wetland protection E

EFFECTIVENESS OF THE STATE ENVIRONMENTAL RESOURCE PERMITTING IN REGARDS TO WETLAND PROTECTION & MITIGATION IN RELATION TO FILL DIRT AND LIMEROCK MINING

The contents of this evaluation are subject to revision upon completion of the environmental mapping and hydrologic modeling that are also being conducted as part of this study.

This task aimed to determine the effectiveness of the State's Environmental Resource Permit (ERP) program, which identifies, protects and mitigates wetlands within the DR/GR study area, in relation to the Lee Plan goals, objectives, and policies. The State's review focuses on regional issues, whereas the county's comprehensive plan specializes in local issues. The State Environmental Resource Permit (ERP) is part of a regulatory program covering alterations to uplands and wetlands that may affect surface water flow and surface water resources. The protection of listed species and ground water levels are also part of this regulatory program. These issues overlap with the Lee Plan's emphasis on protecting, enhancing and restoring the wetlands, flow-ways and water resources in southeast Lee County.

Existing permits and permit files from the Florida Department of Environmental Protection-Bureau of Mine Reclamation (FDEP-BMR) and the South Florida Water Management District (SFWMD) were used to evaluate the ERP regulatory system. In addition, The Florida State Statutes, Florida Administrative Code, and the SFWMD Basis of Review provided information regarding ERP permitting requirements, while FDEP-BMR and SFWMD staffs assisted with details regarding specific permits and regulations.

Time constraints and access to permit files limited this analysis. The FDEP-BMR files are located in Tallahassee and are not available on-line at this time. The permits and annual status reports were obtained from FDEP-BMR staff. However, time and budget did not make it feasible to obtain full copies of the permit files from FDEP. SFWMD permit files were reviewed at the local office or online.

The focus of the evaluation is to review the effectiveness of the State's ERP permitting system in relation to wetlands protection as part of an ERP permit obtained for dirt fill and limerock mining excavations. This evaluation includes a summary of the ERP process and specific information regarding permitted mines in the DR/GR. Additionally, the ERP standards are analyzed by the following groupings: wetland identification; wetland impacts; wetland mitigation; wetland monitoring; watershed analysis; surface and ground water levels; and water quality. A brief discussion of the conversion of mines to residential development is included to document any differences in wetland protection when the use is converted. Deficiencies in the process are identified. Findings and recommended action items are provided as guidance to the county for improving the wetland and water resources protection, enhancement and restoration within the DR/GR as is required by the Lee Plan.

State Agency Review: FDEP-BMR Vs. SFWMD

As of 1995, an ERP must be obtained from the appropriate State agency for proposed fill dirt or limerock mining operations. FDEP-BMR currently reviews proposed fill dirt and limerock mine excavations for projects that have on-site sorting or grading facilities. SFWMD will review the ERP if the mine is a borrow pit for fill dirt excavation, and will not have on-site material grading or sorting facilities. However, there are SFWMD Management and Storage of Surface Water (MSSW) permits that were issued prior to 1995 that include limerock excavations which are grandfathered and remain valid. Additionally, if the applicant indicates the final phase of the mining is a residential development, then SFWMD reviews the mining application.

Southeast Lee County DR/GR Mines

State permits for the approved mines within the southeast Lee County DR/GR study area (Table F-1) were reviewed to ascertain information regarding the preservation and mitigation of wetlands within mining projects. The permits, exhibits, and staff reports, when available, were utilized to compile information regarding existing wetland acreage; preserved wetland acreage; excavated wetland acreage; wetland mitigation acreage or mitigation bank credits; location of mitigation (i.e., onsite, offsite, within the watershed, within the DR/GR); methodology utilized to determine mitigation acreages; surface and ground water level monitoring; and surface and ground water quality monitoring.
The mines in southeast Lee County have typically obtained permits from SFWMD for excavation of fill dirt resources for the initial phase and then

later obtained FDEP-BMR permits for limerock mining. However, one mine was able to convert from a fill dirt mining operation to a limerock excavation project through a letter of modification to their SFWMD permit in 2002. A series of letters documents this revision, first noting the initial request to revise Special Condition 20 (which prohibited the mobilization and operation of sorting, grading or crushing equipment), to stating the final permitting of these operations. An updated letter requesting the deletion of Condition 20 was submitted as well. A letter to FDEP-BMR was also located, which indicated that the applicant intended to apply for an FDEP-BMR permit and that the SFWMD would only continue to be involved with de-watering permits. FDEP-BMR did not receive an application for limerock excavation (Pers. Comm. with FDEP-BMR staff). However, two months after the letter was sent to FDEP-BMR, SFWMD staff approved the removal of Condition 20 to allow limestone sorting, grading, and crushing. (SFWMD Permit 36-03663-P File). It is unclear why this mine was able to convert from fill dirt to limestone excavation through a letter of modification from SFWMD instead of a full ERP review by the FDEP-BMR.

Environmental Resource Permit Standards

The State's review of ERP applications are based upon standards established for surface water management systems as part of a development. No separate specific standards were established for reviewing the impact of mine excavations on wetlands, the watershed, ground water, or wildlife. Many of the ERP standards of review are based upon assumptions made about surface water management systems, which include storm water ponds/lakes much smaller in acreage and in depth than the fill dirt or limerock mining pits.

The SFWMD and the FDEP-BMR staff determine if the application meets the ERP Criteria of Issuance according to the following State standards:

- The project will not cause adverse water quantity impacts to receiving waters and adjacent lands
- The project will not cause adverse flooding to on-site or off-site property
- The project will not adversely impact the value of functions provided to fish and wildlife and listed species by wetlands and other surface waters
- The project will not adversely affect the quality of receiving waters such that state water quality standards will be violated
- The project will not cause adverse secondary impacts to water resources
- The project will not adversely impact the maintenance of surface or ground water levels or surface water flows
- The project will not adversely impact a work of a water management district
- The project will be capable, based on generally accepted engineering and scientific principles, of being performed and of functioning as proposed
- The project will be conducted by an entity with the financial, legal, and administrative capability of ensuring that the activity will be undertaken in accordance with the terms and conditions of the permit, if issued
- The project will comply with applicable special basin or geographic area criteria adopted by rule
- Proposed activities in wetlands and other surface waters must not be contrary to the public interest

If the proposed project does not meet these criteria, then the agency will determine if the adverse effects may be mitigated. [F.S. 373.414(1)]

The SFWMD Basis of Review document is also utilized by both SFWMD and FDEP-BMR in reviewing ERP applications as established in Florida Administrative Code (F.A.C.) 62-330.200(4). Additional regulations regarding mine reclamation, contained F.A.C. Chapter 62C-36 and 62C-39 for fill dirt and limerock mining, are considered as well. Mine reclamation standards are evaluated under Task 2.2.2 of this study.

Table E-1: Mine Activity And Permit Status

PROJECT NAME	MINING ACTIVITY STATUS	STATE PERMIT-TING AGENCY	STATE PERMIT DATE of ISSUANCE	STATE PERMIT DATE OF EXPIRATION	CURRENT MINING OPERATIONS PERMIT (DEVELOPMENT ORDER)	DURATION of MINING OPERATION PERMIT	MINING OPERATION PERMIT STATUS
Bell Road Mine	Active	FDEP	April 13, 2006	April 13, 2016	LDO2003-00403 Approved Oct 2006	5 years Oct 2011	Current
Bonita Land Resources	Inactive	SFWMD	December 10, 1998		LDO2000-00153 Approved Oct 2000	2 years Oct 2002	Expired
Cemex/RMC	Excavation Completed	SFWMD	February 3, 1997		96-09-256.08L Renewal Approved June 2003	5 years June 2008	Current
Florida Rock Industries (Greenmeadows Mine)	Active	SFWMD	October 11, 1984		LDO97-05-074.08 Approved Sept 1997; 1st Renewal Approved Feb 2003 LDO97-05-073.08 Approved Sept 1997; 1st Renewal Approved Feb 2003	5 years Sept 2002 Feb 2008 Sept 2002 Feb 2008	Expired; Renewal #2 Pending Expired; Renewal #2 Pending
Florida Rock Industries (Expansion of Greenmeadows Mine)	Active	SFWMD	November 15, 1989		LDO2001-00034 Approved May 2001	5 years May 2006	Expired; Renewal #1 Pending
Plumosa Farm	Inactive	SFWMD	April 6, 2000		LDO2001-00028 Approved Jan 2003 LDO2007-00214 Under Review	2 years Jan 2008	Expired; Renewal Pending
Rinker Materials (Ph 1A South of Alico)	Excavation Completed	FDEPs	FDEP June 13, 2006 Superseding SFWMD MSSW Permit 36-00681-S July 1986	June 13, 2026	N/A	N/A	N/A
Rinker Materials (Ph 1B, 2A & 2B South of Alico)	Excavation Completed	SFWMD (MSSW); FDEP; SFWMD1	SFWMD MSSW Permit 36-00681-S July 1986 (Ph I-B & IIB); FDEP August 12, 2002 (Ph 2B)	FDEP August 12, 2022 (Ph 2B)	DOS2004-00334 Approved Dec 2006 LDO2001-00419 Ph 2B Approved Dec 2002; Renewal Approved July 2005 LDO98-03-261.08L Ph 1B & 2A Approved July 1998; Renewal Approved July 2003 LDO89-12-107.08L Ph 2B Last Renewal Approved Dec 2004	5 years Dec 2011	N/A
Rinker Materials (Ph 3A & 3B North of Alico)	Active	FDEP	September 21, 2000 Superseding SFWMD MSSW Permit 36-00681-S	September 21, 2013	LDO2007-00214 Approved Sept 2007 LDO99-11-021.80L LDO96-05-098-08L	5 years Sept 2012	Current Superseded Superseded
Westwinds	Active	SFWMD	September 9, 1999		LDO2001-00093 Approved Nov 2001; 1st Renewal Approved July 2007	5 years Nov 2006 July 2012	Current
Youngquist Quarry	Active	FDEP	January 12, 2007 (University Lakes Mine) June 16, 2003 (West lakes Excavation)	December 17, 2021 (University Lakes Mine) June 16, 2023 (West Lakes Excavation)	LDO2006-00071 Approved July 2007; Amendment Pending	5 years July 2012	Current

1.Original permit was issued by FDEP, but was superseded by SFWMD when the property was permitted for the continuation of mining with an end use of residential development.

