



HARDEE COUNTY MINING DEPARTMENT

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Mosaic South Fort Meade Mine Development of Regional Impact Review

Staff Report

I. Background

Project Summary:

Mosaic Fertilizer L.L.C. (Mosaic) proposes development of the South Fort Meade Mine – Hardee County (SFM-HC) Tract as a phosphate mine. The property is adjacent to their existing South Fort Meade Mine – Polk County. The property is in north east Hardee County at the county line, east of the Peace River. The total mine area is 10,856 acres of which 6,941 acres will be mined. The Mine Plan Summary is provided below.

Mine Plan Summary

| Areas | Acres |
|-------------------------------|--------------|
| Total Mine Area | 10,856 acres |
| Area to be Mined | 6,941 acres |
| Area to be Disturbed | 815 acres |
| Total Area Mined or Disturbed | 7,756 acres |
| Area not to be Disturbed | 3,100 acres |
| Average Matrix Thickness | 13.6 feet |
| Average Overburden Thickness | 23 feet |

| Mining and Production Rates | Average | Maximum |
|-------------------------------------|---------------|---------------------|
| Mining Rate + 33%* (acres per year) | 770 | 1,030 |
| | Tons** | Average/Year |
| Tons Product | 50,846,000 | 3,911,231 |

| | | |
|--|-------------------------|------------------------|
| Tons Tailing (From SFM-HC) | 74,808,929 | 5,754,533 |
| Tons Clay (From SFM-HC) | 51,548,916 | 3,965,246 |
| Overburden Volume | 260,047,650 cubic yards | 20,003,665 cubic yards |
| * Maximum Rate for Section 380.06 (19)b.4. FS criteria | | |
| ** Based upon 2007 mine plan Source: Mosaic 2007 | | |

The mining activities are proposed to occur on about 72 percent of the SFM-HC Tract. The remainder of the land either will be specifically avoided because of the ecological attributes present (e.g. high quality wetlands avoided to fulfill the requirements of Chapter 62-343, F.A.C.) or because of logistical constraints. The proposed limits of mining disturbance are shown on various maps and figures and the “Preserved” and “Undisturbed” distinctions are shown on Map H-2 RPC Report (Appendix A). In the event Mosaic is able to reduce or remove logistical constraints, certain areas now classified as “Undisturbed” may be addressed in applications to permit mining, including a Notice of Proposed Change to this DRI.

Development of the SFM-HC Tract will not occur in phases. Once the necessary approvals to mine and reclaim the Tract are received, mining and reclamation activities will continue until they are completed. Map H-1 RPC Report (Appendix A) illustrates the projected mine sequence in terms of the annual blocks to be mined. In each of these areas, the “major elements” of mining and reclamation activities consist of the following sequence of development steps:

- Conducting the wildlife pre-clearing surveys described in the response to Question 12E of the ADA;
- Constructing the perimeter “ditch and berm” systems, if the mining block lies adjacent to property boundaries or wetlands to remain undisturbed;
- Installing the necessary pipelines, pumps, and mine infrastructure;
- Clearing the land;
- Excavating the ore matrix;
- Backfilling the mined land with residual sand or clay in the mined areas as shown on Maps H-5 and E-2 RPC Report (Appendix A);
- Grading and contouring the mined land to achieve the post-reclamation contours shown on Map C-2 RPC Report (Appendix A); and
- Re-vegetating the land to achieve the post-reclamation vegetative conditions shown on Map F-2 RPC Report (Appendix A).

The mine infrastructure needed to facilitate the proposed mining of the SFM-HC Tract consists of:

- the system of mine access corridors shown on Map H-1 RPC Report (Appendix A), including two crossings of Little Charlie Creek, one crossing each of Lake Dale and Parker Branches, and one crossing of an unnamed tributary in Section 2 adjacent to County Road (CR) 664;
- three clay settling areas as shown on Map H-5 RPC Report (Appendix A); and
- surface water discharge outfall structures adjacent to Little Charlie Creek, Parker Branch, and an unnamed tributary to the Peace River in Section 2, as shown on Map H-6 RPC Report (Appendix A). Each of these infrastructure elements is described below.

The mine access corridors have been designed to transfer mined ore to the beneficiation plant and return sand and clay residuals for use as backfill, as well as to manage process water and captured storm water runoff in active mining and reclamation areas. The layout of the corridor system was designed by Mosaic to support an orderly progression of mining and reclamation, including the productive and timely use of sand tailings, clay, and the redistribution of overburden. The number of stream crossings has been minimized and the locations where streams will be crossed by the corridors have been carefully selected to minimize disturbance of natural floodplain features. Plans for FDOT toll road crossing were discussed in meetings in conjunction with the DRI review and the road crossings will be co-located with equipment crossing areas to the extent possible.

Three additional clay settling areas will be required in order to mine the SFM-HC Tract and their number and volumes have been determined by technical calculations and models based on estimates of the clay content of the Hardee County property (ore body). Existing and approved clay settling area locations in Polk County will be utilized first for the disposal of clay generated by washing ore excavated from the SFM-HC Tract to ensure that all approved storage is consumed.

Mining and reclamation of the SFM-HC Tract will result in the capture of storm water runoff in active mining and reclamation areas. In order to return this drainage to the SFM-HC Tract, principally in the Little Charlie Creek basin, surface water discharge outfall structure locations (NPDES) are proposed as shown on Map H-6 RPC Report (Appendix A).

Development of the SFM-HC Tract will be accomplished without the need for many of the infrastructure elements normally considered in a mining DRI review. The beneficiation plant and associated mine infrastructure facilities will not be relocated. Product shipments will continue to originate in Polk County on the same rail spur approved in the Polk County Development Order. The Polk County Conceptual Reclamation Plan will remain the same in terms of wetland impacts and mitigation and the post-reclamation vegetative cover. No increase in authorized well water withdrawals is proposed, nor are new production water wells proposed in Hardee County. Employment levels and the associated traffic demands on local roads as well as other infrastructure will remain essentially the same on an annual basis.

In its completed form, the SFM-HC development will consist of reclaimed land areas suitable for agricultural uses with substantial portions of the site suitable for development into

industrial, commercial, and residential uses. The only portions of the post-reclamation landscape on the SFM-HC Tract not suitable for these post-reclamation uses will be the floodplains of the Peace River, Little Charlie Creek, Lake Dale Branch, Parker Branch, several unnamed tributaries, and wetland mitigation areas.

The build-out of the project has already occurred with respect to traffic, employment, water consumption and other impacts, because the mine and plant are currently in full-scale operation. The mining sequence and schedule presented in MMRP Table 35-6 includes the expected maximum area to be mined in any one year and an average annual rate of mining that is defined as the total mineable area of the mine divided by the expected life of the mine. The schedule includes the dates for completion of mining operations and completion of reclamation. Although market interruptions or other factors may result in a temporary slowing of mining activities, the plans presented in the ADA and MMRP illustrate the maximum projected mining rate. In this way, the maximum potential impacts are addressed in the ADA and MMRP.

Major Issues Considered in the Staff Review

The Hardee County staff isolated several major issues during the review process leading up to the preparation of the development order. These issues included:

- ✓ Economic Impacts to Hardee County
- ✓ Dam Safety for Clay Settling Areas
- ✓ Wildlife Protection
- ✓ Preservation of Environmentally Sensitive Areas along the Peace River and Its Tributaries
- ✓ Protection of Water Quality and Quantity within the Peace River Watershed
- ✓ Monitoring of the Mining and Reclamation Operations
- ✓ Protection of Archaeological and Historical Resources

The economic setting of the project is in North Central Hardee County where growth and development from Polk County is moving south along the Highway 17 corridor. The Florida Department of Transportation has mid- to long-range plans to bring Florida Turnpike corridors through the same area. These issues create interest in post mining development. Citizens who will live near the clay settling areas have expressed concerns regarding dam safety. The Hardee County staff required additional engineering studies to justify Mosaic's proposed designs. Mining near and within the upper reaches of the floodplains of the Peace River and its tributaries has been a long running issue. The county has asked that these lands, many of which are environmentally sensitive be protected through the creation of a conservation easement. Mosaic has agreed to set aside 2,100 acres along the Peace River and Little Charlie Creek which will support environmental protection and recreation within the project area. Water quantity and quality have been issues in contention for several years. Mosaic and its predecessor company have had extensive groundwater and surface water monitoring in place for a decade to provide background data for the watershed. Hardee County will

require extensive on-going monitoring of all permitted work with an independent five-year audit of mining activities. Monitoring plans have been established for all activities for which state and federal environmental standards are applicable. Extensive archaeological and historical studies have been conducted during the review process.

Economic Impacts to Hardee County

Mosaic owns or otherwise has the rights to mine 10,856 acres of land in Hardee County contiguous with the Polk County portion of the South Fort Meade Mine. The mining and reclamation of this land will generate significant revenue and accompanying economic impacts on Hardee County. Hardee County required additional economic development information to supplement the application documents submitted for DRI review. Mosaic concurred and provided funding to conduct economic studies of the proposed mine and its project impacts to the county. Particular emphasis was placed on the direct impacts during mining and reclamation and downstream impacts for redevelopment on reclaimed mined lands.

Much of the land intended for mining is currently being used for row crops, citrus groves, and other agricultural purposes. Mosaic would like to extend the life of the South Fort Meade Mine and the processing plants it helps support by bringing the land in Hardee County into production for phosphate. Hardee County staff agrees with the mining plans but wants to be sure that the post mining landscape will provide for an orderly transition to higher value land uses.

