

*Final Supplemental Environmental  
Impact Statement on Rock Mining  
in the Lake Belt Region of  
Miami-Dade County, Florida*

Executive Summary

U.S. Army Corps of Engineers  
Jacksonville District  
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# COVER SHEET

**Responsible Agency:** U.S. Army Corps of Engineers (USACE)

**Title:** *Supplemental Environmental Impact Statement on Rock Mining in the Lake Belt Region of Miami-Dade County, Florida*

**Location:** Miami-Dade County, Florida

*For additional information or for copies of this Final Lake Belt Supplemental Environmental Impact Statement (SEIS), contact:*

Leah Oberlin, EIS Project Manager  
U.S. Army Corps of Engineers  
Regulatory Division, Palm Beach Gardens Regulatory Office  
4400 PGA Boulevard, Suite 500  
Palm Beach Gardens, FL 33410  
Telephone: 561-472-3506

This document is also available on the *Lake Belt SEIS* website (<http://www.lakebeltseis.com>) for viewing and downloading.

The official closing date for the receipt of comments is 30 days from the date on which the Notice of Availability of this Final SEIS appears in the *Federal Register*.

**Abstract:** The USACE is evaluating proposals for limestone mining and related activities in an area of Miami-Dade County known as the Lake Belt. The USACE has analyzed both offsite and onsite alternatives for those that could reasonably satisfy the project purpose, and has carried forward eight alternatives for mining for further detailed analysis along with a No Action Alternative (Alternative 1). The eight Alternatives include: (2) mining under the set-aside 2002 USACE Permits, (3) Applicants' Preferred Alternative, (4) Full Mine-Out Under the Lake Belt Plan, (5) Exclusion of Mining or Related Activities in the Western Half of the Florida Power and Light Company Transmission Corridor, (6) Exclusion of Mining or Related Activities Beyond 2002 USACE Permits Along the Eastern Border of the Everglades National Park Adjacent to the Lake Belt, (7) Exclusion of Mining or Related Activities Along the Eastern Border of the Everglades National Park and in the Western Half of the Florida Power and Light Company Transmission Corridor, (8) Exclusion of Mining or Related Activities Along the Eastern Border of Everglades National Park and Along a 1,500-Foot-Wide Strip Along the Eastern Border of the Pennsuco Wetlands, and (9) Exclusion of Mining or Related Activities Along the Eastern Border of Everglades National Park and Along a 1,000- to 1,500-Foot-Wide Strip Along the Eastern Border of the Pennsuco Wetlands. Under the No Action Alternative, mining in the Lake Belt area requiring Department of the Army (DA) permits would not be restarted and the USACE would not issue any additional DA permits for mining in the Lake Belt. Under the other alternatives, mining would be permitted in the Lake Belt area in varying degrees over the next 5 to 40 years. The affected environment is primarily the area immediately surrounding the Lake Belt area in northern Miami-Dade County. Analyses indicate that the environmental impacts are closely tied to the number of acres proposed to be mined, with alternatives proposing the largest amount of mining having the largest environmental impacts for most of the areas of concern. The primary discriminators are: natural cover types and wetlands, habitat units, potential impacts to endangered wood storks, hydrology, water quality, and socioeconomics. A mitigation plan has been evaluated that could offset many of the potential environmental impacts, including seepage.

**Public Involvement:** In preparation of this *Final Lake Belt SEIS*, the USACE considered comments received from the public on the *Draft Lake Belt SEIS* and comments on a proposed seepage mitigation plan. Comments were received via mail, fax, email, and through the project's website. In addition, comments were taken from a public meeting on the *Draft Lake Belt SEIS* held on September 18, 2007, in Doral, Florida. Comments received and USACE's responses to these comments are found in Volume II, Appendix G, the Comment Response Appendix of the *Final Lake Belt SEIS*. If the USACE schedules a public meeting on permit applications for Department of the Army permits pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) within Lake Belt, notification of that meeting will be available at the following website: <http://www.saj.usace.army.mil/Divisions/Regulatory/publicnotices.htm>.

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## List of Acronyms

|                       |   |
|-----------------------|---|
| EIS                   | environmental impact statement  |
| ENP                   | Everglades National Park  |
| <i>Lake Belt SEIS</i> | <i>Supplemental Environmental Impact Statement on Rock Mining in the Lake Belt Region of Miami-Dade County, Florida</i> |
| MDLPA                 | Miami-Dade Limestone Products Association   |
| NWWF                  | Northwest Wellfield   |
| ROD                   | Record of Decision  |
| SEIS                  | supplemental environmental impact statement   |
| USACE                 | U.S. Army Corps of Engineers  |
| WCA                   | Water Conservation Area   |
| WRAP                  | Wetland Rapid Assessment Procedure  |



## SUMMARY

The U.S. Army Corps of Engineers (USACE) Jacksonville District has prepared the *Draft Supplemental Environmental Impact Statement on Rock Mining in the Lake Belt Region of Miami-Dade County, Florida (Lake Belt SEIS)* to evaluate potential impacts of further limestone mining within wetlands in western Miami-Dade County, Florida, an area referred to as the “Lake Belt.” The Lake Belt is an approximately 80-square-mile area between the Everglades and the urbanized parts of the County.

### S.1 BACKGROUND

The environmental impact statement (EIS) is referred to as “supplemental” because it expands the analysis presented in the *Final Programmatic Environmental Impact Statement for Rock Mining – Freshwater Lakebelt Plan, Miami-Dade County, Florida (Final Lake Belt PEIS)*, issued in May 2000. That EIS focused on the potential impacts of a 50-year mining plan within the Lake Belt area. After evaluating the EIS, in April 2002, the USACE issued a Record of Decision (ROD) and permits that allowed mining in the Lake Belt area to continue. However, the USACE’s decision was challenged in U.S. District Court and, in March 2006, the court found in favor of the plaintiffs and instructed the USACE to conduct additional analyses of rock mining in the Lake Belt region. Accordingly, the USACE began preparing the supplemental environmental impact statement (SEIS). In July 2007, the court supplemented the March 2006 decision and set aside 4 of the existing 10 permits within an expanded setback zone around Miami-Dade County’s Northwest Wellfield (NWWF). The District Court’s decision was appealed to the U.S. Court of Appeals for the Eleventh Circuit, which issued an opinion on May 9, 2008, vacating the District Court’s opinion and remanding the case to the District Court for further proceedings. Despite the vacatur of the District Court’s opinion, the USACE continued preparing the SEIS as applications had been received for additional mining projects in Lake Belt beyond the 10-year footprint. On January 30, 2009, the District Court issued a new opinion in which it again ruled in favor of the plaintiffs.

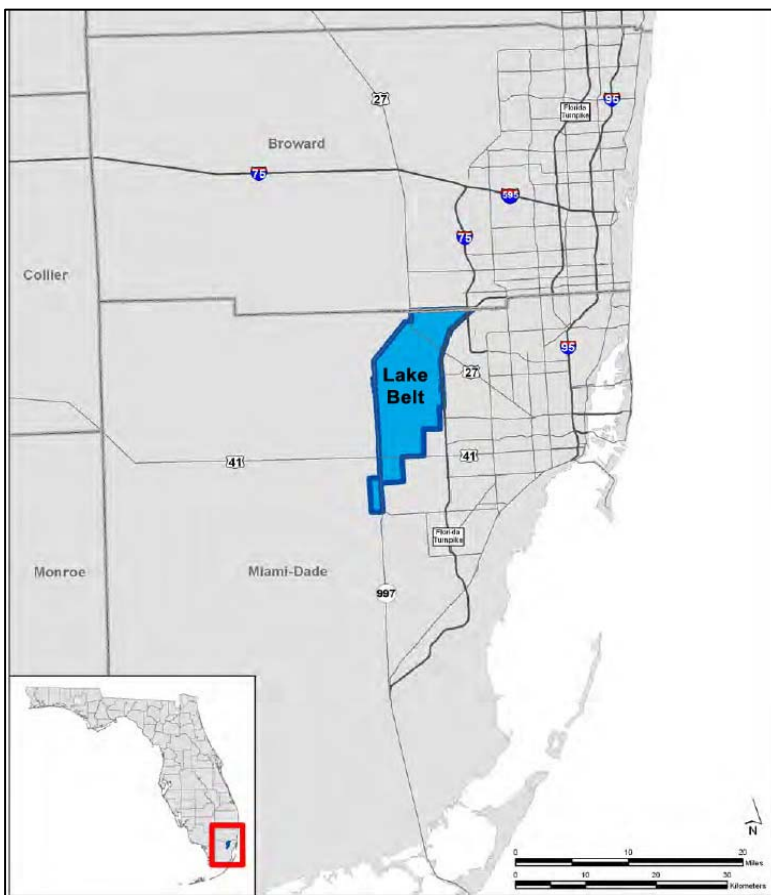


Figure S-1. Lake Belt Area Location

The Lake Belt is an area established by the Florida Legislature in 1997 to implement the Miami-Dade County Lake Belt Implementation Plan (Lake Belt Plan). It is located west of Miami and east of Everglades National Park (ENP) and Water Conservation Area (WCA)-3 in northern Miami-Dade County (see Figure S-1). Rock has been mined in this area since the 1950s. In South Florida, groundwater occurs near the surface of the ground so that when rock is mined, even in shallow pits, excavated areas quickly fill with water and manmade lakes are formed. The name Lake Belt comes from the presence of many such 'lakes.'

The rock (limestone) mined in the Lake Belt area provides base materials used for building homes, other facilities, roads, and infrastructure that support the people living throughout the region. The Lake Belt area was acquired by the mining industry over time. It is an area of high productivity as evidenced by the presence of five of the largest limestone mines in the United States. In 2006, the Lake Belt area produced over 54 million tons of limestone—over 40 percent of Florida's total demand. Output from the Lake Belt fell in 2007 and 2008 as did output across the State due the economic slowdown. However, the Lake Belt continued to supply about 40 percent of the State's demand during this period.

