

**LAKE BELT  
PHASE II PLAN  
COMPANION DOCUMENTS  
PLANNING PROCESS**

*Prepared by*  
**WALLACE ROBERTS & TODD, LLC**

*For the*  
**MIAMI-DADE COUNTY  
LAKE BELT PLAN  
IMPLEMENTATION  
COMMITTEE**

**January, 2001**

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**MIAMI-DADE COUNTY LAKE BELT PHASE II PLAN**  
**Companion Documents**  
**Planning Process**  
January, 2001

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# 1. Overview

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## Overview

This document is one of four Companion Volumes that have been prepared to accompany the Lake Belt Phase II Plan Report. These four volumes provide a more detailed package of background information pertinent to the Phase II Plan. Such information includes commentaries received from members of the public, Committee members and other interested parties, during the planning process; information regarding the planning process itself; and technical documents related to wellfield protection and water management issues.

These documents (including color versions of many of the graphic exhibits), as well as additional information, can also be reviewed at the South Florida Water Management District's website, specifically, the "Documents" portion of the Lake Belt web-page (<http://www.sfwmd.gov/org/pld/proj/lakebelt/index.html>).

The other three Companion Volumes are as follows:

- Lake Belt Phase II Plan, Comments and Additional Proposals (Wallace Roberts & Todd, LLC, January, 2001). This volume documents comments received at various points in the Phase II planning process. These range from general observations, objections or questions, to detailed comments on various specifics of the draft and final Phase II Plan, and to independent proposals for the area submitted as alternatives to the planning concepts developed by the Committee and consultants.
- Northwest Wellfield Watershed Protection Plan (Miami-Dade County Department of Environmental Protection, August, 2000). This volume comprises DERM's Report on the results of initial assessment of the adequacy of Miami-Dade County's existing program of protection for the Northwest Wellfield. It identifies key issues related to risk avoidance, wellfield protection and watershed management, and identifies a series of strategies and action steps for completion of the necessary studies and for implementation.
- Groundwater Simulations for the Miami-Dade County Lake Belt Plan (South Florida Water Management District, January, 2001) This volume describes the subregional groundwater modeling done in support of the Lake Belt Phase II Plan. It contains model documentation including boundary conditions, assumptions and period of record, as well as descriptions of the scenarios modeled and a brief summary of results.

This volume, Lake Belt Phase II Planning Process, gives an overview of the methodology by which the Phase II Plan was developed. It describes the sequence of tasks undertaken, includes copies of interim reports and products, and shows the range of Alternative Concepts considered in preparation of the Plan as well as comments received which critiqued and evaluated those Alternatives. Other correspondence and comments received, which did not focus specifically on the Alternative Concepts, are included in the Comments volume.

## **2. Description of the Lake Belt Phase II Planning Process**

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## **Description of the Lake Belt Phase II Planning Process**

This section provides a brief summary of the process by which the Lake Belt Phase II Plan was developed. More detailed information is contained in the extensive Appendices following this section, which include key project deliverables and correspondence generated throughout the sixteen-month planning process.

The Miami-Dade County Lake Belt Plan Implementation Committee (“the Committee”) was assisted in developing the Phase II Plan by the consulting team of Wallace Roberts & Todd, LLC (WRT), including subconsultants EAS Engineering, Inc. and JGR + Associates. The consultants also worked closely with the Committee’s supporting professional staff provided by the South Florida Water Management District (SFWMD), and professional staff of the contracting agency, the South Florida Regional Planning Council (SFRPC). The Lake Belt Phase II Plan followed a traditional planning methodology comprising six phases:

- Project Scoping
- Synthesis of Inputs
- Analysis
- Alternative Concepts
- Preferred Concept
- Final Plan (Phase II Plan)

### **Project Scoping**

Project Scoping for the Phase II Plan was initiated in July 1999. This phase provided for review of the projects’ goals and objectives, identification of data to be used as inputs to the planning process, identification of key “stakeholders,” and definition of the remaining planning process and plan components. Consideration was given to the methods for obtaining public input, as well as any additional requirements for inter-governmental coordination, that the process should incorporate.

### **Synthesis of Inputs**

An extensive array of both technical and non-technical information served as inputs to the plan, both in the initial phases and throughout the course of the Phase II Plan’s development. An initial series of data collection meetings allowed individuals and agency representatives with specialized knowledge of, or ready access to, important background information to brief the planning team, transmit hard copy information and convey their understanding of its relevance and planning implications (see Appendix A).

Technical background included the Programmatic Environmental Impact Statement (PEIS), and comments thereto, for rock mining in the Lake Belt; the PEIS and Final Integrated Feasibility Report for the “Restudy” (now known as the

## **Lake Belt Phase II Plan** Description of the Planning Process

CERP or Comprehensive Everglades Restoration Plan), as well as related documentation; and a number of historical and current County documents related to water quality, wellhead protection and other hydrologic issues relevant to the area. Planning background included the Phase I Lake Belt Plan documents (annual reports and other documentation), the County Comprehensive Master Development Plan and other regional policy plans.

In addition, GIS data was assembled from several sources including Miami-Dade County / FPL, SFWMD, and data on file at EAS Engineering, among others. A base set of Arc Info coverages was formatted for views of the Lake Belt area as defined by the Florida Legislature (revised 1999 boundaries). This GIS data assemblage, with minor updates and corrections during the planning process (to address changes in land ownership patterns, for example), served as the base for all of the graphic exhibits and mapping tasks subsequently performed.

Finally, the direct input of interested citizens and other stakeholders was solicited in a number of venues. A series of stakeholder interviews solicited opinion and comment from diverse interest groups ranging from mining and non-mining landowners to environmental organizations, regulatory agencies and resource managers (see Appendix C). Advertised public meetings were held in the area twice, on evening schedules; summaries of comments received are included in the companion document entitled Lake Belt Phase II Plan – Comments. In addition, the regular monthly meetings or workshops of the Committee were open meetings, often including extensive public commentary.

### **Analysis**

The analysis phase included consideration both of the complex technical factors that largely define the range of possibilities for the Lake Belt, and of the policy issues and decision points the resolution of which would further shape the Plan's outcome. In conducting this analysis the Lake Belt Phase II Plan had to be coordinated with a number of corollary studies and projects, which ran concurrently or, in some cases, extended beyond the time frame mandated for the planning process. These corollary projects and studies include the CERP (ongoing); Miami-Dade County's studies in support of a re-written Northwest Wellfield Protection Ordinance (completion 2003); hydrologic modeling by SFWMD of the mining plan for the area (completion 2003); and others. (See also the Lake Belt Phase II Plan, "Implementation".)

The analysis was conducted through reviews of the data collected; working meetings with agency staff; and discussions during Committee meetings, resulting in a summary Memorandum of Technical Parameters and Policy Options (see Appendix D). Its focus was to establish the "givens" or foundations upon which further development of Alternative Concepts for the Lake Belt, and the preferred concept for the Phase II Plan, would take place. Planning assumptions were incorporated, based on best available information, from the

## **Lake Belt Phase II Plan** Description of the Planning Process

related studies and projects in progress, and acceptable ranges of options were identified for consideration in the remaining phases of the planning process. Some key “givens” included the paramount importance of wellhead protection, the necessity of accommodating the “Restudy” (CERP), and recognition of the Phase I Lake Belt Plan as the basis for further assumptions regarding the extent of mining and of environmental preservation.

### **Alternative Concepts**

Development of Alternative Concepts for the future of the Lake Belt area comprised two distinct phases of work by the Committee and consultants. In spring 2000, an initial set of Alternative Concepts was prepared (see Appendix E) that illustrated distinct choices in each of three major areas of inquiry: land use and development (non-mining); recreational use and access, and biological enhancements (including wetland mitigation and lake enhancement, as well as other habitat enhancement issues). The purpose of this “Preliminary Draft” set of Alternatives was to generate discussion and focused consideration of some of the most complex and interrelated policy and technical issues, at the same time that certain corollary studies (e.g., wellfield protection, hydrologic modeling) were approaching the completion of milestone products.

The “Preliminary Draft” Alternatives included consideration of a range of land and recreation use and biological enhancement options, from a “no change” scenario (continuation of present practices and policies) to a “reasonable maximum” scenario (pushing the outer limits of satisfying one or another objective suggested for the Plan by various stakeholders). Up to ten exhibits were prepared and reviewed, depicting diverse approaches to the issues referenced. The “Preliminary Draft” Alternatives were considered by the Committee in two successive workshops. Discussions resulted in the preparation of a second round of “combined Alternatives” which merged the various elements and ideas into three annotated maps, each depicting an alternate future for the Lake Belt (see Appendix F).

The revised Alternative Concepts formed the basis of intensive Committee reviews and discussions throughout summer 2000. These three concepts varied significantly in the degree to which each pursued the provision of recreational access, intensification (if any) from current levels of allowable development on private (non-mining) lands, and enhancement of biological values beyond the minimum required as mitigation. Following an additional set of refinement and revisions based on Committee reviews, the final revised Alternative Concepts (see Appendixes G and H) were re-distributed for evaluation, as well as presented at a public evening workshop.

### **Preferred Concept**

Evaluation of the Alternative Concepts was completed in October, 2000, by the Committee and consultants, with consideration of public input and comments received at workshops and through correspondence (see Appendixes I and J). Criteria previously established by the Committee as measures of success for the Lake Belt Plan were updated and re-distributed to serve as a starting point for discussion of the Alternatives. Additional factors and policy directives resulted from Committee workshop discussions in October and November 2000. Among these additional factors was the Phase II Plan's role as an outline of continuing actions needed for implementation, beyond the legislatively mandated time frame of the Lake Belt Plan itself – or of sunset for the Committee. The preferred plan that emerged to form the basis of the final Phase II Plan, therefore, contained selected elements from each of the Alternative Concepts previously developed. It also combined and hybridized them with elements suggested by Committee members and others during the course of the evaluation and review process.

### **Final Plan**

The text of the final Lake Belt Phase II Plan report was drafted in December, 2000 and distributed to an extensive mailing list including Committee members and other interested parties, while progress versions were also posted for comment on the SFWMD website. The Phase II Plan, as approved by the Committee on December 15, 2000 expands on the broad framework of the Phase I Plan by further articulating four critical components:

- The 2050 Vision for the Lake Belt.
- Guiding Principles to generally direct the location, intensity and phasing of uses and activities in the area.
- Guiding Actions to address specific issues, with time frames and assignment of responsibilities.
- Recommendations for other steps related to funding, implementation, phasing, and legislative and regulatory revisions.

Additional comments and correspondence from Committee members and others relative to the Phase II Plan, not specifically related to the Alternative Concepts, are contained in the companion document [Lake Belt Phase II Plan – Comments](#).

### **3. APPENDICES**

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# **Appendix A**

## **Summary of Data Input & Collection Meetings**

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**LAKE BELT  
PHASE II DETAILED MASTER PLAN**

**SUMMARY OF DATA/INPUT IDENTIFICATION  
AND COLLECTION MEETINGS  
(PROJECT WORK TASK 1.1)**

*submitted to*

**SOUTH FLORIDA REGIONAL PLANNING  
COUNCIL  
*and the*  
LAKE BELT COMMITTEE**

*submitted by*

**WALLACE ROBERTS & TODD  
*and*  
EAS ENGINEERING, INC.**

**SEPTEMBER 30, 1999**

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**LAKE BELT PHASE II DETAILED MASTER PLAN  
DATA/INPUT IDENTIFICATION AND COLLECTION MEETINGS**

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## **Florida Power and Light**

Pam Rauch, Attorney

Bob Conklin, Transmission Line Operations

Jim Coughlin, Transmission Line Engineering

Eduardo Garcia, Transmission Line Engineering

Dave Douglass, Corporate Real Estate

Steve Collins, Mitigation Banking

August 4, 1999

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### **1. Summary of Facilities in Lake Belt Area**

- substation at south end (a large 500 KV switch station - the largest in their system)
- 660' wide corridor with one 500 KV line (there is room for a 2nd line in the corridor)
- 200' wide unused corridor

### **2. Management Issues**

Have issues related to land use and environmental management:

- flooding
- blasting
- birds

Specific issues related to mining include:

- vibration
- dust
- access for conveyance
- clearance (lines sag to a 50' clearance in middle of spans)

Need to assess with the mining industry its expectation as to how it plans to mine in the area

### **3. 2nd Transmission Line through Lake Belt Area**

Issues related to 2nd line:

- cost
- buildability
- access
- clearance
- maintenance
- flooding (structures have to be above maximum flood elevation following flooding - existing line is low - new line should be designed to be higher)

Do not know when 2nd line will be installed (probably in next 5 years - now getting permits)

#### **4. Feelings about Recreational Uses in Close Proximity to Transmission Lines**

No sailboats

No boat ramps

Do not want wetlands to be created

Probably could use ROW under lines for hiking and equestrian trail, but would be a number of conditions for shared use:

- would want indemnification forever
- clearance is a concern
- access is a concern
- would want compensation for damages

#### **5. FP&L Mitigation Bank**

Implementation of Lake Belt Plan will create substantial mitigation obligation

Will not be adequate area available in the Pennsuco Wetlands to meet mitigation obligation

For higher quality wetland impacts, FP&L mitigation site is more cost effective (not so for low impact wetlands) (at 2.5:1 FP&L is not competitive; but is for lower ratios)

FP&L site is also a good option because it will be creating a transverse corridor between Biscayne and Everglades (involving approximately 13,000 acres)

FP&L will be restoring approximately 3.5 to 4 acres for every credit received

FP&L would like an opportunity to work cooperatively with SFWMD and others so that its wetland mitigation site can be made available to meet Lake Belt Plan's obligations

#### **6. Coordination Needs**

Need a Memorandum of Agreement with SFWMD

#### **7. Right-of-Way Maps**

Have maps for the 660 foot corridor

Do not have maps for the 2nd corridor

**8. Get the following:**

Cathy Miller's comments on FP&L's position

11x17 graphics from the Phase 1 Study

## **Limestone Mining Coalition**

Paul Larsen, President, Larsen & Associates

August 2, 1999

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### **1. Rock Miners Perspective**

Rock miners need certainty that they will be able to mine (more certainty than they have now) because mining requires a significant investment in equipment and infrastructure

Miners have:

- a permit for the next 15 years
- a mitigation deal
- a footprint for mining
- compatibility with Miami-Dade Comprehensive Development Master Plan
- zoning in Pennsuco area

Miners want to mine, although they could consider development along the edges. At this point they are less interested in development because of the uncertainty in the development business, and the substantial investment the companies have in equipment.

Lake Belt Plan needs to have a 50-year horizon

In order to develop Lake Belt Plan there will have to be a number of assumptions

- No changes to the Miami-Dade Comprehensive Development Master Plan
- Miners want to mine in accordance with Figure 4 (see Limestone Mining Coalition Comments on Draft PEIS)

Miners are eager to make land swaps, but the extent of swaps would be contingent on overall deal

### **2. Configuration of Lake Edges**

Seepage is greater for big lakes (big lakes would probably have the level of Snapper Creek)

Miners would prefer big lakes because they would enable mining the divides

Lake divides should probably be a minimum of 300' in width (100' littoral zone on each side, with 100' of upland)

### **3. Wellfield Protection**

Should be a wellfield protection system, not only a wellfield buffer

There are several components to protection – buffer, access controls, spill prevention

Contends that the models are flawed because do not address interaction of surface flow during the wet season

Could get Tom MacVikar to run part of the SFWMD groundwater model with appropriate changes to reflect surface water

#### **4. Restudy**

Proposing huge reservoirs with 36' change in water level over the year

Include areas already mined and some not mined

ACOE wants to build reservoirs in about 20 years

Impermeable layers are as deep as 200' (and may not prove to be impermeable)

Questions feasibility of reservoir concept

#### **5. FPL Strip**

The burden of proof is on the federal government regulators to prove why miners should not mine the FPL strip

Have to show by 2003 that it is essential to protect the FPL Strip in order to restore the Everglades (see Figure 2 in 1997 Progress Report – the area labeled as “mining allowed in five years unless needed for Everglades restoration”)

#### **6. Get the Following**

Paul Larsen's study on the aesthetics of lakes



## **1. Thoughts on the Lake Belt Plan**

Florida has over 900 special districts – the Lake Belt District is the only one which has an extraction industry that is being treated as an asset (may want to get legislation for special districts)

Plan should be a set of recommendations that must be adopted by County Council as an amendment to the Comprehensive Development Master Plan

Need to identify the scale of what is being addressed – county may have requirements for Comprehensive Plan amendments – for lakes they may be large-scale, whereas the nodes may have to have more detailed plan developed later

Committee is looking for a map and a management scheme – particularly around the wellfield

Consider creating a new category of parks, rather than use the Metropolitan Park designation (have been lawsuits involving state that have led to establishment of “intensity standards”) (?)

Do not propose any commercial development

Will need a permit/general permitting scheme for non-rockmining group

Plan should designate mitigation bank

Environmental community will look favorably upon use of state property (Blockbuster site) as a wetland mitigation site

Should consider planning an Audubon House in the area

Phosphate industry has special requirements imposed on it (exempted from DRI) (a lot could be arguably interpreted as vested)

## **2. Plan Adoption**

The Plan will be submitted to the Legislature – will want the Legislature to accept the Plan and do nothing

May want to handle the Plan as a 380 Comprehensive Plan Amendment

Environmental community will wait for administrative hearing on the Plan Amendment to jump in and comment/criticize/attack

### **3. Non-Rock Mining Lands**

Areas removed from the Lake Belt District were non-rock mining lands

These landowners wanted special treatment in the form of zoning changes and reduction of permitting and mitigation of wetland impacts

### **4. Non-Conforming Uses**

Need to consider the potential for a huge number of non-conforming uses – could do nothing or implement a “vesting of nonconformity as a package” (something like the Harrison Act for undue burden process – a process to negotiate a solution)

In order to understand the magnitude of nonconforming uses, need to overlay ownership with aerial to identify concentrations of activities

### **5. Land Authority Concept**

Are two land authorities – one in the Keys and one in Green Swamp

Land authority is conceived of as an entity that would have some management responsibilities and would purchase small properties

Land authority would be able to establish its own percentage over appraised value that it can pay for property – this will offer the opportunity to create more “willing sellers”

### **6. Relationship of Lake Belt Plan to the Restudy**

Also interested in how to interplay the Lake Belt Concept with the Restudy – keeping in mind that the future of the Restudy has a strong political component

Need to propose a Restudy coordination process (will need a section on amendments that may be needed if Restudy components change)

Perhaps should propose that Dade County include revisiting the Lake Belt Plan in its mandated 5-year review of the Comprehensive Development Master Plan

Plan needs to assume the Restudy components and planning process, based upon the scheme shown in July 1999 Restudy (keeping in mind that the concepts are subject to change pending further studies on reservoir feasibility)

Reservoirs are probably more real than the ASR (in part because the environmental community probably would prefer to see the area “locked up”)

## **7. Good Contacts**

- Stewart Strauss with National Audubon an important player
- Frank Nero at the Economic Development Council (very interested in Greenway Committee)
- Brenda Marshall with TPL has good ties to County Council
- Jerry Hernandez, Chairman of Committee and member of County Council
- Terry Rice, former District Engineer (now in a semi-chair at FIU)

## **8. Get the Following**

- 1998 Amendment to the Comprehensive Development Master Plan
- state legislation related to Special Districts
- information on Plan Amendment process (380 Comprehensive Plan Amendment)
- information on “intensity standards” as they relate to proposing a “Metropolitan Park” or some new type of park
- information on “Audubon Houses”
- information on land authorities (why, how, functions, rules)

**1. Wellfield Protection**

Need to be concerned with both the Northwest and West Wellfields

Northwest Wellfield also called the 3-Mile Square Wellfield

DERM presently restricts land use, hazardous material use and generation

**2. Land Use Study**

Characterized 6 areas (C9, Pennsuco, TNE, N. Trail, West of Krone, Bird Drive)

**3. C9 Charette**

Presents one version of a future that may not be so unrealistic because have potential for all ownership ending up with the rock miners (except for the Blockbuster site and the airport parcel)

**4. Restudy**

“Restudy is a tool box of ideas about how we will get to the 2050 performance level of flood protection and water supply”

Attempts to address uncertainty - see the table of fallback options for components that fail

May lead to a phased approach that allows for alternatives if a component fails to perform

Makes sense to look at 10 to 15 year increments

Neither White Rock nor Rinker owns all property within reservoirs

## **5. Roads**

Dade County has vacated 1/2 and 1/4 section rights-of-way on occasion when it can be demonstrated that there is no private property that will lose access as a result of the action

Need to talk to Public Works regarding conditions for vacating roads (Russell Kelly)

## **6. Non-Rock Mining Issues**

Major conflict areas have been largely removed from study area

White Rock is indicating that they will be buying additional land to mine, which will eliminate some problems in the area

Blockbuster site (488 acres) is owned by the State, with some outparcels

## **7. Littoral Zones**

DERM uses 1:4 slope in all lakes (except where adjacent to a major ROW where it is 1:7)

Based on assumption that this is the steepest slope that is stable without erosion and that can provide littoral and ecological values

SFWMD now pushing 1:5 slope

DERM sees no water quality value in 1:5 or 1:6 over 1:4

(DERM moved away from 1:7 because they concluded that they were double charging for mitigation)

## **8. Pennsuco**

Very inexpensive to use (\$6,000/acre) compared to other areas (like the FPL site which is \$40,000/acre)

There is pressure to use the Pennsuco for mitigation of impacts from all around the area

Is pressure by FPL and others in the mitigation banking industry to undermine Pennsuco by trying to eliminate "unofficial mitigation sites"

WASA now has to mitigate for wellhead protection due to drawdown (are now contributing money to improve the Pennsuco - is not officially "mitigation")

If WASA increases pumpage, it could increase the cone of influence, then theoretically requiring additional mitigation when the permit renewal comes up

## **9. Ideas Regarding the Lake Belt Plan**

Would like us to consider using the Bird Drive Basin for mitigation and recreation - not deep lakes, but shallow lakes for canoeing, bike paths, board walks

Road rights-of-way could be used to create tree islands

Should try to preserve old canals that are older vegetative corridors and that provide wildlife corridors

There is a nice tree island that has been surveyed down in the Pennsuco, near the Shooting Range

Nancy Dalrymple has suggested connecting the Pennsuco to the Northwest Wellfield area

There is birding along the FPL ROW during winter (because FPL mows 300' on each side of the transmission line) - birds sit in trees at edge of melaleuca and feed in mowed wetland

FPL strip might be a good place where the most "natural system type treatments" could be incorporated"

Littoral shelves could have snakes (are not necessarily places where would want to send the public out to recreate)

Will need to prevent illegal dumping into reservoirs

Lake Belt Plan should consider reserving the Pennsuco for the Lake Belt area

## **10. Get the Following**

- 5-page mitigation report
- Dalrymple Report on Littoral Design
- March 1999 Wellfield Plan
- Code Chapters 24-12.1 and 25-35.1 for existing Wellfield Protection Areas
- DERM comments on EIS
- DERM comments on Restudy
- Working Group Issue Report addressing "Areas of Uncertainties"
- Water Preserve Land Suitability Analysis prepared by Dawn Reid at SFWMD
- Paul's notebook with color drawings of alternative littoral treatments
- Pennsuco Mitigation Plan

## **1. Ongoing Wellhead Protection Study**

Engaged in study including the following components:

- water quality assessment
- preliminary tracer test results
- full-scale tracer test results
  - injection well and monitor well installation
  - conduct full scale tracer test
- vertical pathways tracer test
- particle tracer test
- solute transport modeling
- wellfield protection plan

Primary product of the study will be an update of the 1985 Northwest Wellfield Protection Plan by July 2000, with the following sections:

Study driven by:

- changes that mining will have on hydrology
- drinking water standards have changed since 1985 (is more emphasis on groundwater under the influence of surface water)
- County and SFWMD are nervous about more and more stringent drinking water standards

In process of a full-scale tracer test to evaluate contaminant transfer

Now drilling wells

Still need to do additional modeling, taking into account hydrologic changes due to mining

Working through a Cooperative Agreement between the County and SFWMD

## **2. Basic Assumptions**

60-day travel time between any new rock mining and wellheads (falls between 30 and 100' interval)

Is possible that model may show that quarrying may alter the 60-day travel time contour

## **3. Concerns Regarding Surface Water**

WASA engages in routine monitoring

Well 10 was the first well to show elevated “scores,” suggesting transport of surface contaminants in the well

Wells are on raised fill pads so that the pump house is above flood level

Modifications included extending casing and sealing off the annulus

Concern over surface water contamination due to possible redesignation of the water source from “groundwater” to “groundwater under the influence of surface water”

Redesignation would require huge investment for WASA to expand treatment capabilities at water plant

#### **4. Thoughts on the Lake Belt Plan**

Need to manage surface water in the areas by controlling use and water flows:  
berms to divert surface flows

- minimizing access
- no power boats
- no cattle within berms
- probably no equestrian trails within berms

Perhaps could influence phasing of quarrying on basis of potential public health issues:

- develop those closest to 60-day contour last
- WRT should meet again with Harvey to review quarry phasing alternatives

DERM will need to expand the scope of surface water monitoring because, even though the rock pits currently have clean water, they could become eutrophic in the future

#### **5. WASA’s Long-term Approach to Water Supply**

The new South Dade Wellfield will allow WASA to take over and consolidate private suppliers in that area

WASA may expand the North Miami Beach Treatment Plant

No one has approached Harvey yet regarding another possible wellfield in the Blockbuster site vicinity

#### **6. Get the Following**

Cooperative Agreement between DERM and SFWMD



## **Metro-Dade Department of Parks and Recreation**

Howard Gregg

August 2, 1999

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### **1. Current Park Demands**

Is a demand for passive recreation opportunities

Park and recreation demands not currently satisfied:

- equestrian centers and trail riding
- group camping
- freshwater fishing
- mountain biking
- bicycle and pedestrian trails
- camping (especially with swimming)
- corporate events facilities

Are very interested in hiking, biking, fishing and camping

### **2. Metropolitan Park Concept**

Metropolitan parks are large resource-based facilities

County has been looking at setting up “metropolitan parks” on the west side, similar to the east side

### **3. Interest in Future Park in the Lake Belt Area**

2 years ago did not want to discuss the option of future park(s) in the Lake Belt area because the miners were talking about recreation credits for mitigation

Today, however, since the mitigation issue has been addressed, County is very interested in a park concept for the area

The Lake Belt area offers an “extraordinary” opportunity for a metropolitan park

In 20 years County will be out of the “community park business” - therefore the Lake Belt type park is exactly what kind of park they are interested in

Will be a tremendous demand for recreation, once lakes are there

Lakes for bass fishing will be very important

Lake Belt is an outstanding opportunity “if handled right”

- size
- water

- good access
- nearest park in Broward is a long way away resulting in great demand

#### **4. Programming and Design of the Future Facility in the Lake Belt Area**

Concerned that the lakes are planned so that they do not become a “management nightmare” and very expensive to maintain

Recognize potential impact of fisheries on water quality and its relationship to wellhead protection

DERM has indicated that they will restrict use of power boats to areas north of Rt. 27

Might zone portions of lakes for jet skis and water skiing

If the Lake Belt area includes day-use areas, could site them where the miners have already impacted areas (i.e. their mining staging areas)

Want to see nodes of recreation use, not uses tied to something like “an 18-mile linear lake shoreline”

Swimming at Lake Belt would be very desirable - envisions would be in pools, not in lakes due to water quality concerns

#### **5. Previous Park Concept for the Lake Belt Area (done three years ago)**

Presented previous concept - still is what they would want to see - felt that may not need to get any more specific than creating a list of compatible activities so that as the funding and demand evolve there will be flexibility to do different things

- need to keep trail glades (?) (including buffer areas around it)
- two recreation nodes
- access off 8th Street and Route 27

#### **6. Park Long-Term Management**

Need to address the management entity for the park

County could manage campgrounds (are now improving and enlarging existing campgrounds because of huge demands for camping)

#### **7. Park Financing**

There are two park systems in the County:

- unincorporated Dade County
- traditional regional parks (supported through tax millage)

Lake Belt facility would probably have to be paid for by millage - but since there is no tolerance for additional levies at this time - it is likely that a new facility would have to be supported through user fees

Metropolitan Park might not necessarily require a huge amount of money - so could perhaps be financed through user fees

Could consider financing through a surcharge on mining

County is permitted to engage in commercial activities that are park-related

County has legislation prohibiting commercial uses on county-owned land leased for non-park related uses

## **Metro-Dade County Department of Planning and Zoning**

Bob Usherson, Chief, Metropolitan Planning Section

Cindy Dwyer, Principal Planner

Jerry Bell, Principal Planner

August 3, 1999

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### **1. Check the following documents for relevant regulations:**

- Land Use Plan Land Use Policies
- Land Use Plan Conservation Policies
- Building Code, Chapter 13 - Blasting Regulations
- Building Code, Chapter 33 - Limestone and Quarrying Regulations
- Fencing requirements for lake excavations

### **2. Land Use Planning Policy in Lake Belt Area**

Policy for the Lake Belt Area has been clear for the last 25 years

Outside the UDB, land is to be developed for water use (area low and subject to flooding)

Relevant studies include:

- Dade County Water Quality Management Plan
- East Everglades Plan (1974)
- East Everglades 208 Plan
- Northwest Wellfield Protection Plan (1985)

Was once a lot of industrial zoning to accommodate quarries - the County rolled back all industrial zoning but gave the quarries the “unusual use” option

### **3. Permitting New Mining Operations**

Why not make future uses an “activity of right” rather than going through “unusual use process” (that requires public hearing) (speak with Al Torrey (in Zoning) (375 2600) regarding process)

Speak with Greg Adkins in Planning (375 2810) for procedure used by quarry operator to get approval from a Community Council)

Denial by a Community Council can be overturned by a 2/3rds vote by Council (which is very difficult to have happen)

Lake Belt Plan should outline the permitting process

#### **4. Identifying “Permitted Quarry Operations”**

Need to review and confirm that “permitted” lakes are in fact permitted - must have permits from Corps and DERM, as well as Zoning Approval

DERM Permit requires that the applicant have an “unusual use approval” from the County

In reference to the industry’s claim of “unusual use” approval - there are some locations with old approval where they are located east of the 31N levee

#### **5. Existing Zoning and Pending Applications**

Can map existing zoning by composition zoning maps (see Al Torrey)

Pending applications can be provided by Bob Usherson

#### **6. Comprehensive Plan Amendments**

No Comprehensive Plan amendments pending in the area

Along edges of Lake Belt area there are a number of projects

The Lake Belt Master Plan team should assume that anything that happens in the area will be consistent with the Comprehensive Plan

#### **7. DRIs**

There are approximately five DRIs within two miles of the Lake Belt site (Carlos has a map of all pending and approved DRIs)

There are two DRIs in preapplication in the area

DRI threshold for mining is now 500 acres/year (as of the last legislative session)

#### **8. Adjoining Landowner Concerns**

NW 12th Street (see Land Use Study)

#### **9. Non-Rock Mining Interests**

Owners in area north of 27 want 1 du/acre because cannot afford mitigation

May want to talk to Team Metro to get a feel for land uses

## **10. Usherson's Thoughts on Future Land Uses in the Lake Belt Area**

Public parks contiguous to existing development areas

Could consider suggesting new commercial uses on adjacent areas where there is access (he warned about doing this as an applicant would likely come in with their own ideas, claiming that there is no market for the permitted uses described in the Plan, and therefore he/she should be allowed to develop the property in an alternative urban use)

Maybe could have isolated areas, particularly north of 27 and south of 12th Street where allow motor boats or jet skis

Should assume that the "doughnut holes" in the Lake Belt Area are or will be residentially developed

## **11. Long-Term Management and Funding for Parks**

Plan should outline the ultimate institutional entity that will own and manage parks

Could allow commercial development with revenue flows for maintenance of parks

## **12. Slope/Safety Shelf Requirements**

See Zoning Code Section 33-16 for lake slope and safety slopes (differ along roads, in residential areas, and uninhabited areas)

May need to take a fresh look at slope/safety shelf requirements (say 1:7 to 5 feet below MHL)

**Historic Preservation Division, Metro-Dade Office of Community and Economic Development**

Christopher Eck, Director

John Ricisak, Historic Preservation Specialist

August 3, 1999

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**1. Archaeological Site Inventory**

Have a survey of archaeological sites prepared by HPD in 1980

Survey focused on large islands

All have been ground-truthed during the last 20 years

Typical site is a black dirt midden from Seminole camps - larger islands have midden deposits that can be two to four feet in thickness, representing 2000 to 3000 years of use

Are also some settlers compounds and 19th century campsites

Sites more often than no contain human graves

**2. Potential Sites not included in the Site Inventory**

Are many small islands that have not been surveyed that most likely contain graves

**3. Dade County Regulations Pertaining to Archaeological Sites**

Phase 1 Reconnaissance is a given requirement anywhere in the area

Four sites are officially designated as archaeological zones that are protected by Section 16A of the County Code

Under the ordinance, landowner must apply for a certificate to dig in these areas

**4. Regulation of Activities Affecting Graves**

Activities affecting graves are regulated by Florida Statute (call Jim Miller in the State Archaeologist's Office)

There are two choices when graves are encountered:

- preservation on-site
- removal and reinterment elsewhere in accordance with state regulations

## **5. Wetland Mitigation-Related Issues**

Impacts on archaeological sites associated with the physical removal of melaleuca must be mitigated

Is not an issue when enhancement is accomplished through cutting and chemical treatment



## **South Florida Water Management District**

Jim Jackson, Lead Planner, Planning Department

Dawn Reid, Planning Department

John Mulliken, Project Manager, Lower East Coast Regional Water Supply Plan

August 4, 1999

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### **1. Clarification**

Legislation refers to “Making a Whole not Just Holes”

Federal process refers to product of the “Issues Workshop”

EIS evaluates the proposal coming from the “Issues Workshop”

Product of the “Issues Workshop” is a step back from the “Whole”:

- Split up corridor
- Treatment of southwest area
- Treatment of private lands north of Route 27

### **2. Comments Regarding Lake Belt Plan**

Is critical to understand how the three planning projects go together:

- Lake Belt Plan
- Water Supply Plan
- Restudy

Lake Belt time schedule has been criticized for being ahead of the Restudy schedule

Need to consider land use changes along the perimeter that suggest that some areas along the perimeter should go first

Need to understand possibility of moving southern end of Northwest Wellfield from north-south to east-west orientation (this may be a recommendation of the LEC Water Supply Plan)

Lake Belt Plan must be consistent with LEC Water Supply Plan and WPA Plan

### **3. Lower East Coast Water Supply Plan**

Study area encompasses area from Okeechobee/St. Lucie River south

Largest of SFWMD four water supply plan

Is a 20-year water supply plan (to be completed by spring 2000)

Designed to meet the demand for water supply with a drought having a recurrence interval of 10 years (referred to as a 1 in 10 level of service) without invoking water shortage emergency provisions

Have been several iterations of this study over time – more contemporary process started in 1982 with creation of a 46-member committee (not geographically balanced membership)

Have not gotten into debating Lake Belt issues

Do not want to be duplicative of Lake Belt process or WPA process (except for 2020 modeling assumption that ½ of Lake Belt storage will be on line)

Storage in the Lake Belt area very important

To assume loss of Lake Belt storage would require very expensive solutions for Dade County **OR** failure to meet goals for the most important and largest county in the State

Are five models in development that will be used:

- Three are up and running (Lake Belt, North Palm and South Dade)
- Two are not functioning (Broward and South Palm)
- Need all five functioning
- Will then make 3 runs
- These will be processed and then released to public for review
- Originally due 1/99, then 5/99, now 9/99
- Hoping to make 9/99 deadline

Modeling the following:

- 1995 base case
- 2020 base case with no Restudy components
- 2020 with Restudy components
- 2020 with Restudy components and ½ Lake Belt ( ½ of each reservoir)
- 2050 with all Restudy components (this will probably not be done by 9/99)

Will then conduct 2 to 3 development cycles to identify problems that the Restudy does not solve and possible solutions

Probably will solve problems by local water supply provisions

Will need to balance timing of coming on-line so that no county is burdened

Want to finish near 4/2000 with recommended plan and some type of summary document for the governing boards to review

Will probably recommend:

- A new vision of moving utilities around (particularly along coast where there are saltwater intrusions that are creating water shortages) (WMPA not moving wellfield)
- Utility level solutions (ASR/reverse osmosis/other sophisticated technologies)
- Ways of moving water closer to wellfields through secondary canal system

#### **4. Water Preserve Areas**

In 1994, National Audubon proposed the East Coast Buffer (Water Preserve Areas), leading to a study by the SFWMD and CH2MHill

Began Water Preserve Area Study earlier than Restudy (first time began to “connect the dots” in different projects and planning areas)

Many Water Preserve Areas are along edge of Everglades in the East Coast Buffer

North Lake Belt Reservoir is for intercepting normal southwest flow and then controlled water releases

Central Lake Belt Reservoir will be a source of water for Biscayne Bay, Everglades National Park – water will be excess from 2B (must be clean – why added two canals) (located away from wellhead area and north of Conveyance Canal)

WRA deadline is to complete models by 1/2000, with the final study completed 4/2000

#### **5. Changes to the 60-Day Travel Time Limit**

Is possible that the 60-day travel time limit could expand with increased pumping

Will have to wait until SFWMD completes modeling

## **South Florida Water Management District**

Thomas MacVicar, President, MacVicar, Federico & Lamb, Inc.