This analysis estimated the net economic impacts of the proposed mine extension into Hardee County and reviewed strategic alternatives for reclaimed mined lands. It considered only economic impacts of the mine net of reduced agricultural production, and did not take into account other impacts that might be important in the public decision making process, such as environmental impacts, impacts on transportation or other infrastructure during mining, fiscal impacts, etc.

The net impact analysis shows that the extension of mining into Hardee County would have a net economic benefit to the community. The economy and incomes of residents would be better off if mining were conducted and land reclaimed as Mosaic's current plan shows, than if it were not. Furthermore, even though the mining and reclamation phases carry out nineteen years into the future, the incremental value of reclaiming land for residential and mixed-use development, rather than lower-value recreational purposes, when expressed in present 2008 dollars, would have a significant impact on the county's economy.

Overall, the extension of mining would generate about \$98.3 million more in personal income for Hardee County residents and small business owners than they would otherwise see if mining were not extended. This finding includes the effects of losses due to the temporary displacement of agricultural production, which is currently a mainstay of the Hardee County economy, by mining activity.

The analysis considered the future market value of the reclaimed land, and found that the value of the land is much greater if it is reclaimed for mixed-use development rather than for recreational uses only. Reclaiming land so that it could be used for residential, commercial, and industrial development rather than recreation would increase the net present value of the income to be derived from the extension of the South Fort Meade Mine into Hardee County by about \$21.3 million.

Dam Safety for Clay Settling Areas

Hardee County staff responded to citizen's concerns regarding the safety of the dams surrounding clay settling areas and perimeter retaining beams. These concerns were founded on recent incidents including three hurricanes targeting the Hardee County area with wind and flooding. Mosaic was asked to review their plans and provide assurances that these dams will remain safe through the life of the project and beyond.

Accordingly, Mosaic has designed a floodwater diversion system that would divert and contain all floodwaters in open mine cuts in the unlikely event of a dam breach. Additionally, Mosaic has developed protocols for the design, construction, inspection, and maintenance of retaining dikes, including both clay settling dams and perimeter retaining berms. These standards and procedures are consistent with the minimum requirements established by Chapter 62-672, Florida Administrative Code (FAC) for engineering designs of these types of dams. Also, Mosaic is required to provide to Hardee County and the Florida Department of Environmental Protection construction plans for retaining dams, dikes and berms that fully comply with Chapter 62-672, FAC, and Hardee County's Land Development Code Section 3.14.02.05. Mosaic is also required to maintain the overall surface water management system of impoundments and ditches to the original design standards.

The dam safety compliance with design and permit conditions will be addressed by the engineer of record for Mosaic in monthly and annual reports to Hardee County that summarize the inspections and the status of dam conditions.

Wildlife Protection

Phosphate mining typically has a dramatic and profound effect upon the entire suite of components of existing ecosystems. Wildlife protection/mitigation measures described in the MMRP and mandated in the draft DO are designed to provide a high level of protection for those irreplaceable elements of the faunal community (listed species), and to mitigate and minimize unavoidable impacts on wildlife. Conditions of the DO mandate that "pre-clearing" surveys for listed wildlife species, employing survey procedures specified by the Florida Fish and Wildlife Conservation Commission, U.S. Fish and Wildlife Service (USFWS) or otherwise incorporated into the approved wildlife work plan be conducted prior to clearing and preparation of each unit for mining. Based upon the results of these pre-clearing surveys, Mosaic is further required to coordinate with and obtain permits as appropriate from the FFWCC and/or the USFWS for management efforts to ensure protection of any listed species

encountered. Thus the state (FFWCC) and Federal (USFWS) entities exercising primary responsibility for conservation of listed wildlife species are provided ample ongoing opportunity to scrutinize and review mining activities, and prescribe management actions as necessary to ensure the protection of listed species.

Additional protection is provided for nesting wading birds, irrespective of state or Federal listing status, that are found on pre-clearing surveys. If nesting wading birds are discovered during pre-clearing surveys, a consultation with the FFWCC is triggered, and mining activities are suspended in an area including the nesting habitat and a surrounding buffer to be specified by FFWCC until nesting is completed and fledglings have left the area.

Similarly, nesting areas of bald eagles and crested caracaras known to occur on-site or discovered during pre-clearing surveys shall be monitored and protected from disturbance by mining operations using protocols provided by FFWCC and USFWS. Protection of nest sites from disturbance from mining operations will remain in effect until FFWCC and USFWS determine that protection is no longer necessary.

The DO additionally requires that 100 percent of all potentially suitable gopher tortoise habitat be surveyed using procedures specified by FFWCC. All active and inactive gopher tortoise burrows are to be identified, and relocation of gopher tortoises and commensal species to ensure their protection are to be completed under permit from FFWCC.

Additional habitat protection, preservation, and reclamation requirements specified in the DO and further discussed in the following section of this staff report provide for connectivity between undisturbed areas and areas to be reclaimed, facilitating repopulation of native wildlife species following reclamation. The same condition requires that relocation and restocking efforts as approved by the appropriate fish and wildlife conservation agencies will be undertaken as necessary to ensure rapid re-colonization of reclaimed habitats by native wildlife.

Preservation of Environmentally Sensitive Areas along the Peace River and Its Tributaries

The DO specifies a number of conditions designed to preserve environmentally sensitive wetlands areas along the Peace River and five of its primary or secondary tributaries which drain the South Fort Mead Mine-Hardee County Mine. Specifically, portions of the Peace River floodplain, and wetlands associated with its tributaries as depicted in Mosaic's Map H-2 of the Master Mining and Reclamation Plan, September 2007 edition will be preserved, connectivity will be maintained between reclaimed uplands and undisturbed areas to facilitate colonization by native wildlife following reclamation, and mitigation of all wetlands losses will be accomplished as required in the Florida DEP Environmental Resource Permit.

Mosaic has proposed to establish a permanent conservation easement that will cover approximately 2,100 acres on the South Fort Meade Mine-Hardee County, and that proposal is incorporated as a binding condition of the DO. Mosaic is further encouraged to develop a

comprehensive conservation strategy and resource management plan for all areas to be reclaimed as natural habitat that are adjacent to the conservation easement, and to offer the ultimate custodian of the conservation easement the opportunity to purchase “all adjacent areas reclaimed to native habitat.” Additional safeguards are incorporated as DO conditions which will help ensure that no subsequent erosion of these habitat preservation/reclamation requirements occurs.

Mosaic is specifically required to relocate all Giant orchid (*Pteroglossaspis ecristata*) plants observed on the South Fort Meade Mine-Hardee County or facilitate their relocation by competent authority. Mosaic is additionally required to protect offsite or undisturbed wetlands areas from degradation, and to provide unmined protective buffers around preserved wetlands and other preservation areas. Additional protective measures are required to minimize the dewatering effect of mining activities on both preserved onsite and offsite wetlands.

Collectively, the conditions of the DO provide considerable protection to environmentally sensitive areas, especially wetlands, occurring on and adjacent to the South Fort Meade Mine-Hardee County. While reclamation measures proposed appear to employ state-of-the-art technology for wetlands reclamation, and likely effect full compliance with requirements of Florida law, the restoration of full ecological function of reclaimed areas, and the ability of these reclaimed areas to satisfy the long-term habitat requirements of impacted species remains subject to some uncertainty.

Protection of Water Quality and Quantity within the Peace River Watershed

Hardee County understands its role in maintaining the flow and quality of the waters within the Peace River watershed particularly within the surficial (water table) aquifer. The phosphate ore occurs within the surficial aquifer. The drainage basins within the mine area covered by this must be restored to the approximate pre-mining sizes, hydrologic functions, and locations as described in the application documents. In order to demonstrate the ability to restore these hydrologic functions, Mosaic will be required to conduct monitoring of surface and ground water that includes levels, flows and water quality within the project area.

Mosaic has been conducting surface stream measurement from numerous monitoring stations for the past decade to establish background conditions. Groundwater conditions have been monitored through an extensive network of monitoring wells and piezometers over this same period. Hardee County will require Mosaic to continue to monitor groundwater and surface water quality within the boundaries of the South Fort Meade mine as required by ULDC Section 3.14.02.06 B. Mosaic is required to properly plug and abandon all non-essential on-site wells, in accordance with SWFWMD standards and rules, prior to the commencement of mining within each area of the mine.

Mosaic has proposed designs and mining procedures that should reduce or eliminate the dewatering effects on the water table aquifer in preserved onsite wetlands and offsite wetlands, farm ponds, lakes and other surface waters. Techniques to reduce offsite effects

include, but are not limited to, overburden backcast, perimeter recharge ditches and injection wells. Mosaic has identified five stream crossings that will be used to move excavation equipment across the mine site. Hardee County will require that all necessary precautions must be taken and acceptable protection methods employed in the construction and subsequent utilization of the stream crossings to protect surrounding plant communities, water quality, and stream channel integrity from degradation, and to maintain stream flow, consistent with Environmental Resource Permit conditions.

The success of watershed protection measures must be demonstrated before reclamation work is approved by Hardee County in accordance with the provisions of the Land Development Code. As mining progresses, Mosaic must submit evidence that reclaimed areas located adjacent to Parker Branch, Little Charlie Creek, Lake Dale Branch, and unnamed tributaries to the Peace River provide base flow to these preserved streams. Evidence may consist of water table measurements in reclaimed areas, aquifer performance tests, geotechnical evaluation of reclaimed soil cores, or quantitative modeling.