USACE is a permitting agency, and, therefore, does not support or oppose an applicant's proposed action. The USACE ensures that a permitted action is not contrary to the public good by balancing the rights of property owners with the need to protect the natural resources of the region, including the local water supply and the Everglades. The final permitting decisions made in conjunction with the SEIS will balance restoration goals, public concerns, and private property rights and will represent the agency's Preferred Alternative or regulatory decision on a project.

## **S.2 ABOUT THE FINAL LAKE BELT SEIS**

While Florida's economy is currently experiencing a downturn, it is expected that over the next 30–40 years, the continued construction of housing units, nonresidential building space, roads, and infrastructure will result in the continued demand and need for high-quality construction materials throughout Florida. The USACE considers the project's purpose to be to provide affordable, high-quality construction-grade limestone that satisfies the public need for such limestone within peninsular Florida, defined as geographically comprising Florida Department of Transportation (FDOT) Districts 1, 2, 4, 5, 6, and 7. Mining interests and the State have requested permits that would allow mining in the Lake Belt to continue.

The SEIS evaluates alternatives that would continue to provide high-quality, construction-grade limestone to the construction industry in peninsular Florida.

The objectives of the *Lake Belt SEIS* are to

- evaluate the existing environmental and socioeconomic conditions and potential future impacts associated with the issuance of Clean Water Act (CWA) permits associated with the excavation of limestone from the Lake Belt area, and
- describe and assess alternatives to the proposed mining and related activities in the Lake Belt area for which CWA authorization is sought.

## **S.3 PUBLIC INVOLVEMENT**

One of the basic tenets of the National Environmental Policy Act (NEPA) is that comprehensive information is made available to the public and agency officials before decisions are made and before actions are taken. In addition, NEPA gives all persons, organizations, and government agencies the right to comment on proposed Federal actions that are evaluated by an EIS. In order to provide the public with the comprehensive information they need to comment, the early identification of issues and potential impacts is critical to efficient, effective EIS preparation. To obtain public input for the SEIS and to ensure that the information provided in the SEIS was comprehensive, the USACE sought input both early in the process, as required by NEPA, and throughout the development of the document. The opportunities for public input available during the SEIS development and a brief discussion of comments received in response to each public comment opportunity are summarized below. A more comprehensive discussion of comments and USACE's responses is included in Appendix G of the SEIS.

On October 4, 2006, a Notice of Intent was published in the *Federal Register* announcing the USACE's intention to prepare an SEIS on the potential impacts of further limestone mining within the Lake Belt area and the initiation of a scoping period to determine issues to be addressed in the SEIS. The scoping period extended from October 4, 2006, through November 17, 2006. On October 19, 2006, a public scoping meeting was held at the Miami-Dade Fire Rescue Headquarters in Doral, Florida. During the

scoping meeting, seven individuals gave oral comments on the scope of the SEIS and one written comment was received. The USACE received comments from interested parties and individuals, including FDOT, Miami-Dade County Department of Environmental Resources Management, ENP, Sierra Club, Florida Transportation Builders Association, South Florida Chapter of the Associated General Contractors of America, Floridians for Better Transportation, Florida Concrete and Products Association, SelectBuild Construction, Miami-Dade Limestone Products Association (MDLPA), and a private citizen.

A Notice of Availability for the *Draft Lake Belt SEIS* was issued in August 2007 (72 FR 48636; see Appendix A). The formal public comment period began August 17, 2007, and ended October 22, 2007. During this comment period, a public meeting was held on September 18, 2007, in Doral, Florida, near the Lake Belt. Over 200 people attended the public meeting; see Appendix G for the transcript of that meeting. In addition, Federal agencies, State and local governmental entities, American Indian Tribal Governments, and the general public were encouraged to submit comments via U.S. mail, e-mail, or the Lake Belt website ([www.lakebeltseis.com](http://www.lakebeltseis.com)).

Nearly 300 comments were received on the *Draft Lake Belt SEIS*. Comments were received from (1) Federal agencies, including the U.S. Environmental Protection Agency and the U.S. Department of the Interior; (2) State government offices, including FDOT, the Florida Department of Environmental Protection, and the South Florida Water Management District (SFWMD); (3) local government offices, including Miami-Dade County and the Miami-Dade Expressway Authority; (4) the Miccosukee Tribe of Indians of Florida; (5) non-governmental organizations, including the Sierra Club, National Parks Conservation Association, Natural Resources Defense Council, Engineering Contractors' Association, Florida Transportation Builders' Association, Floridians for Better Transportation, Florida Chamber of Commerce, Florida Wildlife Federation, Latin Builders Association, MDLPA, Clean Water Action, Nathan Ratner Testamentary Trust and Nathan Ratner Charitable Foundation, Miami-Dade County Public School Truck and Bus Heavy Equipment Diesel Mechanics Craft Advisory Committee, and Associated General Contractors of America; (6) private companies, including the General Asphalt Company, Community Asphalt Corporation, Austin Tupler Trucking, Allied Trucking of Florida, Tarmac America, Medley Block Industries and Universal Concrete, Williams Paving Company, Condotte America, National Trucking and Allstar Enterprises, Weekley Asphalt Paving, Kelly Tractor, Community Reinvestment Agency, Inc., Florida East Coast Railway, Tri-County Concrete Products, U.S. Concrete Pipe and U.S. Concrete Products, and CSX Corporation; and (7) numerous private individuals.

During October 2007, the miners submitted nine additional permit applications that, taken together, are equivalent to Alternative 3 as included in the SEIS. The USACE released these applications for public comment on February 5, 2008, by issuing public notices requesting public comments within 30 days of the publication date. The comments received on these applications must be separated into two categories. First, there are comments that overlap or relate to performing an adequate evaluation of the proposed project's impacts under NEPA, which were considered in the development of the final SEIS. Second, there are comments that relate to the decisionmaking process that will occur after completion of the SEIS. These comments relate to the USACE's decision on the applicants' preferred alternative, which will be addressed in the ROD.

On August 1, 2008, the applicants submitted a proposed mitigation plan for seepage attributed to limestone mining in the Lake Belt (see Appendix H). The USACE released this plan for public comment by publishing a public notice in early August 2008 and requesting public comments by September 4, 2008. The following discussion presents a summary of the major issues raised by commentors regarding the applicants' plan and the USACE's responses. Commentors included the U.S. Geological Survey, Florida Department of Environmental Protection, Miami-Dade County Water and Sewer Department, Miami-Dade County Department of Environmental Resources Management, and Natural Resources Defense Council. These issues are addressed throughout the SEIS and are responded to in the "Comment/Response Document," Appendix G of the SEIS.

### **S.3.1 Scoping Issues**

Comments received during the SEIS scoping period focused on five issues:

1. The SEIS should evaluate alternatives other than those proposed by the limestone mining industry.
2. The SEIS should consider all issues raised in the lawsuit, including seepage concerns that could reduce the amount of water flowing into the Everglades, the effect of proposed mining on the Biscayne Aquifer and drinking water in Miami-Dade County, and the effect of proposed mining on endangered species in the area.
3. The SEIS should include consideration of mitigation options beyond those presented in the Pennsuco Wetlands.
4. The SEIS should evaluate the continued need for limestone to support building needs throughout Florida and the economic impact on Miami-Dade County and the State of Florida from a mining stoppage.
5. The SEIS should consider the availability of supplies of limestone outside the Lake Belt area to meet the demand within the State of Florida.

The following resource areas were also identified for analysis in the SEIS: vegetation, wetlands, wildlife, cultural resources, geology and soils, water quality, air quality, hazardous and toxic wastes, aesthetics, noise, recreation, land use, and environmental justice. Primary areas of environmental concern are endangered species, loss of natural vegetation and wetland functions and value, groundwater seepage to the east, water quality, socioeconomics, and proposed mitigation activities that may be able to offset some of the potential impacts.

### **S.3.2 Issues Related to the Draft SEIS**

Several topics raised by public comments on the *Draft Lake Belt SEIS* are of broad interest or concern. The following discussion presents a summary of these comments separated by major issues.

#### **Purpose and Need:**

A number of commentors expressed general opposition to continued mining in the Lake Belt area due to the potential harmful environmental impacts mining could have on various environmental resources, including the wood stork and the quantity and quality of drinking water in Miami-Dade County and water flowing into the Everglades.

A number of commentors expressed general support for continued mining in the Lake Belt area, citing economic benefits associated with this mining and the quality of the rock produced in the Lake Belt; these commentors suggested that the potential environmental impacts were not significant enough to warrant a suspension of mining or denial of future permit applications for continued mining in the Lake Belt.

A commentor expressed concern that the purpose and need was unduly restricted due to the inclusion of the words “from the Lake Belt area” at the end of the sentence, “The project purpose is to continue to provide high-quality construction-grade limestone to the construction industry in Florida from the Lake Belt area.”

#### **Alternatives:**

Commentors expressed concern that the alternatives included in the *Draft Lake Belt SEIS* with the exception of the No Action Alternative (Alternative 1) focused on expanding mining in the Lake Belt rather than reducing mining in the Lake Belt below levels currently permitted.

Commentors expressed concern that non-Lake Belt alternatives were not included in the *Draft Lake Belt SEIS* and that materials could be provided from a variety of sources, including other Florida mines and Alabama, Georgia, and offshore locations.

**Wildlife:**

Commentors expressed concern that the SEIS relied on the Biological Opinion for wildlife impact evaluation and that the analysis presented in the Biological Opinion was only applicable to the current permits and could not be extrapolated to cover impacts over the entire Lake Belt. Concerns were also expressed that the wood stork suitability factors included in the Biological Opinion and used in the SEIS were not applicable to wading birds and were therefore not applicable to the wood stork analysis presented in the SEIS.

Commentors expressed concern that changes in hydroperiods as a result of seepage due to mining activities in the Lake Belt could harm the endangered Cape Sable seaside sparrow and thus result in the need for formal consultations with the U.S. Fish and Wildlife Service (FWS) under the Endangered Species Act.

**Seepage:**

The SEIS should acknowledge that seepage impacts need to be offset and should designate who would be responsible for implementing actions to offset these impacts. Commentors expressed concern that the seepage impact evaluation included in the SEIS did not discuss in enough detail the possible mitigation options that could be taken to offset potential seepage impacts or potential difficulties associated with implementing some of these options (e.g., higher canal stages).