Jim Jackson, Lead Planner, Planning Department

Dawn Reid, Planning Department

August 4, 1999

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### **1. Overview of Seepage Studies for Rock Mining Impact Analysis**

Brought in by Limestone Mining Coalition in 1996 to address seepage issue

Done a lot of computer modeling to produce independent reports that are included in the Appendix to the DPEIS

- Appendix A Hydrologic Analysis of Limestone Mining South of Tamiami Trail between Krome Avenue and the L-31 N Canal
- Appendix A Analysis of Seepage and Hydroperiod Impacts of the Lake Belt Plan

Southern area had a separate study done because was a different situation:

- Canal operation
- Wellfield issues were different
- Wetland issue were different

Studies were helpful because that helped to achieve consensus that seepage is not a critical issue and that there are a few basic solutions (structural fixes):

- Changing canal systems to hold higher water level
- Buffers

Need to plot the "basic solutions" for seepage described in Appendix A of the PDEIS (these helped to achieve the accepted footprint in the "Issues Report")

Structural fixes may not be those chosen once the Restudy is completed

### **2. Seepage Modeling Still to be Done**

Modeling of seepage from the west will occur as part of WPA process

SFWMD (JJ) made sure that can evaluate drawdowns in 3B and Pennsuco

SFWMD (JJ) feels that may have to spend time modeling with Lake Belt Plan rather than with WPA Program (JJ guardedly optimistic)

SFWMD (JJ) feels that as move west with mining, seepage impacts will increase

Now assuming that the impacts of seepage will be a part of the study done for the Lake Belt Master Plan

### **3. Miscellaneous Comments Regarding the Lake Belt Plan**

1995 Committee Report goes through analysis of options

Lake Belt Plan will probably be implemented through:

- Amendment to Comprehensive Development Master Plan
- Amendments to Wellfield Protection Ordinance
- Amendments to Restudy
- Additional legislation related to non-rockmining lands

Wellhead protection may be the major difficulty

County plan does not look at lakes as a major issue

Need to look carefully at access control

Incremental unplanned decisions are a threat to the overall project goals (the blasting ordinance is an excellent example)

Biggest threat to Restudy and Lake Belt is if miners cannot mine (reservoirs cannot be built unless miners can mine)

- Critical to consider other forces that will influence ability to mine (such as land use changes)
- County must stick to UDB boundary in the future

## **South Florida Water Management District**

Jeffrey Needle, Senior Civil Engineer, Planning Department

Tommy Strowd, Director, Operations

Jim Jackson, Lead Planner, Planning Department

Dawn Reid, Planning Department

August 4, 1999

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### **1. Background Information Regarding Water Quality and Stormwater Management**

When Dade County started developing, created Area A and Area B

Canals draining to east only drained Area A

Thought Area B should be pumped west into Conservation Area

Area B Plan sat on shelf

By the time people started thinking about it, water quality issues precluded ability to pump

So, today development west added more water (much more than planned) into C4 and C6 Canals

When started looking at Audubon's concept for Water Preserve Areas, decided to look at Area B to see if it was possible to recapture the original plan for Area B

Wanted to capture, hold, treat, and pump west (particularly in the Lake Belt area)

Therefore, Lake Belt area perceived to offer an opportunity to solve a host of water problems

If development continues west, newer communities will be safe from flood in new areas (due to flood proof design), but older areas to east will be flooded

C4 Canal along Tamiami Trail at capacity in wet season

Are a number of communities impacted to the east by high water

Not too many flood complaints in the area east of the Turnpike

Stormwater standards in the area require on-site treatment with no discharge from the 100-year storm in areas to east (100 year/zero discharge)

Snapper Creek level maintained as a wellfield protection area – maintain 3.5' elevation to prevent seepage from the landfill

## **2. L31 Seepage Management Area**

Park very concerned about seepage

Have water flowing in L31 Canal even when the gates are closed

Need to determine how to reduce losses toward east

Can install a vertical seepage barrier or stack water, but transmissivity of substrata so high may be no solution

Park will be acquiring land right up to L31 North

Park wanted to take out L31 North

Aiming toward Natural System Model water levels in Park

Scheme now is to:

- Move levee
- Pump water from reservoir to site near prison
- (Install wells with pumps to run during wet season)
- Then sheet flow the water across the slough (point of spreading is outside park, just south of the prison)

Is an ongoing pilot study to look at seepage control solution – are two ways to consider:

- With land, using stepped down areas
- Mechanically intensive solutions

## **3. Bird Drive Basin**

200 cfs pump back pumping during storms

Will result in a real spiky hydrograph – could get 4' deep water

Water will remain only for a short time because the area is so transmissive

Dade County may need some type of protocol so that biological functions are protected more by reducing flood control level

## **4. Dade-Broward Levee**

Enhancement to levee proposed

Need to maintain water level in Pennsuco by maintaining water deliveries and reducing seepage

## **5. Central Lake Belt Storage Area**

Shape and size generally constrained

Rinker Rock Processing Facility a given

Need 300 feet between edge of barrier

Levee around facility 22' high

When water withdrawn, goes through wetland treatment, then to L30 Canal and then to sheet flow into Shark River Slough

## **6. Option of Using Bird Drive Basin or Blockbuster Site for Mitigation**

No dual function work – if it is doing STA work then it's not doing biological function work

Therefore cannot use STA for mitigation site (i.e. such as Blockbuster site) (would not provide mitigation credits in event we do some type of credit analysis for the Plan)

Maybe could use Bird Drive Basin for mitigation if it is not used for reuse



## **Miami-Dade County Water & Sewer Authority**

Jorge Rodriguez, PE.

August 4, 1999

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### **1. History**

WASA notified by FDEP that well #10 of NW Wellfield was considered UDI (under direct influence of surface water)

WASA fought & won to have it re-classified

Extra treatment required for wells classified UDI would have cost County  $\pm$  \$279 million

WASA argued characteristics of water quality resulted from construction of casing, not surface water influence

Led to agreement w/ FDEP involving regular testing by WASA for microparticulates etc. in 88 wells

### **2. Current Status / Anticipated Future Changes (NW Wellfield)**

225 mgd installed capacity

155 mgd currently permitted

2020 anticipated usage also 155 mgd

60-day travel time studies based on 225 mgd as far as JR understands [*need to confirm*]

WASA does not have a 50 year plan but does have a 15 year plan [*JR can get us a copy*]

May be a need someday to increase capacity (e.g., another 50 mgd). May be an option to expand west and add wells.

Hialeah-Preston wellfield can not be expanded (235 mgd)

Blockbuster site, although shown on some old maps as a potential wellfield site, is not being considered in current planning (20 year plans [?] being done by CH2Mhill)

Any new treatment plant would have to be at NW Wellfield – access would be off 74<sup>th</sup> Street

No other special constraints

### **3. Potential Land Acquisitions / Disposition**

WASA currently owns 3 sections @ NW wellfield. Needs to keep all -- not interested in selling any of that property (e.g., to the east).

May be interested someday in additional buffer to the west.

#### **4. Restudy Comments**

Water quality in the reservoirs is a big question / variable

High eutrophication potential

Note high DOC, nutrients

Concerned if the Pennsuco, the Dade-Broward Levee and the Conveyance Canal would get “dirty” reservoir water – these areas influence the wellfield quality

#### **5. West Wellfield**

Potential Re-use Plant nearby would not be a conflict -- water released is of drinkable quality

Advanced treatment – 100% [???] removal, then disinfected / membrane treated

West Wellfield now 30 [???] – 15 from Biscayne, 15 from ASR

## **Everglades National Park**

Karyn Ferro, Sarah Bellmund

August 19, 1999

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### **1. Recommended Background Documents**

- PEIS Comments
- Issue Team Report
- Land Use Report
- Wildlife Report
- 10/1/97 NPS Letter (recommendation for “Step-Down Concept”)
- Walker & Cadillac [date?] studies regarding residence time criteria for water treatment using wetlands
- SFWMD archives of unpublished, peer-reviewed literature [“gray literature”]

### **2. Biological Values & Mitigation Issues**

Concept of targeted development of littoral zones: aggregate in key areas to maximize biological value, rather than spread uniformly throughout all lakes

Need short hydroperiod marshes (more than littoral zones) – historically, these are habitats with most area lost. Best wood stork & wading bird habitats.

Gradients are key factor for wildlife: hydroperiod and hydroperiod; continuous, slow increase/decrease in water level (spring & fall) rather than abrupt shifts & changes in direction

Recreational fishing a good use especially for non-Restudy lakes

Concerned about potential creation of biological wasteland: e.g., levees around huge Restudy reservoirs; due to great fluctuations in water level, banks will be regularly inundated; will result in great quantities of rotting vegetation on the banks

Serious water quality concerns re: lakes (see EPA comments letter).

- Tropical/subtropical lakes tend to stratify; no thermally induced turnover.
- Introduction of organics (e.g., muck dumping) creates anaerobic zone w/ high BOD
- Resulting “chemical soup” will be chemo-stratified as well as thermally

Implementation modeling needs to be done.

### **3. Restudy Comments**

Restudy reservoirs would probably not work as isolated water bodies (separate from groundwater) – but if they did, a water quality “nightmare” would be created.

Lake Belt Master Plan should assume both possible scenarios: Restudy components will proceed as currently defined; or will not.

- If not, then what? Perhaps assume most feasible option is somewhat smaller, unlined lakes. Best use might be dry season deliveries for make up in water conservation areas.

Storage volumes included in current plans is probably much more than needed, but storage would be helpful in ability to maintain dry season water levels (never before achievable).

#### **4. County Issues**

NW Wellfield source needed for "blending," Hialeah-Preston plant output is not up to standards

County Emergency Planning Dept. also needs coverages [?]

#### **5. Other Suggested Contacts / Information Sources**

- Chris McVoy, Ph.D. (WMD soil scientist) (561) 682-6510
- FDOT contacts re: railway extensions
- Francois \_\_\_\_\_ (at SFWMD) or Dan Thayer re [??]
- Allen Webb, Marjorie Moore at SFWMD re exotic vegetation
- Spencer Simon, USFWS (561) 562-3909
- Nancy Seith, Montgomery Watson (305) 446-3220  
(former County hydrogeologist; did a lot of modeling for West Wellfield; worked on Bird Drive Basin)

# **Appendix B**

## **Progress Report**

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**LAKE BELT  
PHASE II DETAILED MASTER PLAN**

**QUARTERLY PROGRESS REPORT 1**

*submitted to*

**SOUTH FLORIDA REGIONAL PLANNING  
COUNCIL  
and the  
LAKE BELT COMMITTEE**

*submitted by*

**WALLACE ROBERTS & TODD  
and  
EAS ENGINEERING, INC.**

**October 21, 1999**

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**LAKE BELT PHASE II DETAILED MASTER PLAN  
QUARTERLY PROGRESS REPORT # 1**

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# LAKE BELT PHASE II DETAILED MASTER PLAN QUARTERLY PROGRESS REPORT # 1

## 1.0 INTRODUCTION

This Progress Report 1 summarizes the activities completed during the first four months of work on the *Lake Belt Phase II Detailed Master Plan*. During this period the South Florida Regional Planning Council (SFRPC), in cooperation with the South Florida Water Management District (SFWMD), entered into a contract with Wallace Roberts & Todd to complete the *Detailed Master Plan* as mandated by the currently enacted Lake Belt Legislation. Work commenced on Phases 1 and 2 of the Detailed Master Plan. This generally included:

- review of the overall Lake Belt Plan Goals and Objectives
- research into the various inputs that will guide and help shape the plan
- compilation of existing GIS data for the Lake Belt
- meetings with public agencies involved with the Lake Belt
- a series of stakeholders meetings
- an open public workshop to solicit public comment on the overall planning process

## 2.0 PLANNING PROCESS AND SCHEDULE

The Consultant Team in coordination with the SFRPC and the SFWMD is using a six-phase planning process to develop the Lake Belt Phase II Detailed Master Plan:

<b>Phase 1:</b>	<i>Project Scoping</i>	June 1999 through July 1999
<b>Phase 2:</b>	<i>Synthesis of Inputs</i>	July 1999 through September 1999
<b>Phase 3:</b>	<i>Analysis</i>	October 1999 through December 1999
<b>Phase 4:</b>	<i>Alternative Concepts</i>	December 1999 through February 2000
<b>Phase 5:</b>	<i>Preferred Concept</i>	March 2000 through April 2000
<b>Phase 6:</b>	<i>Detailed Master Plan</i>	May 2000 through October 2000

## 3.0 PLAN GOALS AND OBJECTIVES

The 1992 legislative directive to the Lake Belt Committee established the overall goals for the *Lake Belt Plan*. Table 1 presents the goals - as stated in the Lake Belt Legislation - along with a series of objectives that are extracted from the Committee's *Phase I Plan*. Together these goals and objectives provide the basis for developing the *Phase II Detailed Master Plan*.

**TABLE 1**

**LAKE BELT PHASE II DETAILED MASTER PLAN - Goals and Objectives**

*(as extracted from the Lake Belt Committee's Phase I studies)*

**GOAL 1. Enhance the water supply for Dade County and the Everglades**

- Enhance the hydroperiod and flows to the Everglades System, including Florida Bay, Biscayne Bay, and the South Florida estuaries
- Enhance the quality of water made available to the Everglades System
- Enhance the amount of water available during drought conditions for Dade County and the Everglades system
- Provide for additional wellfield protection
- Provide measures to prevent the reclassification of the Northwest Dade County wells as groundwater under the direct influence of surface water
- Protect water resources from potential adverse impacts of mining

**GOAL 2. Maximize efficient rock mining**

- Maximize the volume and quality of rock available for mining through 2050, consistent with other Lake Belt Plan goals
- Enhance the certainty of future governmental permitting requirements

**GOAL 3. Promote the social and economic welfare of the community**

- Protect public health
- Promote compatible land uses
- Enhance recreational opportunities
- Enhance the economic vitality of the rock mining industry and other industries in the area
- Address the rights of all private and public landowners, large and small
- Consider the feasibility of a common mitigation plan for non-rock mining uses
- Enhance compatibility with regional transportation plans
- Reduce the costs of infrastructure construction, operation and maintenance
- Provide for acquisition or compatible lawful use of parcels not intended for rock mining

**GOAL 4. Protect the environment**

- Mitigate environmental impacts of future rock mining and development
- Enhance water quality
- Create, preserve, enhance, and/or restore the habitat and biological productivity of lakes and littoral areas
- Remove and/or control exotic vegetation
- Enhance endangered species conservation

**GOAL 5. Further implementation of the Lake Belt Plan**

- Identify the institutional and financial requirements for plan implementation, including the need to establish a land authority
- Identify the means to secure additional funding for plan implementation
- Educate various groups and the public regarding the benefits of the Lake Belt Plan

## **4.0 ACTIVITIES DURING THE 1<sup>ST</sup> QUARTER (PHASES 1 AND 2) OF THE DETAILED MASTER PLANNING PROCESS**

### **4.1 Data/Input Identification and Collection**

The *Lake Belt Phase II Detailed Master Plan* is building upon the database developed during the Committee's Phase I studies. This database will be complemented by information from other ongoing state and federal studies underway, such as the *Restudy*, the *Wellhead Protection Study*, the *Water Preserve Area Feasibility Study*, the *Lower East Coast Water Supply Plan*, and the *PEIS for Rock Mining*.

The Consultant Team has met with the various federal, state, regional and local agencies involved in preparing these studies to collect available data, to review ongoing studies, and to ascertain the scope, status, and anticipated completion dates for additional information critical to development of the *Phase II Detailed Master Plan*. Meetings were held with the following agencies, organizations, and individuals:

- Florida Power and Light
- Limestone Mining Coalition
- Jim Murley, Director, FAU / FIU Joint Center for Environmental and Urban Problems
- Miami-Dade County Department of Environmental Resources
  - Natural Resources Division
  - Water Supply Section
- Miami-Dade County Department of Parks and Recreation
- Miami-Dade County Department of Planning and Zoning
- Miami-Dade County Office of Community and Economic Development, Historic Preservation Division
- South Florida Water Management District

### **4.2 GIS Database Development**

Available information has been compiled into a GIS database for the Phase II Detailed Master Plan. The database currently is composed of a number of GIS coverages, compiled from available sources in the region, including:

- |                               |                       |
|-------------------------------|-----------------------|
| ▪ 1999 Color Imagery          | ▪ Canals              |
| ▪ Topography                  | ▪ Pumps               |
| ▪ Water                       | ▪ Land Use            |
| ▪ Soils                       | ▪ Buildings           |
| ▪ Vegetation                  | ▪ Sections            |
| ▪ National Wetlands Inventory | ▪ Major Roads         |
| ▪ Wellfield Protection Areas  | ▪ Minor Roads         |
| ▪ Water Management Areas      | ▪ Edge of Pavement    |
| ▪ Water Management District   | ▪ Public Water Supply |
| ▪ Canals                      | ▪ Urban Development   |
| ▪ Wells                       | ▪ Boundary            |
| ▪ Levees                      | ▪ Parks               |
| ▪ Curtains                    | ▪ Public Land         |

- Census Data: 1990
  - Tax Assessor's Data (Cost/SF)
- Existing, Permitted and Proposed Lakes
- Recommended Alternative Issue Team

### 4.3 Lake Belt Implementation Committee Workshop Sessions

The Consultant Team participated in the regular monthly technical ("sub-Committee") workshops of the Lake Belt Committee held on the following dates:

<p>May 20, 1999          June 17, 1999          July 22, 1999</p>	<p>Introduction of the Consultant to the Committee          Planning Process &amp; Schedule; Data/Input Identification          Update on Data/Inputs Collection &amp; Interviews; Planning for Stakeholder Interviews; Public Involvement; Intergovernmental Coordination</p>
<p>September 16, 1999</p>	<p>Report on Stakeholder Interviews; Planning for the September Public Workshop; Next Steps for 1999</p>

The Consultant Team also participated in an on-site informational meeting and tour / fly-over of the Lake Belt area hosted by the SFWMD and CSR/Rinker on July 16, 1999

*Rock crusher in northeastern Lake Belt*



*Mix of land uses and open space/protected areas in central Lake Belt.*



### 4.4 Public Involvement Plan

The public involvement component of the planning process was defined by the Consultant Team, in consultation with SFWMD and SFRPC staff and with input from attendees at the July 22<sup>nd</sup> workshop, as follows:

Public Workshops: Three public workshops will be held during the planning process. All workshops will be bilingually conducted, at a location near the Lake Belt (convenient to residents and landowners most likely to be affected).

- A first workshop (September 1999) to introduce the consultants, explain the Detailed Master Plan’s purpose and schedule, describe the process and certain key issues, and solicit initial general public input on the preferred outcome of the plan
- A second workshop (early 2000) to present the results of the initial phases of work, including analysis of project inputs and the development of Alternative Concepts. Public input will be solicited regarding the Alternatives, to aid in Committee evaluation.
- A third workshop (in mid 2000) to present and seek public comment on the preliminary preferred concept based on Committee evaluations to date

Stakeholder Interviews: A private land-owners “stakeholders” group will be another opportunity for citizen input to the planning process.

Project Updates: SFWMD will prepare additional Update mailings during the planning process, with input as needed from the Consultant Team.

#### **4.5 Stakeholders Meetings**

The Consultant Team conducted a series of six Stakeholders Meetings in late August and early September, 1999. Section 5.0 below presents a summary of the input received at the meetings.

#### **4.6 First Public Workshop**

The SFWMD and SFRPC hosted the first of three public workshops on the *Lake Belt Phase II Detailed Master Plan* on Thursday, September 23, 1999. Section 6.0 below presents a summary of the input received at the workshop.

### **5.0 SUMMARY OF INPUT RECEIVED DURING STAKEHOLDERS MEETINGS**

The Consultant Team, in coordination with the South Florida Regional Planning Council and the South Florida Water Management District, identified distinct groups of stakeholders from whom to solicit initial input and comment to help guide the planning process. The groups were selected to be representative of industrial landowners, other private landowners, public agencies (with either a regulatory or resource-management role in the area), and advocacy groups owning land or otherwise active in the area. They included:

- Rock Miners
- Environmental Groups
- Regulatory Agencies
- Resource Management Agencies
- Government Landowners
- Private Landowners

Each group was invited to attend a two-hour meeting with the Consultant Team. The purpose of each meeting was to elicit information regarding the stakeholders' interests in the Lake Belt area, as well as their perceived sense of the ideal outcome of the Plan, the Plan's mission, the "givens" that should direct the Plan, the perceived challenges and the nature of suitable recreational and non-recreational uses for the Lake Belt area. For ease of logistics, participants from the South Florida Water Management District (both "regulatory" and "resource management" personnel) were invited to a session at the District's West Palm Beach offices. A session with representatives from other Regulatory Agencies was cancelled due to Hurricane Floyd and will be rescheduled.

## **5.1 Rock Miners Stakeholders Meeting**

**Meeting Participants:** Jack Peeples, White & Case  
Paul Larsen, P.E., Larsen & Associates  
Scott Benyon, Rinker Materials Corp

**Invited but not Present:** Tom MacVicar, MacVicar, Federico & Lamb

The rock miners' expressed interest in the project was to ensure full extraction of limestone resources and facilitation of government approvals for mining at the federal, state and local levels. Their ideal outcome was indicated as including the full 8,400 acres of proposed lakes described in the Limestone Coalition's commenting letter on the PEIS for Rock Mining, dated May 27, 1999. Their desire to mine the entire "FP&L strip" (the sections between the two main FPL easements—one at the existing transmission line, the other a mile west at the Dade-Broward Levee ) was restated as non-negotiable, unless the government can demonstrate that mining in the area will destroy or preclude components of the Restudy. The miners perceive that protection of the wellfields is the primary priority affecting future uses that should occur in the area. The "givens" that should direct the planning process include the land use policies of the *Miami-Dade County Comprehensive Development Master Plan*, the miners' proposal for mining lands, and the Restudy components.

The miners would like the Plan to include large lakes in preference to small lakes. They could facilitate mining out some of the section right-of-way lines to create larger lakes. With respect to non-mining land uses, the miners are primarily interested in adjacent uses that are compatible with mining (i.e., not in conflict with blasting). Most of the miners have agreed that land that is not mined in the future will not be proposed for development by the miners. While there is a sense that the government will ultimately own and manage the land once mining is completed, it is unclear as to the nature of the land transactions that will occur – whether land will be donated or sold for public use by the mining companies.

Mitigation remains a major issue to be addressed by the Plan according to the rock miners. Mitigation requirements will have to be refined based upon the selected alternative – for both rock mining and non-rock mining lands. Additional mitigation lands will have to be identified to meet the mitigation requirements that cannot be satisfied in the Pennsuco.



## 5.2 Environmental Groups Stakeholders Meeting

**Meeting Participants:** Darren Harrell, National Audubon Society  
Joe Podgor, Interested Party

**Invited but not Present:** Stewart Strauss, National Audubon Society  
Don Chiquena, Tropical Audubon Society  
Karsten Rist, Tropical Audubon Society  
Mark Krauss, National Audubon Society  
Barbara Lange, Sierra Club  
Michael Chenoweth, Friends of the Everglades  
Erin Deady, National Audubon Society  
Terrel Arline, 1000 Friends of Florida

Water quality and wellfield protection issues were the primary concerns expressed by the environmental interests represented. The goal of the Plan is to guarantee a safe adequate water supply for Dade County.

There is a general concern regarding how the lakes will function biologically and the ultimate water quality of the lakes. There is a perceived potential for formation of a toxic anaerobic layer at the lake bottoms as well as algal blooms. Littoral zones should be designed based upon recommendations of biologists and limnologists. It was suggested that the Fish and Wildlife Service, the National Park Service, and the Florida Fish and Game Commission prepare a “white paper” describing how the lake edges should be designed. There is also concern regarding potential water quality impacts from urban runoff.

The preferred plan for the lakes was described as a series of smaller lakes with s-curved shorelines. Future uses should be limited to water, wells, rock mining and recreation. Recreation uses south of Okeechobee Road should be limited to recreational boating without motors, bass fishing, and controlled primitive camping. North of Okeechobee Road, RV camping, jet skis and boats with motors would be acceptable, provided that the Blockbuster site is not used for a new northeast wellfield. Roadways linking areas within the Lake Belt should follow the perimeter rather than cross the area. Parking should be managed in small parking facilities at use areas. A small environmental education center (with space for 30 to 50 cars) would be acceptable.

The plan should prohibit storage, transport, and use of toxic material. There are also specific concerns regarding the need for emergency plans for handling spills and aerial applications of herbicides.

Long-term management and funding responsibilities for the final Lake Belt facilities should be the joint responsibility of the US Fish and Wildlife Service, the State Fish and Wildlife Commission, and Dade County.

### 5.3 Resource Management Agencies Stakeholders Meeting

**Meeting Participants:** Sarah Bellmund, Everglades National Park  
Steven Lau, Florida Fish and Wildlife Conservation Commission  
Cecelia Harper, US Environmental Protection Agency

**Invited but not Present:** Kalani Cairns, US Fish and Wildlife Service  
David Ferrell, US Fish and Wildlife Service  
Richard Harvey, US Environmental Protection Agency  
Richard Frost, Biscayne National Park  
Richard Ring, Everglades National Park  
Lothian Ager, Florida Fish and Wildlife Conservation Commission  
Allison DeFoor, Florida State Office of Planning and Budgeting

Each of the three agency representatives summarized their interests with respect to the Lake Belt project:

- NPS is primarily concerned with the hydrologic and wildlife impacts of proposed activities in the Lake Belt area, including the Lake Belt plan components as well as the Restudy components
- EPA, as a regulatory agency is interested in public health issues, water quality impacts, and compliance with Section 404 requirements. The ideal outcome of the Plan will be no net loss of wetland function within the watershed, protection of public health through a wellhead protection program, and compliance with water quality standards for designated uses of the lakes
- FFWCC wants to see a buffer provided for the Everglades and the Pennsuco

There was consensus among meeting participants that the proposed lakes may have poor water quality. NPS has concerns that the water that will be pumped to the Everglades will have high BOD and sulfur content and will require treatment prior to discharge. EPA stated that conditions might be such that the water may not meet applicable standards, requiring that the lakes be placed on the Section 303(d) list.

The group was also concerned regarding the future conditions in the Pennsuco. The desired restoration of the Pennsuco was described as a situation where the area would be wet for two to four months a year. The water stacking proposed in the Pennsuco as part of the Restudy will have the opposite effect of lengthening the hydroperiod.

The group agreed that the Pennsuco will not have enough potential area to meet the requirements for mitigation of wetland impacts associated with mining and non-rock mining uses in the Lake Belt area. The Detailed Master Plan should accurately assess the total mitigation requirements for the Lake Belt and include an analysis of mitigation options. The Bird Drive Basin would be a good site for mitigation, although it would not be compatible with the Restudy proposal for stacking water in the area. Short hydroperiod wetlands are particularly desirable.

Littoral zones should be designed to provide a more gradual gradient from upland to wetland and more variety of habitat conditions. The littoral zone should be conceived as extending both below and above the water line, with different water depths and vegetation zones. It will be important to control impacts on the littoral zones associated

with recreation use, particularly since these areas will be counted as mitigation for wetland impacts elsewhere.

The Lake Belt Plan should include a gradient of uses with the least intense uses occurring to the west and the most intense uses occurring to the east. The area should be largely restricted to passive recreation activities. Developed uses would not be consistent with the project's goals. ATV use, intensive equestrian use, and RV campgrounds would not be desirable. Activities involving motorized equipment should be restricted. The Blockbuster site is probably needed for water treatment and should not be designated for active recreation. Elevated overlooks for viewing the Everglades would be desirable.

#### **5.4 Government Landowners Groups Stakeholders Meeting**

***Meeting Participants:*** Jorge Rodriguez, Miami-Dade County Water and Sewer  
Raul Pino, Miami-Dade County Dept. of Public Works

***Invited but not Present:*** Gary Dellapa, Dade County Aviation Department  
Russell Kelly, Miami-Dade County Public Works,  
Right-of-Way Division  
Bill Brandt, Miami-Dade County Water and Sewer Department  
Gary Donn, Florida Department of Transportation  
Steven Davies, Miami-Dade County Property Appraisal Department  
Krome Avenue Detention Center  
Miami-Dade County Corrections Department  
Florida Department of Corrections

The primary goal of the Lake Belt Plan is to ensure that there are sufficient abundant groundwater resources in the future to meet the regional demand for potable water. It is essential to Dade County that the Northwest Wellfield retain its designation as a groundwater source.

WASA wants to see a comprehensive wellfield protection program and watershed management program that addresses both quantity and quality of water. There are questions regarding (1) how the lakes will affect the quantity and quality of water; (2) water quality in the lakes, since they will be closed systems without flushing and turnover; (3) the potential net loss of water due to evaporation once groundwater is exposed to the atmosphere; and (4) maintaining adequate distances between surface water and wellheads to mitigate potential contamination of the groundwater resource. WASA is also concerned that the Restudy reservoir water quality will be poor since it will be supplied by urban runoff.

Land uses proposed in the plan should be consistent with the primary goal for the Lake Belt. Industrial (other than mining), commercial, residential and major transportation facilities would not be suitable. Uses should be limited to passive recreation uses that do not involve motorized equipment, although consideration could be given to permitting motor boats and jet skis north of Okeechobee Road. Equestrian uses, particularly a horse barn, would not be appropriate.

The County would be agreeable to releasing dedicated rights-of-way in most locations. The entity charged with implementing the Lake Belt Plan would have to comply with the County's procedures for vacating rights-of-ways.

## **5.5 Private Landowners Groups Stakeholders Meeting**

**Meeting Participants:** Dorothy Woods, Hicks Realty  
Alberto Tamayo, property owner

**Invited but not Present:** Billy Cypress, Miccosukee Tribal Nation  
Joe Hasan, JH International  
Anamaria Perez, property owner  
David Block, Environmental Salvage Team

Non-rock mining landowners in the Lake Belt area generally would like an opportunity to do more with their land than is currently permitted by county planning policy and zoning. Non-rock mining owners would also like to receive county services, which they feel they are already paying for through property taxes. They would also like relief from full compliance with federal and state wetland mitigation requirements. Appendix 2 to the *1998 Progress Report* most clearly articulates the position of the non-rock mining owners in the northern part of the Lake Belt area.

Many non-rock mining owners are no longer interested in participating in the planning process. They have attended meetings for years, have made their concerns known to government agencies, and see little progress in reaching acceptable solutions.

In general the Lake Belt Plan must be balanced. To accomplish this balance, the Plan must satisfy to a certain degree the non-rock mining interests. This will generally require the County to move the Urban Development Boundary to allow non-rock mining lands to be brought into the Urban Expansion Area. Land in the Route 27 corridor should be designated for some type of commercial use and residential densities should be increased to 1 unit per acre from 1 unit per 5 acres in the area north of Route 27.

## **5.6 South Florida Water Management District Stakeholders Meeting**

**Meeting Participants:** Mike Slayton, Ruth Clements, Jim Jackson, Ken Ammon, Max Day, Marjorie Moore, John Mulliken, Jeffrey Needle, Dawn Reid

**Invited but not Present:** Rob Robbins, Bill Malone

The District sees the Lake Belt as a critical “hub” surrounded by, and interconnected with, many important projects and operations. These include the Lower East Coast Water Supply Plan; aquifer recharge for several wellfields; surface flows to the east for urban canals and Biscayne Bay; surface flows to the west for the Everglades and Florida Bay; drainage in nearby communities; mining; and other economic and environmental benefits.

The SFWMD’s primary concern is protecting the region’s water supply, for both human use and environmental purposes. The goal of the Master Plan should be an integrated land use and water resource management plan. The plan should guide the expansion of rock mining in ways that support everglades restoration, a continued safe water supply,

enhanced and expanded public ownership of environmentally sensitive land and additional recreational opportunities.

Significant “givens” that should shape the plan include wellfield protection requirements; seepage management (e.g., in the restored Pennsuco area); underlying federal, state and local environmental regulations (although flexibility of implementation techniques may be called for); the County Master Development Plan; and the Restudy components identified for the Lake Belt.

The group agreed that while the final design of the Restudy components is still subject to change, it will be essential for the Lake Belt Plan to anticipate and provide for accommodating Restudy-related improvements. The Plan must avoid recommendations that would preclude future implementation of Restudy elements.

Water management and seepage control were of concern, as concepts for the management of the Pennsuco and adjacent areas (e.g., the “step-down”) have not yet been thoroughly modeled or reconciled with all of the inter-related projects (Restudy, Lower East Coast Water Supply, Water Preserve Area Feasibility, etc.). It was noted that various curtain wall concepts and their impact on wellfield drawdown cones have not been fully evaluated. Hydrologic impacts of mining in yet-to-be-permitted areas (central Lake Belt) have not yet been modeled, nor have hydrologic mitigation requirements been determined.

Land uses within the Lake Belt should be restricted, based on water supply protection needs, and keeping in mind the highly transmissive nature of the area’s substrate. Most appropriate uses were water management, water supply, rockmining and its ancillary uses, environmental protection, water-oriented recreation, ecotourism and environmental education. Recreation should be limited to non-motorized, non-polluting forms in much – perhaps all- of the area, and may be off limits entirely in certain zones. Least appropriate uses include airports, intensive industrial uses, housing or intensive development of any sort. Uses that may be acceptable, depending on their kind, intensity and location, include commercial recreation, other commercial uses, and other institutional or industrial uses.

The Lake Belt Plan should also help to address the anticipated shortfall in available acreage for mitigation improvements. However, it should focus on identifying opportunities within the Lake Belt, outside the Pennsuco, for environmental enhancements (for mitigation), rather than striving to identify all of the required mitigation acreage inside or outside the Lake Belt.

Ultimately, the group envisioned the area east of the Dade-Broward Levee and south of US 27 as generally having a “park” character. The area should largely end up in public ownership, possibly a State-County collaboration as often is done with regional parks. The area south of the Miami Canal should be considered a “clean water district.”

## 6.0 SUMMARY OF COMMENTS RECEIVED AT SEPTEMBER 23, 1999 PUBLIC WORKSHOP

The SFWMD, SFRPC and consultants hosted the first of three public workshops on the *Lake Belt Phase II Detailed Master Plan* on Thursday, September 23, 1999. The purpose of the workshop was to inform residents, landowners and interested parties regarding the process that will be used to develop the *Lake Belt Phase II Detailed Master Plan*, as well as to receive public comment on the desired outcome of the process. Approximately 125 individuals attended. The workshop was conducted in both English and Spanish.

SFWMD Staff opened the workshop, followed by a brief presentation by the Consultant Team. Comments and questions were then received from the public. Eight individuals took the opportunity to speak. Following is a summary of the comments received. Materials presented at the workshop are attached in Appendix A.

- **Land Acquisition Procedures**

Information was requested regarding the procedure for acquiring property needed to implement the Lake Belt Plan: how compensation will be determined; and when affected landowners will be notified.

- **Origins of the Project**

A resident wanted to know how the Lake Belt was initially established, and whether the initiation of the project and its boundary definition included any surveys of area residents to ascertain their interests.

- **Elimination of Non-Rock Mining Lands from the Lake Belt Project Area**

Information was requested regarding why and how non-rock mining lands were eliminated from the Lake Belt Project Area during the last Florida Legislative Session.

- **Lake Belt Legislation Amendment**

The Lake Belt Legislation should be amended to expand its mandate to address the rights of non-rock mining landowners.

- **Needs of the Non-Rock Mining Owners in the Northern Part of the Lake Belt**

Appendix B to the *1998 Lake Belt Plan Implementation Committee Progress Report* should be incorporated into the Lake Belt Phase II Detailed Master Plan. This articulates the needs of the non-rock mining owners in the northern part of the Lake Belt area.

- **The Plan as an Opportunity to Satisfy the Needs of Non-Rock Mining Landowners**

Many non-rock mining landowners have suffered a loss of value due to zoning changes that were made subsequent to acquiring their properties. These changes restrict allowable development uses to very low residential densities. The Lake Belt Plan offers non-rock miners affected by these changes an opportunity to remedy this situation.

- **Consideration should be given to Land Swaps**

Rather than asking landowners to sell their land at depressed prices (due to zoning changes), the government should consider trading publicly owned land (not in wetlands) for private land.



*Public Commentary*

- **Alternative Lake Sites should be Evaluated**

Alternative lake sites should be evaluated that do not require acquisition of non-rock mining lands. Public land to the west can be used for the project and better meet the public purpose.

