1.05	7	5	5	0.57	0.5949	0.4055	0.2412
2036	Mined	BRU-324-34	617	1.02	5	6	5	0.53	0.5464	0.4055	0.2216
2036	Mined	BRU-324-35	425	2.58	8	7	7	0.73	1.8929	0.4055	0.7676
2036	Mined	BRU-324-38	425	0.30	8	5	7	0.67	0.2006	0.4055	0.0813
2036	Mined	BRU-324-39	425	0.10	8	5	7	0.67	0.0674	0.4055	0.0273
2036	Mined	BRU-324-44C	425	0.01	7	4	4	0.50	0.0060	0.4055	0.0024
2036	Mined	BRU-324-9	425	0.75	8	8	7	0.77	0.5767	0.4055	0.2339
2036	Mined	HIC-422-13	611	0.01	6	7	7	0.67	0.0045	0.4055	0.0018
2036	Mined	HIC-422-23	611	6.10	6	8	8	0.73	4.4709	0.4055	1.8130
2036	Mined	HIC-423-1	425	6.45	7	8	8	0.77	4.9418	0.4055	2.0039
2036	Mined	HIC-423-18	427	0.35	6	7	6	0.63	0.2210	0.4055	0.0896
2036	Mined	HIC-423-3	427	2.10	7	6	6	0.63	1.3323	0.4055	0.5403
2036	Mined	HIC-423-6	617	4.33	6	7	7	0.67	2.8872	0.4055	1.1708
2036	Mined	HIC-423-9C	427	0.67	7	6	6	0.63	0.4224	0.4055	0.1713
2036	Mined	HIC-427-8	427	6.89	7	7	5	0.63	4.3661	0.4055	1.7704
2036	Mined	OAK-432-12A-425	425	0.00	5	5	4	0.47	0.0000	0.4055	0.0000
2036	Disturbed	OAK-432-12J	617	0.01	5	5	4	0.47	0.0035	0.4055	0.0014
2036	Mined	OAK-432-13A	425	1.24	4	5	4	0.43	0.5394	0.4055	0.2187
2036	Mined	OAK-432-13A-427	427	0.28	4	5	4	0.43	0.1196	0.4055	0.0485
2036	Disturbed	OAK-432-36A	617	3.25	5	6	7	0.60	1.9473	0.4055	0.7896
2036	Mined	OB-431-27	616	1.35	7	6	6	0.63	0.8560	0.4055	0.3471
2036	Mined	OB-431-28A	616	3.93	8	8	6	0.73	2.8856	0.4055	1.1701
2036	Mined	OB-431-29	425	9.17	7	7	7	0.70	6.4214	0.4055	2.6039
2036	Mined	OB-431-29A	427	0.29	7	7	7	0.70	0.2018	0.4055	0.0818
2036	Mined	OB-432-17	425	1.51	7	6	5	0.60	0.9064	0.4055	0.3676
2036	Mined	OB-432-19	425	2.02	7	6	5	0.60	1.2119	0.4055	0.4914

Table 4-8-A-iii(F)		Mining Impacts by Year for Forested Wetlands									
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2036	Mined	OSW-I-107B-427A	427	0.31	5	5	4	0.47	0.1446	0.4055	0.0586
2036	Mined	OSW-I-107E-427A	427	0.18	5	5	6	0.53	0.0976	0.4055	0.0396
2036	Mined	OSW-I-107E-427-617	617	0.00	5	5	6	0.53	0.0000	0.4055	0.0000
2036	Mined	OSW-I-2075	427	0.03	7	4	4	0.50	0.0128	0.4055	0.0052
2036	Disturbed	OSW-I-2215	616	0.06	8	3	3	0.47	0.0268	0.4055	0.0109
2036	Mined	OSW-I-337	427	0.19	4	3	5	0.40	0.0759	0.4055	0.0308
2036	Mined	OSW-I-394B	425	0.14	7	4	4	0.50	0.0720	0.4055	0.0292
2036	Mined	OSW-I-400G	427	0.10	6	3	3	0.40	0.0385	0.4055	0.0156
2036	Mined	OSW-I-427	427	0.39	7	4	4	0.50	0.1965	0.4055	0.0797
2036	Mined	OSW-I-84B	425	0.05	7	4	4	0.50	0.0235	0.4055	0.0095
2037	Mined	BRU-313-29A	616	2.16	8	7	6	0.70	1.5117	0.3840	0.5805
2037	Mined	BRU-324-10	425	1.12	8	7	6	0.70	0.7864	0.3840	0.3020
2037	Mined	BRU-324-4	617	0.48	8	7	6	0.70	0.3350	0.3840	0.1286
2037	Mined	BRU-324-40B	425	0.00	8	4	4	0.53	0.0003	0.3840	0.0001
2037	Mined	BRU-324-49	425	0.24	8	3	3	0.47	0.1118	0.3840	0.0429
2037	Mined	BRU-324-5	616	1.74	7	8	7	0.73	1.2770	0.3840	0.4904
2037	Mined	BRU-324-9	425	0.10	8	8	7	0.77	0.0758	0.3840	0.0291
2037	Mined	HIC-422-13	611	2.67	6	7	7	0.67	1.7804	0.3840	0.6837
2037	Mined	HIC-422-23	611	8.97	6	8	8	0.73	6.5775	0.3840	2.5258
2037	Mined	HIC-427-8	427	1.65	7	7	5	0.63	1.0429	0.3840	0.4005
2037	Mined	OAK-432-36A	617	1.53	5	6	7	0.60	0.9205	0.3840	0.3535
2037	Mined	OB-431-28	427	0.04	8	8	6	0.73	0.0303	0.3840	0.0116
2037	Mined	OB-431-28A	616	4.54	8	8	6	0.73	3.3267	0.3840	1.2774
2037	Disturbed	OB-431-29	425	7.20	7	7	7	0.70	5.0415	0.3840	1.9360
2037	Mined	OB-431-29A	427	1.58	7	7	7	0.70	1.1077	0.3840	0.4254
2037	Mined	OB-431-30	616	1.86	8	8	6	0.73	1.3625	0.3840	0.5232
2037	Disturbed	OB-431-49A-617	617	0.27	6	6	5	0.57	0.1532	0.3840	0.0588
2037	Mined	OB-432-17	425	0.80	7	6	5	0.60	0.4814	0.3840	0.1849
2037	Mined	OB-432-18B-427	427	0.34	7	7	6	0.67	0.2265	0.3840	0.0870
2037	Mined	OB-432-19	425	1.17	7	6	5	0.60	0.7042	0.3840	0.2704
2037	Mined	OB-432-22B	617	0.10	8	7	4	0.63	0.0636	0.3840	0.0244
2037	Mined	OB-432-27	617	2.89	7	7	6	0.67	1.9235	0.3840	0.7386

Table 4-8-A-iii(F)	Mining Impacts by Year for Forested Wetlands										
Impact Year	Impact Type	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	UMAM	Debit	USACE T-factor	PW Debit
2037	Mined	OSW-I-107B-427A	427	0.02	5	5	4	0.47	0.0077	0.3840	0.0030
2037	Disturbed	OSW-I-111F	434	0.06	8	5	8	0.70	0.0415	0.3840	0.0159
2037	Mined	OSW-I-2136-617	617	0.00	5	3	5	0.43	0.0000	0.3840	0.0000
2037	Mined	OSW-I-2215	616	0.14	8	3	3	0.47	0.0669	0.3840	0.0257
2037	Mined	OSW-I-780	425	0.00	7	5	5	0.57	0.0003	0.3840	0.0001
2037	Mined	OSW-I-8	616	0.02	8	4	3	0.50	0.0075	0.3840	0.0029
2038	Mined	OAK-432-12J	617	0.72	5	5	4	0.47	0.3378	0.3632	0.1227
2038	Mined	OAK-432-36A	617	4.51	5	6	7	0.60	2.7069	0.3632	0.9831
2038	Mined	OB-431-29	425	8.83	7	7	7	0.70	6.1825	0.3632	2.2455
2038	Mined	OB-431-29A	427	1.45	7	7	7	0.70	1.0171	0.3632	0.3694
2038	Mined	OB-432-26A	427	1.31	8	4	5	0.57	0.7427	0.3632	0.2697
2038	Mined	OB-432-26B	617	0.33	8	4	5	0.57	0.1860	0.3632	0.0675
2038	Mined	OB-432-27	617	6.13	7	7	6	0.67	4.0856	0.3632	1.4839
2038	Mined	OSW-I-2136	427	0.80	5	3	5	0.43	0.3452	0.3632	0.1254
2038	Mined	OSW-I-2136-617	617	0.00	5	3	5	0.43	0.0000	0.3632	0.0000
2039	Mined	OAK-432-12J	617	0.04	5	5	4	0.47	0.0183	0.3429	0.0063
2039	Mined	OAK-432-36A	617	0.02	5	6	7	0.60	0.0099	0.3429	0.0034
2039	Mined	OB-431-29	425	11.94	7	7	7	0.70	8.3563	0.3429	2.8654
2039	Mined	OB-431-49A	427	0.28	6	6	5	0.57	0.1588	0.3429	0.0545
2039	Mined	OB-431-49A-617	617	2.88	6	6	5	0.57	1.6293	0.3429	0.5587
2039	Mined	OB-431-49B	616	0.27	6	6	5	0.57	0.1511	0.3429	0.0518
2039	Mined	OB-432-26B	617	0.26	8	4	5	0.57	0.1479	0.3429	0.0507
2039	Mined	OSW-I-111F	434	0.00	8	5	8	0.70	0.0001	0.3429	0.0000
2039	Mined	OSW-I-111G	427	0.03	7	3	3	0.43	0.0139	0.3429	0.0048
				1357.87							**607.62**

Table 4-8-A-v(H)			Lift by Year from Creation/Re-Establishment Herbaceous Wetlands											
Reclamation Year	Year Finish (YF)	Wetland ID	FLUCCS	Acreage	New LL Score	WE Score	New CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-factor Adjusted RFG	Final Credit
2038	2041	16E-2	641	11.11	8	8	7	0.77	8.52	1.25	0.61	0.3519	0.22	2.40
2036	2039	16E-3	641	1.95	7	8	7	0.73	1.43	1.25	0.59	0.3935	0.23	0.45
2030	2033	16E-4	641	6.70	7	8	7	0.73	4.91	1.25	0.59	0.5343	0.31	2.10
2036	2039	16E-4	641	3.53	7	8	7	0.73	2.59	1.25	0.59	0.3935	0.23	0.82
2036	2039	16E-5	641	2.76	7	8	7	0.73	2.02	1.25	0.59	0.3935	0.23	0.64
2037	2040	16E-5	641	23.21	7	8	7	0.73	17.02	1.25	0.59	0.3724	0.22	5.07
2035	2038	21-10	641	10.79	8	8	7	0.77	8.27	1.25	0.61	0.4153	0.25	2.75
2038	2041	21-11	641	6.42	8	8	8	0.80	5.13	1.25	0.64	0.3519	0.23	1.45
2044	2047	21-12	643	0.30	8	8	7	0.77	0.23	1.50	0.51	0.2407	0.12	0.04
2044	2047	21-13	643	13.42	8	8	7	0.77	10.29	1.50	0.51	0.2407	0.12	1.65
2035	2038	21-17	641	0.44	8	8	7	0.77	0.34	1.25	0.61	0.4153	0.25	0.11
2044	2047	21-3	641	1.46	8	8	7	0.77	1.12	1.25	0.61	0.2407	0.15	0.22
2035	2038	21-4	641	0.00	8	8	7	0.77	0.00	1.25	0.61	0.4153	0.25	0.00
2044	2047	21-4	641	1.72	8	8	7	0.77	1.32	1.25	0.61	0.2407	0.15	0.25
2044	2047	21-5	641	8.01	8	8	7	0.77	6.14	1.25	0.61	0.2407	0.15	1.18
2044	2047	21-6	641	11.64	8	8	7	0.77	8.92	1.25	0.61	0.2407	0.15	1.72
2035	2038	21-7	641	2.09	8	8	7	0.77	1.60	1.25	0.61	0.4153	0.25	0.53
2035	2038	21-8	641	4.35	8	8	7	0.77	3.34	1.25	0.61	0.4153	0.25	1.11
2038	2041	21-9	641	11.26	8	8	7	0.77	8.63	1.25	0.61	0.3519	0.22	2.43
2034	2037	22-2	641	9.98	8	8	7	0.77	7.65	1.25	0.61	0.4377	0.27	2.68
2034	2037	22-3	641	25.16	8	8	7	0.77	19.29	1.25	0.61	0.4377	0.27	6.76
2037	2040	22-4	641	4.88	7	8	7	0.73	3.58	1.25	0.59	0.3724	0.22	1.07
2034	2037	22-5	641	0.00	7	8	7	0.73	0.00	1.25	0.59	0.4377	0.26	0.00
2037	2040	22-5	641	15.76	7	8	7	0.73	11.56	1.25	0.59	0.3724	0.22	3.44
2037	2040	22-6	643	0.02	4	7	7	0.60	0.01	1.5	0.40	0.3724	0.15	0.00
2044	2047	22-6	643	12.80	4	7	7	0.60	7.68	1.5	0.40	0.2407	0.10	1.23
2040	2043	23E-3	643	5.32	4	7	7	0.60	3.19	1.5	0.40	0.3126	0.13	0.66
2035	2038	23W-10	641	0.88	8	8	7	0.77	0.67	1.25	0.61	0.4153	0.25	0.22
2047	2050	23W-10	641	3.31	8	8	7	0.77	2.54	1.25	0.61	0.1921	0.12	0.39
2032	2035	23W-11	641	3.79	8	8	7	0.77	2.91	1.25	0.61	0.4846	0.30	1.13
2047	2050	23W-11	641	3.45	8	8	7	0.77	2.64	1.25	0.61	0.1921	0.12	0.41
2035	2038	23W-12	641	1.70	8	8	7	0.77	1.31	1.25	0.61	0.4153	0.25	0.43
2047	2050	23W-12	641	0.54	8	8	7	0.77	0.41	1.25	0.61	0.1921	0.12	0.06
2034	2037	23W-13	641	3.46	9	8	7	0.80	2.77	1.25	0.64	0.4377	0.28	0.97
2047	2050	23W-13	641	0.60	9	8	7	0.80	0.48	1.25	0.64	0.1921	0.12	0.07
2034	2037	23W-14	641	11.50	9	8	7	0.80	9.20	1.25	0.64	0.4377	0.28	3.22
2047	2050	23W-14	641	2.84	9	8	7	0.80	2.27	1.25	0.64	0.1921	0.12	0.35