Monitoring of the Mining and Reclamation Operations

Hardee County recognizes that the mine has an operating life through at least 2022 and that mining plans may be modified as market conditions change. The County also recognizes that Mosaic may need to make modifications in the operational plans and procedures that reflect the conditions at that time. Hardee County believes that the proposed mining operations can occur in a safe and environmentally contentious manner. County mine inspectors will conduct their own field inspections and accompany the inspection team of the FDEP Bureau of Mine Reclamation on quarterly inspections.

In order to monitor the mining activities for permit compliance Mosaic will be required to prepare an Annual Operating Report that will review and summarize the adequacy of efforts to comply with the operating requirements spelled out in the conditions of the Development Order. The report will be submitted by the engineer of record and include information from monitoring activities for the previous year. The Annual Operating Report will provide a review of the water monitoring, air quality, and environmental monitoring programs with recommendations for adding monitoring locations, parameters, and methods as well as deleting locations, parameters, and methods no longer necessary to evaluate impacts of mining, waste disposal and reclamation.

The Board of County Commissioners may amend monitoring plans as part of the annual review process. Changes to the approved monitoring program will not require the submittal of a DRI Notice of Proposed Change nor constitute a substantial deviation.

Hardee County will also require a series of five year audits of the mining activities to be conducted for the previous five years by an independent consultant. The consultant will be

required to evaluate mining activities and the monitoring results to determine permit compliance on the part of Mosaic.

Protection of Archaeological and Historical Resources

Mosaic retained Janus Research to prepare an archaeological and historical report on the proposed mining area. This study identified 39 archaeological and historical sites that were classified as insignificant and none that could be classified as significant. Hardee County reviewed the Janus report and recommended a condition to protect any “unanticipated” cultural resources that may be encountered (language from Florida Division of Historical Resources’ [FDHR] Rule 1A46, *Florida Administrative Code*) during mining operations. Mosaic agreed to post “Training Notices”, i.e., prominently displayed “Notices,” to those workers who might be in position to “discover” previously unknown archaeological or historical resources. Such notices will cite and depict types or examples of culturally significant sites or remains that could be commonly encountered, with expedient procedures for reporting any discoveries to be included in the “Training Notice.” In this manner, field staff and management will have a structured procedure that can be implemented immediately to protect the discovery until experts can be available for prompt resolution of significance, if any, of the discovery. This procedure will allow professional consultants to mitigate any negative impact to significant cultural resources.

The review by Hardee County also noted that the Janus report was conducted on the upland areas to be mined and did not survey the floodplain areas. Mosaic proposes to cross floodplain areas to move the excavation equipment across the property. Hardee County requires that these areas be evaluated for cultural historical resources before crossings are made.

II. Project Staff Review of Applicable Hardee County Comprehensive Plan Policies:

A. Future Land Use Element

1. GOAL L1: Provide the foundation for land use decision-making and regulations to achieve and maintain a high quality human, natural and agricultural environment. It is the desire to achieve and maintain a well-planned mix of compatible land uses that promote the public's health, safety, morals and welfare.

Objective L1: New or amended uses of land shall be consistent with the Future Land Use designations as described in this element and as portrayed on the Hardee County Future Land Use Map. The Future Land Use designations are intended to: a) coordinate land use with the natural environment, including soils, topography, and other resources, b) appropriately mix and distribute residential, commercial,

industrial, recreation, public and mining land uses, and c) encourage an efficient pattern of development and discourage sprawl. The Hardee County Future Land Use Map series, as part of this plan, shall be applied only in conjunction with the policies of this element and other elements of this plan.

Policy L1.10: The mining overlay district is to identify areas of Hardee County where mining has, is or is planned and is likely to occur. This overlay shall serve as an atlas of pre and post mining geographical conditions including but not limited to soil types, hydrological features, topographical features and land use suitability indices. It shall also identify land use features during the mining process in 5-year intervals until reclamation is complete. This overlay district should be as definitive as possible identifying all areas of the County where mining is likely to occur. Lands within this overlay district not subject to mining may still be included due to off-site mitigation potential, settling pond locations and other mine related impacts. A restrictive mining corridor in which accelerated reclamation of re-contoured overburden only shall be established to maintain the integrity of the "Development Corridor" generally along U.S. 17 and the Peace River in Central Hardee County. This "Development Corridor" will be more specifically defined through amendments to the Hardee County Mining Ordinance.

Staff Comment Regarding Consistency of Project with Policy L1.10:

Policy L1.10 will be adhered to through the following:

1. SFM-HC is consistent with Policy L1.10 by being located solely within the mining overlay district. Additionally, the mine itself is located outside the "Development Corridor", generally an area following U.S. 17 on each side of the highway.
2. **Policy L1.12:** In order to protect the natural function of the 100-year floodway of the Peace River, Horse Creek, Charlie Creek and Payne Creek, a setback from the banks of the waterways is hereby established, in which only pasturing of livestock and residential development at a density of not more than one dwelling unit per 20 gross acres are permitted. Structures must be flood-proofed and the floor level shall be at least one foot above the 100-year flood elevation. The setback shall be 500 feet on each side of the river and creeks or the width of the 100-year floodway as shown on the FEMA flood map, whichever is less.

Staff Comments Regarding Consistency of Project with Policy L1.12:

Policy L1.12 will be adhered to through the following:

1. Flood prone areas will be protected.
2. Except for a limited number of transportation corridors crossing the drainages and tributaries to the Peace River, no structures will be within the 100-year floodplain.

3. Policy L1.13: Land uses which are potentially incompatible either due to type of use or intensity of use, shall be buffered from one another.

Staff Comment Regarding Consistency of Projection with Policy L1.13:

Policy L1.13 will be adhered to through the following:

1. SFM-HC is consistent with Policy L1.13 by providing additional buffering and protection for the residential areas located on the mine's western boundary. Additionally, SFM-HC's mining vesting will end at the scheduled date of mine completion, or the year 2020. In other words, a measure of land use predictability is being introduced into this process whereby future land uses around SMF-HC can be planned.

4. **Objective L4**: Through land development regulations, the natural and historic resources of Hardee County shall be protected from the adverse impacts of development and redevelopment activities, and shall be coordinated with designated future land uses and appropriate topography and soil conditions.

Policy L4.1: Hardee County shall require that all development proposals be accompanied by evidence that an inventory of wetlands; soils posing severe limitations to construction; unique habitat; endangered species of wildlife and plants; significant historic structures and/or sites; and areas prone to periodic flooding has been conducted. Hardee County shall further require that the extent to which any development or redevelopment is proposed to be placed in/on, to disturb, or to alter the natural functions of any of these resources be identified. Such identification shall occur at a phase in the development review process that provides the opportunity for Hardee County to review the proposed project so that direct and irreversible impacts on the identified resources are minimized, or in the extreme, mitigated. The County shall prohibit all development within jurisdictional wetlands unless appropriate mitigation is provided consistent with Federal and State regulations. Where mitigation is approved, wetlands shall be replaced with the same type and form that perform the same function as the wetland lost to development. Where development is determined to encroach upon a resource, Hardee County shall require a specific management plan to be prepared by the developer, which results in no net loss of wetlands and which includes necessary modifications to the proposed development, specific setback and buffers, and location of development away from site resources to protect and preserve the natural functions of the resource. The minimum setback shall be 25 feet and the average of all setbacks from the resource shall be 40 feet. Areas designated as buffers shall preserve all natural vegetative cover, except where drainage-ways and access ways are approved to cross the buffer. Buffers may be supplemented only with native trees, shrubs and ground covers. On all existing parcels of land, at the time of adoption of the plan, development shall be located away from wetlands on the upland portion of the site. Where no upland exists, development may occur so long as all applicable environmental permit

requirements can be satisfied. All future subdivision of land shall contain adequate uplands for the permitted use.

Staff Comment Regarding Consistency of Projection with Policy L4.1:

Policy L4.1 will be adhered to through the following:

1. Protection from mining of a 2,100-acre corridor of ecologically significant land along the Peace River, Little Charlie Creek, and several smaller tributaries. Of this area, the applicant will dedicate 2,100 acres and an additional 153 contiguous acres to the State in a perpetual conservation easement. A management plan has been drafted by the applicant, outlining allowable uses and key maintenance and management activities. Multiple agencies have targeted the Peace River and its tributaries for protection and management as wildlife corridors.
2. Wetland systems to be avoided will be protected from mining activities with the construction of berms and ditches around the perimeter. The berms and ditches are intended to serve as physical barriers and buffers between mining and reclamation activities and the avoided wetlands. They will be designed to catch and contain process water and stormwater runoff, recharge ditches, and keep the adjacent wetlands hydrated during the time when they are separated from their respective watersheds.
3. The project fails to protect a significant system of habitats located in the northeastern quadrant of the site, consisting of a chain of marshes, hardwood wetlands, palmetto prairie, and pine flatwoods superficially connected to Little Charlie Creek.
4. This policy will be furthered with the creation of wetlands in the post-reclamation landscape on site. The types and acreage of wetlands proposed to be created is listed in **Table 13-1**, and may be modified with issuance of State permits. Generally, the types and acreage of wetlands proposed to be created are similar to those being lost to mining.
5. All proposed impacts to waterways and other surface waters are to be mitigated with the creation of a like amount of mean annual floodplain storage as currently exists.
6. Mosaic will not mine in the 25 –year floodplain of regionally significant watercourses.
7. Reclamation of drainage basins will result in reduced peak flows and extend the base flow.
8. There will not be any disturbance of the Peace River Flood Plain or flow ways. The location of proposed mitigation areas proximate to the Peace River corridor will increase the size of the corridor, providing additional buffering from future land use impacts.
9. The area of waste clay disposal on the SFM-HC tract has been limited to approximately 1,500 acres, by storing as much waste clay as possible in the existing settling areas in Polk County.
10. Approximately 50% of the land will be reclaimed as sand tailing fill with overburden cap. This will allow a return to agricultural production upon completion of mining.
11. The sand tailing fill/ overburden capped reclamation areas will have load-bearing capacities and stability approaching pre-mining capacity.
12. The waste clay settling areas can be utilized for limited agricultural uses.
13. A full evaluation of archaeological and historical resources was conducted.