- **Relocation of the Restudy Components**

The *Lake Belt Phase II Detailed Master Plan* should not assume that the Restudy is “a given.” Proposed components of the Restudy should be moved west to utilize existing public lands, thereby avoiding the need to acquire land owned by non-rock miners.

- **Inconsistencies in County Planning for the Lake Belt**

The proposed uses for the Lake Belt are inconsistent with the project's stated goal. The Plan's goal is to protect the environment. The proposed recreational uses will actually have adverse impacts on the environment. Residential uses that will be displaced by the project actually have fewer adverse environmental impacts.

- **Long Term Use and Ownership of Lands Acquired**

Lands acquired by the government for the Lake Belt project should be permanently restricted to the intended public purpose. In the future, if the purpose for which they were acquired ceases to exist, then the property should revert to the original owner or his/her heirs for an amount equal to that paid at the time of the original transaction.

## **7.0 SUMMARY: KEY THEMES, INCOMPATIBILITIES AND ISSUES TO BE ADDRESSED IN PHASE 3 OF THE MASTER PLAN**

During the upcoming quarter (October-December 1999) the Consultant Team will complete Phase 3 of the Lake Belt Detailed Master Planning Process. In this phase the Consultant Team will work with the Lake Belt Implementation Committee to establish the technical givens and policy direction needed to develop and evaluate alternative plan concepts in subsequent planning phases. The Phase 3 effort will be organized under five major subjects:

- water management
- land and recreation use
- land ownership
- environmental enhancements
- access management

The planning activities to date above have identified a number of consistent themes or "consensus" items, existing incompatibilities, and major questions/unresolved issues that must be addressed during this next phase, as well as subsequent phases, of the Detailed Master Plan's preparation. These are summarized as follows:

### **7.1 CONSENSUS ISSUES**

Despite the very wide range of interests and viewpoints represented in the stakeholders interviewed, the documents reviewed and the citizens heard from, there were several areas in which broad agreement was found. These included the following:

- **Water Supply is Paramount**

Virtually unanimous acknowledgement was given to the prime importance of safeguarding the water supply for the region. This was recognized by virtually all parties as the primary purpose of the Lake Belt area.





*Protection of the County's Northwest Wellfield is critical*

- **Extensive Areas will be Mined**

Although some agencies, organizations or individuals might prefer, in an ideal scenario, a significant reduction in the extent of mining, there appears to be widespread recognition and acceptance of mining's importance and inevitability in a large portion of the Lake Belt's territory as outlined in the Committee's Phase 1 plans.

- **Extensive Areas Will Be Environmentally Restored**

Again, the Committee's Phase 1 plans that call for environmental restoration and management of a significant portion of the Lake Belt, primarily in the Pennsuco, appear to have gained broad acceptance as a "given" for the area's future.

- **The Restudy Will Be Accommodated**

Although some uncertainty exists as to the final form and function of Restudy components within the Lake Belt (see section 7.3 below), the need to coordinate with this massive multi-agency public project is not generally questioned.

## **7.2 EXISTING INCOMPATIBILITIES**

Certain incompatibilities between existing and/or proposed land uses within the Lake Belt were also noted. Rather than “areas of disagreement” (see section 7.3 below), these are sets of activities whose characteristics and requirements will unquestionably lead to conflicts, if not adequately separated and coordinated.

- **Mining and Urban Development**

Various kinds of urban development including, but not limited to, residential development experience conflicts in proximity to mining activities. In addition to blasting, other mining activities such as processing and transport can have significant impacts on nearby properties and roadway networks.

- **Mining and Transmission Lines**

Power lines represent a major infrastructure investment with a number of requirements that may conflict with nearby mining operations. Dust and debris from blasting and rock extraction may cause damage to lines and conductors. Access routes for rock transport that cross under transmission lines may be of concern. Of course, clearances and setbacks from power lines to mining equipment are a critical factor as well.

- **Transmission Lines and Water/Recreational Access**

Code required clearances beneath existing power lines may be compromised by the construction of berms, levees or other grade altering improvements related to water management or recreational access. Similarly, the creation of lakes, Stormwater Treatment Areas (STA's), trails or other improvements in the proximity of transmission lines raise concerns related to both potential damage to the lines, and potential liability issues where public access is provided.

## **7.3 KEY QUESTIONS & ISSUES**

The following issues represent unresolved questions, points of disagreement or conflict, or other key issues noted in the interviews, meetings and document reviews to date. These items will be a primary focus of investigation and evaluation in Phase 3 and subsequent phases of the Master Plan.

- **Status of the Restudy Components**

A number of agencies have questioned the status of some Restudy components, suggesting that more detailed modeling may lead to changes in the Restudy projects proposed for the Lake Belt area. Any major changes could significantly alter the alternative concepts considered in the Lake Belt planning process.

- **Lake Design Options**

A number of options are available for lake design in the aftermath of mining, ranging from limited numbers of large interconnected lakes, to numerous small

lakes or cells based on one-mile sections. Findings of ongoing water management studies will be needed prior to determining the preferred concept. (Recommendations from a number of these studies will not be available until the spring and summer of 2000.)

- **Littoral Zone Design Guidelines**

Concern has been voiced by a number of agencies regarding the preferred design of the lake littoral zones. Lake-by-lake application of minimal littoral zones as required for mitigation purposes need to be evaluated against alternative solutions that aggregate mitigation work into larger areas, to ensure that biological viability issues and maximum resource values are adequately considered.

- **Status of Mining in the FP&L Strip**

Critical to the *Phase II Detailed Master Plan* is completion of the Water Preserve Area Study seepage management analyses. Findings will indicate if mining of the entire "FP&L corridor" is compatible with ongoing efforts to restore the Everglades. (Recommendations from this study will not be available until the spring of 2000.)

- **Phasing Plan for Mining**

Creation of the lakes must be carefully phased over time so that the preferred lake configuration evolves in an orderly and efficient fashion, and in a manner that allows for the environmental impacts to be monitored as each major area of excavation is completed. The rock miners have expressed a willingness to work cooperatively on developing a phasing plan for the lakes. However, the ability of smaller mining land-holders to defer or accelerate mining to fit such an overall plan may be severely limited. The preferred lake design is also a prerequisite to completing the phasing plan.

- **Hydrologic Impacts of Mining**

The Lake Belt legislation, as well as numerous agency representatives and other studies, have stated that a detailed analysis of the hydrologic impacts of mining will be conducted as part of *the Lake Belt Phase II Detailed Master Plan*. This analysis should be conducted simultaneously and iteratively with development of the lake design and phasing plan. Allowance for this activity needs to be integrated into the Lake Belt planning process.

- **Mitigation Needs for Rock Mining**

The Lake Belt legislation, as well as numerous agency representatives and other studies, have stated that a detailed analysis of the mitigation requirements for mining will be conducted as part of the *Lake Belt Phase II Detailed Master Plan*. This analysis should be conducted simultaneously and iteratively with development of the lake design and phasing plan, and must reflect assumptions regarding littoral zone design. Allowance for this activity needs to be integrated into the Lake Belt planning process.

- **Mitigation Plan for Non-Rock Mining Activities**

The Lake Belt Subcommittee has assumed responsibility for preparing a mitigation plan for non-rock mining activities that impact wetlands. Recommendations from the Subcommittee will be needed in a timely fashion as input to the Lake Belt planning process.

- **Identification of Adequate Mitigation Sites**

Numerous agencies have stated that the Pennsuco wetlands do not have adequate capacity to meet the mitigation needs of the entire Lake Belt, including those of both the rock miners and the non-rock miners. It is assumed by agencies that the identification of the necessary mitigation sites will be conducted as part of *the Lake Belt Phase II Detailed Master Plan*. Allowance for this activity needs to be integrated into the Lake Belt planning process.

- **Lake Water Quality**

Serious questions have been raised regarding the long-term water quality of the Lake Belt lakes. There is concern that if the lakes are successfully separated from groundwater, lake water will become stagnant, with high BOD, sulfur levels, algal blooms, and an anaerobic layer at the bottom. Recommendations have been made that the Lake Belt planning process should include limnological investigations that will address this concern.

- **Pennsuco Hydroperiod**

There is concern that present plans for water stacking in the Pennsuco, proposed as part of the Restudy, will actually lengthen the Pennsuco hydroperiod. The desired restoration of the Pennsuco is a for a shorter hydroperiod in which the area would be wet for only two to four months a year.

- **Status of the Urban Development Boundary**

Non-rock mining landowners have requested that the Lake Belt Committee recommend that higher density residential development and commercial uses should occur in portions of the Lake Belt. Further consultations are needed with the Miami-Dade County Department of Planning and Zoning during Phase 3 of the Lake Belt planning process to clarify the County's planning policies and the potential for changes to the Urban Development Boundary is specific portions of the Lake Belt area.

**Appendix A**  
**Public Workshop #1**  
**Exhibits**

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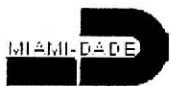
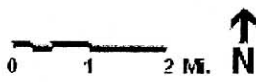
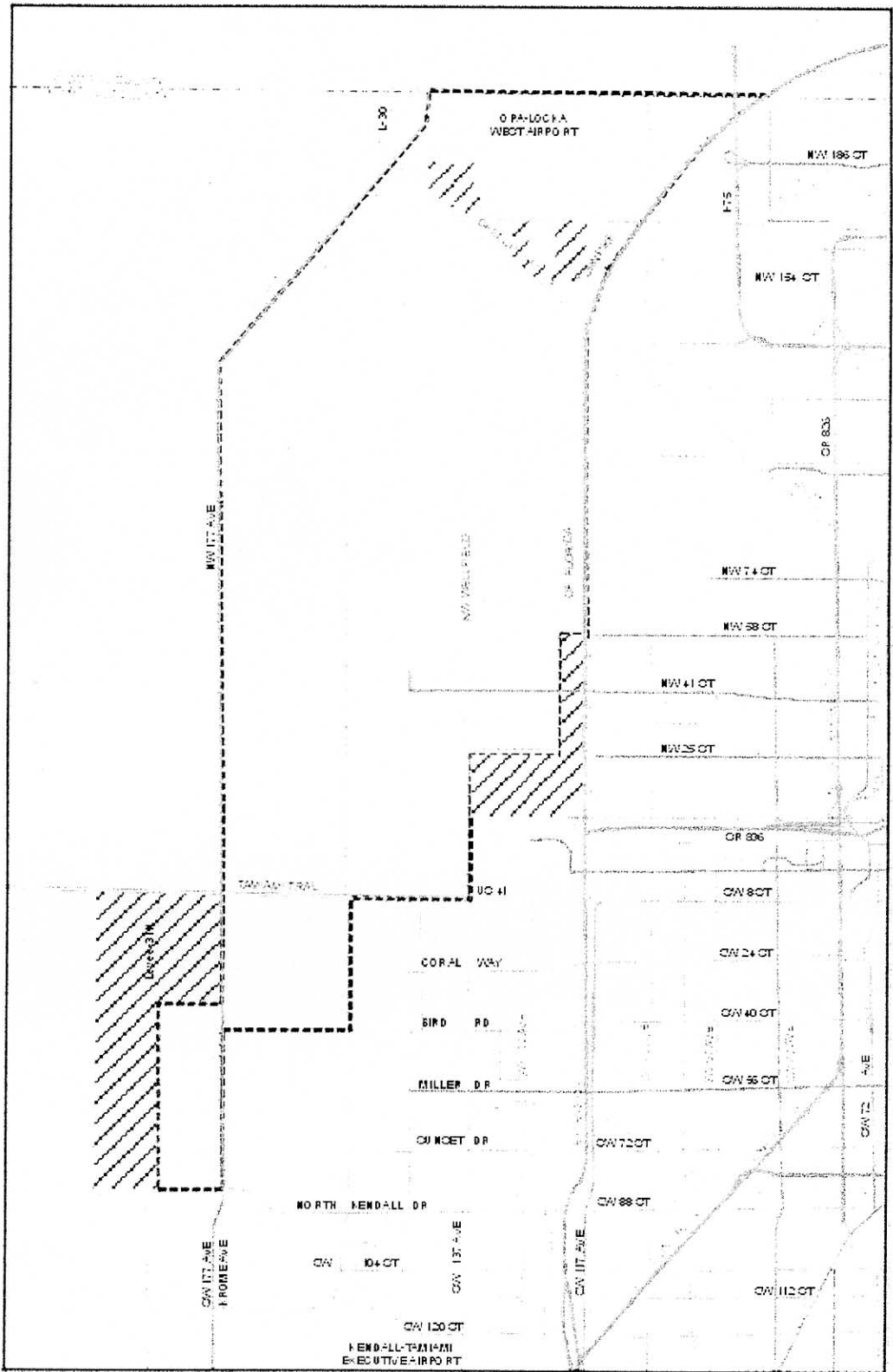
**Lake Belt Phase II Master Plan**  
**Agenda for Public Meeting**  
**9/23/99**

- I. Welcome / Introduction
  - Purpose of Tonight's Meeting
  - Meeting Format
  - Openings on Committee for Non-Rockmining Members
  
- II. General Update
  - 1999 Lake Belt Legislation
  - Everglades and Water Supply Futures Linked
  
- III. Phase II Master Plan
  - Background / Purpose of the Lake Belt
  - Purpose of the Master Plan
  - Schedule & Process
  - Opportunities for Participation
  
- IV. Public Comments or Questions
  
- V. Closing


**Fase II del Plan Maestro del Lake Belt  
Agenda para la Audiencia Pública del  
23/9/99**

- I. Bienvenido / Introducción
  - Propósito de la Reunión
  - Formato / Organización de la Reunión
  - Posiciones Abiertas en el Comité para miembros no relacionados con la Minería
- II. Informe de Progreso
  - Legislación de 1999 Relacionada al Lake Belt
  - Relación entre el futuro de los Everglades y el futuro abastecimiento de agua
- III. Fase II del Plan Maestro
  - Base / Propósito del Lake Belt
  - Propósito del Plan Maestro
  - Programa / Calendario y Proceso
  - Oportunidades para la Participación Pública
- IV. Comentarios y Preguntas
- V. Clausura





**LAKE BELT AREA**

 1999 Boundary of the Lake Belt Area

 Areas deleted in the 1999 Legislation

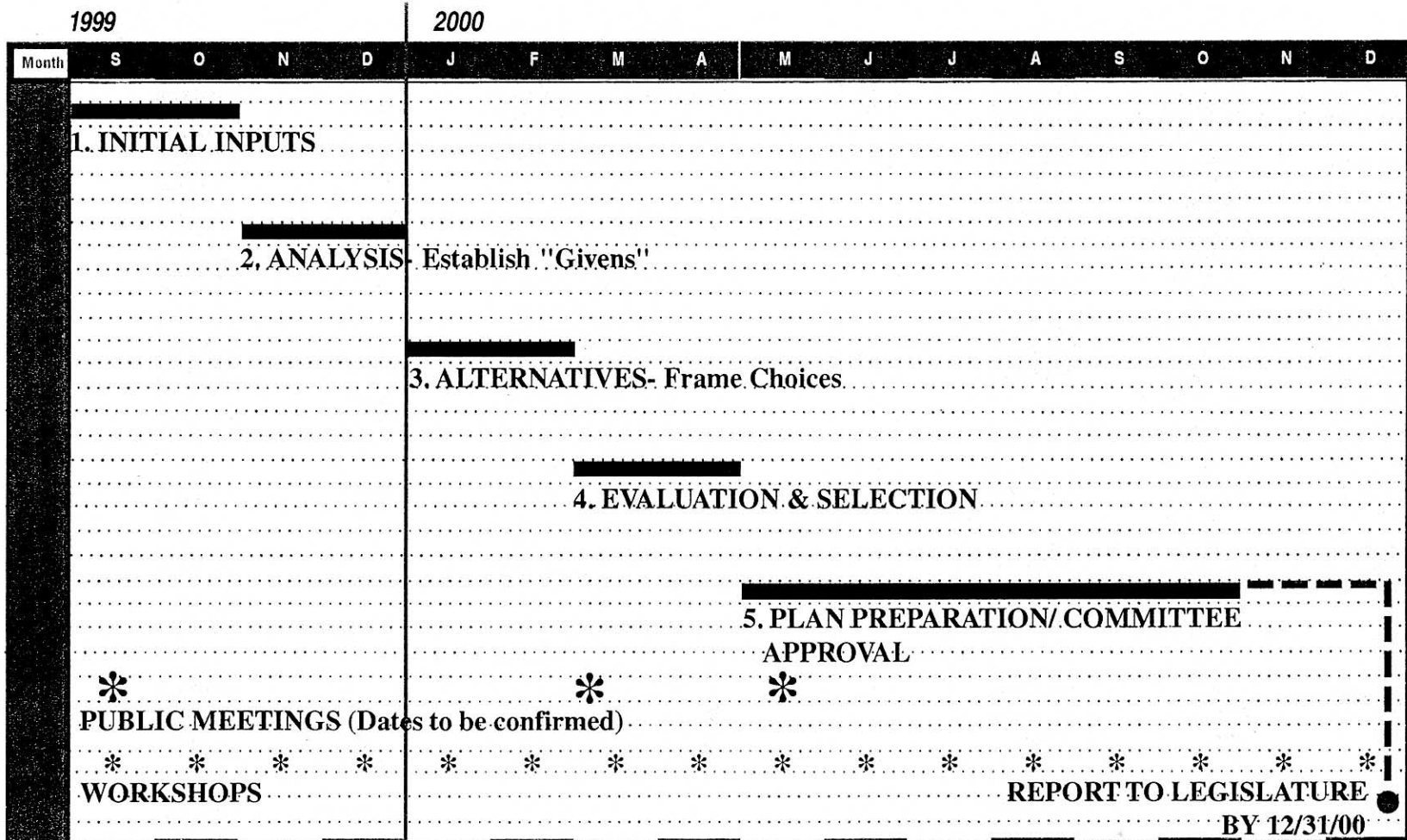
**DEPARTMENT OF  
PLANNING & ZONING**

## Mandato Legislativo al Comité del Lake Belt

- (A) Mejorar el abastecimiento de agua para el Condado de Miami-Dade y los Everglades
- (B) Maximizar la eficiencia en el recobro de piedra caliza, a la vez que promover el bienestar social y económico de la comunidad y proteger el medio ambiente
- (C) Educar a los distintos grupos, y al público en general, acerca de los beneficios del Plan Maestro

# Lake Belt Phase II Master Plan

## PLANNING PROCESS & SCHEDULE



## Legislative Mandate to the Lake Belt Committee

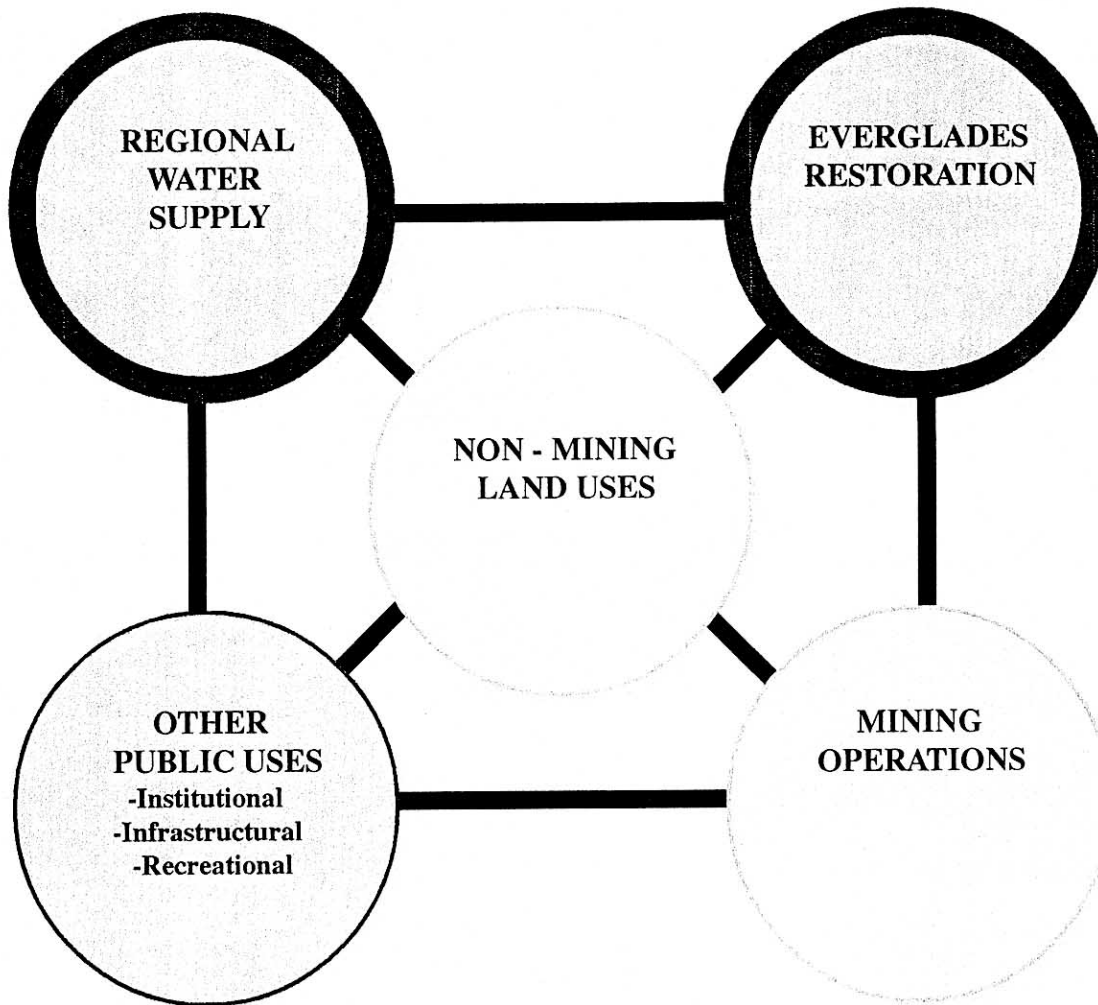
- (A) To enhance the water supply for Miami-Dade county and the Everglades
- (B) To maximize efficient recovery of limestone while promoting the social and economic welfare of the community and protecting the environment
- (C) To educate various groups and the general public about the benefits of the plan

# Fase II del Plan Maestro del Lake Belt

## PROGRAMA Y PROCESO DE PLANIFICACION

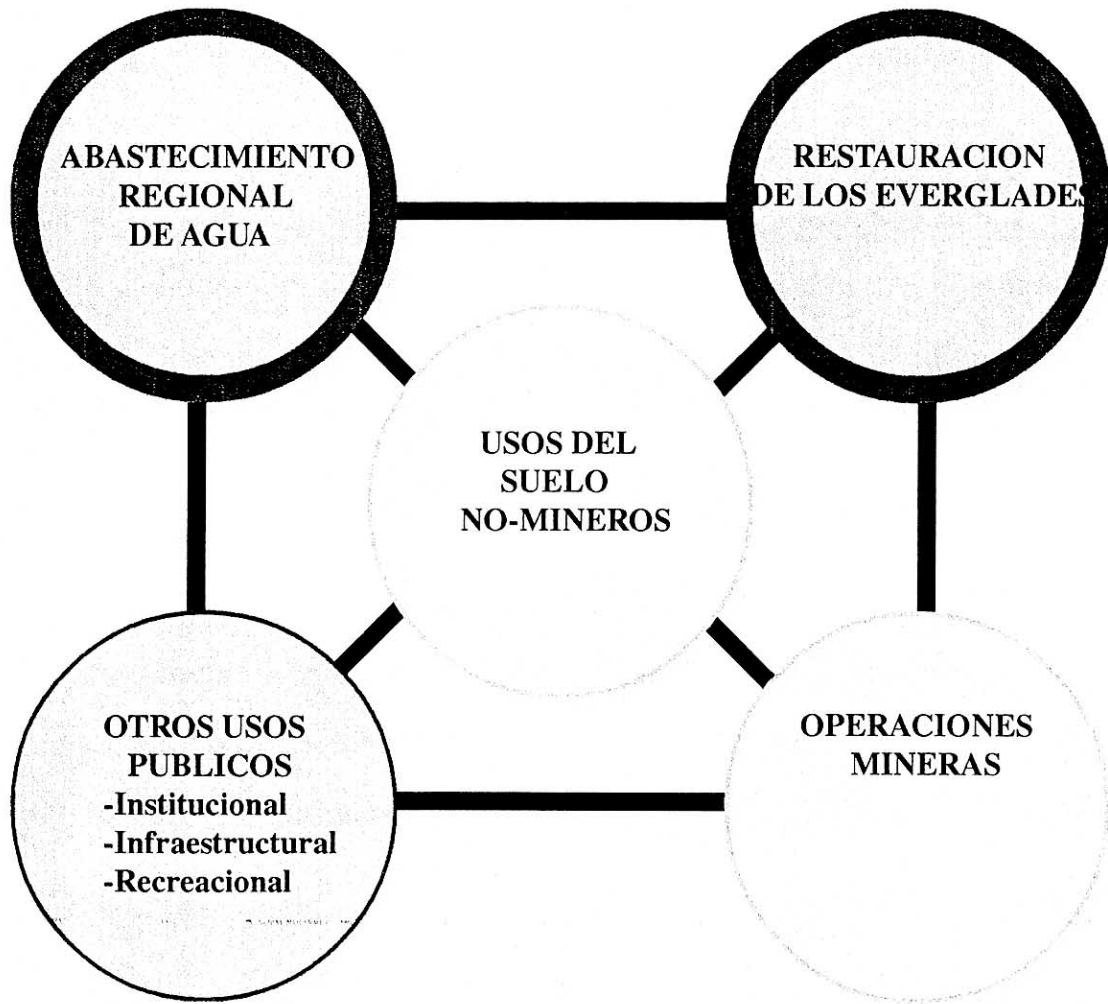
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Month	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	1. INFORMACION/ DATOS INICIALES															
	2. ANALISIS- Establecer los factores que se dan por hecho															
	3. ALTERNATIVAS- Definir las opciones															
	4. EVALUACION Y SELECCION															
	5. PREPARACION DEL PLAN/ APROBACION DEL COMITE															
	*				*			*								
	AUDIENCIAS PUBLICAS (Fechas sujetas a confirmacion)															
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	TALLERES PRESENTARA LA LEGISLATURA PARA 31/12/00															

**"PUBLIC"  
INTERESTS**



**PURPOSES TO BE SERVED IN THE LAKE BELT**

**INTERESES  
"PUBLICOS"**



**INTERESES  
"PRIVADOS"**

**PROPOSITOS A SATISFACER EN EL LAKE BELT**

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Security Purposes**



# **Appendix C**

## **Summary of Stakeholders Meetings**

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**LAKE BELT  
PHASE II DETAILED MASTER PLAN**

**STAKEHOLDERS MEETINGS MEMORANDUM  
(PROJECT WORK TASK 2.3)**

*submitted to*

**SOUTH FLORIDA REGIONAL PLANNING  
COUNCIL**

*and the*

**LAKE BELT COMMITTEE**

*submitted by*

**WALLACE ROBERTS & TODD**

*and*

**EAS ENGINEERING, INC.**

**OCTOBER 21, 1999**

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**LAKE BELT PHASE II DETAILED MASTER PLAN  
STAKEHOLDERS MEETINGS MEMORANDUM**

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Environmental Groups .....	8
Resource Management Groups .....	14
Government Landowners .....	19
Private Landowners .....	22
South Florida Water Management District.....	25

# ROCK MINERS

Wednesday September 1, 1999

**Meeting Participants:** Jack Peeples, White & Case  
Paul Larsen, P.E., Larsen & Associates  
Scott Benyon, Rinker Materials Corp

**Invited but not Present:** Tom MacVicar, MacVicar, Federico & Lamb, Inc.

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## 1. Interest

Miners' interest is full extraction of the resource. Other than that, no strong feelings about what happens in the area.

## 2. Outcome of Detailed Master Plan

Ideal outcome for the project is per "Figure 4" in the Coalition's Comments letter (5/27/99): 8,400 acres of proposed lakes and all properties fully mined out to within 100' of property lines.

The entire "FPL corridor" (between the two transmission line easements) is to be mined. This has been previously approved and is **non-negotiable**. This can only change if the government can demonstrate that mining in this area destroys or precludes Restudy / "replumbing" improvements.

## 3. History / Background of the Project

Miners originally made big concessions in Pennsuco, where they owned a lot of land, in exchange for full mining of the "FPL Corridor"

This was described as a buffer

The buffer concept was then picked up and applied to the whole western edge of south Florida's urban development

Mining industry was glad to have a broad swath of land designated for approval for mining

Environmentalists were glad to have a barrier to westward development

At first, support was "unanimous"

Lake Belt area / rock miners are providing about 2/3 of the total buffer concept

Levee was considered a natural dividing line, however, mining is now getting further “squeezed”

Non-rock mining landowners have felt cheated / left out  
Miners feel they haven’t “taken anything away” from non-rock mining landowners – have provided opportunities for land to be mined, or sold to government agencies

Note that old Wellfield Protection Plan designated everything south of 27 for mining; Comp Plan designates area for mining; Zoning is for protection, mining or ranchettes

Numerous events created uncertainty that made it impossible for miners to plan long-term:

- Jurisdictional overlays introduced
- Corps permitting; Henderson Act [state]
- shortness of permitting
- mitigation requirements

#### **4. Mission**

The miners see protection of the wellfields as the area’s #1 priority

#### **5. Givens**

The Comp Plan and Restudy are mostly, but not completely, fixed

The Plan should look at a number of alternatives

A large area that has already been accepted for mining

Water resource use related to the Restudy

#### **6. Uncertainties**

Restudy components using miner-owned land

Hydrologic mitigation requirements

Non-rock mining mitigation issues

#### **7. Wellfield Protection Issues**

½ mile setback (wells to lakes) is the current “standoff” that everyone is accepting. (This is supposed to equal a 60-day travel time)

More definitive setback criteria may or may not be available within the time frame for this Plan

The current study will not answer the necessary protection questions – it is focussed on the “short circuit” issue

A bigger setback is not necessarily better protection

Levees around the wellfield area, plus a line of protection (e.g., fences) around the adjacent ring of lakes, combined with a raised elevation immediately above the wellfield, may be more effective

Note that a change in area water elevations brought on by the Restudy could change the entire protection scenario

Note also that this wellfield is a lot better situated, with regard to nearby land uses / encroachments, than most of the others in the County

½ section east of the wellfield would probably not be of interest to miners, blasting there would likely be a problem

## **8. Lake Configuration / R.O.W. Mining Issues**

Large lakes (separated by ownership boundaries) would be preferable to small lakes:

- would allow more resource extraction
- assist County in limiting development in the area

Should consider leaving some divisions between lakes to accomplish other purposes [e.g., biological enrichment, recreational access, seepage control, etc.]

Hydrologic issues can point toward both sides of the “large lake vs. small lake” question

Remnant section lines of already mined-out lakes are not economically feasible for mining, but could be cut for other purposes (environmental or aesthetic)

This Plan could facilitate mining out some of the rights-of-way – this requires a zoning change that is normally difficult to get approved

## **9. Land Use Issues**

Non-rock mining private lands: miners want uses that are compatible with mining (i.e. not concerned by blasting)

Other compatibility factors include noise, traffic (including large trucks), and dust

No schools should be allowed



Other industrial would be okay

At a “Y” in the road regarding lands within the “footprint for mining”:

- Will they or will they not be mined?
- If not, what will happen to them?

This Plan should be a vehicle for dialog and resolution over uses of these “lands in transition”

## **10. Mitigation Issues**

The Plan should address where other potential mitigation lands are within the Lake Belt – the required money cannot all be spent in Pennsuco

Perhaps some money should be used to buy and restore / enhance old dug lakes and other outparcels

Planning should also address the fact that some areas identified for mining and included in the overall mitigation calculation but they cannot be mined (e.g., due to proximity of residential development – such as the southeast corner of the Lake Belt area)

## **11. Other Things the Miners would like This Plan to Do**

Facilitate vacating the section line rights-of-way (administratively)

Endorse larger lakes

Make recommendations to streamline the planning and zoning approval process for mining, such as put all of the mining areas under one Community Council, or have approvals at the Board level

## **12. Implementation Issues**

Government to take the area over, eventually – consideration should be given to establishing a land trust or land authority to facilitate acquisition

An interagency acquisition/management entity might be contentious or difficult (e.g., USFWS, FWCC, SFWMD)

Note that the miners have never agreed to donate the land

Most miners (but not all) have agreed that land that is not mined in the future will not be proposed for development by the miners

The development issue will probably be resolvable, but the ownership issue may be difficult to resolve

The less land that is left unmined in the future, the less inclined the miners will be to hold onto their property for future development

### **13. Miscellaneous**

The depth of new lakes will not get significantly shallower as mining moves westward – the usable rock layer is shallower in theory, but the change is only about 1 foot per mile

### **14. The Most Important Issues for this Plan Are**

Where else can mitigation occur in addition to Pennsuco?

How can the wellfields be most effectively and efficiently protected?

What is the long-term result of the Plan?

How do we transition to the long-term end proposed in the Plan?

