

Troyer Brothers
Mine Excavation Planned Development
Lee Plan Consistency

Troyer Brothers Florida, Inc., Lehigh Acres Farm is located in eastern Lee County within the Density-Reduction/Groundwater Resource (DR/GR) Area, extending from SR 82 south to Corkscrew Road. The land is currently used for the cultivation and harvesting of potatoes. The entirety of the Troyer Brothers' holdings at this location comprises $\pm 1,804$ acres. However, only $\pm 1,732.75$ acres of the Troyer property are proposed for inclusion in the Mine Excavation Planned Development. The northern most portion of the property, located immediately south of and adjacent to SR 82, contains existing agricultural produce processing facilities and associated administrative buildings ("Lehigh Packinghouse"), which are not included in the requested MEPD. The proposed ± 781 -acre mine pit area will be mined over approximately 35 years and reclaimed in accordance with existing state and county requirements. The proposed reclamation plan will result in a permanent ± 682 acre lake post reclamation, if approved. The proposed location of the mine excavation activities is at least 1,270 feet away from the nearest residences.

During mining, associated with the proposed ± 781 acres of mine pits, approximately ± 102.6 acres will be used for rock processing and ancillary operations and mine access ("Mine Processing Area"). These areas will be associated with limerock mining but will not be mined. It is expected that the mine pit will support 120,000,000 tons of product to be removed. This total product is made up of approximately 103,700,000 tons of limerock and approximately 16,300,000 tons of fill dirt. If the MEPD is permitted as proposed, post-mining, both the mine pit areas and the mine processing/access areas will be reclaimed and restored in accordance with applicable state, federal, and county requirements.

In addition to the areas supporting mine excavation and processing, a majority of the Troyer property adjacent to the proposed ± 781 -acre mine pit is proposed to be preserved through restoration and reclamation which will result in 1,016 acres of Open Space post reclamation. A summary of these activities is provided in the Summary Narrative as well as the Indigenous Habitat Management Plan (IHMP) completed by W. Dexter Bender and Associates (Dex Bender) and included in the applicant's 2nd Insufficiency Response. The IHMP also described the existing characteristics of the Troyer Brothers property and any necessary enhancements or restoration activities.

Lee Plan Consistency

Section 12-107, Land Development Code, addresses consistency with the Lee Plan policies of particular significance for mining activities. It provides the lens through which to view the

applicant's proposed mining and reclamation activities when assessing consistency with the Lee Plan. Section 12-107 states as follows:

The following Lee Plan policies must be adhered to in applying for and conducting mining activities:

- (1) *Mining activities and mining reclamation plans in or near important water resource areas must be designed to minimize the possibility of contamination of the water during mining activity and after completion of the reclamation.*

The mine operation is not expected to cause violations of state water quality standards either during mining or after reclamation. The State of Florida has certified this conclusion with the existing approved Environmental Resource Permit for mining on the subject property.

As required by the existing ERP permit and proposed in this MEPD submittal, a perimeter berm must be constructed around the area proposed to be utilized for mining activities. This berm ensures surface water is retained on site (except for major storm events) and thereby prevents the discharge of turbid waters into the wetlands located within the adjacent Lee County Conservation Lands. It should also be noted that on-site water retention permits the containment of fuel or chemical spills should an accidental discharge occur.

In addition, a Pollution Prevention Plan is required to address potential sources of contamination and provide Best Management Practices (BMPs) to avoid on and off site surface water and groundwater contamination. To address the requirements of the MEPD, a draft proposed copy of the Pollution Prevention Plan as well as a Water Quality Monitoring Plan was prepared for consideration and can be amended by the eventual Mine Operator of the facility.

The applicant has also provided a Summary Narrative to describe the conditions related to surface and groundwater consistent with the existing agricultural activities and expected during mining and post reclamation. The Summary Narrative supports the details provided in the various reports prepared by Dex Bender and WSP, which confirm that the design of the proposed mining excavation minimizes the possibility for contamination during mining and post reclamation.

- (2) *Mining operations must meet or exceed local, state and federal standards for noise, air, water quality, and vibration. (Lee Plan Policy 7.1.1)*

Mining operations will be designed to meet or exceed applicable standards established for noise, air, and vibration. An ERP has been issued which addresses water quality and will be modified to reflect the mine concept plan if the MEPD request is approved. Through the MEPD submittal and review process, the applicant has submitted numerous documents that include details regarding how the design of the proposed mine will meet or exceed standards for noise, air, water quality and

vibration; including but not limited to, Blasting Plan, Environmental Assessment, Summary Narrative, Modeling Investigation Report & Mining and Excavation Plans

- (3) *Mining activities must be located and designed so as to minimize adverse environmental impacts and water resource impacts.*

The proposed site plan meets or exceeds the various setback requirements as listed in the land development code. In addition, the proposed design utilizes the existing farm fields to establish the mine lake and preserves the existing native habitat to provide appropriate separation and buffering of the proposed mining activities.

As part of the 2nd Insufficiency Response, the applicant has prepared a Summary Narrative describing the existing conditions and expected conditions during mining and post reclamation as related to Groundwater, Surface Water, Wetlands & Indigenous Habitat and Wildlife. The summary narrative demonstrates the proposed design of the mining will not negatively impact environmental or water resources and is based upon the detailed reports prepared by Dex Bender and WSP.

- (4) *Mining activities, and industrial uses accessory to mining activities, must:*
- a. *Have adequate fire protection, transportation facilities, wastewater treatment and water supply; and*
 - b. *Not precipitate significant negative effects with respect to dust, glare, light trespass and noise on surrounding land uses and natural resources.*

A Zoning Traffic Impact Statement is provided with the supporting materials to the MEPD application. The study concludes that the transportation facilities are sufficient to support the current agricultural operations as well as the requested mining activity. A Letter of Availability has been received and is provided from the Lee County Sheriff and Lehigh Acres Fire District to provide Fire, EMS and Police service to the subject property. In addition, mining operations will be designed to meet or exceed applicable standards established for fire protection and for the control of dust, glare, light and noise. The mining operation will comply with all applicable standards for wastewater treatment imposed by the Florida Department of Environmental Protection (FDEP) and has two water use permits from the SFWMD addressing water supply. The referenced permits will be modified as needed to reflect the revised site design.

- (5) *Mining activities and reclamation efforts must facilitate the connection of natural resource extraction lakes and borrow lake excavations into a system of interconnected lakes and flowways that will enhance wildlife habitat values, and strengthen environmental benefits.*

The applicant has proposed a series of restoration, enhancement and reclamation activities that will promote an interconnected flowway across the subject property as well as high value wildlife habitat. These activities are outlined in the Summary Narrative provided as part of the 2nd Insufficiency response and occur prior to Mining Operations Permit (MOP) issuance as well as during Reclamation. The Summary Narrative is based on the Indigenous Habitat Management Plan as prepared by Dex Bender.

Prior to MOP, the existing berms that support the agricultural operations and separate the on-site wetlands slated for preservation from the wetlands located within the adjacent Lee County Conservation Lands will be removed, immediately improving the hydrologic conditions of the on-site wetlands. In addition, a portion of the north south access road located south of the proposed mine processing area along the east property line, will be removed and an equalizer flow conveyance from the east of the property to Wetland 6A will be constructed.

The Post Reclamation Activities will restore a historic flowway across the subject property by removing any remaining impediments and reclaiming the mining lake to establish littoral shelves and marsh drawdown areas promoting habitat for woodstorks and other wading birds.

As part of the 2nd Insufficiency Response, the applicant submitted a Summary Narrative describing these activities, which is based upon the detailed information provided by Dex Bender in the Indigenous Habitat Management Plan as well as the detailed Reclamation drawings included in the landscape plan set.

In summary, as demonstrated in the complete Plan analysis below, the applicant's proposed mining and reclamation plans adhere to the Lee Plan policies addressed in Section 12-107.

Lee County – A Vision for 2030

The Lee Plan's Vision Statement describes Planning Community 18, Southeast Lee County, by stating, *"As the name implies, this Community is located in the southeast area of Lee County. South of SR 82, north of Bonita Beach Road, east of I-75 (excluding areas in the San Carlos Park/Island Park/Estero Corkscrew Road and Gateway/Southwest Florida International Airport Communities) and west of the county line. With very minor exceptions, this community is designated as Density Reduction/Groundwater Resource, Conservation Lands (both upland and wetlands), and Wetlands on the Future Land Use Map. This community consists of **regional mining operations**, active and passive agricultural uses, public wellfields and water treatment plants, significant contiguous tracts set aside for preservation, a private golf course and very large lot residential home sites. Through the year 2030, Southeast Lee County will change dramatically. **Mining pits will double in size as the northwest portion serves as the major supplier of limerock aggregate for southwest Florida**, an activity that continues to generate significant truck traffic especially on Alico Road. The remainder of Southeast Lee County will continue as the county's primary agricultural region and home to its largest (and still expanding) natural preserves. Residential and commercial development will not be significantly increased except in very limited areas where development rights are concentrated by this plan. Some existing farmland will be restored to natural conditions to increase natural storage of water and to improve wildlife habitat. The one exception is the Citrus Park Community."*

This statement recognizes the existence of mining operations in the Planning Community, but more importantly for the instant case, notes that the northwest portion of the community (the

location of the subject property) will serve as the major supplier of limerock aggregate for southwest Florida. Mining operations are the first recognized activity in the Vision Statement for this Planning community, and the clear expectation is that the predominance of such activities is anticipated at least through 2035. The Troyer Brothers MEPD request is CONSISTENT with this policy.

A majority of the subject property is designated as the Density Reduction/Groundwater Resource (DR/GR) land use category by the Lee Plan Future Land Use Map (FLUM).

GOAL 1: FUTURE LAND USE

Policy 1.4.5 of the Lee Plan states, *“the Density Reduction/Groundwater Resource (DR/GR) land use category includes upland areas that provide substantial recharge to aquifers most suitable for future wellfield development. These areas also are the most favorable locations for physical withdrawal of water from those aquifers. Only minimal public facilities exist or are programmed.*

1. *New land uses in these areas that require rezoning or a development order must demonstrate compatibility with maintaining surface and groundwater levels at their historic level (except as provided in Policies 33.1.3 and 33.3.4) utilizing hydrologic modeling must also show that no adverse impacts will result to properties located upstream, downstream as well as adjacent to the site. Offsite mitigation may be utilized, and may be required, to demonstrate this compatibility. Evidence as to historic levels may be submitted during the rezoning or development review process.*
2. **Permitted land uses include agriculture, natural resource extraction and related facilities, conservation uses, public and private recreation facilities, and residential uses at a maximum density of one dwelling unit per ten acres (1 du/10 acres). See Policies 33.3.2, 33.3.3, 33.3.4, and 33.3.5 for potential density adjustments resulting from concentration or transfer of development rights.**
 - a. *For residential development, also see Objective 33.3 and following policies. Commercial and civic uses can be incorporated into Mixed-Use Communities to the extent specifically provided in those policies.*
 - b. *Individual residential parcels may contain up to two acres of Wetlands without losing the right to have a dwelling unit, provided that no alterations are made to those wetland areas.*
 - c. *The Future Limerock Mining Overlay (Map 14) identifies sufficient land near the traditional Alico Road industrial corridor for continued limerock mining to meet regional demands through the Lee Plan’s planning horizon (currently 2030). See Objective 33.1 and following policies.*
3. *Private Recreational Facilities may be permitted in accordance with the site locational requirements and design standards, as further defined in Goal 16. No Private Recreational Facilities may occur within the DR/GR land use category without a rezoning to an appropriate planned development zoning category, and compliance with the Private Recreation Facilities performance standards, contained in Goal 16 of the Lee Plan.”*

This policy states clearly that limerock excavation is a permitted land use in the DR/GR category. The subject parcel is outside of existing wellfield locations, and is not programmed for any future

wellfield development. The project's property lines are outside of any travel time contours shown on maps available from Lee County Utilities Wellfield Protection Ordinance.

Per Policy 33.1.3, DR/GR land uses subject to assignment as a Future Limerock Mining Area on Map 14 are exempt from compliance with the requirement that development be compatible with "maintaining surface and groundwater levels at their historic levels." A concurrent plan amendment has been proposed to add applicable portions of the Troyer Brothers' property to Map 14 and this application therefore benefits from the subject exemption. Regardless, a full analysis of compliance with the stated requirement is provided demonstrating that policy is met.

Regarding this policy's requirement that development be compatible with "maintaining surface and groundwater levels at their historic levels", consideration must be given to the overall impact of the future potential development of the property for excavation, which will have a net positive impact on both surface and groundwater levels, that have been altered from their natural state for agricultural uses and as a result of historic and existing development in the surrounding area. An extensive analysis has already been provided and the applicant's response to the 2nd Insufficiency Letter to the MEPD rezoning request collated all of the reports prepared by WSP which evaluate the geological and hydrological conditions of the subject property and surrounding properties. The hydrogeologic analysis program included:

- Obtaining 1679 feet of core using the sonic drilling method
- Installation of 12 new monitoring wells
- Performance of aquifer pumping tests
- Initiation of long-term water level monitoring which is being continued through the present
- Water quality sampling
- Confinement analysis
- Water budget analysis including an extensive review of existing data from the DRGR area and South Florida in general
- Development of a three-dimensional groundwater flow model, in which the modeling results were published in a peer-review journal
- Four separate modeling investigations were performed, including an integrated surface water/groundwater modeling using the MIKE SHE model prepared for Lee County by DHI

The Modeling Investigation Report prepared by WSP on March 9, 2017, makes several conclusions supporting the proposal's compatibility with groundwater flows and eliminating impacts to surrounding uses:

- "The removal of the farm roads, berms and ditches will restore flow across the site and contribute to the County goal of restoration of flowways." WSP, 46
- "Termination of on-site irrigation water use and the water storage provided by the lake will result in higher groundwater levels during the dry season." WSP, 48
- "Elimination of on-site Standstone Aquifer pumping for irrigation will be net beneficial to other aquifer users (e.g. residential users in southern Lehigh Acres)." WSP, 46

- “Mining operations will not materially impact local wet season water levels” WSP, 46 and “Once the wet season begins, the aquifer and lakes quickly fill” WSP, 40.

The detailed analyses completed to date by WSP demonstrate that the Troyer Brothers MEPD request is CONSISTENT with this policy’s requirement that new land uses demonstrate compatibility with surface and groundwater levels and do not impact surrounding properties.

A portion of the subject property has a Future Land Use designation of Wetlands¹. Objective 1.5 states that Lee County will designate Wetlands on the FLUM in accordance with applicable state statutory and administrative code requirements. Lee Plan Policy 1.5.1 states, *“Permitted land uses in Wetlands consist of very low density residential uses and recreational uses that will not adversely affect the ecological functions of wetlands. All development in Wetlands must be consistent with Goal 114 of this plan. The maximum density is one dwelling unit per twenty acres (1 du/20 acre) except as otherwise provided in Table 1(a) and Chapter XIII of this plan.”* As detailed by the analysis previously provided by Dex Bender, the entire subject property owned by the Troyer Brothers contains approximately ±808.9 acres of wetlands and ditches that are considered jurisdictional by the FDEP. The proposed site design seeks to avoid impacts to wetland systems to the extent practicable. As set forth in the various reports provided by Dex Bender, impacts to wetlands that may occur as a result of the future mining excavation activities are to hydrologically altered wetlands that are separated from the adjacent Lee County Conservation Lands by a series of ditches and berms onsite which hydrologically isolate these areas and impede wildlife movement. Further, the areas adjacent to the ±781 acre mine pit will contain ±525.1 acres of Preservation Lands, many of which are wetlands and are proposed to be included in the concurrent Conservation FLU amendment for preservation in perpetuity.