A. Wetland Identification

Delineation of State Jurisdictional Wetland areas as defined in Florida State Statute (F.S.) 373.019 (Appendix 2.7.1A) are conducted by environmental consultants following the methodology adopted by rule and ratified pursuant to F.S. 373.421(1) (Appendix 2.7.1B). The limits of the wetland are flagged in the field and shown on a Florida Land Use Cover Forms and Classification System (FLUCFCS) map or aerial photograph as part of the ERP application. The FDEP or SFWMD staff are to field verify the wetland limits during the ERP application review.

The evaluation of the effectiveness of the State agencies' jurisdictional wetland determinations was limited by the time line of this study and lack of access to properties for field verifications. It is important to note that State staff relies on information supplied by environmental consultants and "spot checking" the project sites. Therefore, wetlands that are more difficult to delineate, such as hydric pine flatwoods, hydric melaleuca, or hydric pasture, may not be properly identified or field verified. This is a major concern within the DR/GR, as areas historically prevalent with hydric pine flatwoods were often converted to agricultural uses as they were considered less wet than the surrounding lands.

The ERP review process is based upon current conditions; however, the Lee Plan emphasizes the importance of restoring and enhancing wetlands in the DR/GR. The county must consider the historic conditions in order to meet the Lee Plan goals for protecting and enhancing the water resources within the DR/GR.

B. Wetland Impacts

Currently, the State ERP process relies on a zero net loss in wetland function (Basis of Review Section 4.0), though there may be a loss in actual wetland acreage. The State does not require a hydrogeomorphic analysis to be submitted when evaluating the wetlands value and function, and the evaluation is based on "best professional judgment." (Summary of the Wetland and Other Surface Water Regulatory and Proprietary Programs in Florida. Oct. 2007. FDEP). The ERP permitting standard for all developments requires no adverse impacts on the wetlands however, there is no definition of "adverse impacts" contained within the Florida State Statutes, Florida Administrative Code, or Basis of Review for the ERP review process. The SFWMD staff has indicated the reviewers determine whether there will be an adverse impact on the wetlands based upon if the proposed project will alter water quality and/or water quantity resulting in changes to the wetland system. The determination of any adverse impacts relies on the staff's scientific knowledge and resources (Pers. Comm.). FDEP staff indicated they rely on the Basis of Review for determining adverse impacts to wetlands, surface water and ground water including the parameters for lake and wetland separation in Section 6.12 (discussed below) (Pers. Comm.).

Review of secondary or indirect impacts to the wetlands retained onsite and to wetlands located offsite are also required (Basis of Review Section 4.2.7). The secondary impact criterion are based upon adverse impacts to water quality standards; adverse impacts to the functions of wetlands or other surface waters; adverse impacts to habitat function of wetlands associated with upland activities; and adverse impacts to the ecological value of uplands in relation to existing denning or nesting of aquatic or wetland listed animal species. The habitat functions of wetlands associated with upland activities will not be considered to have adverse secondary impacts if buffers, with a minimum width of 15 feet and an average width of 25 feet, are provided abutting wetlands to be preserved. No background information is contained within the Basis of Review that supports establishing this standard or assumption.

Cumulative impacts to wetland and other surface waters are also evaluated through the ERP process. However, wetland impacts that are mitigated within the same drainage basin as defined by SFWMD are not considered to have cumulative impacts (Basis of Review Section 4.2.8). The DR/GR study area falls within the Estero Bay Watershed Basin as defined by SFWMD. This drainage basin includes Ten-Mile Canal Watershed; Hendry Creek Watershed; Six-Mile Cypress Slough Watershed; Spring Creek Watershed; Mullock Creek Watershed; Corkscrew Swamp Watershed; Estero River Watershed; Lake Trafford Watershed; Imperial River Watershed; Barrier Islands Watershed; and Cow Creek Watershed (Estero Bay and Watershed Assessment. 1999) (Figure 2.7.1A). This means that a wetland within the Estero River Watershed may be mitigated within the Corkscrew Watershed because the State considers the larger, regional Estero Bay Watershed basin rather than local watershed basins when re-

viewing for mitigation occurring within the same drainage basin. Therefore, if the wetlands are mitigated following the Basis of Review criteria, the cumulative impacts of the mining pits on the watershed's hydrology are not evaluated.

If a proposed man-made lake, including a mine pit, has the potential to adversely affect wetland areas, then a minimum separation distance is determined according to the design options stated in the Basis of Review criteria (Section 6.12). The separation distances are based upon an allowed 1-foot vertical drop in elevation between the edge of the wetland and the control elevation of the lake. The first design option assumes that a 200-foot separation between the wetland boundary and the control elevation of the lake will not have an adverse impact on the wetland. The second design option allows for a 66-199 foot separation, as long as calculations demonstrate the drawdown in adjacent wetlands will not result in adverse impacts to the wetlands (defined under this standard as a drawdown of more than 12 vertical inches in a 90-day period with no recharge). Additional design options allow for a separation distance of less than 66-feet if an impermeable barrier or equivalent is used, or modeling results demonstrate this separation will not have an adverse impact on the adjacent wetland.

These standards are based upon assumptions in design of surface water management lakes that are smaller in size and depth than excavated mine pits and fluctuate according to input from the accumulated storm water within the project. In addition, these surface water management lakes have control structures that may be altered or redesigned when appropriate due to changes in design standards, operational data or adaptive management needs. Unlike these lakes, mining pits are large, deep permanent features that do not have outfall structures that can be altered to adjust the lake level. The impact to the ground water table is a drop in elevation to the lowest point of the mining pit. This pit then becomes a "sink," where ground water from the surrounding area is drawn for an unknown distance into the mining pit to fill the area previously occupied by rock or sand.

Furthermore, the hydrologic dynamics of a mining pit are different from a typical surface water management lake. Mine pits are typically "leaky systems" with water levels responding to ground water flows down gradient. The water levels of surface water management lakes are regulated by water control structures with fixed elevations and discharge rates of surface flow. Therefore, the standards to review impacts of mining pits and the evaluation of proposed mitigation should be based upon mine designs instead of a surface water management lake design for other types of development.

Both FDEP and SFWMD ERP permits for the mines within the DR/GR include conditions that allow the State agency to require additional measures or mitigation if the mining activity causes adverse impacts to onsite or offsite wetlands. However, the ERP permits did not include any requirements for monitoring offsite areas for hydrology or conducting functional ecosystem assessments. Therefore, it is unclear how the agencies would even become aware of offsite impacts or how they would be able to document the impact caused by mining.

It was not possible to compile the existing or pre-mining wetland acreage for the permitted mines within the DR/GR, as permits did not state the existing wetland acreage for five of the twelve mines, and other information was not always available within the documents in the permit files. This lack of available information on the acreage and the functional assessment of the existing wetlands resulted in an incomplete evaluation of the effectiveness of the ERP process in protecting wetlands and in mitigating wetland impacts.

The approved mining projects located within the study area have wetland impacts ranging from no direct impact to those with approximately 264 acres of wetlands removed (Table F-2). The trend is to preserve the onsite wetlands when obtaining a SFWMD permit for fill dirt mining. Subsequently, the mining operations are revised by obtaining a FDEP permit for limerock mining - where only the wetlands at the perimeter of the property are preserved, and the other previously preserved onsite wetlands are excavated to reach the limerock resources. The mines within the DR/GR study area have State ERP permits that directly impact 534 acres of State Jurisdictional Wetlands (Table F-2), though the acreage of wetlands that are indirectly affected as a result of hydrologic impacts are still unknown.

PROJECT NAME	PROJECT SIZE (ACRES)	EXISTING WET-LANDS (ACRES)	EXCAVATED WET-LAND (ACRES)	MITIGATION ASSESSMENT METHOD	MITIGATION REQUIRED BY STATE PERMIT
Bell Road Mine	503.75	(1)	6.89	(1)	189.76 acres wetland + upland onsite conservation area
Bonita Land Resources	47.80	31.25	23.55	(1)	5 credits purchased from Panther Island Mitigation Bank
Cemex/RMC	308.64	0	0	(2)	(2)
Florida Rock Industries (Greenmeadows Mine)	1520.8	185.46	68.0	1:1 Ratio	91.3 acres onsite
Florida Rock Industries (Expansion of Greenmeadows Mine)	1525.0	175.79	0.35	(1)	11.5 acres onsite wetland hydrologic enhancement
Florida Rock Mine #2[4]	4839.17	(3)	263.8	WRAP	797.3 acres wetland + upland onsite creation, enhancement & restoration; 487.66 acres of lake & shoreline
Plumosa Farm	36.82	0	0	(2)	(2)
Rinker Materials (South of Alico)	2665.24	(1)	13.24 + 3.72 temporary	(1)	36.59 acres + 13.8 acres onsite enhancement and restoration
Rinker Materials (North of Alico)	1193.60	(1)	0.7	(1)	4.0 acres wetland + upland onsite conservation area
Westwinds	602.72	68.53	0	(2)	(2)
Youngquist Quarry (University Lakes)	667.10	82.4	57.8	(1)	143.59 acres wetland + upland onsite conservation area + offsite land funding donated to CREW
Youngquist Quarry (West Lakes)	1048.30	(3)	99.71	(1)	121.4 acres wetland + upland onsite conservation area + offsite Panther Island Mitigation Bank credits purchased

Table E-2: ERP Mitigation Data

1.Information not in Permit
2. Not Applicable
3. FLUCCS map illegible in permit file

C. Wetland Mitigation

In April 2005, the State adopted the Uniform Mitigation Assessment Method (UMAM) as the "standardized procedure for assessing the functions provided by wetlands and other surface waters; the amount that those functions are reduced by a proposed impact; and the amount of mitigation necessary to offset that loss." Prior to 2005, ratio guidelines or requirements were used to determine the amount of mitigation required to offset an impact to wetlands or other surface waters.