## **ENVIRONMENTAL GROUPS**

*Tuesday, August 31, 1999*

**Meeting Participants:**        **Darren Harrell, National Audubon Society**  
   **Joe Podgor, Interested Party**

**Invited but not Present:**    **Stewart Strauss, National Audubon Society**  
   **Don Chiquena, Tropical Audubon Society**  
   **Karsten Rist, Tropical Audubon Society**  
   **Mark Krauss, Tropical Audubon Society**  
   **Barbara Lange, Sierra Club**  
   **Michael Chenoweth, Friends of the Everglades**  
   **Erin Deady, National Audubon Society**  
   **Terrel Arline, 1000 Friends of Florida**

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*Joe Podgor*

### **1. History / Background of the Project**

In 1972 he participated in ordinance building to address real estate lakes in Dade County

He was Friendly with FIU people who assembled a student-based study on real estate lakes

This led to the notion of the Lake Belt - first mentioned in 1975 in Miami News

He has been trying to sell idea since then

Came upon mining as a means of addressing some of water supply and quality issues

### **2. Wellfield Issues and His Proposed Water Management Concept**

Initiated wellfield study work in mid 80s

Want to feed wells from the east and not with Everglades water

Still does not think that the current plan and ordinance work well

Convinced at this point that only a hard water edge would keep potential pollution sources out of wellfield

Ordinance is based on travel time, but zone is short-circuited by canals that provide a direct conduit to the wellhead area

There is a particular problem with the Turnpike, since no one has been willing to put controls on travel on Turnpike

Initiated measures to prevent leachate movement from landfill to wellhead area

Most scientists at County disagree over extent of hazard associated with the landfill

Only a differential in head would push potential pollutants away from wellhead

Concept was to create an impoundment (head) over the wellhead that would feed the wellhead with head along the Turnpike:

- Source of water would be urban runoff
- Urban runoff (of today's quality) is treated through the stair steps, then stored in ASRs yielding a huge quantity of water
- Series of cells – running north south in a linear fashion (not affecting the Pennsuco – the Pennsuco should be preserved with moderated levels so that is biologically happy)
- First cell is westernmost
- Water would be backpumped from Canal into first cell, seep into next cell, etc. until reach wellhead

ASR is essential to get additional water beyond water that the ground actually holds (enables ability to provide additional water during the dry season)

Restudy actually more modest – his ideas should be done in addition to restudy components

Want to rely on locally generated runoff rather than using water from Everglades

His step-down concept would be an alternative to seepage barrier (would do it before putting in east seepage barrier) (his concept would be tried first, without seepage barrier) (if fails then could put barrier in later)

FPL strip could run through the cells

Step-down needed for treatment (even if have a seepage barrier)

Can probably mine the step-down areas (not bottom of water that matters, but height of water that's important)

Width of strips to be maintained between lakes still to be has not been modeled

When is excess water, would not be discharging to ocean (water would move south and flow into the cells)

He is unsure as to the status of the step-down concept at this time

### **3. Main Purpose of Lake Belt Zone (Okeechobee to Trail is his desired area)**

Is Dade County's last chance for a wellfield and last chance for reservoirs

Goal is to guarantee a safe adequate water supply

Whole area should be treated like a drinking water reservoir to provide continuing and sustainable water supply to provide an area that would not be polluted in the future by:

- retrofitting the Turnpike
- controlling over drainage and major canals that feed the area
- limiting recreation (low impact with no pollution sources)
- water management for regional concerns
- ringing the area with a security system like in Water Conservation Area (where access points are monitored)

### **4. Water Quality Concerns with Respect to Lakes Concept**

Will get a toxic anaerobic layer at the bottom because lakes do not turn over

Cara (orange) algae is what takes over naturally in the mined lakes

### **5. Thoughts on the Lake Belt Detailed Master Plan**

Lake Design

- cells with lake separated with s-curve shorelines
- may not be 80 to 100 feet deep in all areas (as go west the aquifer thins so can not dig that deep) (65 foot lake has been max inland further to the east – miners may be amenable to shallower depth)
- width must relate to some type of sloping scheme that can handle range of heads
- some cells will have to be access controlled
- lakes must be set up with biological safeguards
- big challenge will be to make certain that the footprint and design of the lakes will function biologically

Littoral Zone Design

- Suggests that Fish and Wildlife, Fish and Game and NPS be asked to prepare "White Papers" on how the edges of the lakes should be handled
- Would design drop offs for littoral zones designed by biologists/limnologists who can provide information regarding breeding potential for birds and fish
- Littoral zone design must also take into consideration adjacent upland design
- 100 foot wide zone is not very wide to accomplish a lot – is a minimum

FPL Strip

- feels a good portion of FPL strip could be mined and contoured to meet needs

Uses that should not be Permitted Anywhere in the Lake Belt Area

- only land uses would be water, wells, rock mining, and recreation

- mining (okay with sinuous shorelines, different water elevations, littoral zones that are for wildlife habitat)
- railroads
- high speed lines (noisy)
- horses and livestock not desirable due to nitrate contamination potential
- Water theme parks not compatible with drinking water system

#### Uses that could be Permitted Anywhere in the Lake Belt Area

- Bass fishing will be particularly attractive because will be mercury-free and therefore edible
- Controlled primitive camping (particularly if can create islands)
- No trouble with bicycles – can design so that impacts of biking are foreseen

#### Uses that should not be Permitted South of Okeechobee Road

- jet skis and motor boats
- RV camping

#### Uses that could be Permitted North of Okeechobee Road

- recreation with power boats (if there is no NE Wellfield )
- RV camping (but already have ME Thompson)

#### Environmental Education Center

- don't want to create an attraction but would rather have it been a small scale facility along lines of a small interpretive center, hosting max of 30 to 50 cars
- See interpretive centers in the Pennsuco, managed by the public sector – federal, state or county operated

#### Blockbuster Site

- should be retained for future NE Wellfield

#### Mining

- rock mining must be included in the program because the miners own the land, mining is permitted, and it will continue to occur
- Rock miners should be mining in accordance with plan, so that they create the desired endpoint, doing it as they go
- Suggests that the miners could do more to mitigate blasting impacts by timing when it is done
- incentive for rock miners to cooperate would be that land use intrusions at perimeter would be controlled by the county
- incentives for rock miners to give land to county would be property tax relief

#### Water Management

- Proviso that will be not backpumping from the Lake Belt into the Everglades

#### Access

- Primary goal is not public access – public access is a secondary goal
- Should be no road that penetrates the area (nothing allowed on west side of Turnpike)

- Roadways linking areas within the area, should follow the perimeter of the area with contained and managed small parking facilities at use areas

#### Rezoning

- need to be very careful about rezonings east of the Turnpike (is some IU3 zoning in

#### Land Acquisition / Land Authority

- Land Authority concept should be to acquire land as it becomes available, not to facilitate development
- Islands in C9 Basin need to be included – need to acquired soon (to get at lower price)

#### Security:

- physical levees
- access control similar to what SFWMD has for some of its levees
- Might be hikeable, no cars
- patrolled
- helicopter
- attendants at attractions and visitor centers
- fish and game to service and patrol uses

#### Long-Term Management and Funding

- Three-way entity running final product - State, fish and wildlife, fish and game and county should manage the area jointly
- Will need reservation management system for camping facilities
- Weighing of costs so that each entity pays its share
- Equal split for perimeter security
- Funding through federal responsibility for water management (north to south); state (for wildlife habitat enhancement); county

### ***Darren Harrell, National Audubon Society***

#### **1. Water Quality Concerns**

Interested water quality for water supply

Precautions should include monitoring through a network of monitoring stations

Measures needed to prevent contamination, particularly from urban runoff

Feels however that there will be development in the area and therefore, water quality issues must be planned for and addressed

## **2. Containment of Hazardous and Toxic Materials in Lake Belt Area**

No hazardous or toxic materials should be stored, transported or used within Lake Belt unless there are provisions for proper storage and containment

Need an emergency plan for handling spills and emergency situations (effective containment procedures, as well as alternate sources of water)

Plan should include infrastructure for supporting needs of emergency management situations

Concerned about hydrologic impacts of lakes – should take into consideration findings and recommendations of the Restudy

Also concerned about aerial applications

## **3. Urban Development Boundary**

Unclear regarding handling of the UDB – would it be expanded or stay as is?

## **4. Thoughts on the Lake Belt Detailed Master Plan**

Uses in the Lake Belt Area:

- Supports concept that there should be no development in the Lake Belt
- Generally supports Joe Podgor's comments regarding the nature of suitable land uses north and south of Okeechobee Road
- no jet skis and motor boats south of Okeechobee
- Are safety concerns regarding use of jet skis and boats
- North of Okeechobee (should buy up inholdings) for recreation with power boats allowed if there is no NE Wellfield

Mining:

- Mining (okay with sinuous shorelines, different water elevations, littoral zones that are for wildlife habitat)

Lake Design:

- lakes should be designed with s-curve shorelines
- some will have to be access controlled

Long-Term Ownership :

- Audubon supports concept of turning over to the public upon completion of mining



## RESOURCE MANAGEMENT AGENCIES

Wednesday, September 1, 1999

**Meeting Participants:** Sarah Bellmund, Everglades National Park  
Steve Lau, Florida Fish and Wildlife Conservation Commission  
Cecelia Harper, US Environmental Protection Agency

**Invited but not Present:** Kalini Cairns, US Fish and Wildlife Service  
David Ferrell, US Fish and Wildlife Service  
Richard Harvey, US Environmental Protection Agency  
Richard Frost, Biscayne National Park  
Richard Ring, Everglades National Park  
Lothian Ager, Florida Fish and Wildlife Conservation Commission  
Allison DeFoor, Florida State Office of Planning and Budgeting

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***Sarah Bellmund, Everglades National Park***

### **1. NPS's Interests and Concerns**

Primary interest is in not having natural resources degraded

Primarily concerned with hydrologic impacts, implementation of Restudy, and protection of wildlife communities

Agency position is that there will be no hydrologic impacts on the Park and no significant wildlife impacts

Agency is concerned regarding the irretrievable nature of the project – will not be able to put the rock back in the holes if in thirty years the Park is sucked dry

Concerns regarding the Restudy:

- some operational functions of Restudy lakes are incompatible with mitigation and with adjacent land uses (particularly the northern lake with the 36 foot elevation shifts)
- Restudy has not addressed biological issues adequately with result that the spatial extent of wildlife habitat has been inadequately addressed or considered in the Restudy (all on record with that)
- Pennsuco success will be directly be impacted by management of groundwater flow out of Conservation Area 3B, as well as development to southeast
- need to grade hydroperiod to east to accomplish biological objectives – can't flood a wetland with three feet of water, dry it out and then flood again – not compatible

with plants that are normally used under the conditions proposed for operations with several of the Restudy components

Water quality concerns:

- have considerable concerns regarding quality of water coming from the lakes that will be pumped into the Everglades
- if they successfully separate lake water from groundwater, the water will have poor quality – high BOD, high sulfur – will require additional treatment
- appears to be standard practice to scrape muck back into the lakes when are mined – probably not a good practice from a water quality perspective

## **2. Thoughts on the Lake Belt Detailed Master Plan**

Plan goals:

- Major goal of plan – hydrologic and water quality protection for natural system

Ideal outcome of plan:

- Ideal result of plan would be functional success of wetlands – FPL strip included as part of Pennsuco Basin – no hydrologic impacts on Water Conservation Areas or Everglades National Park – clean water quality in lakes and Restudy lakes – as much habitat around lakes as possible

Expected Outcome of Plan:

- expect that a portion, if not all, of FPL strip will be mined
- would prefer no mining in area west of Krome

Challenges to Developing Plan:

- not having a clear vision and technical information to support decisions – too many unknowns at this point

Lake Design and Seepage Control:

- personal perception is that the lakes are separate
- Park would rather have stair step scheme than curtain walls for seepage control
- not worried about too much water in the Pennsuco, because can always remove it – the issue is more keeping water or putting it back

Uses:

- land uses will depend upon landscape location – proximity to park and proximity to wellfields
- perhaps should partition uses – identify areas with different intensities of use
- do not think that developed uses – commercial and residential uses – would be consistent with overall goals of Lake Belt planning process and efforts to reach a mitigation solution with miners
- airport use not compatible
- area should probably be used for water treatment versus lake storage (will need the area to clean up the water in the upper storage reservoir)
- do not like ATV use or intensive equestrian uses or RV campground or hydroplane racing

- any kind of activity requiring motorized equipment would have to be subject to scrutiny and management
- visualize the northernmost area (Blockbuster site) as necessary for water treatment and then not usable for active recreation
- the uses in the area north of Okeechobee will depend upon how the storage reservoir is operated
- primitive camping is okay, but there will be safety considerations
- elevated overlooks are a very nice vehicle for viewing the Everglades
- no introduced exotic fish (Asian swamp eels are a huge issue for wildlife reservation in the Everglades – are very prolific, eat native fish, are in C9 Canal – if invested natural areas, it would be very difficult to eradicate them)

Littoral Zone Design:

- littoral zones are now sterile, without connection to upland – would be nice to have a gradient above the lake edge with a gradual gradient that is also wetland vegetation

Mitigation:

- would be nice to utilize some of Bird Drive Basin for mitigation (flowing water through it would probably be okay, but not stacked water)
- are particularly interested in short hydroperiod wetlands (these will not be replaced by littoral areas around lakes)

County Canals:

- Would be nice if any remaining county canals could be managed more effectively

### **3. Non-Rock Mining Interests**

What is there now is okay, but if it changes (which it is likely to given the history of land use in Dade County) then it would not be okay

Owners of inholdings should realize that they will do better if they sell to miners than if try to sell land for development

With respect to areas taken out of Lake Belt, the inholdings that are not bought out by miners should be purchased by public sector

#### ***Cecilia Harper, US Environmental Protection Agency***

##### **1. EPA's Interests and Concerns**

Since EPA is a regulatory agency, their interest is in public health issues and water quality issues, and Section 404 requirements

Will want to consider ultimate water quality designations for future water bodies

Possible that the water bodies may end up on 303(d) list (water body that does not meet standards)

Are concerned that there is enough mitigation potential (spatially/functionally) to meet requirements for Lake Belt after the Pennsuco is exhausted – need to identify options now rather than later

Are also concerned about Restudy projects

## **2. Thoughts on the Lake Belt Detailed Master Plan**

Plan goals:

- are conflicting goals for the plan
- major goal - public health and natural system protection

Ideal outcome of plan:

- no net loss of wetland function within watershed, public health protected through wellhead protection program, ensuring that water quality standards for designated uses are met (Federal requirement deals with function not with spatial extent)
- no net loss is important because is not adequate mitigation land – therefore plan should identify lands needed for mitigation
- Realistically, feels that there will be a loss in the spatial extent of wetlands and loss of short hydroperiod wetlands (since littoral wetlands will replace short hydroperiod)

Uses:

- Envisions a gradient of uses with least intense on the east and more intense on west
- Access should be restricted from wellhead area

Littoral Zone Design:

- Littoral zones are being used for on-site mitigation for 404 impacts – will not want them to be adversely impacted by future uses (passive recreation uses would have less impact)

### ***Steve Lau, Florida Fish and Wildlife Conservation Commission***

#### **1. US Fish and Wildlife Service Interests and Concerns**

Very interested in providing buffer for Everglades National Park and the Pennsuco

Restoration of Pennsuco would be a situation where Pennsuco is wet two to four months a year (short hydroperiod would be one to three months) – Restudy would probably be lengthening hydroperiod because would be stacking water

Existing hydroperiod now too short and flashy with a lot of reversals

Worst case scenario would be pits with very low quality water and increased seepage out of water conservation areas

## **2. Thoughts on the Lake Belt Detailed Master Plan**

Ideal outcome of plan:

- would like to see Pennsuco restored and functioning with short hydroperiod wetlands with some deeper areas, restored wildlife values
- lakes would become buffer between Pennsuco, water conservation areas, and urban Miami with some recreational value and wellfield protection value
- plan cannot be all things to all people – need to strike balance

Goals of Plan:

- Major goal of plan - natural system protection and enhancement

Uses:

- shares EPA's concept of a gradient in the intensity of uses from east to west (with most passive occurring on the west)
- Want to increase outdoor passive recreation for people in the area
- probably will be very difficult to create a viable fishery in the lakes
- do not like RV campground
- no new prisons or prison expansions
- no problem with primitive camping, if there is adequate wetland

Littoral Zone Design:

- littoral zones can be designed a lot better than are right now
- biggest problem is that all zones are the same – no variation – need slope and variation with zone with different depths and vegetation zones

# GOVERNMENT LANDOWNERS

Wednesday, September 1, 1999

**Meeting Participants:** Jorge Rodriguez, Miami-Dade County Water and Sewer Authority  
Raul Pino, Miami-Dade County Department of Public Works

**Invited but not Present:** Gary Dellapa, Dade County Aviation Department  
Russell Kelly, Miami-Dade County Public Works Department, Right-of-Way Division  
Bill Brandt, Miami-Dade County Water and Sewer Authority  
Gary Donn, Florida Department of Transportation  
Steven Davies, Miami-Dade County Property Appraisal Department  
Krome Avenue Detention Center  
Miami-Dade County Department of Corrections  
Florida Department of Corrections

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***Raul Pino, Dade County Department of Public Works Right-of-Way Division***

**1. Public Works Department's Major Concerns**

Public Works major consideration is 137<sup>th</sup> Avenue

**2. Potential for Vacating Section Line Rights-of-Way**

County currently has zoned rights-of-way on all section lines and dedicated rights-of-way along some section lines

Would be agreeable to release of dedicated rights of way, except in a few locations – would have to go through County's process of vacating rights-of-way

***Jorge Rodriguez, Miami-Dade County Water and Sewer Authority***

**1. WASA's Major Concerns**

Make sure that there are sufficient abundant groundwater resources in the future to meet demand

Want to keep groundwater designation for water supply

Protect water quality:

- How will lakes affect water quantity and water quality of groundwater?
- Is exposing water to atmosphere going to constitute a net loss of water through evaporation?
- What is distance needed between surface water and wellheads to mitigate potential contamination of groundwater resource?

## **2. Thoughts on Lake Belt Detailed Master Plan**

Lake Belt sold to public as a project to improve water supply source for Dade County

Plan goals:

- making sufficient amounts of water available for withdrawal from Northwest Wellfield

Land Uses:

- Question as to what can be built within the Lake Belt area is something that still needs to be addressed
- Hydroplane racing, water skiing, jet skiing, motor boats not desirable (maybe okay to north)
- Do not mind passive recreation – fishing, non-motorized boats, hiking, primitive camping
- Concerned about equestrian uses, particularly if a barn
- Concerned about industrial, commercial, residential, and airport anywhere in Lake Belt

Sees possibility of miners finishing mining, being left with a 500' strip along Okeechobee, and then seeking to develop in commercial uses

Interested in buying additional land to the west as a wellfield buffer

Sees no problem with littoral zones along lakes – will provide filtering mechanism and habitat value

Wellhead study will provide buffer distance (30-day travel time) between wells and limit of mining

## **3. Water Quality Concerns**

Concerned about Restudy reservoir water quality because of urban runoff source, as well as water quality in lake because will be a closed system without turnover and flushing

Need a watershed management program if want to ensure quality of groundwater supply

#### **4. Challenges in Developing Lake Belt Detailed Master Plan**

Will the project make more water available for Dade County?

What is needed to keep the groundwater destination?

Who will manage the groundwater basin and how will it be paid for?



## **PRIVATE LANDOWNERS**

*Wednesday, September 1, 1999*

**Meeting Participants:** Dorothy Woods, Hicks Realty  
Alberto Tamayo, property owner

**Invited but not Present:** Billy Cypress, Miccosukee Tribal Office  
Joe Hasan, JH International  
Anamaria Perez, property owner  
David Block, Environmental Salvage Team

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### ***Dorothy Woods***

#### **1. General Real Estate Issues in Lake Belt Area**

There are a lot of conflicting things going on in the Lake Belt area – widening Krome Avenue, installing lights along 27 - do not need upgrades if are only going to use the land for water retention

Are many landowners in the area that cannot do anything with their land

Are many landowners of small lots in Section 17 between Coral Way and Bird Road – who own lots, pay taxes, and have no access

Miccosukee Tribe has bought a lot of land north of the Trail and east of Krome in Section 31 (purchasing in tribal name)

Developers have paid for all the infrastructure in Dade County and should be allowed to use the land that is served

#### **2. Ideas Regarding What the Plan should Do**

Interested in having some areas north of the Trail removed from Lake Belt Area

Would like to see private landowners have an opportunity to use their land in the future

The Urban Expansion Area should not be hampered by the various government agencies that are doing these studies

Plan should recommend that land be brought into the UDB

## ***Alberto Tamayo***

### **1. Development Interests**

Mr. Tamayo's family owns 75 acres on corner of US 27 and Krome Avenue

Wants to be able to use the land for some type of commercial use

Location at the intersection of two major roads is a logical place for commercial use

C9 charette suggested that active recreation uses go north of 27 – would make sense that there would be supporting commercial development in the area

Has been his expectation that there will be a major master plan amendment that will enable non-rock mining landowners an opportunity to do something with their land

### **2. Non-Rock Mining Interests in General**

Most non-rock mining owners are no longer interested in participating in planning process because they have attended meetings in the past that have not led to acceptable solutions to issues – people have told agencies what they want

Had requested that legislature remove all non rock mining lands from the Lake Belt area

Concept in Appendix to Annual Progress Report, presented by Tomayo, was an effort to offer a “water-downed alternative” (versus high expectations) that could be a minimum concept that would satisfy non-rock mining owners:

- Commercial along north side of 27 before turns north
- Commercial along both sides of 27 after turns north
- Residential at 1 unit per five acres

Lot of tax dollars coming out of Lake Belt without any services in return (is taxation without representation) – time is now to receive some type of service

Perhaps the government should just buy out all private landowners

### **3. Ideas Regarding What the Plan should Do**

The plan should be “balanced”:

- for the plan to be balanced, it must satisfy to a certain degree the non-rock mining interests – have satisfied miners, agencies and regulators - but not the non-rock mining owners
- are not a lot of non-rock mining landowners – so would not be that difficult to address them in order to achieve a balanced plan

Expects that the final plan should:

- address all concerns of landowners – this will necessitate changing the UDB
- anything that touches 27 should be some type of commercial use
- would like to see adjustment of UDB to allow more development
- stair step area will be reduced
- unclear as to whether there will be changes in the Bird Drive Basin

Potential uses in Lake Belt:

- All of the uses listed (*in the Stakeholders Meeting*) would be alright if put in the right place – like not residential development in wellhead area
- Probably would want more intense uses along 27

Definition of zones within Lake Belt:

- Dividing zone for north and south should be the Miami Canal, not US 27 because that is a more logical divide with respect to water management
- 8th Street should be the divide between the central and northern and southern section of the Lake Belt

Restudy should be designed to accommodate the Lake Belt Plan (not vice versa)

## South Florida Water Management District

Thursday, September 2, 1999

**Meeting Participants:** Mike Slayton, Ruth Clements, Jim Jackson, Ken Ammon, Max Day, Marjorie Moore, John Mulliken, Jeffrey Needle, Dawn Reid

**Invited but not Present:** Rob Robbins, Bill Malone

---

### 1. General History and Context

The Lake Belt is like a “hub” that radiates to numerous other critical elements:

- LEC [Lower East Coast Water Supply] Plan
- aquifer recharge for wellfields to the south, southwest, and east-northeast
- flows to the west for ENP, Florida Bay
- flows east to Biscayne Bay
- impacts to drainage to the east (West Miami, Sweetwater)
- water supply on-site
- environmental benefits on-site
- mining on-site
- other economic benefits

[question – how do we handle the time frame for seepage studies & for wellfield protection studies that don’t mesh w/ current Lake Belt Plan schedule?]

The planning for this area has always involved multiple, simultaneous projects and the need to hit “moving targets.” Certain facets can be immediately moved forward regardless of outside factors, such as, design criteria for biological productivity of the lakes

### 2. Givens

Wellfield constraints

Seepage management for Pennsuco

- keep water from moving west-to-east too fast
- maintain reasonable hydroperiods west of the Dade -Broward Levee

Walled in reservoirs – which will either work or will not work

*[per J Needle, they have some options in mind if the “bathtubs” do not work, but these are limited and expensive – above ground reservoirs; increased storage in the C-11, etc.]*

### 3. Land Uses

Entire corridor is sensitive – Biscayne Aquifer, highly transmissive conditions

Uses should be very restricted – ban airports, industrial uses that generate pollution

Intensity of use is OK so long as not highly polluting

Recreation: great opportunities / multiple types – note strong demand for water rec (e.g., current popularity of windsurfing / Hobie Cats off Rickenbacker Cswy.)

Camping in Pennsuco – OK if primitive / low-impact – consider camping platforms (similar to Okefenokee), canoe access only in wet season

Observation / birdwatching towers – good idea

Any motorized / polluting use has to be considered in terms of potential water supply impacts

Water from northern reservoir will go into the urban canal system to deter salinity encroachment – goes right over the wellfield (cone of influence)

#### **4. Lake Configuration / Seepage Issues**

Northern lake /reservoir (n. of 27) to be all contained in 1 big curtain wall

- WPA Feasibility Study may change that
- Section lines to be left in place – limestone separations 1 mile apart, reduces “fetch,” reduces needed height of berm – too high a surcharge would force urban runoff into the groundwater

Canal east of Pennsuco (at Dade-Broward Levee) to be kept higher, even out head difference, prevent wellfield from drawing down Pennsuco / WCA's / 'glades

- Question re: optimum hydroperiod in Pennsuco
- May dry down 3-4 months per year, or more [short hydroperiod wetlands may be most important habitat to restore/replace]
- D Reid is working on modeling for this issue
- Note that Restudy contains certain goals & performance measures for Pennsuco hydroperiod

This does not work if lakes are dug immediately adjacent to canal / levee (high transmissivity – surcharge in canal goes into lake, surcharge in lake goes into ground [“you could drain Lake Okeechobee trying to keep a big lake filled here”])

Consider pumping from nearby lakes into canal ( $\pm$  a recirculation concept) to keep water high at D-B Levee – probably feasible but w/ high O&M cost

If a curtain wall were placed east and north of wellfield (may help w/ wellfield protection), cone of influence would be pushed westward -- per J Needle, may want to model additional water in the canal (at D-B Levee) to further protect Pennsuco from drawdown

For “stepdown” concept, ½ mile max [sic] separation between lakes [for north to south separations?]

West to east stepdown concept:

- glades relatively high
- Pennsuco comprises 1<sup>st</sup> step, controlled elevation, slightly lower
- FPL Corridor comprises 2<sup>nd</sup> step, also controlled, slightly lower than Pennsuco
- “east Lake Belt” is 3<sup>rd</sup> and final step before urban development

Hydrologic impacts and mitigation not yet determined for mining beyond existing / currently permitted

The closer mining gets to ‘glades, the greater impact it will have on seepage

## **5. Mitigation Issues**

Other options for mitigation beyond the Pennsuco?

- Western portion of FPL corridor?
- ½ mile buffer along west edge of the Lake Belt, north of Pennsuco
- Bird Drive Basin [Restudy calls for regular flooding of this area for recharge; depending on source / quality of water, some environmental enhancement may be possible]
- Southeast corner of Lake Belt area, probably now un-mineable due to nearby development

This Plan should focus on additional mitigation opportunities within the Lake Belt, and does not necessarily need to identify all of the additional mitigation needed

## **6. Management / Implementation**

Joint management team for Pennsuco land management? (w/ SFWMD as a member; similar to WCA’s) [ Note that mitigation fees go in part toward an endowment]

Envision “park atmosphere” east of Dade-Broward Levee, south of 27

Public ownership – possibly State-County collaboration as a “regional park”

South of Miami Canal to be a “clean water district”

## **7. “Plug Ins” / Concurrent Studies**

WPA Feasibility Study	due September 2001
LEC Water Supply Plan	due April 2000 [not firm]
Final Wellfield Protection Plan	due July 2000

Restudy Congress - WRDA 2000 to include approval of Restudy  
[Note- Restudy has a Water Quality team to address WQ issues]

**Appendix D**  
**Memorandum of Technical Parameters & Policy Options**

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# LAKE BELT PHASE II DETAILED MASTER PLAN

## MEMORANDUM OF TECHNICAL PARAMETERS & POLICY OPTIONS

*submitted to*

**SOUTH FLORIDA REGIONAL PLANNING  
COUNCIL  
and the  
LAKE BELT COMMITTEE**

*submitted by*

**WALLACE ROBERTS & TODD  
and  
EAS ENGINEERING, INC.**



### Lakebelt Vegetation

- AG (Agriculture)
- C (Canal)
- D (Disturbed)
- DM (Dense Melaleuca Forest: 75%-100% Cover)
- DMS (Dense Melaleuca Saplings: 75%-100% Cover)
- DP (Disturbed Prairie)
- DP50 (Disturbed Prairie with Melaleuca: 10%-50% Cover)
- DP75 (Disturbed Prairie with Melaleuca: 50%-75% Cover)
- DV (Developed)
- FPL (FPL Right-of-Way)
- L (Lake)
- LP (Lake Perimeter)
- P (Prairie)
- P50 (Prairie with Melaleuca: 10%-50% Cover)
- P75 (Prairie with Melaleuca: 50%-75% Cover)
- TI (Tree Island)
- W (Other Water: e.g. impoundment)
- WH (Willow Head)

**February 9, 2000**

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## **INTRODUCTION**

The purpose of this Memorandum is to secure the guidance of the Miami-Dade County Lake Belt Plan Implementation Committee (“the Committee”) on working assumptions and a general policy framework within which the Lake Belt Detailed Master Plan will be developed.

***These will be important general directives to guide the early phase planning, but are not final determinations of Committee policy.***

Consultants for the Detailed Master Plan have conducted an analysis of technical data and other background information, have assembled a spatial data base for the project in Arcview/GIS, and have obtained feedback from citizens, stakeholders and other interested parties in a number of workshops, meetings and other venues.

The next steps in the preparation of the Detailed Master Plan will comprise the development and evaluation of Alternative Concepts. These Alternative Concepts will explore different approaches to issues of land use, land treatment, recreation, access management, environmental enhancement and water management.

These Alternatives will be reviewed during Spring 2000 in upcoming Committee workshops, as well as a public workshop. The project schedule calls for evaluation of the Alternatives to lead to a Preferred Concept Plan by Summer 2000. Prior to that time, inputs from several key related studies should be available for inclusion in the Committee’s consideration; all of the following efforts are due by late May, 2000. These include:

- Wellfield Protection and Watershed Management Plan: Recommendations (Miami-Dade County DERM)
- Blasting Task Force: Recommendations (Miami-Dade County Blasting Task Force)
- Water Preserve Area Feasibility Study: Initial Modeling Results; Alternative Design Refinements for Restudy Components (South Florida Water Management District/ U.S. Army Corps of Engineers)
- Hydrologic Analysis of Potential Mining Impacts: Initial Modeling Results (SFWMD)

The Committee’s consensus and guidance is sought regarding the planning assumptions described below in order to expedite the development of Alternatives for the Detailed Master Plan, and to focus the range of options in the directions felt by the Committee to be most appropriate.

Within each of nine major topics, these planning assumptions are described in two categories. The first, *Technical Parameters*, addresses factual observations and clear physical, environmental, economic and other factors that impose constraints or opportunities for planning. A *Discussion* section provides a summary of key issues.

*Under “Technical Parameters,” the Committee is asked to review these assumptions, and to advise and direct the Consultant only if some exception is taken.*

The second category, *Policy Options*, are items for which a broad spectrum of possible futures might be considered. Based on an understanding of the Technical Parameters and on the sense of the Committee, directives are needed to help establish the overall frame work that will guide the remainder of planning process.

*Under "Policy Options," the Committee is asked to provide initial guidance on options of general policy to shape the development of Alternative Concepts.*

The major topics addressed in this Memorandum are as follows:

1. Wellhead protection
2. Hydrologic issues
3. Restudy components
4. Rock mining interests
5. Non-rockmining private land interests
6. Biological mitigation needs & enhancement opportunities
7. FPL facilities and needs
8. Recreation opportunities

## **1.0 WELLHEAD PROTECTION**

### **1.1 TECHNICAL PARAMETERS**

Miami-Dade County has identified the region around the Northwest Wellfield (NWWF) as needing special protection for water-resource purposes since the late 1960s. The wellfield, currently permitted for withdrawal of 155 mgd, has a maximum built capacity of 225 mgd. No increase in the requested permit limits of withdrawal is under consideration within the 20-year planning horizon, according to Miami-Dade Water and Sewer Authority staff, although a subsequent increase may well be needed. Even without any increase, however, the NWWF ranks as the most important single supply of water to County residents, as well as one of the largest municipal wellfields in the country.

The current Wellfield Protection Ordinance was developed in 1980 with additional considerations for the NWWF enacted in 1985 (see attached exhibit, *Wellfield Protection Areas*). Current provisions affecting the NWWF Protection Area include:

- Prohibition of new activities involving hazardous materials
- Restrictions on densities of new activities
- Sanitary sewer connections required for new non-residential activities
- No mining within the 30-day travel time contour
- Limited depth of mining allowed between 30- and 60- day travel time
- Canals provided as hydraulic barriers between NWWF and pollution sources

A study is presently underway to evaluate the effectiveness of the previously developed models for wellfield protection, using field trials and additional modeling. It will make recommendations for revisions to the Ordinance, as well as for a Watershed Management Plan, by mid 2000. Some of its key components, for planning purposes, are anticipated to include:

- Establishment of the 60-day travel time contour
- Potential revised locations for travel time contours – these may move outward, based on indications of test results to date
- No mining within the 60-day contour
- A larger buffer area (limits to be determined) within which more stringent restrictions may be specified regarding land uses, access and habitat development (lake and littoral design considerations)
- An overall Management Plan for the larger watershed as a whole, addressing land uses, land treatments and access management
- Other (as yet unspecified) recommendations to prevent re-classification of the wellfield as being Under Direct Influence of surface water

#### *Discussion:*

A consensus expressed by virtually all of the project's participants to date has recognized wellfield protection as one of the most important functions of the Lake Belt. It is assumed that wellfield protection issues shall be given a commensurate high priority in the planning process. However, certain conflicts may arise with other project components. This level of potential conflict may increase as recommendations of the current DERM study come into play.

Outward migration of the travel time contours may engender conflicts with private land owners (both rock mining and non-rockmining) who find increasing restrictions on their activities. The “buffer zone” concept (beyond 60-day travel time) may have a similar impact. Areas immediately adjacent the current WASD properties are most likely to be affected (see exhibit).

Larger watershed management considerations may affect private (non-rockmining) development scenarios within the larger zone bounded roughly by US 27, Dade-Broward Levee, SW 8<sup>th</sup> Street and the Florida Turnpike – or beyond.

Potential restriction of habitat development / biological enhancement within the “buffer areas” would require re-allocation elsewhere of biological mitigation originally identified for lakes within those zones.

Further recommendations for access restrictions will affect scenarios for recreational use of both land and water areas. It is likely that, if adopted, the forthcoming recommendations will take a significant area “out of play” for fishing, boating (even non-motorized boating), trails, natural areas enhancement and visitation, etc.

## 1.2 POLICY OPTIONS

### 1.2.1 Wellfield Protection Recommendations

The planning team can ***accept and incorporate – as planning assumptions - preliminary recommendations of the Wellfield Protection Study, as they become available.*** Although these recommendations will not have been finalized or approved by the Board of County Commissioners at the time the Lake Belt Alternatives are being prepared, this approach is recommended as the most conservative with regard to protection of the water supply.

Incorporation of these draft recommendations as planning assumptions would have to be based on the policy decision of the Committee, as the draft recommendations will at that time have no regulatory standing.

Alternatively, the planning team could ***proceed based only on provisions of the current ordinance.*** This approach would provide for a lesser level of protection, but one that has the certainty of being presently enacted into law. It might be considered inconsistent with the legislation’s mandate that the Plan “enhances the water supply for Dade County...” However, this approach would also preclude the planning effort from impacting “competing” interests (such as land uses or recreational access) based on wellfield protection ideas that may not ultimately be adopted.

## 2.0 HYDROLOGIC ISSUES

### 2.1 TECHNICAL PARAMETERS

The Lake Belt area historically consisted of wet sawgrass prairie, and still exhibits a hydrologic regime of seasonal inundation. In recent decades the average period of inundation has ranged from 60-120 days per year in portions of the C-9 basin and central Lake Belt, to 330-plus days per year in portions of the Pennsuco and elsewhere.

Natural ground elevations generally range from 3.0 to 6.0' NGVD; normal October water levels are approximately 1 foot higher, with County flood criteria for building purposes generally 2.5 to 3 feet higher still (see attached exhibit, *Existing Ground Water Elevations and Flood Criteria*).

Protection of the cone of influence of the Northwest Wellfield is one of the most important hydrologic considerations affecting the area (see section 1 above).

A second area of critical concern is the impact of mining and other activities on the hydrology of the adjacent Everglades, specifically Everglades National Park, the Pennsuco wetlands and the Water Conservation Areas. Restoration of these areas to more of a pre-development model is a key objective of the Restudy project (see section 3 below).

More detailed modeling and analysis of the hydrologic impacts of both proposed Lake Belt mining and alternative design refinements of the Restudy project are now underway by the South Florida Water Management District.

These analyses will provide critical input to the Lake Belt planning process in May-June, 2000. They will begin to quantify anticipated hydrologic impacts of mining beyond that already permitted, for which hydrologic mitigation requirements remain to be established. They will also address how well both the Restudy alternatives and the Lake Belt mining proposals meet a key goal, of having no detrimental impacts to the Everglades.

### 2.2 POLICY OPTIONS

Other than review of the planning assumptions described above, ***no policy directives are requested from the Committee at this time***. Further issues requiring decisions and guidance will be brought forth for Committee review during preparation and evaluation of the Alternative Concepts. During that portion of the planning process, it is expected that extensive additional input will be available as a result of the hydrologic modeling underway at SFWMD, which will assist the Committee and planning team in evaluating options.



### 3.0 RESTUDY COMPONENTS

#### 3.1 TECHNICAL PARAMETERS

The Central and Southern Florida Project Comprehensive Review Study (the “Restudy”) will, as the Committee well knows, play a major role in the future of the Lake Belt as well as of the south Florida region. This \$7.8 billion, 20-year-plus project to “re-plumb” southern Florida aims to assure an adequate future supply of water both for the restoration of southern Florida’s ecosystems and the needs of its human population.

The project seeks to accomplish this by creating water storage reservoirs, water preserve areas, underground storage areas, and treatment wetlands; reconfiguring conveyance systems; improving sheet flows and hydroperiod in the Everglades; improving water deliveries to Biscayne Bay and estuarine areas; and reclaiming wastewater.

There are some concerns over a number of the proposed elements which use technologies untested at such a large scale. The project is a massive cooperative undertaking on the part of the U.S. Army Corps of Engineers, the South Florida Water Management District, and dozens of other federal and state agencies, with broad collective expertise and input. The Corps submitted its Final Integrated Feasibility Report & Programmatic Environmental Impact Statement to Congress in July, 1999, and congressional authorization of certain initial portions is anticipated in 2000. Further plan refinements are presently underway (see *Discussion*, below).

Critical Restudy components proposed for the Lake Belt area will affect the options for planning (see attached exhibit, *Restudy Components*). These include:

**North Lake Belt Storage Area (NLBSA):** The NLBSA is conceived as a 4,500 acre in-ground reservoir with an impermeable lining, allowing drawdown of water up to 20’ below grade. It will be used to capture excess water from the urban canals system, and return water to maintain canal stages during dry periods. Flows from this reservoir will ultimately help recharge the Northwest Wellfield (NWWF) area and, further downstream, prevent saltwater intrusion from Biscayne Bay.

Its configuration in the Comprehensive Plan – along with three potential Stormwater Treatment Areas (STA’s), buffer wetlands to the west, and other smaller features – occupies most of the northern Lake Belt (north of U.S. 27). Further alternatives that reduce and/or otherwise modify the overall footprint of this component are presently being developed and evaluated.

**Central Lake Belt Storage Area (CLBSA):** The CLBSA is a 5,200 acre reservoir with a surrounding high berm and underground impermeable lining, allowing water to be stored up to 16’ above grade, or drawn down as much as 20’ below grade. It will be used to capture excess water, when available, from the Water Conservation Areas, and to return this water during dry periods to the Water Conservation Areas, Shark River Slough (feeding Everglades National Park) and – if avail – to Biscayne Bay.

Its current configuration – along with an adjacent 640-acre STA – occupies all of the area bounded by U.S. 27, the Turnpike, the NWWF Feeder Canal and the Dade-Broward

Levee. Alternatives under consideration may reduce and/or otherwise modify this footprint to utilize more of the existing / near-term mining lakes.