14. If future mining activities uncover any previously unidentified archaeological remains, mining activity in the immediate area of the remains will be stopped until a professional archaeologist can evaluate them.

5. Policy L4.6: Mineral extraction may be permitted either where compatible with existing land uses, or appropriately buffered from surrounding land uses. Hardee County shall continue to enforce its mining ordinance regarding the permitting, mining and reclamation of areas of mineral resources. All proposed phosphate mineral extraction activities shall continue to be addressed through the Development of Regional Impact review process. Hardee County mining regulations shall specify criteria by which mining activities may be permitted, including appropriate setbacks and buffering from adjacent land uses.

Staff Comment Regarding Consistency with Policy L4.6:

Policy L4.6 will be adhered to through the following:

Policy L4.6 will be adhered to by the submission of the annual mining unit report for SFM-HC, as well as through independent five-year audits of the mine's field operations.

6. Policy L4.7: The County shall require the maximization of reclaimed mining lands available for future compatible development activities while balancing the requirements of protection and preservation of critical natural areas and habitat.

Staff Comment Regarding Consistency of Projection with Policy L4.7:

1. Policy L 4.7 will be adhered to by the submission of Master Mining and Reclamation Plan, including Figure SR2-11, Development Potential. The annual mining unit review and the five-year comprehensive audits will refer to Figure SR2-11 as one of several measures of reclamation success.

7. **Objective L7:** Protect the economic viability of future land development in the County.

Policy L7.1: The County shall adopt a "Land Use Suitability Index" to assess the ability of reclaimed lands to support and sustain various types of future development. The Index shall ultimately be employed to determine the value and contribution of post-mining scenarios to the economy and future growth of Hardee County.

Policy L7.2: The County shall ensure continued economic viability, adequate development diversity, sustainability, and land use compatibility of post-mine properties.

Policy L7.3: The County will examine the success history of various mine reclamation techniques.

Policy L7.4: Prior to approval, modification, or extension of any development orders, permits, or other County approvals, phosphate mining reclamation techniques shall

be evaluated in terms of their ability to support economically viable and diverse forms of development.

Policy L7.5: The County shall continue to assess the economic impacts of phosphate mining, existing and proposed, in conjunction with the Central Florida Regional Planning Council. Other agencies and/or private interests, may be enlisted to assist in this evaluation.

Policy L7.6: The County shall require comprehensive Geographic Information System (GIS) data for all mine lands. Specifications for such data shall be prescribed in the Hardee County Mining Ordinance and/or the Hardee County Land Development Regulations.

Policy L7.7: The Hardee County Mining Ordinance and Hardee County Land Development Regulations shall, in addition to all other functions, include requirements for the most expeditious reclamation possible.

Policy L7.8: The Hardee County Mining Ordinance and Hardee County Land Development Regulations shall be revised and/or amended to implement the policies of this objective.

Staff Comment Regarding Consistency of Projection with Policies L7.1 through L7.8:

Policies L 7.1 through L7.8 will be adhered to through the following:

1. Adherence to the mining and reclamation schedule through the annual unit review process and the five-year comprehensive audit process.
2. Consistency with Figure SR2-11, Development Potential, as a general guide to reclamation activities, land use suitability, and other post-mining activities suitable for the site.
3. During each annual review, GIS data requirements shall be reviewed to be certain that the most recent shape file information has been provided to Hardee County.
4. The economic study the applicant has provided shall serve as a base line during the annual review and five-year audit process. Said study shall be informational and not a part of the regulatory requirements of the county's mining regulations subject to review during the annual unit reviews and five-year audit.
5. Hardee County will regularly evaluate the need to amend its comprehensive plan and mining regulations.

[Copy of mining overlay map here]

[Omitted Transportation and Housing Elements because project does not concern issues related to Transportation and Housing Elements]

B. Sanity Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Recharge Element

1. GOAL S1: Hardee County will provide, or require the provision of, needed facilities in a manner that corrects existing deficiencies, protects investments in existing facilities, and promotes compact and orderly growth. Hardee County will: ensure that adequate stormwater drainage will be provided to ensure reasonable protection from flooding and prevent degradation of receiving water quality; take actions necessary to assure that the function of natural groundwater recharge areas within the County will be protected; and, ensure an adequate supply of potable water for present and future demands without adversely affecting the quantity and quality of the County's environmental resources.

Objective S6: The County shall maintain, as part of its land development regulations, stormwater drainage regulations providing for the protection of natural drainage features and provisions for ensuring that future development utilizes appropriate stormwater management techniques.

Policy S6.1: Hardee County's land development regulations shall include stormwater drainage provisions which ensure that: a) new developments are required to manage runoff from the 25-year frequency, 24-hour duration storm event on-site so that post-development runoff rates, volumes and pollutant loads do not exceed pre-development conditions; b) stormwater engineering, design and construction standards for on-site systems are provided; c) erosion and sediment controls are used during development; and, d) periodic inspection and maintenance of on-site systems is provided by the developer as a condition of system permit renewal.

Staff Comment Regarding Consistency on Project with Policy S6.1:

Policy S6.1 will be adhered to through the following:

1. Mosaic will collect all surface water runoff, properly decant the stormwater runoff and release the water only through a permitted discharge point until such time as the reclamation area is released.
2. Mining and or disturbance will be restricted. 2,100 acres are not to be mined including the floodplains, and sensitive habitat along the drainages. This area will be conveyed by conservation easement.
3. During the time period when land is disturbed but, not yet reclaimed and re-vegetated, a perimeter ditch and berm system will intercept all stormwater runoff from such disturbed areas. Runoff captured from these areas will be pumped into and stored within the mine process water recirculation system. EPA has defined

this management protocol as a “Best Management Practice” (see 60 FR 189) and FDEP imposes upon Mosaic the requirement to implement this procedure in the Industrial Wastewater Facilities Permit issued as required by Chapter 62-620, F.A.C.

4. During mining, the active clay settling and mined but not yet backfilled areas will create sizeable storage volumes to store the captured stormwater runoff. Storage volumes seasonally become filled by captured runoff. Following clarification in a clay settling area, the water will be discharged through discharge outfall structures proposed to be constructed on the SFM-HC Tract.
5. During the time period when land is disturbed but, not yet reclaimed and re-vegetated, a perimeter ditch and berm system will intercept all stormwater runoff from such disturbed areas. Runoff captured from these areas will be pumped into and stored within the mine process water recirculation system.
6. The proposed drainage system does not contain artificial structures and is designed to be a passive system that will not require active maintenance. Mosaic intends to design a post-reclamation drainage system that will not require any artificial structures or any post-reclamation maintenance.

2. Objective S8: Through land development regulations, Hardee County will protect the function of areas of high natural groundwater aquifer recharge and natural drainage features.

Policy S8.1: As part of its land development regulations, Hardee County will include provisions protecting the function of natural drainage features and areas of high groundwater aquifer recharge as identified by the Southwest Florida Water Management District. Regulations shall include criteria for appropriate setbacks, buffers, provisions for the use of open space and native vegetation as buffers, regulation of the use or storage of hazardous materials, and appropriate land uses and densities and intensities of land use within and adjacent to natural drainage features and areas of high natural groundwater aquifer recharge.

Staff Comment Regarding Consistency of Project with Policy L8.1:

Policy L8.1 will be adhered through the following:

1. The SFMM-HC will not have any effect on areas of high aquifer recharge.
2. The hydrologic and soils investigations indicate that there is reasonable assurance that none of the area proposed to be mined are geologically or hydrologically unsuitable for mining.
3. Mosaic’s reclamation plans restore to the extent possible the pre-mining drainage basins. With the exception of the elevated area of the waste clay disposal the post reclamation topography conforms to the pre-mining topography.
4. A no mining no disturbance area of 2,100 acres along the Peace River and Little Charlie Creek drainages has been set aside.

C. Conservation Element

1. GOAL C1: The natural resources of Hardee County shall be conserved, protected and used for the benefit of the citizens of the county.

Objective C1: Hardee County shall continue to implement policies which serve to protect the air quality of the immediate area through relevant land development regulations.

Policy C1.1: Hardee County land development regulations shall prescribe best management practices which minimize unconfined emissions generated by construction activities.

Policy C1.2: Hardee County shall continue to require new development that discharges gasses or particulates into the air to meet the minimum air quality standards as defined in Rule 62-204.

Staff Comment Regarding Consistency of Project with Policies C1.1 – C1.2:

Policy C1.1-C1.2 will be adhered to through the following:

1. The only regulated emissions will be particulates from mining operations as beneficiation will occur at the existing facility in Polk County.
2. The SFMM-HC will use mobile air quality monitors located in areas most likely to generate particulate emissions. The monitors will be relocated as necessary.
3. Land graded to the design post-reclamation elevations will be either covered with topsoil from an unmined donor area or planted as soon as grading is completed.
4. The number of access corridors required to link the mining areas to the Beneficiation plant will be limited.
5. Mining roads will be watered down if necessary to control fugitive dust.
6. Land clearing in advance of mining will be restricted to areas to be mined in the immediate future.
7. Grassed and vegetated berms will be installed around areas to be mined and reclaimed.