The evaluation of the permitted wetland mitigation for the twelve existing mining operations (Table E-1) within the study area was limited by the fact that only two of the permits indicated the methodology used in conducting the functional assessment of the existing wetland and the proposed mitigation area. Additionally, the proposed mitigation included the combination of wetland and upland conservation areas for five of the mining projects without a clear indication of the acreage of wetland within the preserved conservation areas.

The majority of the wetland mitigation for those State Jurisdictional Wetlands impacted through mining excavations in the DR/GR study area is occurring on project sites with 1,405 acres of wetland and upland conservation areas (Table E-2). The wetland mitigation predominantly occurs within the boundaries of the project even though the mining pit may permanently alter the surface and ground water levels in an unknown area surrounding the mined lake. This creates alterations to the hydrology of the ecosystems and results in failed mitigation.

The onsite mitigation typically includes the preservation and enhancement of existing wetlands. The enhancement is mainly defined by the removal of invasive exotic vegetation, which normally improves the functional value of the wetland. Some of the onsite mitigation includes wetland restoration and/or creation to provide larger, contiguous preserves onsite at the perimeter of the property and for connectivity to offsite conservation areas. The viability of the onsite wetland preserves is monitored according to site-specific permit conditions, which require a range of three to five years in annual monitoring. The ERP permits also stipulate that if the onsite wetland preserves do not meet the permit success criteria, then the applicant must propose alternate means to reach that criteria or propose offsite mitigation. However, the lack of required base line or post project hydrologic data limits the ability of agency staff to identify hydrologic alterations and impacts. Field inspections would allow the gathering of forensic ecological evidence of hydrologic impacts, but site-specific hydrologic data presented in hydrographs would provide a more reliable evaluation.

The methodology used in determining the type and quantity of mitigation required to offset wetland impacts is rarely stated in the permit. Ratios were used in one case, and the Wetland Rapid Assessment Procedure (WRAP) was cited for another project. The other seven permits with identified wetland impacts did not include information regarding the mitigation assessment. It appears that if preserves are larger than the wetland impact, these are accepted without any functional assessment evaluation of the wetland impacts or the proposed mitigation area.

Conservation easements for the preserved or mitigation wetlands may be required as part of the mitigation plan through specific permit conditions; however, conservation easements are not required by the Florida Administrative Code or Basis of Review Rules. The recorded conservation easement is provided as an attachment to the FDEP-BMR ERP permits with a condition included in the permit that the easement may be released if the project does not obtain all the necessary permits from other agencies to proceed with the mining. SFWMD ERP permits include schedules under the specific conditions that will indicate a specific date for the submission of a recorded conservation easement. The Conservation Easements are dedicated to the State agency issuing the ERP.

One of the older mines permitted within the study area did not place the wetland preserves under a conservation easement, indicating to the SFWMD that the county's special exception document approving the mining would insure the long term preservation of these wetland areas (SFWMD Permit 36-0681-S File). However, when the mining operation was proposed for conversion to a residential development, the applicant argued that the wetland preservation and other requirements of the special exception for mining did not apply to the new proposal, and that it should receive a new review under the current regulations (Lee County Development Order File DOS2004-00334). The residential development

was issued a SFWMD ERP allowing the impact of 398 acres of wetlands that were presumed not to be directly impacted and preserved during the mining operations (SFWMD Permit 36-05075-P).

Even with the requirement for a conservation easement, the preserve areas would not be protected in perpetuity. The conservation easements do not prevent degradation of the wetland preserves from mining operations. Additionally, the conservation easements may be modified or eliminated through modifications to the permit or when a new permit is obtained. An example of this is one mine (Lee County Zoning File DCI2004-00019) within study area that revised the mine pit size, resulting in the impact to wetlands previously placed under conservation easements dedicated to the State. The new impacts to the previously preserved wetlands were mitigated through onsite wetland preservation and creation and the purchase of mitigation credits at Panther Island Mitigation Bank. This conservation easement was not to Lee County; therefore, the county was not involved in the review of replacing the preserved wetlands under the conservation easement with a mining pit and the revised preservation, creation, and mitigation areas.

The agency has approved offsite wetland mitigation for mining projects within the study area where there has been a purchase of land within the Corkscrew Regional Ecosystem Watershed (CREW) or a purchase of mitigation credits from the Panther Island Mitigation Bank. The CREW lands are within the DR/GR and Panther Island Mitigation Bank abuts the DR/GR to the south in Collier County. One limerock mine partially mitigated wetland impacts through a donation to CREW (FDEP Permit 0176063-003), and Panther Island Mitigation Bank credits were purchased for partial mitigation of wetland impacts for two mines (FDEP Permit 0194206-004 & SFWMD Permit 36-03511-P). One mine site, which converted to a residential development, has also partially mitigated wetland impacts through the purchase of Panther Island Mitigation Bank credits (SFWMD Permit 36-05075-P).

FDEP does not maintain a central database of mitigation projects documenting the amount of wetland impacts and loss or gain of wetland functions for permitted wetland impacts. The State previously compiled overall wetland gain or loss reports based upon tracking the acreage of wetlands that were permitted to be dredged, filled and mitigated. These reports did not account for the gain or loss of wetland functions, only actual acreage. However, the last report was compiled fifteen years ago - in 1993 - “due to the limitations on staff resources” and the elimination of the State law requiring these reports in that same year. Reports on the actual acreage of permitted impacts may be requested from the FDEP and water management districts. (Summary of the Wetland and Other Surface Water Regulatory and Proprietary Programs in Florida. Oct 2007. FDEP)

The appropriateness and effectiveness of the wetland mitigation program could not be thoroughly evaluated due to the lack of available information regarding the actual acreage and the functional analyses of the permitted impacts and approved mitigation areas.

D. Wetland Monitoring

Monitoring of onsite wetland preserves is required when enhancement activities or wetland creation areas are included in the permit. The monitoring requirements are site-specific in regard to documentation of wetland vegetation, wetland hydrology (monthly staff gauge readings), and wildlife utilization. This information is compiled into monitoring reports submitted to the State permit agency on an annual basis for the duration indicated in the permit.

The SFWMD ERP permits require monitoring of enhanced or created wetlands for a period of five consecutive years to confirm the site-specific success criteria are met. A baseline report is compiled and submitted after the permit is issued but prior to any enhancement or maintenance activities. Once the success criteria stated in the ERP permit are met, the monitoring and maintenance activities are no longer required (Basis of Review Rule 4.3.6).

Records were obtained from SFWMD compliance files to determine the adequacy of the required monitoring and if the permitted mines were up to date with the required monitoring reports. Three mines have SFWMD permits that require onsite wetland monitoring. The annual monitoring report schedules have been revised for permits because of gaps in the submittal of the reports, which may be blamed on changes in operation scheduling or a lack of follow through on the permit conditions (SFWMD

Permits 36-00260-S; 36-00612-S & 36-03663-P). When SFWMD staff recognize that a monitoring report is overdue, a non-compliance letter is sent to the permit holder, and the staff work with the permit holder to obtain the reports and conduct reviews of the reports to determine if revisions are needed to meet the success criteria. Wetland monitoring reports were not required for two mines that did not have any identified wetland impacts. Also, monitoring reports were not required for one mine that mitigated the wetland impacts through offsite mitigation.

SFWMD staff conduct a helicopter site inspection of Lee County each month. No set standards are in place that outline the frequency of onsite inspections needed to verify that environmental permit conditions are being fulfilled on the mining project sites. (Pers. Comm. SFWMD staff) The last field inspection conducted for the two mines that have not yet completed the permit success criteria was in 2006, and the annual monitoring reports are overdue (SFWMD Compliance File for Permit 36-00260-S).

FDEP-BMR requires annual reports for mining operations that include rainfall and water level data. FDEP-BMR was unable to locate the annual reports for one of the permitted mines (FDEP Permits 0166176-001; 0166176-002; & 0166176-005). The monitoring reports for two other mines (FDEP Permits 0176063-003 & 0194206-004) were obtained from the FDEP records. The reports indicate baseline monitoring (prior to any enhancement or restoration work, but post permit issuance); time zero monitoring (after enhancement or restoration work); followed by five consecutive years of annual monitoring; and a final site inspection of the preserves in the sixth year after time zero. The annual status reports included discussion of water quality within the wetlands in relation to turbidity; microbial monitoring; erosion & sedimentation control; water levels within preserves; vegetation coverage within preserves; and photos taken at set photo stations. The location of monitoring transects were not included. Discussion of each monitoring transect was limited, but one area was cited as possibly creating hydrologic impacts. The water level data was presented in tabular form without reference to what the numbers represented. No hydrographs were included. Rainfall data was not included; yet the statement "water levels are consistent with rainfall patterns and adequate to maintain vigor and health of the wetlands" was included in the report. The information provided does not completely document whether or not the appropriate hydrology was maintained. Additional information including the following would be needed to conduct analysis of the hydrology within the wetland preserves: rainfall data, clarification of hydrology data, topography, and transect locations. An additional FDEP permitted mine (FDEP Permit 225217-001) has not had an annual report due as of yet (Pers. Comm. FDEP staff).