***Bird Drive Recharge Area:*** This 2,877-acre area comprises the entire Lake Belt south of Tamiami Trail and east of Krome Avenue. It is currently proposed as an above-ground recharge area that would support wetland vegetation but would also accept up to 3' of water from nearby urban canals and the proposed West Miami-Dade Wastewater Treatment Plant. It will serve to ease flooding, recharge groundwater (reducing seepage from Everglades National Park), and provide water to the South Dade canal system.

***Dade-Broward Levee and Pennsuco Wetlands:*** Improvements along the length of the Dade-Broward Levee will help maintain water levels in the Pennsuco and reduce seepage eastward from the Everglades toward urban areas.

***WCA 3A and 3B Seepage Management:*** Construction of buffer wetlands, pump and levee and other improvements adjacent the northwest edge of the Lake Belt will prevent seepage losses from critical Water Conservation Areas to the west.

***L31N Seepage Management:*** Reconfiguration and new improvements of levees and other elements south of Tamiami Trail, along Krome Avenue, will provide protection for water levels in Everglades National Park and for groundwater flows to coastal Miami-Dade County.

*Discussion:*

The Restudy project, including its major Lake Belt components, are presently being refined through the Water Preserve Area Feasibility Study and other efforts, with the goal of improving the project's timetable, economics and overall function. This process will provide initial modeling results in May 2000 and a report to Congress by September 2001.

Constraints for biological mitigation or other enhancements in lakes that are incorporated into reservoirs must also be addressed. Both the NLBSA and CLBSA will have water level variations of 20 feet or more, virtually eliminating the potential for littoral zone development (see further discussion under section 6, below.).

There are important implications for Land Uses within the potential footprints of Restudy components, particularly with regard to private (non-rockmining) interests (see also section 5, below). These long term public projects likely limit the range of interim options available for lands they will ultimately require. They are further seen by many small land owners as crippling land values and impairing the area's economic viability. Several have suggested that Restudy components should be re-located further west on other public lands, outside of the Lake Belt. The Restudy team has indicated that this proposal conflicts with the overall project goal of ecosystem restoration and will not be pursued by them.

## 3.2 POLICY OPTIONS

### 3.2.1 Planning Assumptions Related to Restudy Components

The planning team can ***seek to incorporate further Restudy refinements and alternatives as they develop***. This approach is recommended to help address some of the coordination issues and other concerns noted above. However, it would be using concepts that have not been fully evaluated by the Restudy team, nor yet recommended – again, their incorporation (as in above discussion of the Wellfield, section 1.2.) would need to be based on the Committee’s policy directive at this time.

It should also be noted that Restudy refinements now underway will not be fully articulated until late in the Alternatives phase of the master plan’s development (circa May 2000). If Restudy refinements and alternatives begin to exhibit dramatic changes in the scope and character of major components, the complexity and difficulty of planning for the Lake Belt may be increased. The introduction of one or more “new” scenarios for Restudy components at that point in time may make evaluation of Lake Belt alternatives by July 2000 a very formidable challenge.

Alternatively, the planning team *can* ***incorporate the existing recommended configuration of Restudy components*** (as per the 1999 recommended plan) as planning assumption for Lake Belt alternatives. This approach would be less complex and arguably the most conservative, but would also potentially miss important opportunities of inter-project coordination.

A third option which can be considered is to ***include in the range of Alternatives a scenario in which Restudy components are re-located out of the Lake Belt***. While this option has been raised by some area residents (see section 5, below), this approach would conflict with the Restudy’s basic mission and directives, as reiterated in recent statements by the Restudy team. It should be noted that ***the final configuration of Restudy components will be determined by the Restudy team*** (led by the U.S. Army Corps of Engineers and the South Florida Water Management District), subject to approval by the Florida DEP, Florida Legislature and U.S. Congress.

## **4.0 ROCK MINING INTERESTS**

### **4.1 TECHNICAL PARAMETERS**

Various mining companies own or control upward of 24,000 acres, or nearly half the total area of the Lake Belt. The extraction of limestone is of major regional and statewide economic importance, and its efficient maximization (compatible with water supply objectives) is one of the mandates of the Lake Belt legislation.

According to the South Florida Limestone Mining Coalition (LMC), as of 1999 there were 5,650 acres of existing lakes, and another 5,940 acres of permitted lakes. In addition, the LMC's proposal is to mine an additional 8,400 acres of area, not yet permitted (see attached exhibit, *Rock Mining*). It is assumed that all permitted lakes will be mined, unless their proximity to urbanizing areas renders them infeasible to mine due to controversy over blasting (see below).

The general footprint for LMC proposed mining appears consistent with the Lake Belt Phase 1 Plan approved by the Florida Legislature, as well as with the Issue Team's Recommended Plan. However, "proposed mining" areas in the western Lake Belt – within a ½ mile wide strip adjacent the designated environmental lands – may be removed from mining consideration if found to be needed for ecosystem (Everglades) restoration. (This concept is also consistent with the Phase 1 and Issue Team Plans.) The miners have agreed in principle to sell their lands in the Pennsuco for environmental restoration.

Hydrologic impacts for the full extent of mining proposals will be analyzed by SFWMD in 2000. These impacts will generally increase as the extent of mining increases and moves closer to the levees. Hydrologic mitigation will be required but has not yet been quantified.

Rock mining will not occur within the area defined by the 60-day travel time for the Northwest Wellfield

Another factor that may affect the overall mining footprint is the strong objection by area residents, property owners and realtors to the blasting that mining requires. Ramifications, if any, of this issue for the future configuration of Lake Belt area mining will likely become more apparent later this spring, as the work of the Miami-Dade County Blasting Task Force progresses. A report is due in May.

The overall footprint assumed in the planning process must be consistent with, and use as a starting point, the Phase 1 Lake Belt Plan and the Issue Team Recommended Plan.

At the site scale, efficiency of mining and maximum returns generally require mining the full extent of the property. The result of this is seen in the landscape today: square lakes, generally 1-mile sections each. The lakes are typically separated by a 300-foot strip of land: 100' of right-of-way, flanked by the required 100' wide littoral zones (see section 6, below).

All of the Lake Belt rights-of-way are zoned, rather than dedicated. The County may opt to abandon those rights-of-way that do not serve any non-mining property. In this case the mining companies would generally be interested in mining the rights-of-way resulting in larger, interconnected lakes.

*Discussion:*

The Detailed Master Plan will need to address a number of land-use, land-treatment and aesthetic issues related to post-mining conditions in and around the lakes. Current regulations require only minimal addressing of safe slope, access control and biological mitigation factors. Additional requirements will be defined in the Master Plan, with participation by, and ultimately cooperation from, the mining industry.

A range of options for lake configurations will be explored (e.g., degree of interconnectedness, extent and character of shoreline character, etc.). The optimal treatments must be determined based on additional factors other than just the efficiency of mining. These other factors may include:

- Rock-mining land ownership patterns
- Hydrologic considerations (seepage management, wellfield protection)
- Wetland mitigation considerations
- Wildlife habitat considerations
- Access and control requirements
- Aesthetic considerations

Phasing of mining activities will be addressed with consideration of a number of factors:

*Overall Rate of Mining:* The remaining acres of mining will proceed at the approximate rate of 300 acres per year.

*Phasing Plans of Individual Rock Mining Companies:* Rock mining companies have individual phasing plans designed to maximize the efficient recovery of limestone. These provide the starting point for development of a mining phasing plan for the Lake Belt Area.

*Wellfield Protection:* Mining within the wellfield buffer area should begin at the outer perimeter of the buffer and move inward toward the 60-day travel time contour. This will enable monitoring of mining impacts on the wellfield.

*Impacts of Blasting:* Permitted and proposed mining in the vicinity of anticipated future development should be planned so that all mining activities are completed before development occurs.

*Restudy Components:* Phasing of mining should anticipate desired construction schedules for the Restudy reservoirs, and strive to help maximize the available storage in the near term.

*Already Permitted Lakes:* Lakes that have already been permitted will be mined before those that are not presently permitted.

*Hydrologic Impacts:* Mining should generally move from east to west in order to monitor and better mitigate potential hydrologic impacts.

Future ownership of post-mining lakes and surrounding lands has not been determined; however, it is assumed that the majority of the area will in some way pass to public ownership. In addition to the wellfield area, reservoirs, and major environmental restoration areas, all of which would certainly be in public ownership, the remaining areas will likely represent a unique water resource. Public agencies are the most likely ownership / management entities, however, a degree of private ownership (such as for commercial recreation, or other compatible development) may also be considered (see section 5, below).

Any lands that are presently planned for mining, but which for any reason are ultimately not mined, will need to be addressed with many of the same considerations as other private lands (see section 5, below). There is, at present, no guarantee or commitment from the rock miners that at some future time they will not seek to develop such lands.

#### 4.2 POLICY OPTIONS

Other than review of the planning assumptions described above,, ***no policy directives are requested from the Committee at this time.*** Further issues requiring decisions and guidance will be brought forth for Committee review during preparation of the Alternative Concepts.

## 5.0 NON-ROCKMINING PRIVATE LAND INTERESTS

### 5.1 TECHNICAL PARAMETERS

Non-rockmining private landholdings account for approximately 14,000 acres within the Lake Belt, about 1/3 of the total area. While the region has been viewed by the County for several decades as a low density, primarily ex-urban area devoted largely to water management, mining and rural uses, there are nevertheless residents, businesses and other property owners who consider this area their community.

Many of these community members have expressed a desire to remain in this area, unless forced to relocate by some future public project exercising condemnation authority. Others are potential willing sellers, if their lands are wanted by mining companies or public agencies, but are concerned with the compensation they would receive for their lands.

Land acquisition efforts by the SFWMD are underway in the Pennsuco area, Bird Drive basin, and other areas. This is presently a willing seller program but it is possible that future phases will involve condemnation. It is assumed the acquisition process will continue as identified in the Restudy and Water Preserve Area planning processes, to support those projects.

Private landowners who remain in the Lake Belt will contend with an assortment of physical and regulatory conditions, ongoing activities by others (miners and public agencies) and the direct and indirect influences thereof. The Lake Belt planning process will test a variety of alternatives for land uses, striving to make them compatible with all of the following:

- Legislative mandates for the Lake Belt including enhancement of the water supply (for both human and ecosystem purposes), furtherance of mining, and socioeconomic benefit to the community
- Applicable County Development Master Plan (CDMP) policies
- Applicable environmental regulations
- Private property rights

All of the area is outside of the County's Urban Development Boundary (UDB) for the year 2000/2005, with the exception of a small portion of the North Trail Basin where lands bordering the western side of NW 137<sup>th</sup> Avenue are within the UDB. The year 2015 UDB extends west from this area to 157<sup>th</sup> Avenue, adding another approximately 3.5 square miles. The existing regulatory framework of the County Comprehensive Development Master Plan (CDMP) and other applicable regulations is as follows:

The CDMP designates almost all of the land within the Lake Belt as "Open Land" or (in the Pennsuco area) "Environmental Protection". The land within the UDB on the western side of NW 137 Avenue is designated by the CDMP for restricted industrial and office use (restricted due to the proximity to wellfields).

The "Open Land" designation is used by the County to set aside from urban development areas that have important water-supply related or environmental functions. Such lands are designated for compatible resource extraction, resource protection, or low-density uses (see attached exhibit, *Environmental Protection and Open Land Sub-Areas*).

New land uses that may be approved within the *Open Land Area* include rock mining and related uses, agriculture that requires no additional off-site drainage, rural residences at a density of one unit per five acres, necessary institutions and public facilities, utility and communication facilities, and recreational uses. Land uses that may be approved within the *Environmental Protection Area* (the Pennsuco) are limited to rural residences at a density of one unit per five acres, low-coverage communications facilities, recreational facilities, and necessary public facilities, including water management facilities.

Zoning of the vast majority of land within the Lake Belt is for agriculture (AG) or general use / interim zoning (GU). Occasional business and industrial zoning exists for a handful of parcels scattered throughout the northern (C-9 basin) and central Lake Belt, and the Bird Drive basin. Rock mining, or residential use at 1 unit per 5 acres, are allowable uses in either the *General Use* or *Agricultural* zoning category.

Wetland regulations at the local, state and federal level affect new development in the Lake Belt. Flood criteria typically requires the placement of fill to raise floor elevations above flood levels, normally approximately 3 feet above natural ground. This activity must comply with federal, state and county regulations pertaining to the filling of wetlands. Impacts on wetlands must be mitigated in accordance with those regulations. The cost of mitigation is borne by the landowner seeking a permit to place fill in wetlands.

Wastewater disposal also presents problems, as most of the Lake Belt is beyond the UDB, rendering sanitary service unaffordable. Most of the land in the area is also not naturally conducive to the use of on-site disposal systems (OSDS) due to low land elevations, high groundwater water levels and adverse soil conditions. Improper installation, maintenance, and use of OSDS in the area have led to ground and surface water contamination. New OSDS systems are required to meet the requirements of the Miami-Dade County DERM.

*Discussion:*

Private (non-rockmining) property owners have made a number of requests for relief from what are perceived as onerous and unfair limitations on the ability to use their properties, or to realize a desirable return on their investment. Such requests include:

- *Relaxation of zoning / land use limitations:* Current regulations (in conjunction with the anticipated presence of major public projects) are perceived as depressing property values; and (in conjunction with mitigation requirements) making usage of one's property economically infeasible. Requested changes include:
  - increasing allowable residential density to 1 unit per acre
  - allowing commercial uses along US 27 to meet the needs of area residents
  - allowing other limited development – compatible with wellfield protection – in the C-9 and North Trail areas.
- *Restudy components:* The planned projects, many of which are years away from implementation, are perceived to be adversely affecting both the value of land and the marketability of land in the area. Some property owners have suggested that the Restudy



components be relocated to the west to areas already in public ownership (see also section 3, above).

- *Wetland permitting regulations:* Wetland permitting and mitigation requirements are perceived by some as an excessive and unfair economic burden which precludes property owners from using their land. Requests have been made for the following:
  - no mitigation requirements of A/U and ranchette uses
  - affordable mitigation on fill pads only
  - eliminate mitigation requirements in “degraded” areas (e.g., C-9 basin)

The Committee recently again expanded representation from non-rock mining interests and will be addressing these concerns in upcoming workshops. The immediate focus is on developing a common mitigation solution, consistent with federal, state and local regulations, to simplify the permitting process and provide for more affordable mitigation. Options may include the following:

- Exempt the Lake Belt Area from requirements of federal, state and local wetland permitting regulations for non-rock mining interests
- Reduce the ratio of acres of mitigation to acres of wetlands impacted
- Change requirements so that mitigation is required only for fill pads
- Increase permitted residential densities to enable a greater financial return on land investments, thereby making mitigation more affordable
- Create a special taxing district to finance the cost of wetland impact mitigation (with no reduction in the mitigation ratio)
- Place a special assessment on mining to pay for non-mining mitigation
- Request the Legislature to make specific appropriations to establish a revolving fund for non-mining landowners to pay up-front costs of mitigation
- Utilize environmental easements
- Include mitigation within mortgages
- Create combined mitigation sites
- Mitigate on-site
- No change to existing mitigation requirements and no special funding mechanism

It should be noted that some of the above options will require the cooperation of regulatory agencies and legislative bodies that may not be readily influenced by the Lake Belt planning process. It is possible, although not necessarily likely, that local regulations may be changed as a result of Lake Belt Master Plan recommendations. (Creative alternative arrangements to satisfy existing regulations – as was done in the rock-mining mitigation agreement – may be a more likely scenario.) It is assumed to be less likely that state regulations can be affected by this planning process, and extremely unlikely that federal requirements can be significantly altered.

## 5.2 POLICY OPTIONS

### 5.2.1 Zoning Regulations and Limitations on Permitted Uses

The planning team should **consider a wide range of alternative scenarios for the future of private non-rockmining lands, within the framework of compatibility with wellfield protection and water management recommendations, and consistency with other county, state and federal regulations.** This approach is recommended to ensure that all interests and options are considered in developing and evaluating Alternatives for the Lake Belt. The range of scenarios will likely include the following:

- Consider allowing increased residential densities for areas currently limited to one unit on five acres (*the final decision on densities to be based upon a thorough analysis of the environmental impacts of increased densities; proximity to proposed mining areas; and the cost of providing public facilities and services such as flood control, water, sewer, emergency services and other services to new suburban development*)
- Consider permitting nodes of commercial and other compatible development (institutional, limited office / industrial, etc.), particularly in the US 27 and/or Tamiami Trail corridors (*the final decision to allow commercial nodes to be based upon a thorough analysis of the environmental impacts of such commercial development; proximity to proposed mining areas; and the cost of providing public facilities and services such as flood control, water, sewer emergency services and other services to commercial development*)
- Anticipate future conditions if no change to existing permitted land uses and residential densities
- Recommend expanded/accelerated acquisition of private non-rockmining properties by public agencies and/or mining companies

Alternatively, the Committee may opt to preclude from consideration certain alternatives at this time.

***It should be noted that all land use and local planning authority, for areas both within and outside of the Lake Belt, remains with Miami-Dade County, although the Committee can make recommendations for the County's consideration.***

### 5.2.2 Areas Deleted by the 1999 Legislation

Should the planning team **include in its consideration of alternative scenarios areas removed from the Lake Belt by the State Legislature in 1999?** The inclusion of these areas in schematic depictions of future conditions would provide the Committee with a more complete and realistic portrayal of the character of the entire area, and the implications of different land use options within the Lake Belt.

### 5.2.3 Areas Impacted by Wellfield Protection & Water Management Requirements

Should the planning team **limit its consideration of alternative development scenarios for lands in areas designated for wellfield protection, for Restudy components, or as part of the Pennsuco restoration?** If these related projects are assigned a high degree of certainty (see sections 1 and 3 above), the most conservative and realistic scenarios for private lands in these areas may be limited to anticipating continued strict limitations on development, and/or public acquisition.

## **6.0 BIOLOGICAL MITIGATION NEEDS & ENHANCEMENT OPPORTUNITIES**

### 6.1 TECHNICAL PARAMETERS

The biological mitigation agreement for future mining impacts in the Lake Belt, recommended by the Committee and approved by the Legislature, will include land acquisition and wetland restoration and enhancement, funded by the Mitigation Fees on mining collected beginning October 1, 1999. Implementation will be overseen by an inter-agency committee charged with fund management and the approval of specific projects.

The total extent of area to be improved as mitigation for mining impacts exceeds the land available for mitigation that has been identified to date.

The current standard practice for on-site mitigation of mining, which is included in consideration of the overall mitigation required, is the provision of a 100 foot wide littoral shelf around the perimeter of each lake.

Biological mitigation concerns related to non-rockmining properties are described in section 5, above.

Existing biological values are obviously significant in many portions of the Lake Belt, particularly in the Pennsoco, the "FPL strip" and other areas less impacted by mining, development or invasion by dense (>75% cover) *Melaleuca* forest. Integration of existing resources into preservation / restoration areas, wherever possible, is highly desirable.

#### *Discussion:*

Previous studies have suggested a potentially significant increase in biological productivity may be attained by widening at least some of the littoral zones, so that at least some lakes attain a 1:10 or better ratio of littoral zone to total area. Diversification of littoral zone design has also been recommended: varied slopes (in conjunction with widths); varied shoreline edge designs; and the introduction of upland islands and isolated deep-water pockets within littoral areas.

Areas around proposed Restudy reservoirs may be infeasible for development of littoral zones due to water level fluctuation (see section 3, above). If so, equivalent areas of littoral zone should be added to other lake plans within the Lake Belt. This would provide an opportunity for establishment of larger littoral habitats as suggested above.

Preserved or restored upland and marsh areas (beyond littoral zones) represent an important opportunity. Combining littoral zones, other wetlands and other habitat areas into a connected and functioning mosaic of landscape types will yield far greater biological benefit than an equivalent habitat area composed of isolated patches.

## 6.2 POLICY OPTIONS

### 6.2.1 Identification of Additional Opportunity Sites

The Lake Belt planning process should ***include identification of additional opportunity sites to undertake biological enhancement, wherever possible, within the Lake Belt.*** This policy would seek to emphasize environmental restoration and the creation of a larger “critical mass” of habitat as a primary function of the Lake Belt.

An alternative to this policy is to defer action on this issue until addressed on a case by case basis. At that point, mitigation projects in search of a site will be allocated by other processes, with perhaps no special emphasis on expanding this function within the Lake Belt.

### 6.2.2 On-Site Mitigation Design and Other Enhancement Opportunities

The planning should also ***consider alternatives and improvements to the current standard on-site mitigation practice.*** Without altering the overall amount of mitigation already committed, opportunities to diversify and enrich the created habitat areas should be pursued. In addition, special attention should be paid to opportunities to link mitigation sites with other functioning habitats such as seasonal wetlands, tree islands and other uplands, whether existing, restored or created. Such a policy direction will seek to maximize biological enhancement value, within the framework of other agreed-upon project objectives and commitments.

An alternative to this policy is to allow mitigation design criteria to remain standardized, without special concern for variations within and between sites. While easier and more expedient for individual properties, this approach foregoes potentially important opportunities to build an enriched, functioning larger landscape.

## 7.0 FPL FACILITIES & NEEDS

### 7.1 TECHNICAL PARAMETERS

Existing FPL facilities represent a major infrastructure investment whose location and configuration shall be considered fixed.

Future facilities including a 2<sup>nd</sup> major transmission line, roughly alongside the Dade-Broward Levee, have already approved by the Governor & Cabinet in accordance with the Transmission Line Siting Act. It is assumed these future facilities will be developed where approved, and must be accommodated in the planning process.

Concerns have been expressed over the potential impact of dust, blasting (rock debris), and other mining operations within certain proximity to FPL transmission lines. Constraints for mining in proximity to power lines will need to be more clearly defined through joint discussions between the rockmining industry and FPL representatives.

In consultation with FPL, their rights-of-way and easements must be assessed to determine their potential implications for recreational access and coordination with other project objectives.

## 7.2 POLICY OPTIONS

Other than review of the planning assumptions described above, ***no policy directives are requested from the Committee at this time.*** Further issues requiring decisions and guidance will be brought forth for Committee review during preparation of the Alternative Concepts.

## 8.0 RECREATION OPPORTUNITIES

### 8.1 TECHNICAL PARAMETERS

Public recreational use of post-mining lakes and other components of the Lake Belt has long been identified as one of the potential benefits of the plan.

Strong latent demand for, and interest in, water-dependent and other resource-oriented recreation is evidenced by recent leisure preference surveys by the Miami-Dade County Park & Recreation Department. Hiking and walking, fishing, boating, swimming, camping, biking, equestrian activities and nature appreciation all rank at or near the top of desired activities. The Park & Recreation Department is actively seeking to identify additional sites throughout the County where these kinds of activities can be supported.

At a time when the western half of the County is rapidly developing, the Lake Belt represents an opportunity to develop one or more regional-serving, resource-based parks in the west to complement existing regional parks in the eastern half of the County (such as Greynolds, Haulover and Matheson Hammock Park).

Two existing park facilities are expected to remain: M. E. Thompson Park at the northern end of Krome Avenue, and the Trail Glades Range off of Tamiami Trail. The latter facility is more resistant to change, as it is the County's only public gun range. It will require significant buffer areas. Thompson Park is important to retain as a program element but may be considered for re-location if necessary.

Concepts for recreational access and use will need to be coordinated with wellfield protection requirements, water management objectives, FPL requirements and protection of sensitive habitat areas.

### 8.2 POLICY OPTIONS

Other than review of the planning assumptions described above, ***no policy directives are requested from the Committee at this time.*** Further issues requiring decisions and guidance will be brought forth for Committee review during preparation of the Alternative Concepts.

## **LIST OF EXHIBITS**

- Wellfield Protection Zones
- Existing Ground Water Elevations and Flood Criteria
- Restudy Components
- Rock Mining
- Environmental Protection and Open Land Subareas

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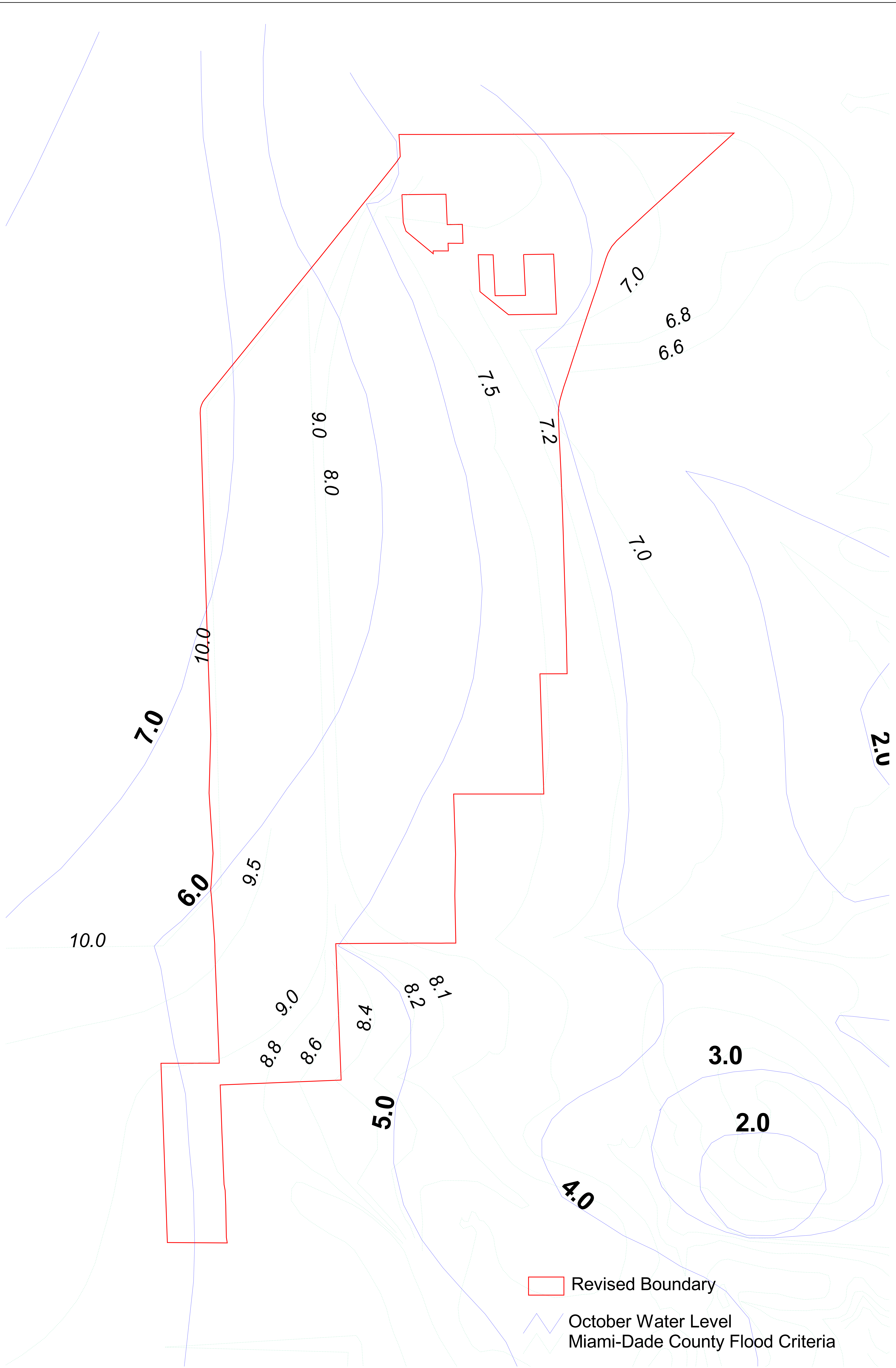
Lake Belt Phase II Detailed Master Plan

Wellfield Protection Areas

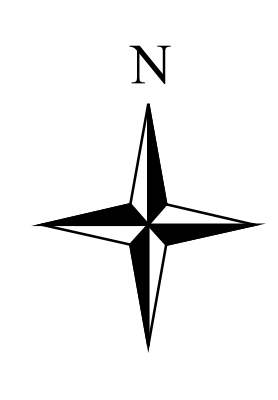
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# Lake Belt Phase II Detailed Master Plan

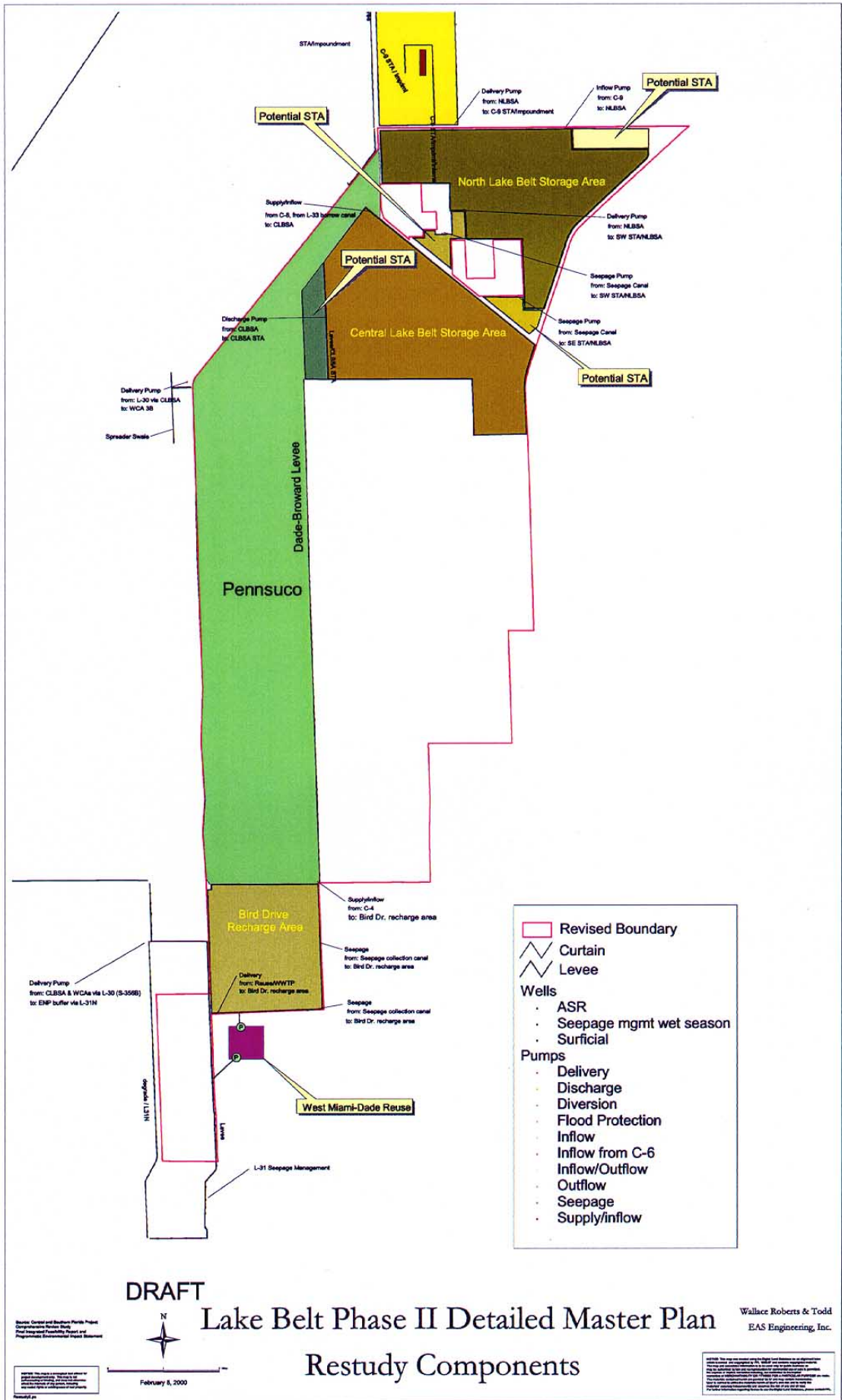
## Existing Ground Water Elevations and Flood Criteria

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November 18, 1999

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# Lake Belt Phase II Detailed Master Plan Restudy Components

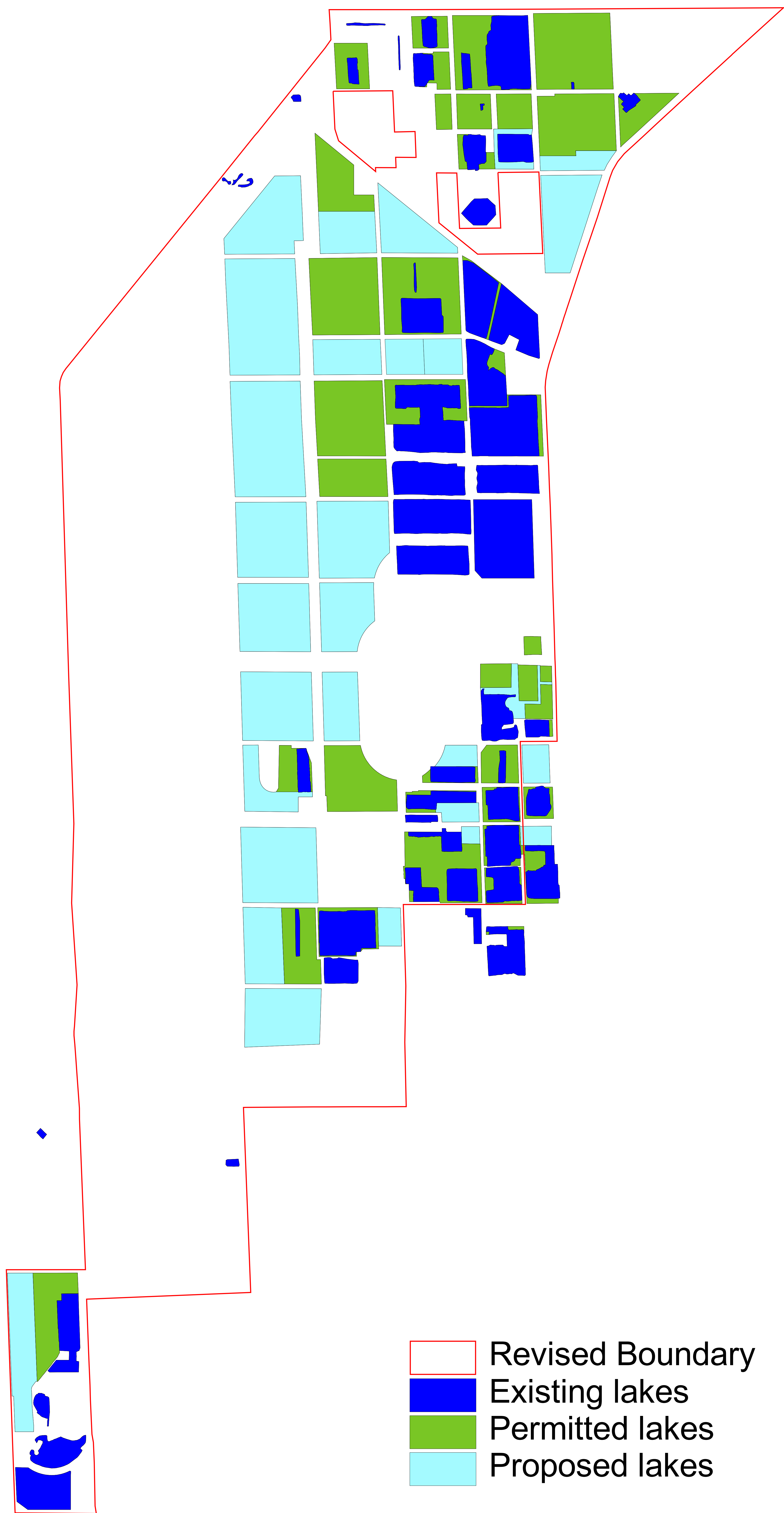
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EAS Engineering, Inc.

Source: Central and Southern Florida Project  
Comprehensive Water Study  
Final Proposed Facility Plans and  
Proposed Operating Procedures

Revised: The master plan is subject to change  
without notice. This drawing is for  
information only and should not be used  
for construction purposes.