2. Objective C2: Hardee County shall implement policies which maintain surface and ground water quality by regulating or restricting land use activities that may adversely impact water quality.

Policy C2.1: Domestic, agricultural, mining and other industrial wastewater discharge and runoff shall not degrade the existing water quality of the receiving water body as measured at United States Geological Survey testing sites.

Policy C2.4: In order to protect the natural function of the 100-year floodway of the Peace River, Horse Creek, Charlie Creek and Payne Creek, a setback from the banks of the waterways is hereby established, in which only pasturing of livestock and residential development at a density of not more than one dwelling unit per

20 gross acres are permitted. Structures must be flood-proofed and the floor level shall be at least one foot above the 100-year flood elevation. The setback shall be 500 feet on each side of the river and creeks or the width of the 100-year floodway as shown on the FEMA flood map, whichever is less.

Staff Comment Regarding Consistency of Project with Policies C2.1 and C2.4:

Policy C2.1-C2.4 will be adhered to through the following:

1. During the time period when land is disturbed but, not yet reclaimed and re-vegetated, a perimeter ditch and berm system will intercept all stormwater runoff from such disturbed areas. Runoff captured from these areas will be pumped into and stored within the mine process water recirculation system. EPA has defined this management protocol as a “Best Management Practice” (see 60 FR 189) and FDEP imposes upon Mosaic the requirement to implement this procedure in the Industrial Wastewater Facilities Permit issued as required by Chapter 62-620, F.A.C.
2. During mining, the active clay settling and mined but not yet backfilled areas will create sizeable storage volumes to store the captured stormwater runoff. Storage volumes seasonally become filled by captured runoff. Following clarification in a clay settling area, the water will be discharged through discharge outfall structures proposed to be constructed on the SFM-HC Tract.
3. During the time period when land is disturbed but, not yet reclaimed and re-vegetated, a perimeter ditch and berm system will intercept all stormwater runoff from such disturbed areas. Runoff captured from these areas will be pumped into and stored within the mine process water recirculation system. The surface water will become part of the water recirculation system and reduce the dependence on groundwater withdrawal. EPA has defined this management protocol as a “Best Management Practice” (see 60 FR 189) and FDEP imposes upon Mosaic the requirement to implement this procedure in the Industrial Wastewater Facilities Permit issued as required by Chapter 62-620, F.A.C.
4. All required setbacks from the Peace River will be maintained and those areas protected by conservation easements.
5. Policy C2.1-C2.4 will be further adhered to through regular monitoring and inspection activities, annual unit reviews and the five-year comprehensive audit process.

- 2. Objective C4:** Hardee County shall continue to implement policies and enforce land development regulations which provide for the appropriate use, conservation, and/or protection of minerals, soils, and native vegetative communities within the County.

Policy C4.1: Hardee County, through its mining regulations and development of regional impact process, required for all phosphate mining operations, shall provide for the conservation, appropriate use, and protection of areas suitable for

extraction of phosphate rock. These provisions shall also protect other land uses from adverse effects of mining operations. This policy shall not be interpreted or applied in conflict with other policies adopted to protect identified environmentally sensitive natural resources.

Staff Comment Regarding Consistency of Projection with Policy C.4.1:

Policy C.4.1 will be adhered to through:

1. The County will require adherence to the mining and reclamation schedule in the SFMM-HC MMRP.
 2. For those time periods set forth in the MMRP mining schedule and mapped mining areas as exists on the date of approval as depicted on Map ____ of the SFMM-HC, the mine setbacks established in the mining regulations will be vested with respect to adjoining properties use and request for future land use amendments which may conflict with minimum setback requirements.
 3. Through its required Evaluation and Appraisal process, Hardee County may consider comprehensive plan amendments which may better reflect land uses within the county including those where the vesting mentioned above no longer applies.
3. Policy C4.2: Hardee County shall cooperate with adjoining cities and counties to conserve or protect native vegetative communities listed as rare, threatened or endangered by the U.S. Fish and Wildlife Service. Hardee County shall work with adjoining jurisdictions to identify rare, threatened or endangered vegetative communities in need of protection, and to establish similar protection criteria in local regulations.

Policy C4.4: Upon Plan adoption, Hardee County shall require that all development proposals be accompanied by evidence that an inventory of wetlands; soils posing severe limitations to construction; unique habitat; endangered species of wildlife and plants; significant historic structures and/or sites; and areas prone to periodic flooding has been conducted. Hardee County shall further require that the extent to which any development or redevelopment is proposed to be placed in/on, to disturb, or to alter the natural functions of any of these resources be identified. Such identification shall occur at a phase in the development review process that provides the opportunity for Hardee County to review the proposed project so that direct and irreversible impacts on the identified resources are minimized, or in the extreme, mitigated. The County shall prohibit all development within jurisdictional wetlands unless appropriate mitigation is provided and is consistent with all Federal and State regulations. Where mitigation is approved, wetlands shall be replaced with the same type and form that perform the same function as the wetland lost to development. Where development is determined to encroach upon a resource, Hardee County shall require a specific management plan to be prepared

by the developer, which results in no net loss of wetlands and which includes necessary modifications to the proposed development, specific setback and buffers, and location of development away from site resources to protect and preserve the natural functions of the resource. The minimum setback shall be 25 feet and the average of all setbacks from the resource shall be 40 feet. Areas designated as buffers shall preserve all natural vegetative cover, except where drainage-ways and access ways are approved to cross the buffer. Buffers may be supplemented only with native trees, shrubs and ground covers. On all existing parcels of land, at the time of adoption of the plan, development shall be located away from wetlands on the upland portion of the site. Where no upland exists, development may occur so long as all applicable environmental permit requirements can be satisfied. All future subdivision of land shall contain adequate uplands for the permitted use.

Policy C4.5: Hardee County shall encourage development activities to avoid natural wetland areas to the greatest extent feasible. Determination of potential impacts on wetlands shall consider the type, density and intensity of proposed land use as well as the type, function and quality of the wetland system.

Staff Comment Regarding Consistency of Project with Policies C4.2, C4.4 and C4.5:

Policy C4.2, C4.4 and C4.5 will be adhered to through the following:

1. All vegetative communities on the site have been identified and inventoried and conditions will protect vegetative communities listed as rare, threatened or endangered.
2. The development applicant has inventoried all wetlands, soils, unique habitat, endangered species of wildlife and plants, significant historic structures and areas prone to flooding. Impacts to these have been either minimized or mitigated.
3. Significant wetlands and stream corridors have been avoided and will be protected by conservation easement. Mitigation wetlands will replace acre-for-acre type-for-type the same type and function as those wetlands impacted and will also be protected by a conservation easement. Comprehensive management plans will protect all natural resources protected under the conservation easements.
4. All wetland area setbacks and buffers will be complied with, with the exception of wetlands permitted to be impacted and mitigated.
5. The annual unit review and five-year comprehensive audit process will be utilized to track compliance with conditions which protect the natural features and functions of protected areas.

5. Objective C5: Hardee County shall maintain land development regulations that provide for the appropriate use, conservation, and/or protection of fisheries, wildlife, and wildlife habitat.

Policy C5.1: Hardee County, by regulation, shall restrict activities which would adversely affect the survival of any endangered and threatened wildlife known to inhabit the

county. Such restrictions shall allow for on-site or off-site mitigation, as appropriate, and shall be applied or rescinded based on the status of the species.

Staff Comment Regarding Consistency of Project with Policy C5.1:

Policy C5.1 will be adhered to through the following:

1. The applicant has inventoried all threatened or endangered wildlife species on the site.
2. The development order will set forth species specific strategies and measures for eliminating, minimizing, or mitigating affects of mining on endangered or threatened wildlife species, as appropriate.
3. The annual unit review and five-year comprehensive review process will be utilized to track and measure compliance with conditions protecting threatened and endangered wildlife species.

D. Recreation and Open Space Element

1. GOAL R1: To ensure the provision of sufficient parks, recreation facilities, and open space areas to satisfy the needs of citizens and visitors.

Objective R1: Hardee County shall maintain access to public recreation facilities or sites, including the Peace River.

Policy R1.1: Hardee County shall continue to carry out scheduled maintenance activities to maintain public recreation facilities, including county-maintained boat ramps to the Peace River, and to ensure continued public access.

Policy R1.2: Hardee County shall work with the Florida Department of Environmental Protection and/or other relevant state agencies, to improve access to the Peace River. The County shall periodically report to the FDEP regarding the conditions and adequacy of existing boat ramps, and shall work with the FDEP to locate possible sites for future boat ramps.

Policy R1.3: Subject to local land development regulations, Hardee County shall permit low intensity commercial development, such as primitive camping or canoe rentals, in proximity to the Peace River to provide additional access points available to the public.

Policy R1.4: Hardee County shall encourage that new development in proximity to the Peace River to provide access for residents of the development and/or the general public.

Policy R1.5: New recreational facilities or sites shall accommodate the elderly, handicapped, and others with special needs subject to physical site constraints.

Policy R1.6: Hardee County shall maintain Pioneer Park in suitable condition, which provides access to the handicapped and provides access to the Peace River.

Objective R2: Management of public and private resources sufficient to meet the recreation and open space needs of Hardee County shall be coordinated through interlocal or interagency agreements, local regulations or development fees.

Policy R2.1: Activities identified in interlocal/interagency agreements regarding recreation and open space will be made consistent with open space standards established in the Recreation and Open Space element of the Comprehensive Plan. Hardee County Land Development Regulations and the recreation standards established in this element.