FDEP-BMR has a goal of conducting site inspections of mines on an annual basis. However, it has been two to three years since field inspections were conducted on mines within the study area. Two mines were last inspected by FDEP-BMR staff in 2006 (FDEP Permits 0176063-003 & 0194206-004). One mine was inspected FDEP-BMR in 2005 (FDEP Permits 0166176-001; 0166176-002; & 0166176-005). Rinker Mine Phases 1B, 2A and 2B portions of the FDEP-BMR permit (0166176) were superseded by the SFWMD Permit (36-05075-P), which was issued in 2004 for the Lago residential development. Therefore, FDEP staff no longer field inspect these areas for compliance with environmental conditions. (Pers. Comm. with FDEP staff).

E. Watershed Analysis

A requirement to evaluate a proposed project's impact on the alteration of the watershed was not located within the Florida State Statutes, Florida Administrative Code, or the SFWMD Basis of Review. As previously indicated, a cumulative impact evaluation does not need to be included for wetland impacts if the mitigation occurs in the same watershed. This has implications within the DR/GR as the State accepts mitigation anywhere within the regional Estero Bay Watershed, instead of the local watershed basins that are within the DR/GR limits. The local watersheds are commonly referred to as Six Mile Cypress, Estero River, Flint Pen (Imperial River) and Corkscrew.

Additionally, the ERP process does not include mitigation for impact or alteration to the watershed caused by the mining pit. Large acreages of land are converted to deep lakes through these extractive operations, permanently altering the hydrology of the watershed. The quantity and dynamics of the water flowing through the watershed will be changed and the direction of movement altered since the mining pit may draw in water from the adjacent areas. Most mining pits in the DR/GR do not

discharge surface water into adjacent wetlands or flow-ways. The mining pit has a multiple impact on the watershed with the drawdown of ground water, alteration in direction of flow, and the interruption of surface water or sheet flow. These effects will likely be amplified with multiple mines.

F. Surface and Ground Water Levels

Establishing Existing Water Levels

A specific regulation requiring the documentation of the surface or ground water levels was not located within the Florida State Statutes, Florida Administrative Code, or the SFWMD Basis of Review. However, the ERP water quantity criteria (Basis of Review Section 6.10) states surface water management systems shall be designed to:

1. Maintain existing water table elevations in existing well field cones of depression, and
2. Preserve site environmental values, and
3. Not waste fresh water, and
4. Not lower water tables, which would adversely affect the existing rights of others, and
5. Preserve site ground water recharge characteristics.

No specific requirements are given regarding the information an applicant needs to submit to demonstrate the project design meets these criteria. The ERP application does indicate that the following information must be submitted:

1. The seasonal high water and normal pool for each wetland along with how these were determined (Section I: Site Information)
2. Wet season high water tables need to be identified along with how these elevations were determined (Section I: Site Information)
3. A description of how water quantity, quality, hydroperiod, and habitat will be maintained in onsite wetlands to be preserved or remain undisturbed (Section II: Environmental Considerations)
4. Existing topography extending at least 100 feet off the project area, and including adjacent wetlands (Section III: Plans)
5. Water table elevations (normal and seasonal high) including aerial extent and magnitude of any proposed water table draw down (Section V: Drainage Information)
6. Results of any percolation tests and soil borings that are representative of actual site conditions (Section V: Drainage Information)

Monitoring Water Levels

The surface and ground water monitoring requirements contained within the conditions of approved ERPs are different between the FDEP-BMR and SFWMD mining permits. Most SFWMD permits issued for mines within the DR/GR study area do not have any hydrologic monitoring required. FDEP-BMR permits have staff gauge monitoring requirements within selected preserved, restored or created wetlands onsite. Some of the FDEP-BMR permits require staff gauge monitoring of the lake water level. Neither agency requires offsite monitoring.

FDEP-BMR permits require hydrological monitoring if a permitted limerock mine will be operating for more than five years. The parameters of the hydrologic monitoring are site-specific. The monitoring may include surface water level of the mine lake; shallow ground water level adjacent to the mine lake; shallow ground water level within wetland preserves; and/or water quality of the mine lake.

In general, the FDEP-BMR permits issued for mines within the study area require minimal surface and ground water level monitoring through the use of staff gauges within preserved or created wetlands. The FDEP-BMR permits require bi-weekly monitoring of surface water levels within the wetlands during the wet season (June-October) and monthly monitoring during the dry season (November-May). If no standing water exists for a period of 60 days, then the permit requires the applicant to ascertain the depth of the surficial ground water. FDEP-BMR may increase the frequency of monitoring if data does not provide reasonable assurance that there are no significant hydrological impacts to wetlands as a result of mining. After 3 years of monitoring, modifications to monitoring frequency may be requested by the applicant. The records obtained from FDEP-BMR do not indicate that such a request has been submitted for any Lee County mines. Rainfall data is also required to be monitored. Annual status reports are required to be submitted to FDEP that include the hydrologic monitoring data.

None of the FDEP-BMR permits for projects within the study area required ground water level monitoring beyond the surficial aquifer also referred to as the water table aquifer.

The SFWMD ERP permits (36-00260-S; 36-00612-S & 36-03663-P) for the mines within the study area contained requirements for water level monitoring in enhanced or restored wetlands for five consecutive years. This time period for monitoring does not document the effects of the completed mining pit on the wetlands. Additionally, ground water monitoring is not typically required through the SFWMD ERP permits, but is more likely to be a condition of approval for de-watering or consumptive water use permits, which were not reviewed as a part of this study. Therefore, the impact of the mining pits on the ground water level is not known.

G. Water Quality Monitoring

Water quality does affect the ecological integrity of wetlands. Nonetheless, water quality monitoring is not required unless the data can be used to determine if the pollution abatement practices incorporated into the design for the drainage system are functioning properly, or if there is a real and immediate concern regarding the degradation of quality in the receiving waters. (Basis of Review Section 5.9.3)

Surface water quality is required to be monitored for turbidity where it is discharging into wetlands through specific permit conditions (FDEP Permits 0166176-002; 0134874-001; 225217-001; 0176063-003 & 194206-004). Additionally, any water discharged from the project sites are required to meet the State water quality standards for Class III waters (FDEP Permits 0166176-007; 0134874-001; 225217-001; 0176063-003; & 194206-004). Yet, pursuant to F.S. 403.031, the lakes created through the mining excavation process do not have to meet any State water quality standards because these waters are privately owned.

Currently, only the mine just north of the Lee County well field on Alico Road is required through ERP permit conditions to install and monitor ground water quality monitoring wells to the depth of mining (FDEP Permit 0176063-003). However, FDEP-BMR staff indicated that new permits for mines include requiring the permit holder to drill and install a ground water quality well 100 feet from the maximum excavation limit or the property line, whichever is less [F.A.C. Rule 62-520.420(1)].

Conversion Of Mines To Residential Developments

Two approved mining operations within the southeast Lee County DR/GR study area had residential development as their final phase. The University Lake Mine was originally approved as a Residential Planned Development (RPD) with mining as phase 1 of development. However, the owner later revised the plan through the public hearing process to expand the mining excavation limits and eliminate the residential use to convert the project to an Industrial Planned Development (IPD). The other project, the Corkscrew Woods Mine, was permitted under SFWMD (36-03178-P) for a 173.70 acre project area with a mine excavation of 149.60 acres. The mining operation did not directly impact any wetlands. A second application (960516-6) was submitted to SFWMD for the approval of a residential development project consisting of 571.33 acres including the 173.70 acre Corkscrew Woods mine project area. These 571.33 acres include 132.03 acres of wetland.

Conversion of approved mining excavations to residential developments also occurred with portions of the Florida Rock Fort Myers Mine #1 being converted to the Miromar Development of Regional Impact (DRI) and the Lago residential development. The conversion of both projects from mining to residential resulted in a decrease in the mining excavation area. However, both residential projects obtained SFWMD ERPs, allowing wetlands that were avoided by the mining operations to be directly removed for the residential development. The approved Lago residential development impacts approximately 390 acres of wetlands that were preserved by the mining operations. However, the developer is currently evaluating how the mine lakes are or will affect adjacent preserves and onsite mitigation areas in order to address long term management and viability. The mining has continued under the approved Lago residential development order including mine Phase 3A and 3B north of Alico Road.

Conclusions

The protection and management of both wetlands and water resources are overriding elements of the Lee County Comprehensive Plan as it pertains to the Density Reduction/Ground Water Resource land use area. However, the State ERP process is based on typical surface water management systems, not mine pits, therefore severely limiting the effectiveness of evaluating a proposed mining project's affect on wetlands, watersheds, and ground water resources. The State standards within the SFWMD Basis of Review, which is utilized by both the SFWMD and FDEP in reviewing ERP applications, was based on shallower lakes (e.g., ≤12-foot depth) for stormwater detention within developments. These standards do not specifically address how to design and monitor fill dirt or limerock excavation pits to insure the protection of wetlands, surface and ground water quantities and quality.

The identification of both current and historic wetlands within the DR/GR is important to achieve the county's comprehensive plan goals, objectives and policies to protect, enhance and restore wetlands, flow-ways and ground water levels in this specified ground water resource area. The ERP process is based on current conditions; therefore, the county needs to be actively involved in the review of proposed mines to insure the local comprehensive plan issues are addressed in the design and implementation of the mining operations.