February 5, 2000

NOT TO SCALE  
DATE: 2/5/00  
DRAWN BY: [Name]  
CHECKED BY: [Name]  
APPROVED BY: [Name]



- Revised Boundary
- Existing lakes
- Permitted lakes
- Proposed lakes

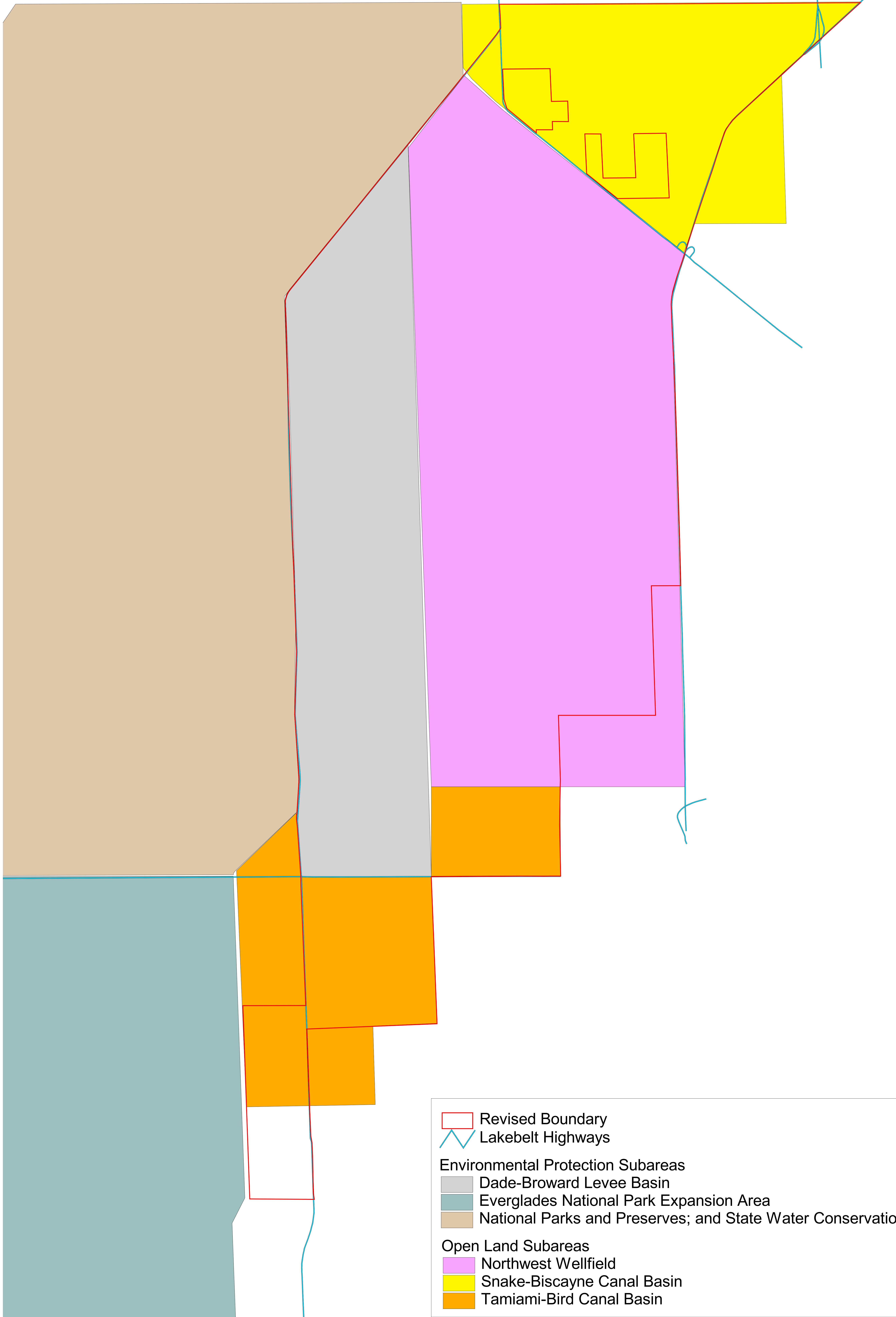
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 November 18, 1999







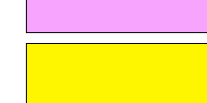

# Lake Belt Phase II Detailed Master Plan Rock Mining

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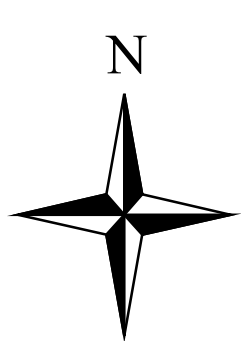
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-  Revised Boundary
-  Lakebelt Highways
- Environmental Protection Subareas**
-  Dade-Broward Levee Basin
-  Everglades National Park Expansion Area
-  National Parks and Preserves; and State Water Conservation Areas
- Open Land Subareas**
-  Northwest Wellfield
-  Snake-Biscayne Canal Basin
-  Tamiami-Bird Canal Basin

**DRAFT**



November 18, 1999

# Lake Belt Phase II Detailed Master Plan

## Environmental Protection and Open Land Subareas

Wallace Roberts & Todd  
EAS Engineering, Inc.

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**Appendix E**  
**Preliminary Draft**  
**Alternative Concepts Memorandum**

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**LAKE BELT  
PHASE II DETAILED MASTER PLAN  
PRELIMINARY DRAFT  
ALTERNATIVE CONCEPTS MEMORANDUM**



*submitted to*

**SOUTH FLORIDA REGIONAL PLANNING  
COUNCIL  
and the  
LAKE BELT COMMITTEE**

*submitted by*

**WALLACE ROBERTS & TODD, LLC  
and  
EAS ENGINEERING, INC.**

**May 4, 2000**

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**Lake Belt Master Plan**  
**DRAFT Alternative Plan Concepts Memorandum**  
**May 4, 2000**  
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## **1. INTRODUCTION**

### **Purpose**

This Memorandum and its accompanying graphic exhibits describe preliminary Draft Alternative Concepts for the Lake Belt Area. The Alternative Concepts include a range of scenarios that have been developed addressing land use and development, recreational use and access, and opportunities for biological enhancement. These Alternative Concepts are submitted for the consideration of the Miami-Dade County Lake Belt Plan Implementation Committee (“the Committee”).

This begins an intensive process of discussion, review and evaluation by the Committee, and further refinement and development of the Alternative Concepts. The result will be the creation of a ‘Preferred Plan Concept’ that will form the basis of the recommended Master Plan. The project schedule calls for a Preferred Plan to be identified by July 2000 and the Final Detailed Master Plan to be prepared by November 15, 2000, with subsequent approval by the Committee and submission to the Legislature by December 31, 2000.

In evaluating and further developing Alternative Concepts for the Lake Belt Master Plan, the Committee will need to include consideration of technical input and recommendations from several key related studies and projects, described below.

### **Related Planning Efforts**

The related planning efforts are at various stages of development: some are nearing completion, others are in-progress and of longer-term duration. However, all of the following events, which will provide critical input and influences for Lake Belt planning, are scheduled to occur in late spring or summer:

*Wellfield Protection and Watershed Management Plan (Miami-Dade County DERM):  
Draft Recommendations – late May 2000*

DERM’s initial concepts and draft recommendations for potential revisions to the County’s Wellfield Protection Ordinance, including a Watershed Management Plan, will influence concepts for land uses, access management and other design criteria within the Northwest Wellfield Protection Area.

*Blasting Task Force (Miami-Dade County):  
Recommendations for Consideration of the County Commission – late May 2000*

Recommendations by the Task Force to the County Commission will seek to resolve conflicts between mining and nearby urban development, potentially affecting scenarios of land use and phasing (of mining and/or development) within the Lake Belt.

*Water Preserve Area Feasibility Study: Initial Modeling Results (South Florida Water Management District/ U.S. Army Corps of Engineers):  
Alternative Design Refinements for Comprehensive Plan Components – Summer 2000*

Modeling and evaluations underway at the District and Corps are part of ongoing design refinements for the Comprehensive Everglades Restoration Plan (CERP, formerly known as the “Restudy”). Preliminary footprints exist, in the recommended Plan submitted to Congress in 1999, for major Plan components to be developed in the Lake Belt including reservoirs and recharge areas. While the final configuration and design of these elements may not be determined for several years, alternative designs are in development. Revised proposed footprints for northern and central Lake Belt components are imminent and may affect land use, phasing, recreation and biological enhancement scenarios, especially for lakes to be incorporated into reservoirs.

*Hydrologic Analysis of Potential Mining Impacts (SFWMD):  
Initial Modeling Results – Summer 2000*

More detailed modeling and analysis of the hydrologic impacts of both proposed Lake Belt mining and alternative design refinements of the CERP have been underway at the South Florida Water Management District. These analyses will provide critical input to the Lake Belt planning process. They will quantify anticipated hydrologic impacts of mining beyond that already permitted, for which hydrologic mitigation requirements remain to be established. Some of the areas of critical concern include the western half of the one-mile wide “FPL strip” and the mining areas immediately adjacent the Northwest Wellfield.

## **Planning Assumptions**

Consistent with the recommendations and discussion contained in the Draft Memorandum of Technical Parameters and Policy Options (dated February 9, 2000), the following planning assumptions have been used as the basis for developing Alternative Concepts:

Wellfield Protection: It is assumed that future protection provisions will be at least as stringent as current rules, possibly more so. It is recognized that additional restrictions (yet to be defined) may be recommended particularly in areas immediately around the Northwest Wellfield.

Hydrologic Issues: Detailed consideration of lake configuration options, as well as of possible refinements to general mining footprints, have been deferred pending further input from modeling studies underway.

Comprehensive Everglades Restoration Plan: The Alternatives currently indicate general footprints of major CERP components as described in the July 1999 Final Report. It is assumed that, while these footprints are subject to change, the Lake Belt Master Plan will need to coordinate to the extent practicable, with the CERP, and to accommodate planned components in some form. It is assumed that CERP components will not be relocated out of the Lake Belt, and that the project will be implemented. As new footprints become available from the CERP team, they should be incorporated into the Lake Belt planning process.

Rock Mining: Mining will be generally consistent with the Phase 1 Lake Belt Plan and the Issue Team Recommended Plan. Mining will proceed first where already permitted, later where proposed by mining companies on land owned or controlled by them and consistent with the Phase 1 Plans.

Non-mining Private Lands: The existing rural community in the northern Lake Belt as well as property owners in other portions maintain strong interests in community viability and other existing property rights. A wide range of land use scenarios is being considered, within a general framework of compatibility with wellfield protection needs and other federal, state and county laws and regulations.

Biological Mitigation Needs & Biological Enhancement: Alternative approaches that improve upon current standard, uniform practices of on-site wetland mitigation for mining (i.e., lake and littoral design) are to be strongly considered. Implementation strategies for such alternative approaches will need to resolve any inequities of mitigation responsibility among various mining entities.

FPL Facilities & Needs: FPL facilities are considered permanent improvements. Representatives of FPL, mining companies and other parties (e.g., public agencies) will mutually address site-scale issues of coordination between FPL facilities and other activities such as mining, recreational access, water management and CERP improvements.

Recreation Opportunities: Strong regional demand exists and is growing, as the County's western areas develop, for resource-based and water-dependent recreation such as boating, swimming, fishing, camping, hiking/biking and nature interpretation. A variety of recreational uses and improvements are being considered, ranging from fishing, boating and greenway/trail access, to regional parks and private (commercial) recreation.

## **2. ALTERNATIVE CONCEPTS**

This section provides descriptive text for the accompanying graphic exhibits (Figures 1 through 10) as well as elaboration on related issues not shown on the maps.

The Lake Belt Master Plan must consider and coordinate with a large number of diverse and complex interrelated issues. In order to facilitate and clarify the discussion and review process, certain key issues have been singled out for focused consideration. A range of alternative scenarios are graphically depicted for each of three critical sets of issues. These include:

- Land Use and Development
- Recreational Use
- Biological Enhancement

Additional issues related to access management, water management needs, and implications for phasing and implementation are discussed further at the end of this section.

The ideas and elements contained in these various scenarios – subject to further refinement – must ultimately be evaluated by the Committee to establish a preferred direction, and combined and coordinated to create a holistic plan for the Lake Belt addressing all aspects of land use and treatment within this nearly 80-square-mile area.

### **2.1 Land Use & Development**

#### **Existing Conditions**

Existing development patterns are shown on an aerial photo Base Map (Figure 1). While extensive urbanization occurs just east and south of the Lake Belt Area, private development (other than limestone mining) within the Lake Belt primarily occurs along U.S. 27 (Okeechobee Road). There, a low-density pattern has developed of rural home sites, agricultural establishments and a handful of other businesses, and public and institutional uses (e.g., cemeteries, a County airfield), interspersed with mining areas and undeveloped lands.

Like almost all of the Lake Belt, this area is presently limited in its developability by natural factors – topography, hydrology, soils – and related public policies including the County's Comprehensive Plan and local, state and federal wetland regulations (see prior planning documents including *Draft Technical Parameters & Policy Options* and others). The remainder of the Lake Belt evidences very little development other than mining, infrastructure and public/institutional uses.

Such key features shown on the Base Map include existing mining lakes; mining-related infrastructure including processing plants, cement mills and railroads; major roadways; major FPL transmission line corridors; two significant County parks and several smaller recreation sites; two prison/detention center sites; and the County's Northwest Wellfield.

Three further land use scenarios are described, as follows:

***Presently Allowable Development*** (Figure 2) indicates the underlying development potential throughout the Lake Belt, based on existing County land use regulations. This scenario also indicates near-term (already permitted) mining, as well as public ownership which has implications for the future of those lands. Other relevant policies or potential future developments are diagrammed in Figure 3, **Additional Policy Factors**.

An ***Intensified Development*** scenario indicates two potential concentrations of more intense use and development, one in the vicinity of U.S. 27, and another north of Tamiami Trail between 137<sup>th</sup> and 157<sup>th</sup> Avenues. This scenario is consistent with requests for policy changes made by a number of non-mining landowners.

A ***Modified Development*** scenario indicates a pattern more consistent with established policies in the Comprehensive Plan and with the recreational, environmental and rural lifestyle opportunities presented by the Lake Belt, but which offers greater economic value to non rock-mining interests than do present policies.

## **2.1 (A) Presently Allowable Development**

This exhibit (Figure 2) depicts the existing development rights associated with lands throughout the Lake Belt. Virtually the entire area is developable for rural residences on 5-acre lots, and can be used as well for agricultural and other non-intensive, non-urban uses subject to compatibility with environmental land and wellfield protection policies.

A small portion of the Lake Belt is included within the County's Urban Development Boundary (UDB) and is presently designated for Industrial/Office uses. Another very small area at the Krome Avenue / Tamiami Trail intersection is designated for Commercial uses (an existing service station across from the Miccosukee Gaming and Hotel facility).

Within the overall areas designated for rural densities exist a small number of previously approved non-residential uses that are also considered likely to remain (see Figure 1). Other anticipated non-residential uses include continued mining and public agency projects. Figure 2 shows permitted mining areas and the existing pattern of public or utilities (FPL) land use and ownership, all areas that are highly unlikely to be otherwise developed. (Note that the land acquisition for public purposes is ongoing; the public ownership pattern shown is as of March 2000.)

Additional "Policy Factors" that must be recognized in considering land use issues are shown in Figure 3:

- Potential future expansion of the UDB (north of Tamiami Trail) would mean a County commitment to provide certain urban services in that area, as well as a likely increase in allowable densities and kinds of development;
- Wellfield protection requirements are expected to continue to impose limitations on land use in much of the central Lake Belt

- Mining is expected to continue generally westward, within the limits agreed in the Phase 1 Plans. Parts of the last half-mile of proposed mining adjacent the Dade-Broward Levee and certain portions west of Krome Avenue may be subject to additional conditions, negotiations or mitigation requirements prior to being permitted.
- Potential large-scale public projects likely to involve land acquisition include the Pennsuco restoration area and other major components of the CERP (reservoirs, recharge areas, etc.)
- Potential conflicts between mining (especially blasting) and other development in several areas.

### ***Implications***

The total potential of this scenario must include consideration of all remaining non-mined, non-public lands as a maximum ultimate build-out scenario. A working assumption for mining is that mining will proceed on all presently permitted sites and on all “proposed mining” land meeting the following criteria:

- Consistent with Phase 1 Lake Belt Plans (note certain areas are “conditional” as described above)
- Owned by mining companies, or by public agencies with potential for lease of mineral rights

The remaining non-public land totals some 19,334 acres. Although this number is likely to be reduced through further public land acquisitions, it equates to approximately 3,866 residential units as a maximum (at 1 unit per 5 acres), likely to house over 12,000 residents.

Without significant further acquisition of land for public and/or mining purposes, or in an interim condition until such acquisition is made, this development could occur in a dispersed pattern throughout all sections of the Lake Belt. Such magnitude and distribution of very low density population growth would require the provision of basic public services including minimal vehicular access (retention and maintenance of existing rights-of-way) and emergency services in a fashion which is likely not fiscally self-supporting. Likewise, the proliferation of residences throughout the Lake Belt represents substantial potential conflict with mining operations, agriculture, environmental restoration and recreational access to lakes and restored natural areas.

### **2.1 (B) Intensified Development**

This development scenario (Figure 4) incorporates the potential for additional development to bolster a community presence and augment existing property rights and land values. It includes extensive rural residential development and additional, more intensive suburban/urban development in areas having the greatest vehicular accessibility and proximity to the expanding urban fringe of Miami-Dade County.

As described above, mining is again assumed to proceed on permitted sites and on miner-proposed sites owned by mining companies or public agencies, and consistent with Phase 1 Plans. Adjacent to the U.S. 27 corridor, on non-mined lands, residential densities are increased from 1 dwelling unit per 5 acres to Estate residential densities of up to 1 dwelling per acre. This re-designation would increase total potential dwellings from approximately 435 units to 2,170 units. This population growth will generate substantial additional demand for commercial

development (as much as 26 acres), which is depicted being accommodated in several commercial “nodes” along U.S. 27.

In the North Trail area (north of Tamiami Trail), development pressures will likely increase with the extension of the SR 836 expressway as well as the potential Urban Development Boundary expansion. This scenario accommodates additional industrial – office development along the 137<sup>th</sup> Avenue corridor, while to the west residential densities are increased to up to 6 dwelling units per acre. This scenario reflects an expansion of the urban fringe similar to what presently occurs in nearby sections to the east and south. A dramatic increase in residential development of up to 7,350 units (approximately 23,500 residents) would result. Again, increased demand for commercial services would engender commercial development (perhaps as much as 90 total acres), conceptually depicted in nodes along Tamiami Trail and 147<sup>th</sup> Avenue.

All remaining non-mined, non-public lands in the Lake Belt are depicted as potentially residential uses at 1 unit per 5 acres (the existing allowable density). As in the above scenario, this generates substantial development (approximately 3,180 units) in a dispersed pattern throughout the Lake Belt.

### ***Implications***

As with the preceding development scenario, the proliferation of rural residential development dispersed throughout the Lake Belt is a pattern which may be fiscally unsound, and which would exacerbate conflicts with mining, wellfield protection (especially access management), recreational use and, potentially, with longer range land purchases for environmental restoration and other public projects (such as CERP). With continued residential development as a possibility west of the Northwest Wellfield, also, the County would be unable to restrict or vacate existing rights-of-way (e.g., the 147<sup>th</sup> Avenue/FPL corridor as shown on Figure 4) that it might otherwise eliminate for purposes of access management and protection of the wellfield.

The intensification of residential development along the U.S. 27 corridor, although it would enhance property values and address economic concerns of area landowners, may also conflict with the desire of other property owners to retain a rural area character and lifestyle. At the indicated densities if 1 dwelling per acre, this area will become suburban in character, with associated increases in traffic and in demand for public service. Such an intensification of use and activity outside the Urban Development Boundary is inconsistent with present County land use policies.

In the sector north of Tamiami Trail, there is an identified potential to expand the Urban Development Boundary. If this area were to develop at maximum intensity, with residential densities of up to 6 dwellings per acre, plus substantial additional industrial – office and commercial development, a major sub-regional activity center would result. A related issue is potential additional development by the Miccosukee Tribe on properties being acquired by them north of Tamiami Trail, immediately west of this sector. Such development, if it extends into the Pennsuco, would impact an area identified in the Phase 1 Lake Belt Plan for environmental restoration. This degree of intensification is also likely to conflict with County land use policies which seek to curb urban sprawl at the County’s fringe and instead encourage in-fill development in older developed sections.



## **2.1 (C) Modified Development**

This development scenario (Figure 5) seeks to incorporate measures to mitigate the undesirable implications of the preceding scenarios, consistent with the need for compatibility with mining, environmental restoration and other public purposes, while still enhancing the development potential for private land over and above present conditions.

While this scenario does not envision “downzoning” it does seek to discourage sprawling, fragmented rural residential development among the mining areas, as well as in remote and inaccessible locations and other areas identified for long range public acquisition (e.g., Pennsuco). This is done by establishing the bulk of the Lake Belt as a sender site for a Lake Belt Transfer of Development Rights (TDR) program. The primary receiver site is the sector adjacent Tamiami Trail where base densities would remain at 1 dwelling per 5 acres. However, with a transfer of development rights residential densities of up to 6 dwellings per acre could be achieved. Due to the special nature of the area (adjacent the Pennsuco and the Northwest Wellfield Protection zone) the TDR density increase is joined with mandatory development clustering and open space retention. Similarly, additional industrial – office development can be accommodated in this area with a suitable factor to “convert” a residential development right into an equivalent increment of commercial development. Additional development potentials in this area include commercial recreation activity nodes at locations appropriate for recreational access to lakes and trails.

The private, non-mined properties along U.S. 27 – outside the wellfield protection zone – may also be suitable as a TDR receiver site, however, in this scenario total achievable densities would be kept consistent with a rural character and lifestyle (as well as with the this area’s continued likely exclusion from the Urban Development Boundary). Options include retaining the base densities of 1 dwelling per 5 acres, or up to 1 dwelling per 2.5 or 3 acres with provisions for 1 acre minimum lot size. Alternatively, property values and development flexibility can be enhanced merely by allowing minimum 1 acre lots while retaining total gross density of 1 dwelling per 5 acres. In this scenario an owner of a 15 acre property would have the ability to sell two 1-acre lots while maintaining a rural homestead on the remaining 13 acres. As with the sector adjacent to Tamiami Trail, this area has the opportunity to accommodate commercial recreation activities oriented to completed mining lakes that become available for recreation.

### ***Implications***

This scenario would provide less of an increase in overall private property values than the preceding scenario, but would likely also reduce the undesirable consequences of sprawling, fragmented rural residential development. It retains property rights but re-allocates development into higher concentrations in areas more suitable for such development, via a Transfer of Development Rights incentive mechanism. This incentive for re-allocation may help reduce short-range conflicts with mining operations and long-range conflicts with recreational use, wellfield protection, environmental restoration and associated costs of public acquisition.

The feasibility, costs and benefits of all three of the land use and development scenarios will need to be further evaluated in light of several critical factors. These include:

- Total non-mining, non-public acreage likely to be at issue, pending further information regarding revised CERP component footprints, wellfield protection restrictions, updated public land acquisition status and other factors
- Potential development feasibility of these areas in light of physical and regulatory constraints (mitigation requirements, flood criteria, etc.)
- Potential requirements of public service provision by Miami-Dade County and associated cost/feasibility factors
- Potential marketability and balance of “sender” and “receiver” unit calculations for TDR program

## **2.2 RECREATIONAL USE**

Public recreational use has long been cited as one of the key potential benefits of the Lake Belt Area, and recreational interest and demand is anticipated to be quite high, particularly for water-dependent and resource-oriented activities. Existing park sites and other public land, as well as remainder sites from mining activities and other privately owned lands, may offer major opportunities for access. Two scenarios have been developed that focus on different approaches to providing such access.

### **2.2(A) Recreation Nodes**

A Recreation Nodes Scenario (Figure 6) concentrates potential use in several discrete zones. These are located in proximity to good access routes and existing / potential resources (natural areas and lakes), and away from sensitive resources (i.e., the Northwest Wellfield).

Mined lakes are designated for one of three levels of accessibility. Lakes beyond the Wellfield Protection Area (the maximum drawdown area, as presently defined) may be used for a full range of consumptive (motor powered) uses such as small to medium sized power boats, races, rentals, jet skis, etc., along with sailing and para-sail uses. (Within these zones, spatial segregation and appropriate management of these diverse uses will of course be necessary to prevent conflicts.)

Lakes within the Wellfield Protection Area that are reasonably close to access nodes are designated “Non-motorized Use Lakes.” These areas would provide access for fishing, hiking, wind- and muscle-powered water play (sailing, rowing, swimming, etc.) and other non-consumptive, non-polluting uses. Non-accessible lakes are designated for the core Wellfield Protection buffers (areas immediately adjacent the wellfield) as well as other remote lakes in the Lake Belt interior.

In this scenario, major access points (such as regional parks) are conceptually shown at the following locations:

Krome Avenue North: Based on the existing location of M.E. Thompson Park, this provides access to lakes immediately south of U.S. 27, and to adjacent upland and natural (wetland) areas.

Krome Avenue South: Located on remaining uplands associated with mined-out lakes (presently private property), this site, just beyond the Urban Development Boundary, could serve nearby urbanizing areas with access to nonmotorized-use lakes and other open space resources ranging from restored wetlands to upland habitat or active recreation sites.

NW 12<sup>th</sup> Street (Government Lot 4): Some portion of this state-owned land, currently proposed (although not permitted) for mining, could be retained as a park site. With good access from NW 12<sup>th</sup> Street, this location abuts the only motorized-use lake proposed south of U.S. 27. It also can provide access to the Pennsuco's restored wetlands, for interpretive and primitive hiking use. (A primitive / seasonal trail is indicated westward from this site following an abandoned canal and levee, and traversing a tree island; such a trail might be usable for canoeing in the wet season and hiking in the dry season.)

NW 41<sup>st</sup> Street: Again, based on accessibility to intensively developed urban areas, such a location could utilize a series of smaller mined lakes for a variety of non-consumptive uses.

Northern Lake Belt: Access to lakes or reservoirs in the C-9 basin may be provided at one or more locations in the "stair-step" area, perhaps utilizing existing publicly owned land such as the Opa-Locka West airstrip. Feasibility of providing such access must be determined based on further design information for potential CERP components (reservoirs) in this area.

## **2.2(B) Recreation Network**

A Recreation Network Scenario (Figure 7) seeks to provide a broader range and extent of recreation opportunities by incorporating much more of the Lake Belt Area itself, as well as maximizing greenway and trail system linkages through the area and connecting to existing systems elsewhere in the County.

Such a scenario opens up a great deal of territory for access; this enhances its potential usability and broadens its potential user appeal, but also would require a greater commitment of resources to the development, operation and management of an open space system.

This scenario creates a number of corridors that can connect to the larger greenway system under development in the County, and provide a diversity of recreational routes within the Lake Belt. The Lake Belt in this scenario becomes both a destination and an important opportunity to connect other greenway and trail systems that are presently isolated from each other. Such connectivity will enhance the regional effectiveness of the greenway system as a means of linking open space throughout Miami-Dade and beyond.

Major greenway corridors would be made up of one or more trails (bicycle, pedestrian, possibly equestrian), often within an enhanced landscape zone, that can serve as part of a larger route. Examples include a Krome Avenue link that allows continuity from the existing South Dade network, along the Krome right-of-way north to U.S. 27; a U.S. 27 link that connects Krome Avenue to the North Dade network; or a link along the Dade-Broward Levee from Krome Avenue southward.

Secondary greenway corridors would be generally shorter loops that provide access off of major corridors or other points, to relatively close-in destinations such as accessible lakes, scenic overlooks or special natural resource features (e.g., bird rookeries, tree islands, fishing destinations).

A ‘Blueway’ corridor, primarily a canoe/kayak trail with an accompanying upland corridor, is also indicated for the Dade-Broward Levee canal. In this case the alignment of the canal might be modified to provide a more visually interesting and user-friendly experience. As in the preceding scenario, Primitive/Seasonal Trails are also indicated wherever resources warrant, particularly in the Pennsuco.

Also as in the preceding scenario, lakes are accorded one of three types of accessibility, from none, to non-motorized only, to full access for diverse uses. In this case, only the lakes immediately adjacent the Northwest Wellfield are restricted from all access. Future mining lakes within the ‘FPL strip’ are all indicated as potentially accessible, helping to form a major north-south recreational linkage along the Dade-Broward Levee.

This scenario also envisions a number of major and minor access nodes linking various parts of the network. Two regional parks are suggested (similar to the preceding scenario) along with minor connections such as boat launches, trail heads and smaller interpretive centers at key locations. In addition, suitably located private recreational sites would be encouraged.

### **2.3 BIOLOGICAL ENHANCEMENT**

Several interrelated issues come under this heading. These include:

- Biological (wetland) mitigation for rock-mining impacts;
- Biological mitigation for the impacts of other kinds of land use and development; and
- Other land use and management strategies to enhance the habitat value and productivity of the Lake Belt, potentially including reclamation (prescribed post-mining lake edge and land treatments for mining areas)

The quantity of biological mitigation required for mining was addressed in the 1999 agreement incorporated in that year’s Lake Belt legislation and now administered by an interagency task force. Similarly, an agreement addressing non-mining development impacts is now being sought by the applicable agencies and non rock-mining representatives.

Alternative scenarios for the total *amount* of mitigation required are therefore not developed here, as this issue is being addressed in other venues. Two scenarios have been developed, illustrating contrasting approaches to the allocation of resources within the Lake Belt for purposes of re-creating and enhancing biological value.

### **2.3(A) Existing Practices / Trends**

This scenario (Figure 8) illustrates the trend condition based on current practices and requirements. Existing completed mined-out lakes, which have little or no shoreline enhancement, are assumed to remain as is (no retrofitting). All future lakes are treated with the same, or similar, enhanced edge: a (typically) 100-foot wide littoral zone around the entire perimeter. In this scenario, restoration of the entire Pennsuco area to seasonal wet prairie, as identified in Lake Belt Phase 1 and CERP plans, is assumed.

Not depicted at this scale are the potential variations that may be developed in the lakes' shapes and connectivity. The lake shapes shown on the exhibits reflect deep-cut mining footprints proposed by the owners. Lake boundaries are determined by property limits (zoned rights-of-way at section lines) and by ownership patterns. These boundaries may be subject to refinement for aesthetic and biological purposes, if suitable mechanisms for implementation can be developed.

A diagrammatic depiction of preliminary lake configuration options is included in Figure 10 (see below). However, more detailed consideration of this issue will require further technical input from SFWMD regarding the water management and hydrological implications of increasing or decreasing lake connectivity compared to the current pattern.

The existing pattern of littoral development has been critiqued in prior plans as being weak in the support of biological productivity (Everglades Research Group, 1996). Recommended improvements include increasing the proportion of shallow littoral areas from approximately eight percent, to between ten and thirty percent, of total lake area, for at least some of the lakes; and diversifying edges and littoral zones with upland tree islands, willow and cypress islands, and deeper pools and cuts.

### **2.3 (B) Resource Concentration**

This scenario (Figure 9) seeks to address the potential deficiencies noted above, without necessarily making changes in the total amount of littoral development required as on-site biological mitigation for mining. It also seeks to further enhance habitat values in the area by providing for connections between enhanced lake edges and other undeveloped lands.

In this scenario, resource enhancements (littoral zones) are concentrated in approximately half the future lakes, and reduced or deleted in the remainder. This results in effective concentrations of littoral zone within the "enhanced habitat" lakes. It provides for up to 30% of the total area of selected lakes to remain shallow and littoral, a ratio that should greatly boost productivity. Wider littoral shelves (generally 100 to 500 feet) will similarly and enable full, diversified development of shallow water zones with deeper cuts and pools and emergent / island features.

As in the preceding scenario, this alternative assumes no enhancements to mining lakes that are already complete and mined-out. The other (future) non-enhanced, or "quarry-only," lakes, while minimally productive, may also aid in coordinating with other public purposes. The lake

areas so shown are within the current footprint of CERP reservoirs, where water level fluctuations will preclude littoral zone development; or are within close proximity to the Northwest Wellfield, in an area preliminarily identified by DERM as a potential buffer area requiring additional restrictions. DERM has indicated that one management approach to this buffer area may be to restrict littoral development so as to discourage wildlife (especially mammals) and reduce the area's attractiveness to humans (such as fishermen).

This scenario also suggests the development or preservation of linkages that can serve as wildlife corridors throughout the Lake Belt. Such corridors might take advantage of existing filled and disturbed margins around the Pennsuco, at major existing roads and the Dade-Broward Levee, to provide upland or forested corridors to complement wetland and littoral habitats.

As noted above, Figure 10 shows preliminary concepts for Alternative Lake Configurations. More detailed treatment concepts will be developed as further input becomes available from hydrologic modelling underway at the SFWMD and U.S. Army Corps of Engineers.

## **2.4 RELATED ISSUES**

Additional factors will need to be considered as the above scenarios are further developed, evaluated and combined into a Preferred Plan for the Lake Belt. The treatment of these additional factors will depend largely on the Committee's preferred directions on the major topics described above, as well as on additional technical and policy inputs not available at this time. Only brief discussion of these additional factors is included at this time, as follows.

### **2.4(A) Access Management Considerations**

Land use, recreation use, wellfield protection, mining operations and water management all impose requirements and pose challenges for access management within the Lake Belt. As noted in section 2.1(B) above, the continued presence of private land holdings in any given portion will prevent the County from vacating rights-of-way potentially needed to access those lands.

Otherwise, preliminary discussions with County Public Works staff indicate that r.o.w.'s could potentially be vacated in remote interior sections of the Lake Belt. Such vacations could in turn increase the flexibility possible in dealing with mining lake configurations, lake connectivity, habitat enhancement opportunities, etc. All of these factors may further affect, or be affected by, wellfield protection criteria and watershed management concepts presently in development at DERM.

The final acceptable range of access scenarios will be defined by these pending technical and policy criteria. Preferred concepts for recreation as well as other land uses will obviously be required to be compatible.

## **2.4(B) Water Management Needs**

As noted above in section 1.0, further technical criteria and input are pending studies underway at both DERM and SFWMD. Regional seepage management, water storage and wellfield protection recommendations may well define the range of possibilities for lake configurations and connectivity, as well as for the size and shape of associated upland buffers (e.g., rights-of-way). The range of acceptable scenarios for lake configurations and connectivity must be determined before recreational and habitat enhancement concepts can be finalized.

## **2.4(C) Implementation and Phasing Considerations**

Phasing and implementation concepts will need to be developed based on various anticipated land uses. Critical to this effort will be the potential phasing scenarios for mining, as influenced by the following factors:

- Default phasing plans of various mining companies / landowners
- Input from County Blasting Task Force
- Other urban development / mining conflicts
- Input from CERP team regarding revised reservoir footprints and time frames for implementation
- Hydrologic modeling for future impacts of mining
- Input from Wellfield Protection team

### 3.0 EVALUATION PROCESS

#### Next Steps

As referenced above, the Draft Alternative Concepts described in this document represent but the beginning of a challenging process of Alternatives refinement and evaluation, leading to the creation of a Preferred Plan. The Committee will need to rapidly assess the meaning and incorporate approved recommendations emerging from a host of related planning efforts (see section 1.0). The next steps are as follows:

- Review Preliminary Alternatives
- Review inputs and recommendations from all related planning efforts
- Determine criteria for evaluation of Alternative Plan Concepts
- Revise/refine Alternative Plan Concepts
- Solicit public comment on Alternative Plan Concepts
- Review further inputs and recommendations from all related planning efforts
- Develop the “Preferred Plan” incorporating results from all of the above steps

#### Draft Criteria

The following criteria for evaluating the overall success of the Lake Belt Plan were adopted by the Lake Belt Committee in 1995 as “Initial Objectives and Measures of Success.” These criteria are based on the legislative mandate for the Lake Belt Plan (373.4149, F.S.). They are included here as a starting point for discussion of appropriate criteria for the evaluation of the Alternative Concepts:

#### **Objective 1: Enhance Water Supply for Miami-Dade County and the Everglades**

##### *Measures of Success:*

- A. Extent to which water supply for Miami-Dade County is enhanced
- B. Extent to which hydroperiod and flows are enhanced for the Everglades including Florida Bay
- C. Extent to which wet and dry season flows to Biscayne Bay are enhanced
- D. Extent to which the Lake Plan meshes with state and regional plans being developed
- E. Amount of water available during drought conditions for Miami-Dade County and the Everglades system including Biscayne Bay, Florida Bay, and South Florida estuaries.
- F. Effects of plan on potable water quality and Northwest Wellfield groundwater designation
- G. Quality of the water being made available for Miami-Dade County and the Everglades system



## **Objective 2: Maximize Efficient Rockmining**

### *Measures of Success:*

- A. Total volume of rock available for mining through 2050
- B. Proximity of lands available for rockmining to processing and transportation facilities
- C. Quality of rock in lands available for mining
  
- D. Extent to which future governmental permitting requirements are made more certain

## **Objective 3: Promote the Social and Economic Welfare of the Community**

### *Measures of Success:*

- A. Extent of recreational opportunities
- B. Diversity of opportunities
- C. Economic vitality of rockmining industry
- D. Economic vitality of other industries
- E. Compatibility of land uses
- F. Addresses rights of all private and public land owners, large and small
- G. Economic value of clean, quality environment
- H. Compatibility with transportation plans
- I. Extent to which the Lake Plan provides for a sustainable South Florida
- J. Costs of infrastructure construction, operation, and maintenance of public health
- K. Avoidance of risk to potable water quality and preservation of groundwater designation of the Northwest Wellfield
- L. Provision for the acquisition or compatible lawful use of parcels not intended for rockmining

## **Objective 4: Protect the Environment**

### *Measures of Success:*

- A. Extent to which the Everglades including WCAs are preserved, enhanced, and restored
- B. Amount, quality, and the extent to which the habitat within Lake Belt is created, preserved, enhanced, and restored including biological productivity of lakes and littoral areas
- C. The extent to which the habitat created, preserved, enhanced, and restored provides improved functions to the natural communities.