Policy R2.2: Activities or programs implemented by interlocal/interagency agreements will be carried out in an equitable manner by all parties.

Policy R2.3: Hardee County will coordinate with the Florida Department of Environmental Protection, and other relevant state agencies to assure that resource-based parks providing passive activity areas continue to be provided and maintained by the state park system.

Staff Comment Regarding Consistency of Project with Policies R1.1 through R1.6 and R2.1 through R2.3:

Policies R1.1 through R1.6 and R2.1 through R2.3 will be adhered to through the following:

1. Hardee County will be a sub-lessee under the conservation easement protecting un-mined lands dedicated to the State of Florida for purposes of providing public access and appropriate limited use of protected conservation lands for recreational purposes.
2. Hardee County will participate in the development of a management plan for conservation areas within the Peace River conservation area of SFMM-HC for purposes of providing appropriate public access to this resource.
3. The applicant will help facilitate Hardee County's coordination with the FDEP, acting as the State's agent in protecting the Peace River conservation area.

4. Objective R3: Hardee County shall ensure the adequate provision of open space by coordination with public and private entities, and standards to be implemented in local regulations.

Policy R3.2: Hardee County will coordinate with the Florida Department of Environmental Protection to assure that open space will continue to be provided by the state park system.

Policy R3.3: Hardee County will work with the phosphate mining companies operating in the County to utilize reclaimed land as open space. Future mining operations shall be required to designate some reclaimed land as open space, or for passive recreation. Upon reclamation, such land will be appropriately designated by an amendment to the County's Future Land Use Map.

Policy R3.4: Hardee County will work with the phosphate mining companies operating in the County to create sustainable lakes that provide public and/or private access and may be used for recreational purposes as well as other diverse land uses as part of required reclamation activities.

Policy R3.5: Payne's Creek State Park is designated as a natural reservation area. Hardee County's land development regulations shall be amended by September 1, 2003 to establish criteria for its protection from incompatible surrounding land uses, such as setback or buffering requirements for new development, and criteria for adjacent land uses or land use activities which shall be prohibited.

Staff Comment Regarding Consistency of Project with Policy R3.1 through R3.5:

Policy R.3.1 through R3.5 will be adhered to through the following:

1. Enforcing the DO through the annual mining review and five-year comprehensive audit process to ensure that reclamation is being conducted where required and at the pace established in the DO.
2. Where practical, urge Mosaic to accelerate construction of land and lakes reclamation to provide for that feature sooner than later.

E. Economic Development Element

1. GOAL E5: Hardee County shall achieve economic diversity and maximize sustainability on reclaimed phosphate mine lands.

Objective E5: At a minimum, sustain and improve the economic vitality and diversity of Hardee County through the development of efficient and effective reclamation land use planning and applicability, yielding, but not limited to agriculture, residential, commercial, industrial and recreation/open space type uses.

Policy E5.1: Hardee County shall require mining interests that participate in the annual mining review process to address these elements of economic development contained in the Policies of Objective E5. Additionally, prior to approval, modification or extension of any development order, permit or other County approval the applicant shall address the elements of economic development demonstrating how each mining operation and reclamation plan maximize and achieve economic development and diversity.

Policy E5.2: Hardee County shall work with the private sector to develop a site donated by IMC in Hardee County with a minimum of 30 jobs being created within the first three years of development.

Policy E5.3: The County shall recognize "Hardee Lakes" as a highly desired and suitable reclamation land type, encouraging other reclamation plans to produce such land use formations. Its development shall attempt to yield, but not be limited to, recreational uses.

Policy E5.4: Hardee County shall expeditiously amend its Mining Ordinance to reflect the philosophy of the Hardee County Comprehensive Plan, complying with or more stringent than State and Federal Laws, where applicable.

Policy E5.5: All interests in the mining industry including but not limited to mining companies, banking, real estate sales and owners of land and governmental agencies shall be assembled into a working, perpetual ad hoc committee with the purpose of addressing the issues related to mining impacts and land use efficiency and suitability.

Staff Comment Regarding Consistency of Project with Policies E5.1 through E5.5:

Policies E5.1 through E5.5 will be adhered to through the following:

1. Maintain Figure SR2-11, Development Potential, as the overall guide to post-mining and reclamation land uses on the SFM-HC mine.
2. Maintain coordination by Mosaic with the FDOT and/or Turnpike Authority to secure the most up-to-date information available with respect to a future east-west transportation corridor that may traverse on SFM-HC.
3. Apply the economic study developed for the project as a base line of information relative to the economic viability of land uses post mining/reclamation.
4. Encourage Mosaic to consider Figure SR2-11 as a base line for future land use entitlement post mining/reclamation.

F. Concurrency Management System.

Requirements for Concurrency

MINIMUM REQUIREMENTS FOR CONCURRENCY. The County's concurrency management system shall ensure that public facilities and services needed to support development are available concurrent with the impacts of such developments.

(a) For potable water, sewer, solid waste, and drainage, at a minimum, provisions in this comprehensive plan ensure that the following standards will be met will satisfy the concurrency requirement: 1. The necessary facilities and services are in place at the time a development permit is issued; or 2. A development permit is issued subject to the condition that the necessary facilities and services will be in place when the impacts of

the development occur; or 3. The necessary facilities are under construction at the time a permit is issued; or 4. The necessary facilities and services are guaranteed in an enforceable development agreement that includes the provisions of Rules 9J-5.0055(2)(a)1.-3. FAC. An enforceable development agreement may include, but is not limited to, development agreements pursuant to section 163.3220, Florida Statutes, or an agreement or development order issued pursuant to Chapter 380, Florida Statutes. The agreement must guarantee that the necessary facilities and services will be in place when the impacts of the development occur. (b) For parks and recreation, Hardee County may satisfy the concurrency requirement by complying with the standards in Rules 9J-5.0055(2)(a)1.-4. FAC or by complying with comprehensive plan provisions that ensure that the following standards will be met: 1. At the time the development permit is issued, the necessary facilities and services are the subject of a binding executed contract which provides for the commencement of the actual construction of the required facilities or the provision of services within one year of the issuance of the development permit; or 2. The necessary facilities and services are guaranteed in an enforceable development agreement that requires the commencement of the actual construction of the facilities or the provision of services within one year of the issuance of the applicable development permit. An enforceable development agreement may include, but is not limited to, development agreements pursuant to Section 163.3220, Florida Statutes, or an agreement or development order issued pursuant to Chapter 380, Florida Statutes. (c) For roads and mass transit designated in the adopted plan, Hardee County may satisfy the concurrency requirement by complying with the standards in Rules 9J-5.0055(2)(a)1.-4. And (2)(b)1. and 2., FAC. In addition, in areas in which Hardee County has committed to provide the necessary public facilities and services in accordance with its five-year schedule of capital improvements, the County may satisfy the concurrency requirement for roads and mass transit by the adoption and implementation of a concurrency management system based upon an adequate capital improvements program and schedule and adequate implementing regulations which, at a minimum, include the following provisions: 1. A capital improvement element and a five-year schedule of capital improvements which, in addition to meeting all of the other statutory and rule requirements, must be financially feasible. The capital improvements element and schedule of capital improvements may recognize and include transportation projects included in the first three years of the applicable, adopted Florida Department of Transportation five-year work program. 2. A five-year schedule of capital improvements which must include both necessary facilities to maintain the adopted level of service standards to serve the new development proposed to be permitted and the necessary facilities required to eliminate those portions of existing deficiencies which are a priority to be eliminated during the five-year period under the local government plan's schedule of capital improvements pursuant to Rule 9J-5.016(4)(a)1. FAC. 3. A realistic, financially feasible funding system based on currently available revenue sources which must be adequate to fund the public facilities required to serve the development authorized by the development order and development permit and which public facilities are included in the five-year schedule of capital improvements. 4. A five-year schedule of capital improvements which must include the estimated date of commencement of actual construction and the estimated date of project completion. 5. A five-year schedule of capital improvements which must demonstrate that the actual construction of the road or

mass transit facilities and the provision of services are scheduled to commence in or before the third year of the five-year schedule of capital improvements. 6. A provision that a plan amendment would be required to eliminate, defer or delay construction of any road or mass transit facility or service which is needed to maintain the adopted level of service standard and which is listed in the five-year schedule of improvements. 7. A requirement that Hardee County must adopt local development regulations which, in conjunction with the capital improvements element, ensure that development orders and permits are issued in a manner that will assure that the necessary public facilities and services will be available to accommodate the impact of that development. 8. A provision that a monitoring system shall be adopted which enables Hardee County to determine whether it is adhering to the adopted level of service standards and its schedule of capital improvements and that the County has a demonstrated capability of monitoring the availability of public facilities and services. 9. A clear designation within the Hardee County Comprehensive Plan of those areas within which facilities and services will be provided by the County with public funds in accordance with the five-year capital improvements schedule.

(d) In determining the availability of services or facilities, a developer may propose and Hardee County may approve developments in stages or phases so that facilities and services needed for each phase will be available in accordance with the standards required by Rules 9J-5.0055(2)(a), (2)(b) and (2)(c) FAC. (e) For the requirements of Rules 9J-5.0055(2)(a), (2)(b) and (2)(c) FAC, Hardee County must develop guidelines for interpreting and applying level of service standards to applications for development orders and permits and determining when the test for concurrency must be met. The latest point in the application process for the determination of concurrency is prior to the approval of an application for a development order or permit which contains a specific plan for development, including the densities and intensities of development.