Commentors expressed concern that the seepage impact evaluation included in the SEIS did not adequately consider the potential loss of water from WCA-3B and ENP under the various alternatives and did not take into account the changes in the policies of the SFWMD with regard to consumptive use and the future availability of additional water from the regional system.

**Water Quality:**

Commentors expressed concern that the monitoring efforts required at the Lake Belt are insufficient to detect the presence of pathogens such as *Cryptosporidium* or *Giardia* or contaminants such as benzene, and that additional monitoring is needed to ensure that a safe source of drinking water continues to be provided within the Lake Belt. In addition, commentors requested that mining activities in the vicinity of the NWWF be restricted or limited and that additional mitigation activities be required to protect the NWWF.

**Groundwater Travel Time:**

Commentors expressed concern that the alternatives included in the *Draft Lake Belt SEIS* proposed mining within an area considered to be within 60 days' travel time for groundwater to flow to the pumps in the NWWF, thus increasing the potential for pathogens to reach the pumps before they could be naturally filtered or die off.

**Socioeconomics:**

Some commentors expressed concern that the socioeconomic impact evaluation was inadequate, utilized an improper modeling instrument, relied too heavily on materials favorable to the rock-mining industry, and did not adequately predict potential economic changes related to the different alternatives included in the SEIS.

**Mitigation Plan:**

Commentors expressed concern that the wetlands mitigation options included in the *Draft Lake Belt SEIS* were not discussed in enough detail to allow a decision to be made.

Commentors expressed concern that the *Draft Lake Belt SEIS* allowed habitat unit credits for that portion of the deepwater lakes that extends from the proposed littoral shelves out to 200 feet into the deepwater lakes (referred to as "lakes nearshore" in the draft SEIS). These credits were then used to partially offset the loss of habitat units due to mining activities.

Commentors expressed concern that the wetland impact evaluation included in the draft SEIS did not adequately consider the decreasing prevalence of invasive species such as melaleuca in the Lake Belt due to the success of biological or other controls that have been used in the area and that, if the

decreasing prevalence of these invasive species were considered, the number of lost habitat units related to mining activities would be greater.

**Comprehensive Everglades Restoration Plan:**

Commentors expressed concern that the relationship of proposed mining activities with respect to planned Comprehensive Everglades Restoration Plan (CERP) activities has not been adequately evaluated or discussed in the SEIS.

**Other:**

A commentor requested that an analysis of the potential impacts of implementing any of the alternatives with regard to greenhouse gas emissions be presented in the SEIS and specifically called for an analysis of the emissions connected with the operation of cement kilns.

**S.3.3 Issues Related to the Miners' Seepage Mitigation Plan**

The following discussion presents a summary of these comments separated by major issues. These issues are addressed throughout the SEIS.

**Incorrect Baseline Being Used to Evaluate Seepage:**

A comment was received that stated an incorrect baseline of 2006 has been utilized in the proposed mitigation plan.

**The Proposed Seepage Mitigation Plan Does Nothing to Address Losses from the L-31N Canal and ENP:**

The model indicates a seepage loss of over 20 percent based on the preferred mining option from the L-31N Canal to the east, yet the proposed plans do not do anything to lessen these losses.

**The Model Used to Evaluate the Various Proposed Seepage Mitigation Plans is Inadequate:**

A number of comments were received that questioned the ability of the Lake Belt Groundwater Flow Model to accurately assess the effectiveness of the proposed mitigation plans. Questions were raised regarding the model's ability to handle the conditions that exist in the Lake Belt, as reported in recent U.S. Geological Survey papers.

**A Schedule for Implementing the Proposed Plan Needs to be Set:**

Comments were received that none of the alternatives set forth in the mitigation plan contain a schedule for implementation. An implementation schedule that is linked to the schedule of impacts should be added to each of the alternatives.

**The Proposed Dade-Broward Levee Recharge Canal Would Result in a Long-Term Operation and Maintenance Concern:**

Proposed Mitigation Plan 3 (i.e., the Dade-Broward Levee Recharge Canal) would necessitate perpetual pumping in order to avoid adverse hydrologic impacts to the Pennsuco Wetlands at any future date. This usage of freshwater would also have to compete with other emergency demands for water during drought conditions. In principle, commentors expressed concern about any seepage mitigation plan that would require active intervention by a governmental entity in perpetuity with associated pumping costs. The proposal did not identify the management entity (Federal, State, or County) that would be responsible for perpetual maintenance and operation of the pump station and associated control structures. An additional concern is that the slow infiltration rate from the recharge canal will eventually become restricted by the accumulation of silt or organic matter. This will require periodic cleaning and maintenance and the associated costs.

**Water Quality Concerns:**

What approach is planned to address short- and longer-term water quality change issues associated with the change in land use as wetlands are transformed into borrow pits/lakes?

**Opposition to the Use of Seepage Barriers:**

Although the seepage barrier options were not selected as the preferred options, please note that Miami-Dade County opposes any barrier that restricts water supply to the wellfields.

**Effect of Proposed Dade-Broward Levee Recharge Canal on Regional Water:**

It is not clear how this option would prevent seepage out of the regional system since regional water would be pumped into the proposed recharge canal. A clearer analysis of the water budget with this proposed option would be beneficial.

**The Model Needs to be Updated for CERP Projects:**

The model may need to be revised to account for CERP projects that will affect the area hydrology. There are several CERP, Combined Structural and Operating Plan, and Modified Water Delivery projects that will have a significant impact on seepage rates in the area once they are completed; these impacts should be evaluated in conjunction with the mining alternatives.

**Seepage Modeling Needs to Include Proposed Mines Below the Krome Avenue Mine:**

The updated seepage modeling should also be expanded to include the current and proposed quarries that are located along Krome Avenue south of the Tamiami Trail, as well as reflect any seepage effects from the nearby West Wellfield. In addition to the mine operated by Kendall Properties and Investments, there is a mine operated by Krome Mining Partners. An application for a new mine to be located adjacent to Krome Mining Partners is currently under review. The seepage effects from all the mines should be looked at holistically, even if two locations are situated south of the statutorily-defined limits of the Miami-Dade Lake Belt region.

**Modeling Shows that the Pennsuco Wetlands Would Continue to be Adversely Impacted by Seepage:**

The model results for all proposed mitigation alternatives, with exception of the flow barrier, show that the proposed alternatives would not achieve the baseline 2006 hydroperiods and would result in further draining of the Pennsuco Wetlands.

**How Would Higher Water Levels in the Pennsuco Wetlands be Dealt With:**

The plan does not explain how to deal with potentially higher water levels in the private lands in the Pennsuco Wetlands as a result of proposed Mitigation Plan 3 (i.e., the Dade-Broward Levee Recharge Canal).

### **S.3.4 Issues Related to the Permit Applications**

The following discussion presents a summary of the major issues raised by commentors regarding NEPA-related issues with regard to the permit applications for additional mining in the Lake Belt received by the USACE in October 2007. These issues are addressed throughout the SEIS, where appropriate, and responses to them will be finalized in the USACE ROD.

**Expansion of Mining Activities in the Lake Belt Would Remove Needed Buffers:**

The proposed expansion would remove the wildlife habitat and water quality buffers that are currently being provided for ENP and the NWWF.

**Expansion of Mining Activities in the Lake Belt Would Increase Seepage:**

The proposed expansion would result in increased seepage of groundwater away from ENP, the L-30 and L-31N Canals, and the Pennsuco Wetlands.

**Expansion of Mining Activities in the Lake Belt Would Increase Risk of Groundwater Contamination:**

The proposed expansion would increase the risk of contamination reaching the Biscayne Aquifer.

**Applicants Have Not Transferred their Pennsuco Property to Public Ownership:**

The companies are requesting new permits for expanded mining without previously transferring their remaining land in the Pennsuco Wetlands to public ownership for mitigation purposes.

**Uncertainties Remain with Regard to Proposed Mitigation Outside the Pennsuco Wetlands:**

Uncertainties exist regarding the availability, timing, and success of mitigation efforts outside the Pennsuco Wetlands that would be needed to offset the additional losses that could result from the proposed expansion of mining in the Lake Belt.

**Absence of a Final EIS:**

The USACE should not have issued the public notices for mining applications without completing an adequate EIS.

**Inadequate Public Notice:**

The mining applications fail to include sufficient information to give a clear understanding of the nature and magnitude of the activity to generate meaningful comment. The notice must include, at a minimum, a description of all proposed activities and all available information which may assist interested parties in evaluating the likely impact of the proposed activities.

**Failure to Comply with the Endangered Species Act:**

The USACE's proposal to issue the mining applications violates its obligations under the Endangered Species Act and the FWS's implementing regulations.

## **S.4 DECISIONS TO BE MADE**

While this SEIS supplements the *Final Lakebelt PEIS*, neither document addresses a USACE program. Rather, both documents address potential regulatory action within a region. Therefore, despite the name given to the *Final Lakebelt PEIS*, both EISs are defined as regional—not programmatic. The information compiled in this SEIS will be used by the USACE to determine whether to issue, issue with modifications or conditions, or deny Section 404 CWA permits for the purpose of mining within the Lake Belt. Lake Belt area mining companies could impact approximately 14,800 acres of wetlands through filling, land clearing, and other activities associated with limestone mining operations if the full Lake Belt mining plan is implemented. The alternatives under consideration include the No Action Alternative (no further USACE permits), three mining alternatives that were provided by the MDLPA, and several alternatives that limit the extent of the incremental MDLPA alternatives for specified objectives.

## **S.5 CHANGES FROM THE DRAFT LAKE BELT SEIS**

In preparing the *Final Lake Belt SEIS*, the USACE made revisions in response to comments received from other Federal agencies, State and local government entities, American Indian Tribal Governments, and the public. In addition, the SEIS was changed to provide additional environmental baseline information, modify the project purpose, include additional analyses, correct inaccuracies, make editorial corrections, and clarify text. The following sections summarize the most important changes made to the SEIS.