**LIST OF EXHIBITS**

1. Base Map
2. Presently Allowable Development
3. Additional Policy Factors
4. Intensified Development Scenario
5. Modified Development Scenario
6. Recreation Scenario A – Nodes
7. Recreation Scenario B – Network
8. Biological Scenario A – Existing Practices / Trends
9. Biological Scenario B – Resource Concentration
10. Lake Configuration Concepts

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These maps [exhibits] are conceptual tools utilized for project development only. They are not self-executing or binding, and do not otherwise affect the interests of any person, including any vested rights or existing uses of real property.

FIG. 1

# This Map Removed for Security Purposes

DRAFT



May 4, 2000

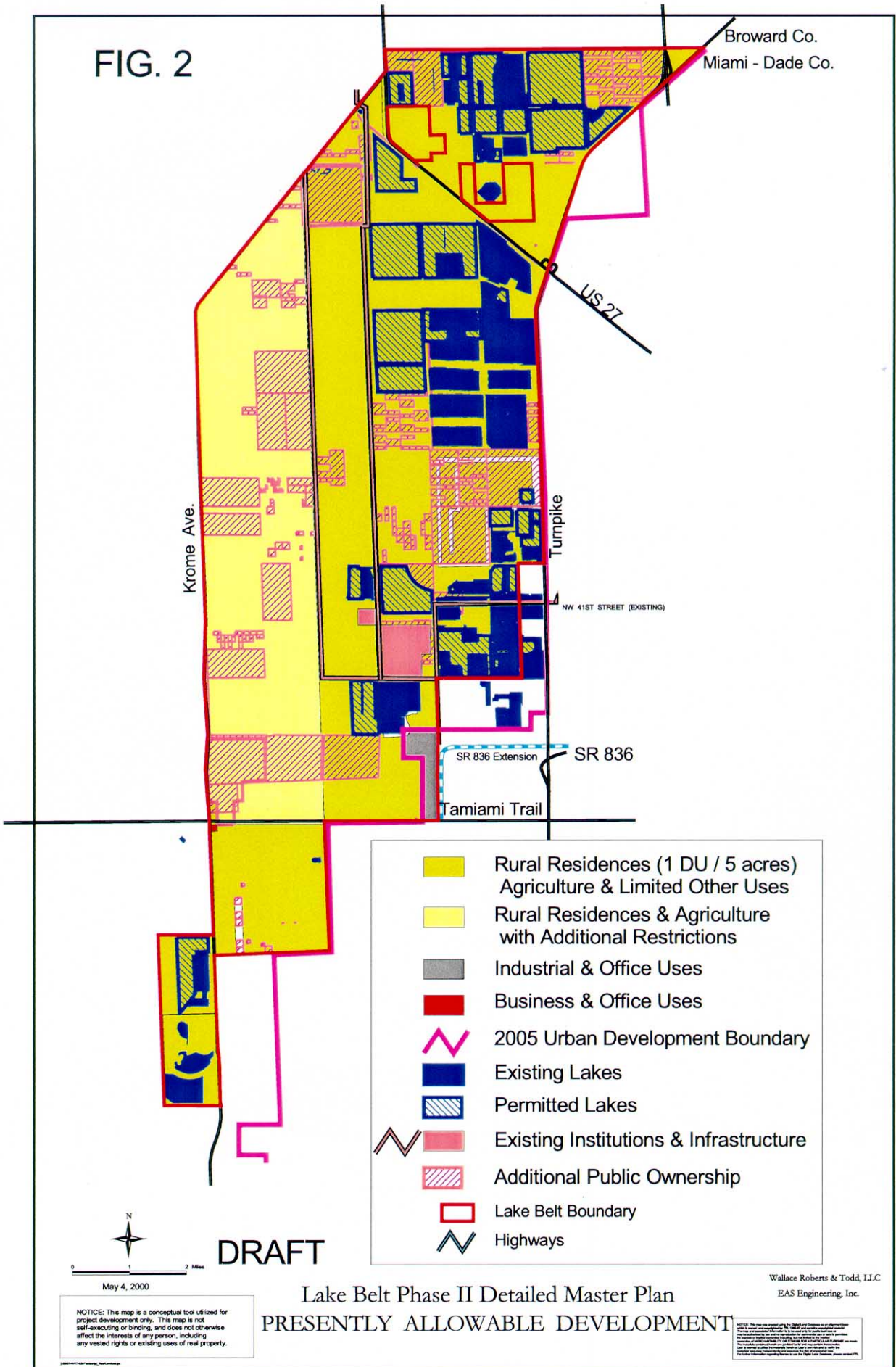
NOTICE: This map is a conceptual tool utilized for project development only. This map is not self-executing or binding, and does not otherwise affect the interests of any person, including any vested rights or existing uses of real property.

## Lake Belt Phase II Detailed Master Plan Base Map

Wallace Roberts & Todd, LLC  
EAS Engineering, Inc.

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FIG. 2



Broward Co.  
Miami - Dade Co.

US 27

Krome Ave.

Tumpike

NW 41ST STREET (EXISTING)

SR 836 Extension SR 836

Tamiami Trail

- Rural Residences (1 DU / 5 acres)  
Agriculture & Limited Other Uses
- Rural Residences & Agriculture  
with Additional Restrictions
- Industrial & Office Uses
- Business & Office Uses
- 2005 Urban Development Boundary
- Existing Lakes
- Permitted Lakes
- Existing Institutions & Infrastructure
- Additional Public Ownership
- Lake Belt Boundary
- Highways



0 1 2 Miles  
May 4, 2000

DRAFT

Lake Belt Phase II Detailed Master Plan  
PRESENTLY ALLOWABLE DEVELOPMENT

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Small text box containing additional project information and disclaimer.

FIG. 3

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0 1 2 Miles  
April 19, 2000

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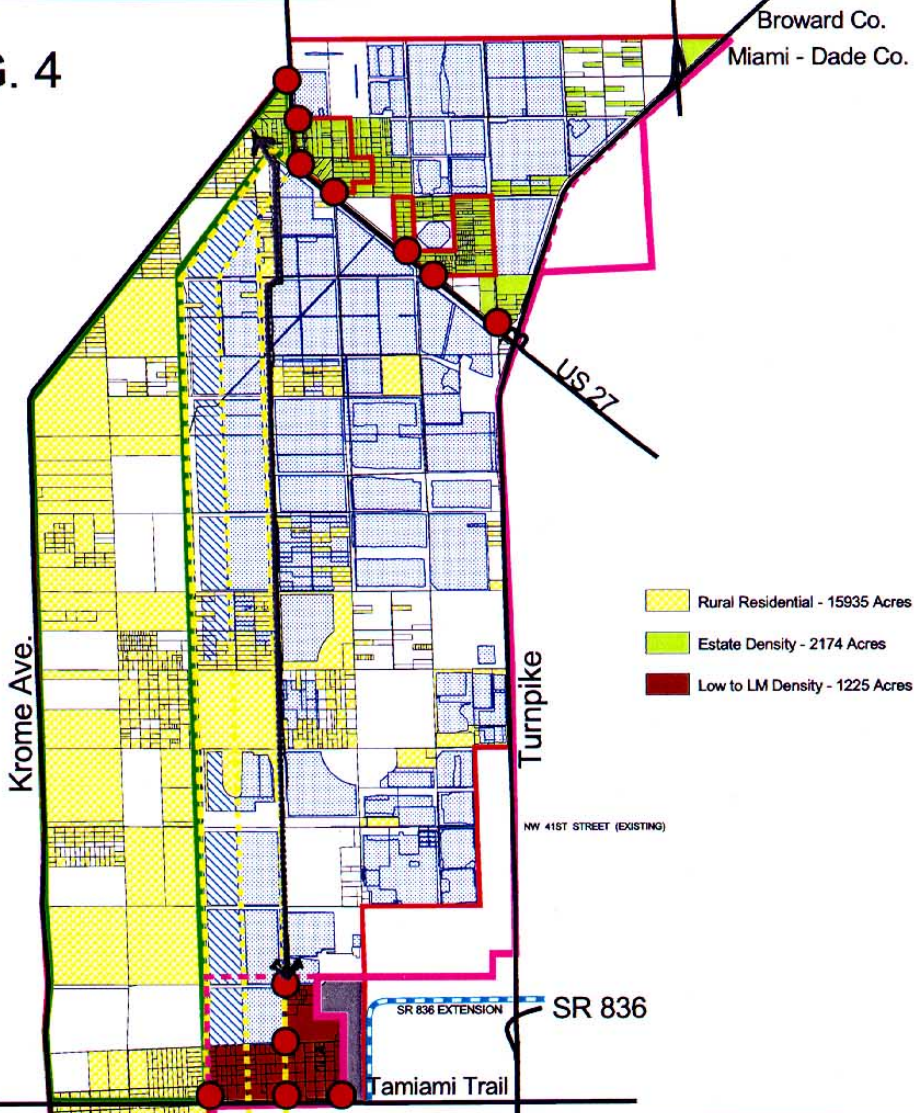
## Lake Belt Phase II Detailed Master Plan ADDITIONAL POLICY FACTORS

Wallace Roberts & Todd  
EAS Engineering, Inc.

Map Scale: 1" = 1 Mile  
Map Date: April 19, 2000  
Map Title: Lake Belt Phase II Detailed Master Plan  
Map Project: Lake Belt Phase II Detailed Master Plan  
Map Author: Wallace Roberts & Todd  
Map Reviewer: EAS Engineering, Inc.  
Map Status: Final  
Map Version: 1.0  
Map File Name: Lake Belt Phase II Detailed Master Plan.mxd  
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Map File Version: 10.0  
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Map File Reviewer: EAS Engineering, Inc.  
Map File Status: Final  
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Map File File Author: Wallace Roberts & Todd  
Map File File Reviewer: EAS Engineering, Inc.  
Map File File Status: Final  
Map File File Version: 1.0



FIG. 4



- Public Ownership
- Assumed Mining (Existing / Permitted or Owned & Proposed)
- Conditional Mining (Phase 1 Plan)
- Rural Residential (1/5)
- Estate Density Suburban (1/1)
- Low to L/M Density Residential
- Industrial / Office
- Business / Office Node (Locations Conceptual)
- UDB Expansion
- Potential Footprint - Restudy Components
- Pennsuco Restoration & Related Buffers
- Generalized Western Limits of Mining (Phase 1 Plan)
- Potential R/W Retention
- Lake Belt Boundary
- Highways

DRAFT



0 1 2 Miles

May 4, 2000

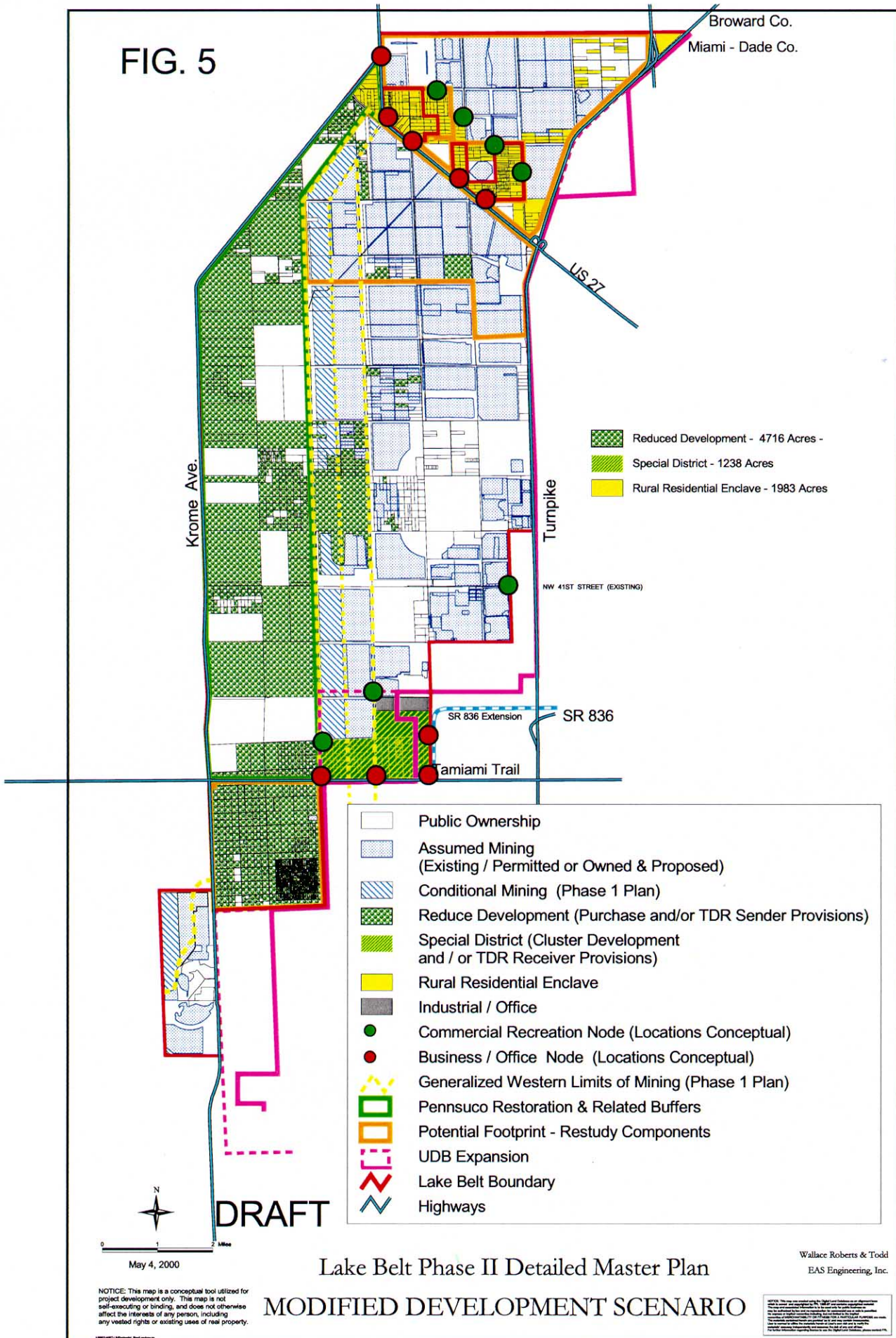
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## Lake Belt Phase II Detailed Master Plan INTENSIFIED DEVELOPMENT SCENARIO

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EAS Engineering, Inc.


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FIG. 5



Reduced Development - 4716 Acres -  
 Special District - 1238 Acres  
 Rural Residential Enclave - 1983 Acres

- Public Ownership
- Assumed Mining (Existing / Permitted or Owned & Proposed)
- Conditional Mining (Phase 1 Plan)
- Reduce Development (Purchase and/or TDR Sender Provisions)
- Special District (Cluster Development and / or TDR Receiver Provisions)
- Rural Residential Enclave
- Industrial / Office
- Commercial Recreation Node (Locations Conceptual)
- Business / Office Node (Locations Conceptual)
- Generalized Western Limits of Mining (Phase 1 Plan)
- Pennsuco Restoration & Related Buffers
- Potential Footprint - Restudy Components
- UDB Expansion
- Lake Belt Boundary
- Highways

  
 May 4, 2000

**DRAFT**

Lake Belt Phase II Detailed Master Plan  
**MODIFIED DEVELOPMENT SCENARIO**

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FIG. 6

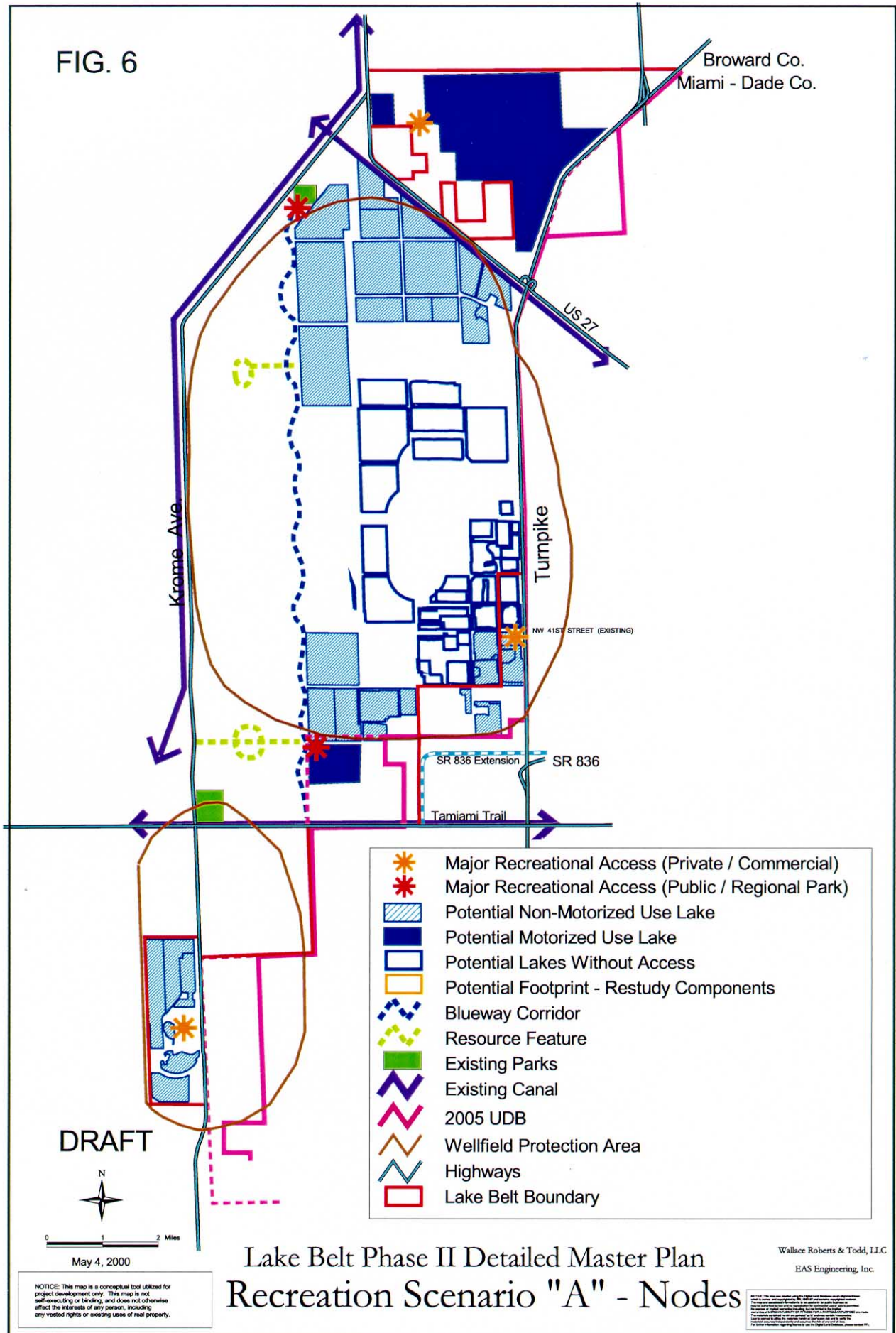




FIG. 7

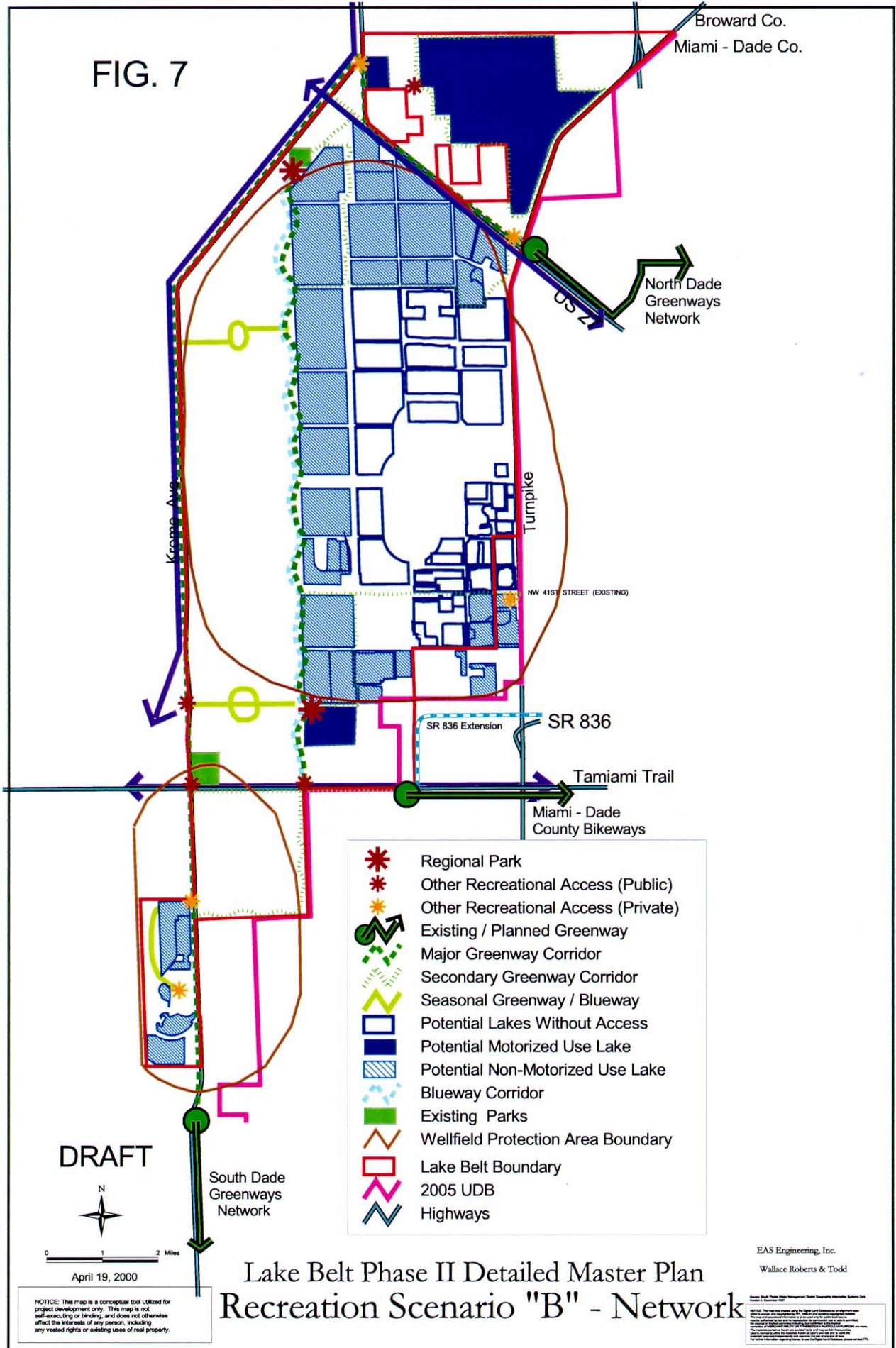


FIG. 8

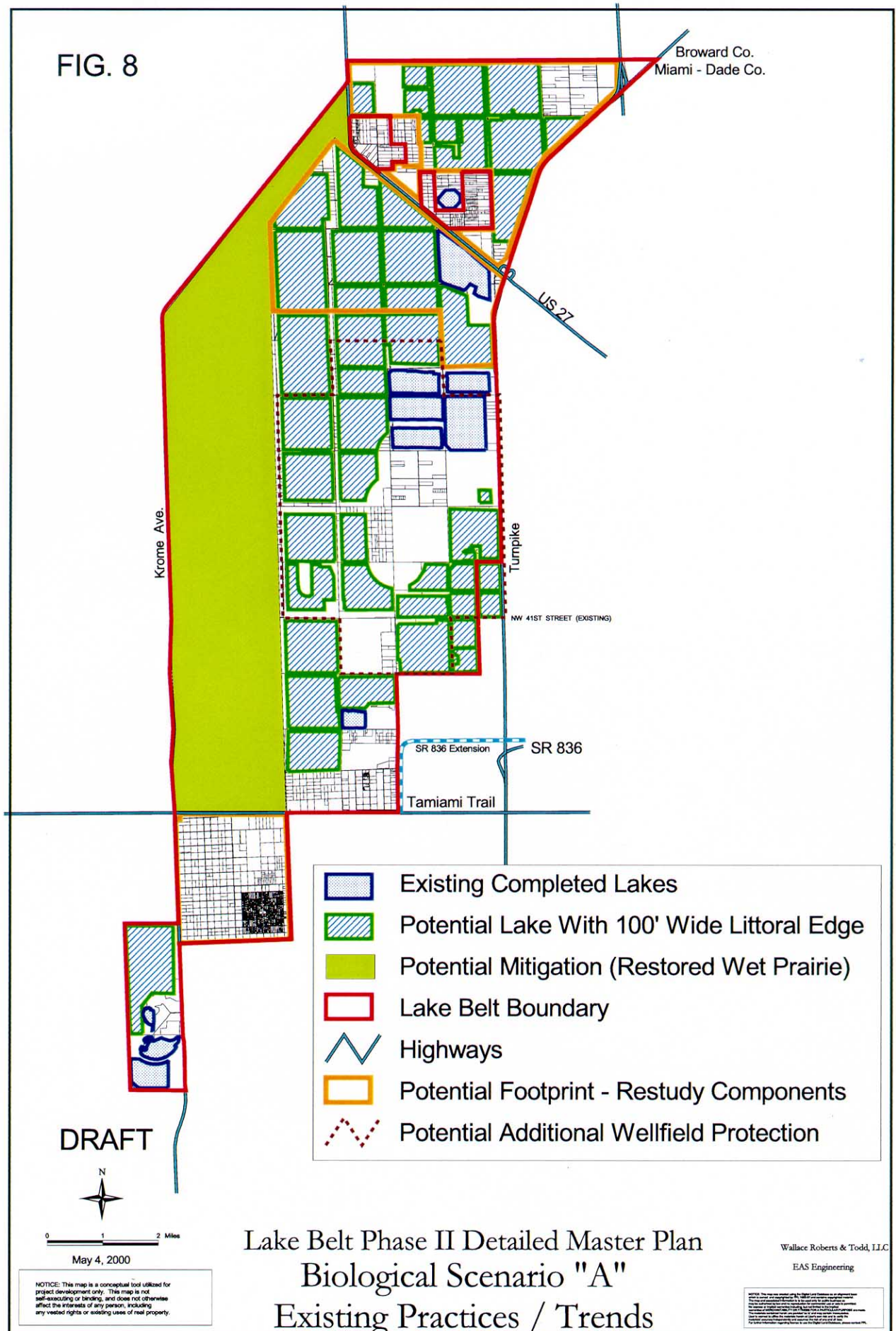
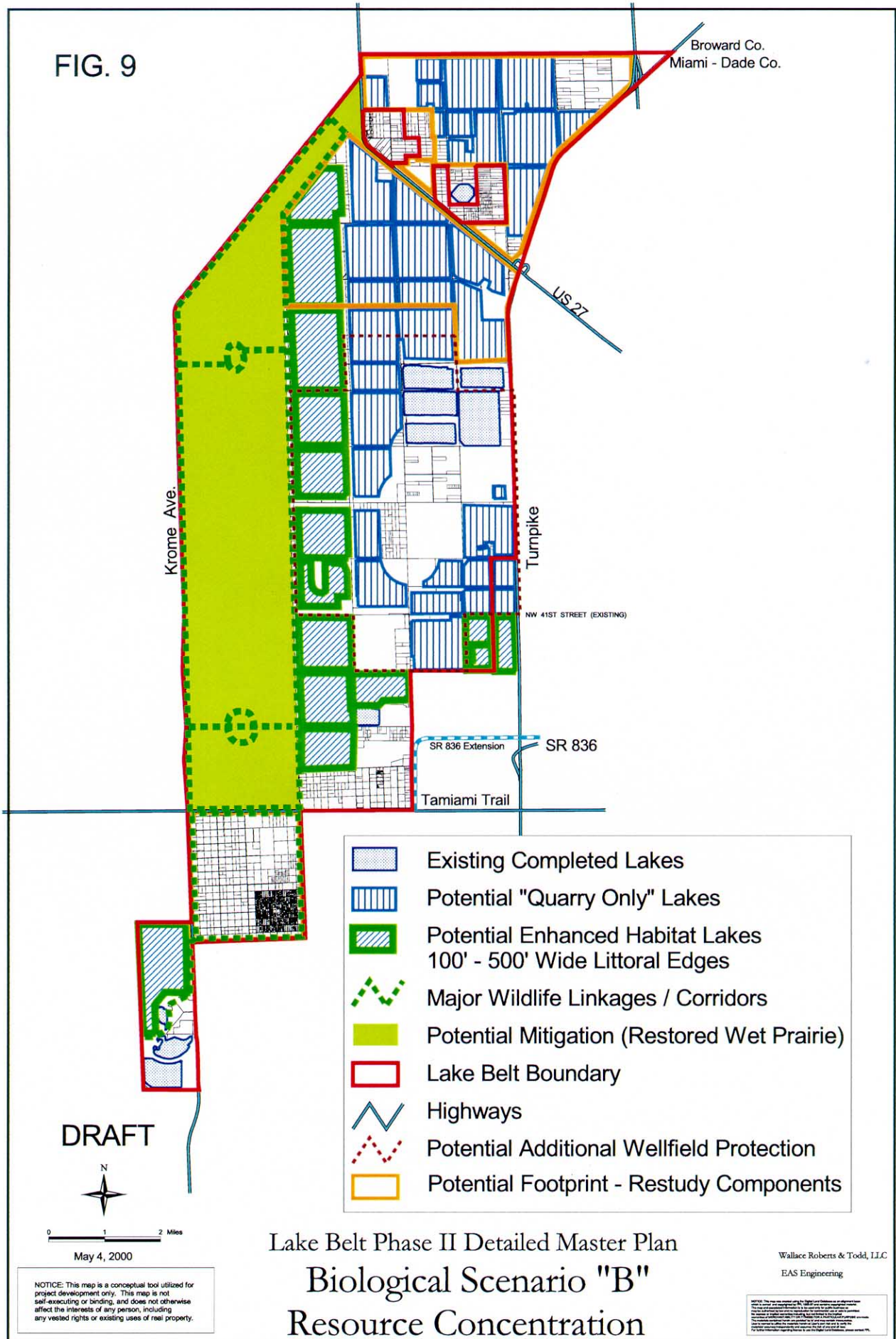




FIG. 9



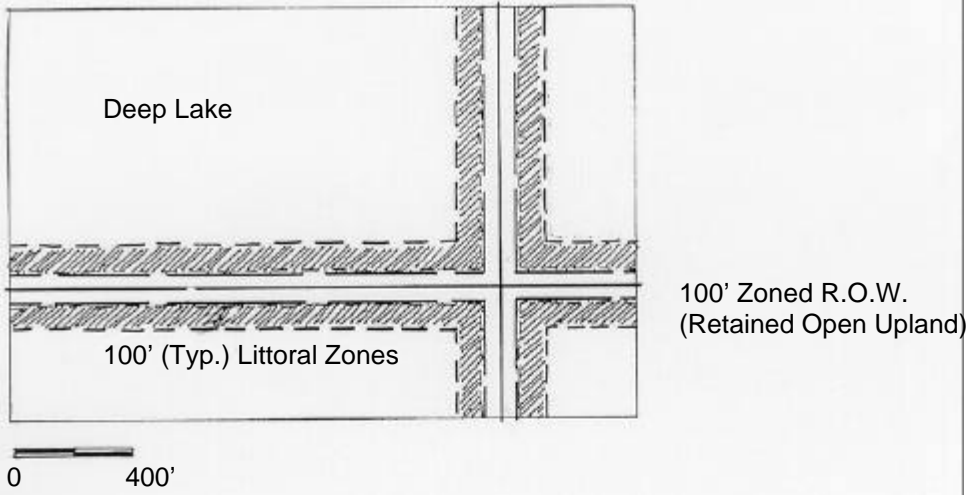
Lake Belt Phase II Detailed Master Plan  
 Biological Scenario "B"  
 Resource Concentration

Wallace Roberts & Todd, LLC  
 EAS Engineering

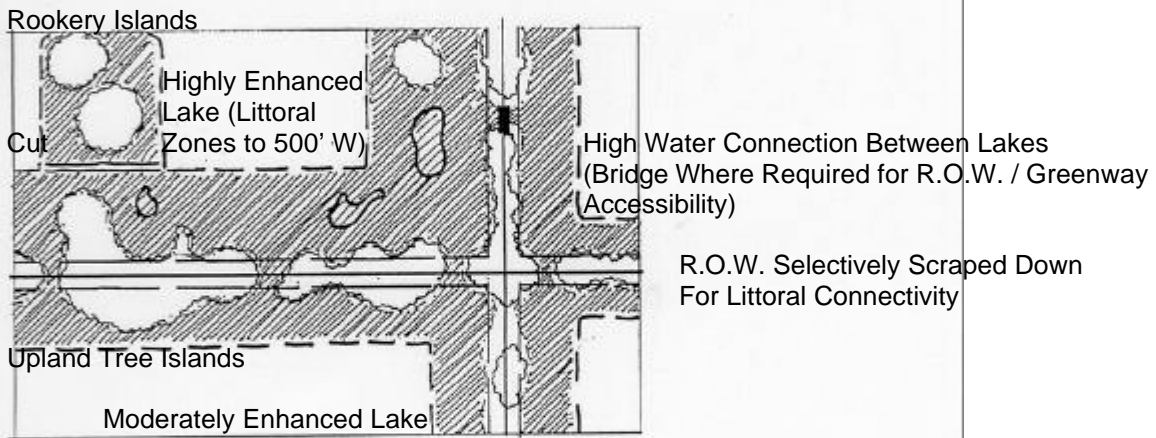
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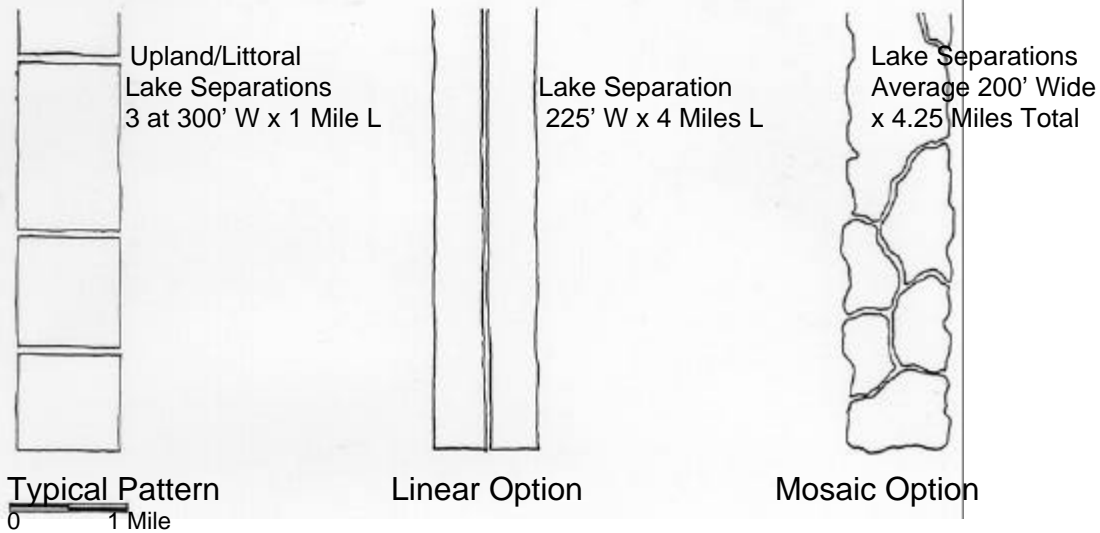
FIG. 10



TYPICAL LAKE EDGE PLAN – PRESENT PRACTICES



ALTERNATIVE LAKE EDGE PLAN – CONCENTRATED RESOURCES



LAKE CONFIGURATIONS & CONNECTIONS

Lake Belt Phase II Detailed Master Plan

Lake Configuration Concepts

**Appendix F**  
**Memorandum: [Revised] Alternative Concepts Description**

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# Memorandum

To: Members, Miami-Dade County  
Lake Belt Plan Implementation  
Committee

Date: June 21, 2000

From: David Sacks, ASLA

Ref. No. 991728

Project: Lake Belt Phase II Master Plan

Re: Alternative Concepts Description

Fax:

Tel:

CC:

---

This is a summary description of the three DRAFT Alternative Concept maps presented for discussion at today's meeting (exhibits A through C dated 6/19/00). All three concepts have the following in common:

- Major existing infrastructure is incorporated, including the FPL lines (and future easements), major roads, the Northwest and West wellfields, the prison and detention center, etc.
- The existing community in the "stair-step" region is incorporated, in some form.
- Recovery of limestone is maximized with approximately 20,000 acres of total mining (as a planning assumption), consistent with the Phase 1 Plans.
- Other forms of development are not shown in the central portion of the Lake Belt (west of the NW Wellfield). Again, this is a planning assumption, based on inherent conflicts between wellfield protection and mining on the one hand, and scattered residential development on the other. Its implementation would depend on land acquisition for mining, or other mechanisms such as conservation easements or a Transfer of Development Rights (TDR) program.
- The existing and planned "greenway" networks abutting the Lake Belt are tied in to whatever recreational systems are developed within the Lake Belt.
- The area footprints of major elements of the 1999 recommended Comprehensive Everglades Restoration Plan (CERP) are indicated, even though the limits of these elements are subject to change: the Northern Lake Belt Storage Area (NLBSA), Central Lake Belt Storage Area (CLBSA), Pennsuco wetland restoration, and various treatment / recharge areas.