Prior to the issuance of a MOP, enhancement and restoration activities are proposed to eradicate exotic and nuisance vegetation, remove the existing agricultural berms that separate 594.28 acres of on-site wetlands slated for preservation from the adjacent Lee County Conservations, and remove a portion of the north south access road. In addition, an equalizer east-west flow conveyance is proposed to bring surface water to the eastern property boundary to the west wetlands on-site and the wetlands in the adjacent Lee County Conservation Lands. These actions will hydrologically reconnect the on-site and off-site wetlands to each other, increasing the interchange and storage of surface water and prolonging the submerged and saturated conditions of the wetlands as compared to the existing conditions. Enhancement and restoration to indigenous habitat will also occur prior to issuance of the MOP. A detailed description of the 703.09 acres of enhancement and restoration activities, including the establishment of a wildlife corridor in the southern portion of the property, is provided in the Indigenous Habitat Management Plan prepared by Dex Bender. It should be noted that these acres will also be placed under conservation easement for preservation in perpetuity.

¹ Note that the acreage of the FLU designation of Wetlands is not the same as jurisdictional wetlands acreage. While the FLU designations are generalized, the jurisdictional wetlands are based on actual survey methods and on-site data.

The proposed Reclamation Plan includes a number of elements to enhance, restore and reclaim the subject property after mining activities cease. These elements include:

1. Removal of the perimeter berm surrounding the mining activities
2. Creation of Littoral Shelves
3. Creation of Marsh Wetlands
4. Establishment of a Wildlife Corridor in the northern portion of the subject property
5. Promotion of Natural Habitat/Native Rangeland

These activities are detailed in the Indigenous Habitat and Management Plan prepared by Dex Bender and Associates. After Reclamation and combined with the enhancement, restoration and preservation activities to occur prior to MOP, 1,016.4 acres of open space will be established and placed under conservation easement. As a result, a historic flowway and two wildlife corridors will be established across the subject property connecting the adjacent Lee County Conservation Lands located along the eastern and western property boundaries.

The overall effect of the proposed enhancement, restoration, and reclamation will be 1,016.4 acres of uplands and wetlands on-site which will be at or near historic natural ground elevations with no hydrologic impediments on-site or between the off-site adjacent Lee County Conservation Lands wetlands. Hydrologic impediments exist in the current conditions, separating on-site wetlands from off-site wetlands in conservation lands and cutting off surface flow across the property, keeping it from reaching conservation lands to the west and southwest. While some of the activities proposed prior to MOP will interconnect the on-site and off-site wetlands, surface water flow across the property will largely be unchanged during mining. However, these impediments will be removed in the post mining condition. After reclamation, during the wet season, surface/stormwater flows from the northeast will flow onto the Troyer Brothers property in a south/southwesterly direction to the mining lake and the restored and enhanced wetlands on-site. Surface water will flow off-site to the south, west, and southwest into the adjacent Lee County Conservation Lands wetlands through low points of the on-site wetlands similar to the natural historic conditions. No significant changes in surface water flow are anticipated for lands to the southeast of the Troyer property.

The duration of inundation in these wetlands likely will not change significantly post mining from existing conditions based on the observed conditions and the model's predictions in the WSP Hydrogeology Report and Modeling Investigation Report, consistent with the requirement of LDC Section 12-113(b)(5) that water levels be maintained. However, during the dry season, when water levels are well below surface elevations and the wetlands are typically dry, the water levels are projected to remain up to 1.0 to 1.3' higher than the existing conditions at the southern end of the mine lake and up to about 0.7' higher in wetlands adjoining the property as described in the previously submitted WSP Hydrogeology Report and Modeling Investigation Report on March 14, 2017. The provided model shows water levels below grade by 3-4' in the dry season of the existing conditions and the wetlands are dry during this time. If water levels are up to 0.7' higher during the dry season, the wetlands would still be dry during the dry season based on the existing well data of the site as described in the WSP Hydrogeology Report and Modeling Investigation Report, and the type and function would not be expected to change, but the water levels would be closer to ground surface elevation. In accordance with LDC Section 12-113(b)(6), this would

benefit these wetlands by providing water closer to the root systems of the plants during the dry season and decreasing the time required for water to reach ground surface at the beginning of the wet season as described in the Proposed During Mining Conditions section above. It must be stressed that the dry season increase in water levels will vary based on weather conditions and the location of wetlands with respect to the mine lake. The greatest benefits, as far as higher dry season water levels, will occur in wetlands closest to the southern end of the lake.

The detailed analyses provided in the reports supporting the Mine Excavation Planned Development prepared by WSP and Dex Bender and summarized herein demonstrate that the Troyer Brothers MEPD request is CONSISTENT with this Policy.

GOAL 2: GROWTH MANAGEMENT

Goal 2 indicates that the County intends to provide for an economically feasible plan, coordinating location and timing of new development with infrastructure provision. Lee Plan Objective 2.1 states, *“Contiguous and compact growth patterns will be promoted through the rezoning process to contain urban sprawl, minimize energy costs, conserve land, water, and natural resources, minimize the cost of services, prevent development patterns where large tracts of land are by-passed in favor of development more distant from services and existing communities.”*

The Troyer property is adjacent to an existing limerock mine (Florida Rock) and an existing sand/fill dirt mine (Bell Road Mine). The applicant is seeking to permit mining activities on a portion of the subject property adjacent to an existing limerock mine. The proposed mine plan seeks to conduct mining on the central portion of the property and processing on the northern parts of the property. The applicant notes that the northern portion of the subject property immediately adjacent to SR 82 is not included in the MEPD Amendment. The application request is for approval of natural resources excavation, and does not constitute urban sprawl. The MEPD application to permit excavation activities on the property will not require the extension of services or facilities and locates the operation in a necessary area adjacent to similar existing facilities in which the scarce and valuable resource exists. The MEPD request is CONSISTENT with this Lee Plan Goal and Objective.

Lee Plan Policy 2.1.1 states, *“Most residential, commercial, industrial, and public development is expected to occur within the designated Future Urban Areas on the Future Land Use Map through the assignment of very low densities to the non-urban categories.”*

Policy 2.1.2 states, *“New land use will be permitted only if they are consistent with the Future Land Use Map and the goals, objectives, policies and standards of this plan.”*

Policy 2.1.1 addresses residential uses as the technique by which development will be restricted to designated Future Urban Areas. The MEPD request will not seek residential, commercial, public or traditional industrial land development. Policy 2.1.2 does not prohibit development outside the Future Urban Areas, nor does it suggest that uses reliant upon natural resources are prohibited from seeking permission for a rezoning request to undertake extraction activities in

non-urban areas. In fact, mining is referenced as a permitted activity within the DR/GR area (i.e. Policy 1.4.5 and 10.1.4) and the detailed analysis that follows along with the supporting documentation of this application will demonstrate the request is consistent with the Lee Plan. Therefore, it cannot be inferred that the request to permit future excavation activities in a non-urban area is somehow inconsistent with the intent of the Future Land Use Category. The Troyer Brothers MEPD request is CONSISTENT with these policies.

Objective 2.2 addresses development timing, and states, *“Direct new growth to those portions of the Future Urban Areas where adequate public facilities exist or are assured and where compact and contiguous development patterns can be created. Development orders and permits (as defined in F.S. 163.3164(7)) will be granted only when consistent with the provisions of Sections 163.3202(2)(g) and 163.3180, Florida Statutes and the county’s Concurrency Management Ordinance.”*

The request does not constitute “new growth” into a non-urban area. The extension of urban infrastructure is not required to service the potential future use. The Troyer Brothers MEPD request is CONSISTENT with Objective 2.2.

Policy 2.2.2: Map 1 of the Future Land Use Map series indicates the uses and density ranges that will ultimately be permitted on a given parcel. However, it is not a guarantee that such densities or uses are immediately appropriate, as the map provides for the county’s growth beyond the Lee Plan’s planning horizon of 2030. During the rezoning process the Board of County Commissioners will balance the overall standards and policies of this plan with three additional factors:

- 1. Whether a given proposal would further burden already overwhelmed existing and committed public facilities such that the approval should be delayed until the facilities can be constructed; and*
- 2. Whether a given proposal is for land so far beyond existing development or adequate public facilities that approval should be delayed in an effort to encourage compact and efficient growth patterns; and*
- 3. Whether a given proposal would result in unreasonable development expectations that may not be achievable because of acreage limitations contained in the Acreage Allocation Table (see Policy 1.7.6, Map 16 and Table 1(b)). Additional provisions related to mining are provided in Policy 33.1.4.*

In all cases where rezoning is approved, such approval does not constitute a determination that the minimum acceptable levels of service (see Policy 95.1.3) will be available concurrent with the impacts of the proposed development. Such a determination must be made prior to the issuance of additional development permits, based on conditions which exist at that time, as required by Lee County’s concurrency management system.

Although the subject property is not located in a Future Urban Area and does not require the extension of public services, it is subject to analysis of the project’s potential impacts on the existing surrounding roadway network, the necessity of the request, and available acreage allocations.

The most notable public facility that would be impacted by this development is the roadway network, which is a FDOT facility. TR Transportation Consultants has prepared a traffic impact study consistent with LDC Section 12-116(a) which concluded that the surrounding County road network will operate at an acceptable level of service.

The project has been designed to be compatible with the surrounding land uses to the greatest extent practicable. There are few residential uses adjacent to the site, and those that exist are clustered around the area the applicant refers to as the “Southern Troyer Lands,” approximately 257 acres located immediately south of the proposed mine lake, which are not proposed to be altered/developed by the proposed request. Furthermore, these lands are outside of the proposed Map 14 overlay of the concurrent proposed plan amendment and therefore cannot be utilized for mining excavation, processing or related supporting uses. The processing portion of the operations will occur in the northern part of the site, which is located within the Map 14 overlay area, well away from the residential uses to minimize impacts from noise, dust, and glare. These areas are located adjacent to an existing approved limerock mine and therefore the proposed MEPD and proposed excavation activities does promote a compact and efficient “growth pattern” for these similar and compatible uses.

A Text Amendment to Table 1(b) is requested as part of the companion Comprehensive Plan Amendment to the MEPD request. The text amendment proposes to reallocate ±907.6 acres from Active Agriculture to Industrial within the Southeast Lee County Planning Community to address the companion Map 14 overlay amendment and to accommodate the Mine Excavation Planned Development.

The Troyer Map 14 Amendment project is CONSISTENT with Policy 2.2.2 which states, *“All proposed changes to the Future Land Use Map in critical areas for future potable water supply (Lehigh Acres as described in Policy 54.1.9; and all land in the Density Reduction/ Groundwater Resource land use category) will be subject to a special review by the staff of Lee County. This review will analyze the proposed land uses to determine the short-term and long-term availability of irrigation and domestic water sources, and will assess whether the proposed land uses would cause any significant impact on present or future water resources. If the Board of County Commissioners wishes to approve any such changes to the Future Land Use Map, it must make a formal finding that no significant impacts on present or future water resources will result from the change.”*

Policy 2.4.3 states, *“Future Land Use Map Amendments to the existing DR/GR areas south of SR 82 east of I-75, excluding areas designated by the Port Authority as needed for airport expansion, which increase the current allowable density or intensity of land use will be discouraged by the county. It is Lee County’s policy not to approve further urban designations there for the same reasons that supported its 1990 decision to establish this category. In addition to satisfying the requirements in 163 Part II Florida Statutes, Rule 9J-5 of the Florida Administrative Code, the Strategic Regional Policy Plan, the State Comprehensive Plan, and all of the criteria in the Lee Plan, applicants seeking such an amendment must:*

1. *analyze the proposed allowable land uses to determine the availability of irrigation and domestic water sources; and,*
2. *identify potential irrigation and domestic water sources, consistent with the Regional Water Supply Plan. Since regional water suppliers cannot obtain permits consistent with the planning time frame of the Lee Plan, water sources do not have to be currently permitted and available, but they must be reasonably capable of being permitted; and,*
3. *present data and analysis that the proposed land uses will not cause any significant harm to present and future public water resources; and,*
4. *supply data and analysis specifically addressing the urban sprawl criteria listed in Rule 9J-5.006(5) (g), (h), (i) and (j), FAC.*

During the transmittal and adoption process, the Board of County Commissioners must review the application for all these analytical requirements and make a finding that the amendment complies with all of them.”

A detailed analysis of geologic suitability of the limerock mining and the hydrologic effects of the future excavation use onsite and on the surrounding properties was provided in the reports provided by WSP, which were collated and resubmitted as part of the applicant’s response to the 2nd Insufficiency. Specifically, the analysis makes several conclusions determining that the proposed land use would not cause significant impact on present or future water resources:

- The site mining plan calls for mining of materials to a maximum of 110 feet. Therefore the mining activities will not cross a confining unit and will meet the regulations set by the SFWMD. WSP Hydrogeology Report, 65
- The modeling results show the combined hydrologic impacts of the proposed land use change...would act to increase ground water levels in the dry season. WSP, 73
- The major hydrologic impact of lakes is their greater storage, which acts to maintain higher water-table aquifer levels within the start of the dry season. Schlumberger, 79
- The termination of irrigation using the Sandstone aquifer will be beneficial to other aquifer users in the project site area. WSP, 79
- An increase in annual ET resulting from the mine lake will be compensated for by the capture and storage of surface water during the wet season in the mine lake. Any reduction in wet season runoff is beneficial as far as reducing downstream flooding and water quality impacts. WSP, 79.

The detailed analysis conducted by WSP demonstrates there will be no negative impacts to present or future water resources. Reviews of the existing and proposed conditions of the property indicate that overall net positive impacts that will occur through the additional water storage on site during the wet season and elimination of irrigation.

Groundwater conditions for the post mining scenario were evaluated by four separate modeling investigations as documented in the 2017 Modeling Investigation Report prepared by WSP and included in Tab 5 of the applicant’s response to the 2nd Insufficiency. MODFLOW simulations were used to simulate change during conditions. An integrated surface water/groundwater model using MIKE SHE code was used to simulate year-round changes in groundwater levels. These modeling methods are also consistent with Policy 33.2.7, which states that “impacts of proposed land disturbances on surface and groundwater resources will be analyzed using integrated

surface and groundwater models that utilize site-specific data to assess potential adverse impacts on water resources and natural systems within Southeast Lee County.” All the modeling investigations indicate that groundwater levels will be higher post mining than current conditions during the early dry season due to the termination of irrigation pumping and the water storage provided by the mine lake.

The detailed reports provided by WSP and resubmitted as a complete set as part of the applicant’s response to the 2nd Insufficiency demonstrate the proposed MEPD is CONSISTENT with Policies 2.4.2 and 2.4.3.

GOAL 5: RESIDENTIAL LAND USES

One theme of the Lee Plan is compatibility of land uses, especially residential uses. For residential uses, Policy 5.1.5 embodies that theme. Its intent is to *“(p)rotect existing and future residential areas from any encroachment of uses that are potentially destructive to the character and integrity of the residential environment. Requests for conventional rezonings will be denied in the event that the buffers provided in Chapter 10 of the Land Development Code are not adequate to address potentially incompatible uses in a satisfactory manner. If such uses are proposed in the form of a planned development or special exception and generally applicable development regulations are deemed to be inadequate, conditions will be attached to minimize or eliminate the potential impacts or, where no adequate conditions can be devised, the application will be denied altogether. The Land Development Code will continue to require appropriate buffers for new developments.”*

Policy 5.1.5 must be placed into the context of the Southeast Lee County Planning Community’s vision statement, which clearly recognizes that *“This “community” consists of **regional mining operations**, active and passive agricultural uses, public wellfields and water treatment plants, significant contiguous tracts set aside for preservation, a private golf course, and very large lot residential home sites.”* The area already consists of a mixture of mining uses, and large lot residential uses. The proposed Troyer Excavation plan will not change the existing character of this planning community.