Reclamation Year	Year Finish (YF)	Wetland ID	FLUCCS	Acreage	New LL Score	WE Score	New CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-factor Adjusted RFG	Final Credit
2033	2036	23W-15	641	14.98	7	8	7	0.73	10.98	1.25	0.59	0.4608	0.27	4.05
2047	2050	23W-15	641	6.86	7	8	7	0.73	5.03	1.25	0.59	0.1921	0.11	0.77
2034	2037	23W-16	641	7.76	9	8	7	0.80	6.21	1.25	0.64	0.4377	0.28	2.17
2035	2038	23W-17	641	24.40	7	8	7	0.73	17.89	1.25	0.59	0.4153	0.24	5.94
2047	2050	23W-3	641	11.72	9	8	7	0.80	9.38	1.25	0.64	0.1921	0.12	1.44
2032	2035	23W-4	641	12.94	9	8	7	0.80	10.35	1.25	0.64	0.4846	0.31	4.01
2035	2038	23W-5	641	0.02	9	8	7	0.80	0.02	1.25	0.64	0.4153	0.27	0.01
2047	2050	23W-5	641	3.66	9	8	7	0.80	2.93	1.25	0.64	0.1921	0.12	0.45
2032	2035	23W-6	641	8.42	9	8	7	0.80	6.74	1.25	0.64	0.4846	0.31	2.61
2032	2035	23W-7	641	2.68	9	8	7	0.80	2.15	1.25	0.64	0.4846	0.31	0.83
2033	2036	23W-8	641	0.03	9	8	7	0.80	0.03	1.25	0.64	0.4608	0.29	0.01
2034	2037	23W-8	641	3.50	9	8	7	0.80	2.80	1.25	0.64	0.4377	0.28	0.98
2034	2037	23W-9	641	2.25	9	8	7	0.80	1.80	1.25	0.64	0.4377	0.28	0.63
2043	2046	24-10	641	0.45	9	8	7	0.80	0.36	1.25	0.64	0.2579	0.17	0.07
2047	2050	24-10	641	3.26	9	8	7	0.80	2.61	1.25	0.64	0.1921	0.12	0.40
2043	2046	24-11	641	1.93	9	8	7	0.80	1.54	1.25	0.64	0.2579	0.17	0.32
2043	2046	24-13	641	24.91	7	8	7	0.73	18.27	1.25	0.59	0.2579	0.15	3.77
2042	2045	24-5	641	3.92	8	8	7	0.77	3.00	1.25	0.61	0.2756	0.17	0.66
2047	2050	24-6	641	11.61	7	8	7	0.73	8.51	1.25	0.59	0.1921	0.11	1.31
2034	2037	24-7	641	6.85	9	8	7	0.80	5.48	1.25	0.64	0.4377	0.28	1.92
2042	2045	24-8	641	4.12	9	8	7	0.80	3.30	1.25	0.64	0.2756	0.18	0.73
2047	2050	24-9	641	3.36	7	8	7	0.73	2.47	1.25	0.59	0.1921	0.11	0.38
2040	2043	25-11	641	6.29	9	8	7	0.80	5.03	1.25	0.64	0.3126	0.20	1.26
2041	2044	25-11	641	3.74	9	8	7	0.80	2.99	1.25	0.64	0.2938	0.19	0.70
2039	2042	25-12	641	3.65	6	8	7	0.70	2.55	1.25	0.56	0.3319	0.19	0.68
2041	2044	25-5	641	7.84	9	8	7	0.80	6.27	1.25	0.64	0.2938	0.19	1.47
2041	2044	25-9	641	5.67	8	8	7	0.77	4.35	1.25	0.61	0.2938	0.18	1.02
2040	2043	26E-10	643	0.38	6	8	7	0.70	0.26	1.50	0.47	0.3126	0.15	0.05
2040	2043	26E-11	641	5.59	6	7	7	0.67	3.72	1.25	0.53	0.3126	0.17	0.93
2039	2042	26E-3	641	18.82	7	8	7	0.73	13.80	1.25	0.59	0.3319	0.19	3.66
2039	2042	26E-4	641	6.12	7	8	7	0.73	4.49	1.25	0.59	0.3319	0.19	1.19
2040	2043	26E-5	641	0.54	6	8	7	0.70	0.38	1.25	0.56	0.3126	0.18	0.09
2039	2042	26E-6	641	2.25	7	8	7	0.73	1.65	1.25	0.59	0.3319	0.19	0.44
2040	2043	26E-7	641	4.55	7	8	7	0.73	3.33	1.25	0.59	0.3126	0.18	0.83
2040	2043	26E-8	641	7.97	7	8	7	0.73	5.85	1.25	0.59	0.3126	0.18	1.46
2040	2043	26E-9	641	13.02	6	8	7	0.70	9.11	1.25	0.56	0.3126	0.18	2.28
2035	2038	26W-10	647	2.85	8	8	7	0.77	2.19	1.25	0.61	0.4153	0.25	0.73
2035	2038	26W-11	647	2.84	8	8	7	0.77	2.18	1.25	0.61	0.4153	0.25	0.72
2035	2038	26W-5	641	65.73	6	8	7	0.70	46.01	1.25	0.56	0.4153	0.23	15.29

Reclamation Year	Year Finish (YF)	Wetland ID	FLUCCS	Acreage	New LL Score	WE Score	New CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-factor Adjusted RFG	Final Credit
2047	2050	26W-6	641	4.92	9	8	7	0.80	3.94	1.25	0.64	0.1921	0.12	0.61
2036	2039	26W-7	643	11.46	8	8	7	0.77	8.79	1.5	0.51	0.3935	0.20	2.31
2035	2038	26W-8	647	0.99	8	8	7	0.77	0.76	1.25	0.61	0.4153	0.25	0.25
2035	2038	26W-9	647	2.29	8	8	7	0.77	1.75	1.25	0.61	0.4153	0.25	0.58
2038	2041	27E-10	641	42.59	6	8	7	0.70	29.81	1.25	0.56	0.3519	0.20	8.39
2038	2041	27E-3	641	51.84	6	8	7	0.70	36.29	1.25	0.56	0.3519	0.20	10.22
2032	2035	27E-4	641	18.83	6	8	7	0.70	13.18	1.25	0.56	0.4846	0.27	5.11
2031	2034	27E-5	641	77.97	6	8	7	0.70	54.58	1.25	0.56	0.5091	0.29	22.23
2032	2035	27E-5	641	13.15	6	8	7	0.70	9.20	1.25	0.56	0.4846	0.27	3.57
2033	2036	27E-5	641	0.08	6	8	7	0.70	0.05	1.25	0.56	0.4608	0.26	0.02
2034	2037	27E-6	641	9.07	8	8	7	0.77	6.95	1.25	0.61	0.4377	0.27	2.44
2038	2041	27E-7	643	6.52	6	8	7	0.70	4.57	1.50	0.47	0.3519	0.16	1.07
2038	2041	27E-8	643	8.43	6	8	7	0.70	5.90	1.50	0.47	0.3519	0.16	1.38
2033	2036	27W-2	641	0.31	6	8	7	0.70	0.21	1.25	0.56	0.4608	0.26	0.08
2034	2037	27W-2	641	9.99	6	8	7	0.70	6.99	1.25	0.56	0.4377	0.25	2.45
2030	2033	28E-10	641	0.71	8	8	7	0.77	0.54	1.25	0.61	0.5343	0.33	0.23
2030	2033	28E-11	641	1.51	8	8	7	0.77	1.15	1.25	0.61	0.5343	0.33	0.49
2032	2035	28E-12	641	2.23	8	8	7	0.77	1.71	1.25	0.61	0.4846	0.30	0.66
2030	2033	28E-13	641	7.28	8	8	7	0.77	5.58	1.25	0.61	0.5343	0.33	2.39
2033	2036	28E-13	641	1.84	8	8	7	0.77	1.41	1.25	0.61	0.4608	0.28	0.52
2033	2036	28E-14	641	6.17	8	8	7	0.77	4.73	1.25	0.61	0.4608	0.28	1.74
2035	2038	28E-15	641	3.11	8	8	7	0.77	2.38	1.25	0.61	0.4153	0.25	0.79
2032	2035	28E-5	641	1.10	6	7	7	0.67	0.73	1.25	0.53	0.4846	0.26	0.28
2032	2035	28E-6	641	15.53	6	8	7	0.70	10.87	1.25	0.56	0.4846	0.27	4.21
2033	2036	28E-7	641	13.45	7	8	7	0.73	9.86	1.25	0.59	0.4608	0.27	3.64
2031	2034	28E-8	641	0.22	8	8	7	0.77	0.16	1.25	0.61	0.5091	0.31	0.07
2031	2034	28E-9	641	0.64	8	8	7	0.77	0.49	1.25	0.61	0.5091	0.31	0.20
2031	2034	28W-1	641	19.37	6	8	7	0.70	13.56	1.25	0.56	0.5091	0.29	5.52
2032	2035	28W-1	641	40.66	6	8	7	0.70	28.46	1.25	0.56	0.4846	0.27	11.03
2031	2034	28W-2	641	16.03	6	8	7	0.70	11.22	1.25	0.56	0.5091	0.29	4.57
2031	2034	28W-4	641	12.09	6	8	7	0.70	8.46	1.25	0.56	0.5091	0.29	3.45
2031	2034	28W-6	643	5.70	6	8	7	0.70	3.99	1.5	0.47	0.5091	0.24	1.35
2031	2034	28W-7	643	5.33	6	8	7	0.70	3.73	1.5	0.47	0.5091	0.24	1.27
2031	2034	28W-8	643	4.93	6	8	7	0.70	3.45	1.5	0.47	0.5091	0.24	1.17
2038	2041	29E-1	641	3.31	7	8	7	0.73	2.43	1.25	0.59	0.3519	0.21	0.68
2033	2036	29E-4	641	4.83	7	8	7	0.73	3.54	1.25	0.59	0.4608	0.27	1.30
2034	2037	29E-4	641	4.77	7	8	7	0.73	3.50	1.25	0.59	0.4377	0.26	1.23
2038	2041	30E-10	641	1.17	7	8	7	0.73	0.86	1.25	0.59	0.3519	0.21	0.24
2038	2041	30E-11	641	4.10	6	8	7	0.70	2.87	1.25	0.56	0.3519	0.20	0.81

Reclamation Year	Year Finish (YF)	Wetland ID	FLUCCS	Acreage	New LL Score	WE Score	New CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-factor Adjusted RFG	Final Credit
2038	2041	30E-12	641	1.37	7	8	7	0.73	1.00	1.25	0.59	0.3519	0.21	0.28
2038	2041	30E-13	641	5.13	7	8	7	0.73	3.76	1.25	0.59	0.3519	0.21	1.06
2038	2041	30E-14	641	4.95	7	8	7	0.73	3.63	1.25	0.59	0.3519	0.21	1.02
2038	2041	30E-15	641	4.94	7	8	7	0.73	3.62	1.25	0.59	0.3519	0.21	1.02
2038	2041	30E-16	641	3.14	7	8	7	0.73	2.31	1.25	0.59	0.3519	0.21	0.65
2038	2041	30E-17	641	18.83	7	8	7	0.73	13.81	1.25	0.59	0.3519	0.21	3.89
2038	2041	30E-22	641	4.81	7	8	7	0.73	3.53	1.25	0.59	0.3519	0.21	0.99
2038	2041	30E-24	641	0.40	7	8	7	0.73	0.29	1.25	0.59	0.3519	0.21	0.08
2038	2041	30E-27	641	0.25	7	8	7	0.73	0.18	1.25	0.59	0.3519	0.21	0.05
2038	2041	30E-28	641	0.43	7	8	7	0.73	0.31	1.25	0.59	0.3519	0.21	0.09
2038	2041	30E-8	641	5.04	6	8	7	0.70	3.53	1.25	0.56	0.3519	0.20	0.99
2038	2041	30E-9	641	3.81	7	8	7	0.73	2.79	1.25	0.59	0.3519	0.21	0.79
2033	2036	30W-5	641	38.08	6	8	7	0.70	26.66	1.25	0.56	0.4608	0.26	9.83
2033	2036	30W-6	647	4.69	6	8	7	0.70	3.28	1.25	0.56	0.4608	0.26	1.21
2037	2040	31E-10	641	0.69	8	8	7	0.77	0.53	1.25	0.61	0.3724	0.23	0.16
2037	2040	31E-11	641	1.67	8	8	7	0.77	1.28	1.25	0.61	0.3724	0.23	0.38
2037	2040	31E-12	641	0.67	8	8	7	0.77	0.51	1.25	0.61	0.3724	0.23	0.15
2037	2040	31E-13	641	1.68	8	8	7	0.77	1.29	1.25	0.61	0.3724	0.23	0.38
2037	2040	31E-14	641	0.59	8	8	7	0.77	0.45	1.25	0.61	0.3724	0.23	0.13
2037	2040	31E-16	641	1.48	8	8	7	0.77	1.13	1.25	0.61	0.3724	0.23	0.34
2037	2040	31E-17	641	7.20	8	8	7	0.77	5.52	1.25	0.61	0.3724	0.23	1.64
2044	2047	31E-17	641	0.01	8	8	7	0.77	0.01	1.25	0.61	0.2407	0.15	0.00
2037	2040	31E-18	641	1.42	8	8	7	0.77	1.09	1.25	0.61	0.3724	0.23	0.32
2044	2047	31E-19	641	2.32	8	8	7	0.77	1.78	1.25	0.61	0.2407	0.15	0.34
2037	2040	31E-20	641	2.98	8	8	7	0.77	2.28	1.25	0.61	0.3724	0.23	0.68
2037	2040	31E-21	641	10.24	8	8	7	0.77	7.85	1.25	0.61	0.3724	0.23	2.34
2037	2040	31E-22	641	0.87	8	8	7	0.77	0.67	1.25	0.61	0.3724	0.23	0.20
2037	2040	31E-23	641	0.82	8	8	7	0.77	0.63	1.25	0.61	0.3724	0.23	0.19
2037	2040	31E-24	641	1.08	8	8	7	0.77	0.83	1.25	0.61	0.3724	0.23	0.25
2037	2040	31E-26	641	1.44	8	8	7	0.77	1.10	1.25	0.61	0.3724	0.23	0.33
2037	2040	31E-27	641	1.46	8	8	7	0.77	1.12	1.25	0.61	0.3724	0.23	0.33
2037	2040	31E-29	641	16.42	8	8	7	0.77	12.59	1.25	0.61	0.3724	0.23	3.75
2043	2046	31E-30	641	0.17	8	8	7	0.77	0.13	1.25	0.61	0.2579	0.16	0.03
2044	2047	31E-30	641	13.98	8	8	7	0.77	10.71	1.25	0.61	0.2407	0.15	2.06
2044	2047	31E-32	641	4.57	8	8	7	0.77	3.50	1.25	0.61	0.2407	0.15	0.67
2036	2039	31E-33	641	1.91	5	8	7	0.67	1.27	1.25	0.53	0.3935	0.21	0.40
2037	2040	31E-33	641	6.82	5	8	7	0.67	4.55	1.25	0.53	0.3724	0.20	1.35
2037	2040	31E-34	641	5.80	5	8	7	0.67	3.86	1.25	0.53	0.3724	0.20	1.15
2041	2044	31E-34	641	4.66	5	8	7	0.67	3.11	1.25	0.53	0.2938	0.16	0.73

Reclamation Year	Year Finish (YF)	Wetland ID	FLUCCS	Acreage	New LL Score	WE Score	New CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-factor Adjusted RFG	Final Credit
2039	2042	31E-35	641	10.27	5	7	8	0.67	6.85	1.25	0.53	0.3319	0.18	1.82
2037	2040	31E-37	643	0.97	8	8	7	0.77	0.75	1.50	0.51	0.3724	0.19	0.19
2037	2040	31E-39	647	1.97	8	8	7	0.77	1.51	1.25	0.61	0.3724	0.23	0.45
2043	2046	31E-40	647	2.27	8	8	7	0.77	1.74	1.25	0.61	0.2579	0.16	0.36
2044	2047	31E-40	647	0.36	8	8	7	0.77	0.28	1.25	0.61	0.2407	0.15	0.05
2037	2040	31E-41	641	2.88	8	8	7	0.77	2.21	1.25	0.61	0.3724	0.23	0.66
2043	2046	31E-41	641	0.20	8	8	7	0.77	0.15	1.25	0.61	0.2579	0.16	0.03
2037	2040	31E-42	641	0.65	8	8	7	0.77	0.50	1.25	0.61	0.3724	0.23	0.15
2044	2047	31E-42	641	1.03	8	8	7	0.77	0.79	1.25	0.61	0.2407	0.15	0.15
2037	2040	31E-7	641	0.31	8	8	7	0.77	0.24	1.25	0.61	0.3724	0.23	0.07
2037	2040	31E-8	641	2.72	8	8	7	0.77	2.08	1.25	0.61	0.3724	0.23	0.62
2045	2048	31E-8	641	2.43	8	8	7	0.77	1.86	1.25	0.61	0.2240	0.14	0.33
2045	2048	31E-9	641	10.74	7	8	7	0.73	7.88	1.25	0.59	0.2240	0.13	1.41
2044	2047	32-10	641	23.90	8	8	7	0.77	18.32	1.25	0.61	0.2407	0.15	3.53
2043	2046	32-11	643	2.20	8	7	7	0.73	1.61	1.50	0.49	0.2579	0.13	0.28
2043	2046	32-12	643	1.00	8	7	7	0.73	0.74	1.5	0.49	0.2579	0.13	0.13
2044	2047	32-13	643	4.08	8	7	7	0.73	2.99	1.50	0.49	0.2407	0.12	0.48
2044	2047	32-14	647	6.84	8	8	7	0.77	5.25	1.25	0.61	0.2407	0.15	1.01
2043	2046	32-15	647	1.88	8	8	7	0.77	1.44	1.25	0.61	0.2579	0.16	0.30
2043	2046	32-16	647	4.39	8	8	7	0.77	3.37	1.25	0.61	0.2579	0.16	0.70
2042	2045	32-18	641	13.76	7	8	7	0.73	10.09	1.25	0.59	0.2756	0.16	2.23
2043	2046	32-18	641	6.46	7	8	7	0.73	4.74	1.25	0.59	0.2579	0.15	0.98
2044	2047	32-18	641	17.43	7	8	7	0.73	12.78	1.25	0.59	0.2407	0.14	2.46
2045	2048	32-18	641	3.91	7	8	7	0.73	2.87	1.25	0.59	0.2240	0.13	0.51
2043	2046	32-19	643	1.05	8	7	7	0.73	0.77	1.50	0.49	0.2579	0.13	0.13
2044	2047	32-20	647	1.72	7	8	7	0.73	1.26	1.25	0.59	0.2407	0.14	0.24
2045	2048	32-6	641	6.86	6	8	7	0.70	4.80	1.25	0.56	0.2240	0.13	0.86
2044	2047	32-7	641	8.57	7	8	7	0.73	6.28	1.25	0.59	0.2407	0.14	1.21
2045	2048	32-7	641	18.48	7	8	7	0.73	13.55	1.25	0.59	0.2240	0.13	2.43
2044	2047	32-8	641	20.75	8	8	7	0.77	15.91	1.25	0.61	0.2407	0.15	3.06
2043	2046	32-9	641	1.39	8	8	7	0.77	1.07	1.25	0.61	0.2579	0.16	0.22
2044	2047	32-9	641	3.22	8	8	7	0.77	2.47	1.25	0.61	0.2407	0.15	0.47
2041	2044	33-3	641	7.85	6	8	7	0.70	5.50	1.25	0.56	0.2938	0.16	1.29
2032	2035	33-4	641	7.68	6	8	7	0.70	5.38	1.25	0.56	0.4846	0.27	2.08
2041	2044	33-6	641	2.32	6	8	7	0.70	1.63	1.25	0.56	0.2938	0.16	0.38
2041	2044	4E-10	641	1.00	5	6	7	0.60	0.60	1.25	0.48	0.2938	0.14	0.14
2039	2042	4E-4	641	88.04	6	8	7	0.70	61.63	1.25	0.56	0.3319	0.19	16.37
2040	2043	4E-4	641	14.82	6	8	7	0.70	10.38	1.25	0.56	0.3126	0.18	2.60
2041	2044	4E-4	641	25.28	6	8	7	0.70	17.70	1.25	0.56	0.2938	0.16	4.16