### **S.5.1 Revised Statement of Overall Purpose and Need**

The draft SEIS described the project purpose and need as "to continue to provide high-quality construction-grade limestone to the construction industry in Florida from the Lake Belt area." Upon further review, including consideration of comments submitted following publication of the draft SEIS, the USACE has determined that the overall project purpose and need should be revised to reflect the public need within peninsular Florida for affordable, high-quality construction-grade aggregate.

### **S.5.2 Incorporation of Two New Alternatives**

Alternative 8 has been added to the *Final Lake Belt SEIS* to evaluate the impacts of excluding mining in a 1,500-foot-wide area running from north to south parallel to the Pennsuco Wetlands. This exclusion area would be improved through melaleuca eradication and maintained as a large area of additional wetlands within the Lake Belt. It would then be turned over to public ownership. Also, under Alternative 8, no additional mining would be allowed beyond that permitted under the 2002 USACE permits south of Tamiami Trail and adjacent to ENP.

Alternative 9 has been added to the *Final Lake Belt SEIS* to evaluate the impacts of limited mining in a 1,000- to 1,500-foot-wide area running from north to south parallel to the Pennsuco Wetlands. This exclusion area would be improved through melaleuca eradication and maintained as a large area of additional wetlands within the Lake Belt. It would then be turned over to public ownership. Also, under Alternative 9, no additional mining would be allowed beyond that permitted under the 2002 USACE permits south of Tamiami Trail and adjacent to ENP.

### **S.5.3 Incorporation of Agricultural Cover Type as a Wetland Cover Type**

Agricultural areas were not included in the category of potentially affected wetlands in the draft SEIS. The USACE has decided to include the agricultural cover type in the wetland category in the *Final Lake Belt SEIS* because of the potential for agricultural areas to include jurisdictional wetlands. By assuming that all agricultural lands are wetlands, the number of acres of wetlands that could be impacted by the various mining alternatives considered in the *Final Lake Belt SEIS* increases from 13,600 (in the *Draft Lake Belt SEIS*) to 14,800 acres.

### **S.5.4 Expansion of Wood Stork Analysis**

The wood stork analysis presented in the *Final Lake Belt SEIS* has been expanded to include an analysis of the potential impacts using suitability factors specific to wading birds in addition to the all birds suitability factors used in the *Draft Lake Belt SEIS* evaluation. The suitability factors used in the *Draft Lake Belt SEIS* were the same as the suitability factors used in the August 2006 FWS Biological Opinion related to the Lake Belt. These suitability factors were developed using information related to all birds from O'Hare and Dalrymple's 1997 report, "Wildlife in Southern Everglades Invaded by Melaleuca (*Melaleuca quinquenervia*)" (O'Hare and Dalrymple 1997). Based on comments received on the *Draft Lake Belt SEIS*, this information was reexamined and a set of suitability factors was developed specific to wading birds. Because the number of wading birds observed in this study was relatively low compared with all birds, the *Final Lake Belt SEIS* evaluates the potential impacts of mining on wood storks under the various alternatives, using both the all birds suitability factors and the wading birds suitability factors.

The definition of suitable wood stork foraging habitat has been expanded in the *Final Lake Belt SEIS* to include dense mature melaleuca and dense melaleuca saplings based on discussions with the FWS. These cover types have very low suitability factors but could potentially support wood stork foraging. As a result, the area of suitable wood stork foraging habitat within the Lake Belt shown in the *Final Lake Belt SEIS* is much higher than that shown in the *Draft Lake Belt SEIS* (approximately 35,000 acres for the baseline compared with approximately 20,000 acres).

Also based on discussions with the FWS, an analysis of potential wood stork impacts was developed specifically for short-hydroperiod wetlands within the Lake Belt. Short-hydroperiod wetlands are considered critical to the wood stork during the nesting season. This analysis is included in Appendix I, which was added to the *Final Lake Belt SEIS*.

### **S.5.5 Incorporation of Updated Environmental Data and Other Information**

Information was updated in the *Final Lake Belt SEIS* to reflect the most recent environmental data and to respond to comments received on the *Draft Lake Belt SEIS*. Resource areas most affected include wildlife, hydrology, water quality, socioeconomics, cumulative impacts, mitigation of seepage impacts, and mitigation of endangered species impacts. Other new information incorporated into the *Final Lake Belt SEIS* analyses includes an assessment of the potential impacts of the alternatives with respect to greenhouse gas emissions, which has been added to the air quality analysis. A new section (Section 5.6) was added to discuss possible permit requirements that could be included in future mining permits, if any are issued, including requirements allowing for additional water monitoring or requiring additional mitigation actions that may need to be taken in conjunction with such permits. Appendix C was revised to more clearly indicate the purpose and use of the Lake Belt Groundwater Flow Model and to incorporate changes in the model, such as reducing the planned pumpage rate for the NWWF to 97 million gallons per day (MGD) from 155 MGD, based on Miami-Dade County's revised permit for operation of the NWWF over the next 20 years and the decision by the applicants not to propose mining Section 13 south of

Tamiami Trail. Other changes have been made to the model to improve its applicability to analyzing the effect of mining activities in the Lake Belt on groundwater flow, as discussed in Appendix C. Changes in the text of the *Final Lake Belt SEIS* are sidebarred to highlight significant alterations compared with the *Draft Lake Belt SEIS*.

### **S.5.6 Addition of Appendix G, “Comment/Response Document”**

Appendix G, the “Comment/Response Document,” has been added to the SEIS. Section G.1 presents public comments on the *Draft Lake Belt SEIS* and USACE responses. Section G.2 presents the USACE responses to comments received on the applicants’ seepage mitigation plan (see Appendix H).

### **S.5.7 Addition of Appendix H, “Applicants’ Seepage Mitigation Plan”**

Appendix H, the “Applicants’ Seepage Mitigation Plan,” has been added to the SEIS. This plan details a number of different options for addressing seepage concerns related to the various mining alternatives considered in the SEIS. The USACE released this plan to the public for comment. A number of comments were received and responses to these comments have been included in the “Comment/Response Document” (see Appendix G). The USACE analysis of this plan is included in the revised Section 5.3.3.

### **S.5.8 Addition of Appendix I, “Potential Wood Stork Impacts Related to Changes in Short-Hydroperiod Wetlands Within the Lake Belt”**

As discussed above, based on discussions with the FWS, the USACE has analyzed the potential impacts of the various mining alternatives on short-hydroperiod wetlands within the Lake Belt. These wetlands are particularly important to wood storks during the nesting season. This analysis was done using both all birds and wading birds suitability factors.

### **S.5.9 Addition of Appendix J, “Relevant Sections of the Code of Miami-Dade County, Florida With Respect to Protection of the Northwest Wellfield”**

As requested by Miami-Dade County in their comments on the *Draft Lake Belt SEIS*, relevant sections of the Code of Miami-Dade County with respect to protection of the NWWF has been added as Appendix J.

## **S.6 ALTERNATIVES EVALUATED IN THE DRAFT LAKE BELT SEIS**

NEPA requires consideration of a range of reasonable alternatives. Nine alternatives were identified for evaluation in the *Final Lake Belt SEIS*.

### **S.6.1 Alternative 1 – No Action**

Under Alternative 1, all mining-related activities would cease upon issuance of the ROD for the *Lake Belt SEIS* (assumed for analysis purposes to be early 2009). At that point, any need for limestone and related products currently filled by materials from the Lake Belt area would have to be satisfied by other sources that could be within or outside the State.

Alternative 1 would result in the smallest amount of the Lake Belt (approximately 9,900 acres, an increase of about 2,200 acres over the baseline of 2002) being converted to lake cover types (includes lakes, lakes nearshore, littoral shelves, and lake perimeters) and the lowest environmental impacts (in general), if implemented. However, this alternative could also result in adverse economic impacts on the construction industry in Florida; FDOT, which relies on limestone from the Lake Belt area for a large portion of its needed road base; and the economy of central and South Florida. In addition, this alternative could result in a disproportionate and adverse impact on minority and low-income populations.

### **S.6.2 Alternative 2 – 2002 USACE Permitted Mining**

Under Alternative 2, mining would continue through the life of the 2002 USACE permits (as soon as 2012), which would need to be reissued, at which time limestone mining in the Lake Belt area would stop. Alternative 2 would result in the next smallest amount of the Lake Belt (approximately 13,600 acres, an increase of about 5,800 acres over the baseline of 2002) being converted to lake cover types after Alternative 1 and the next lowest environmental impacts (in general), if implemented.

### **S.6.3 Alternative 3 – Applicants' Preferred Alternative**

Under Alternative 3, the limestone mining industry and the State would request additional permits beyond the 2002 USACE permits that would allow mining to expand in the Lake Belt area. Alternative 3 would result in approximately 19,800 acres (an increase of about 12,100 acres over the baseline of 2002) being converted to lake cover types, if implemented. Included in these totals are approximately 350 acres of County-owned land that the State has proposed to mine on the closed Opa Locka West Airport site.

### **S.6.4 Alternative 4 – Full Mine-Out Under the Lake Belt Plan**

Under Alternative 4, the limestone mining industry would request additional permits beyond the 2002 USACE permits that would allow mining to expand in the Lake Belt area beyond the permits envisioned under Alternative 3. Alternative 4 would result in approximately 25,800 acres (an increase of about 18,000 acres over the baseline of 2002) being converted to lakes, if implemented. As with Alternative 3, included in these totals are approximately 350 acres of County-owned land that the State has proposed to mine on the closed Opa Locka West Airport site. Alternative 4, in general, would result in the greatest environmental impacts.

### **S.6.5 Alternative 5 – Exclusion of Mining or Related Activities in the Western Half of the Florida Power and Light Company Transmission Corridor**

Alternative 5 was developed by the USACE. It allows the USACE to limit environmental impacts along the eastern border of the Pennsuco Wetlands by restricting mining within the western half of the Florida Power and Light Company transmission corridor. This alternative lessens seepage concerns related to the Pennsuco Wetlands and results in longer hydroperiods in the Pennsuco Wetlands compared with Alternative 4 while allowing additional mining to be permitted in other parts of the Lake Belt considered to be less environmentally sensitive. Alternative 5 would result in approximately 23,400 acres (an increase of about 15,600 acres over the baseline of 2002) being converted to lake cover types, if implemented. Included in these totals are the approximately 350 acres of County-owned land that the State has proposed to mine on the closed Opa Locka West Airport site.