The Lee Plan also acknowledges that mining is a valuable resource; and that “It is important to seek opportunities to site and permit mines in a manner that fosters compatibility between the environment and surrounding communities and minimizes, to the extent possible, the creation of additional impacts on the environment and surrounding community.” The Troyer MEPD request accomplishes this.

Compatibility is a relative concept which is generally subject to professional planning interpretation. Within the DR/GR area, where both large-scale agricultural activities and mining are permissible uses and residential densities are relatively low, greater proximity between large-scale agricultural uses, mining, and residential activity is deemed more compatible than the same distance within urban and suburban designations. Further, while the compatibility theme is clear throughout the entire Lee Plan, the site design standards of the Land Development Code are the

mechanism by which compatibility is assured, via minimum setback and buffering requirements. Chapter 12 establishes the property development regulations, setbacks and other design requirements for excavation activities. LDC Section 12-113 establishes minimum excavation setbacks of 150' from a property line under separate ownership; and a 150'-wide vegetated buffer between a mining use and a residential land use. The proposed conceptual plan attached as part of the MEPD application complies with the required setbacks and deviations requested to the site design elements of the LDC seek to address the existing conditions of the subject property, the requirements of the existing FDEP permits, and promote the retention and/or establishment of native habitat to promote compatibility with the adjacent Lee County Conservation Lands.

Considering the Lee Plan in its entirety, the Troyer Brothers MEPD request is CONSISTENT with professional interpretation and application of compatibility concepts as applied in the DR/GR areas, and more specifically Policy 5.1.5.

GOAL 7: INDUSTRIAL LAND USE

Goal 7 indicates that all development approvals for industrial land uses must be consistent with the policies included in this cluster, the standards under Goal 11, and other provisions of the Lee Plan. This analysis discusses the policies contained within this cluster (and Goal 11) because of the reference to Policy 7.1.1 in Section 12-107, LDC. However, more specific policies of Goal 10, enacted after Section 12-107 was adopted, specifically target resource extraction activities. The only uses on the Troyer property that are accommodated within the Map 14 amendment area and by the requested MEPD will be resource extraction and the operations necessary to turn the material into a saleable commodity. No additional operations will be proposed (e.g. batch plants, block plants, etc.) that could be considered more properly industrial in nature. Thus, given the adoption of Goal 10, it is not at all clear that the application of policies intended to regulate manufacturing, fabrication, industrial processing, warehousing, and other similar industrial activities would be proper to apply to the current request. Troyer Brothers has included a discussion of these policies in an abundance of caution, in light of Section 12-107, LDC. Assuming these policies are applicable, the Troyer Brothers MEPD request is CONSISTENT with the policies discussed below for the reasons stated.

Policy 7.1.1. states, *"In addition to the standards required herein, the following factors apply to industrial rezoning and development order applications:*

- 1. The development must comply with local, state, and federal air, water, and noise pollution standards.*

The applicant will accept a condition agreeing to comply with local, state, and federal air, water and noise pollution standards.

- 2. When located next to residential areas, industry must not generate noise levels incompatible with the residential development.*

Given the location of the excavation area and distance to any residential areas, the mining operation is not expected to generate noise levels incompatible with residential development.

3. *Bulk storage or production of toxic, explosive, or hazardous materials will not be permitted near residential areas.*

No toxic, explosive or hazardous materials will be stored or used near residential areas.

4. *Contamination of ground or surface water will not be permitted.*

The applicant is required to have an environmental resource permit for the project, which requires compliance with state water quality standards. The applicant will modify the existing ERP to reflect the revised mining boundary consistent with the proposed MEPD.

5. *Applications for industrial development will be reviewed and evaluated as to:*

a. air emissions (rezoning and development orders);

b. impact and effect on environmental and natural resources (rezoning and development orders);

c. effect on neighbors and surrounding land use (rezoning);

d. impacts on water quality and water needs (rezoning and development orders);

e. drainage system (development orders);

f. employment characteristics (rezoning);

g. fire and safety (rezoning and development orders);

h. noise and odor (rezoning and development orders);

i. buffering and screening (planned development rezoning and development orders);

j. impacts on transportation facilities and access points (rezoning and development orders);

k. access to rail, major thoroughfares, air, and, if applicable, water (rezoning and development orders);

l. utility needs (rezoning and development orders); and

m. sewage collection and treatment (rezoning and development orders)

It is noted that staff will conduct this review through the MEPD rezoning application as well as subsequent required applications for Mine Development Order (MDO) and MOP approval. As part of the rezoning request, the applicant has proposed a condition agreeing to comply with local, state, and federal air, water and noise pollution standards and must obtain a modified ERP, Water Use Permit and Industrial Wastewater Permit to address water quality and water needs. The proposed setbacks and buffers discussed above will avoid or minimize effects on neighbors and surrounding land uses. The traffic impact study has been updated and demonstrates no level of service impact to the adjacent transportation network. The requested MEPD does not promote residential uses therefore utilities are not needed to service the proposed development.

Policy 7.1.2 states, *“Industrial developments requiring rezoning and meeting Development of County Impact (DCI) thresholds must be developed as Planned Developments designed to arrange uses as an integrated and cohesive unit in order to:*

1. promote compatibility and screening;

2. reduce dependence on the automobile;

3. promote pedestrian movement within the development;

4. utilize joint parking, access and loading facilities;

5. avoid negative impacts on surrounding land uses and traffic circulation;

6. *protect natural resources; and*
7. *provide necessary facilities and services where they are inadequate to serve the proposed use.”*

The proposed request is to establish a Mine Excavation Planned Development to permit natural resource extraction within the Map 14 Overlay on the subject property. The proposed site plan outlined in the Mining and Excavation Plans demonstrates compliance with the design standards outlined in Chapter 12 of the Lee County LDC for Mining Excavation. Location of the resource proximate to demand sources in the eastern part of Lee County will serve to reduce dependency on vehicular transport of the resource from farther sites in Southeast Lee County which are only accessible via I-75 and Alico Road. A joint internal circulation system will be used by all vehicles. All traffic impacts have been addressed by the TIS prepared by TR Transportation. On-site habitat, to the greatest extent practicable, will be protected and enhanced. Details regarding the 1,016.4 acres to be restored, enhanced and reclaimed and placed under conservation easement are provided in the detailed reports prepared by Dex Bender. All necessary infrastructure is available to support the request, and additional extensions or expansions of public services are not needed to support the proposed development.

Policy 7.1.3 states, *“Industrial land uses must be located in areas appropriate to their special needs and constraints, including but not limited to, considerations of: topography; choice and flexibility in site selection; access by truck, air, deep water and rail; commuter access from home to work trips; and utilities; greenbelt and other amenities; air and water quality considerations; proximity to supportive and related land uses; and compatibility with neighboring uses.*

The Troyer Brothers property is located proximate to the demand for construction materials in Lee County which will reduce dependency on vehicular transport of the resource from farther sites in Southeast Lee County which are only accessible via I-75 and Alico Road. Furthermore, this is the only location of the County in which the resources are available, making extraction economically viable and appropriate for the location. It is also adjacent to existing mine uses.

Policy 7.1.8 states, *“Land development regulations will require that industrial uses be adequately buffered and screened from adjacent existing or proposed residential areas so as to prevent visual blight and noise pollution.”*

Within the DR/GR both large-scale agricultural activities and mining are permissible uses and residential densities are relatively low. Compatibility is present throughout the entire Lee Plan; however, the site design standards of the LDC are the mechanism by which compatibility is assured, via minimum setback and buffering requirements. Chapter 12 of the LDC establishes minimum excavation setbacks of 150' from a property line under separate ownership; and a 150'-wide vegetated buffer between a mining use and a residential land use. The Mining and Excavation Plans included in the MEPD application materials meets or exceed these criteria. Deviations requested to the site design elements of LDC Section 12-113 seek to address the

existing conditions of the subject property, the requirements of the existing FDEP permits, and promote the retention and/or establishment of native habitat to promote compatibility with the adjacent Lee County Conservation Lands. The 1,016.4 acres of open space to be placed under conservation easement post mining provide adequate preservation and buffering from the adjacent surrounding uses. Additionally, no mining activities are proposed adjacent to the existing residential community to the east. The design of the conceptual plan provides 1,279 feet of separation from the nearest residential uses to the boundary of the proposed excavation activities promoting adequate buffering and screening to the nearest residential use.

GOAL 9: AGRICULTURAL LAND USES

The intent of Goal 9 is to protect agricultural activities from the encroachment of incompatible land uses. Objective 9.1 establishes the parameters for properties to be identified on Map 20, Contiguous Agricultural Parcels Over 100 Acres in Non-Urban Future Land Use Categories. However, Policy 9.1.1 in support of this Objective states, *“In accordance with F.S. 187.201(23)(b)1, nothing in this plan will be construed to permanently prohibit the conversion of agricultural uses to other land uses.”*

The Troyer Brothers Property is included within the lands designated on Map 20 and is proposed to be included in the Map 14 Overlay, which permits the proposed MEPD request to allow mining use on the subject property in place of the existing agricultural use. This request is permitted by Policy 9.1.1 and supported by Florida Statute 187.201(23)(b)1.

Protection of agricultural activities from adjacent uses is the intent of Lee Plan Policy 9.1.4. The Policy reads: *“Protect agricultural activities on lands designated as Agricultural on the agricultural overlay (see Map 20) from the impacts of new natural resource extraction operations, recreational uses, and residential developments. However, in Future Limerock Mining areas (see Map 14), agricultural activities may be limited to the interim period prior to mining or may need to coexist with adjoining mining activities and mining pits.”*

The articulated goal of this plan is clearly the protection of existing farmland from other adjacent activities, not to prevent the conversion of the land from agricultural land use to an excavation land use. Any other interpretation of this policy would render Lee Plan Goal 10 (see below) in direct conflict with Goal 9. That is clearly not the case. The proposed MEPD and supporting Mine and Excavation Plans as well as Reclamation Plans are consistent with the design standards outlined in LDC Section 12-113 regarding setbacks, buffering, separation from existing uses, etc. Deviations requested from the design elements for the proposed mining activities are to support the existing conditions related to the stormwater management system, promote design elements as required by the existing FDEP permit, and support the establishment and/or preservation of native habitat. The Troyer property is adjacent to only four parcels which have active agricultural exemptions and the proposed MEPD will have little to no adverse impacts on farming lands as designed. The proposed mine processing/mine accessory area, located in the northern area of the subject property to be zoned MEPD, is adjacent to the four agricultural properties referenced.

The design of the Mining and Excavation Plans demonstrates consistency with the standards of Chapter 12, by providing a minimum setback of 150 feet from those properties with 50 feet provided as a landscape buffer from the property boundary where available consistent with the existing stormwater management system. The Troyer Brothers MEPD request is CONSISTENT with Policies 9.1.1 and 9.1.4.

GOAL 10: NATURAL RESOURCE EXTRACTION

Goal 10 of the Lee Plan indicates that Lee County intends, *“To protect areas containing commercially viable natural resources from incompatible urban development, while insuring that natural resource extraction operations minimize or eliminate adverse effects on surrounding land use and natural resources.”* Objective 10.1 states that Lee County will, *“Designate through the rezoning process sufficient lands suitable for providing fill material, limerock, and other commercially valuable natural resources to meet the county’s needs and to export to other communities, while providing adequate protection for the county’s natural resources.”*

The Troyer parcel has been identified as an area where the natural resource (limerock) exists, and as a result of the goals, objectives and policies of the DR/GR land use category set forth in the Lee Plan, the site has been protected from incompatible urban development. The Troyer Brothers MEPD request is consistent with Objective 10.1 in that the property is designated within an area (DR/GR) that has been identified as suitable to provide the limerock resource to meet the County’s need and to export to other communities. The objective clearly anticipates that the resource will both be provided to users within Lee County and exported to other communities.

As noted in the comprehensive plan amendment applications submitted prior to this MEPD request, there are currently insufficient lands remaining within the Map 14 area to meet the county’s projected need for limerock and to export to other communities. The pending Troyer Map 14 Amendment will help meet those needs, and the MEPD request is required to establish extraction activities on the Troyer property within the Map 14 amendment boundaries in compliance with LDC Chapter 12. The Troyer Brothers MEPD request is CONSISTENT with Goal 10 and Objective 10.1.



Figure 1. Alico Rd. Corridor Land Use & Reclaimed Subject Property

Policy 10.1.2 states, “The future uses of any new or existing natural resource extraction operation must be evaluated at the time the property undergoes planned development zoning review. Site plans should be designed to incorporate proposed future uses, including open space, and to ensure protection of surface and groundwater resources, wildlife and native plant communities.”

Consistent with this policy, the applicant has requested a Mine Excavation Planned Development meeting the site design requirements of Land Development Code Chapter 12. After reclamation activities are completed, the property is not proposed to be utilized for additional uses and 1,016.4 acres will be preserved as open space under a perpetual conservation easement. These preserved areas will interconnect with the adjacent Lee County Conservation lands providing improvements to habitat, surface water and groundwater. The applicant has detailed these improvements in the Summary Narrative provided as part of the Applicant’s response to the 2nd Insufficiency as well as the detailed reports prepared by Dex Bender and WSP.

Policy 10.1.3 states, “Reclamation is intended to replace or offset ecological benefits lost during extraction, including the creation of conditions that will support a healthy water body to the extent practicable. Applications for natural resource extraction permits for new or expanding sites, or for future use of such sites, must include a reclamation plan that provide assurance of

implementation. This plan must address the reclamation and sustainable management of all existing and future mining pits, preserves, and buffer areas that are or may in the future be related to the mining operation. Reclamation plans in Future Limerock Mining areas (see Map 14) must include littoral shelves suitable for native wetland plants, revegetation of disturbed land, allowance for wildlife movement, and minimization of long-term effects on surrounding surface and groundwater levels. Reclamation plans for mines providing primarily fill material should provide more extensive littoral shelves and describe how shorelines will be configured and managed and how disturbed uplands will be restored or converted to other acceptable lands uses. Reclamation plans in or near important surface and groundwater resource areas must also be designed to minimize the possibility of contamination of the surface and groundwater during mining and after completion of the reclamation.

The proposed MEPD request is to allow mining use in the place of the existing agricultural use. The proposed mining activities represent ±883 acres of ±1,804 acres owned by the Troyer Brothers.

After the completion of mining, numerous activities will occur to reclaim the lake bank as well as other areas of the subject property to promote stabilization and vegetation growth of lake shoreline and improve native habitat over the long term. After the required lake perimeter berm is removed, regrading and restoration efforts will occur to address the temporary wetland impacts of the perimeter berm as well as the establishment of littoral shelves and marsh drawdown areas, backfilling a portion of the northern lake to create a northern wildlife corridor, and promotion of natural habitat and rangelands. At the completion of the proposed reclamation activities, described in detail in the Summary Narrative and Indigenous Habitat Management Plan submitted as part of the applicant's response to the 2nd Insufficiency, and when combined with the restoration activities occurring prior to MOP, approximately 1,016.4 acres of the subject property will be identified as open space and placed under a conservation easement for protection in perpetuity. Collectively, these activities will promote interconnected preserves with the adjacent Lee County Conservation Lands to promote the movement of surface water and wildlife from the interconnected habitat.