The State's Basis of Review for ERP permitting includes many regulations that assume that the designed surface water management system does not have any adverse impacts on wetlands or water resources. The only clarification or definition of adverse impact that was located within the Basis of Review, Florida Administrative Code, or Florida State Statutes states "a drawdown of more than 12 vertical inches in a 90-day period with no recharge shall be presumed to be an adverse impact" (Basis of Review Section 6.12). This raises concerns about wetland protection, considering a drawdown of just a fraction of a foot for a three-month period will impact the ecological integrity of some wetland habitats in southeast Lee County. Additionally, the absence of a requirement to collect baseline data does not allow for the establishment of pre-permit conditions for permit application analysis or for a comparison to future monitoring data when required.

It is important that the appropriateness and effectiveness of the wetland mitigation be documented. The available information was not adequate for such an evaluation to be conducted at this time.

The current ERP related monitoring is inadequate for determining what, if any, impacts the existing and proposed mining projects have on wetland, water and wildlife resources within the DR/GR. The effectiveness of wetland monitoring would be improved with comprehensive and uniform methodologies and specific requirements for the monitoring reports for preserved, enhanced, created or mitigation area wetlands. These reports should not only include the raw data but should include a complete analysis including hydrographs of the data in relation to the specific preserve area being monitored. Additionally, field inspections should be conducted annually to verify the current condition of the wetland preserves and mitigation areas. The monitoring should be required at least through the completion of mining and reclamation activities to verify that the conditions of the ERP permit have protected the wetland and/or conservation areas.

The impact of the mining excavation on the watershed must be a part of the analysis in determining appropriate design and location of fill dirt and limerock mines. The mine lakes are often self-contained with no outfall structures to contribute to the surface water or sheet flow in the watershed. In essence, the mined lake plus surrounding project area within the surface water management system become an anomaly within the watershed. There may be interaction between the mined lake and ground water, but any water that would have been present above ground is now displaced down gradient in the watershed, interrupting any sheet flow from the property to the watershed. Additionally, when the lake created through the extraction of these natural resources, will be the lowest topographic feature within the project, the surface and ground water will naturally seek the lowest point and be "drawn" to fill the lake and directed down gradient as ground water flow. The individual and cumulative extent of effects and impacts this has on adjacent wetlands and ground water is unknown due to the lack of data. Watershed analysis for wetland, wildlife, surface and ground water impacts, alteration and mitigation should be required as part of the review for proposed fill dirt and limerock mines in order to protect the natural resources within the

DR/GR and the ecologically significant areas interconnected with the DR/GR through the watersheds such as Estero Bay Aquatic Preserve and Corkscrew Swamp Sanctuary.

A detailed review of the ERP program's protection of wildlife was not conducted as a part of this study; however, wildlife are likely to be affected by the loss or alteration of wetlands and the changes in overall watershed dynamics. The removal of wetlands will result in the loss of wetland dependent species (e.g. otter; waterfowl; amphibians) within the vicinity of the wetland impact. A change in the depth of inundation and/or the hydroperiod within preserved wetlands may be detrimental to the foraging and/or breeding success of wetland dependent species (e.g. American wood stork; American alligator; amphibians) resulting in a potential reduction in wildlife population. Additionally, if the mosaic of wetland and upland landscape in the DR/GR is fragmented through wetland and/or upland impacts, then the territories of listed species such as the Florida panther, Florida black bear, and Big Cypress fox squirrel will be reduced, which may result in adverse impacts to the sustainability of these species within southeast Lee County. It is important to evaluate the impact of proposed altered water levels and flows, as well as removal of habitat (whether upland or wetland as well as the interconnectivity of the two), on the wildlife resources to insure the preservation of ecosystems and sustainability of wildlife populations. Appropriate regulations for habitat protection are needed at a local level to insure the continued presence of the diverse wildlife occurring in the DR/GR.

Source water protection is an additional issue that concerns water resources in the DR/GR created by the presence of public potable water well fields. Three public well fields are found within the DR/GR study area: Lee County Utilities Corkscrew Well Field, Lee County Utilities Green Meadow Mine Well Field, and Bonita Springs Utilities Well Field. Lee County Utilities provides approximately 70% of its potable water supply from wells located within the DR/GR study area. Bonita Springs Utilities has the capacity to provide 53.5% of its service area from its well fields within the DR/GR (37% within the study area; 16.5% within the City's DR/GR), excluding its reverse osmosis production wells. The Lee County Utility wells are drawing water from both the surficial aquifer and the sandstone aquifer. The Corkscrew wells range from a 40-150 foot depth in the surficial aquifer and a 243-315 foot depth in the sandstone aquifer. The Green Meadows wells are shallower, with the surficial aquifer wells ranging from a 24-45 foot depth, and the sandstone aquifer wells ranging from a 180-235 foot depth. The lakes created through limerock mining are located within the same aquifer as the surficial aquifer wells. (Pers. Comm. Lee County Utilities Staff). Furthermore, given that State water quality standards do not apply to the lakes created through mining, and Lee County's potable water supply wells are located adjacent to many of these mines, it is important that Lee County require the establishment of base line water quality as well as real time water quality monitoring in perpetuity of the surface and ground water within the mining projects boundaries. The Bonita Springs Utilities wells within both the Lee County and City of Bonita Springs DR/GR are approximately 80-100 feet in depth. Their reverse osmosis production wells extract water from a 800-1100 foot depth, well below the influence of the surface water or mining pits. The Bonita Springs Utilities well fields are not directly adjacent to approved or proposed mining pits. Additionally, the City of Bonita Springs' comprehensive plan prohibits the establishment of new mining operations.

The county needs to continue to review development applications within the DR/GR to insure appropriate protection, enhancement, restoration and management of the wetlands and water resources. The important connection of the DR/GR to potable water supply, conservation lands, and wildlife needs to be protected through ecologically-based local regulations. The surface waters leaving the DR/GR via sloughs, flow-ways, ditches, and streams ultimately reach the Estero Bay Aquatic Preserve, placing an additional local value and responsibility in maintaining and enhancing wetlands and the surface and ground water levels and quality within the DR/GR.

Findings & Action Items

1. The appropriateness and effectiveness of wetland protection and mitigation within the DR/GR through the State ERP process was not able to be thoroughly evaluated due to the nature of monitoring and the lack of available information.

    a. Detailed functional assessments of existing wetlands and mitigation areas need to be required for the ERP permit applications.
    b. "Adverse impacts" need to be clearly defined by the State with specific means of quantifying impacts based on scientific standards.
    c. Preserved, enhanced, restored and created wetlands must be properly monitored to determine if appropriate vegetation, hydrology, water quality, and wildlife usage are maintained or established. The monitoring reports must include a full analysis, including hydrographs of the data collected in relation to the specific preserve area in addition to the data alone. Monitoring needs to be performed annually for a minimum of five years after the completion of excavation and reclamation activities with perhaps less intensive monitoring required after success criteria are satisfied.
    d. Monitoring that documents the success or failure of all mitigation through annual functional analysis reports is necessary.
    e. A database of permitted wetland impacts and mitigation, including actual acreage and functional analyses, must be developed and maintained to provide regular reports on the amount of permitted wetland impacts including acreage and functional value; the amount of mitigation including acreage and functional value; and the success or failure of the permitted wetland mitigation on a regular basis whether annually or biannually.

2. The county needs to evaluate if the State's "no net functional loss of wetlands" policy provides enough protection for wetlands within the DR/GR or if additional wetland protection is necessary to protect the water resources within the DR/GR as is directed within the Lee Plan.

3. The ERP process is based on existing conditions, whereas the Lee Plan emphasizes the importance of restoring and enhancing wetlands within the DR/GR.

    a. The county must consider the historic conditions when identifying wetlands to be preserved, enhanced or restored.

4. The ERP standards are based on surface water management systems with relatively small and shallow storm water ponds/lakes.

    a. Establish ERP rules specific to mine excavations, which are more appropriate than rules based upon surface water management systems for development.
    b. Evaluate impact of the mining pit on the surface and ground water levels and quality, and determine the effects of any changes in onsite and offsite conservation areas (e.g. changes in depth of inundation and hydroperiods).
    c. Evaluate the cumulative impact of the mines on the local watershed (i.e. Estero River; Flint Pen; Corkscrew) water budget.

5. Conservation easements may be eliminated through permit revisions.

    a. Conservation easements need to be dedicated to Lee County in addition to any other appropriate State or Federal agency to insure Lee County is included in the review and approval or denial of any revisions to conservation easements.

6. Ground water levels within and adjacent to the onsite preserves and at the property boundaries need to be monitored through the completion of the mining and reclamation activities.

7. Water quality monitoring of the mined lake and ground water for each aquifer must be made a requirement in the LDC with active mines being required to install monitoring wells within 6 months of adoption of the revised standard. The monitoring wells need to be maintained in perpetuity and provide real time data.

8. Wildlife may be affected by the loss or alteration of wetlands and the overall watershed landscape.

    a. Proposed changes in the depth of inundation and/or hydrology of preserved wetlands must be evaluated for their impact on wetland dependent species foraging and breeding success.
    b. The Lee County Land Development Code should be evaluated to insure the inclusion of project design regulations and requirements. These requirements will maintain or enhance the mosaic of interconnected wetland and upland areas so as to provide wildlife corridors.

ENHANCING WETLAND PROTECTION

The Lee Plan places emphasis on protecting the water resources within the DR/GR as an area of critical surface water management concern. Evaluation of wetlands, surface and ground water are all important components of maintaining the integrity of the DR/GR. The State ERP program focuses on surface water management which does not fully address the goals of the Lee Plan. The following methods may be utilized to enhance the protection and mitigation of natural resources within the DR/GR:

Project Design and Permit Review:

A. Obtain delegated authority from FDEP & SFWMD for ERP review, issuance & compliance for projects within the DR/GR

Florida Administrative Code (FAC) 62-344 indicates that a local government may seek "delegation of all or a part of the environmental resource permit (ERP) program from the Department and water management districts." Lee County could petition for delegation of the ERP program for mining projects, agricultural operations, residential developments, and roadways within the DR/GR study area, which is a critical location for surface water management as determined by the county (Lee Plan Objective 60.4). This delegation would allow the State and County regulations to be reviewed simultaneously, reducing the time involved in obtaining separate permits and modifications. Such an integrated review would allow the special issues and requirements of the Lee Plan regarding the DR/GR protection of water resources to be addressed more thoroughly while the wetland and surface water management issues are also reviewed for compliance with the ERP standards. Additionally, the county staff would be able to insure that permit conditions are met in a timely manner with regularly scheduled field inspections. If delegation were granted, staff members would be needed within the Divisions of Zoning, Development Services, Environmental Sciences, and Natural Resources who would specialize in the review of mines to cover the complex State and local issues and requirements.