### **S.6.6 Alternative 6 – Exclusion of Mining or Related Activities in An Area Along the Eastern Border of Everglades National Park**

Alternative 6 was developed by the USACE. This alternative would limit limestone mining and related activities in areas that adjoin ENP to areas allowed under the 2002 USACE permits. No further mining would be allowed in this area. This alternative lessens seepage concerns related to ENP while allowing additional mining to be permitted in other parts of the Lake Belt considered to be less environmentally sensitive. Alternative 6 would result in approximately 25,700 acres (an increase of about 17,900 acres over the baseline of 2002) being converted to lake cover types, if implemented. Included in these totals are the approximately 350 acres of County-owned land that the State has proposed to mine on the closed Opa Locka West Airport site. Alternative 6, in general, would result in the second largest environmental impacts of the alternatives being evaluated, trailing only Alternative 4 in terms of overall environmental impacts.

**S.6.7      Alternative 7 – Exclusion of Mining or Related Activities Along the Eastern Border of Everglades National Park and in the Western Half of the Florida Power and Light Company Transmission Corridor**

Alternative 7 was developed by the USACE. This alternative would limit limestone mining and related activities in the exclusion areas addressed in Alternative 5 (along the eastern border of the Pennsuco Wetlands) and Alternative 6 (along the eastern border of ENP). This alternative lessens seepage concerns related to the Pennsuco Wetlands and ENP while allowing additional mining to be permitted in other parts of the Lake Belt considered to be less environmentally sensitive. Alternative 7 would result in approximately 23,300 acres (an increase of about 15,500 acres over the baseline of 2002) being converted to lake cover types, if implemented. Included in these totals are the approximately 350 acres of County-owned land that the State has proposed to mine on the closed Opa Locka West Airport site.

**S.6.8      Alternative 8 – Exclusion of Mining or Related Activities Along the Eastern Border of Everglades National Park and Along a 1,500-Foot-Wide Strip Along the Eastern Border of the Pennsuco Wetlands**

Alternative 8 was developed by the USACE. Under this alternative, the excluded area of Alternative 6 would be supplemented by an additional 1,500-foot-wide exclusion area that would run from north to south in the Lake Belt alongside the eastern border of the Pennsuco Wetlands, effectively reducing the footprint of possible mining in the Lake Belt area by approximately 1,300 acres. This exclusion area would be placed in a conservation easement or turned over to public ownership with the State of Florida, the SFWMD, or Miami-Dade County. This exclusion area could be used for mitigation purposes to help offset mining impacts in other parts of the Lake Belt. Alternative 8 would result in approximately 24,500 acres (an increase of about 16,700 acres over the baseline of 2002) being converted to lake cover types, if implemented. Included in these totals are the approximately 350 acres of County-owned land that the State has proposed to mine on the closed Opa Locka West Airport site.

**S.6.9      Alternative 9 – Exclusion of Mining or Related Activities Along the Eastern Border of Everglades National Park and Along a 1,000- to 1,500-Foot-Wide Strip Along the Eastern Border of the Pennsuco Wetlands**

Alternative 9 was developed by the USACE. Under this alternative, the excluded area of Alternative 6 would be supplemented by an additional 1,000- to 1,500-foot-wide exclusion area that would run from north to south in the Lake Belt alongside the eastern border of the Pennsuco Wetlands, effectively reducing the footprint of possible mining in the Lake Belt area by approximately 810 acres. This exclusion area would be placed in a conservation easement or turned over to public ownership with the State of Florida, the SFWMD, or Miami-Dade County. This exclusion area could be used for mitigation purposes to help offset mining impacts in other parts of the Lake Belt. Alternative 8 would result in approximately 24,900 acres (an increase of about 17,200 acres over the baseline of 2002) being converted to lake cover types, if implemented. Included in these totals are the approximately 350 acres of County-owned land that the State has proposed to mine on the closed Opa Locka West Airport site.

**S.7      COMPARISON OF IMPACTS**

The following section details a comparison of the alternatives evaluated in the SEIS in terms of potentially significant impacts, focusing on resource areas that could be most impacted. Given the nature of the alternatives being evaluated and the varying degrees of limestone mining in areas consisting mainly of wetlands, environmental impacts are expected under every alternative. The severity of the impacts relates directly to the number of acres of wetlands being mined. In other words, the alternative with the greatest amount of proposed mining, Alternative 4, is the alternative with the greatest potential for adverse environmental impacts for nearly all of the resource areas. Conversely, Alternative 1, with the least amount of proposed mining, is expected to result in the smallest environmental impacts for all resource areas except socioeconomics. Alternative 1, a total shutdown of mining in the Lake Belt, is

expected to result in the greatest socioeconomic impacts due to the potential disruption in the construction industry within Florida since the Lake Belt has previously supplied approximately 40 percent of Florida's annual demand for limestone.

### S.7.1 Vegetation, Wetlands, and Habitat Units

Vegetation and wetland impacts from Alternatives 1 through 9 can be ranked from lowest to highest in the following order in terms of net acreage of land converted from existing, vegetated cover types and natural cover types or wetlands to lands disturbed by mining-related activities: Alternative 1 (No Action), Alternative 2, Alternative 3, Alternative 7, Alternative 5, Alternative 8, Alternative 9, Alternative 6, and Alternative 4, as shown in Table S–1. The number of acres of natural cover types lost in the Lake Belt area as a result of implementing any of the proposed alternatives ranges from 2,422 under Alternative 1 to 12,779 under Alternative 4.

**Table S–1. Loss of Natural Cover Types and Wetlands Due to Proposed Mining (acres)**

|                             | Alternative |       |        |        |        |        |        |        |        |
|-----------------------------|-------------|-------|--------|--------|--------|--------|--------|--------|--------|
|                             | 1           | 2     | 3      | 4      | 5      | 6      | 7      | 8      | 9      |
| Loss of natural cover types | 2,422       | 3,627 | 8,841  | 12,779 | 10,392 | 12,712 | 10,325 | 11,522 | 11,970 |
| Loss of wetlands            | 2,861       | 4,145 | 10,070 | 14,823 | 12,436 | 14,756 | 12,369 | 13,566 | 14,014 |

The magnitude of the potential loss of wetlands is very close to the loss of natural cover types except wetlands also includes already disturbed wetlands (including agricultural lands) that may be lost as a result of the proposed mining activities. The number of acres of wetlands lost in the Lake Belt as a result of implementing any of the proposed alternatives ranges from 2,861 under Alternative 1 to 14,823 under Alternative 4. These losses are expected to be offset by increases in the number of acres of both natural cover types and wetlands added as a result of mitigation activities that would be required if any of the proposed alternatives are implemented.

Similar to the vegetation and wetland impacts discussed above, Alternatives 1 through 9 can be ranked from lowest to highest impact in the following order in terms of loss of habitat units within the Lake Belt area versus the number of acres mined or disturbed: Alternative 1, Alternative 2, Alternative 3, Alternative 7, Alternative 5, Alternative 8, Alternative 9, Alternative 6, and Alternative 4, as shown in Table S–2. The number of habitat units lost in the Lake Belt as a result of implementing any of the proposed alternatives ranges from 1,337 under Alternative 1 to 7,254 under Alternative 4. When compared on the basis of the loss of habitat units per acre mined or disturbed, all of the alternatives are relatively close to one another; Alternatives 1, 5, and 7 have the lowest impact at 0.47 habitat units lost per acre, and Alternative 2 results in the greatest impact at 0.49 habitat units lost per acre.

**Table S–2. Loss of Habitat Units by Alternative**

|   | Alternative |       |        |        |        |        |        |        |        |
|---|-------------|-------|--------|--------|--------|--------|--------|--------|--------|
|   | 1           | 2     | 3      | 4      | 5      | 6      | 7      | 8      | 9      |
| Acres mined or disturbed by mining <sup>a</sup>   | 2,866       | 4,187 | 10,194 | 15,056 | 12,661 | 14,985 | 12,590 | 13,791 | 14,245 |
| Loss of habitat units due to proposed mining      | 1,337       | 2,041 | 4,917  | 7,254  | 5,987  | 7,210  | 5,943  | 6,592  | 6,836  |
| Loss of habitat units per acre mined or disturbed | 0.47        | 0.49  | 0.48   | 0.48   | 0.47   | 0.48   | 0.47   | 0.48   | 0.48   |

<sup>a</sup> Acres mined or disturbed include the following cover types: lakes, lakes nearshore, littoral shelves, lake perimeter, and disturbed (forested and open).

To offset the projected loss of wetlands and habitat units, the miners have proposed mitigation activities that would be credited with creating or improving wetlands and, as a result, increasing the number of habitat units. Wetlands and natural cover types would be created or restored in the Lake Belt area as a result of anticipated mitigation activities, including the creation of littoral shelves adjacent to or around the lakes formed by mining and the acquisition and enhancement of wetlands in the Pennsuco Wetlands. In addition to activities within the Lake Belt area, proposed mitigation activities would restore wetlands in

nearby areas outside the Lake Belt, including areas adjacent to and within ENP. Some combination of the proposed mitigation activities would be implemented depending on the selected alternative such that any projected loss of habitat units would be offset entirely. Table S-3 indicates the range of mitigation activities and the potential credits that could be implemented to offset the projected loss of habitat units under Alternatives 1-9. Sufficient mitigation credits are expected to exist outside the Lake Belt under the provided mitigation plan to cover Alternatives 1 and 2 without any of the proposed low-priority mitigation activities, including credit from the Everglades Mitigation Bank and the L-31N Transition Lands. If low-priority mitigation activities are included, sufficient mitigation should exist for Alternative 3. At the current time, there does not appear to be sufficient mitigation credits available to support implementation of Alternatives 4-9 without the identification of additional mitigation projects.