Reclamation Year	Year Finish (YF)	Wetland ID	FLUCCS	Acreage	New LL Score	WE Score	New CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-factor Adjusted RFG	Final Credit
2039	2042	4E-8	641	0.06	6	8	7	0.70	0.04	1.25	0.56	0.3319	0.19	0.01
2040	2043	4E-8	641	24.40	6	8	7	0.70	17.08	1.25	0.56	0.3126	0.18	4.27
2041	2044	4E-8	641	2.41	6	8	7	0.70	1.69	1.25	0.56	0.2938	0.16	0.40
2039	2042	5-1	649	28.91	6	8	7	0.70	20.24	1.25	0.56	0.3319	0.19	5.37
2040	2043	5-1	649	0.10	6	8	7	0.70	0.07	1.25	0.56	0.3126	0.18	0.02
2038	2041	5-11	641	59.64	6	8	7	0.70	41.75	1.25	0.56	0.3519	0.20	11.75
2039	2042	5-11	641	38.12	6	8	7	0.70	26.68	1.25	0.56	0.3319	0.19	7.09
2040	2043	5-11	641	0.35	6	8	7	0.70	0.24	1.25	0.56	0.3126	0.18	0.06
2038	2041	5-12	647	50.85	6	8	7	0.70	35.59	1.25	0.56	0.3519	0.20	10.02
2039	2042	5-13	647	0.00	6	8	7	0.70	0.00	1.25	0.56	0.3319	0.19	0.00
2041	2044	5-13	647	7.64	6	8	7	0.70	5.34	1.25	0.56	0.2938	0.16	1.26
2039	2042	5-14	641	2.96	6	8	7	0.70	2.08	1.25	0.56	0.3319	0.19	0.55
2038	2041	5-16	641	4.76	5	8	7	0.67	3.18	1.25	0.53	0.3519	0.19	0.89
2038	2041	5-17	641	2.37	5	8	7	0.67	1.58	1.25	0.53	0.3519	0.19	0.45
2038	2041	5-18	643	0.97	5	8	7	0.67	0.65	1.50	0.44	0.3519	0.16	0.15
2040	2043	5-20	641	11.11	6	8	7	0.70	7.78	1.25	0.56	0.3126	0.18	1.95
2036	2039	5-5	641	8.32	6	8	7	0.70	5.83	1.25	0.56	0.3935	0.22	1.83
2037	2040	5-5	641	7.66	6	8	7	0.70	5.36	1.25	0.56	0.3724	0.21	1.60
2041	2044	5-6	641	36.88	6	8	7	0.70	25.82	1.25	0.56	0.2938	0.16	6.07
2041	2044	5-7	641	3.20	6	8	7	0.70	2.24	1.25	0.56	0.2938	0.16	0.53
2036	2039	5-9	641	74.07	7	8	7	0.73	54.32	1.25	0.59	0.3935	0.23	17.10
2037	2040	5-9	641	1.32	7	8	7	0.73	0.96	1.25	0.59	0.3724	0.22	0.29
2042	2045	OSW-R-321-10-ce	321	0.17	8	8	7	0.77	0.13	1.25	0.61	0.2756	0.17	0.03
2047	2050	OSW-R-321-10-ce	321	0.09	8	8	7	0.77	0.07	1.25	0.61	0.1921	0.12	0.01
2039	2042	OSW-R-321-6	321	0.26	7	8	7	0.73	0.19	1.25	0.59	0.3319	0.19	0.05
2030	2033	OSW-R-321-9	321	0.17	8	8	7	0.77	0.13	1.25	0.61	0.5343	0.33	0.05
2033	2036	OSW-R-321-9	321	0.54	8	8	7	0.77	0.41	1.25	0.61	0.4608	0.28	0.15
2034	2037	OSW-R-321-9	321	0.18	8	8	7	0.77	0.14	1.25	0.61	0.4377	0.27	0.05
2035	2038	OSW-R-321-9	321	0.04	8	8	7	0.77	0.03	1.25	0.61	0.4153	0.25	0.01
2038	2041	OSW-R-321-9	321	0.11	8	8	7	0.77	0.08	1.25	0.61	0.3519	0.22	0.02
2044	2047	OSW-R-321-9	321	0.49	8	8	7	0.77	0.37	1.25	0.61	0.2407	0.15	0.07
2016	2019	R1*	643	0.52	7	7	7	0.70	0.37	1.50	0.47	0.9784	0.46	0.24
2016	2019	R10*	643	0.51	7	7	7	0.70	0.35	1.50	0.47	0.9784	0.46	0.23
2016	2019	R11*	643	1.00	7	7	7	0.70	0.70	1.50	0.47	0.9784	0.46	0.46
2016	2019	R12*	643	1.48	7	7	7	0.70	1.04	1.50	0.47	0.9784	0.46	0.68
2016	2019	R13*	643	1.03	7	7	7	0.70	0.72	1.50	0.47	0.9784	0.46	0.47
2016	2019	R14*	643	1.91	8	7	7	0.73	1.40	1.50	0.49	0.9784	0.48	0.91
2016	2019	R15*	641	1.56	7	7	7	0.70	1.09	1.25	0.56	0.9784	0.55	0.85
2016	2019	R2*	643	0.49	7	7	7	0.70	0.34	1.50	0.47	0.9784	0.46	0.22

Reclamation Year	Year Finish (YF)	Wetland ID	FLUCCS	Acreage	New LL Score	WE Score	New CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-factor Adjusted RFG	Final Credit
2016	2019	R3*	643	1.00	7	7	7	0.70	0.70	1.50	0.47	0.9784	0.46	0.46
2016	2019	R4*	643	0.68	8	7	7	0.73	0.50	1.50	0.49	0.9784	0.48	0.33
2016	2019	R5*	643	0.90	8	7	7	0.73	0.66	1.50	0.49	0.9784	0.48	0.43
2016	2019	R6*	643	0.71	8	7	7	0.73	0.52	1.50	0.49	0.9784	0.48	0.34
2016	2019	R7*	643	2.01	8	7	7	0.73	1.47	1.50	0.49	0.9784	0.48	0.96
2016	2019	R8*	643	1.96	7	7	7	0.70	1.37	1.50	0.47	0.9784	0.46	0.90
2016	2019	R9*	643	0.52	7	7	7	0.70	0.36	1.50	0.47	0.9784	0.46	0.24
			Total	**1880.00**										**397.02**
			OSW Total	**2.04**										**0.45**
			Total including OSW's	**1882.05**										**397.47**

*Wetlands established from uplands inside the Ona no-mine area.

Table 4-8-A-v(F) Lift by Year from Creation/Re-Establishment Forested Wetlands

Reclamation Year	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-Factor Adjusted RFG	Final Credit
2030	16E-1	630	3.91	7	8	7	0.73	2.86	1.50	0.49	0.5065	0.25	0.97
2036	16E-1	630	19.42	7	8	7	0.73	14.24	1.50	0.49	0.3824	0.19	3.63
2037	16E-1	630	3.39	7	8	7	0.73	2.48	1.50	0.49	0.3498	0.17	0.58
2030	16E-6	625	10.07	7	8	7	0.73	7.39	1.50	0.49	0.5065	0.25	2.49
2031	16E-6	625	0.71	7	8	7	0.73	0.52	1.50	0.49	0.4821	0.24	0.17
2036	16E-6	625	13.34	7	8	7	0.73	9.78	1.50	0.49	0.3824	0.19	2.49
2037	16E-6	625	9.59	7	8	7	0.73	7.03	1.50	0.49	0.3498	0.17	1.64
2034	19-1	630	10.56	7	8	7	0.73	7.75	1.50	0.49	0.4301	0.21	2.22
2035	19-1	630	0.43	7	8	7	0.73	0.31	1.50	0.49	0.4058	0.20	0.08
2034	19-10	617	5.18	7	8	7	0.73	3.80	1.50	0.49	0.4301	0.21	1.09
2035	19-10	617	2.87	7	8	7	0.73	2.10	1.50	0.49	0.4058	0.20	0.57
2036	19-10	617	9.71	7	8	7	0.73	7.12	1.50	0.49	0.3824	0.19	1.81
2030	21-1	616	11.58	8	8	8	0.80	9.27	1.50	0.53	0.5065	0.27	3.13
2038	21-1	616	3.69	8	8	8	0.80	2.95	1.50	0.53	0.3299	0.18	0.65
2034	21-14	617	0.00	8	8	7	0.77	0.00	1.50	0.51	0.4301	0.22	0.00
2044	21-14	617	4.31	8	8	7	0.77	3.31	1.50	0.51	0.2223	0.11	0.49
2030	21-15	617	10.00	8	8	8	0.80	8.00	1.50	0.53	0.5065	0.27	2.70
2031	21-15	617	1.07	8	8	8	0.80	0.85	1.50	0.53	0.4821	0.26	0.27
2034	21-15	617	15.51	8	8	8	0.80	12.41	1.50	0.53	0.4301	0.23	3.56
2038	21-15	617	98.07	8	8	8	0.80	78.45	1.50	0.53	0.3299	0.18	17.26
2035	21-16	630	3.94	8	8	7	0.77	3.02	1.50	0.51	0.4058	0.21	0.82
2034	21-2	617	0.08	8	8	7	0.77	0.06	1.50	0.51	0.4301	0.22	0.02
2035	21-2	617	4.37	8	8	7	0.77	3.35	1.50	0.51	0.4058	0.21	0.91
2034	23W-1	613	3.88	9	8	7	0.80	3.10	1.50	0.53	0.4301	0.23	0.89
2035	23W-1	613	1.18	9	8	7	0.80	0.94	1.50	0.53	0.4058	0.22	0.26
2035	23W-18	617	0.11	9	8	7	0.80	0.09	1.50	0.53	0.4058	0.22	0.02
2032	23W-19	617	28.41	9	8	7	0.80	22.73	1.50	0.53	0.4584	0.24	6.95
2033	23W-2	617	2.26	9	8	7	0.80	1.81	1.50	0.53	0.4353	0.23	0.52
2034	23W-2	617	0.58	9	8	7	0.80	0.46	1.50	0.53	0.4301	0.23	0.13
2032	23W-20	617	3.19	8	8	7	0.77	2.45	1.50	0.51	0.4584	0.23	0.75
2034	23W-20	617	0.02	8	8	7	0.77	0.01	1.50	0.51	0.4301	0.22	0.00
2035	23W-20	617	6.75	8	8	7	0.77	5.18	1.50	0.51	0.4058	0.21	1.40
2047	23W-20	617	11.81	8	8	7	0.77	9.06	1.50	0.51	0.1753	0.09	1.06
2042	24-1	611	41.80	8	8	7	0.77	32.05	1.75	0.44	0.2561	0.11	4.69
2033	24-12	617	0.42	9	8	7	0.80	0.33	1.50	0.53	0.4353	0.23	0.10
2034	24-12	617	32.92	9	8	7	0.80	26.34	1.50	0.53	0.4301	0.23	7.55
2035	24-12	617	14.54	9	8	7	0.80	11.63	1.50	0.53	0.4058	0.22	3.15
2036	24-12	617	1.22	9	8	7	0.80	0.98	1.50	0.53	0.3824	0.20	0.25

Reclamation Year	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-Factor Adjusted RFG	Final Credit
2042	24-12	617	25.74	9	8	7	0.80	20.59	1.50	0.53	0.2561	0.14	3.52
2043	24-12	617	24.59	9	8	7	0.80	19.67	1.50	0.53	0.2390	0.13	3.13
2047	24-12	617	18.74	9	8	7	0.80	14.99	1.50	0.53	0.1753	0.09	1.75
2034	24-2	616	16.09	9	8	7	0.80	12.87	1.50	0.53	0.4301	0.23	3.69
2035	24-2	616	4.49	9	8	7	0.80	3.59	1.50	0.53	0.4058	0.22	0.97
2042	24-2	616	1.74	9	8	7	0.80	1.39	1.50	0.53	0.2561	0.14	0.24
2043	24-2	616	4.18	9	8	7	0.80	3.35	1.50	0.53	0.2390	0.13	0.53
2047	24-2	616	2.41	9	8	7	0.80	1.93	1.50	0.53	0.1753	0.09	0.23
2042	24-3	617	9.58	8	8	7	0.77	7.34	1.50	0.51	0.2561	0.13	1.25
2033	24-4	630	82.64	9	8	7	0.80	66.11	1.50	0.53	0.4353	0.23	19.19
2034	24-4	630	2.03	9	8	7	0.80	1.63	1.50	0.53	0.4301	0.23	0.47
2040	24-4	630	0.12	9	8	7	0.80	0.10	1.50	0.53	0.2919	0.16	0.02
2041	24-4	630	13.33	9	8	7	0.80	10.66	1.50	0.53	0.2737	0.15	1.95
2042	24-4	630	11.29	9	8	7	0.80	9.03	1.50	0.53	0.2561	0.14	1.54
2047	24-4	630	16.53	9	8	7	0.80	13.23	1.50	0.53	0.1753	0.09	1.55
2039	25-1	617	3.21	6	8	7	0.70	2.25	1.50	0.47	0.3106	0.14	0.47
2039	25-2	625	0.01	9	8	7	0.80	0.01	1.50	0.53	0.3106	0.17	0.00
2040	25-2	625	2.06	9	8	7	0.80	1.65	1.50	0.53	0.2919	0.16	0.32
2041	25-2	625	0.96	9	8	7	0.80	0.77	1.50	0.53	0.2737	0.15	0.14
2040	26E-1	630	0.85	6	8	7	0.70	0.59	1.50	0.47	0.2919	0.14	0.12
2039	26E-2	630	1.89	6	8	7	0.70	1.32	1.50	0.47	0.3106	0.14	0.27
2040	26E-2	630	0.27	6	8	7	0.70	0.19	1.50	0.47	0.2919	0.14	0.04
2035	26W-1	617	14.74	6	8	7	0.70	10.32	1.50	0.47	0.4058	0.19	2.79
2038	27E-1	611	10.05	7	8	7	0.73	7.37	1.75	0.42	0.3299	0.14	1.39
2038	27E-2	611	19.64	7	8	7	0.73	14.40	1.75	0.42	0.3299	0.14	2.72
2040	27E-2	611	2.58	7	8	7	0.73	1.89	1.75	0.42	0.2919	0.12	0.32
2038	27E-9	617	1.58	7	8	7	0.73	1.16	1.50	0.49	0.3299	0.16	0.25
2039	27E-9	617	8.56	7	8	7	0.73	6.28	1.50	0.49	0.3106	0.15	1.30
2040	27E-9	617	9.42	7	8	7	0.73	6.91	1.50	0.49	0.2919	0.14	1.34
2032	28E-1	617	3.40	6	8	7	0.70	2.38	1.50	0.47	0.4584	0.21	0.73
2031	28E-16	630	5.38	8	8	7	0.77	4.13	1.50	0.51	0.4821	0.25	1.33
2032	28E-2	617	0.00	8	8	7	0.77	0.00	1.50	0.51	0.4584	0.23	0.00
2033	28E-2	617	4.74	8	8	7	0.77	3.63	1.50	0.51	0.4353	0.22	1.05
2044	28E-3	630	2.64	8	8	7	0.77	2.03	1.50	0.51	0.2223	0.11	0.30
2031	28W-9	630	37.85	6	8	7	0.70	26.50	1.50	0.47	0.4821	0.22	8.52
2032	28W-9	630	35.00	6	8	7	0.70	24.50	1.50	0.47	0.4584	0.21	7.49
2033	28W-9	630	8.03	6	8	7	0.70	5.62	1.50	0.47	0.4353	0.20	1.63
2038	30E-1	616	2.12	6	8	7	0.70	1.48	1.50	0.47	0.3299	0.15	0.33
2039	30E-1	616	0.72	6	8	7	0.70	0.50	1.50	0.47	0.3106	0.14	0.10
2038	30E-2	626	0.99	7	8	7	0.73	0.73	1.50	0.49	0.3299	0.16	0.16
2038	30E-20	617	40.30	6	8	7	0.70	28.21	1.50	0.47	0.3299	0.15	6.20