The scope of this evaluation did not include review of the ERP permits issued outside of the DR/GR, therefore, the effectiveness of the State's protection of wetlands outside the DR/GR study area is not included and would involve different Lee Plan goals, objectives, and policies. The county should conduct an evaluation of the ERP program in relation to the Lee Plan for the area outside of the DR/GR before seeking delegation to include the entire county.

Any request for delegation of authority needs to be specific to the areas the county wishes to be directly involved, as the ERP program also includes review of solid waste management facilities, hazardous waste management facilities, domestic wastewater treatment facilities, and industrial wastewater treatment.

B. Require base line hydrological information for both quality and quantity of surface and ground water

Site-specific base line data is critical in establishing the design of any new or expanded development within the DR/GR. This will insure that alteration to land associated with the development does not lower the existing surface and ground water to levels that are detrimental to maintaining the ecological integrity of habitats, water resources, and the watershed. A series of piezometers and wells should be used to establish site-specific information on water levels for the water table aquifer as well as other aquifers deemed necessary by the county. The monitoring plan must be coordinated with the county prior to commencing the installation of wells. The use of continuous monitors would provide detailed documentation of seasonal and event fluctuations. The appropriate water quality analysis would be determined by the Lee County Division of Natural Resources staff.

C. Watershed analysis

The permit review process needs to include an analysis of how the proposed project impacts, alters, restores, or enhances the watershed as defined by the DHI, Inc. Mike She Model completed as a part of this study. The items to be reviewed must include surface and ground water quality and quantity; surface water flows; wetlands; upland habitat; wildlife; and water budget. The DHI, Inc. model should be utilized with site-specific data to demonstrate the effects of the proposed development on the watershed through running pre- and post-development scenarios.

D. Require appropriate hydrologic monitoring of surface and ground water quantity

The series of piezometers and other monitoring wells established to gather the base line hydrological information should also be used to monitor the water levels during construction for a minimum of five years beyond completion of the project. Continuous monitoring should occur year-round, with monitoring reports and data submitted quarterly to the county. Some appropriate level of post construction monitoring may continue indefinitely.

E. Require appropriate water quality monitoring of surface and ground water

The appropriate water quality monitoring analysis established by the Lee County Division of Natural Resources staff for the base line information should be required as ongoing water quality monitoring for a specified number of years as determined by the county staff. The county would determine the appropriate report submittal timeline, with at least one report submitted annually. It may be beneficial to have reports submitted biannually, with one report submitted at the end of the dry season (i.e. May) and the other report submitted at the end of the wet season (i.e. October).

F. Establish an open space and preservation requirement specific to the DR/GR study area

The Lee Plan recognizes the value of the open space within the DR/GR as being different from other portions of the county through the limitation of potential land uses. However, only private recreational facilities have DR/GR specific open space and preservation requirements. Lee Plan Objective 77.2 emphasizes the importance of open space as part of the development design. The Lee Plan (Policy 77.2.1) also directs staff to "continue to review the open space requirements of the Land Development Code to determine if these requirements should be modified in any way to best meet the objectives of open space requirements within new commercial and industrial developments."

The following points detail the existing Land Development Code (LDC) open space and preservation requirements for private recreational facilities, residential lots, mines, and agricultural operations, which are the developments allowed within the DR/GR land use category:

1. When private recreational facilities were added as an allowable use within the DR/GR land use category, stringent open space and preservation requirements were established. Eighty-five percent of a private recreational facility planned development must be open space [LDC Sect. 34-941(d)(2)(d)]. Additionally, golf courses must provide a minimum of 200 acres of habitat preservation or creation for every 150 acres of impact [LDC Sect. 34-941(e)(5)(e)]. All other private recreational facilities must preserve 50% of the onsite indigenous upland habitat [LDC Sect. 34-941(d)(4)(b)].

2. Residential lots within the AG-2 zoned portions of the DR/GR must have a maximum lot coverage of 25% [LDC Table 34-654]. This results in a minimum of 75% open space on the residential lots. Currently, there is no minimum native habitat preservation requirement in place for residential lots.

3. Mines are considered an industrial use that must provide a minimum of 20% open space [LDC Sect. 10-415(a)]. Fifty percent of the required open space, or 10% of the project area, must be provided through the preservation of the existing indigenous habitat [LDC Sect. 10-415(b)]. There is no minimum requirement for restoring habitat if none currently exists. These industrial standards were established for urban and suburban industrial centers. The county should re-evaluate the open space and preservation requirements for mines to insure the protection and enhancement of the DR/GR natural resources.

4. Agricultural uses do not have any open space or preservation requirements. The conversion of land to agricultural use requires a Notice of Clearing (Lee County Administrative Code 13-15), which allows the Division of Environmental Sciences staff to conduct a field inspection of the property to determine if any listed species or wetlands are present. The applicant is then advised to secure the appropriate State and Federal permits for any observed environmental issue. No surface water management review is conducted. Lee County should develop standards for sustainable agriculture in the DR/GR.

Establishing DR/GR specific open space and preservation requirements will provide protection of the water resources, wildlife, habitat, and green space. The wetlands and uplands in the DR/GR need to be an interconnected system to provide an appropriate surface water flow that maintains the ecological health of the watersheds and the continued existence of listed wildlife such as Florida panther, Florida black bear, American wood stork and Big Cypress fox squirrel.

Land Use:

A. Strict interpretation of Lee Plan Future Land Use Category for Wetlands, to not allow mining within wetlands
The 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." Objective 1.5 indicates that the Wetlands land use category will be defined by the unified state delineation methodology contained in the Florida Administrative Code, meaning that any State jurisdictional wetland is considered to be within the Wetlands land use category whether it is identified on the future land use map or not.

If no mining is allowed within the Wetlands land use category, there may be negative consequences to protecting the overall water resources within the DR/GR. This could create greater fragmentation of natural systems than already is occurring by forcing mines to excavate around the wetlands. In essence, this would create "mining sprawl," to obtain the same quantity of limerock that is being excavated under current designs or future maximized, limited location mines. Additionally, maintenance of the hydrology of wetlands encircled by mining pits would be difficult, resulting in the reduction in wetland function and value.

It is typically more ecologically sound to allow critically-evaluated wetland impacts within a mining designated area in order to preserve or restore larger contiguous systems within the DR/GR for water storage, water conveyance, wildlife usage, and maintenance of the native habitats. However, a conservation and mitigation plan to insure the appropriate lands are acquired, restored and managed to meet the needs for water storage, water conveyance, wildlife, and ecosystems must be developed and strictly adhered to for the overall ecological benefits to be achieved.

B. Concentrate mining within a designated portion of the DR/GR
Designating a mining area within the DR/GR will allow the mining operations to continue without creating "mining sprawl," while also reducing the expanse of ecological impact. Limiting the location of mining operations allows improved protection and management of the wetlands, water resources, and wildlife in the remainder of the DR/GR through concentrating the footprint of the mining impacts on the landscape. As noted above, a conservation and mitigation plan must be adopted and strictly adhered to for the overall ecological benefits to be achieved.

C. Partner with agricultural interests to insure the continuation and enhancement of agricultural operations
Agricultural operations do not typically leave a permanent alteration to the land as they do not remove the native soil; do not create large areas of impervious surface; and do not permanently alter the surface and ground water characteristics. Additionally, agricultural operations may be managed in a manner that does not have adverse impacts on ground water. Southwest Florida farmers traditionally farmed during the late fall, winter and early spring. This farming practice meant the lands were fallow during the rainy season, allowing for the storage of water within and on top of the land and resulting in recharge of the ground water levels, sheet flow through the watershed, and maintenance of appropriate base flows in the rivers and streams. Agricultural operations also provide open space and corridors for wildlife movement.

Establishing partnerships with agricultural operations will insure those operations are able to maintain their businesses and prevents the land from being permanently altered through mining or other development. The partnership may involve the transfer of development rights. The owner may sell his/her rights to insure the continuation of farming while protecting the water resources; conservation easements; and/or purchase options so that the county may have the first right of refusal if the land owner decides to convert the land from agricultural operations into another allowable use.

The continued use of the land for agricultural operations encourages a local food supply, preserves the native soil, and allows for restoration of native habitats, and surface and ground water. This process continues, even if the agricultural use is terminated 10, 25, 50 or more years from today.

Natural Resource Protection:

A. Require conservation easements dedicated to Lee County
Conservation easements may be adjusted or eliminated through future permitting reviews. Therefore, in order to insure that Lee County's regulations pertaining to the protection of natural resources are maintained in perpetuity, it is necessary to have conservation easements dedicated to Lee County for preserved, enhanced, created, and restored habitats within developments including the planted littoral areas of mine lakes.

Other permitting agencies may require conservation easements as part of their permit approval. Each agency has its own criteria and format for conservation easement documents; therefore, it will be important for Lee County to obtain an agreement with the FDEP, SFWMD, and ACOE to adopt standardized conservation easement language and a format covering all the pertinent requirements. Such an agreement will avoid multiple conservation easements over an individual parcel. Additionally, Lee County should have an agreement with these agencies to accept conservation easements dedicated to Lee County as part of their permit issuance. If Lee County obtains delegation for ERP reviews, then no additional agreement will be needed between the State agencies and Lee County regarding the dedication of conservation easements.