Staff Comment Regarding Consistency of Project with Concurrency Management requirements.

The nature of SFM-HC is such that concurrency requirements, as set forth in Chapter 163, Part II, Florida Statutes, are addressed and adhered to in the Chapter 380.06, Florida Statutes, portion of this request. The SFMM does not present any new concurrency demands in relation to transportation, water, wastewater, solid waste, recreation, or schools. Since conventional development is not anticipated through the mining and reclamation process it is not necessary for the development order to address concurrency in the same manner as with other types of development.

III. Project Staff Review of Applicable Hardee County Mining Regulation Policies:

Regarding the mining of phosphate the Hardee County Unified Land Development Code Section 3.14.02 provides as follows:

A. Mining Standards:

01. No mining operations, except temporary storage of excavated materials, shall be performed within:
 - a. One-quarter (1/4) mile from the following future land use classifications specified and shown on the Future Land Use Map: incorporated towns and cities; Town Center; Highway Mixed Use; Residential Mixed Use; and Rural Center. The Board of County Commissioners may allow mining operations within one-quarter (1/4) mile upon demonstration by the Applicant/Owner that such mining operations will not significantly interfere with current or planned uses within or adjacent to such land use classification;
 - b. Five hundred (500) feet from a public park boundary, cemetery, historical site, or permanent buildings (including Mobile Homes or Manufactured Housing) used for residential, commercial, church or public purposes, on site at time of application for a mining unit approval, in areas not controlled by paragraph A.01.a. above;
 - e. One hundred (100) feet from an existing public right-of-way, or public easement for drainage, utility or road purposes, in areas not controlled by paragraph A.01.a. and 01.b. above;
 - d. Fifty (50) feet from Permittee's property line, in areas not controlled by paragraphs A.01.a., A.01.b., and A.01.c. above.
02. No settling pond, sand clay mix area, or thickening pond shall be constructed within:
 - a. Five hundred (500) feet from a public park boundary, cemetery, historical site, or permanent buildings (including Mobile Homes or Manufactured Housing) used for residential, commercial, church or public purposes on site at time of application for mining unit approval;
 - b. Five hundred (500) feet from any right-of-way line of any public road;
 - c. Two hundred (200) feet from Permittee's property line in areas not controlled by paragraphs A.02.a. and A.02.b. above.
03. No excavated material or stock pile shall be left longer than fourteen (14) days within:
 - a. Five hundred (500) feet of the Applicant's property line which abuts a public park boundary, cemetery, historical site, or permanent building (including Mobile Homes or Manufactured Housing) used for residential, commercial, church or public purposes, on site at time of application for mining unit approval;
 - b. One hundred (100) feet from an existing public right-of-way or public

easement for drainage, utility or road purposes, in areas not controlled by paragraph A.03.a. above;

- c. Fifty (50) feet from Permittee's property line in areas not controlled by paragraphs A.03.a. and A.03.b. above.

04. Effect on Adjoining Owners:

- a. The above setback requirements are the minimum, and the Board expressly reserves the right to require whatever setbacks may be necessary, on a case by case evaluation, to protect adjoining property uses, including but not limited to citrus operations and improved pasture;
- b. The setback requirements described in subparagraphs 01. through 03. above shall not apply where owners of the land protected by said setbacks have expressly consented to a reduction thereof by written instrument executed with the formality of a deed and recorded in the public records of Hardee County, Florida. Such consent and recordation must occur prior to any mining activities by the Applicant in the areas subject to the agreement and certified copies of the recorded instrument shall be furnished to the County Engineer, who shall acknowledge receipt in writing.

05. Excavated materials and stock piles shall not be higher than a slope-line of 1 (one) vertical to 5 (five) horizontal projected from the nearest point of Applicant's property line.

06. Increases to ambient noise levels resulting from mining operations shall not result in readings in excess of 75 decibels as measured at the Applicant's property lines, nor shall mining operations generate noise in excess of that allowed by any applicable Hardee County, state or federal law.

07. Soil vibrations caused by any mining operations shall be below the levels which would be detrimental to the health, welfare and well being of the general public or existing structures.

08. No blasting or other use of explosives shall be performed without the written permission of the Board. Should blasting or other use of explosives be permitted, the transportation, handling, storage and use of explosives shall be directed and supervised by a person of proven experience and ability in blasting operations, and shall conform to all applicable Hardee County, state or federal laws.

9. Spillways and other outlet structures from settling ponds shall be designed and constructed in accordance with a plan developed and certified by a professional engineer. The minimum design capacity shall be based on a 12 inch, 24 hour rainfall.

10. All clay settling ponds and sand clay mix areas shall be contained within fenced areas, or shall otherwise be blocked to public access.

11. Archeological and historical sites, cemeteries, and burial grounds shall be preserved, or if removal of remains is deemed necessary, it shall be accomplished by process of applicable law.
12. No mining, placement of fill, construction of permanent buildings or other facilities inside the 100 year flood elevation shall be permitted unless the Applicant can show that the operations will not increase the flood hazards. Dragline crossings are permitted as approved under the Master Mining Plan.

B. Monitoring Standards: Monitoring and reporting in accordance with these regulations shall be performed by the Applicant for a period of one (1) year prior to beginning mining operations, with continuous monitoring and reporting until all mining operations cease. The Board may, at any time, order additional monitoring as may be reasonably necessary to protect the public health, safety and welfare.

1. The waters of all natural and manmade streams entering upon the Operator's property shall be monitored once weekly at the point of entry and exit, or at a location and frequency specified by the County Engineer, to determine the quantity and quality.
2. The air quality shall be monitored around the boundary of the Applicant's property. Monitoring devices shall be installed at intervals not to exceed 5,280 feet, or in accordance with a suitable air monitoring plan prepared under the seal of a professional engineer. The monitoring shall be performed on a continuous basis.
3. Observation wells shall be constructed around the boundary of the Applicant's property for purposes of monitoring the ground water levels potentiometric level of, the aquifers from which production water is being withdrawn and the water quality of each. The monitoring for the water levels shall be done on a continuous basis. The monitoring of the water quality shall be performed once monthly or periodically as specified by the County Engineer as necessary to monitor ground water quality.
4. Rainfall gauges shall be installed on the Applicant's property. They shall be placed at random with an average density of one per two (2) square miles or two minimum, whichever is the greater number, or at locations or densities as specified by the County Engineer. The monitoring shall be performed on a continuous basis with recordings tabulated monthly.
5. Effluent from all sewage treatment plants shall be monitored for quantity and quality. The water quality and monitoring of the effluent shall meet the standards established by applicable Hardee County, state and federal laws.
6. The effluent from all operations and treatment plants other than sewage shall be monitored for quantity and quality. The water quality and monitoring shall meet the standards established by applicable Hardee County, state and federal laws.
7. Water for production use, as defined herein shall be monitored for quantity and

quality. The monitoring for quantity shall be performed on a continuous basis. The monitoring for quality shall be performed once monthly or periodically as specified by the County Engineer as necessary to monitor water quality.

8. All dams shall be inspected daily by a representative of the Applicant and in accordance with all applicable Hardee County, state and federal laws.

C. Reclamation Standards:

01. Between one-quarter (1/4) mile and one-half (1/2) mile from the following future land use classifications specified and shown on the Future Land Use Map: incorporated towns and cities; Town Center; Highway Mixed Use; Residential Mixed Use; and Rural Center, the reclamation by placement of sand tailings, and/or over burden or a combination of both, shall be considered the method of maximizing urban land development potential. The use of land/lakes reclamation is also encouraged. Between one-half (1/2) mile and one (1) mile from the same future land use classifications there shall be a Reclamation Transition Zone, in which reclamation shall maximize the opportunity for urban development of mined land, The Board of County Commissioners may allow alternative methods of reclamation upon demonstration by the Applicant/Owner that such reclamation will not significantly interfere with current or planned uses within or adjacent to such land use classification;
02. The restoration of wetlands and construction of lakes are encouraged in Reclamation Transition zone, and shall be considered maximization of urban land development potential;
03. All reclamation within 300 feet from the right-of way of arterial and collector roads shall be by sand tailings and/or overburden or a combination of both;
04. All upland areas disturbed by mining shall be reclaimed in accordance with these standards;
05. Except as provided otherwise in this Ordinance, all duly adopted state and federal reclamation criteria and standards shall apply to reclamation or restoration of lands located in Hardee County, Florida;
06. All surface areas of the mining site actually mined or disturbed by mining activities, and lying within one-half (1/2) mile of incorporated towns and cities, and Future Land Use Classifications of Town Center; Highway Mixed Use; Residential Mixed Use; and Rural Center shall be reclaimed not later than two (2) years after completion of mining operations as defined in the approved Master Mining and Reclamation Plan;
07. All surface areas of the milling site actually milled or disturbed by mining activities and lying within 300 ft from the right-of-way of arterial and collector roads shall be reclaimed not later than two (2) years after completion of mining operations as defined in the approved Master Mining and Reclamation Plan.