Reclamation Year	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-Factor Adjusted RFG	Final Credit
2039	30E-20	617	2.15	6	8	7	0.70	1.50	1.50	0.47	0.3106	0.14	0.31
2038	30E-21	616	0.53	7	8	7	0.73	0.39	1.50	0.49	0.3299	0.16	0.09
2038	30E-23	616	1.27	7	8	7	0.73	0.93	1.50	0.49	0.3299	0.16	0.21
2038	30E-25	630	1.43	7	8	7	0.73	1.05	1.50	0.49	0.3299	0.16	0.23
2038	30E-26	630	1.63	7	8	7	0.73	1.19	1.50	0.49	0.3299	0.16	0.26
2038	30E-3	616	1.70	7	8	7	0.73	1.24	1.50	0.49	0.3299	0.16	0.27
2038	30E-4	616	1.83	7	8	7	0.73	1.34	1.50	0.49	0.3299	0.16	0.30
2038	30E-5	616	6.76	7	8	7	0.73	4.96	1.50	0.49	0.3299	0.16	1.09
2038	30E-6	617	10.00	6	8	7	0.70	7.00	1.50	0.47	0.3299	0.15	1.54
2033	30W-9	617	23.53	6	8	7	0.70	16.47	1.50	0.47	0.4353	0.20	4.78
2042	31E-1	616	0.03	8	8	7	0.77	0.02	1.50	0.51	0.2561	0.13	0.00
2043	31E-1	616	1.89	8	8	7	0.77	1.45	1.50	0.51	0.2390	0.12	0.23
2037	31E-2	616	29.66	7	8	7	0.73	21.75	1.50	0.49	0.3498	0.17	5.07
2044	31E-2	616	3.74	7	8	7	0.73	2.74	1.50	0.49	0.2223	0.11	0.41
2037	31E-4	617	3.12	5	8	7	0.67	2.08	1.50	0.44	0.3498	0.16	0.49
2037	31E-43	617	83.21	8	8	7	0.77	63.79	1.50	0.51	0.3498	0.18	14.88
2041	31E-43	617	2.03	8	8	7	0.77	1.56	1.50	0.51	0.2737	0.14	0.28
2043	31E-43	617	4.23	8	8	7	0.77	3.24	1.50	0.51	0.2390	0.12	0.52
2044	31E-43	617	17.41	8	8	7	0.77	13.34	1.50	0.51	0.2223	0.11	1.98
2037	31E-44	620	6.55	8	8	7	0.77	5.02	1.50	0.51	0.3498	0.18	1.17
2044	31E-44	620	0.01	8	8	7	0.77	0.01	1.50	0.51	0.2223	0.11	0.00
2037	31E-47	617	3.09	8	8	7	0.77	2.37	1.50	0.51	0.3498	0.18	0.55
2037	31E-5	617	4.75	5	8	7	0.67	3.17	1.50	0.44	0.3498	0.16	0.74
2037	32-17	617	4.60	8	8	7	0.77	3.53	1.50	0.51	0.3498	0.18	0.82
2044	32-17	617	34.55	8	8	7	0.77	26.49	1.50	0.51	0.2223	0.11	3.93
2045	32-17	617	17.19	8	8	7	0.77	13.18	1.50	0.51	0.2088	0.11	1.83
2032	33-1	617	0.64	6	7	7	0.67	0.43	1.50	0.44	0.4584	0.20	0.13
2032	33-2	617	0.22	6	7	7	0.67	0.15	1.50	0.44	0.4584	0.20	0.05
2040	33-5	617	1.30	6	8	7	0.70	0.91	1.50	0.47	0.2919	0.14	0.18
2041	33-5	617	23.19	6	8	7	0.70	16.23	1.50	0.47	0.2737	0.13	2.96
2038	4E-5	617	7.13	6	8	7	0.70	4.99	1.50	0.47	0.3299	0.15	1.10
2039	4E-5	617	59.26	6	8	7	0.70	41.48	1.50	0.47	0.3106	0.14	8.59
2041	4E-5	617	7.24	6	8	7	0.70	5.07	1.50	0.47	0.2737	0.13	0.93
2039	4E-6	617	2.46	6	8	7	0.70	1.72	1.50	0.47	0.3106	0.14	0.36
2040	4E-6	617	2.46	6	8	7	0.70	1.72	1.50	0.47	0.2919	0.14	0.33
2041	4E-6	617	2.51	6	8	7	0.70	1.76	1.50	0.47	0.2737	0.13	0.32
2039	4E-7	617	0.02	5	6	7	0.60	0.01	1.50	0.40	0.3106	0.12	0.00
2040	4E-7	617	0.48	5	6	7	0.60	0.29	1.50	0.40	0.2919	0.12	0.06
2038	5-10	617	4.93	6	8	7	0.70	3.45	1.50	0.47	0.3299	0.15	0.76
2039	5-10	617	39.31	6	8	7	0.70	27.52	1.50	0.47	0.3106	0.14	5.70
2040	5-10	617	34.05	6	8	7	0.70	23.83	1.50	0.47	0.2919	0.14	4.64

Reclamation Year	Wetland ID	FLUCCS	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-Factor Adjusted RFG	Final Credit
2041	5-10	617	6.81	6	8	7	0.70	4.76	1.50	0.47	0.2737	0.13	0.87
2038	OSW-R-411-9	411	0.21	8	8	7	0.77	0.16	1.50	0.51	0.3299	0.17	0.04
2033	OSW-R-425-9	425	0.14	7	8	7	0.73	0.10	1.50	0.49	0.4353	0.21	0.03
2039	OSW-R-427-11	427	0.11	7	8	7	0.73	0.08	1.50	0.49	0.3106	0.15	0.02
2040	OSW-R-427-11	427	0.19	7	8	7	0.73	0.14	1.50	0.49	0.2919	0.14	0.03
2033	OSW-R-427-6	427	3.26	9	8	7	0.80	2.61	1.50	0.53	0.4353	0.23	0.76
2040	OSW-R-427-6	427	0.23	9	8	7	0.80	0.18	1.50	0.53	0.2919	0.16	0.04
2041	OSW-R-427-6	427	4.14	9	8	7	0.80	3.31	1.50	0.53	0.2737	0.15	0.60
2047	OSW-R-427-6	427	3.49	9	8	7	0.80	2.79	1.50	0.53	0.1753	0.09	0.33
2038	OSW-R-427-8	427	0.51	6	7	7	0.67	0.34	1.50	0.44	0.3299	0.15	0.07
2034	OSW-R-427-9	427	0.02	7	8	7	0.73	0.01	1.50	0.49	0.4301	0.21	0.00
2044	OSW-R-427-9	427	0.38	7	8	7	0.73	0.28	1.50	0.49	0.2223	0.11	0.04
2040	OSW-R-434-11a	434	1.14	5	6	7	0.60	0.69	1.50	0.40	0.2919	0.12	0.13
2041	OSW-R-434-11a	434	0.13	5	6	7	0.60	0.08	1.50	0.40	0.2737	0.11	0.01
2038	OSW-R-434-11a-ce	434	0.46	5	6	7	0.60	0.28	1.50	0.40	0.3299	0.13	0.06
2038	OSW-R-434-11c	434	0.65	6	8	7	0.70	0.45	1.50	0.47	0.3299	0.15	0.10
2033	OSW-R-434-6	434	6.82	9	8	7	0.80	5.45	1.50	0.53	0.4353	0.23	1.58
2047	OSW-R-434-6	434	1.29	9	8	7	0.80	1.03	1.50	0.53	0.1753	0.09	0.12
2038	OSW-R-434-9-ce	434	0.03	5	7	7	0.63	0.02	1.50	0.42	0.3299	0.14	0.00
		Total	**1323.46**										227.49

Table 4-8-A-viii Stream Establishment Functional Gain Assessment

Stream ID	Mine Year Reconnected*	HA	Stream Length (ft)	Net Gain	Temporal Lag Factor**	Risk Factor	Adjusted Net Gain
O-T3C	2030	105	773 88	507 86	0 5343	1 11	244 46
O-T3E	2030	105	68 72	45 10	0 5343	1 11	21 71
O-T8A	2030	105	567 28	372 28	0 5343	1 11	179 20
O-T8B	2030	105	433 00	284 16	0 5343	1 11	136 78
O-T8F1	2030	105	877 92	576 14	0 5343	1 11	277 32
O-T3C	2031	105	365 66	239 96	0 5091	1 11	110 06
O-T8A	2031	105	334 72	219 66	0 5091	1 11	100 75
BU-M1	2032	105	1446 00	948 94	0 4846	1 11	414 28
O-T1A	2032	105	1345 90	883 25	0 4846	1 11	385 60
O-T8F1	2032	105	1175 26	771 27	0 4846	1 11	336 72
BU-M1	2033	105	3995 77	2622 23	0 4608	1 11	1088 58
BU-T3A	2033	105	2981 34	1956 50	0 4608	1 11	812 21
O-T8C	2033	105	716 00	469 88	0 4608	1 11	195 06
O-T8F1	2033	105	1355 82	889 75	0 4608	1 11	369 37
O-T8F2	2033	105	632 95	415 37	0 4608	1 11	172 44
BU-M1	2034	105	154 99	101 71	0 4377	1 11	40 11
BU-T10	2034	105	271 67	178 28	0 4377	1 11	70 30
BU-T3A	2034	105	572 66	375 81	0 4377	1 11	148 19
O-T3G	2034	105	817 66	536 59	0 4377	1 11	211 59
O-T8F2	2034	105	676 67	444 06	0 4377	1 11	175 10
WF-T3B	2034	105	1044 92	685 73	0 4377	1 11	270 40
WF-T3C	2034	105	808 42	530 52	0 4377	1 11	209 20
BU-T10	2035	105	1452 33	953 09	0 4153	1 11	356 59
BU-T12	2035	105	801 02	525 67	0 4153	1 11	196 68
BU-T3B	2035	105	1024 00	672 00	0 4153	1 11	251 42
O-T3E	2035	105	673 28	441 84	0 4153	1 11	165 31
O-T3F	2035	105	1379 00	904 97	0 4153	1 11	338 59
O-T3G	2035	105	473 34	310 63	0 4153	1 11	116 22
WF-T3B	2035	105	614 72	403 41	0 4153	1 11	150 93
WF-T3C	2035	105	404 86	265 69	0 4153	1 11	99 41
BA-MA	2036	105	307 40	201 73	0 3935	1 11	71 51
BU-T12	2036	105	466 98	306 46	0 3935	1 11	108 64
O-T8F2	2036	105	125 39	82 28	0 3935	1 11	29 17
WF-T3B	2036	105	941 36	617 77	0 3935	1 11	219 00
WF-T3C	2036	105	90 72	59 54	0 3935	1 11	21 11
BA-MA	2037	105	2825 60	1854 30	0 3724	1 11	622 11
BA-T4	2037	105	275 00	180 47	0 3724	1 11	60 55
BA-T6A	2038	105	436 63	286 54	0 3519	1 11	90 84
H-M1	2038	105	1600 30	1050 19	0 3519	1 11	332 94
H-T5	2038	105	399 08	261 90	0 3519	1 11	83 03
O-T3D	2038	105	935 49	613 91	0 3519	1 11	194 63
BA-T6A	2039	105	305 37	200 40	0 3319	1 11	59 92
BU-T13	2039	105	615 00	403 59	0 3319	1 11	120 68
H-M1	2039	105	1075 73	705 95	0 3319	1 11	211 09
H-T2B	2039	105	826 58	542 45	0 3319	1 11	162 20
H-T5	2039	105	11 92	7 82	0 3319	1 11	2 34
O-MA	2039	105	1183 78	776 85	0 3319	1 11	232 29
H-M1	2040	105	3809 97	2500 29	0 3126	1 11	704 14
H-T2B	2040	105	65 42	42 93	0 3126	1 11	12 09
H-T2C	2040	105	637 00	418 03	0 3126	1 11	117 73
O-MA	2040	105	1671 73	1097 07	0 3126	1 11	308 96
O-MA	2041	105	565 49	371 10	0 2938	1 11	98 23
BU-T5	2043	105	1710 00	1122 19	0 2579	1 11	260 73
BA-T3	2044	105	2684 66	1761 81	0 2407	1 11	382 04
O-T3D	2044	105	478 51	314 02	0 2407	1 11	68 10
BA-T3	2045	105	943 34	619 07	0 2240	1 11	124 93
BU-M1	2047	105	1098 24	720 72	0 1921	1 11	124 73
Total Creation Gain			**54326.44**	**35651.73**			**12468.28**

Table 4-8-A-x Stream Preservation Functional Assessment

Stream ID	Without Project HA Score 20% Reduction	Current HA Score	Stream Length (ft)	W/O Project Total	Current Condition Total (HA/160 x length)	Net Gain
100A	95.2	119	8856.86	5269.83	6587.29	1317.46
100B	88.8	111	4212.59	2337.99	2922.48	584.50
100D	94.4	118	2459.77	1451.26	1814.08	362.82
100E	76	95	1148.39	545.49	681.86	136.37
100F	95.2	119	819.80	487.78	609.73	121.95
100G	70.4	88	83.64	36.80	46.00	9.20
101A	78.4	98	766.48	375.58	469.47	93.89
102A	58.4	73	170.06	62.07	77.59	15.52
103A	85.6	107	416.96	223.07	278.84	55.77
104A	79.2	99	757.29	374.86	468.57	93.71
105A	84	105	3018.83	1584.89	1981.11	396.22
105C	121.6	152	1278.06	971.33	1214.16	242.83
105D	92.8	116	159.84	92.71	115.88	23.18
105F	80.8	101	832.39	420.36	525.45	105.09
105H	101.6	127	787.41	500.01	625.01	125.00
105I	60	75	3317.00	1243.88	1554.84	310.97
105J	97.6	122	373.95	228.11	285.14	57.03
105L	91.2	114	1548.38	882.58	1103.22	220.64
105M	78.4	98	532.88	261.11	326.39	65.28
105O	86.4	108	351.80	189.97	237.47	47.49
105P	103.2	129	764.45	493.07	616.34	123.27
105V	84.8	106	578.84	306.79	383.48	76.70
109B	74.4	93	42.88	19.94	24.92	4.98
111A	85.6	107	707.94	378.75	473.43	94.69
111B	68	85	634.48	269.65	337.07	67.41
111C	79.2	99	808.52	400.22	500.27	100.05
111D	100	125	1584.64	990.40	1238.00	247.60
111E	69.6	87	1179.53	513.10	641.37	128.27
111F	93.6	117	244.88	143.25	179.07	35.81
111I	72.8	91	418.88	190.59	238.24	47.65
111J	111.2	139	332.83	231.32	289.15	57.83
111K	68	85	386.28	164.17	205.21	41.04
112A	97.6	122	637.69	388.99	486.24	97.25
113A	102.4	128	451.46	288.93	361.17	72.23
114A	86.4	108	101.73	54.93	68.67	13.73
300B	84.8	106	829.41	439.59	549.48	109.90
300C	98.4	123	880.58	541.56	676.95	135.39
300D	85.6	107	740.40	396.11	495.14	99.03
301A	96.8	121	663.91	401.67	502.08	100.42
301B	106.4	133	2369.83	1575.94	1969.92	393.98
301C	100	125	1317.88	823.68	1029.59	205.92
301E	81.6	102	409.55	208.87	261.09	52.22
301J	90.4	113	525.00	296.63	370.78	74.16
301K	103.2	129	193.53	124.83	156.03	31.21
302A	94.4	118	2055.58	1212.79	1515.99	303.20
310A	69.6	87	366.67	159.50	199.38	39.88
400A	96.8	121	2020.54	1222.43	1528.03	305.61
400B	39.2	49	238.87	58.52	73.15	14.63
401A	69.6	87	277.33	120.64	150.80	30.16
500A	110.4	138	25391.85	17520.38	21900.47	4380.09
501A	85.6	107	902.17	482.66	603.33	120.67
502A	112	140	13964.36	9775.05	12218.82	2443.76
502B	75.2	94	612.65	287.95	359.93	71.99