Natural Resource Restoration:

A. Delineate potential, appropriate restoration areas within the DR/GR
Kevin L. Erwin Consulting Ecologist, Inc. (KLECE) is determining the most appropriate areas for ecosystem restoration within the DR/GR, reestablishing flowways and wildlife corridors. Within these areas, the functional capacity of wetlands, water quantity and quality may be enhanced. Adopting a watershed based ecosystem restoration plan is consistent with Lee Plan Objective 107.1, which states "the county will continue to implement a resource management program that ensures the long-term protection and enhancement of the natural upland and wetland habitats through the retention of interconnected, functioning, and maintainable hydroecological systems where the remaining wetlands and uplands function as a productive unit resembling the original landscape."

The potential land uses within the DR/GR include agriculture, natural resource extraction and related facilities, conservation uses, public facilities, publicly-owned gun range facilities, private recreation facilities, and low density residential uses. Existing agricultural operations that utilize best management practices to protect water resources do not create a permanent foot print on the landscape, nor do they remove the native soils. Therefore agriculture is often an acceptable use within the designated restoration areas. However, natural resource extraction of fill dirt and limerock should be prohibited within the delineated restoration areas as the mining results in a permanent alteration to the land and watershed.

The allowable residential uses are limited to low-density (i.e. one dwelling unit per 10 acres) developments in the DR/GR with a further restriction within wetlands to one dwelling unit per 20 acres. New residential developments should be given incentives to be located outside of the delineated restoration area, such as the ability to transfer development rights from lands within the restoration area to land outside of the restoration area. Public facilities in the DR/GR are currently related to potable water and transportation. The potable water wells should continue to be managed to insure the protection of surface and ground water quantity and quality. Any expansion of facilities into the designated restoration area must be carefully designed and managed to be consistent with restoration efforts.

Ecological concerns exist with the development of additional roads within the delineated restoration area, as they may interrupt or alter the water flow and wildlife movement as well as fragment the ecosystem. Therefore, new or expanded roads should be prohibited within the delineated restoration area. Existing roads adjacent to the delineated restoration areas may need to be retrofitted to provide appropriate hydrologic and wildlife connections to conservation and restoration areas. Wildlife fencing may be necessary in certain areas to reduce the potential conflict between vehicles and wildlife.

B. Require hydrologic restoration of wetlands as included in Lee Plan Policy 1.4.5:
"Land uses in these [DR/GR] areas must be compatible with maintaining surface and groundwater levels at their historic levels."

The surface and ground water resources within the DR/GR study area have been altered and drained from their historic levels as is evident when comparing the differences in land use cover between 1953 and 2007. However, opportunity still exists to implement Lee Plan Policy 1.4.5 and enhance the currently drained surface and ground water levels.

One manner in which the water levels were lowered was through the construction of agricultural ditches. The water table levels can be restored either when agriculture ceases by filling the ditches (as has been done on the Corkscrew Regional Mitigation Bank site) or when the agricultural fields are allowed to go fallow in the summer months. This may allow for redesign and adaptive management of water storage and aquifer recharge during the rainy season instead of the channelized discharge that is detrimental downstream to the rivers and estuary. Additional means to increase the storage of water within the agricultural lands while maintaining viable crops are potentially available. The county should work with the agricultural community to determine the best options for maintaining viable agricultural operations while improving water storage, aquifer recharge, and water conveyance within the DR/GR.

Mining pits permanently alter the surface and ground water resources. Recognizing both the need for limerock within the construction and transportation industry and the importance of the potable water resources and fresh water input into the watershed, it is important to develop and adhere to a plan that allows mining in a designated area, as this insures the protection and enhancement of the water resources. Through concentrating the mining within a designated area, the impacts to the water resources and watersheds are isolated to a single portion of the DR/GR and concurrently offset the impacts in other portions of the DR/GR.

Residential uses, even at low density, have altered surface water flows and patterns through the ditching of properties and excavation of ponds. These alterations must be more thoroughly reviewed with regard to the cumulative impact to the natural resources in the DR/GR. In addition, future residential areas need to be designed in a manner that is not detrimental to the functionality of wetland and upland ecosystems or the water table aquifer. The use of septic tanks within the DR/GR may also alter water quality; therefore, any options for transferring residential density and/or clustering development needs to consider sewer systems. Private wells can also lower the surface and ground water levels. Private wells need to be evaluated for cumulative impacts, and any options for transferring residential density and/or clustering development need to include a centralized potable and irrigation water system.

Private recreational facilities may be designed to enhance the surface and ground water levels to a more appropriate historic level. Site-specific water quantity and quality data will need to be collected to insure the proper design of golf courses and other private recreational facilities. This will also improve the native ecosystems and enhance wildlife habitat.

Public facilities in the DR/GR include public potable water wells, the Port Authority mitigation park, conservation lands, and roadways. The public potable water wells are located on various size properties. The larger property at the corner of Alico and Corkscrew Roads provides a wildlife habitat and flow-way connections that should be maintained and enhanced. The Port Authority mitigation park has undergone some restoration and may be available for additional restoration of surface and ground water quantities to more historic levels as part of the upper reaches of the Flint Pen watershed. The Conservation 20/20 lands that have been acquired provide opportunities for restoration of the historic water levels as part of the ecosystem restoration as offsets or mitigation for public works projects elsewhere in the county. The existing roadways may need to have improvements in order to restore historic flow-ways and allow wildlife movement.

A comprehensive and cumulative impact analysis of proposed development within the DR/GR will provide a means to implement Lee Plan Policy 1.4.5 to restore the surface and ground water levels to more historic levels. In turn, this process will improve the water storage, native ecosystems, and the watersheds.

C. Encourage/require ecosystem preservation and restoration
The DR/GR area historically consisted of a wetland-dominated ecosystem. Hydric pine flatwoods and the cypress swamp were the predominant wetland habitats, and slash pine flatwoods were the predominant upland habitat. The mosaic of wetland and upland habitats form ecosystems allowing for the storage of surface and ground water and sheet flow within the watershed. The restoration of the ecosystems will allow a greater quantity of surface and ground water storage, resulting in enhanced water resources within the DR/GR and in the larger, Estero Bay watershed. Additionally, these habitats provide foraging and nesting or denning areas for listed species including Florida panther, Florida black bear, Big Cypress fox squirrel, American wood stork, indigo snake, and American alligator. The Florida panther and Florida black bear need to have large, connected habitats away from the urban and suburban development to continue to be present within Lee County. The DR/GR is within the critical habitat areas for the Florida panther and American wood stork.

Natural Resources Impact & Mitigation:

A. Require wetland impact mitigation to occur within the DR/GR
Requiring that mitigation for wetland impacts in the DR/GR area be provided within the DR/GR is consistent with the Lee Plan and would provide opportunities to improve water storage and conveyance where needed. Also, this would allow for the maintenance or improvement of wildlife habitats for listed species such as the American wood stork, Big Cypress fox squirrel, Florida black bear and Florida panther. The implementation of the restoration plan compiled by KLECE as part of this study will allow an interconnection between existing conservation lands within the DR/GR and CREW lands to the east, creating a large wildlife loop in southeast Lee County and directing wildlife away from the urban centers to the west and north of the DR/GR.

B. Establish a regional offsite mitigation area (ROMA) within the DR/GR
Establishing a Regional Offsite Mitigation Area (ROMA) through FDEP would allow Lee County to be involved with determining the appropriate areas for wetland mitigation within the DR/GR so as to insure protection of the water supply, watersheds, and listed species. ROMAs operate similarly to a mitigation bank though without the lengthiness of the permitting process.

C. Establish a "natural resource extraction fee" to be utilized to purchase and/or restore lands within the DR/GR
Establishing a Natural Resource Extraction Fee for fill dirt and limerock mining recognizes these materials as valuable natural resources and identifies that the excavation of these materials does have an adverse, permanent ecological and hydrological impact on the DR/GR. Utilizing the generated fees to purchase and/or restore lands within the appropriate areas of the DR/GR will help offset the impacts created through the excavation of the permanent, deep mining pits.

D. Require mitigation for impacts to listed species habitat to occur within the DR/GR
The DR/GR in southeast Lee County provides habitats for listed species including the Florida panther; Florida black bear; American wood stork; Big Cypress fox squirrel; indigo snake; gopher tortoise; Audubon's caracara; American bald eagle; red cockaded woodpeckers; snail kite; wading birds; and American alligator. Lee Plan Policy 107.3.1 requires the county to "participate with the Southwest Florida Regional Planning Council and the Florida Game and Fresh Water Fish Commission in the development of a regional plan that identifies and protects areas utilized by wildlife, including panthers and bears, so as to promote the continued viability and diversity of regional species."

The county did compile an overall county mitigation plan as a long-range planning tool for permitting public works projects with unavoidable impacts to wetlands and/or wildlife. However, this study has provided more detailed information regarding the DR/GR in relation to current and historic wetlands and watersheds. Therefore, the mitigation plan for the study area should be updated to include the KLECE restoration plan.

Also, the county needs to coordinate with the US Fish and Wildlife Service and the Florida Freshwater Fish and Wildlife Conservation Commission to

insure wildlife impacts within the county are mitigated within the county. The adoption and strict adherence to a restoration, conservation and mitigation plan will insure long-the term protection and enhancement of wildlife habitat. Establishing such a plan and partnership with wildlife agencies would also provide a means to keep the mitigation for impacts to listed species habitat within Lee County and more specifically within the DR/GR.