**Table S-3. Proposed Mitigation Activities and Potential Habitat Units**

|  | Acres of Wetlands<br>Created/Restored | Potential Habitat<br>Units Available |
|--|---------------------------------------|--------------------------------------|
| <b>Inside the Lake Belt Area</b>   |                                       |                                      |
| Creation of littoral shelves within the Lake Belt                            | 162-1,356                             | 90-756                               |
| Acquisition/restoration/enhancement of wetlands within the Pennsuco Wetlands | 4,608                                 | 1,135                                |
| Other potential mitigation areas within the Lake Belt                        | 423-858                               | 108-256                              |
| Exclusion areas within the Lake Belt under Alternatives 8 and 9              | 1,230-1,633                           | 311-423                              |
| <b>Outside Everglades National Park</b>                                      |                                       |                                      |
| 8.5 Square Mile Area—phase I   | 175                                   | 55                                   |
| 8.5 Square Mile Area—exotic vegetation management and fill removal           | 292                                   | 146                                  |
| L-31N Transition Lands—exotic vegetation management and fill removal         | 3,800                                 | 570-1,140                            |
| Southern Glades—phase I  | 100                                   | 25                                   |
| Southern Glades—exotic vegetation management                                 | 200                                   | 74                                   |
| Aerojet Complex—exotic vegetation management and fill removal                | 60                                    | 30                                   |
| Old Fish Farm—exotic vegetation management                                   | 100                                   | 25                                   |
| Old Fish Farm—exotic vegetation management and fill removal/fishway fill     | 52                                    | 26                                   |
| Everglades Mitigation Bank   | -                                     | 238                                  |
| <b>Inside Everglades National Park</b>                                       |                                       |                                      |
| <b>Direct impacts</b>  |                                       |                                      |
| East Everglades acquisition  | 550                                   | 275                                  |
| Pine Island  | 140                                   | 70                                   |
| Hardwood hammocks  | 50                                    | 10                                   |
| Hole-in-the-Donut  | 2,500                                 | 1,300                                |
| Tamiami Trail removal  | 90                                    | 45                                   |
| <b>Secondary/Indirect Impacts</b>  |                                       |                                      |
| East Everglades acquisition  | 2,400                                 | 240                                  |
| Pine Island  | 30                                    | 6                                    |
| Tamiami Trail removal  | 1,200                                 | 120                                  |
|  |                                       |                                      |
| <b>Total</b>   | <b>18,162-20,194</b>                  | <b>4,899-6,395</b>                   |

### S.7.2 Wildlife

With the possible exception of the endangered wood stork, the alternatives are unlikely to have a significant positive or negative impact on wildlife. Direct adverse impacts of mining operations are short term and avoidable by most wading birds and other wildlife species. No other species of wading birds are as dependent upon and limited by the abundance of short-hydroperiod wetlands and the density of prey fish as are wood storks. The lakes created by mining are potentially suitable habitat for the American alligator and some species of wading birds. Other federally listed threatened and endangered species and species of special concern to Florida are unlikely to occur in the Lake Belt area and thus would not be impacted.

Without mitigation, the alternatives being considered in the SEIS would result in the reduction of prey fish biomass available for wood storks and other wading birds that forage in the Lake Belt area, in particular the 3B Mud East, Tamiami West, and 2B Melaleuca wood stork colonies located within an 18.6-mile radius of the Lake Belt area. This loss of prey fish is expected to result in a loss of wood storks. However, actions are already under way to improve the suitability of the Pennsuco Wetlands within these foraging areas, which should improve the overall condition of the wetlands to the benefit of the wood stork.

By eradicating melaleuca from the Pennsuco Wetlands and other potential mitigation areas in the Lake Belt and maintaining these treated areas over the long term, it is possible to restore melaleuca-infested areas to wet prairie, increasing the wood stork suitability factor up to 1; in contrast, dense melaleuca has a wood stork suitability factor of nearly 0. To date, nearly 2,900 acres of wetlands in the Pennsuco Wetlands have been treated to eradicate melaleuca using Lake Belt mitigation funding. About another 1,700 acres of wetlands in the Pennsuco Wetlands owned by the miners must be turned over to public ownership in the event additional mining is permitted; this area could then be treated. As shown in Table S-4, without mitigation activities being implemented, between 4 and 33 wood storks would potentially be lost due to changes in the amount of biomass available within the Lake Belt area as a result of mining activities under the proposed alternatives using the all birds suitability index. Using the wading birds suitability index, without mitigation activities being implemented, between 7 and 49 wood storks would potentially be lost due to changes in the amount of biomass available within the Lake Belt as a result of mining activities under the proposed alternatives. The cumulative losses in this table are estimated through the end of Alternative 4 (as soon as 2032) for all alternatives to allow them to be compared on an equal basis. For example, implementing Alternative 1 is expected to result in the loss of 2,420 acres of suitable habitat in the Lake Belt without any mitigation activities, and the loss of this habitat would continue from year to year after the end of the alternative.

**Table S-4. Potential Impacts on Wood Storks**

|  | Alternative |        |        |         |         |         |         |             |         |
|--|-------------|--------|--------|---------|---------|---------|---------|-------------|---------|
|  | 1           | 2      | 3      | 4       | 5       | 6       | 7       | 8           | 9       |
| Loss of suitable habitat within the Lake Belt due to implementation of alternative without mitigation (acres)              | -2,420      | -3,731 | -9,020 | -13,068 | -10,693 | -13,004 | -10,629 | -11,817     | -12,264 |
| Gain of high-quality habitat (prairie) from proposed mitigation activities within the Lake Belt (acres)                    | 2,890       | 2,890  | 4,590  | 4,590   | 4,590   | 4,590   | 4,590   | Up to 7,189 | 5,820   |
| <b>Using All Birds Suitability Index</b>   |             |        |        |         |         |         |         |             |         |
| Cumulative loss after implementation of alternative without mitigation through the end of longest alternative (birds)      | -4          | -9     | -31    | -33     | -24     | -34     | -26     | -32         | -30     |
| Cumulative gain or loss after implementation of alternative with mitigation through the end of longest alternative (birds) | 25          | 16     | 0      | -4      | 4       | -5      | 5       | Up to 30    | 28      |
| Net gain with proposed mitigation activities through the end of longest alternative (birds)                                | 29          | 25     | 31     | 29      | 28      | 29      | 31      | Up to 62    | 58      |
| <b>Using Wading Birds Suitability Index</b>  |             |        |        |         |         |         |         |             |         |
| Cumulative loss after implementation of alternative without mitigation through the end of longest alternative (birds)      | -7          | -16    | -43    | -47     | -37     | -49     | -39     | -46         | -45     |
| Cumulative gain or loss after implementation of alternative with mitigation through the end of longest alternative (birds) | 14          | 5      | -26    | -29     | -19     | -31     | -22     | Up to 5     | 4       |
| Net gain with proposed mitigation activities through the end of longest alternative (birds)                                | 21          | 21     | 17     | 18      | 18      | 18      | 17      | Up to 51    | 49      |

However, mitigation activities are expected to offset the projected losses of biomass within the Lake Belt by eradicating melaleuca within the Pennsuco Wetlands and converting habitat within the Pennsuco Wetlands from low-value wetlands in terms of suitability for wood storks to high-value wetlands. Once these improvements are made, they are expected to last in perpetuity because of the maintenance requirements associated with the mitigation activities and the availability of funds from the Lake Belt mitigation fee. The number of acres of prairie that could be restored in the Lake Belt as a result of mitigation activities ranges from 2,890 to approximately 7,200 acres. The cumulative change in the number of wood storks supported by colonies that include all or part of the Lake Belt under each alternative with mitigation is estimated to be between 4 fewer and 30 more wood storks using the all birds suitability index compared with the baseline, and between 29 fewer and 14 more using the wading birds suitability index through the end of 2032. The net gain in wood storks over this period compared to the same alternative without mitigation is estimated to be between 25 and 62 using the all birds suitability index, and between 17 and 51 more using the wading birds suitability index. Alternative 8 with mitigation would result in the largest gain (up to 30 wood storks) using the all birds suitability index, and Alternative 1 with mitigation would result in the largest gain (14 wood storks) using the wading birds suitability index. Alternative 8 with mitigation includes various options for mitigating seepage in the Lake Belt as discussed in Section S.6.4. Applying seepage mitigation to any of the alternatives would be expected to benefit wood storks. Alternative 6 with mitigation would result in the greatest projected losses (between 5 and 31 fewer wood storks) using either suitability index through the end of 2032.

### **S.7.3 Cultural Resources**

A number of cultural resources sites could be adversely impacted by mining activities under the proposed alternatives being evaluated in the SEIS. Two sites were previously impacted in violation of the 2002 USACE permits and are not included in these calculations for potential impacts. As shown in Table S-5, up to 15 sites could be impacted under Alternative 4. Alternative 1 would impact the fewest sites, 4; however, 3 of these sites have had survey or recovery work performed. Alternatives 1 through 9 can be ranked in the following order in terms of the number of sites potentially impacted from lowest to highest: Alternative 1; Alternative 2; Alternative 3; Alternative 7; Alternative 5; Alternatives 6, 8, and 9; and, finally, Alternative 4.

**Table S-5. Potential Impacts on Cultural Resources Sites Within the Lake Belt Area**

|   | Alternative |   |   |    |    |    |    |    |    |
|---|-------------|---|---|----|----|----|----|----|----|
|   | 1           | 2 | 3 | 4  | 5  | 6  | 7  | 8  | 9  |
| Number of sites potentially impacted by mining activities | 4           | 6 | 9 | 15 | 12 | 14 | 11 | 14 | 14 |

USACE permits contain conditions stating that if historical or archeological artifacts are discovered, soil disturbance activities must be immediately halted, and the Florida Division of Historical Resources and the Miami-Dade County Office of Historic Preservation (MDOHP) must be notified. These restrictions may be removed if (1) the Florida Division of Historical Resources and the USACE concur that permitted activities will not affect any sites eligible for listing on the National Register of Historic Places (NRHP) or (2) a required mitigation procedure is followed, after appropriate coordination at the Federal and State levels and with concurrence with the USACE and State Historic Preservation Officer, including submission of a Phase II archeological survey to the USACE following approval of the survey design, submission and approval of a mitigation plan, execution of a Memorandum of Agreement for adverse impacts on sites eligible for listing on the NRHP, and receipt of a "Certificate to Dig" from the MDOHP.