It should be noted that the FDEP issued ERP permit no. 0292013-001 on April 5, 2011 for a new limestone, sand, and fill mine within a 1,477.0 acre project area within the overall 1803.5 acre Troyer Brothers property for a comparable project. This permit authorizes impacts to 143.12 acres of wetlands and 42.0 acres of other surface waters. The proposed impacts to FDEP jurisdictional areas include 159.88 acres of wetlands and 29.67 acres of other surface water ditches, a total of 189.55 acres. The impacts to wetlands approved by FDEP in April 2011 are to generally the same or similar wetlands as proposed in this application.

The currently proposed project does not include any impacts to wetlands or uplands in the 257.2 acre Southern Troyer Lands, although impacts to certain of those wetlands were approved in the FDEP permit. Conversely, the proposed project includes impacts to wetland W-4 toward the northern portion of the property and to wetlands W-11, W-12, and W-13 along the west side of the property, which are currently not authorized by the FDEP permit. These additional impacts

as well as the other impacts to wetlands associated with the proposed project are to hydrologically altered wetlands that are separated from the conservation areas to the west by a series of ditches and berms onsite that hydrologically isolate these areas and impede wildlife movement. Not impacting any wetlands or uplands in the Southern Troyer Lands is a significant design modification in that these areas that directly link the surrounding conservation and mitigation lands to each other have been avoided and will continue to function in their existing condition. The applicant has also agreed to a MEPD condition to preserve the native habitat, including the wetlands, in the Southern Troyer Lands, as an added benefit to wildlife to ensure a permanent wildlife corridor. The ERP will be modified to reflect the smaller mine footprint to accomplish these results.

Objective 10.2 states, *“Coordinate mining activities, including evaluation, monitoring, reclamation and redevelopment with water supply planning, surface and groundwater management activities, wetland protection, wildlife conservation, and future residential activities. Consider the cumulative and watershed-wide impacts of mining activities, not just the direct impacts of each individual mine in isolation.”*

Policy 10.2.1 states, *“Natural resource extraction operation must provide a monitoring system to measure surface and groundwater levels and quality to assess any degradation of surface and groundwater resources. Particular attention will be given to potential travel time to wellfields and residential wells. Mining applications are strongly encouraged to include a minimum of three years baseline monitoring and assessments of the likely change in flow, timing of travel, and direction of surface and groundwater systems on-site and in the impacted area.”*

According to Policy 10.2.2, *“Applications for natural resource extraction permits for new or expanding areas must include an environmental assessment. The assessment will include (but not be limited to) consideration of air emissions, impact on environmental and natural resources, effect on nearby land uses, degradation of water quality, depletion of water quantity, drainage, fire and safety, noise, odor, visual impacts, transportation including access roads, sewage disposal, and solid waste disposal. Assessments will also include:*

- 1. Potential impacts on aquatic ecology and water quality of mining pits that will result from mining pit design.*
- 2. Likely post-mining impacts such as runoff or surface and groundwater flow on land uses surrounding the site.*
- 3. Consideration of the primary and secondary impacts at the local and watershed levels.*

As part of the MEPD copies of the previous Environmental Assessment Report, Protected Species Assessment and Indigenous Management Plan prepared by the Phoenix Environmental Group were submitted. In addition, these reports were redone and resubmitted by Dex Bender discussing the current condition of the subject property and the proposed restoration, enhancement and preservation activities to support the proposed mining activities. In addition, detailed reports with 4 hydrological models, including an integrated surface and groundwater MIKE SHE Model were provided in the Hydrogeology and Mining Investigation Reports prepared by WSP. These reports consider the impacts of the proposed mine along and cumulative impacts

with adjacent permitted and proposed mines (Florida Rock and Old Corkscrew Plantation). Also included in these materials were copies of all monitoring that has occurred on the subject property to date, most of which included data from 2008. An example of the proposed Water Quality Monitoring Plan was also provided in the materials supporting the MEPD to demonstrate the information expected to be collected by the final mine operator.

The proposed site plan as depicted in the Mine and Excavation Plans has been designed to mostly align with the existing farmfields on the subject property and avoid impacting higher quality habitats. A concurrent Comprehensive Plan Amendment to the requested MEPD seeks to preserve 453 acres of high quality habitat in the Conservation Future Land Use Category. Consistent with this designation, enhancement, restoration and preservation activities will occur within these 453 acres prior to the issuance of a MOP. In addition to eradicating exotic and nuisance vegetation, the existing agricultural berms that separate the on-site wetlands from the wetlands in the adjacent Lee County Conservation Lands will be removed, hydrologically reconnecting these wetlands immediately. A portion of the north/south internal road, which currently acts like a levee prohibiting water from flowing across the subject property, will also be removed. An east-west flow conveyance is also proposed to be constructed north of the processing areas. Collectively, these activities will improve the on and off-site wetlands by permitting surface water to flow from the east side of the subject property to the west enabling prolonged submerged conditions and lengthening the effective wet season and shorting the dry season. Collectively, approximately 703 acres of enhancement and restoration will occur prior to MOP as described in detail in the Indigenous Habitat Management Plan prepared by Dex Bender.

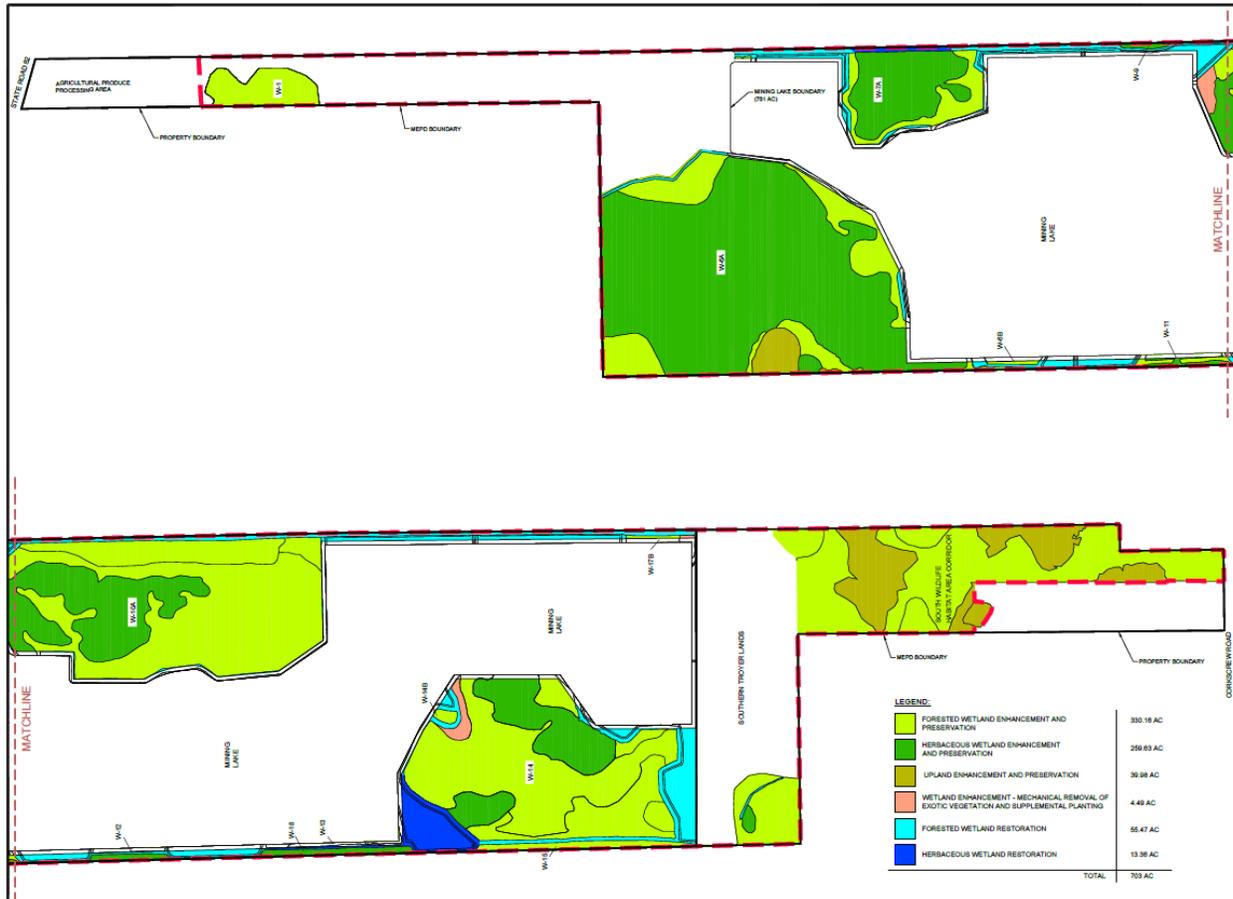


Figure 2. Restoration, Enhancement & Preservation Prior to MOP

After mining activities are complete on the subject property, equipment will be removed and regrading will occur to bring the subject property in line with the natural elevation of the surrounding lands. Berms installed to support the mining activities will be removed, littoral shelves and drawdown marshes will be created, and some back filling will occur to support the creation of a northern wildlife corridor. When combined with the activities to occur prior to MOP, approximately 1,016.4 acres of the subject property will be preserved as open space. Approximately 634 acres are considered indigenous habitat, or 36% of the acreage included in the MEPA request, well above the required 25% per LDC Section 12-113(m).

The overall effect of the enhancement, restoration threshold and reclamation of the 1,016 acres is to establish wetlands and uplands on-site that are at or near natural ground elevations with no hydrologic impediments between the on-site wetlands and off-site adjacent Lee County Conservation Lands. Therefore, after reclamation during the wet season, surface water from the north east will flow onto the Troyer Brothers property in a south/southwest direction to the mining land and the restored and enhanced wetlands on-site. Surface water will be reestablished to resume historic flow through the low points of the on-site wetlands to the adjacent Lee County Conservation Lands in a manner similar to historic conditions.

In addition, WSP has provided a Hydrogeology Report and Mining Impact Analysis, submitted as part of the Environmental Assessment submitted March 14, 2017 and again with the applicant's response to the 2nd Insufficiency, which addressed post-mining runoff, surface and groundwater flow and local watersheds. That analysis demonstrated that post mining conditions have a net positive effect through the mining lake, which will provide a large volume of water storage to maintain higher groundwater levels in the dry season, the curtailment and mitigation of irrigation return flows from the storage of surface water, and the elimination of pumping from the Sandstone Aquifer. Additionally, the hydrogeological report includes water quality analyses for three water-table aquifer and two Sandstone Aquifer production wells located on site which will serve as a baseline for any future water quality monitoring efforts related to the MEPD, MDO or MOP applications.

Policy 10.2.3 states, *"The depth of mining for a proposed excavation will be limited as necessary to prevent any breach of an aquaclude or confining layer."*

The previous hydrogeological report provided by WSP, resubmitted with the applicant's 2nd Insufficiency Response, acknowledges the regional confining unit that separates the water-table aquifer from the Sandstone Aquifer, ranges on-site from 116 to 286 feet. The maximum mining depth shown on the Mining and Excavation Plans and Proposed Conditions supporting the MEPD is to 110 feet below control elevation, or to the top of the confining layer, whichever is first encountered. Therefore, the mining depth will prevent any breach of an aquaclude or confining layer.

Goal 33: Southeast Lee County

Southeast Lee County is of the County's 16 Planning Communities and Goal 33 establishes the intent of this Planning Community. The intent of the Goal is to create a balance between water storage and extraction activities through the separation of residential, commercial, preservation and extraction uses.

Objective 33.1 states, *"Designate on a Future Land Use Map overlay sufficient land near the traditional Alico Road industrial corridor for continued limerock mining to meet regional demands through this plan's horizon."*

Policy 33.1.1 states, *"Limerock mining is a high-disturbance activity whose effects on the surrounding area cannot be completely mitigated. To minimize the impacts of mining on valuable water resources, natural systems, residential areas, and the road system, Map 14 identifies Future Limerock Mining areas that will concentrate limerock mining activity in the traditional Alico Road industrial corridor east of I-75. By formally identifying such areas in this plan and allowing rezonings for new and expanded limerock mines only in the areas identified in Map 14, limerock resources in or near existing disturbed areas will be more fully utilized and the spread of limerock mining impacts into less disturbed environments will be precluded until such time as there is a clear necessity to do so (and Map 14 is amended accordingly). Inclusion of land on Map 14 does not restrict the rights of land owners to use their land for other allowable purposes."*

The Troyer Brothers' property is an active agricultural use for the cultivation and harvesting of potatoes. A majority of the property has been highly disturbed to support the existing agricultural operation, including redirecting surface water flows around the property via ditches and berms. The requested mining activities will occur on approximately ±883 acres which are mostly limited to the disturbed portions of the property, are contiguous to existing and approved mining areas, and will not promote encroachment into less disturbed environments. Furthermore, the requested MEPD and mining activities will facilitate the provision of necessary construction materials to meet the growing demands within Lee County. Lee County has identified a clear need for additional lands to meet its aggregate needs within its new planning horizon. The property is the subject of a pending comprehensive plan amendment to add the mine area to Map 14, consistent with this policy.

Policy 33.1.2 states, "Most land identified on Map 14 is in the Density Reduction/Groundwater Resources land use category (see Policy 1.4.5) and will also be subject to those special requirements. Future Limerock Mining land outside the DR/GR area will also be subject to requirements of the appropriate designation on Map 14. Goal 10 and its objectives and policies contain additional guidance on mining. The Land Development Code will continue to provide additional details on mining approvals and operations."

As required by Policy 1.4.5 and additional supporting policies, detailed analyses have been provided by Dex Bender and WSP demonstrating that the proposed mining activity of the subject property will have a net positive impact on water resources and will not negatively harm native indigenous habitat and wildlife. Additional analysis related to the proposed rezoning's consistency with Goal 10 and its implementing policies is provided above.

Policy 33.1.3 states, "Concurrent with the update of Map 14 in 2010, the Lee Plan was amended to improve the ability to efficiently mine in Future Limerock Mining areas. An exception was made to the requirement in Policy 1.4.5 that DR/GR land uses must demonstrate compatibility with maintaining surface and groundwater levels at their historic levels. Under this exception, land in Future Limerock Mining area may be rezoned for mining when the impacts to natural resources including water levels and wetlands are offset through appropriate mitigation within Southeast Lee County. The Land Development Code will be amended and maintained to include provisions for assessing and mitigating mining impacts and for transferring residential development rights from land zoned for limerock mining pits. Appropriate mitigation for water levels will be based upon site-specific data and modeling acceptable to the Division of Natural Resources. Appropriate wetland mitigation may be provided by preservation of high quality indigenous habitat, restoration or reconnection of historic flowways, connectivity to public conservation lands, restoration of historic flowways, connectivity to public conservation lands, restoration of historic ecosystems or other mitigation measures as deemed sufficient by the Division of Environmental Sciences. It is recommended that, whenever possible, wetland mitigation be located within Southeast Lee County. The Land Development Code will be revised to include provisions to implement this policy."

Detailed analysis has been provided by Dex Bender and WSP to address the character of the proposed Troyer Brothers property including the area proposed for Extraction Activities, Mine Processing Area, and Preservation Areas, as well as the effects on potable water supplies, ground and surface water, water resources, drainage basins and the geologic suitability of the ±781 acre excavation area for limerock mining.

A detailed analysis conducted by WSP included four separate modeling investigations including integrated surface water/groundwater modeling using the MIKE SHE model of the DR/GR area prepared by DHI for Lee County. The results of the all four modeling investigations demonstrate that “termination of on-site groundwater pumping for irrigation water use and water storage provided by the lakes **will result in higher groundwater levels** during the dry season.” In addition, the MIKE SHE modeling results indicate that the requested mining activity will have an overall essentially neutral effect on wet season water levels. Simulated wet season water levels were mostly within ± 0.3 ft of current (baseline) water levels. Low-lying areas (i.e., wetlands) are currently inundated during the wet season and would continue to be inundated in the wet season during and after mining. The duration of inundation will also not materially change. Due to the beneficial changes in the dry season and essentially neutral impacts in the wet season, there will be no overall adverse impact to groundwater resources as a result of the requested mining activity and mitigation for groundwater resources is not needed.