Table 4-8-A-x Stream Preservation Functional Assessment

Stream ID	Without Project HA Score 20% Reduction	Current HA Score	Stream Length (ft)	W/O Project Total	Current Condition Total (HA/160 x length)	Net Gain
502C	75.2	94	620.99	291.87	364.83	72.97
502D	63.2	79	359.74	142.10	177.62	35.52
502E	97.6	122	463.50	282.74	353.42	70.68
502F	126.4	158	960.94	759.14	948.93	189.79
502H	106.4	133	115.35	76.71	95.88	19.18
502I	128	160	4207.55	3366.04	4207.55	841.51
502J	67.2	84	998.70	419.45	524.32	104.86
502K	94.4	118	710.04	418.92	523.65	104.73
502L	85.6	107	97.93	52.39	65.49	13.10
502M	78.4	98	134.02	65.67	82.09	16.42
502N	83.2	104	190.06	98.83	123.54	24.71
502O	54.4	68	183.48	62.38	77.98	15.60
502P	106.4	133	240.54	159.96	199.95	39.99
502Q	106.4	133	199.24	132.49	165.62	33.12
502R	59.2	74	225.45	83.42	104.27	20.85
502S	98.4	123	141.90	87.27	109.09	21.82
502T	98.4	123	28.98	17.82	22.28	4.46
502U	51.2	64	268.00	85.76	107.20	21.44
502V	66.4	83	322.75	133.94	167.43	33.49
504A	80.8	101	298.22	150.60	188.25	37.65
505A	98.4	123	234.41	144.16	180.20	36.04
505B	98.4	123	62.23	38.27	47.84	9.57
505C	98.4	123	92.69	57.00	71.26	14.25
506A	92	115	394.01	226.56	283.19	56.64
507A	73.6	92	364.27	167.56	209.46	41.89
508A	52	65	731.68	237.80	297.25	59.45
509A	93.6	117	130.92	76.59	95.74	19.15
510A	47.2	59	468.65	138.25	172.81	34.56
511A	80	100	756.78	378.39	472.99	94.60
512A	71.2	89	798.90	355.51	444.39	88.88
513A	84	105	246.43	129.38	161.72	32.34
514A	92	115	1126.40	647.68	809.60	161.92
515A	82.4	103	62.83	32.36	40.45	8.09
515B-1	82.4	103	232.18	119.57	149.47	29.89
516A	80	100	479.25	239.63	299.53	59.91
516B	97.6	122	1031.62	629.29	786.61	157.32
516C	68	85	319.94	135.97	169.97	33.99
516E	80	100	317.73	158.87	198.58	39.72
517A	90.4	113	283.18	160.00	200.00	40.00
518A	80	100	647.98	323.99	404.99	81.00
518B	68.8	86	571.17	245.60	307.00	61.40
519A	100.8	126	173.97	109.60	137.00	27.40
520A	80	100	359.17	179.59	224.48	44.90
520B	77.6	97	375.55	182.14	227.68	45.54
521A	89.6	112	318.69	178.47	223.08	44.62
521B	98.4	123	613.63	377.38	471.73	94.35
522A	85.6	107	741.93	396.93	496.17	99.23
523A	106.4	133	1718.40	1142.74	1428.42	285.68
524A	94.4	118	665.44	392.61	490.76	98.15
525A	77.6	97	289.78	140.54	175.68	35.14
526A	96.8	121	612.00	370.26	462.83	92.57
528A	72	90	338.94	152.52	190.65	38.13
Total Preserve Credit			**120855.65**	**73175.24**	**91469.05**	**18293.81**

Table 4-8-A-xi	Net Stream Mitigation Sufficiency Summary		
	Feet	Functional Loss	Functional Gain
Streams Impacts			
Streams	100,766.76	41,377.21	
Created Streams			
Streams	54,326.44		12,468.28
Preserved Streams			
Streams	120,855.65		18,293.81
Total Credit Balance On-site:			**-10615.1**
Off-Site Streams			
Payne Creek			
Created Streams	14,755.00		7,878.10
Bowlegs Creek			
Created Streams	5,507.00		2,940.34
Total Credit Balance On-site + Off-site:			**203.31**

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Table 4-8-A-xii(H)	On-Site Herbaceous Wetland Preservation																							
Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code*	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Preservation Adjustment Factor	Preservation Adjustment Factor	New Ac.	Ac.	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.									
Wetland	16-8A	213	5	8	8	6	7	7	4	5	5	0.50	0.67	0.67	0.17	1	1	1	1	1		3.64	0.61
Wetland	17-1-643	643	5	8	8	6	7	7	3	4	6	0.47	0.63	0.70	0.23	1	1	1	1	1		0.28	0.06
Wetland	17-4-643	643	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	1	1		2.25	0.37
Wetland	20-5B	213	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		1.55	0.26
Wetland	20-6A	641	5	7	7	6	7	7	5	6	6	0.53	0.67	0.67	0.13	1	1	1	1	1		0.35	0.05
Wetland	20-7H	643	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		0.20	0.03
Wetland	20-7M	641	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		0.15	0.02
Wetland	20-7O	211	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		0.14	0.02
Wetland	29-1	647	5	7	7	6	7	7	3	4	4	0.47	0.60	0.60	0.13	1	1	1	1	1		1.00	0.13
Wetland	29-2	643	5	7	7	2	3	3	6	7	7	0.43	0.57	0.57	0.13	1	1	1	1	1		0.03	0.00
Wetland	29-6A	643	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	1	1		0.27	0.04
Wetland	4-27-641	641	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		0.77	0.13
Wetland	8-8A	641	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	1	1		3.26	0.54
Wetland	9-14B	641	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	1	1		0.56	0.09
Wetland	9-6-641	641	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	1	1		3.17	0.53
Wetland	9-7-649	321	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		1.17	0.19
Wetland	BRA-429-12-643	643	5	8	8	5	6	6	5	6	6	0.50	0.67	0.67	0.17	1	1	1	1	1		0.12	0.02
Wetland	BRA-429-13-641	641	5	8	8	5	6	6	5	6	6	0.50	0.67	0.67	0.17	1	1	1	1	1		0.32	0.05
Wetland	BRA-429-14-641	641	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		0.32	0.05
Wetland	BRA-429-18-641	641	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		4.49	0.75
Wetland	BRA-429-22-641	641	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	1	1		0.41	0.07
Wetland	BRA-429-23-641	641	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	1	1		0.28	0.05
Wetland	BRA-429-24-321	321	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	1	1		0.00	0.00
Wetland	BRA-429-24-641	641	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	1	1		6.25	1.04
Wetland	BRA-429-38-625b	321	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	1	1		0.38	0.06
Wetland	BRA-429-38-641	641	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	1	1		6.73	1.12
Wetland	BRA-429-38-649a	641	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	1	1		0.08	0.01
Wetland	BRA-429-38-649b	321	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	1	1		0.59	0.10
Wetland	BRA-429-40	641	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	1	1		18.75	3.13
Wetland	BRA-432-1-641a	641	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		4.63	0.77
Wetland	BRU-311-10-641	641	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	1	1		1.70	0.34
Wetland	BRU-311-5-643	643	5	9	9	8	9	9	5	6	6	0.60	0.80	0.80	0.20	1	1	1	1	1		0.35	0.07
Wetland	BRU-312-1-641	641	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		1.26	0.25
Wetland	BRU-312-2B	641	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	1	1		0.53	0.11
Wetland	BRU-312-2Ca	647	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	1	1		2.71	0.54
Wetland	BRU-312-2Cb	641	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	1	1		2.90	0.58
Wetland	BRU-312-2E	641	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	1	1		1.07	0.21
Wetland	BRU-312-3	213	5	7	7	6	7	7	5	6	6	0.53	0.67	0.67	0.13	1	1	1	1	1		2.29	0.31
Wetland	BRU-312-4B	647	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	1	1		3.07	0.61
Wetland	BRU-312-6-643	643	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		0.42	0.08
Wetland	BRU-312-9a	641	5	8	8	4	5	5	5	6	6	0.47	0.63	0.63	0.17	1	1	1	1	1		0.03	0.01
Wetland	BRU-313-11A	641	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	1	1		2.79	0.47
Wetland	BRU-313-12	641	5	9	9	5	6	6	4	5	5	0.47	0.67	0.67	0.20	1	1	1	1	1		0.94	0.19
Wetland	BRU-313-13A	641	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		0.47	0.09

Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code*	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Preservation Adjustment Factor	Preservation Adjustment Factor	New Ac.	Ac.	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.									
Wetland	BRU-313-13B	641	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		0.13	0.03
Wetland	BRU-313-13E	641	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		0.73	0.15
Wetland	BRU-313-1-641	641	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		1.85	0.37
Wetland	BRU-313-19-647	647	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		0.92	0.18
Wetland	BRU-313-22B	641	5	9	9	5	6	6	6	7	7	0.53	0.73	0.73	0.20	1	1	1	1	1		0.36	0.07
Wetland	BRU-313-22C	213	5	9	9	5	6	6	6	7	7	0.53	0.73	0.73	0.20	1	1	1	1	1		4.48	0.90
Wetland	BRU-313-25X	513	5	9	9	5	6	6	5	6	6	0.50	0.70	0.70	0.20	1	1	1	1	1		0.04	0.01
Wetland	BRU-313-28-641	641	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		0.46	0.09
Wetland	BRU-313-2B	647	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		3.59	0.60
Wetland	BRU-313-2D	641	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		0.43	0.07
Wetland	BRU-313-8B	641	5	9	9	6	7	7	5	6	6	0.53	0.73	0.73	0.20	1	1	1	1	1		0.48	0.10
Wetland	BRU-313-8C	641	5	9	9	6	7	7	5	6	6	0.53	0.73	0.73	0.20	1	1	1	1	1		4.00	0.80
Wetland	BRU-314-11-641	641	5	9	9	7	8	8	5	6	6	0.57	0.77	0.77	0.20	1	1	1	1	1		2.04	0.41
Wetland	BRU-314-26A	641	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		1.57	0.31
Wetland	BRU-314-27-647	647	5	9	9	6	7	7	5	6	6	0.53	0.73	0.73	0.20	1	1	1	1	1		1.86	0.37
Wetland	BRU-314-31-647	647	5	9	9	6	7	7	5	6	6	0.53	0.73	0.73	0.20	1	1	1	1	1		1.98	0.40
Wetland	BRU-314-35-641	641	5	9	9	5	6	6	5	6	6	0.50	0.70	0.70	0.20	1	1	1	1	1		1.38	0.28
Wetland	BRU-314-3-641	641	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	1	1		0.97	0.19
Wetland	BRU-314-38-641	641	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	1	1		0.79	0.16
Wetland	BRU-314-40C-P	641	5	9	9	6	7	7	7	8	8	0.60	0.80	0.80	0.20	1	1	1	1	1		1.46	0.29
Wetland	BRU-314-40-P	647	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	1	1		0.26	0.03
Wetland	BRU-314-41a	647	5	9	9	6	7	7	4	5	5	0.50	0.70	0.70	0.20	1	1	1	1	1		3.37	0.67
Wetland	BRU-314-42C	647	5	9	9	6	7	7	4	5	5	0.50	0.70	0.70	0.20	1	1	1	1	1		0.84	0.17
Wetland	BRU-314-43	647	5	7	7	7	8	8	4	5	5	0.53	0.67	0.67	0.13	1	1	1	1	1		1.92	0.26
Wetland	BRU-314-4-641	641	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	1	1		2.39	0.32
Wetland	BRU-322-11	641	5	7	7	4	5	5	5	6	6	0.47	0.60	0.60	0.13	1	1	1	1	1		1.02	0.14
Wetland	BRU-322-12-649	321	5	9	9	5	6	6	5	6	6	0.50	0.70	0.70	0.20	1	1	1	1	1		7.35	1.47
Wetland	BRU-322-13-641	641	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	1	1		2.95	0.49
Wetland	BRU-322-17-641	641	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		1.43	0.29
Wetland	BRU-322-19B	647	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	1	1		0.66	0.13
Wetland	BRU-322-2	647	5	8	8	3	4	4	5	6	6	0.43	0.60	0.60	0.17	1	1	1	1	1		0.94	0.16
Wetland	BRU-322-20-647	647	5	9	9	6	7	7	7	8	8	0.60	0.80	0.80	0.20	1	1	1	1	1		0.97	0.19
Wetland	BRU-322-21	647	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	1	1		5.35	1.07
Wetland	BRU-322-4A	647	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	1	1		0.85	0.17
Wetland	BRU-322-5B	647	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	1	1		11.32	1.89
Wetland	BRU-322-7A-321	321	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	1	1		0.24	0.05
Wetland	BRU-322-7D	641	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	1	1		16.12	3.22
Wetland	BRU-322-8-641	641	5	9	9	4	5	5	5	6	6	0.47	0.67	0.67	0.20	1	1	1	1	1		0.85	0.17
Wetland	BRU-322-9-641	641	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	1	1		0.85	0.14
Wetland	BRU-325-13B	213	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		0.98	0.20
Wetland	BRU-325-18-P	641	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	1	1		0.63	0.11
Wetland	BRU-326-1-641	641	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		3.75	0.75
Wetland	BRU-326-1-643	643	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1	1		0.74	0.15
Wetland	BRU-326-17-513-E	647	5	9	9	7	8	8	8	9	9	0.70	0.87	0.87	0.13	1	1	1	1	1		0.05	0.00
Wetland	BRU-326-17-647	647	5	9	9	7	8	8	8	9	9	0.67	0.87	0.87	0.20	1	1	1	1	1		39.09	7.82
Wetland	BRU-326-18-641	641	5	8	8	8	9	9	8	9	9	0.70	0.87	0.87	0.17	1	1	1	1	1		1.54	0.26

Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code*	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Preservation Adjustment Factor	Preservation Adjustment Factor	New Ac.	Ac.	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.									
Wetland	BRU-326-19-647	647	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	1	1		0.43	0.07
Wetland	BRU-326-20-641	641	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	1	1		0.86	0.14
Wetland	BRU-326-23-611b	321	5	8	8	8	9	9	8	9	9	0.70	0.87	0.87	0.17	1	1	1	1	1		0.59	0.10
Wetland	BRU-326-24-641	641	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		0.97	0.16
Wetland	BRU-326-26A	641	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		1.28	0.21
Wetland	BRU-326-28-641	641	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	1	1		8.38	1.40
Wetland	BRU-326-36-641	641	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		0.28	0.05
Wetland	BRU-326-37-641	641	5	8	8	4	5	5	5	6	6	0.47	0.63	0.63	0.17	1	1	1	1	1		2.30	0.38
Wetland	BRU-326-38-641	641	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	1	1		1.01	0.17
Wetland	BRU-326-48-E	643	5	9	9	4	5	5	5	6	6	0.63	0.67	0.67	0.13	1	1	1	1	1		0.08	0.00
Wetland	BRU-326-7A-P	647	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	1	1		14.53	2.42
Wetland	BRU-326-7B-P	647	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	1	1		3.62	0.60
Wetland	BRU-326-7X-E	647	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.13	1	1	1	1	1		0.52	0.03
Wetland	BRU-327-1-641	641	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		2.09	0.35
Wetland	BRU-327-2-643	643	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		1.00	0.17
Wetland	BRU-327-3-643	643	5	8	8	5	6	6	5	6	6	0.50	0.67	0.67	0.17	1	1	1	1	1		0.72	0.12
Wetland	BRU-327-4-647	647	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	1	1		0.90	0.18
Wetland	BRU-327-9-647	647	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		0.59	0.10
Wetland	BRU-336-2-641	641	5	8	8	2	3	3	2	3	3	0.30	0.47	0.47	0.17	1	1	1	1	1		0.05	0.01
Wetland	BRU-336-28A-P	641	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		0.34	0.06
Wetland	BRU-336-37A	641	5	8	8	5	6	6	5	6	6	0.50	0.67	0.67	0.17	1	1	1	1	1		0.96	0.16
Wetland	BRU-336-3-P	641	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		0.09	0.01
Wetland	BRU-336-40a	213	5	8	8	6	7	7	4	5	5	0.50	0.67	0.67	0.17	1	1	1	1	1		0.06	0.01
Wetland	BRU-336-40b	641	5	8	8	6	7	7	4	5	5	0.50	0.67	0.67	0.17	1	1	1	1	1		0.06	0.01
Wetland	BRU-336-43	213	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		0.14	0.02
Wetland	BRU-336-44-641	641	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	1	1		0.85	0.14
Wetland	BRU-336-45A	641	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		1.59	0.27
Wetland	BRU-336-50-641	641	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		0.22	0.04
Wetland	BRU-336-52-641	641	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		0.34	0.06
Wetland	BRU-336-57-641	641	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		0.23	0.04
Wetland	BRU-336-59	641	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		0.43	0.07
Wetland	BRU-336-59X	641	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		0.01	0.00
Wetland	BRU-336-60A	641	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		0.33	0.06
Wetland	BRU-336-60B	641	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		0.11	0.02
Wetland	HC-329-21-647	647	5	7	7	6	7	7	5	6	6	0.53	0.67	0.67	0.13	1	1	1	1	1		0.60	0.08
Wetland	HIC-427-32	213	5	7	7	6	7	7	5	6	6	0.53	0.67	0.67	0.13	1	1	1	1	1		0.16	0.02
Wetland	HIC-427-33	213	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	1	1		0.01	0.00
Wetland	OAK-428-23-641	641	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	1	1		0.30	0.05
Wetland	OAK-428-26-321	321	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	1	1		0.75	0.10
Wetland	OAK-428-26-641	641	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	1	1		3.91	0.52
Wetland	OAK-428-27-641	641	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1	1		0.30	0.05
Wetland	OAK-428-29-641	641	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	1	1		0.31	0.05
Wetland	OAK-428-29-647	647	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	1	1		1.40	0.23
Wetland	OAK-428-30-649	321	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	1	1		1.08	0.18
Wetland	OAK-428-34-641	641	5	8	8	8	9	9	8	9	9	0.70	0.87	0.87	0.17	1	1	1	1	1		3.73	0.62

Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code*	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Preservation Adjustment Factor	Preservation Adjustment Factor	New Ac.	Ac.	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.									
Wetland	OAK-428-35-643	643	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	1	1		0.47	0.08
Wetland	OAK-428-47-647	647	5	7	7	6	7	7	6	7	7	0.57	0.70	0.70	0.13	1	1	1	1	1		5.70	0.76
Wetland	OAK-429-16-641	641	5	8	8	7	8	8	5	6	6	0.57	0.73	0.73	0.17	1	1	1	1	1		7.51	1.25
Wetland	OAK-429-27-647	647	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		1.05	0.18
Wetland	OAK-429-28-641	641	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	1	1		3.95	0.66
Wetland	OAK-429-30-643	643	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	1	1		0.22	0.04
Wetland	OAK-429-31-643	643	5	8	8	4	5	5	4	5	5	0.43	0.60	0.60	0.17	1	1	1	1	1		0.33	0.06
Wetland	OAK-429-33-641	641	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	1	1		0.72	0.12
Wetland	OAK-429-35	641	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		28.90	4.82
Wetland	OAK-429-35X-E	641	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		0.14	0.01
Wetland	OAK-429-36-647	647	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		0.36	0.06
Wetland	OAK-429-39	647	5	7	7	7	8	8	5	6	6	0.57	0.70	0.70	0.13	1	1	1	1	1		8.41	1.12
Wetland	OAK-429-48-647	647	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1	1		28.72	4.79
Wetland	OAK-429-49-641	641	5	8	8	7	8	8	5	6	6	0.57	0.73	0.73	0.17	1	1	1	1	1		1.36	0.23
Wetland	OAK-432-3-641	641	5	5	5	3	4	4	3	4	4	0.37	0.43	0.43	0.07	1	1	1	1	1		0.13	0.01
Wetland	OAK-432-42-641	641	5	8	8	5	6	6	5	6	6	0.50	0.67	0.67	0.17	1	1	1	1	1		1.37	0.23
Wetland	OAK-432-5-513-E	641	5	8	8	5	6	6	6	7	7	0.57	0.70	0.70	0.13	1	1	1	1	1		0.08	0.00
Wetland	OAK-432-5-641	641	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	1	1		7.02	1.17
Wetland	OAK-432-8	647	5	5	5	4	5	5	3	4	4	0.40	0.47	0.47	0.07	1	1	1	1	1		0.06	0.00
Wetland	UMAA-321-8-P	321	5	8	8	5	6	6	7	8	8	0.57	0.73	0.73	0.17	1	1	1	1	1		0.05	0.01
Wetland	UMAA-514-1-P	514	5	9	9	5	6	6	3	4	4	0.43	0.63	0.63	0.20	1	1	1	1	1		0.02	0.00
Wetland	UMAA-534-10-P	534	5	8	8	5	5	5	3	4	4	0.43	0.57	0.57	0.13	1	1	1	1	1		0.05	0.01
Wetland	UMAA-534-4-P	534	5	7	7	5	6	6	3	4	4	0.43	0.57	0.57	0.13	1	1	1	1	1		0.12	0.02
Wetland	UMAA-534-5-P	534	5	8	8	5	6	6	3	4	4	0.43	0.60	0.60	0.17	1	1	1	1	1		0.22	0.04
Wetland	WFHC-319-4-P	211	5	8	8	5	6	6	7	8	8	0.57	0.73	0.73	0.17	1	1	1	1	1		0.05	0.01
Wetland	WFHC-329-22	647	5	6	6	6	7	7	5	6	6	0.53	0.63	0.63	0.10	1	1	1	1	1		0.85	0.09
Wetland	WFHC-329-5	643	5	8	8	3	4	4	2	3	3	0.33	0.50	0.50	0.17	1	1	1	1	1		0.12	0.02
Wetland	WFHC-329-6X-534	534	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	1	1		0.32	0.04
Wetland	WFHC-330-7B-P	211	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		0.09	0.02
Wetland	WFHC-330-7C-P	211	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1	1		0.03	0.01
																				Total		**375.58**	**65.62**

Table 4-8-A-xii(F) On-Site Forested Wetland Preservation

Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code*	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Ac.	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Wetland	16-10A	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.08	0.01
Wetland	16-10B-P	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	3.65	0.61
Wetland	16-11B-P	617	5	6	6	4	5	5	4	5	5	0.43	0.53	0.53	0.10	1	1	1	0.08	0.01
Wetland	16-18	425	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	11.91	1.98
Wetland	16-19A	425	5	8	8	8	9	9	6	7	7	0.63	0.80	0.80	0.17	1	1	1	17.49	2.91
Wetland	16-19B	617	5	8	8	8	9	9	6	7	7	0.63	0.80	0.80	0.17	1	1	1	0.80	0.13
Wetland	16-19C	617	5	8	8	8	9	9	6	7	7	0.63	0.80	0.80	0.17	1	1	1	1.83	0.31
Wetland	16-20A	611	5	7	7	6	7	7	6	7	7	0.57	0.70	0.70	0.13	1	1	1	7.68	1.02
Wetland	16-20B-P	611	5	7	7	6	7	7	6	7	7	0.57	0.70	0.70	0.13	1	1	1	0.03	0.00
Wetland	16-4B	434	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.80	0.13
Wetland	16-6B	425	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	5.24	0.70
Wetland	16-6C	611	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	17.21	2.30
Wetland	16-6E	434	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	10.47	1.40
Wetland	16-6F	434	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	6.03	0.80
Wetland	16-8B	617	5	8	8	6	7	7	4	5	5	0.50	0.67	0.67	0.17	1	1	1	0.97	0.16
Wetland	16-8C	617	5	8	8	6	7	7	4	5	5	0.50	0.67	0.67	0.17	1	1	1	0.22	0.04
Wetland	17-4-611	611	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	9.41	1.57
Wetland	20-5A	427	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	2.80	0.47
Wetland	20-5F	617	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	4.09	0.68
Wetland	20-6B	617	5	7	7	6	7	7	5	6	6	0.53	0.67	0.67	0.13	1	1	1	0.16	0.02
Wetland	20-7A	427	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.08	0.01
Wetland	20-7B	427	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	20.55	3.43
Wetland	20-7C	617	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.30	0.05
Wetland	29-4B	617	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.50	0.08
Wetland	29-5B	617	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	3.93	0.66
Wetland	29-5C	427	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	9.08	1.51
Wetland	29-5E	617	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1.75	0.29
Wetland	29-5F	617	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.46	0.08
Wetland	4-15-630	434	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.29	0.05
Wetland	4-27-617a	617	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	4.67	0.78
Wetland	4-27-617b	425	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1.12	0.19
Wetland	4-27-625	411	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.40	0.07
Wetland	9-13	411	5	8	8	4	5	5	6	7	7	0.50	0.67	0.67	0.17	1	1	1	1.15	0.19
Wetland	9-14A	611	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	7.64	1.27
Wetland	9-15	611	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1.69	0.28
Wetland	9-16	617	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	5.65	0.94
Wetland	9-17A	617	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	14.40	2.40
Wetland	9-18A-611	611	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	8.64	1.44
Wetland	9-18B-617	425	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	5.99	1.00
Wetland	9-4-P	611	5	7	7	5	6	6	5	6	6	0.50	0.63	0.63	0.13	1	1	1	1.97	0.26
Wetland	9-6-611	611	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	4.23	0.70
Wetland	9-6-630a	411	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	0.20	0.03
Wetland	9-6-630b	434	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	1.65	0.27
Wetland	9-7-611	611	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	5.81	0.97
Wetland	9-7-617	617	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.75	0.12

Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code*	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Ac.	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Wetland	9-7-625	411	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.97	0.16
Wetland	9-7-630a	630	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	2.55	0.43
Wetland	9-7-630b	434	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	2.20	0.37
Wetland	9-7-630c	411	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	5.45	0.91
Wetland	9-8	617	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	8.02	1.34
Wetland	BRA-429-12-434	434	5	8	8	5	6	6	5	6	6	0.50	0.67	0.67	0.17	1	1	1	0.01	0.00
Wetland	BRA-429-13-427	427	5	8	8	5	6	6	5	6	6	0.50	0.67	0.67	0.17	1	1	1	0.03	0.01
Wetland	BRA-429-14-427	427	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.02	0.00
Wetland	BRA-429-19-617	427	5	8	8	6	7	7	4	5	5	0.50	0.67	0.67	0.17	1	1	1	3.11	0.52
Wetland	BRA-429-23-427	427	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	0.08	0.01
Wetland	BRA-429-24-425	425	5	8	8	8	9	9	8	9	9	0.70	0.87	0.87	0.17	1	1	1	0.30	0.05
Wetland	BRA-429-24-434	434	5	8	8	8	9	9	8	9	9	0.70	0.87	0.87	0.17	1	1	1	5.55	0.92
Wetland	BRA-429-24-611	611	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	0.15	0.02
Wetland	BRA-429-24-625	411	5	8	8	8	9	9	8	9	9	0.70	0.87	0.87	0.17	1	1	1	1.10	0.18
Wetland	BRA-429-37	427	5	8	8	5	6	6	3	4	4	0.43	0.60	0.60	0.17	1	1	1	4.10	0.68
Wetland	BRA-429-38-625a	411	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	2.00	0.33
Wetland	BRA-430-51-P	425	5	8	8	5	6	6	5	6	6	0.50	0.67	0.67	0.17	1	1	1	1.67	0.28
Wetland	BRA-432-1-630	434	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	1.82	0.30
Wetland	BRA-432-1-641b	427	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.01	0.00
Wetland	BRU-311-11-616	616	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	9.29	1.86
Wetland	BRU-311-4-427	427	5	9	9	8	9	9	7	8	8	0.67	0.87	0.87	0.20	1	1	1	0.33	0.07
Wetland	BRU-311-4-616	616	5	9	9	8	9	9	7	8	8	0.67	0.87	0.87	0.20	1	1	1	0.80	0.16
Wetland	BRU-311-4-617	617	5	9	9	8	9	9	7	8	8	0.67	0.87	0.87	0.20	1	1	1	11.10	2.22
Wetland	BRU-311-4A-P	617	5	9	9	8	9	9	7	8	8	0.67	0.87	0.87	0.20	1	1	1	0.48	0.10
Wetland	BRU-312-1-617	617	5	9	9	6	7	7	7	8	8	0.60	0.80	0.80	0.20	1	1	1	0.70	0.14
Wetland	BRU-312-2A	616	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	18.42	3.68
Wetland	BRU-312-2D	616	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	1.81	0.36
Wetland	BRU-312-2F-617a	425	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	0.11	0.02
Wetland	BRU-312-2F-617b	427	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	0.24	0.05
Wetland	BRU-312-2F-617c	617	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	21.89	4.38
Wetland	BRU-312-4A	616	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	4.77	0.95
Wetland	BRU-312-4C	425	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	1.40	0.28
Wetland	BRU-312-5-617	425	5	9	9	5	6	6	4	5	5	0.47	0.67	0.67	0.20	1	1	1	0.71	0.14
Wetland	BRU-312-7-630	434	5	9	9	6	7	7	5	6	6	0.53	0.73	0.73	0.20	1	1	1	0.35	0.07
Wetland	BRU-312-8	425	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	5.18	1.04
Wetland	BRU-313-11B	425	5	9	9	5	6	6	4	5	5	0.47	0.67	0.67	0.20	1	1	1	1.78	0.36
Wetland	BRU-313-13C	616	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	2.93	0.59
Wetland	BRU-313-15-P	425	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	9.50	1.90
Wetland	BRU-313-1-617	425	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	1.36	0.23
Wetland	BRU-313-21A	425	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	6.37	1.27
Wetland	BRU-313-21B	617	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	25.53	5.11
Wetland	BRU-313-21C	616	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	0.31	0.06
Wetland	BRU-313-21D	616	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	0.38	0.08
Wetland	BRU-313-22A	425	5	9	9	5	6	6	6	7	7	0.53	0.73	0.73	0.20	1	1	1	7.04	1.41
Wetland	BRU-313-25A	617	5	9	9	5	6	6	5	6	6	0.50	0.70	0.70	0.20	1	1	1	13.76	2.75
Wetland	BRU-313-27-616	616	5	9	9	6	7	7	5	6	6	0.53	0.73	0.73	0.20	1	1	1	0.19	0.04
Wetland	BRU-313-27-617	617	5	9	9	6	7	7	5	6	6	0.53	0.73	0.73	0.20	1	1	1	9.33	1.87
Wetland	BRU-313-28-617	617	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	0.27	0.05
Wetland	BRU-313-29A-P	616	5	9	9	6	7	7	5	6	6	0.53	0.73	0.73	0.20	1	1	1	2.97	0.59
Wetland	BRU-313-2C	617	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	12.18	2.03

Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code*	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Ac.	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Wetland	BRU-313-30	616	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1.24	0.25
Wetland	BRU-313-31-616	616	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	1.86	0.37
Wetland	BRU-313-32-617a	617	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1.26	0.25
Wetland	BRU-313-32-617b	425	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	0.17	0.03
Wetland	BRU-314-10-616	616	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	1.48	0.30
Wetland	BRU-314-10-617	425	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	1.93	0.39
Wetland	BRU-314-25A	427	5	9	9	6	7	7	4	5	5	0.50	0.70	0.70	0.20	1	1	1	0.61	0.12
Wetland	BRU-314-26B	616	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1.20	0.24
Wetland	BRU-314-32-617	425	5	9	9	6	7	7	7	8	8	0.60	0.80	0.80	0.20	1	1	1	2.22	0.44
Wetland	BRU-314-34-616	616	5	9	9	5	6	6	6	7	7	0.53	0.73	0.73	0.20	1	1	1	4.55	0.91
Wetland	BRU-314-36-616	616	5	9	9	8	9	9	7	8	8	0.67	0.87	0.87	0.20	1	1	1	0.54	0.11
Wetland	BRU-314-37-P	425	5	9	9	5	6	6	5	6	6	0.50	0.70	0.70	0.20	1	1	1	34.52	6.90
Wetland	BRU-314-39D	616	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	14.14	2.36
Wetland	BRU-314-40A	425	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	22.18	2.96
Wetland	BRU-314-40Fa	427	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	0.36	0.05
Wetland	BRU-314-40Fb	425	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	1.41	0.19
Wetland	BRU-314-41b	427	5	9	9	6	7	7	4	5	5	0.50	0.70	0.70	0.20	1	1	1	0.33	0.07
Wetland	BRU-314-44B-P	425	5	9	9	6	7	7	3	4	4	0.47	0.67	0.67	0.20	1	1	1	0.29	0.06
Wetland	BRU-322-1	617	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	3.64	0.61
Wetland	BRU-322-12-630	434	5	9	9	5	6	6	5	6	6	0.50	0.70	0.70	0.20	1	1	1	1.50	0.30
Wetland	BRU-322-14B-P	425	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.74	0.12
Wetland	BRU-322-18-411	411	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	0.22	0.04
Wetland	BRU-322-18-617a	617	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	16.54	3.31
Wetland	BRU-322-18-617c	411	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	2.74	0.55
Wetland	BRU-322-19A-434	434	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	34.73	6.95
Wetland	BRU-322-22A-630	411	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	14.07	2.35
Wetland	BRU-322-22A-630-E	411	5	7	7	4	5	5	5	6	6	0.57	0.60	0.60	0.17	1	1	1	0.01	0.00
Wetland	BRU-322-22C-617	617	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1.23	0.25
Wetland	BRU-322-2-E	411	5	8	8	1	2	2	4	5	5	0.40	0.50	0.50	0.20	1	1	1	0.00	0.00
Wetland	BRU-322-3	611	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	12.76	2.13
Wetland	BRU-322-4B	611	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	20.64	4.13
Wetland	BRU-322-5A	434	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	4.79	0.80
Wetland	BRU-322-7A	411	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	7.84	1.57
Wetland	BRU-322-7B	434	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	4.95	0.99
Wetland	BRU-322-7C	434	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	4.04	0.81
Wetland	BRU-322-7E-P	434	5	9	9	7	8	8	7	8	8	0.63	0.83	0.83	0.20	1	1	1	3.67	0.73
Wetland	BRU-325-29-P	411	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.71	0.12
Wetland	BRU-325-34	434	5	7	7	2	3	3	2	3	3	0.30	0.43	0.43	0.13	1	1	1	0.29	0.04
Wetland	BRU-326-14-617	425	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	1.64	0.33
Wetland	BRU-326-15-617	617	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	2.91	0.49
Wetland	BRU-326-19-617	425	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	1.58	0.26
Wetland	BRU-326-20-630	434	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	2.25	0.37
Wetland	BRU-326-23-611a	611	5	8	8	8	9	9	8	9	9	0.70	0.87	0.87	0.17	1	1	1	11.67	1.95
Wetland	BRU-326-24-630	434	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.31	0.05
Wetland	BRU-326-25-630	434	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	4.20	0.70
Wetland	BRU-326-26B	616	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.13	0.02
Wetland	BRU-326-2a	425	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	7.38	1.48
Wetland	BRU-326-2b	617	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	4.36	0.87
Wetland	BRU-326-35-630	434	5	8	8	4	5	5	5	6	6	0.47	0.63	0.63	0.17	1	1	1	2.30	0.38

Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code*	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Ac.	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Wetland	BRU-326-40-630	434	5	7	7	5	6	6	5	6	6	0.50	0.63	0.63	0.13	1	1	1	1.21	0.16
Wetland	BRU-326-42-617	617	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.26	0.04
Wetland	BRU-326-46	425	5	8	8	4	5	5	5	6	6	0.47	0.63	0.63	0.17	1	1	1	0.16	0.03
Wetland	BRU-326-7C-P	425	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	0.59	0.10
Wetland	BRU-326-7D-P	411	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	3.88	0.65
Wetland	BRU-326-7E	425	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	0.66	0.11
Wetland	BRU-326-9-630	434	5	9	9	7	8	8	6	7	7	0.60	0.80	0.80	0.20	1	1	1	6.05	1.21
Wetland	BRU-327-19	411	5	9	9	6	7	7	6	7	7	0.57	0.77	0.77	0.20	1	1	1	0.12	0.02
Wetland	BRU-327-8-617	617	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	24.19	4.03
Wetland	BRU-327-8-630	434	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	31.15	5.19
Wetland	BRU-336-21-617	425	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.71	0.12
Wetland	BRU-336-25	434	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.17	0.03
Wetland	BRU-336-26	425	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	10.78	1.80
Wetland	BRU-336-28B	617	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.16	0.03
Wetland	BRU-336-37B	616	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.24	0.04
Wetland	BRU-336-38	616	5	8	8	7	8	8	5	6	6	0.57	0.73	0.73	0.17	1	1	1	0.52	0.09
Wetland	BRU-336-39	425	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	0.54	0.09
Wetland	BRU-336-41	180	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	0.04	0.01
Wetland	BRU-336-41-E	630	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	0.07	0.01
Wetland	BRU-336-43-E-434	434	5	8	8	3	4	4	4	5	5	0.40	0.57	0.57	0.17	1	1	1	1.34	0.22
Wetland	BRU-336-43-E-630	630	5	8	8	6	7	7	5	6	6	0.70	0.70	0.70	0.03	1	1	1	0.00	0.00
Wetland	BRU-336-44-617	425	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	0.35	0.06
Wetland	BRU-336-45	425	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.03	0.01
Wetland	BRU-336-45B	425	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	1.77	0.29
Wetland	BRU-336-45C	425	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.29	0.05
Wetland	BRU-336-46-P	425	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	2.31	0.38
Wetland	BRU-336-47	434	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.13	0.02
Wetland	BRU-336-48	425	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.11	0.02
Wetland	BRU-336-49	425	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	2.13	0.35
Wetland	BRU-336-50-617	425	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.14	0.02
Wetland	BRU-336-51-630	434	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.07	0.01
Wetland	BRU-336-54-617	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.11	0.02
Wetland	BRU-336-55	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.10	0.02
Wetland	BRU-336-56-617	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.08	0.01
Wetland	BRU-336-58-617	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.70	0.12
Wetland	BRU-336-58-641	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.09	0.02
Wetland	BRU-336-61	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.24	0.04
Wetland	BRU-336-62-617	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.01	0.00
Wetland	BRU-336-65	425	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.01	0.00
Wetland	BRU-336-9C	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.14	0.02
Wetland	HC-329-12A	617	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	2.00	0.33
Wetland	HC-329-13-617	617	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	2.57	0.43
Wetland	HC-329-2	617	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	0.52	0.09
Wetland	HC-329-3	427	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	10.68	1.78
Wetland	OAK-428-23-617	425	5	8	8	5	6	6	4	5	5	0.47	0.63	0.63	0.17	1	1	1	1.13	0.19
Wetland	OAK-428-27-625	411	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.99	0.17
Wetland	OAK-428-27-630	434	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.38	0.06
Wetland	OAK-428-29-617a	617	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	13.34	2.22
Wetland	OAK-428-29-617b	434	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	0.30	0.05
Wetland	OAK-428-29-617c	427	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	3.14	0.52
Wetland	OAK-428-29-630a	434	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	9.06	1.51
Wetland	OAK-428-29-630b	411	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	1.45	0.24
Wetland	OAK-428-30-611	611	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	9.61	1.60
Wetland	OAK-428-31-611	611	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	8.32	1.39

Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code*	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Ac.	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Wetland	OAK-428-34-630	434	5	8	8	8	9	9	8	9	9	0.70	0.87	0.87	0.17	1	1	1	1.96	0.33
Wetland	OAK-428-35-434	434	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	0.33	0.06
Wetland	OAK-428-36-630	434	5	8	8	6	7	7	4	5	5	0.50	0.67	0.67	0.17	1	1	1	1.43	0.24
Wetland	OAK-428-46-611	611	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	3.58	0.60
Wetland	OAK-428-47-617	425	5	7	7	6	7	7	6	7	7	0.57	0.70	0.70	0.13	1	1	1	0.59	0.08
Wetland	OAK-428-50-630	434	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	7.05	1.17
Wetland	OAK-429-15-617	425	5	8	8	6	7	7	4	5	5	0.50	0.67	0.67	0.17	1	1	1	8.64	1.44
Wetland	OAK-429-17-616	616	5	8	8	6	7	7	8	9	9	0.63	0.80	0.80	0.17	1	1	1	1.54	0.26
Wetland	OAK-429-25-427	427	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.54	0.09
Wetland	OAK-429-25-617	617	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	2.48	0.41
Wetland	OAK-429-29-617	427	5	8	8	5	6	6	5	6	6	0.50	0.67	0.67	0.17	1	1	1	3.43	0.57
Wetland	OAK-429-30-617	427	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	0.79	0.13
Wetland	OAK-429-31-630	434	5	8	8	4	5	5	4	5	5	0.43	0.60	0.60	0.17	1	1	1	0.17	0.03
Wetland	OAK-429-32-617	427	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	3.06	0.51
Wetland	OAK-429-33-617	425	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	6.05	1.01
Wetland	OAK-429-3-427	427	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	0.27	0.04
Wetland	OAK-429-3-617	617	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	74.73	12.45
Wetland	OAK-429-36-616	616	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.35	0.06
Wetland	OAK-429-36-617a	617	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	2.71	0.45
Wetland	OAK-429-36-617b	425	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.64	0.11
Wetland	OAK-429-43-617	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.45	0.07
Wetland	OAK-429-44-617	425	5	8	8	7	8	8	6	7	7	0.60	0.77	0.77	0.17	1	1	1	0.12	0.02
Wetland	OAK-429-45-617	617	5	8	8	6	7	7	7	8	8	0.60	0.77	0.77	0.17	1	1	1	2.65	0.44
Wetland	OAK-429-46-617	427	5	8	8	6	7	7	5	6	6	0.53	0.70	0.70	0.17	1	1	1	10.76	1.79
Wetland	OAK-432-2-620	620	5	5	5	3	4	4	3	4	4	0.37	0.43	0.43	0.07	1	1	1	0.27	0.02
Wetland	OAK-432-41-617	427	5	8	8	4	5	5	3	4	4	0.40	0.57	0.57	0.17	1	1	1	0.77	0.13
Wetland	OAK-432-4-617	427	5	8	8	5	6	6	6	7	7	0.53	0.70	0.70	0.17	1	1	1	5.01	0.83
Wetland	OAK-432-6	425	5	8	8	5	6	6	3	4	4	0.43	0.60	0.60	0.17	1	1	1	5.86	0.98
Wetland	UMAA-434-8-P	434	5	8	8	5	6	6	7	8	8	0.57	0.73	0.73	0.17	1	1	1	0.00	0.00
Wetland	WFHC-319-1A	411	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	9.39	1.57
Wetland	WFHC-319-1B	617	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	2.04	0.34
Wetland	WFHC-319-1C-P-434	434	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	0.47	0.08
Wetland	WFHC-319-1C-P-617	617	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	46.82	7.80
Wetland	WFHC-319-1D	620	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	0.14	0.02
Wetland	WFHC-319-1E-434	434	5	8	8	8	9	9	7	8	8	0.67	0.83	0.83	0.17	1	1	1	1.45	0.24
Wetland	WFHC-319-7-625	411	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.60	0.10
Wetland	WFHC-329-1A	611	5	7	7	6	7	7	6	7	7	0.57	0.70	0.70	0.13	1	1	1	0.38	0.05
Wetland	WFHC-329-1C-427	427	5	7	7	6	7	7	6	7	7	0.57	0.70	0.70	0.13	1	1	1	16.76	2.24
Wetland	WFHC-329-1C-617	617	5	7	7	6	7	7	6	7	7	0.57	0.70	0.70	0.13	1	1	1	1.95	0.26
Wetland	WFHC-329-23	425	5	7	7	2	3	3	2	3	3	0.30	0.43	0.43	0.13	1	1	1	0.06	0.01
Wetland	WFHC-329-6-425	425	5	7	7	7	8	8	6	7	7	0.60	0.73	0.73	0.13	1	1	1	4.57	0.61
Wetland	WFHC-330-16	617	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	1.15	0.19
Wetland	WFHC-330-1-P-617a	617	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	2.90	0.48
Wetland	WFHC-330-1-P-617b	434	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	0.38	0.06
Wetland	WFHC-330-1-P-617c	425	5	8	8	6	7	7	6	7	7	0.57	0.73	0.73	0.17	1	1	1	14.25	2.37
Wetland	WFHC-330-2	434	5	7	7	6	7	7	6	7	7	0.57	0.70	0.70	0.13	1	1	1	6.27	0.84
Wetland	WFHC-330-6C-P	617	5	7	7	7	8	8	7	8	8	0.63	0.77	0.77	0.13	1	1	1	0.10	0.01
Wetland	WFHC-330-7-617	617	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	3.10	0.52
Wetland	WFHC-330-8-434	434	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.98	0.16
Wetland	WFHC-330-8-617a	617	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	10.76	1.79
Wetland	WFHC-330-8-617b	425	5	8	8	7	8	8	7	8	8	0.63	0.80	0.80	0.17	1	1	1	0.21	0.04
Wetland	OSW-P-2201	425	5	7	7	7	8	8	7	8	8	0.63	0.77	0.77	0.13	1	1	1	0.26	0.04
																			1104.67	**191.51**
																		including OSW	**1104.93**	**191.54**

Table 4-8-A xiii	Net Wetland Mitigation Sufficiency Summary		
	Acreage	Debits	Credits
Mining Impacts			
Forested	1357.9	607.6	
Herbaceous	2060.3	778 9	
Total:	3418.2	1386.5	
On-Site Wetland Establishment			
Forested	1323.5		227 5
Herbaceous	1882.0		397 5
Total:	3205.5		625 0
On-Site Wetland Preservation			
Forested	1104.7		191 5
Herbaceous	375.6		65.6
Total:	1480.3		257.1
Forested Credit Balance On-site:			**-188.6**
Herbaceous Credit Balance On-site:			**-315.8**
Total Credit Balance On-site:			**504.4**
Off-Site Mitigation			
Payne Creek			
Forested Wetland Establishment	88.6		41.6
Herbaceous Wetland Establishment	418 0		237 3
Payne Creek Total	*506.6*		*278.9*
Bowlegs Creek			
Forested Wetland Establishment	36.1		17.8
Herbaceous Wetland Establishment	3.6		1.8
Forested Wetland Preservation	80.0		13.3
Forested Wetland Enhancement	82.4		15.7
Herbaceous Wetland Enhancement	33.0		7.2
Bowlegs Creek Total	*235.2*		*55.8*
Horse Creek-Payne Creek			
Forested Wetland Preservation	471.4		15.7
Herbaceous Wetland Preservation	102 2		1.7
Horse Creek-Payne Creek Total	*573.6*		*17.4*
Peace River North			
Forested Wetland Preservation	445.72		45.07
Herbaceous Wetland Preservation	0.37		0.05
Peace River North Total	*446.1*		*45.1*
Peace River South			
Forested Wetland Preservation	236 8		24.0
Peace River South Total	*236.8*		*24.0*
West Fork Horse Creek			
Forested Wetland Establishment	18.0		2.5
Herbaceous Wetland Establishment	13.4		2.5
Forested Wetland Preservation	63.1		12.6
Herbaceous Wetland Preservation	0.4		0.1
Forested Wetland Enhancement	5.4		0.5
West Fork Horse Creek Total	*100.3*		*18.2*
South Pasture Extension			
Herbaceous Wetland Establishment	166.6		65.2
South Pasture Extension Total	*166.6*		*65.2*
Forested Credit Balance On-site + Off-site:			0.3
Herbaceous Credit Balance On-site + Off-site:			0.1
Total Credit Balance On-site + Off site:			**0.3**

Table 4-8-A-xiv(H)		Summary of Payne Creek Offsite Herbaceous Wetland Establishment												
Reclamation Year	Year Finish (YF)	Wetland ID	Land Use Code	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-factor Adjusted RFG	Final Credit
2016	2019	W1	641	1.90	4	8	8	0.67	1.27	1.25	0.53	0.9784	0.52	0.99
2016	2019	W3	641	5.98	4	7	8	0.63	3.79	1.25	0.51	0.9784	0.50	2.96
2016	2019	W6	641	126.20	7	8	8	0.77	96.75	1.25	0.61	0.9784	0.60	75.73
2016	2019	W8	643	53.10	7	8	8	0.77	40.71	1.50	0.51	0.9784	0.50	26.55
2016	2019	W9	641	31.70	6	8	8	0.73	23.25	1.25	0.59	0.9784	0.57	18.20
2016	2019	W11	641	27.90	6	8	8	0.73	20.46	1.25	0.59	0.9784	0.57	16.01
2016	2019	W15	641	112.50	7	8	8	0.77	86.25	1.25	0.61	0.9784	0.60	67.51
2016	2019	W17	643	39.60	7	8	8	0.77	30.36	1.50	0.51	0.9784	0.50	19.80
2016	2019	W18	643	19.10	7	8	8	0.77	14.64	1.50	0.51	0.9784	0.50	9.55
			Total	**417.98**					**317.48**					**237.31**

Table 4-8-A-xiv(F)	Summary of Payne Creek Offsite Forested Wetland Establishment													
Reclamation Year	Year Finish (YF)	Wetland ID	Land Use Code	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T factor	T-factor Adjusted RFG	Final Credit
2016	2031	W2	617	24.7	7	8	8	0.77	18.94	1.50	0.51	0.9363	0.48	11.82
2016	2031	W4	611	7.5	8	8	8	0.80	6.00	1.75	0.46	0.9363	0.43	3.21
2016	2031	W5	617	2.8	8	8	8	0.80	2.24	1.50	0.53	0.9363	0.50	1.40
2016	2031	W7	617	12.6	7	8	8	0.77	9.66	1.50	0.51	0.9363	0.48	6.03
2016	2031	W10	617	1.1	7	8	8	0.77	0.84	1.50	0.51	0.9363	0.48	0.53
2016	2031	W12	611	7.9	7	8	8	0.77	6.06	1.75	0.44	0.9363	0.41	3.24
2016	2031	W13	617	4.0	7	8	8	0.77	3.07	1.50	0.51	0.9363	0.48	1.91
2016	2031	W14	617	1.9	8	8	8	0.80	1.52	1.50	0.53	0.9363	0.50	0.95
2016	2031	W16	617	23.8	7	8	8	0.77	18.25	1.50	0.51	0.9363	0.48	11.39
2016	2031	W19	617	2.3	8	8	8	0.80	1.84	1.50	0.53	0.9363	0.50	1.15
			Total	**88.60**					**68.41**					**41.63**

Table 4-8-A-xiv		Stream Establishment on Offsite Lands (Payne Creek) by Year					
Stream ID	Mine Year Reconnected*	HA	Stream Length (ft)	Net Gain	Temporal Lag Factor**	Risk Factor	Adjusted Net Gain
Stream 1	2018	105	1,820.00	1,194.38	0.9031	1.11	971.75
Stream 2	2018	105	506.00	332.06	0.9031	1.11	270.17
Stream 3	2018	105	757.00	496.78	0.9031	1.11	404.18
Stream 4	2018	105	752.00	493.50	0.9031	1.11	401.51
Stream 5	2018	105	2,834.00	1,859.81	0.9031	1.11	1,513.15
Stream 6	2018	105	8,086.00	5,306.44	0.9031	1.11	4,317.34
Total Creation Gain			**14,755.00**	**9,682.97**			**7,878.10**

*Based on construction/reconnection timeframe of 2 years
**Per Temporal Lag Factor for Wetland Establishment Herbaceous

Table 4-8-A-xix	Summary of Peace River North Offsite Preservation (With and Without Project) UMAM Values by Assessment Area ID																				
Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Acreage	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Forested Wetland	PRN-615-1	615	7	8	8	7	8	8	7	8	8	0.70	0.80	0 80	0.10	1	1	1	403 27	40.33
Forested Wetland	PRN-615-2	615	5	6	6	6	7	7	6	7	7	0 57	0.67	0.67	0.10	1	1	1	3 37	0 34
Forested Wetland	PRN-617-1	617	5	6	6	6	7	7	7	8	8	0.60	0.70	0.70	0.10	1	1	1	12.13	1 21
Forested Wetland	PRN-617-2	617	5	7	7	7	8	8	7	8	8	0.63	0.77	0.77	0.13	1	1	1	14.95	1 99
Forested Wetland	PRN-630-1	630	6	7	7	6	7	7	6	7	7	0.60	0.70	0.70	0.10	1	1	1	12.00	1 20
Forested Wetland	PRN-648-1	648	5	7	7	5	6	6	5	6	6	0 50	0.63	0.63	0.13	1	1	1	0 37	0.05
																			446.08	**45.12**