08. All other areas shall be reclaimed as follows:
- a. Areas not including settling ponds, sand clay mix areas, sand tailings piles or recirculating water systems shall be reclaimed within four (4) years from the date mining operations are completed. All backfilling and reshaping must be completed within eighteen (18) months. All soil treatment, soil enrichment and grassing (or temporary vegetation) must be completed within two (2) years. All initial permanent vegetation (trees and shrubs) must be completed within three (3) years. The fourth year all include at least a one-year growing season for the permanent vegetation. Shade adapted or other specific site requirements may be planted at a later date than specified;
 - b. Settling ponds and sand clay mix areas shall be reclaimed within four (4) years after active dewatering activities are complete and the area is sufficiently consolidated to support reclamation activities being taken out of use a settling ponds, using the same requirements as paragraph a. above;
 - c. Recirculating water systems and sand tailings piles shall be reclaimed within two (2) years after commencement of reclamation. All backfilling, reshaping, enrichment and treatment of the soil, and all revegetation must be completed within one (1) year. The second year shall include the one-year growing season for permanent vegetation;
 - d. The Board of County Commissioners of Hardee County, Florida may require a more expeditious reclamation schedule in order to minimize impacts to neighbors, wetlands, offsite drainage or flood plains. Also, the Board may grant a more lengthy reclamation schedule, if there are circumstances outside the Applicant's/Operator's control that delays the reclamation process.
09. The reclaimed upland shall, at a minimum, be compacted sufficiently to permit the safe operation of conventional farm and agricultural equipment and other ordinary agricultural use of land.
10. All reclaimed land shall be revegetated in accordance with the approved Development Order, Master Mining Plan, and in accordance with any Conceptual Reclamation Plan submitted and approved in accordance with applicable state and federal laws. In addition to other requirements relating to revegetation, the Operator shall guarantee a plant survival rate of 80%, and in the event the survival rate is not maintained, the Operator shall replant as necessary to achieve such rate.
11. No permanent body of water with a bottom width of less than 100 feet or an average bottom diameter of less than 100 feet, if circular in shape, shall be permitted.
12. Lake Design:

- a. In order to encourage a variety of emergent habitats and a balance of deep and shallow water bodies throughout the mined area in Hardee County, the development of deeper lakes or water bodies, with a smaller littoral zone than that set out in Section 62C-16.051, FLORIDA ADMINISTRATIVE CODE, may be permitted if specifically approved by the Board,
 - b. All such deeper lakes shall be a minimum of eight (8) feet deep as measured from the water surface, with a maximum side slope of one vertical and four horizontal, This depth requirement may be reduced to six (6) feet where bedrock would otherwise have to be pierced.
13. During backfilling, if tailings are used, such tailings shall be placed in the fill area first and overburden shall be used for top soil. If sand/clay mix is used to reclaim mined out areas, reclamation shall be completed in the period of time specified for a particular unit in the Development Order and Master Mining Plan.
14. After mining operations cease on the entire sites no more than thirty percent (30%) of the land area shown on the Master Mining Plan as settling areas shall be covered by unreclaimed settling ponds or pits.
15. After mining is complete, all phosphatic clay pits and settling ponds shall be restricted from public access until reclamation is complete,
16. All disturbed land shall be reclaimed to a slope not greater than four (4) horizontal to one (1) vertical, and in no case shall be left in an incline too steep to accommodate normal agricultural operations.
17. Approval of Reclamation:
 - a. After reclamation of each unit, the Operator shall make written application to the Board for approval of the reclamation. The application shall identify the lands and contain certification by the project superintendent or manager that reclamation has been performed according to these regulations. The Board of County Commissioners reserves the right to require a certification from a professional engineer or a professional geologist;
 - b. At the time of Annual Unit and Operating Review, the Operator shall also file the status of any reclamation permit or approval as applied for pending or received from any other local, state or federal governmental authority, and shall give notice to such other agency of the requirements for reclamation as set out in this Ordinance and in any development order or permit relating to its operations in Hardee County;
 - c. The Board shall act upon the application within thirty (30) days of receipt of the complete information. In the event the reclamation is not approved, the Board shall inform the Operator in writing of the specific areas of non-compliance and shall specify a reasonable period of time for compliance. Failure to comply with such reclamation order withal the time specified shall

be a violation of this Ordinance subject to the enforcement procedures set out herein.

D. Standard for Production Use of Water: The water usage for operations subject to this ordinance shall not exceed the available water supply as determined by these standards or the standards set by any other applicable regulatory agency, whichever allows the lesser usage rate.

01. A proposed rate of withdrawal for production use of any ground water shall be determined after analyzing the results of an on site test well program performed by the Applicant. The test program and analysis shall be performed under the control and seal of a professional engineer or certified hydrologist.
 - a. Test wells shall be drilled to determine the depth and characteristics of the subsurface, geologic and hydrologic units and variations in water quality and potentiometric levels.
 - b. Detailed pumping tests shall be conducted on the aquifer(s) from which production withdrawal is proposed with monitoring of water level and potentiometric levels in the pumped aquifer, and all overlying aquifers by means of observation wells located at various distances from the pumping wells.
 - c. The hydrogeologic characteristics, including transmissivity and storage coefficient of the pumped aquifers, and coefficient of vertical permeability of the confining layers shall be determined,
 - d. The proposed production withdrawal rates shall be that amount which can be shown not to cause any significant lowering of the potentiometric levels of the production aquifer beyond the project boundaries.
 - e. The effects of production withdrawal shall be monitored during mining operations. Withdrawal rates shall be adjusted as required to maintain the permitted potentiometric levels at the project boundaries.
02. Unreasonable changes of the natural hydraulic connections between the surficial water bearing material and the Floridian aquifer or the introduction of deleterious chemical or physical constituents into the local ground water or surface water shall not be permitted. The Board of County Commissioners may order the Applicant to take whatever measures are necessary to alleviate adverse impacts due to lowering of the water level, or if water quality deterioration is occurring beyond the project boundaries. In the event that such measures do not appear to alleviate the water problem the Board may temporarily direct that all mining activities cease while a thorough investigation is made.
03. The Applicant shall provide a complete inventory of all existing wells on the property under consideration including locations, potentiometric elevations complete chemical analysis, proposed disposition and in so far as possible; depths, diameters, casing schedules, types of pumps and logs, All wells not proposed for

use in the mining operations may be plugged in accordance with accepted standard procedures, as specified by the Board of County Commissioners. All free flowing wells shall be sealed immediately after obtaining the required measurement.

Staff Comments Regarding Consistency of Project with Policies of Hardee County Mining Ordinance:

1. Approximately 30 percent of the SFM-HC site, or 2,100 acres, have been designated for no mining or disturbance. These areas are located along the Peace River and Little Charlie Creek. Some adjacent areas will be reclaimed as wetlands thereby, expanding the wildlife corridors of the Integrated Habitat Network. Un-mined conservation lands and reclaimed mitigation wetlands will be protected by conservation easements.
2. Mosaic's reclamation plans restore to the extent possible the pre-mining drainage basins. With the exception of the elevated area of the waste clay disposal the post reclamation topography conforms to the pre-mining topography.
3. Mosaic has designed a post-reclamation landscape that will include functional and diverse ecological communities at locations on the property that support the concept of the IHN. Reclamation plans provide for planting with native vegetation. At the same time, large portions of the SFM-HC Tract will be reclaimed using tailings backfill that will support residential, commercial, and industrial development, as well as lakes suitable for a variety of post-reclamation uses. Each of these landscapes will be positioned to preclude incompatibility and to maximize the potential of each use type.
4. The vast majority of the mined lands will be sand tailings fill capped with overburden, or land and lakes. Only 1500 acres are to be used for waste clay disposal which is suitable for some agricultural uses.
5. A reclamation schedule has been prepared. Except for the waste clay settling area and utility corridors, reclamation is required within 5 years from the completion of mining to establishment of vegetation on mined areas.
6. Mosaic is not requesting variances from the time frame established by FDEP and Hardee County and will comply with both the County and FDEP reclamation timeframes.
7. Waste clay settling areas will be reclaimed upon completion of mining.
8. With the exception of the 1500 acres of elevated area for the waste clay disposal areas the reclamation will approximately restore the pre-mining topography.
9. Mosaic continues to work with FIPR and other researchers to explore all viable options for the management of waste clays.
10. Mosaic has developed the plans to mine and reclaim the SFM-HC Tract in a manner that minimizes the acreage of clay settling areas in Hardee County. Approved clay settling areas in Polk County will be used for the deposition of clay generated by

mining the SFM-HC Tract, to the extent that such areas are not filled with clay generated by mining in Polk County.

11. All clay settling areas will be managed using the stage fill process to maximize the consolidation of clay and the beneficial re-use of process water.
12. All clay settling areas will be reclaimed using the aggressive ditch dewatering process that represents the state-of-the-art method for timely, reliable, consolidation of clay settling areas. Use of these techniques maximizes and extends the operating life of each settling area, but minimizes the time required to reclaim settling areas once filled and maximizes the rate of reclamation across the entire SFM-HC Tract.
13. It is anticipated that all decommissioned waste clay ponds will be returned to use as improved pasture, as these areas provide superior grazing land characteristics. Mosaic, Polk County, and FIPR researchers have demonstrated that reclaimed settling areas can be used for alternative economically productive uses. Reclaimed waste clay settling areas have been shown to be usable for cattle grazing or vegetable crops.
14. The Peace River and Little Charlie Creek are the only regionally significant watercourse in the vicinity of the SFM-HC Tract. With the exception of infrastructure crossings, Mosaic is proposing to avoid disturbing all portions of the 25-year floodplain left undisturbed by historic agricultural activities on the property. However, disturbance is proposed to occur within certain portions of the 25-year floodplain that have been cleared and converted into agricultural uses.
15. The crossing of the creeks with draglines and utilities have been limited and located in areas which would have the least disturbance of sensitive habitat.
16. Toe spoiling of the leach zone will be employed to reduce the radiation exposure in reclamation.
17. The hydrologic and soils investigations indicate that there is reasonable assurance that none of the area proposed to be mined are geologically or hydrologically unsuitable for mining.