The surface water conditions of the subject property are documented by the analysis provided by Dex Bender as well as WSP. Furthermore, additional details have been provided by AIM Engineering, Inc. in the Summary Narrative included in the applicant’s 2nd Insufficiency Response. The existing agricultural activities of the subject property have established internal roadways, ditches, berms and farm fields which direct and divert surface water to cut off the historic flowways that existed on the subject property. Prior to the issuance of MOP, the existing agricultural berms that separate the on-site wetlands from the adjacent Lee County Conservation Lands will be removed. In addition, a portion of the internal road which also acts as a barrier to surface water will also be removed. An east-west flow conveyance is also proposed to be constructed north of the proposed processing area permitting surface water from the eastern portion of the property to flow to the west. Collectively these activities will improve hydrological connections prior to MOP. After the completion of mining activities, any remaining impediments to surface water flow will be removed further improving surface water flow across the property and supporting the Lee County goal to restore flowways. Enabling the flow of surface water to occur across the property and interconnecting the on and off-site preserves is consistent with the “appropriate mitigation” outlined in Policy 33.1.3.

The applicant notes that the FDEP issued permit no. 0292013-001 on April 5, 2011 for a new limestone, sand, and fill mine within a 1,477.0 acre project area within the overall 1,803.5 acre Troyer Brothers property. This permit is active and authorizes impacts to 143.12 acres of wetlands and 42.0 acres of other surface waters. The proposed impacts to FDEP jurisdictional areas include 159.88 acres of wetlands and 29.67 acres of other surface water ditches, a total of 189.55 acres. The impacts to wetlands approved by FDEP in April 2011 are to generally the same or similar wetlands as proposed in this application.

It should be noted that the currently proposed project does not include any impacts to wetlands or uplands in the area known as the “Southern Troyer Lands,” although impacts to that area were approved in the FDEP permit. Conversely, the proposed project includes impacts to wetland W-4 toward the northern portion of the property and to wetlands W-11, W-12, and W-13 along the west side of the property which are not currently authorized by the FDEP permit. These additional impacts as well as the other impacts to wetlands associated with the proposed project are to hydrologically altered wetlands that are separated from the conservation areas to the west and east by a series of ditches and berms onsite which hydrologically isolate these areas and impede wildlife movement. Not impacting any wetlands or uplands in the Southern Troyer Lands is a significant design modification in that these areas that directly link the surrounding conservation and mitigation lands to each other have been avoided and will continue to function in their existing condition. Further, the applicant has agreed to an MEPD condition which will place a conservation easement over approximately 121.5 acres of these Southern Troyer Lands, which is the entire remaining native habitat, to provide a permanent wildlife corridor in the southern portion of the property. A second wildlife corridor is proposed as part of the reclamation activities which includes backfilling approximately 99 acres of the northern portion of the mine lake to establish a northern wildlife corridor. At the conclusion of reclamation activities approximately 1,016.4 acres will be considered open space and placed under conservation easement consistent with LDC Section 12-119(b)(12).

Policy 33.1.4 states, *“Table 1(b) contains industrial acreage in Southeast Lee County that reflects the acreage of limerock mining pits needed to meet local and regional demand through year 2030. The parcel-based database of existing land uses described in Policy 1.7.6 will be updated at least every seven years to reflect additional data about limerock mining in Southeast Lee County, including mining acreage zoned (project acres and mining pit acreage), pit acreage with active mine operation permits, acreage actually mined, and acreage remaining to be mined. Current totals are based on data compiled in Prospects for Southeast Lee County for the year 2006. Future amendments will reflect any additional data that becomes available through routine monitoring reports and bathymetric surveys or other credible sources. The industrial acreage totals for Southeast Lee County that are found in Table 1(b) for Planning Community #18 will be used for the following purposes:*

- 1. In accordance with Policies 1.1.1 and 1.7.6, new mine development orders and mine development order amendments may be issued provided that the industrial acreage totals in Table 1(b) are exceeded. For purposes of this computation, the proposed additional limerock pit acreage, when added to the acreage of limerock pits already dug, cannot exceed the acreage limitation established in Table 1(b) for Planning Community #18.*
- 2. By monitoring the remaining acreage of land rezoned for mining but not yet mined, Lee County will have critical information to use in determining whether and to what extent the Future Limerock Mining areas in Map 14 may need to be expanded in the future to meet local and regional demands.*

As part of the Lee County DR/GR studies, a report was produced by Spikowski and Associates providing estimates for the future production capabilities of the existing and proposed mines

located in SE Lee County. That study, dated July 2008, is now 8 years old and like all studies, due for revisions based upon events that have taken place since its completion. Updating this data and analysis is consistent with Policy 33.1.4, reflecting an intention to update Table 1(b) at least every seven years to reflect additional data about limerock mining. The following represents additional data about limerock mining in Southeast Lee County as contemplated by Policy 33.1.4.

There is no more mining south of Alico Road in the areas listed by the study as Rinker Materials, either in the ±915 acre site (±537 acres of mine area) or the Ginn Lago site of ±3,560 acres (±1,357 acres of mine area). The mining in the Cemex/RMC mine listed as Corkscrew Woods has ceased, with a ±309 acre mine (±228 acres of mine area) no longer active. Bonita Grande Aggregates, having virtually shut down during the recession, is now back to production, but has filed a request with the City of Bonita Springs to turn the site into a residential development instead of a mine. Although estimated reserves from the Bonita Grande Mine are put at ±20.3 million cubic yards (MCY), that material will never be extracted if the FLUM change is approved as requested.

A detailed analysis regarding Limerock Demand was provided to support the companion Map 14 Amendment and is attached to this application for reference. The report concluded

- Lee County has a finite and dwindling support of approved mineable reserves on Map 14, which have been significantly reduced since the 2008 report was published.
- Demand for limerock continues to exist and exceeds the available approved supply through 2030.
- The deficit in the current supply will continue to increase when reviewed through 2040.
- An additional 1,289 acres of mining area are needed.

Lee County recently commissioned a study, the Waldrop Report, that also identified a need for additional land to meet local and regional aggregate needs over the County's new planning horizon, notwithstanding that Report conservatively assumed the mining of multiple inactive or fill mines that are not on Map 14 nor pending for inclusion on Map 14, namely: Plumosa Mine, Bell Road Mine, and Westwind Corkscrew Mine. The Report also conservatively assumed the continued mining of Bonita Grande Mine, discussed above.

The Troyer Brothers' property is an active agricultural site used for the cultivation and harvesting of potatoes. A majority of the property has been disturbed to support the existing agricultural operation. The requested ±883 acres for mining activities is mostly limited to the disturbed portions of the property and will not promote encroachment into less disturbed environments. The requested MEPD is contiguous to existing Map 14 areas and approved MEPD zonings. Furthermore, the requested rezoning will facilitate the provision of construction materials to meet the growing demands within Lee County, as noted above.

The MEPD request does not open unimpacted areas to this type of development and will provide a needed resource to address the deficit that will be created by the 2018 expiration of Bonita Grande Aggregates as well as reductions in previously approved mining area and demands for material to support the recent increase in building permits in the County. The MEPD request will meet or partially meet the need identified in the Waldrop Report.

Policy 33.1.7 states, *“Protect agricultural activities on lands designated as Agricultural on the agricultural overlay (see Map 20) from the impacts of new natural resource extraction operations, recreational uses, and residential developments. However, in Future Limerock Mining areas (see Map 14), agricultural activities may be limited to the interim period prior to mining or may need to coexist with adjoining mining activities and mining pits.*

The articulated goal of this plan is clearly the protection of existing farmland from other adjacent activities, not to prevent the conversion of the land from agricultural land use to an excavation land use. Any other interpretation of this policy would render Lee Plan Goal 33 in direct conflict with Goal 9. That is clearly not the case, and LDC Chapter 12 has set forth design standards (setbacks and buffer requirements) to ensure compatibility between agricultural land uses and potential excavation land uses. The Troyer site is adjacent to only four parcels which have active agricultural exemptions and the proposed land use will have little to no adverse impacts on farming lands as designed. The proposed mine processing area is located adjacent to the four agricultural properties referenced above. The MEPD request and proposed conceptual site design demonstrates consistency with the design standards of LDC Section 12-113 by providing a minimum setback of 250 feet with 50 feet provided as a landscape buffer from the property boundary. It should also be noted deviations requested from the required site design elements are to enable the existing stormwater management system to continue functioning, address requirements of the existing FEDP permit and promote the establishment of native vegetation. The MEPD request is CONSISTENT with Policy 3.1.7.

Objective 33.2 seeks to encourage the preservation of lands within Southeast Lee County that are most critical to restoring historic surface and groundwater levels and improving the protections of wetlands and wildlife habitat.

Policy 33.2.1 states, *“Large-scale ecosystem integrity in Southeast Lee County should be maintained and restored. Protection and/or restoration of land is of even higher value when it connects existing corridors and conservation areas. Restoration is also highly desirable when it can be achieved in conjunction with other uses on privately owned land including agriculture. Lee County Natural Resources, Conservation 20/20, and Environmental Sciences staff will work with landowners who are interested in voluntarily restoring native habitats and landowners who are required to conduct restoration based upon land use changes. The parameters for the required restoration will be established in the Land Development Code by 2012.*

In addition to the ±883 acre area proposed for mining activities, adjacent to the mine pit along the boundaries of the Troyer Brothers’ property will be 453 acres of high quality habitat as preserved through the Conservation Future Land Use. Additional restoration, enhancement and preservation activities are proposed to occur prior to MOP and during reclamation to establish 1,016 acres of open space and 634 acres of indigenous habitat upon the completion of mining activities. These areas are proposed to be preserved and will be enhanced where appropriate from their current conditions during mitigation activities associated with the adjacent mine. These mitigation/preservation areas are a minimum component of any required

preservation/mitigation to support the MEPD request. The proposed preservation is mostly located along the eastern and western property boundaries of the Troyer Brothers site and connects to adjacent Lee County Conservation Lands to provide larger regional connections through the Corkscrew Regional Mitigation Bank. Additional preservation is proposed within the area known as the Southern Troyer Lands south of the mine footprint, through an approximately 121 acre area to be placed into a conservation easement prior to MOP which will preserve quality natural habitat immediately adjacent to two Lee County Preserves and provide a wildlife corridor in the southern portion of the property. An additional wildlife corridor is proposed in the northern portion of the property as part of the proposed reclamation activities. The Troyer MEPD request will mitigate and preserve lands and connect public conservation lands, representing a public/private partnership supported by Policy 33.2.1. The Troyer Brothers MEPD request proposal is CONSISTENT with Policy 33.2.1

Policy 33.2.2 states, The DR/GR Priority Restoration overlay depicts land where protection and/or restoration would be most critical to restore historic surface and groundwater levels and to connect existing corridors or conservation areas (see Policy 1.7.7 and Map 1, Page 4). This overlay identifies seven tiers of land potentially eligible for protection and restoration, with Tier 1 and Tier 2 being the highest priority for protection from irreversible land-use changes. Lee County will evaluate this overlay map every 7 years to determine if changes in public ownership, land use new scientific data, and/or demands on natural resources justify updating this map. This overlay does not restrict the use of the land in and of itself. It will be utilized as the basis for incentives and for informational purposes since this map will represent a composite of potential restoration and acquisition activities in the County.

The Troyer Brothers' property is an active agricultural use for the cultivation and harvesting of potatoes and identified as a Tier 7 property for protection and restoration. A majority of the property has been disturbed to support the existing agricultural operation. The requested ±883 acres of mining activities is mostly limited to the disturbed portions of the property and will not promote encroachment into less disturbed environments. As noted above, a significant portion of the property will be preserved in perpetuity after the completion of reclamation activities. The 1,016.4 acres proposed to be placed under conservation easement are proposed adjacent to the mining activities to provide adequate buffering and separation from the surrounding properties during mining and after reclamation will create an interconnection for habitat, surface water and wildlife. The areas proposed to be preserved provide larger and more permanent regional wildlife connections through the Corkscrew Regional Mitigation Bank than are achievable in the current condition. The MEPD Mine and Excavation Plans, Reclamation Plans and schedule of uses demonstrate that future development around the reclaimed lake is precluded (due to the lack of adequate land area around the lake for residential lots and the adjacency of preserve areas), which will achieve the goal of protection and restoration of a Tier 7 property without the expenditure of public funds to do so. The Troyer Brothers MEPD request is CONSISTENT with Policy 33.2.2.

Policy 33.2.4 states, *“Restoration of critical lands in Southeast Lee County is a long-term program that will progress in phases based on available funding, land ownership, and natural resource priority. On individual sites, restoration can be carried out in stages:*

- 1. Initial restoration efforts would include techniques such as filling agricultural ditches and/or establishing control structures to restore historic water levels as much as possible without adversely impacting nearby properties.*
- 2. Future restoration efforts would include the eradication of invasive exotic vegetation and the reestablishment of appropriate native ecosystems based upon the restored hydrology.*

The proposed MEPD to permit a mining use in place of the existing agricultural use will promote lake creation, filter marsh creation, and the filling of abandoned agricultural ditches after mining is completed. As contemplated by Section 12-107(5), the mining lakes, after reclamation, will provide for a system of interconnected lakes and flowways that will enhance wildlife habitat values and strengthen environmental benefits over the current conditions. As discussed in the previously provided detailed analysis provided by WSP, the reconnection of the drainage basin from the north, will greatly improve the northern part of the DR/GR and benefit the Caloosahatchee River by reducing stormwater flows. In addition, the wetland area to the south of SR 82 could be re-hydrated to improve the health of the overall system. WSP also concludes, “by incorporating mining, mining restoration plans, flowway re-establishment plans, and the drainage divide restoration plans for Lehigh Acres, all interests could make a contribution to the environment and meet critical needs of the region (i.e., construction materials and environmental restoration).” These materials were provided as part of the Environmental Assessment submitted on March 14, 2017 as well as the applicant’s 2nd Insufficiency Response.

The materials provided by Dex Bender detail the conditions of the subject property as well as the preliminary wetland restoration, enhancement and preservation plan as well mine reclamation plan. The subject property has been significantly altered by ditching and the installation of berms to support the current agricultural activities on-site which has also impacted the existing wetlands. Through the proposed restoration, enhancement and preservation plan associated with the MEPD request, prior to MOP existing agricultural berms between the on and off-site wetlands will be removed, a portion of the internal roadway will be removed, an east-west conveyance will be constructed, and 703 acres of enhancement and restoration will occur. These areas will be preserved and placed into a conservation easement prior to MOP as indicated by the detailed reports provided by Dex Bender and the Proposed Conditions prepared by Morris-Depew Associates.

As part of the reclamation after mining activities cease, the perimeter mining berm will be removed along with any remaining impediments to surface water flow across the subject property. Littoral shelves will be designed to restore the hydrology of the contiguous wetland system and promote biological diversity. A drawdown marsh is also proposed to allow water and fish to enter the littoral shelf area during the wet season and promote foraging habitat for wood storks and wading birds. The applicant also notes that the ERP Permit will be modified to reflect the existing proposed conceptual site plan. The Troyer Brothers MEPD request is CONSISTENT with Policy 33.2.4.