Forested	445.72	45.07
Herbaceous	0.37	0.05

Table 4-8-A-xvi(H)		Summary of Bowlegs Creek Offsite Herbaceous Wetland Establishment												
Reclamation Year	Year Finish (YF)	Wetland ID	Land Use Code	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-Factor	T-factor Adjusted RFG	Final Credit
2018	2021	WC-4	643	3.63	8	8	8	0.80	2.90	1.50	0.53	0.9031	0.48	1.75
			Total	**3.63**					**2.90**					**1.75**

Table 4-8-A-xvi(F)		Summary of Bowlegs Creek Offsite Forested Wetland Establishment												
Reclamation Year	Year Finish (YF)	Wetland ID	Land Use Code	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-factor	T-factor Adjusted RFG	Final Credit
0	15	WC-1	611	3.76	8	8	8	0.80	3.01	1.75	0.46	0.9363	0.43	1.61
0	15	WC-3	624	28.70	8	8	8	0.80	22.96	1.50	0.53	0.9363	0.50	14.33
0	15	WC-2	617	3.67	8	8	8	0.80	2.94	1.50	0.53	0.9363	0.50	1.83
			Total	**36.13**					**28.90**					**17.77**

Table 4-8-A-xvi(S)	Stream Establishment on Offsite Lands (Bowlegs Creek) by Year						
Stream ID	Mine Year Reconnected*	HA	Stream Length (ft)	Net Gain	Temporal Lag Factor**	Risk Factor	Adjusted Net Gain
Stream to Connection #14	2018	105	1,914	1,256.06	0.9031	1.11	1,021.94
Stream to Connection #13	2018	105	412	270.38	0.9031	1.11	219.98
Stream to Connection #2	2018	105	195	127.97	0.9031	1.11	104.12
Stream to Connection #3	2018	105	128	84.00	0.9031	1.11	68.34
Stream to Connection #4	2018	105	401	263.16	0.9031	1.11	214.10
Stream to Connection #6	2018	105	1,728	1,134.00	0.9031	1.11	922.63
Stream to Connection #9	2018	105	729	478.41	0.9031	1.11	389.23
Total Creation Gain			**5,507**	**3,613.97**			**2,940.34**

*Based on construction/reconnection timeframe of 2 years
**Per Temporal Lag Factor for Wetland Establishment Herbaceous

Table 4-8-A-xvi(P)	Summary of Bowlegs Creek Offsite Forested Preservation (With and Without Project) UMAM Values by Assessment Area ID																			
Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Acreage	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Forested Wetland	WP-1	615	5	7	8	7	8	8	7	8	8	0.63	0.77	0 80	0.17	1	1	1	46.83	7.81
Forested Wetland	WP-2	617	5	7	8	7	8	8	7	8	8	0.63	0.77	0 80	0.17	1	1	1	16.76	2.79
Forested Wetland	WP-3	631	5	5	8	7	8	8	5	6	6	0 57	0.63	0.73	0.17	1	1	1	16.43	2.74
																		Total	**80.02**	**13.34**

Table 4-8-A-xvi(E)	Summary of Bowlegs Creek Offsite Enhancement (With and Without Project) UMAM Values by Assessment Area ID																			
			Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score								
Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code	Without Project	Current	With Project	Without Project	Current	With Project	Without Project	Current	With Project	Without Project	Current	With Project	Delta	Risk	USACE T-factor*	Preservation Adjustment Factor	Acreage	Functional Gain
Forested Wetland	WE-1	615	5	5	8	7	7	7	5	5	7	0 57	0 57	0.73	0.17	1 25	0 9784	N/A	1.04	0.14
Forested Wetland	WE-2	621	5	5	8	7	7	7	5	5	7	0 57	0 57	0.73	0.17	1 25	0 9784	N/A	7.35	0.96
Herbaceous Wetland	WE-3	641	5	5	8	7	7	7	3	3	8	0 50	0 50	0.77	0.27	1 25	0 9784	N/A	9.43	1.97
Herbaceous Wetland	WE-4	641	5	5	8	7	7	7	3	3	8	0 50	0 50	0.77	0.27	1 25	0 9784	N/A	10.84	2.26
Herbaceous Wetland	WE-5	643	5	5	8	7	7	8	3	3	8	0 50	0 50	0.80	0.30	1 25	0 9784	N/A	6.19	1.45
Herbaceous Wetland	WE-6	646	5	5	8	7	7	8	3	3	8	0 50	0 50	0.80	0.30	1 25	0 9784	N/A	6.52	1.53
Forested Wetland	WE-7	616	5	5	8	7	7	8	4	4	8	0 53	0 53	0.80	0.27	1 25	0 9363	N/A	46.37	9.26
Forested Wetland	WE-8	621	5	5	8	7	7	8	4	4	8	0 53	0 53	0.80	0.27	1 25	0 9363	N/A	0.06	0.01
Forested Wetland	WE-9	624	5	5	8	7	7	8	4	4	8	0 53	0 53	0.80	0.27	1 25	0 9363	N/A	14.10	2.82
Forested Wetland	WE-10	611	5	5	8	7	7	8	3	3	8	0 50	0 50	0.80	0.30	1 50	0 9363	N/A	13.47	2.52
																		Total	**115.38**	**22.92**

*Used Ona year 0 herbaceous temporal lag except on wetlands where enhancements include tree plantings (WE-7, 8, 9, 10); year 0 forested temporal lag was used in those cases

Herbaceous Wetlands	32.98	7.22
Forested Wetlands	82.39	15.71

Table 4-8-A-xvii(H)		Summary of South Pasture Extension Offsite Herbaceous Wetland Establishment												
Reclamation Year	Year Finish (YF)	Wetland ID	Land Use Code	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T Factor	T-factor Adjusted RFG	Final Credit
2017	2020	R-04E-16-641	641	4.15	6	6	6	0.60	2.49	1.25	0.48	0.9402	0.45	1.87
2017	2020	R-05-08-641	641	3.37	6	6	7	0.63	2.13	1.25	0.51	0.9402	0.48	1.61
2019	2022	R-07W-44-641	641	0.67	6	6	6	0.60	0.40	1.25	0.48	0.8672	0.42	0.28
2019	2022	R-08E-02-641	641	7.06	7	6	7	0.67	4.71	1.25	0.53	0.8672	0.46	3.26
2019	2022	R-08E-02-643	643	7.49	7	6	7	0.67	5.00	1.50	0.44	0.8672	0.39	2.89
2019	2022	R-08E-03-641	641	12.46	6	6	7	0.63	7.89	1.25	0.51	0.8672	0.44	5.47
2020	2023	R-11W-16-641	641	3.02	6	6	6	0.60	1.81	1.25	0.48	0.8322	0.40	1.21
2020	2023	R-08E-07-641	641	28.69	6	6	7	0.63	18.17	1.25	0.51	0.8322	0.42	12.10
2020	2023	R-08E-08-641	641	39.12	6	6	7	0.63	24.78	1.25	0.51	0.8322	0.42	16.50
2022	2025	R-04E-02-641	641	4.39	6	6	7	0.63	2.78	1.25	0.51	0.7654	0.39	1.70
2022	2025	R-04E-04-641	641	5.54	6	6	7	0.63	3.51	1.25	0.51	0.7654	0.39	2.15
2022	2025	R-04E-10-643	643	2.04	6	6	7	0.63	1.29	1.50	0.42	0.7654	0.32	0.66
2028	2031	R-01W-26-641	641	8.24	8	7	7	0.73	6.04	1.25	0.59	0.5871	0.34	2.84
2028	2031	R-01W-28-641	641	14.19	8	7	7	0.73	10.41	1.25	0.59	0.5871	0.34	4.89
2028	2031	R-01W-30-641	641	0.86	8	7	7	0.73	0.63	1.25	0.59	0.5871	0.34	0.30
2028	2031	R-01W-36-641	641	6.58	7	7	7	0.70	4.61	1.25	0.56	0.5871	0.33	2.16
2028	2031	R-01W-40-641	641	0.68	7	7	7	0.70	0.48	1.25	0.56	0.5871	0.33	0.22
2028	2031	R-01W-42-641	641	0.29	8	7	7	0.73	0.21	1.25	0.59	0.5871	0.34	0.10
2028	2031	R-01W-46-641	641	1.24	7	7	7	0.70	0.87	1.25	0.56	0.5871	0.33	0.41
2028	2031	R-01W-48-641	641	1.12	8	7	7	0.73	0.82	1.25	0.59	0.5871	0.34	0.39
2028	2031	R-12W-02-641	641	0.90	6	6	6	0.60	0.54	1.25	0.48	0.5871	0.28	0.25
2028	2031	R-12W-16-641	641	1.00	7	7	6	0.67	0.67	1.25	0.53	0.5871	0.31	0.31
2031	2034	R-01W-04-641	641	13.46	7	6	7	0.67	8.97	1.25	0.53	0.5091	0.27	3.65
2031	2034	R-01W-28-641	641	0.02	8	7	7	0.73	0.01	1.25	0.59	0.5091	0.30	0.01
			Total	**166.58**										**65.22**

Table 4-8-A-xx	Summary of Peace River South Offsite Preservation (With and Without Project) UMAM Values by Assessment Area ID																			
Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Acreage	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Forested Wetland	PRS-615-1	615	7	8	8	7	8	8	7	8	8	0.70	0.80	0 80	0.10	1	1	1	199.76	19 98
Forested Wetland	PRS-617-1	617	6	7	7	6	7	7	6	7	7	0.60	0.70	0.70	0.10	1	1	1	0.15	0.02
Forested Wetland	PRS-617-2	617	6	7	7	6	7	7	7	8	8	0.63	0.73	0.73	0.10	1	1	1	26.69	2.67
Forested Wetland	PRS-617-3	617	5	7	7	7	8	8	7	8	8	0.63	0.77	0.77	0.13	1	1	1	4.72	0.63
Forested Wetland	PRS-617-4	617	6	7	7	6	7	7	6	7	7	0.60	0.70	0.70	0.10	1	1	1	0.54	0.05
Forested Wetland	PRS-617-5	617	5	7	7	5	6	6	5	6	6	0 50	0.63	0.63	0.13	1	1	1	0.58	0.08
Forested Wetland	PRS-617-6	617	5	7	7	5	6	6	5	6	6	0 50	0.63	0.63	0.13	1	1	1	4.37	0 58
																			236.82	**24.00**

Table 4-8-A-xxi(H)		Summary of WFHC Offsite Herbaceous Wetland Establishment												
Reclamation Year	Year Finish (YF)	Wetland ID	Land Use Code	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-factor	T-factor Adjusted RFG	Final Credit
2035	2038	R-24-9	643	10.51	8	6	7	0.70	7.35	1.50	0.47	0.3826	0.18	1.88
2036	2039	R-25-7	641	2.92	8	7	8	0.77	2.24	1.25	0.61	0.3597	0.22	0.64
			Total	**13.42**									**Total**	**2.52**

Table 4-8-A-xxi(F)		Summary of WFHC Offsite Forested Wetland Establishment												
Reclamation Year	Year Finish (YF)	Wetland ID	Land Use Code	Acreage	LL Score	WE Score	CS Score	Delta	Subtotal Credit	Risk	Risk Adjusted RFG	USACE T-factor	T-factor Adjusted RFG	Final Credit
2036	2039	R-13-1	630	0.79	8	7	7	0.73	0.58	1.50	0.49	0.3351	0.16	0.13
2036	2039	R-24-3	617	0.06	8	7	7	0.73	0.04	1.50	0.49	0.3351	0.16	0.01
2036	2039	R-24-4	630	5.07	8	7	7	0.73	3.72	1.50	0.49	0.3351	0.16	0.83
2036	2039	R-24-5	617	0.76	8	7	7	0.73	0.56	1.50	0.49	0.3351	0.16	0.12
2036	2051	R-24-7	617	11.28	8	7	7	0.73	8.27	1.50	0.49	0.2545	0.12	1.40
			Total	**17.96**									**Total**	**2.50**

Table 4-8-B-xxi(F)	Summary of WFHC Offsite Forested Wetland Enhacement																				
Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Acreage	Functional Gain
			Without Project	Current	With Project	Without Project	Current	With Project	Without Project	Current	With Project	Without Project	Current	With Project						
Wetland	24-2	630	6	6	8	6	6	7	6	6	8	0.60	0.60	0.77	0.17	1.25	0.748768	N/A	5.44	0 54
																		Total	**5.44**	**0.54**

Table 4-8-B-xxi(H)	Summary of WFHC Offsite Herbaceous Wetland Preservation																			
Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Acreage	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Wetland	24-6B	647	5	8	8	5	6	6	5	6	6	0 50	0.67	0.67	0.17	1	1	1	0.16	0.03
Wetland	24-6C	647	5	8	8	5	6	6	5	6	6	0 50	0.67	0.67	0.17	1	1	1	0.28	0.05
																		Total	**0.44**	**0.07**

Table 4-8-B-xxi(F)			Summary of WFHC Offsite Forested Wetland Preservation																	
Type (Wetland or OSW)	UMAM Assessment Area ID	Land Use Code	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Acreage	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Wetland	24-3	617	5	8	9	7	8	8	7	8	8	0.63	0.80	0.83	0 20	1	1	1	47.60	9 52
Wetland	24-7	617	5	8	9	6	7	7	7	8	8	0.60	0.77	0.80	0 20	1	1	1	10.46	2.09
Wetland	24-6A	620	5	8	9	6	7	7	6	7	7	0.57	0.73	0.77	0 20	1	1	1	4.99	1.00
																			63.05	**12.61**

Table 4-8-A xxiii	Summary of Horse Creek CF - Payne Creek CF Offsite Preservation (With and Without Project) UMAM Values by Assessment Area ID																				
Wetland Type	UMAM Assessment Area ID	Land Use Code*	Location Landscape Support Score			Water Environment Score			Community Structure Score			UMAM Score			Delta	Risk	Time Lag	Preservation Adjustment Factor	Ac.	Functional Gain
			Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.	Without Project	Current	With Proj.						
Forested Wetland	HC1-610	610	6	6	6	7	8	8	5	6	6	0.60	0.67	0.67	0.07	1	1	0.5	8.95	0.30
Forested Wetland	HC4-610	610	8	8	8	7	8	8	7	8	8	0.73	0.80	0.80	0.07	1	1	0.5	5.06	0.17
Forested Wetland	HC6-610	610	8	8	8	7	8	8	6	7	7	0.70	0.77	0.77	0.07	1	1	0.5	36.31	1.21
Forested Wetland	HC8-610	610	6	6	6	7	8	8	6	7	7	0.63	0.70	0.70	0.07	1	1	0.5	32.53	1.08
Forested Wetland	HC9-610	610	8	8	8	7	8	8	6	7	7	0.70	0.77	0.77	0.07	1	1	0.5	43.81	1.46
Forested Wetland	PC-615	615	6	6	6	7	8	8	6	7	7	0.63	0.70	0.70	0.07	1	1	0.5	344.78	11.49
Herbaceous Wetland	HC1-640	640	6	6	6	6	7	7	7	7	7	0.63	0.67	0.67	0.03	1	1	0.5	5.63	0.09
Herbaceous Wetland	HC2-640	640	7	7	7	7	8	8	7	7	7	0.70	0.73	0.73	0.03	1	1	0.5	7.99	0.13
Herbaceous Wetland	HC3-640	640	8	8	8	7	8	8	7	7	7	0.73	0.77	0.77	0.03	1	1	0.5	1.22	0.02
Herbaceous Wetland	HC4-640	640	8	8	8	7	8	8	7	7	7	0.73	0.77	0.77	0.03	1	1	0.5	3.45	0.06
Herbaceous Wetland	HC5-640	640	7	7	7	7	8	8	7	7	7	0.70	0.73	0.73	0.03	1	1	0.5	26.67	0.44
Herbaceous Wetland	HC6-640	640	8	8	8	7	8	8	7	7	7	0.73	0.77	0.77	0.03	1	1	0.5	8.26	0.14
Herbaceous Wetland	HC7-640	640	7	7	7	7	8	8	7	7	7	0.70	0.73	0.73	0.03	1	1	0.5	3.02	0.05
Herbaceous Wetland	HC8-640	640	7	7	7	7	8	8	7	7	7	0.70	0.73	0.73	0.03	1	1	0.5	8.09	0.13
Herbaceous Wetland	HC9-640	640	8	8	8	7	8	8	7	7	7	0.73	0.77	0.77	0.03	1	1	0.5	37.86	0.63
																		Total	**573.63**	**17.42**

Forested	471.44	15.71
Herbaceous	102.19	1.70