DA2114 (Ditch Island) falls within the impact area of a 2002 USACE permit, which had a condition that stated, "No impacts to any archeological resources are authorized under this permit." The condition also stated that the restriction could be removed from the sites upon either completing a mitigation procedure with prior USACE approval or submitting documents from the Florida Division of Historical Resources stating that the work proposed will have no effect on sites eligible for inclusion on the NRHP. Additional testing was performed at the request of the miners, after which the contractor recommended that the proposed mining would have no effect on cultural resources listed or eligible for listing on the NRHP. The study revealed that the northern portion of DA2114 was largely intact but the southern portion had been heavily impacted by mining activities and no longer exists (Janus 2006, 2008). Site DA2114 was

subsequently designated an Archeological Zone by the Miami-Dade County Historic Preservation Board. The board also recommended the site for nomination to the NRHP (MDCHPB 2008). In March 2009, the USACE informed Rinker Materials that the USACE cannot concur that the work conducted has adequately located the recorded prehistoric site, DA2114, and cannot concur with the determination that the site is not eligible for listing on the NRHP without additional information (USACE 2009).

In May 2007, human remains were discovered at site DA5918 (Blockbuster No.7) by a mining company research contractor during a mitigation activity initiated by the USACE to investigate the effects of mining on historic resources in the Lake Belt. Following discovery of the remains, the Seminole Tribe of Florida and the Miccosukee Tribe of Indians of Florida were notified. After subsequent consultation between the Florida Department of Environmental Protection, White Rock Quarries, and the Florida Division of Historical Resources, an agreement was reached for reburial of the remains (FDEP 2007a). As part of the proposed re-internment preparation, the USACE was advised of the internment request and received a copy of the January 2008 archeological data recovery detailing the project history on February 6, 2008. In response, the USACE determined that there was a lack of required coordination under Section 106 of the National Historic Preservation Act (16 U.S.C. 470 et seq.) and advised White Rock that the State Historic Preservation Officer coordination was not an appropriate substitution for Federal review. Federal agencies are responsible for making final decisions in the Section 106 process (36 CFR 800.2[a]). As it has not been demonstrated that avoidance of this site is not appropriate, the USACE has determined that a modification of the proposed mining footprint to avoid all impacts on sites DA5917 and DA5918 and to restore DA5918 is the appropriate action for White Rock. This letter also stated that further activities in the immediate area should cease until Federal coordination can be finalized (USACE 2009).

There are two historical structures in the Lake Belt region. The AT&T Pennsuco Building is located at 11011 NW 177th Avenue. It is a communications-related concrete warehouse. The other historical structure is a masonry vernacular warehouse located at 11001 NW 177th Avenue. Neither building is eligible for listing on the NRHP (FDHR 2007). These two structures are outside the mining area and will not be impacted by any of the alternatives being evaluated in the SEIS.

#### S.7.4 Geology, Hydrology, and Water Quality

The removal of rock as lakes are created within the Lake Belt area under the proposed alternatives would reach a maximum volume of approximately 2.2 billion cubic yards of rock mined beyond the 2002 baseline under Alternative 4, as shown in Table S-6. This rock is expected to help fill existing demand throughout Florida through at least 2032. The other alternatives would result in less rock being available to fill public demand, with Alternative 1 providing the least amount of rock.

**Table S-6. Volume of Rock Removed by Alternative**

| Alternative | Volume of Rock Removed (millions of cubic yards) | Change from Baseline (millions of cubic yards) |
|-------------|--|--|
| 1           | 1,080  | 257  |
| 2           | 1,518  | 695  |
| 3           | 2,264  | 1,441  |
| 4           | 2,975  | 2,152  |
| 5           | 2,691  | 1,868  |
| 6           | 2,964  | 2,141  |
| 7           | 2,681  | 1,858  |
| 8           | 2,823  | 2,000  |
| 9           | 2,879  | 2,056  |

Rock removal as a result of mining activities within the Lake Belt area would impact groundwater flow and reduce the filtration capacity of the Biscayne Aquifer. As the amount of rock removed from the Lake Belt area increases under the proposed alternatives, seepage rates from the L-30 and L-31N Canals into the Lake Belt area would also increase, as shown in Table S-7. Seepage rates from WCA-3B and the L-30

Canal to the east and from ENP and the L-31N Canal to the east are expected to increase as the amount of rock being removed from the Lake Belt area increases. As a result, Alternative 1 would result in the lowest seepage rates, followed by Alternative 2, Alternative 7, Alternative 5, Alternative 3, Alternative 8, and Alternative 9. The greatest increase in seepage rates is expected with the implementation of Alternative 4 or Alternative 6.

**Table S–7. Predicted 7-Year Average Seepage Rates<sup>a</sup> by Alternative Without Mitigation**

| Transects for Evaluating Seepage                         | Existing 2006 Conditions (MGD) | Alternative |         |         |         |         |         |         |         |
|--|--------------------------------|-------------|---------|---------|---------|---------|---------|---------|---------|
|  |                                | 2 (MGD)     | 3 (MGD) | 4 (MGD) | 5 (MGD) | 6 (MGD) | 7 (MGD) | 8 (MGD) | 9 (MGD) |
| <b><i>Mine-Out Areas North of Tamiami Trail</i></b>      |                                |             |         |         |         |         |         |         |         |
| L-30 Canal to east                                       | 92.9                           | 95.4        | 105.7   | 115.7   | 106.8   | 115.7   | 106.8   | 110.8   | 112.5   |
| L-30 Canal to Pennsuco Wetlands                          | 88.4                           | 90.4        | 99.6    | 107.1   | 97.5    | 107.1   | 97.5    | 101.3   | 103.7   |
| Pennsuco Wetlands to south & east                        | 86.3                           | 88.2        | 97.5    | 105.1   | 95.4    | 105.1   | 95.4    | 99.3    | 101.7   |
| <b><i>Krome Avenue Area (South of Tamiami Trail)</i></b> |                                |             |         |         |         |         |         |         |         |
| L-31N Canal to east                                      | 31.7                           | 36.9        | 39.6    | 39.6    | 39.6    | 39.6    | 36.0    | 36.0    | 36.0    |

<sup>a</sup> Average seepage rates represent the predicted average from 1989 through 1995 (i.e., the period of simulation).  
Key: MGD=million gallons per day.

It is possible that increased seepage rates could be mitigated through implementation of seepage mitigation activities. A number of mitigation activities were analyzed for the final SEIS. The best appears to be enhancing and then maintaining an elevated water level in the Dade-Broward Levee Recharge Canal. Alternative 8 was evaluated as a representative of the mining alternatives included in the SEIS for this seepage mitigation analysis. When the Dade-Broward Levee Recharge Canal is charged with 60 MGD from a mining lake near the NWWF Recharge Canal, seepage projected for Alternative 8 with mitigation is largely offset compared with the baseline, as shown in Table S–8. Inclusion of the Dade-Broward Levee Recharge Canal as a mitigation activity does not mitigate seepage losses expected below Tamiami Trail. A mitigation plan addressing these losses is needed to address seepage concerns associated with mining activities below Tamiami Trail before any additional mining is permitted there. A pilot project to install a 1,000-foot shallow barrier seepage wall along the L-31N Canal has been submitted and is currently under review.

In addition to the increased groundwater seepage rates that are expected to result from implementation of the proposed alternatives, increased mining is expected to affect the hydroperiods of wetlands within the Lake Belt. As seepage rates increase in the Lake Belt due to increased mining, the remaining wetlands within the Lake Belt area are expected to be affected by shortened hydroperiods. These wetlands are located mainly in the Pennsuco Wetlands and the Bird Drive Recharge area. Under Alternative 1, the alternative with the smallest amount of mining and lowest relative seepage rates, the average hydroperiod of remaining wetlands within the Lake Belt area is projected to be approximately 133 days, as shown in Table S–9. As more lakes are created in the Lake Belt area under the other proposed alternatives, the average hydroperiod of the remaining wetlands is expected to decrease further. Alternatives 4 and 6 would result in the shortest average hydroperiod, 113 days.

Inclusion of the Dade-Broward Levee Recharge Canal as a mitigation activity is expected to help mitigate the potential shortening of hydroperiods within the Lake Belt. Alternative 8 was evaluated as a representative of the proposed mining alternatives. With the Dade-Broward Levee Recharge Canal, the average number of days these wetlands are expected to be wet per year would increase from 115 days to 118–133 days for the areas that would not be mined under Alternative 8.

**Table S–8. Predicted Seepage Rates with the Proposed Dade-Broward Levee Recharge Canal**

| Transects for Evaluating Seepage    | Existing 2006 Cond. (MGD) | Representative Mining Alternative Without Mitigation |                              | Representative Mining Alternative with Mitigation; Water from a Lake North of the NWWF Recharge Canal |                              | Representative Mining Alternative with Mitigation; Water from a Lake South of the NWWF Recharge Canal   |                              |
|-------------------------------------|---------------------------|--|------------------------------|---|------------------------------|---|------------------------------|
|                                     |                           | Projected Seepage (MGD)                              | Percent Change from Baseline | Projected Seepage (MGD)   | Percent Change from Baseline | Projected Seepage (MGD)   | Percent Change from Baseline |
| L-30 Canal to east                  | 93                        | 111  | 19                           | 100   | 7.7                          | 101   | 9.0                          |
| L-30 Canal to Pennsuco Wetlands     | 88                        | 101  | 15                           | 88  | 0.1                          | 91  | 2.6                          |
| Pennsuco Wetlands to south and east | 86                        | 99   | 15                           | 86  | -0.2                         | 88  | 2.5                          |
| Transects for Evaluating Seepage    | Existing 2006 Cond. (MGD) | Representative Mining Alternative Without Mitigation |                              | Representative Mining Alternative with Additional Mining Excluded North of the NWWF Recharge Canal    |                              | Representative Mining Alternative with Additional Mining Excluded North of the NWWF Recharge Canal and Water from a Lake South of the NWWF Recharge Canal |                              |
|                                     |                           | Projected Seepage (MGD)                              | Percent Change from Baseline | Projected Seepage (MGD)   | Percent Change from Baseline | Projected Seepage (MGD)   | Percent Change from Baseline |
| L-30 Canal to east                  | 93                        | 111  | 19                           | 108   | 17                           | 99  | 6.4                          |
| L-30 Canal to Pennsuco Wetlands     | 88                        | 101  | 15                           | 100   | 13                           | 90  | 1.8                          |
| Pennsuco Wetlands to south and east | 86                        | 99   | 15                           | 98  | 14                           | 88  | 1.6                          |

<sup>a</sup> Seven-year average period represents the predicted average from January 1989 through December 1995.