Policy 33.2.7 states, *“Impacts of proposed land disturbances on surface and groundwater resources will be analyzed using integrated surface and groundwater models that utilize site-specific data to assess potential adverse impacts on water resources and natural systems within Southeast Lee County. Lee County Division of Natural Resources will determine if the appropriate model or models are being utilized, and assess the design and outputs of the modeling to ensure protection of Lee County’s natural resources.”*

The proposed mining use of the property would have a positive net benefit to water resources. A detailed analysis provided by WSP as part of the Environmental Assessment on March 14, 2017 and resubmitted with the applicant’s 2nd Insufficiency Response, including integrated surface/groundwater MIKE SHE Modeling, demonstrates these benefits. The analysis provided concludes “[t]he large additional volume of water stored in mine lakes during the wet season would act to reduce the rate of decline of the water table on-site and in adjoining areas during the dry season, compared to existing (agricultural row crops) conditions. The termination of Sandstone Aquifer pumping [for irrigation] will decrease the lateral flow of water onto the property during the dry season, which will be beneficial to other aquifer users.”

WSP met with Lee County Division of Natural Resources staff on several occasions to discuss modelling plans. It was agreed upon to use the MIKE SHE integrated surface water/groundwater model of the DR/GR area prepared on DHI under contract with Lee County. The final MIKE SHE modeling plans were discussed during a May 26, 2017 meeting between the County staff and representatives of Troyer Brothers. At that meeting, Lee County Division of Natural Resources staff reported to WSP their requested model simulations and outputs (requested maps), which were provided to the Lee County Division of Natural Resources in a memo dated June 15, 2017 (and resubmitted as part of the 2nd Insufficiency letter response). County staff were also provided copies of all model and output files to allow for independent analysis of the data.

TRANSPORTATION ELEMENT

The Transportation Element of the Lee Plan seeks to outline various transportation related Goals, Objectives and Policies that must be met by future development to ensure an efficient multi-modal transportation system with the County. Goal 39 specifically addresses development regulations to address on-site and off-site development impacts to protect and preserve public transportation facilities.

Objective 39.1 states, *“The county will maintain and enforce development regulations to ensure that impacts of development approvals occur concurrently with adequate roads, and to achieve maximum safety, efficiency, and cost effectiveness.”*

A Traffic Impact Statement was provided by TR Transportation and concludes there will be no change in Level of Service on any roadway links in the study area and the greatest impact to any of the segments “is approximately 0.6% of the LOS C services volume...very negligible.” Furthermore, the study concludes “no modifications are necessary to the adopted work programs of the Florida Department of Transportation or Lee County.” The analysis from TR

Transportation also indicates the FDOT has recently advanced the funding for the widening of SR 82 from Colonial Boulevard to its eastern terminus at SR 29 in Collier County. This widening would include the portion of SR 82 adjacent to the Troyer property.

Policy 39.1.1 states, *“New development must:*

- *Have adequate on-site parking.*
- *Have access to the existing or planned public road system except where other public policy would prevent such access.*
- *Fund all private access and intersection work and mitigate all site-related impacts on the public road system: this mitigation is not eligible for credit against impact fees.”*

The Troyer Property has an existing access point to SR 82 which will continue to provide site access to the property, the existing agricultural produce processing facility (which will remain), as well as the proposed mining uses. The proposed MEPD includes 102 acres for mine processing which will provide adequate area for truck parking, washing, staging, etc. The details of this area are identified on the Mine and Excavation Plans provided in the supporting materials to the MEPD application.

Policy 39.1.2, states, *“County regulations will encourage proposed development along state roads to protect existing and planned transportation corridors to meet state standards for future expansions consistent with the Transportation Map series and the Official Trafficways Map.”*

The previously provided traffic impact statement indicates that there is no change in LOS on any of the roadway links within or without the project and that LOS C will be maintained on the roadway facilities adjacent to the subject property (SR 82) both with and without the excavation development. However, Goal 39 can best be characterized as establishing a standard for the County to meet in the articulation of its regulations. Additionally, any expansions of infrastructure necessary for SR 82 can take place without impacting the current request due to the setbacks established for the excavation operations. Thus, insofar as these provisions can be applied, the Troyer Brothers MEPD request is CONSISTENT with them.

GOAL 60: COORDINATED SURFACE WATER MANAGEMENT AND LAND USE PLANNING ON A WATERSHED BASIS

The overarching theme of this goal is the protection or improvement of the quality of receiving waters and functions of natural groundwater aquifer recharge areas, as well as flood protection. Lee Plan Policy 60.1.2 states that Lee County will, *“Incorporate, utilize, and where practicable restore natural surface water flowways and associated habitats.”*

In addition to the proposed restoration, enhancement and preservation activities which will place 1,016 acres under conservation easement, the requested MEPD to permit a mining use in place of the existing agricultural use will promote lake creation, filter marsh creation, and filling of abandoned agricultural ditches after mining is completed.

As discussed in the detailed analysis provided by WSP, post-mining plans for the Troyer Brothers site are a key element towards restoring the natural surface water flow system. Completion of mining activities will positively impact groundwater levels as evaluated by the four separate groundwater modeling investigations provided by WSP. All modeling investigations indicated groundwater levels will be higher post mining than current conditions in the early dry season due to the termination of irrigation pumping and water storage provided by the mine lake. Groundwater levels are expected to change little in the wet season post mining as compared to current conditions due to the large excess precipitation that occurs in the wet season. The Troyer Brothers MEPD request is CONSISTENT with Policy 60.1.2.

The requested MEPD will be consistent with the Lee County LDC, specifically Chapter 12 which requires a reclamation plan complete with mitigation/restoration to establish littoral zones up to 25% of the lake surface area, replanting of wetlands to improve water quality and indigenous habitat, bank slopes as well as a recorded conservation easement to protect these areas in perpetuity. Detailed mitigation and reclamation plans have been submitted to support the requested MEPD. Approximately 1,016.4 acres are proposed to be placed under Conservation Easement and are appropriately classified as open space. Of the 1,016.4 acres, 634 acres or 36% of the acreage included in the MEPD request are indigenous habitat. The proposed reclamation activities include the removal of the mining perimeter berm, establishment of littoral shelves and drawdown marshes, the backfilling of 99 acres of the mine lake to promote a northern wildlife corridor and restoration of natural habitat and native rangeland. The overall effect of these proposed activities will be the creation of uplands and wetlands on the subject property which will be at or near historic natural ground elevations with no hydrologic impediments on-site or between the off-site adjacent Lee County Conservation Lands. The FDEP ERP will be modified to reflect the proposed conceptual site plan included in the application supporting materials for the MEPD. The proposed MEPD's compliance with the requirements of Chapter 12, as well as the reclamation requirements of the FDEP, will ensure consistency with Policy 60.1.2

Lee Plan Objective 60.5 and Policies 60.5.1 – 60.5.3 encourage new developments to incorporate best management practices, including filtration marshes, lakes with enlarged littoral zones, preserved or restored wetlands; incorporation of existing wetlands into the surface water management system; and preservation of existing flowways, or restore historic flowways. The proposed reclamation plan includes all of these elements as described in the Summary Narrative and Indigenous Habitat Management Plan prepared by Dex Bender. As a result of these reclamation activities, during the wet season, surface water from the northeast will flow onto the Troyer Brothers property in a south/southwest direction to the mining lake and restored on-site wetlands. Surface water will flow off-site to the south, west and southwest into the adjacent Lee County Conservation Lands similar to natural conditions. The Troyer Brothers MEPD request is CONSISTENT with Lee Plan Goal 60, Objective 60.5, and Policies 60.5.1, 60.5.2, and 60.5.3.

GOAL 61: PROTECTION OF WATER RESOURCES

This goal proposes to protect the county's water resources through the application of innovative surface water management schemes. Such efforts are intended to be consistent with the need to protect receiving waters. The request proposes mechanisms to filter pollutants and sediment

from stormwater, reconnection, to the extent practical, off-site surface water flows across the subject property, and decreased consumptive water use during the period in which the property is being excavated. All of these actions combine to implement the intention of the County's stated intent found in this Goal.

Policy 61.1.4 emphasizes maintaining and increasing historic surface and groundwater levels in the DR/GR land use category. Objective 61.2 supports a surface water management strategy that relies on natural features (flowways, sloughs, strands, etc.) and natural systems to receive and otherwise manage storm and surface water through the mimicking of the functions of natural systems; Policy 61.2.1 indicates that all development outside urban areas must recognize the unique hydrology of a given site, and that the natural features must be used to the extent possible; Policy 61.2.6 states that the county will "maintain regulations that require reclamation standards for future excavation that mimic natural systems through the techniques that improve water quality, wildlife utilization, and enhance groundwater recharge". Policy 61.3.6 provides the development must have and maintain adequate surface water management system and post development runoff conditions that reflect the natural surface water flow. Policy 61.3.7 indicates that channelization of natural streams and watercourses is prohibited. Chapter 12 of the LDC incorporates this theme into its design requirements as well.

The requested MEPD has provided detailed analysis of the surface and groundwater conditions under the existing conditions, during mining and after reclamation. Prior to the issuance of MOP, the existing agricultural berms that separate the on and off-site wetlands will be removed, a portion of the internal road separating the on and off-site wetlands will also be removed, and an east-west flow conveyance will be constructed. Collectively these activities will permit surface water from the east to flow in a controlled manner to the west of the property. Upon issuance of the MOP, pumping related to agricultural irrigation will cease. WSP has conducted four separate modeling investigations to properly evaluate the effects of the proposed mining activity on groundwater and surface water. The modeling results demonstrated during the dry season groundwater levels will be higher than at present and during the wet season there will be little change in groundwater levels. An analysis of water quality was also conducted by WSP. It is important to note rock mining and public water supply wells have co-existed for many years in Lee County and the land development code outlined numerous required reports to address water quality. The applicant has provided these reports as part of the MEPD application process and notes updated reports are required at the time of MDO approval.

As part of the SFWMD permit application process, an impact analysis was performed demonstrating that during mining adverse impacts to the on-site wetlands slated for preservation will not occur (i.e. dewatering operations will not cause an unacceptable lowering of water levels). The FDEP ERP issued permit no. 0292013-001 on April 5, 2011 authorizing a new limestone, sand, and fill mine within a 1,477.0 acre project area. The impacts to wetlands approved by FDEP in April 2011 are to generally the same or similar wetlands as proposed in this application; however, the currently proposed project does not include any impacts to wetlands or uplands in the 257.2 acres Southern Troyer Lands which were approved in the FDEP permit but instead includes impacts to wetland W-4 toward the northern portion of the property and to

wetlands W-11, W-12, and W-13 along the west side of the property, which are currently not authorized by the FDEP permit. These additional impacts as well as the other impacts to wetlands associated with the proposed project are to hydrologically altered wetlands that are separated from the conservation areas to the west by a series of ditches and berms onsite which hydrologically isolate these areas and impede wildlife movement. Not impacting any wetlands or uplands in the Southern Troyer Lands is a significant design modification in that these areas that directly link the surrounding conservation and mitigation lands to each other have been avoided and will continue to function in their existing condition.

The proposed reclamation plan will occur after mining activities cease. After equipment is removed, the mining perimeter berm will be removed and the property will be graded to a condition consistent with the adjacent surrounding properties. Littoral shelves and drawdown marshes are proposed to be created surrounding the mining lake to reclaim the lake bank and promote high quality habitat for fish and wading birds. Approximately 99 acres of the northern portion of the mine lake will be back filled and a wildlife corridor will be established through this section of the subject property to promote wildlife movement between the adjacent Lee County Conservation Lands. Additional natural habitat and native rangeland recruitment is proposed for the southern portion of the property. Upon the conclusion of these activities 1,016 acres will be placed into conservation easement and the open space configuration will provide large contiguous open spaces with enhanced habitat value.

The overall effect of the proposed enhancement, restoration and preservation is to provide uplands and wetlands on-site that are at or near historic natural ground elevations with no hydrologic impediments on-site or between the off-site adjacent Lee County Conservation Lands. After reclamation, during the wet season, surface water flows from the northeast will flow onto the Troyer Brothers property in a south/southwest direction to the mining lake and the restored and enhanced wetlands on-site. Surface water will continue to flow off-site to the south, west, and southwest into the adjacent Lee County Conservation Lands similar to nature historic conditions thereby restoring a historic flowway. The duration of inundation in these wetlands likely will not change significantly post mining from existing conditions based on the observed conditions and predictions of the models prepared by WSP. However, during the dry season water levels are projected to remain higher than existing conditions benefiting the wetland systems by providing water closer to the root systems of the plants during dry season.

As discussed in the detailed analysis provided by WSP, the reclamation plans contribute to the reconnection of historic flow ways. Four separate integrated surface and groundwater resource modeling investigations were performed and all demonstrated positive results. Groundwater levels will be higher post mining than current conditions in the early dry season due to the termination of irrigation pumping and the water storage provided by the mine lake. Groundwater levels will change little in the wet season post mining compared to current conditions due to the large amount of precipitation in the wet season. The Troyer Brothers MEPD request is CONSISTENT with Goal 61, Policy 61.1.4, Objective 61.2, Policy 61.2.1, Policy 61.2.6, and Policy 61.3.7.

GOAL 77: DEVELOPMENT DESIGN REQUIREMENTS

The Lee Plan Goal requires new development to provide adequate open space for improved aesthetic appearance, visual relief, environmental quality, preservation of existing native trees and plant communities, and the planting of required vegetation. Objective 77.3 requires new development to use innovative design to preserve existing and native vegetation, providing visual relief and buffers for adjacent uses. Policy 77.3.4 encourages new development to incorporate large, contiguous open space areas into the development design.

Upon completion of the reclamation plan, the requested MEPD will provide 1,016.4 acres of open space and 634 acres or 35% of Indigenous Habitat, well in excess of the required 25% per LDC Section 12-113(m). It is important to note, LDC Chapter 12 sets forth no open space percentage requirements for MEPD applications, but rather states that if the LDC-required indigenous preserves (25% of site area), wildlife habitat areas, setbacks and buffers are met, that the open space requirement will be deemed to be met. The Troyer Brothers is consistent with the requirements of LDC Chapter 12 and has provided a detailed acreage breakdown on the Reclamation Plans as well as the Indigenous Habitat Management Plan. The proposed site design establishes an open space configuration that provides large, contiguous opens space areas, preservation of native trees, and enhanced habitat value on approximately 58% of the property subject to the MEPD request. These areas are included in the graphics supporting the Summary Narrative as well as the Proposed Conservation Areas exhibit supporting the MEPD application. The Troyer Map 14 amendment is CONSISTENT with Lee Plan Goal 77, Objective 77.3, and Policy 77.3.4.

GOAL 107: RESOURCE PROTECTION

Preservation of valuable habitat is the overarching theme of Goal 107. The proposed amendment to Map 14 and potential Mine Excavation Planned Development and Mining Operation Permit seek to promote the implementation of the policies supporting Goal 107.

Policy 107.2.3 states, *“Prevent water management and development projects from altering or disrupting the natural function of significant natural systems.”*

Policy 107.2.4 states, *“Encourage the protection of viable tracts of sensitive or high-quality natural plant communities.”*

As previously described, the Troyer Brothers’ property is an active agricultural use for the cultivation and harvesting of potatoes. A majority of the property has been disturbed to support the existing agricultural operation. The requested mining activities are mostly limited to the disturbed portions of the property and will not promote encroachment into less disturbed environments or the alteration of natural systems. The analysis provided by Dex Bender discusses the protection of the ecological functions of significant and natural systems and the analysis provided by WSP concludes that the project will not alter or disrupt the hydrologic function of adjacent natural systems. The detailed reports demonstrate the significant activities that will occur prior to MOP and during reclamation to improve ecological value, increase groundwater levels and increase interconnections with the adjacent Lee County Conservation Lands to

promote improved conditions when compared to the existing agricultural activities on the subject property.