Permit Compliance:

A. Establish a notification system that alerts compliance staff when an annual status or monitoring report is due. This will insure that monitoring is completed on time, and that follow-ups to any issues are addressed in a timely matter

Establishing a system that notifies staff when monitoring reports are due would insure that the permit conditions are met in a timely manner, and that any issues regarding impacts to water resources and conservation areas could be addressed. Additionally, the program could be set up to issue reminder notices to the permit holder prior to the due date of the report. This program would be more effective if the county obtained delegation of the ERP program from the State for projects within the DR/GR, giving direct authorization to enforce ERP permit conditions.

ENVIRONMENTAL RESOURCE PERMITTING & WETLANDS

APPENDIX 2.7.1A

State Definition of Wetlands F.S.S. 373.019

For the sole purpose of serving as the basis for the unified statewide methodology adopted pursuant to s. 373.421(1), as amended, "wetlands" means those areas that are inundated or saturated by surface water or groundwater at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce, or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto. Upon legislative ratification of the methodology adopted pursuant to s. 373.421(1), as amended, the limitation contained herein regarding the purpose of this definition shall cease to be effective.

APPENDIX 2.7.1B

F.S.S. 373.421 Delineation methods; formal determinations.
(1) The Environmental Regulation Commission shall adopt a unified statewide methodology for the delineation of the extent of wetlands as defined in s. 373.019(25). This methodology shall consider regional differences in the types of soils and vegetation that may serve as indicators of the extent of wetlands. This methodology shall also include provisions for determining the extent of surface waters other than wetlands for the purposes of regulation under s. 373.414. This methodology shall not become effective until ratified by the Legislature. Subsequent to legislative ratification, the wetland definition in s. 373.019(25) and the adopted wetland methodology shall be binding on the department, the water management districts, local governments, and any other governmental entities. Upon ratification of such wetland methodology, the Legislature preempts the authority of any water management district, state or regional agency, or local government to define wetlands or develop a delineation methodology to implement the definition and determines that the exclusive definition and delineation methodology for wetlands shall be that established pursuant to s. 373.019(25) and this section. Upon such legislative ratification, any existing wetlands definition or wetland delineation methodology shall be superseded by the wetland definition and delineation methodology established pursuant to this chapter. Subsequent to legislative ratification, a delineation of the extent of a surface water or wetland by the department or a water management district, pursuant to a formal determination under subsection (2), or pursuant to a permit issued under this part in which the delineation was field-verified by the permitting agency and specifically approved in the permit, shall be binding on all other governmental entities for the duration of the formal determination or permit. All existing rules and methodologies of the department, the water management districts, and local governments, regarding surface water or wetland definition and delineation shall remain in full force and effect until the common methodology rule becomes effective. However, this shall not be construed to limit any power of the department, the water management districts, and local governments to amend or adopt a surface water or wetland definition or delineation methodology until the common methodology rule becomes effective.

(2) A water management district or the department may provide a process by rule for formal determinations of the extent of surface waters and wetlands, as delineated in subsection (1). By interagency agreement, the department and each water management district shall determine which agency shall implement the determination process within the district. If a rule is adopted, a property owner, an entity that has the power of eminent domain, or any other person who has a legal or equitable interest in property may petition the district for a formal determination. In such rule, the governing board or the department shall specify information which must be provided and may require authorization to enter upon the property. The rule shall also establish procedures for issuing a formal determination. The governing board may authorize its executive director to issue formal determinations. The governing board must by rule prescribe the circumstances in which its executive director may issue such determinations. The governing board or the department may require a fee to cover the costs of processing and acting upon the petition. That fee must be established by rule. A water management district or the department may publish, or require the petitioner to publish at the petitioner's expense, notice of the intended agency action on the petition for a formal determination in a newspaper of general circulation within the affected area. Within 60 days prior to the expiration of a formal determination, the property owner, an entity that has the power of eminent domain, or any other person who has a legal or equitable interest in the property may petition for a new formal determination for the same parcel of property and such determination shall be issued, approving the same extent of surface waters and wetlands in the previous formal determination, as long as physical conditions on the property have not changed, other than changes which have been authorized by a permit pursuant to this part, so as to alter the boundaries of surface waters or wetlands and the methodology for determining the extent of surface waters and wetlands authorized by subsection (1) has not been amended since the previous formal determination. The application fee for such a subsequent petition shall be less than the application fee for the original determination.

(3) A formal determination is binding for a period not to exceed 5 years as long as physical conditions on the property do not change, other than changes which have been authorized by a permit pursuant to this part, so as to alter the boundaries of surface waters or wetlands, as delineated in subsection (1).

(4) The governing board or the department may revoke a formal determination if it finds that the petitioner has submitted inaccurate information to the district.

(5) A formal determination obtained under this section is final agency action and is in lieu of a declaratory statement of jurisdiction obtainable under s. 120.565. Sections 120.569 and 120.57 apply to formal determinations under this section.

(6) The district or the department may also issue nonbinding informal determinations or otherwise institute determinations on its own initiative as provided by law. A nonbinding informal determination of the extent of surface waters and wetlands issued by the South Florida Water Management District or the Southwest Florida Water Management District, between July 1, 1989, and the effective date of the methodology ratified in s. 373.4211, shall be validated by the district if a petition to validate the nonbinding informal determination is filed with the district on or before October 1, 1994, provided:

(a) The petitioner submits the documentation prepared by the agency, and signed by an agency employee in the course of the employee's official duties, at the time the nonbinding informal determination was issued, showing the boundary of the surface waters or wetlands;

(b) The request is accompanied by the appropriate fee in accordance with the fee schedule established by district rule;

(c) Any supplemental information, such as aerial photographs and soils maps, is provided as necessary to ensure an accurate determination;

(d) District staff verify the delineated surface water or wetland boundary through site inspection; and

(e) Following district verification, and adjustment if necessary, of the boundary of surface waters or wetlands, the petitioner submits a survey certified pursuant to chapter 472, which depicts the surface water or wetland boundaries. The certified survey shall contain a legal description of, and the acreage contained within, the boundaries of the property for which the determination is sought. The boundaries must be witnessed to the property boundaries and must be capable of being mathematically reproduced from the survey.

Validated informal nonbinding determinations issued by the South Florida Water Management District and the Southwest Florida Water Management District shall remain valid for a period of 5 years from the date of validation by the district, as long as physical conditions on the property do not change so as to alter the boundaries of surface waters or wetlands. A validation obtained under this section is final agency action. Sections 120.569 and 120.57 apply to validations under this section.

(7) (a) This subsection is intended to restore qualified developments to their pre-Henderson Wetland Protection Act status for contiguous wetlands. This provision will therefore streamline state wetland permitting without loss of wetland protection by other governmental entities.

(b) Wetlands contiguous to surface waters of the state as defined in s. 403.031(13), Florida Statutes (1991), shall be delineated pursuant to the department's rules as such rules existed prior to January 24, 1984, while wetlands not contiguous to surface waters of the state as defined in s. 403.031(13), Florida Statutes (1991), shall be delineated pursuant to the applicable methodology ratified by s. 373.4211 for any development which obtains an individual permit from the United States Army Corps of Engineers under 33 U.S.C. s. 1344:

1. Where a jurisdictional determination validated by the department pursuant to rule 17-301.400(8), Florida Administrative Code, as it existed in rule 17-4.022, Florida Administrative Code, on April 1, 1985, is re-validated pursuant to s. 373.414(13) and the affected lands are part of a project for which a vested rights determination has been issued pursuant to s. 380.06, or

2. Where the lands affected were grandfathered pursuant to s. 403.913(6), Florida Statutes (1991), and proof of prior notification pursuant to s. 403.913(6), Florida Statutes (1991), is submitted to the department within 180 days of the publication of a notice by the department of the existence of this provision. Failure to timely submit the proof of prior notification to the department serves as a waiver of the benefits conferred by this subsection.

3. This subsection shall not be applicable to lands:

   a. Within the geographical area to which an individual or general permit issued prior to June 1, 1994, under rules adopted pursuant to this part applies; or

   b. Within the geographical area to which a conceptual permit issued prior to June 1, 1994, under rules adopted pursuant to this part applies if wetland delineations were identified and approved by the conceptual permit as set forth in s. 373.414(12)(b)1. or 2.; or

   c. Where no development activity as defined in 1s. 380.01(1) or (2)(a)-(d) and (f) has occurred within the project boundaries since October 1, 1986; or

   d. Of a project which is not in compliance with this part or the rules adopted pursuant to 2ss. 403.91-403.929, 1984 Supplement to the Florida Statutes 1983, as amended.

4. The wetland delineation methodology required in this subsection shall only apply within the geographical area of an individual permit issued by the United States Army Corps of Engineers under 33 U.S.C. s. 1344. The requirement to obtain such individual permit to secure the benefit of this subsection shall not apply to any activities exempt or not subject to regulation under 33 U.S.C. s. 1344.

5. Notwithstanding subsection (1), wetland delineation methodology required in this subsection and any wetland delineation pursuant thereto, shall only apply to agency action under this part and shall not be binding on local governments except in their implementation of this part.

History.--s. 7, ch. 91-288; s. 31, ch. 93-213; ss. 6, 18, ch. 94-122; s. 100, ch. 96-410; s. 10, ch. 98-88; s. 170, ch. 99-13; s. 41, ch. 2006-1.

[1]**Note.**--Section 380.01 was transferred to s. 381.492 by the reviser in 1969; it was further redesignated as s. 381.0605 by s. 52, ch. 91-297.

[2]**Note.**--Sections 403.91-403.925 and 403.929 were repealed by s. 45, ch. 93-213, and s. 403.913, as amended by s. 46, ch. 93-213, was transferred to s. 403.939 and subsequently repealed by s. 18, ch. 95-145. The only section remaining within the cited range is s. 403.927.

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