Key: Cond.=Conditions; MGD=million gallons per day; NWWF=Northwest Wellfield.

**Table S–9. Potential Impacts on Hydroperiods Within the Lake Belt Area Without Mitigation**

|                            | Alternative |     |     |     |     |     |     |     |     |
|----------------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|
|                            | 1           | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   |
| Average hydroperiod (days) | 133         | 130 | 121 | 113 | 120 | 113 | 120 | 115 | 116 |

Physical changes such as increases in the number of acres of lakes or in seepage rates within the Lake Belt have the potential to facilitate pathogen transport within the aquifer and subsequent extraction by NWWF wells. To date, this has not occurred and it is not certain that it would occur under any of the proposed alternatives. However, the potential risks of such an event occurring increase as additional lakes are added to the Lake Belt, especially as lakes are added close to the NWWF. Note that physical changes to the transport pathways or seepage rates are exclusive of possible changes in the chemical or biological conditions within the lakes that may increase or decrease pathogen populations.

Using the Lake Belt Groundwater Flow Model, the final SEIS reestimated the 60-day travel times for groundwater to the wellheads of the NWWF using revised pumpage rates for the County’s wellfields and other improvements to the model. The areas inside these travel time boundaries were then compared to the County’s current 60-day setback area. The results show that the area within the SEIS’s estimated 60-day travel time boundary is very close to the County’s current 60-day setback area. Notwithstanding potential changes in the County’s setback areas, in 2006, Miami-Dade County Department of Environmental Resources Management recommended a conservative approach regarding the removal of protozoa such as *Cryptosporidium* and *Giardia* to ensure protection of public health, which the Florida Legislature subsequently approved. Beginning in January 2007, a fee of \$0.15 per ton was collected on all limestone and sand sold from Lake Belt mining properties that will be used to fund upgrades to the

Miami-Dade County water treatment plant to ensure effective removal of *Cryptosporidium* and *Giardia* should they occur. Through December 31, 2008, over \$10 million had been collected for this purpose.

### **S.7.5 Socioeconomics and Environmental Justice**

Socioeconomic impacts associated with the proposed alternatives could be large depending on the alternative implemented. This is because rock from the Lake Belt currently supplies over 40 percent of Florida's annual demand and a much higher percentage of the demand in South Florida. Until 2007, construction had been booming in Florida due to a growing economy that was serving a growing population base and an increasing demand for new homes, roads, commercial and civic buildings, and infrastructure. While the rate of growth of Florida's economy slowed considerably in late 2007 and throughout 2008, Florida's population and economy is projected to grow over the next 20 to 30 years and with it the demand for building materials such as the rock currently being mined in the Lake Belt area. Because rock from the Lake Belt area is needed at the start of many construction projects, a shortage of this important resource is expected to ripple through the construction industry, a much larger segment of Florida's economy than rock mining alone.

Alternative 1, a complete shutdown of mining activities in the Lake Belt, represents the most significant alternative in terms of potential socioeconomic impacts within Florida. If mining were suddenly shut down in the Lake Belt, it is expected that large numbers of construction workers in Florida would be impacted by layoffs as a result of a slowdown in the construction business from the resulting shortage of aggregate. Because the economy has already slowed considerably from the levels seen in 2006 and the beginning of 2007, the number of construction workers in Florida has decreased since that timeframe. However, there are still more than 500,000 people employed by the construction industry in Florida (AWI 2009b). Any temporary loss of construction jobs due to a shutdown of mining in the Lake Belt would be in addition to the permanent loss of jobs by persons directly employed by mining activities within the Lake Belt area. Because Florida's infrastructure is not currently equipped to receive large quantities of rock from outside the State or even from other parts of the State, the impacts associated with the implementation of Alternative 1 are expected to linger for a number of years.

There are several efforts under way to increase the ability of Florida ports to receive rock from sources outside the State and within 5 years, the ability to receive another 4.8 to 12.9 million tons of rock annually could be in place. Assuming 80 percent of this material would be construction grade aggregate, an additional 3.9 to 10.4 million tons of aggregate could be provided through these ports. In addition, there are efforts under way to expand current mines or permit new mines throughout the State. However, these efforts are expected to take a number of years before they would be able to offset a total loss of mining in the Lake Belt due to extensive environmental review and/or additional infrastructure needs.

In the first year of a total shutdown of mining in the Lake Belt, after existing inventories are exhausted, it is estimated that over \$9.8 billion in wages could be lost and approximately \$22.9 billion in economic output across Florida could be lost. Over time, other sources of supply could be expected to fill the demand for aggregate and limerock base in Florida and these impacts would become smaller, but the changes needed in Florida's infrastructure to efficiently move over 40 million tons of rock annually from new sources of supply both inside and outside the State are expected to take a number of years.

Compared with Alternative 1, Alternatives 2 through 9 are expected to result in fewer socioeconomic impacts, assuming actions are taken in advance of a shutdown (with the knowledge that mining in the Lake Belt area will end at some future date). Alternative 2 is expected to result in the next greatest socioeconomic impact compared with Alternative 1 because it calls for a shutdown of mining in the Lake Belt area as soon as 2012, leaving as few as 3 years for the necessary infrastructure improvements to Florida's ports and railways to be implemented, or for new or existing mines in Florida to establish the ability to offset the loss of Lake Belt production. Significant planning, investment, and regulatory requirements would have to be addressed to make these improvements before the end of Alternative 2; whether they can be made fully in the time available is unclear. Alternatives 3 through 9 should allow adequate time to implement such improvements, if they are pursued diligently. Under Alternatives 3 through 9, the earliest that mining would end in the Lake Belt would be 2022.

As shown in Table S–10, the Lake Belt could produce a tremendous amount of limestone over the next 20 to 40 years. Under Alternative 4, the largest amount of rock would be mined (over 2.1 billion tons), and the continued mining would allow the longest period of time to perform the necessary reviews and make the necessary infrastructure changes needed to support large quantities of rock being shipped from other parts of the State into South Florida or for large quantities of rock to be shipped into the State from outside the State once mining in the Lake Belt area ends. However, as discussed above, Alternative 4 also results in the greatest environmental impacts.

**Table S–10. Projected Output of the Lake Belt by Alternative**

| Activity  | Alternative |      |       |       |       |       |       |       |       |
|---|-------------|------|-------|-------|-------|-------|-------|-------|-------|
|   | 1           | 2    | 3     | 4     | 5     | 6     | 7     | 8     | 9     |
| Output over baseline (million tons)                           | 252         | 681  | 1,412 | 2,108 | 1,831 | 2,098 | 1,821 | 2,011 | 2,068 |
| Earliest year mining in the Lake Belt area is expected to end | 2008        | 2012 | 2022  | 2032  | 2028  | 2031  | 2026  | 2028  | 2030  |
| Latest year mining in the Lake Belt area is expected to end   | 2008        | 2016 | 2032  | 2048  | 2042  | 2047  | 2041  | 2046  | 2047  |

The area proposed for mining is generally performed on vacant property and not within areas that are populated by minority communities. Thus, the activity of mining is not likely to disproportionately impact minority communities directly. While the shutdown of the mines in the Lake Belt is not expected to have any significant adverse human health impacts on the general public, a significant adverse impact is expected in terms of lost jobs or layoffs within the construction industry and the rock-mining industry in Miami-Dade County and the surrounding area under Alternative 1. As discussed above, an immediate shutdown of mining in the Lake Belt without the ability to support the increased importation of rock from other parts of the State or from outside of Florida into the State is expected to result in the loss of a large number of construction jobs throughout the State and especially in southern Florida, where the construction industry is heavily dependent on rock coming from the Lake Belt to support construction projects. Given that the construction industry in southern Florida employs a large number of minority individuals and many of the jobs are lower-paying manual labor positions, Alternative 1, if it is implemented, is expected to have a disproportionate and adverse impact on minority and low-income populations.

### S.7.6 Remaining Environmental Analyses

The remaining environmental analyses conducted as part of the SEIS are not expected to result in potentially significant impacts under any of the proposed alternatives. The areas covered by these analyses include air quality, hazardous and toxic wastes, aesthetics, noise, recreation, and land use. While it is true that the impacts associated with these areas of concern are expected to increase as the number of acres mined within the Lake Belt increases, there are no cases where the impacts are expected to exceed existing standards or result in impacts that could threaten human health. As a result, these analyses are unlikely to influence the decision as to which alternative should be implemented.

### S.8 NEXT STEP

The *Final Lake Belt SEIS* is being released to the public and regulatory agencies. As discussed in Section S.3.4, the USACE is in possession of a number of permit applications requesting permission for additional mining in the Lake Belt. Before any new mining permits can be issued by the USACE, the USACE must first issue a ROD. A ROD cannot be released by the USACE for at least 30 days after the *Final Lake Belt SEIS* is available for review.

## **S.9 HOW CAN THE PUBLIC PARTICIPATE?**

All interested parties are invited to participate in the SEIS process. Public comments will be accepted during a public comment period which ends on June 8, 2009. Comments, requests for further information, and requests for additional copies of the final SEIS may be directed to:

Ms. Leah Oberlin, EIS Project Manager  
U.S. Army Corps of Engineers  
Regulatory Division, Palm Beach Gardens Regulatory Office  
4400 PGA Boulevard, Suite 500  
Palm Beach Gardens, FL, 33410  
Telephone: 561-472-3506  
FAX: 561-626-6971

This document and other supporting documents are also available on the Lake Belt SEIS website (<http://www.lakebeltseis.com>) for viewing and downloading. Comments can also be submitted directly through this website.