It should be noted that, in contrast to the approved ERP, the currently proposed project does not include any impacts to wetlands or uplands in the 257.2 acres Southern Troyer Lands which were approved in the FDEP permit. Instead the proposed project includes impacts to wetland W-4 toward the northern portion of the property and to wetlands W-11, W-12, and W-13 along the west side of the property which are currently not authorized by the FDEP permit. These additional impacts as well as the other impacts to wetlands associated with the proposed project are to hydrologically altered wetlands that are separated from the conservation areas to the west by a series of ditches and berms onsite, which hydrologically isolate these areas and impede wildlife movement. Not impacting any wetlands or uplands in the Southern Troyer Lands is a significant design modification from the previous MEPD mining request on the subject property in that these areas that directly link the surrounding conservation and mitigation lands to each other have been avoided and will continue to function in their existing condition. The 121.5 acres to be placed under conservation easement are identified on the conceptual mining plan which demonstrates the areas alignment with adjacent conservation and mitigation lands, which will promote wildlife movement through this corridor.

Policy 107.2.8 states, *“Promote the long-term maintenance of natural systems through such instruments as conservation easements, transfer of development rights, restrictive zoning and public acquisition.”*

Collectively, 703.09 acres of enhancement and restoration occurring prior to MOP will be placed under conservation easement. As described above, there are approximately 1,016 acres of open space to be provided and placed under conservation easement after reclamation activities are complete. Consistent with the provisions of Chapter 12, proposed conditions have been provided allocating the open space acreage and conservation easement recording.

Policy 107.2.10 states, *“Development adjacent to other nature preserves, wildlife refuges, and recreation areas must protect the natural character and public benefit of these areas including, but not limited to, scenic values for the benefit of future generations.”*

The lands proposed to be preserved on the Troyer Brothers property are immediately adjacent to Lee County Conservation Lands which interconnect to the Corkscrew Regional Mitigation Bank. Where necessary these lands will be mitigated and then preserved in a perpetual conservation easement as required by Chapter 12. Collectively, 703.09 acres of enhancement and restoration occurring prior to MOP will be placed under conservation easement. As described above, there are approximately 1,106.4 acres of open space to be provided and placed under conservation easement after reclamation activities are complete. This provision has been included in the proposed conditions provided in the supporting materials to the MEPD application.

Objective 107.3 articulates a desire to maintain and enhance the fish and wildlife diversity and distribution within Lee County for the benefit of a balanced ecological system, while Policy

107.3.1 encourages “upland preservation in and around preserved wetlands to provide habitat diversity, enhance edge effects and promote wildlife conservation.”

In its existing condition, the Troyer site offers minimal value to fish and wildlife diversity in this region. The creation of a large mining lake and the mitigation/preservation of wetlands and uplands which will occur under the future MEPD and would be proposed as a part of that future application will enhance and increase the habitat value for any species found on-site as well as other species that may be found in this area. 58% of the site will be placed in permanent preservation as a result of this project, and the reclaimed lakes will provide additional habitat value to fish and wildlife when reclaimed as proposed to provide a drawdown berm for wading birds.

Objective 107.4 mandates Lee County to continue protection of threatened and endangered species habitat, and to maintain or enhance listed species populations. Policy 107.4.2 requires conservation of rare and endangered plant and animal species through development review, regulation, incentives, and acquisition. Policy 107.4.4 indicates that the use of protected plant and wildlife species habitat will be compatible with the requirements of those species. The LDC, in implementing the Lee Plan, calls for 25% of the site area to be preserved as indigenous vegetation; the proposed site design is consistent with this percentage. As described in the detailed Indigenous Habitat Management Plan, approximately 634 or 36% of the acreage included in the MEPD request will be preserved as indigenous habitat.

The creation of wood stork feeding areas in littoral shelf design and construction is encouraged by Lee Plan Objective 107.10 and Policy 107.10.3, as well as by the site design standards set forth in Chapter 12. The proposed reclamation plan provides the necessary details to describe the littoral shelves and marsh drawdown areas proposed to facilitate wood stork foraging areas in addition to the details provided in the Indigenous Habitat Management Plan.

Lee Plan Objective 107.11 and its subsequent policies (e.g. 107.11.4) articulate the desire to protect the Florida panther and black bear primarily through greenbelt and acquisition strategies. The protected species survey conducted by Dex Bender did not reveal a presence of the Florida panther or Florida black bear within the area proposed for mining activities and there is little suitable denning habitat for those species there. However, the permanent wildlife connectivity provided by the proposed site design and interconnection with the Lee County Conservation Lands will benefit the listed wildlife including the panther and black bear.

The proposed preservation areas and adjacent buffering will enhance the fish and wildlife diversity on the site above that which currently exists under the current agricultural use. The request proposes to preserve 1,016 acres of open space and 634 acres of indigenous habitat. The restoration, enhancement and preservation activities proposed will increase the habitat value and create a system of interconnected lakes, flowways and natural habitats. In addition the subject property is centrally located within the Department of Environmental Protection’s Critical Linkage Area and surrounding by several conservation and mitigations areas. The proposed activities will enhance habitat for listed and non-listed species and promote interconnectivity for

wildlife movement between the subject property and adjacent Lee County Conservation Lands. Therefore, the MEPD request is CONSISTENT with Goal 107, Objectives 107.3, 107.4, 107.10, and 107.11, and Policies 107.2.3, 107.2.4, 107.2.8, 107.2.10, 107.2.13, 107.3.1, 107.4.2, 107.4.4, 107.10.2, 107.10.3, and 107.11.4.

GOAL 114: WETLANDS

Policy 114.1.1 of the Lee Plan limits development in wetlands to *“very low density residential uses and uses of a recreational, open space, or conservation nature that are compatible with wetland functions. The maximum density in the Wetlands category is one unit per 20 acres, except that one single family residence will be permitted on lots meeting the standards in Chapter XIII of this plan, and except that owners of wetlands adjacent to Intensive Development, Central Urban, Urban Community, Suburban, and Outlying Suburban areas may transfer densities to developable contiguous uplands under common ownership in accordance with Footnotes 8(b) and 8(c) of Table 1(a), Summary of Residential Densities.”*

The proposed MEPD site design preserves the vast majority of the existing on-site wetlands, and further plans for wetland enhancement, buffers, and littoral zones that complement the existing wetlands. No residential uses are proposed in the Wetlands land use category. Furthermore, the applicant has indicated that no additional residential uses or future development are anticipated for the majority of the site, most of which will be either Preservation Lands or reclaimed mine lake, and therefore is well below the permitted density (one unit per 20 acres) and consistent with this policy.

Policy 114.1.2 states that the county will not undertake an independent review of the impacts to wetlands resulting from development in wetlands that is specifically authorized by a FDEP or SFWMD dredge and fill permit or exception, and further that no development in wetlands will be permitted by Lee County without appropriate state agency permit or authorization. Reasonable efforts to avoid or minimize wetland impacts must be demonstrated, and on- or off-site mitigation is only permitted in accordance with applicable state laws. The Troyer Brothers have actively pursued permit approval for the FDEP-jurisdictional wetlands on the site through the FDEP and ACOE. The FDEP issued an environmental resource permit (ERP) for the project (Permit No. 0292013-001), although the applicant plans to modify the ERP to reduce and shift the mine area north consistent with this request if the MEPD is approved. The proposed impacts to FDEP jurisdictional areas include 159.88 acres of wetlands and 29.67 acres of other surface water ditches, a total of 189.55 acres. The impacts to wetlands approved by FDEP in April 2011 are to generally the same or similar wetlands as proposed in this application. The currently proposed project does not include any impacts to wetlands or uplands in the 257.2 acres Southern Troyer Lands which were approved in the FDEP permit. Conversely, the proposed project includes impacts to wetland W-4 toward the northern portion of the property and to wetlands W-11, W-12, and W-13 along the west side of the property which are currently not authorized by the FDEP permit. These additional impacts as well as the other impacts to wetlands associated with the proposed project are to hydrologically altered wetlands that are separated from the conservation areas to the west by a series of ditches and berms onsite which hydrologically isolate these areas and impede wildlife movement. Not impacting any wetlands or uplands in the Southern Troyer

Lands is a significant design modification from the previous mining request on the property in that these areas that directly link the surrounding conservation and mitigation lands to each other have been avoided and will continue to function in their existing condition.

Dex Bender has prepared and provided details regarding the Reclamation Plan, which proposes the restoration, enhancement and preservation of 634 acres of indigenous habitat which will be placed into conservation easements. The provided Indigenous Habitat Management Plan also summarizes the proposed activities to be completed prior to MOP and during reclamation, which includes the removal of the existing agricultural ditch and berm system to re-establish the natural flow-way on and offsite as well as establishing littoral shelves and marsh drawdown areas as part of the reclamation activities to promote hydrological restoration to adjacent wetland preserves as well as foraging habitat for wood storks and wading birds. These plans will be compatible with wetland functions.

GOAL 115: WATER QUALITY AND WASTEWATER

This goal links the issue of water quality with environmental protection. Policy 115.1.2 states that new development must not degrade surface and ground water quality; Policy 115.1.4 requires developments which have the potential to lower water quality standards to provide appropriate monitoring data. Policy 115.1.6 requires the county to initiate a wellfield protection program, which the county has done through its Wellfield Protection Ordinance.

The Troyer Brothers property is currently an agricultural use and has the requisite permits for agricultural activities such as stormwater management and water use by the SFWMD. Agricultural pumping for irrigation purposes will cease upon the issuance of the Mine Operation Permit, should the MEPD application be approved. The detailed analysis previously provided by WSP provides substantial competent evidence that the cessation of agricultural pumping will have an overall benefit to the groundwater levels on the subject site. An added value is the creation of storage found in the mine lake, further reducing any drawdown from water use as described by the WSP analysis. The report also addresses the potential for water quality issues and concludes that the project will not adversely impact water quality.

Additionally, the ERP referenced above constitutes the State of Florida's certification that the project will not violate state water quality standards. The project already has a water use permit from SFWMD which represents the State of Florida's conclusion that the project will not cause unacceptable adverse impacts to water resources. The ERP and water use permit will be modified as needed to reflect the modified site plan, should this MEPD request be approved.

In terms of protection of wellfields, the Troyer property is outside of any travel time contours of all existing Lee County Utilities (LCU) wellfields. Nevertheless, LDC Ch. 12-117(b) and (d) sets forth extensive water quality and water level monitoring requirements designed to assure continued water quality on the site. The MEPD will abide by the requirements of LDC Ch. 12-117(b) and (d) and proposed conditions have been provided to demonstrate this commitment as part of the MEPD application. The Applicant will be required to submit the initial reports and

follow up analysis to Lee County Natural Resources for review on a regular basis. The Troyer Brothers MEPD is CONSISTENT with Lee Plan Goal 115, and Policies 115.1.2 and 115.1.4.

GOAL 117: WATER RESOURCES

Conservation, management and protection of the natural hydrologic system are the theme of this Lee Plan goal. Policy 117.1.4 states that development designs must provide for maintaining surface water flows, groundwater levels, and lake levels at or above existing conditions. Policy 117.1.8 indicates that the County will support the acquisition of the Flint Pen Strand; nothing in the current request would impede that effort.

The Troyer site is an active farm with appropriate permits from the SFWMD: the site has been bermed, diked and ditched to accommodate the activity. In addition, the site has a consumptive water use permit from SFWMD which allocates 1,144 MGY of withdrawal from the Sandstone and Water-table aquifers for agricultural irrigation. It should be noted that the mining water use permit allocated 98 percent of this amount for rock washing. As noted in the attached Project Narrativem the revised mine plans have committed that rock washing will use only surface water from the mine site (initially an 8-acre pond south of the processing area and later the mine lake) and will not use the Sandstone Aquifer at all. Further, as noted, irrigation pumping and rock washing (i.e. 98 percent of the water use needed for the mine) will not overlap, as irrigation pumping will cease prior to MOP and rock washing will not commence until post MOP. The mine water use permit will be modified at the appropriate time to reflect these changes. The applicant has agreed that irrigation for agricultural operations within the MEPD boundary will terminate with the issuance of the Mine operation Permit in the provided MEPD proposed conditions. The SFWMD has issued a consumptive water use permit for the previous mine plan that would initially allow 1,788.5 MG annually (Permit No. 36-07597-A), which would be in lieu of the 1,144 MGY currently authorized for irrigation. The SFWMD in issuing Permit 36-07597-W has made a determination that this level of annual withdrawals will not cause adverse impacts to water resources. The analysis provided by WSP came to the same conclusion.

The Applicant's hydrogeologist, WSP, has previously provided a detailed analysis demonstrating that as a result of mining, groundwater levels will rise above that of existing conditions, helping restore the natural historic hydrologic system. Specifically, WSP concludes that "a combination of lake creation, filter marsh creation, filling of abandon agricultural ditches after mining will be completed and the re-connection of the drainage basin from the north would greatly improve the northern part of the DR/GR and benefit the Caloosahatchee River by reducing stormwater flows." The report continues, "The wetland areas to the south of SR 82 could be re-hydrated to improve the health of the overall natural system. By incorporating mining, mining restoration plans, flowway re-establishment plans, and the drainage divide restoration plans for Lehigh Acres, all interests could make a contribution to the environment and meet critical needs of the region (i.e., construction materials and environmental restoration)." It should be noted that the SFWMD industrial use permit for the mine operation, with its initial annual allocation of 1,788.5 MG, is based on a sequential reduction in agricultural irrigation as mining proceeds through the farm fields. However, the applicant has now committed [MEPD Condition 18] that irrigation will cease in its entirety upon the issuance of the Mine Operation Permit.

To ensure that the proposed excavation activity will not adversely impact water flows or water levels, the Applicant will be subject to compliance with the SWPPP, conditions set forth by the FDEP ERP, monitoring requirements and reporting in accordance with all permit requirements, as well as Chapter 12-117 requirements. An updated SWPPP was provided as part of the MEPD application submittals demonstrating the materials to be provided by the Mine Operator prior to approval of the MDO. Additionally, as noted above, the project has already received a water use permit from SFWMD and an ERP from DEP that represent the State of Florida’s conclusions that the project will not adversely impact water quality, water resources, surface flows or groundwater levels. The Troyer Brothers MEPD request is CONSISTENT with Goal 117, Policies 117.1.1, 117.1.3, and 117.1.8.

GOAL 158: ECONOMIC ELEMENT

This Lee Plan Goal articulates that Lee County will achieve and maintain a diversified economy, positive business climate, and maintenance of a high quality of life. Objective 158.1 emphasizes the conservation and enhancement of the county’s resources that provide for the recreational, retirement, and tourist-oriented element of the local economy. Policy 158.1.7 encourages the preservation of sensitive natural resources such as wetlands, clean air and water, and scenic vistas through public acquisition and/or regulatory protection.

The proposed MEPD request is consistent with this goal, objective and policy of the Lee Plan. The limerock mining industry provides a substantial number of jobs and economic benefits to the county’s economy, but also provides a resource that is literally a foundation of the construction industry. The Bureau of Labor Statistics data indicates that the “Mining, Logging and Construction” employment sector in the Cape Coral/Fort Myers metropolitan statistical area (MSA) contributed 14,470 jobs to the local economy in 2015. The median and mean hourly wage for all occupations in Lee County in 2015 was \$16.67 and \$18.14, respectively. In general, the average wages for this employment sector is higher than that in the healthcare support, food preparation, building and grounds maintenance, farming, fish and forestry, and tourism-sector jobs. The mining industry serves to diversify the Lee County economy, but also provides higher paying jobs than those related to tourism, healthcare support services, and farming and fishing.

Occupation Title	Median Hourly	Mean Hourly	Mean Annual
ALL OCCUPATIONS	\$14.71	\$19.21	\$39,950
Healthcare Support	\$13.50	\$14.49	\$30,130
Food Preparation and Serving Related	\$9.44	\$11.39	\$23,680
Building and Grounds Cleaning and Maintenance	\$11.33	\$12.60	\$26,210
Farming, Fishing and Forestry	\$9.29	\$10.85	\$22,560
Construction and Extraction Operations	\$16.67	\$18.14	\$37,740
Transportation and Material Moving	\$12.42	\$14.23	\$29,590

Wages for Lee County Occupation Sectors (2015)²

² Source: US Census Bureau of Labor Statistics http://www.bls.gov/oes/current/oes_15980.htm#45-0000

Mining and extraction operations provide a valuable and limited resource to the area and the region, without detriment to the environment or other natural resources. The Troyer proposal has committed to enhance and preserve significant acreage of wetlands and wildlife habitat outside of the proposed mining activity area; approximately 58% of the property will be placed into conservation easement, exceeding the requirements of Chapter 12 and resulting in large conservation areas immediately adjacent to Corkscrew Regional Mitigation Bank and Airport Mitigation Lands. Furthermore, water modeling data indicate that there will be an increase in the groundwater levels in the area after the proposed land use change as detailed in the analysis provided by WSP. In other words, the conversion of the property from agricultural to mining and ultimately reclamation will produce positive environmental benefits to the Troyer site as well as to the adjacent conservation lands and will provide long-term benefits to wetlands, clean air and water, and scenic vistas.

Lee Plan Objective 158.6 states that Lee County *“will maintain a system of development regulations that will promote the accomplishment of the goals, objectives, and policies of this element and will expedite the development review process for projects identified by the Economic Development Office as “economic projects.”* Policy 158.6.1 states *“Before adopting any new regulation which potentially imposes new costs to taxpayers and private business, Lee County first will generally assess the impact of that regulation upon the local economy and will adopt such regulations only in cases of compelling public need.”*

A major theme of the Lee County Comprehensive Plan is growth management and directing growth to the appropriate locations in the county. Another recurring theme throughout the Lee Plan is “smart growth” principles which encourage “green” practices and resource management. The proposed amendment and potential limerock excavation activities at the Troyer property are consistent with both of these themes, in that a large portion of the Troyer property, adjacent to the proposed mining activities, would be placed into a conservation easement following reclamation and will therefore be unavailable to be subsequently developed for commercial or residential uses. Further, the provision of local building material resources is consistent with the principles of the Florida Green Building Code. Utilizing locally available materials (i.e., aggregate) reduces costs for development by reducing trucking/transportation distances, and also serves to reduce vehicle miles travelled (VMT) on local roadways. Whether through resource limitations or regulations, a limited supply of materials generally results in increased prices for that resource; limiting the supply and suppliers of the limerock materials in Lee County will certainly result in increased costs of the material, which will in the long run increase the costs of development in Lee County as well as the costs of infrastructure and maintenance of local roadways and facilities. These increased costs would be passed on to Lee County, and ultimately to its taxpayers. Historically, Lee County has been one of the largest consumers of aggregate within the FDOT’s District 1 territory. This material is needed. An analysis of the need for aggregate is set forth above.

The proposed MEPD and subsequent mining activities will serve to diversify the local economy, support the construction industry, provide higher than average wage jobs, and reduce local costs of a valuable natural resource in the County and southwest Florida region. The provision of jobs associated with the excavation will continue to promote economic recovery for the local economy. The Troyer MEPD request is CONSISTENT with Lee Plan Goal 158, Objective 158.1 and 158.6, and Policies 158.1.7 and 158.6.1.

Natural Resources

Several issues have been raised in the past with regard to mining within the DR/GR area of Lee County. First, the depth of mining is not permitted to cross confining units between regional aquifers. Second, the issue of mining across topographic contours has been raised. Third, the creation of lakes with a perceived higher than background evaporative loss has been raised. This is a brief discussion of these issues, which are evaluated in considerable detail within the text of the previously provided WSP report entitled “Hydrogeology of Troyer Brothers Florida, Inc. with a Mining Impact Analysis, Lee County, Florida”.

A. Depth – The Excavation Will Not Penetrate a Confining Layer

The MEPD request would permit mining activities on the Troyer property, which will be limited vertically to two (2) feet above the top of the Buckingham Member of the Tamiami Formation. This will leave the entire thickness of this confining unit along with the Cape Coral Clay Member of the underlying Peace River Formation to maintain confinement between the Water-Table Aquifer and the Sandstone Aquifer. No other significant confining units are located within the upper part of the Tamiami Formation based on the coring and detailed geologic analysis. Furthermore the Mine and Excavation Plans and proposed conditions submitted to support the MEPD application limit the maximum depth of 110 feet below the control elevation, or 2 feet above the confining layer whichever is more restrictive. **Therefore, the mining activities will not cross a confining unit and will meet the regulations set by the SFWMD and FDEP.**

B. Topography

When large-scale mining activities occur across topographic contours, such as excavating lakes, continuously from a higher altitude to a lower altitude, significant impacts can occur to wetland areas on the up-gradient end of the system. A careful review of the topography of the site was made to assess the best placement and orientation of the proposed mine lake. Fortunately, the topographic relief on the site is minimal with no great slope from north to south. WSP provided a detailed memo with Topography exhibit to Lee County Natural Resources on May 31, 2017 explaining the topography and “flatness” of the subject property.

C. Evapotranspiration

Very little data are available on the evapotranspiration rates of native and disturbed land covers in the DR/GR area or elsewhere in South Florida. As reviewed in the WSP Updated Hydrogeology Report (Section 7), lakes in southwest Florida are conservatively estimated to have ET rates in the range of 52 to 54 inches per year (from various FGS, SFWMD, and USGS studies). Lake ET rates are likely greater than that of existing land covers, so the change in land use to mining would likely result in greater ET.

However, higher post-mining ET rate will be offset by the capture and storage of excess surface water during the wet season, to be naturally released in the dry season and help toward restoring historic water levels. The excess surface water in Lee County is eventually lost to tide, so upstream water storage in the wet season is beneficial (although marginally so due to enormous surface water flows relative to captured water volume).

The DHI (2009) MIKE SHE modeling study results well illustrates the impacts of mining on ET and the water budget. Table 17 of their report (average water budget of the DR.GR area) shows that future conditions models (FCMs) with more mining, did indeed have higher ET rates, but also had lower surface water outflow rates and higher net groundwater recharge rates.

D. Water Quantity

The Troyer property is currently used for the cultivation and harvesting of potatoes. The original, natural hydrological conditions at the project site have necessarily been altered for agricultural purposes, in addition to the significant impacts from man-made improvements such as the construction of Corkscrew Road to the south and State Road 82 to the north. The land alterations include an extensive network of drainage ditches and canals within the project site, which were constructed in accordance with a SFWMD surface water management permit. The site has been drained to keep the water table at least two feet below land surface to allow the potatoes to grow without risk of damage. Drainage along the northern part of the property is further enhanced by deep ditches that are part of the East County Water Control District (ECWCD). Water from the southern part of the property moves south into wetland areas to the west (minor) or through ditches passing beneath Corkscrew Road. The water system, both above and below surface, is controlled artificially to maintain agricultural operations.

The impacts of mining have been evaluated in detail to assure that the proposed design for the post-mining environment will be an improvement upon the existing site condition. Currently, 1,144 MG per year of water is permitted for use from the water-table and Sandstone aquifers to irrigate potatoes. The area has been drained to allow for agricultural use, and the natural surface-water flow patterns have been altered by ditches and dikes. As described by the detailed Indigenous Habitat Management Plan and Reclamation Plans the existing impediments to natural surface water flow will be removed to promote a pre-development condition to the extent possible. Based on the analysis provided by WSP, the water-table and Sandstone aquifer water levels will be higher in the post-lake condition. The lake surface area will produce slightly higher rates of evaporation compared to current site conditions, which would be offset by the storage of surface water during the wet season. The analysis by WSP was based on a SFWMD permit (Permit 36-07597-W) that contained an initial annual allocation of 1,788.5 MG for both industrial and irrigation uses (replacing the irrigation permit with its 1,144 MGY allocation); this permit was based on a sequential reduction in agricultural irrigation as mining proceeds through the farm fields. The SFWMD in issuing Permit 36-07597-W made a determination that this level of annual withdrawals will not cause adverse impacts to water resources. It is important to note the applicant has committed to ceasing agricultural irrigation pumping upon the issuance of MOP and expects to modify the existing SFWMD permits upon approval of the MEPD.

A site-specific, three-dimensional groundwater flow model was developed for hydraulic impact analysis for proposed mining activity at the Troyer property. This model was developed based on a calibrated regional groundwater flow model developed for the Lower West Coast Surficial Aquifer System (LWC) by Marco Water Engineering, Inc. and Ecology and Environment, Inc. (2006) under a contract with the SFWMD. The model was revised based on the field investigation conducted at the site. Revised parameters included the layer thickness, model layer elevation, and hydraulic conductivity or transmissivity.³

The results of the model simulation indicate that the hydraulic impacts due to proposed mining activities are small and not adverse. Although the evaporation loss increases slightly after proposed mining activity, **the water level in the water-table aquifer will actually rebound (increase) after the existing irrigation wells are removed and pumping ceases.** During the beginning of dry season, groundwater levels would decrease more slowly, maintaining longer wetland hydroperiods.

The hydraulic impact due to proposed mining activities is limited to the close vicinity of the project site. The applicant has now committed [MEPD Condition 18] that irrigation will cease in its entirety on the sale of excavated materials offsite, rather than sequentially, and this commitment will be reflected in the updated hydrology analysis.

At the request of Lee County Division of Natural Resources staff, the hydrologic impacts of the proposed mine were simulated again using the MIKE SHE integrated surface water/groundwater modeled prepared by DHI under contract with Lee County. The MIKE SHE modeling results are consistent with the earlier MODFLOW model results in showing higher groundwater levels post-mining. The simulated effects of mining on wet season water levels were much smaller due mainly to the fact that South Florida has a large excess precipitation (rainfall minus ET rate) in the wet season. Once the rains start, the water table aquifer quickly fills and low-lying areas (wetlands) are inundated.

E. Water Quality

The anticipated effect on water quality is negligible. The mining activities that will be permitted on the site if the MEPD application request is approved will include the excavation of fill dirt, sand and limerock, and the operation will be conducted in accordance with site specific pollution prevention plans to maintain the water quality (which currently meets the required standards) and minimize the possibility of a release to the lake or the project site.

As part of the detailed analysis submitted to support the MEPD, a monitoring plan in accordance with LDC 12-117(b)(1) has been submitted provided to establish background water quality prior

³ In the 12/2/2008 memorandum from Pam Houck, Lee County Zoning Director, Natural Resources Staff directed the applicant to "incorporate the DRGR MODFLOW model into the analysis (model) to evaluate the potential impact (and cumulative impacts from the other proposed mines). At a meeting with Natural Resources Staff on April 6, 2010, Staff indicated that it was up to the consultants whether or not to use the DHI MODFLOW model, based on the initial model files. Based on issues with the DHI MODFLOW model identified by Lee County and Schlumberger Water Services, the applicant has elected to utilize the SFWMD LWC SAS model.

to the mining activities. As part of the MEPD application process, a draft monitoring plan was created and provided to Lee County Staff for consideration. At a minimum, two pairs of wells (one upstream and one downstream of groundwater flow) will be installed. The water will be analyzed by a state-certified environmental laboratory; and all sampling will be performed in accordance with FAC Ch. 62-160. A monitoring plan has been provided in accordance with LDC 12-117(b)(1).

Based upon the location of the property in relation to Lee County Utilities public wells and detailed analysis submitted supporting the application request the Troyer MEPD request is consistent with Goal 115 (*"To ensure that water quality is maintained or improved for the protection of the environment and people of Lee County."*) The request is also consistent with Policy 115.1.1 (*"Sources of water pollution will be identified, controlled, and eliminated wherever feasible."*) and Policy 115.1.2 (*"New development and additions to existing development must not degrade surface and ground water quality."*) Policy 115.1.4 (*"Developments which have the potential of lowering existing water quality below state and federal water quality standards will provide standardized appropriate monitoring data."*) has been addressed by the applicant, and will be further implemented through MEPD, if approved, in accordance with the provisions of the monitoring requirements and site design standards established in LDC Chapter 12.

With the combination of the design of the mine site, proposed operations plans, and the restoration and mitigation efforts, Goal 117 (*"To conserve, manage, and protect the natural hydrologic system of Lee County to insure continued water resource availability."*) and Policy 117.1.1 (*"Natural water system features which are essential for retention, detention, purification, runoff, recharge, and maintenance of stream flows and groundwater levels shall be identified, protected, and managed."*) are implemented. This is further discussed in the previously provided Schlumberger Water Services report and will be included in the update currently being prepared.

The Troyer property is currently utilized for the cultivation and harvesting of potatoes. The northernmost ±12.4 acres of the property, located immediately south of and adjacent to SR 82, contains existing agricultural produce processing facilities and associated administrative buildings, which are not included in the proposed MEPD application. Immediately south of this area is the ±883 acre mining activity area which includes ±102 acres for Mine Processing and ±781 acres for Mine Excavation Activities. Adjacent to the mining excavation area along the eastern and western boundaries are significant areas proposed to be preserved through the Conservation Future Land Use and the required 150' buffer from this MEPD in addition to the habitat proposed to be enhanced and/or established as part of the reclamation plans. These lands will be preserved in perpetuity, if the MEPD is ultimately approved, by being placed under conservation easement. Collectively, 1,016.4 acres will be placed under easement and are appropriately considered open space. Approximately 634 acres are indigenous habitat or 35% of the acreage included in the MEPD request. At the conclusion of the reclamation, two wildlife corridors will also exist on the subject property within the acreage to be preserved provided valuable habitat and a north and south crossing for wildlife between the two adjacent Lee County Conservation Lands. The requested MEPD is consistent with the Lee County Comprehensive Plan and the supporting materials to the MEPD application currently provide detailed data and analysis demonstrating

the requested MEPD would not negatively impact natural resources, surrounding properties, or the transportation network.

As noted above, the FDEP has already issued an ERP in 2011 for this project that constitutes the FDEP's determination that the project will comply with state water quality standards and will not cause adverse impacts to water resources. The ERP contains measures the FDEP determined would be sufficient to offset functional impacts to jurisdictional wetlands and surface waters and protect against secondary impacts to wetland-dependent listed species. The impacts to wetlands approved by FDEP in April 2011 are generally the same or similar wetlands as proposed in this application. The currently proposed project does not include any impacts to wetlands or uplands in the 257.2 acres Southern Troyer Lands which were approved in the FDEP permit. Rather, the proposed project includes impacts to wetland W-4 toward the northern portion of the property and to wetlands W-11, W-12, and W-13 along the west side of the property. These additional impacts as well as the other impacts to wetlands associated with the proposed project are to hydrologically altered wetlands that are separated from the conservation areas to the west by a series of ditches and berms onsite which hydrologically isolate these areas and impede wildlife movement. Not impacting any wetlands or uplands in the Southern Troyer Lands is a significant design modification in that these areas that directly link the surrounding conservation and mitigation lands to each other have been avoided and will continue to function in their existing condition. The Mine and Excavation Plans and Reclamation Plans and Indigenous Habitat Management Plan supporting the application demonstrates the restoration, enhancement and preservation activities to occur adjacent to existing preservation and mitigations lands to restore a historic flowway and promote regional interconnectivity for surface water, native habitat and wildlife.