The preferred plan ultimately selected by the Committee may be a "mix and match" scheme combining elements from different concepts, or could be simply one of the three. Working through this with the Committee will be our main task for the remainder of the summer. The key differences between the three "DRAFT" concepts can be described as follows:

### ***Alternative Concept "A"***

This concept emphasizes recreational usage and the increased development and economic return of private (non-mining) land holdings. It uses a planning assumption for wellfield protection that incorporates the smallest "inner wellfield protection" zone that DERM might be expected to recommend (note that the actual

J:\991728.000 Lake Belt\PRODUCTS 6-19-00\Alternatives\READONLY.doc

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recommendations are pending from DERM and may vary from this assumption). The area within this "inner zone" is off limits for public access, whereas the area outside it is extensively developed with parks, greenways and seasonal trails.

Private lands not used for mining (or within CERP component footprints) are developed according to an "increased development" scenario. The "stair-step" area (north of U.S. 27) becomes more suburban in character while the "North Trail Basin" (north of Tamiami Trail) becomes urbanized, similar to the adjacent districts to the south and east.

### ***Alternative Concept "B"***

This concept emphasizes the biological enhancement of the area, with balanced but less intensive attention (relative to Concept "A") to other values such as economic return on real property, or recreational usage. This concept includes a somewhat expanded "inner wellfield protection" zone (again, final recommendations from DERM may vary). All of the lake areas outside this zone, and outside CERP footprints, are highly enhanced with expanded and diversified littoral areas and edges, providing a broad variety of habitats for native species.

Recreational opportunities are fairly widespread, although not as extensive as in concept "A," and focus on a trail corridor through re-created natural areas in the center of the "FPL mile." Private land development generally follows existing allowable patterns, with limited industrial / office uses within the Urban Development Boundary as currently defined, and rural residences (5 acre lots) and limited other uses throughout the rest of the Lake Belt.

### ***Alternative Concept "C"***

This concept takes much of the Lake Belt as a protective sanctuary for water, with the strictest limitations (of the 3 concepts) on human access or other uses of the area. Virtually all of the remaining central Lake Belt is included in the inner wellfield protection zone (west to the Pennsuco, north to the CLBSA and south a mile past NW 41<sup>st</sup> Street). Within this zone, a vast water body is protected from public access and serves in turn to protect the wellfield. Recreational use is limited to about 3 ½ square miles of lakes scattered in the southern portions of the Lake Belt, and to park sites and greenways generally on the area's perimeter. Biological enhancements that would otherwise be spread throughout the Lake Belt are concentrated on the western edge of the area, furthest from the wellfield and closest to the restored natural areas of the Pennsuco.

In this concept, private (non-mining) land development follows a modified or hybrid pattern. Modest increases over the presently allowable densities are strategically implemented, and used to help improve both the economic benefit of property holdings and the alleviation of development pressure (such as through TDR) in areas facing land use conflicts. Special design considerations such as cluster development with open-space conservation would also be called for.



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0 1 2 Miles

June 19, 2000

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NETWORK

## Lake Belt Phase II Detailed Master Plan Alternative Concept Plan "A"

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June 19, 2000

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NETWORK

## Lake Belt Phase II Detailed Master Plan Alternative Concept Plan "B"

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## Lake Belt Phase II Detailed Master Plan Alternative Concept Plan "C"

Wallace Roberts & Todd, LLC  
EAS Engineering Inc.

DATE: 06/19/00  
PROJECT: Lake Belt Phase II Detailed Master Plan  
ALTERNATIVE CONCEPT PLAN "C"  
DRAWN BY: [Name]  
CHECKED BY: [Name]  
APPROVED BY: [Name]  
SCALE: AS SHOWN  
BY: WALLACE ROBERTS & TODD, LLC  
EAS ENGINEERING INC.

	ALTERNATIVE CONCEPT PLAN "A"	ALTERNATIVE CONCEPT PLAN "B"	ALTERNATIVE CONCEPT PLAN "C"
<p><b>Wellfield Protection</b>  <b>NOTE:</b> Recommendations for wellfield protection and watershed manager are pending from Miami-Dade DERM for approval by the Board of County Commissioners. A range of concepts is shown here for planning purpose only and does not represent DERM's recommendations. The final wellfield protection measures and the area extents for each will be determined by the County based on Board review of DERM's recommendations.</p>	<p><b>Minimum</b>                      Aquifer buffer based on 60 day travel time                      Inner lake zone minimum 1/2 mile around aquifer buffer (no public access)                      Outer protection zone (watershed) beyond inner lake zone - limited land &amp; recreational uses</p>	<p><b>Medium</b>                      Aquifer buffer based on 60 day travel time                      Inner lake zone typically 0.5 to 1.5 miles around aquifer buffer (no public access)                      Outer protection zone (watershed) beyond inner lake zone - limited land &amp; recreational uses</p>	<p><b>Maximum</b>                      Aquifer buffer based on 60 day travel time                      Inner lake zone typically 1.5 to 2.5 miles around aquifer buffer (no public access)                      Outer protection zone (watershed) beyond inner lake zone - limited land &amp; recreational uses</p>
<p><b>C.E.R.P. Components' "Footprints"</b></p>	<p><b>Per 1999 Recommended Plan (#D13R)*</b>                      * Minor adjustments indicated at some STA's / wetland areas north of Miami Canal</p>	<p><b>Same</b></p>	<p><b>Same</b></p>
<p><b>Other Lake Configurations</b></p>	<p><b>Mostly linear and/or irregular</b>  <b>Extensive removal of ROW's</b></p>	<p><b>Square and irregular lakes</b>  <b>Moderate degree of ROW removal</b></p>	<p><b>Mostly rectangular</b>  <b>Minimal removal of ROW's</b></p>
<p><b>Lake Edge Enhancement for Biological Productivity</b></p>	<p><b>Moderate to Extensive</b>                      No enhancement within CERP impoundments                      Minimum enhancement adjacent Inner Wellfield zone limit line                      Enhanced edges at all other lakes (except existing completed edges, e.g. adjacent to roads)</p>	<p><b>Extensive</b>                      No enhancement within CERP impoundments                      Enhanced edges at all other lakes (except existing completed edges, e.g. adjacent to roads)                      Enhanced connectivity between littoral areas and adjacent habitat areas</p>	<p><b>Minimal</b>                      No enhancement within CERP impoundments                      No enhancement within extensive inner wellfield zone except at westernmost limits</p>
<p><b>Other Habitat Enhancement</b></p>	<p><b>Minimal</b>                      Wetland restoration primarily limited to Pennsuco</p>	<p><b>Extensive</b>                      Wetland and other habitats restored between lakes to create networks (outside inner wellfield zone and CERP impoundments)</p>	<p><b>Moderate</b>                      Wetland and other habitats restored / preserved in areas east of Dade-Broward levee (re-allocation and concentration of biological enhancements from other mining areas)</p>
<p><b>Recreational Accessibility</b></p>	<p><b>Extensive</b>                      Passive recreation access to approx 16 square miles of lake thru/o area                      Motorized access to approx 3/4 sq mile of lake                      4 park sites (2 exist, 2 new)                      Extensive greenway corridors utilizing Krome, Tamiami, US 27, Dade-Brow Levee and other internal routes</p>	<p><b>Moderate</b>                      Passive recreation access to approx 11 square miles of lake                      Motorized access to approx 3/4 sq mile of lake                      4 park sites (2 exist, 2 new)                      Greenway corridors mainly utilizing existing roadways with limited internal routes (central portion of "FPL strip" and in the North Trail area)</p>	<p><b>Minimal</b>                      Passive recreation access to approx 3.5 square miles of lake                      Motorized access to approx 1/2 sq mile of lake                      4 park sites (2 exist, 2 new)                      Greenway corridors limited to existing roadways and connection to new park at NW 12th Street</p>
<p><b>Private Land Use &amp; Development</b></p>	<p><b>Significantly Increased Development*</b>  <b>"Stair-Step"</b>                      Estate residences at 1 d.u. / ac. (TDR receiver)                      Limited Commercial at 'nodes' along US 27  <b>"Central Lake Belt"</b>                      TDR sender area and/or acquisition to eliminate conflict with wellfield  <b>"North Trail Basin"</b>                      Industrial / Office at east and north edges                      Low to L/M density residential along Trail (TDR receiver)                      Waterfront community adjacent future lake</p>	<p><b>Developed per Existing Allowable Densities*</b>  <b>"Stair-Step"</b>                      Rural residences at 1 d.u. / 5 ac. And other limited uses (agriculture, etc.)                      Limited Commercial at 'nodes' along US 27  <b>"Central Lake Belt"</b>                      TDR sender area and/or acquisition to eliminate conflict with wellfield  <b>"North Trail Basin"</b>                      Industrial / Office at east and north edges                      Maintain existing allowed residential densities of 1 d.u. / 5 ac. Elsewhere</p>	<p><b>Modified Pattern with Little Density Increase*</b>  <b>"Stair-Step"</b>                      Rural district with base gross density of 1/5 or 1/3                      Allow modest increase with TDR receiver provisions                      Consider cluster development with open space conservation  <b>"Central Lake Belt"</b>                      TDR sender area and/or acquisition to eliminate conflict with wellfield  <b>"North Trail Basin"</b>                      Industrial / Office at east edge                      Elsewhere, special development district with TDR receiver provisions to accept increased densities while encouraging cluster development</p>

# **Appendix G**

## **Supplemental Memorandum: Alternative Concepts**

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**Lake Belt Phase II Detailed Master Plan**  
**Supplemental Memorandum – Alternative Concepts**  
Wallace Roberts & Todd, LLC  
August 16, 2000

---

**Overview**

With four-and-a-half months remaining to the legislatively mandated completion date for the Master Plan, the critical task of the next 60 days is to develop a consensus Preferred Plan. This Memorandum is written to outline the critical path and to request information and directives from Committee members and other stakeholders (e.g., FPL) that is needed now in order to complete the Plan.

The steps include finalizing agreement on all technical parameters and planning assumptions; finalizing the three Alternative Concepts, as deemed suitable for further evaluation; and then through a process of evaluation and analysis (including public meeting feedback), developing a consensus Preferred Plan. The Preferred Plan may be based on one of the Alternatives or on combinations of elements from two or three.

**Schedule**

Critical dates are as follows:

August 24 (Workshop/Meeting date for master plan alternatives – by close of meeting):

- Final definition of “planning assumptions” or technical parameters for all outstanding technical issues (see below)
- Consensus on “3 Alternatives” to be further evaluated

Mid September

- Initial draft of committee members’ comments: alternative concepts evaluation

Mid October [by close of workshop/meeting, on October 18?]

- Completion of evaluation; consensus on a Preferred Concept

November 30

- Draft Master Plan / Report

Mid December

- Approval of Draft Plan / Report

December 31

- Submission of Final Report

## Status of Technical Inputs & Planning Assumptions

The finalization of the Alternative Concepts, the evaluation of the Alternatives, and the development of a Preferred Concept, will all require consideration of technical and policy input from SFWMD, USACOE, DERM, other county agencies, the mining industry and others.

Some elements of the plan's framework are fairly well fixed (e.g., legislatively approved Phase 1 Plan; existing law). Other information coming from corollary projects and studies is not conclusive at this time, in many instances (e.g., wellfield protection recommendations, results of hydrologic modeling).

The Draft Alternative Concept documents developed to date are based upon certain known baseline factors ("fixed" elements) and on planning assumptions. These were described in the draft Technical and Policy Memorandum (February 2000), the draft Alternative Concepts Memorandum (May 2000) and the revised Alternative Concepts Description (June 2000).

In order to proceed with development of the Master Plan, all outstanding technical and policy parameters must be resolved in one of two ways:

- Consensus on Committee policy based on the available technical information; or
- If technical data is deemed by the Committee insufficient at this time, consensus on what constitutes an acceptable "planning assumption."

The attached "matrix" summarizes the baseline factors and planning assumptions which have been incorporated into the planning process to date. ***Absent directives to the contrary from the Committee by August 25<sup>th</sup>, 2000, these assumptions and "givens" will serve as the foundation for the remaining work.***

It is recognized that significant technical input and other discussions will be occurring in the workshops and meetings later this month; the input from these discussions should be used to focus closely on the issues summarized in the attached document (and the other preceding documents as noted above), and to help achieve consensus among the members of the Committee.

**The draft memorandums and the maps of the draft alternatives are available on the Lake Belt web site ([www.sfwmd.gov/org/pld/proj/lakebelt](http://www.sfwmd.gov/org/pld/proj/lakebelt)).**



Lake Belt Phase II Detailed Master Plan			16-Aug-00
Status of Technical Parameters & Planning Assumptions			TBD = To Be Determined
Key Elements	Current Data Status	Current "Planning Assumptions"	Further Input From
<b>WELLFIELD PROTECTION &amp; WATERSHED MANAGEMENT</b>			
60-Day travel time (contour location) & associated restrictions	Recommendations Pending	Per Phase 1 Lake Belt Plans	DERM
Other zones w/ restrictions within Lake Belt - type & extent	Recommendations Pending	Current Ordinance at a Minimum	DERM
Other measures to prevent "reclassification"	Recommendations Pending	TBD	DERM
<b>CERP [formerly Restudy] COMPONENTS</b>	Preliminary design recommended 07/99; 07/99; further refinement 2001 or later	Assume will be implemented per July 1999 configurations	
<b>BIOLOGICAL MITIGATION &amp; ENHANCEMENT</b>			
Mitigation for mining impacts: ON-SITE REQUIREMENTS	Built into fee calculation: 100' wide zone @ all lakes	Lakes per Larsen May '99 (see "Rock Mining" exhibit in "Tech. & Policy" Memo 2/9/00); total mitigation acreage implied can be re-arranged within Lake Belt	Task Force / Committee / Industry
Mitigation for mining impacts: OFF SITE	Fee collection / land acquisition & management only at this time	TBD	Task Force / Committee
Mitigation for non-mining Impacts (private land use)	Pending - In Process	TBD	Committee
Lake design for productivity	Preliminary concepts based on DERM, ERG & WRT documents (see Alternatives Memos 5/4/00 and 6/21/00 esp. May 4 Figure 10)	Adequate/significant productivity would be achieved by implementing the preliminary recommendations	TBD
Regional criteria (e.g. design for species of special concern)	No detailed, location-specific data provided	Major tree islands only are significant unique resources to be preserved	TBD
<b>OTHER HYDROLOGIC ISSUES</b>			
Impacts from future mining - analysis, quantification, and land use implications	Initial modeling underway	TBD	SFWMD
WPA Design	Pending	TBD	SFWMD
Hydrologic / water management implications for lake interconnections	Unknown	No significant constraints	SFWMD

Key Elements	Current Data Status	Current "Planning Assumptions"	Further Input From
<b>MINING ACTIVITIES</b>			
Phasing preferred by each company	Unknown	Overall phasing can be prescribed or at least strongly influenced by the Plan	Industry
Land acquisition efforts by miners (of other private lands)	Unknown	Non-mining lands within "proposed mining" areas (see "Rock Mining" exhibit in "Tech. & Policy" Memo 2/9/00) will be acquired by the industry	Industry
Ownership of mined-out lakes	Confirmation needed whether conveyance to public ownership is built into mitigation fee calculation	Public ownership desirable for some or all for water management, environmental and/or public recreation purposes	Mitigation Task Force / Industry / Agencies
<b>PRIVATE NON-MINING LANDS</b>			
Existing Development	Primarily occurs in northern Lake Belt (see base map in 5/4/00 Alternatives memo)	Generally to remain unless property is needed for CERP components	
Urban Service Area Boundary	Per County CDMP, may be moved west in North Trail area circa 2015	Other expansion of UDB unlikely as inconsistent w/ County policy	
Future Development Intensity	Primarily limited by wellfield protection considerations	Range of scenarios to be considered (see Alternatives Memos May / June '00)	
Land use conflicts with mining	Potential changes to blasting restrictions TBD Other conflicts include traffic, dust, etc	Phasing of development and of mining, and other controls, can address conflicts	County / industry

Key Elements	Current Data Status	Current "Planning Assumptions"	Further Input From
<b>FPL - FACILITIES AND NEEDS</b>			
Future FPL Facilities	Existing easements per base map (see 5/4/00 Alternatives Memo)	Minor location adjustments possible to coordinate with other elements e.g. bikeways/trails	FPL
Coordination requirements with future mining (specific setbacks, etc.)	Undetermined	Minimum 50' setback	FPL
<b>RECREATIONAL USAGE</b>			
Existing Parks	Existing facilities per base map (see 5/4/00 Alternatives Memo)	All existing facilities to remain; M.E. Thompson park (undeveloped portion) subject to future mining	
Future Facilities	Strong demand per Parks Dept. input 09/99; limitations based primarily on wellfield protection considerations	Additional regional parks and access to natural / resource areas to be provided in multiple locations	
Greenways & Linkages	Greenways under development in adjacent County regions (see Alternatives Memos exhibits)	Linkages through Lake Belt desirable and can be coordinated with other features (e.g levees, FPL lines, CERP components)	
<b>OTHER</b>			
Existing Zoning Approvals (above base allowable uses per Zoning & Land Use designations)	County information not readily available in digital form	Existing approvals to be respected; any data submitted will be included	Property owners
Existing Rights-of-Way	Per input from Public Works and P&Z all ROW's in Lake Belt are zoned, not owned, by the County	Vacating ROW's (to augment mining, environmental, recreation or other uses) is an option, wherever no other private lands remain that need access; but is at County's option, not a "given"	

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**Appendix H**  
**Memorandum: [Final Revised] Alternative Concepts Description**

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# Memorandum

To: Members, Miami-Dade County  
Lake Belt Plan Implementation  
Committee

Date: September 7, 2000

From: David Sacks, ASLA

Ref. No. 991728

Project: Lake Belt Phase II Master Plan

Re: Alternative Concepts Description

Fax:

Tel:

CC:

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This is a summary description of the three Alternative Concept Plans (attached Alternative Concept Plans A through C dated 9/6/00) as revised pursuant to the Committee Meeting of August 31, 2000. For more background information on the development of these concepts, Committee members and other interested parties should refer to previous documents including the Memoranda of "Technical Parameters & Policy Options" and "Alternative Concepts," as well as other Lake Belt documents available at <http://www.sfwmd.gov/org/pld/proj/lakebelt>.

The Alternative Concept Plans reflect a number of common elements, consistent with the planning assumptions and other parameters previously developed and approved. They also reflect key differences as described for the individual maps (below).

### ***Common Elements***

All three concepts have the following in common:

- Major existing infrastructure is incorporated, including the FPL lines (and future easements), major roads, the Northwest and West wellfields, the prison and detention center, etc.
- Requirements for additional wellfield protection are still being defined by Miami-Dade County. Draft recommendations from Miami-Dade DERM include three concentric zones of protection around the Northwest Wellfield (see the 8/16/00 *Northwest Wellfield Watershed Protection Plan*). The precise extent and applicable restrictions of each are under study at present, with an initial further set of modeling results expected in December 2000 followed by more in-depth analyses in 2001. All three Alternative Concept maps reflect an approximate location of two general zones most likely to be affected by new County regulations, if any, arising from the study (limits of these areas are also subject to change). These zones include an innermost "rockmine setback" (presently defined as the assumed "60 day travel time") and, outside that, an "inner protection zone" within which access, post- or non- mining land uses, and habitat enhancement activities may be highly restricted. A third, still larger zone

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(not shown) may be defined as the wellfield “watershed” and subject to other use and/or management regulations.

- Recovery of limestone is maximized with approximately 20,000 acres of total mining (as a planning assumption), consistent with the Phase 1 Plans.
- The area footprints of major elements of the 1999 recommended Comprehensive Everglades Restoration Plan (CERP) are indicated: the Northern Lake Belt Storage Area (NLBSA), Central Lake Belt Storage Area (CLBSA), Pennsuco wetland restoration, and various treatment / recharge areas (including the Bird Drive basin). It is recognized that the configurations and spatial extent of these elements are subject to change, based on ongoing design and implementation work of the CERP.
- No recreational access or littoral zone development is indicated within the CERP reservoirs, although the ultimate determination of feasibility or desirability for such will be dependent on the final design of those components.
- The existing community in the “stair-step” region is retained, in some form. All existing, approved uses are assumed to remain unless acquired for CERP-related improvements.
- Other non-mining land development is anticipated in the “north Trail” region (north of Tamiami Trail between 137<sup>th</sup> and 157<sup>th</sup> Avenues). Most of this area is in private non-mining ownership and is presently within the year 2015 Urban Expansion boundary.
- Other forms of non-mining land development are not shown in the central portion of the Lake Belt (west of the NW Wellfield). Again, this is a planning assumption, based on inherent conflicts between wellfield protection and mining on the one hand, and scattered residential development on the other. Its implementation would depend on land acquisition for mining, or other mechanisms such as conservation easements or a Transfer of Development Rights (TDR) program. Approximately
- The existing and planned “greenway” networks abutting the Lake Belt are tied in to whatever recreational systems are developed within the Lake Belt.

### **Differences**

The preferred plan ultimately selected by the Committee may be a “mix and match” scheme combining elements from different concepts, or could be simply one of the three. The key differences between the three Alternative Concept Plans are described on the following pages.





## ALTERNATIVE CONCEPT "A"

This concept emphasizes multiple use, of as much of the Lake Belt as possible, for recreational and economic benefit, consistent with wellfield protection requirements and coordination with the Comprehensive Everglades Restoration Plan (CERP).

**Lake Configurations:** Generally larger lakes for increased efficiency of mining as well as access control benefits.

- Frequent instances of interconnection across rights-of-way.
- North-south R.O.W.'s are generally retained, while many east-west R.O.W.'s are shown as mined through.

(All lake configuration concepts are subject to confirmation, pending both the results of hydrologic modeling underway by SFWMD relative to water management needs, and County agreement to vacate the zoned R.O.W.'s).

**Lake Edge Enhancements:** A moderate extent of littoral zone and lake edge enhancement is provided

- Littoral enhancements are re-allocated away from the wellfield (as described below) .
- Total littoral area is approximately equal to that provided by application of "minimum littoral design" to all future lakes (no exceptions for CERP or wellfield protection areas)

Lakes within 1 mile of the Northwest Wellfield property generally have "quarry only" edges, without littoral zone enhancements (a concept proposed for further investigation and possible adoption in the *Watershed Protection Plan*.)

Lake edges immediately adjacent to this inner ring will have littoral zones developed according to currently prescribed minimum standards (e.g., 100' width).

All other lake edges will be highly enhanced with wider littoral zones (e.g., 200' to 500' width). Enhanced littoral areas would also be diversified with island and shallow cut areas as well as transitional and complementary habitats developed along adjacent uplands.

**Other Habitat Enhancement & Mitigation:** Wetland and related habitat restoration activities are primarily focused in the Pennsuco

- Restoration within Pennsuco provides approximately 12,840 acres
- In addition, two existing tree islands are preserved in the "FPL corridor."
- Other mitigation to be funded as a result of mining activities would need to be identified outside of the Lake Belt.



**Recreational Use & Access:** This concept provides the most extensive and diverse array of recreation.

- Approximately 500 acres of fully motorized water access (two locations outside CERP & wellfield protection areas)
- Approximately 3,375 acres of “passive” or “non-consumptive” water access areas (for fishing, swimming, sailing, canoe / kayaks, etc.)
- Greenway and bikeway corridors traverse all of the major roadways within the Lake Belt as well as the Lake Belt interior
- Seasonal or primitive trails provide further access to tree islands and other resources in the Pennsuco, Bird Drive area and FPL corridor (seasonal hiking and/or canoe trails and/or boardwalks, in natural terrain).
- Six potential park sites are shown including two existing County facilities, which would be upgraded, and four new facilities.

(Note that all recreational access concepts will need to be determined to be consistent with wellfield protection requirements as established by the County.)

**Private (Non-Mining ) Land Use & Development:** Increased development enhances the economic return of private (non-mining) land holdings in two areas: The “Stair-step” area (approximately 1,660 acres) becomes more suburban in character:

- Estate residential densities allowed (1 d.u. / 1 acre), with other compatible uses
- Potential TDR receiver site
- Approximately 4 local commercial “nodes” along US 27.

The “North Trail Basin” (approximately 1,241 acres) becomes urbanized, similar to the adjacent districts to the south and east:

- Low to low/medium residential densities (approximately 665 acres)
- Also a potential TDR receiver site
- Limited industrial/office uses along the 836 extension and 12<sup>th</sup> street sections (approximately 576 acres)
- Approximately two additional commercial nodes along Tamiami Trail
- Potential special development opportunities for lakefront residential development

Other private (non-mining) lands will need to be addressed in the central Lake Belt. Excluding the Pennsuco, approximately 1,700 acres of such lands occur within the area bounded by the Turnpike/Lake Belt Boundary, the CLBSA, the Dade-Broward Levee and the NW 25<sup>th</sup> Street extension (south edge of the prison property). These lands may be acquired for mining by the industry, acquired by the County for wellfield protection purposes, or could become sender sites for a transfer of development rights (TDR) program. Miner-owned lands that are opted out of mining by their owners (quantity undetermined) may also need to be considered.

(Note that all land use concepts will need to be determined to be consistent with wellfield protection requirements as established by the County.)



## ALTERNATIVE CONCEPT "B"

This concept emphasizes the biological enhancement of the area, with balanced but less intensive attention (relative to Concept "A") to other values such as increased economic return on real property, or recreational usage.

**Lake Configurations:** Generally 1 mile square (or equivalently sized) lakes for moderate efficiency of mining as well as creation of environmental enhancement opportunities between the lakes.

- Lakes closest to the wellfield are generally simple rectangles, 1 section or ½ section.
- Lakes further west and south are generally more linear and irregular, allowing for a diversity of environments as well as passive recreation

**Lake Edge Enhancements:** An extensive amount of littoral zone and lake edge enhancement is provided

- Littoral enhancements are omitted in the first "ring" of lakes adjacent to the wellfield property.
- All other lake edges are highly enhanced (see description included under concept "A")
- Total littoral area would exceed the amount that would be provided by application of "minimum littoral design" to all future lakes (exact quantity to be determined)

**Other Habitat Enhancement & Mitigation:** Wetland and related habitat restoration activities will be expanded beyond the Pennsuco

- Remnant uplands between the lakes will be included, throughout the central Lake Belt mining areas
- Restoration areas total approximately 14,940 acres
- Other mitigation to be funded as a result of mining activities would need to be identified outside of the Lake Belt.

**Recreational Use & Access:** This concept provides a moderate extent of recreational opportunities.

- Approximately 438 acres of fully motorized water access
- Approximately 2,220 acres of "passive" or "non-consumptive" water access areas
- Greenway and bikeway corridors traverse all major roadways; plus one north-south link through the Lake Belt interior (FPL corridor) takes advantage of extensive restored and created natural habitat areas among the mined lakes
- One seasonal / primitive trail provides further access to a portion of the Pennsuco / existing tree island
- Five potential park sites are shown (two existing County facilities, upgraded, and three new).



***Private (Non-Mining ) Land Use & Development.*** Private land development generally follows existing allowable patterns and uses:

The “Stair-step” area (approximately 1,547 acres) remains a rural, mainly residential area

- Maximum residential density of 1 d.u./ 5 acres as currently allowed
- Other uses as currently allowed
- Approximately 3 local commercial “nodes” along US 27.
- US 27 (not Miami Canal) serves as boundary between “developed” and ‘environmental” areas

The “North Trail Basin” (approximately 1,376 acres) remains less urbanized, in accordance with current County land use regulations:

- Additional rural residential areas (approximately 914 acres)
- No expectation of County revision westward of Urban Development Boundary
- Limited industrial/office uses, generally as presently allowed along west edge of 137<sup>th</sup> Avenue (approximately 462 acres)
- One additional commercial node at Tamiami Trail’s intersection with [future] SR 836 Extension

Other private lands, especially within the central Lake Belt, will need to be addressed as in Concept “A” (above).



## ALTERNATIVE CONCEPT "C"

This concept treats much of the Lake Belt as a protected sanctuary for water, with minimal allowance for recreational access or other human uses of the post-mining lake area.

**Lake Configurations:** Generally 1 mile square with minimal R.O.W. removal.

- Within the central Lake Belt, concentrated mining creates a vast water body (with minimal separations) that is protected from public access and serves in turn to help protect the wellfield.

**Lake Edge Enhancements:** Biological enhancements that would otherwise be spread throughout the Lake Belt are concentrated on the western edge of the area, furthest from the wellfield and closest to the restored natural areas of the Pennsuco.

- Littoral enhancements are omitted in all but the westernmost lakes adjacent to the western edge of mining.

(Note that western limits of mining are subject to determination by a number of pending factors, including ongoing hydrologic modeling, assessment of hydrologic mitigation, permitting considerations, CERP design, actions or decisions by individual landowners, and other factors. Final determination of these issues will be beyond the scope and time frame of this master planning process.)

**Other Habitat Enhancement & Mitigation:** As noted above, all wetland and related habitat restoration activities are concentrated in the Pennsuco and the western portion of the FPL corridor.

- Restoration areas combined with concentrated littoral development total approximately 16,420 acres
- Other mitigation to be funded as a result of mining activities would need to be identified outside of the Lake Belt.

**Recreational Use & Access:** This concept provides a very limited extent of recreational opportunities.

- Approximately 293 acres of fully motorized water access
- Approximately 1,939 acres of "passive" or "non-consumptive" water access areas
- Greenway and bikeway corridors traverse all major roadways; generally perimeter only, no major links through the Lake Belt interior
- One seasonal / primitive trail provides a minor loop south of a new 12<sup>th</sup> Street park site
- Four potential park sites are shown (two existing County facilities, upgraded, and two new)



***Private (Non-Mining ) Land Use & Development.*** Private land development follows a modified or hybrid pattern, between the two levels shown in Concepts “A” and “B”. Modest increases over the presently allowable densities are strategically implemented, and used to help improve both the economic benefit of property holdings and the alleviation of development pressure (such as through TDR) in areas facing land use conflicts. Special design considerations such as cluster development with open-space conservation would also be considered.

The “Stair-step” area (approximately 1,630 acres) maintains a mainly rural, residential character with some increase in density and special design considerations

- Set base residential density of 1 d.u./ per 3 acres or per 5 acres as currently allowed
- Allow increased density with TDR receiver provisions: from 1 du/5 acres to 1/3; or from 1/3 to 1/1 with appropriate limits to maximum number of receiver sites to protect area character
- Consider special design approaches such as clustered 1-acre lot pattern with common open space conservation
- Other uses as currently allowed and as further identified as compatible
- Approximately 2 local commercial “nodes” along US 27.

The “North Trail Basin” (approximately 1,414 acres) serves as a special development district that provides compatible, mainly residential development as a transition between the urban area to the east and the natural areas to the west.

- Limited industrial/office uses along west edge of 137<sup>th</sup> Avenue (approximately 242 acres)
- Remainder of area (approximately 1,172 acres) of mainly residential development. This area may accept higher gross densities than presently allowed, such as 4 to 6 units per acre with TDR receiving, but with significant open space requirements
- One additional commercial node at Tamiami Trail’s intersection with [future] SR 836 Extension

Other private lands, especially within the central Lake Belt, will need to be addressed as in Concepts “A” and “B” (above).









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# **Appendix I**

## **Alternative Concepts – Evaluation Comments**

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## **MIAMI-DADE COUNTY LAKE BELT PHASE II PLAN**

### **Companion Document:**

### **Planning Process**

January, 2001

#### **Appendix I**

#### **Lake Belt Alternative Concepts – Evaluation Comments**

- South Florida Test Service (May, 2000)
- Audubon of Florida (May, 2000)
- Florida Rock Industries, Inc. (June 29, 2000)
- Florida Rock Industries, Inc. (August 15, 2000)
- Florida Rock Industries, Inc. (September 6, 2000)
- Memorandum: Action Items [Evaluation Criteria & Process] (WRT, September 12, 2000)
- Florida Rock Industries, Inc. (September 21, 2000)
- Brigham Moore (September 26, 2000)
- Miami-Dade County Department of Planning & Zoning (September 29, 2000)
- Karsten Rist (October 3, 2000)
- Domingo Rodriguez (October, 2000)
- Miami-Dade County DERM (October, 2000)
- Florida DEP (October 10, 2000)
- Miami-Dade County Parks Department (October 10, 2000)
- Friends of the Everglades (December 1, 2000)

Dear Jim:

***I would like the following comments to be placed in the official meeting minutes for the May 17, 2000 meeting. The Chairman of the Implementation Committee indicated he would accept written comments.***

I am writing you again to voice the concerns of South Florida Test Service over the latest Lake Belt Plan proposal put forth during the above referenced meeting. Specifically, South Florida Test Service (SFTS) is concerned about the "alternative concepts" proposed at the meeting.

As I have expressed in past correspondence to the Lake Belt Committee, SFTS is very concerned about any land use or zoning changes which would negatively impact our business. SFTS relocated to this area of Dade County in 1989 specifically for the rural and pristine environment this location provides. This environment is critical for the operation of our business. SFTS is the world leader in materials durability testing and the primary specifications which govern our industry mandate testing in a clean, pristine subtropical environment. I have copied you with these standards and specifications in the past. Any significant changes in the environment would effectively put SFTS out of business. This is why SFTS went to the trouble and expense to obtain a land use variance for land zoned "agricultural" to conduct our business. Another important consideration in our relocation to this site was that this land was also designated to stay rural by the Dade County Master Plan. It is imperative that we operate in this rural environment. Changing the rules in the middle of the game is not an option for SFTS.

The "alternative concepts" that are of a concern to SFTS are:

1. Intensified residential development
2. The "commercial node" concept along US 27
3. Any less restrictive zoning proposals
4. Increased rock mining activity

All of these proposed changes would result in degradation of the test environment by creating pollution, increased airborne dust, decreased ultraviolet radiation levels, and reduced "time of wetness." These environmental parameters are truly the "life blood" of our business.

Jim, I feel that it is important for you, and other members of the Lake Belt Committee, to visit SFTS in the very near future to better understand our concerns. This invitation has fallen upon deaf ears in the past. I believe that until you visit our facility, you will never fully understand the sincerity and legitimacy of our concerns.

Thanks for your consideration. I look forward to hearing from you in the near future.

Kind regards,

Jack Martin  
South Florida Test Service  
#305-824-3900

### **Private Land Use & Development**

With the Lakebelt area providing such open access to vital wellfields and recharge resources, providing for increased development and residential density is not a safe alternative. It is a well known and proven fact that with urbanization and increased population, whether it be commercial or residential, the amount of pollution produced increases. Implementing a post-mining alternative, which increases the possibility of polluting such a valuable drinking water source as the Northwest and West wellfields, is very dangerous and irresponsible. The fact that no emergency contamination-clean up or containment plan/team has been discussed also makes the 'Private Land Use & Development' an unwanted alternative.

### **Recreational Uses**

Limited recreation could work to be a useful and safe alternative if and only if implemented and controlled in the proper manner. Recreation activity and opportunity provides a safe usage of resources along with instilling a responsibility upon users to maintain a clean and healthy environment. For the non-active recreation seeker, the littoral zones provide opportunity to enjoy nature as an amenity. For the active recreation seeker, the natural environment will provide ample fishing and camping opportunity.

One thing to be noted when deciding which recreation activities should be allowed is that the lakes resulting from rock mining are extremely deep and past the littoral zones there are sudden vertical drops. Not only should people not be allowed to swim in these dangerous waters, but water vehicles should be provided only strictly controlled access. Among the vehicles allowed access to the waters, small non-motorized vehicles (ie; canoes, row boats, ...) should be the only ones considered. Under no circumstances should motorized recreation vehicles be allowed in the vicinity of Lakebelt waters, due to leakage of fuels and the carelessness of vehicle users.

### **Lake Configurations and Treatments**

This alternative concept can also be adjusted into a viable one. The configurations and connectivity of lakes can add to the amenity value of the area. Connectivity can also enhance biological productivity, diversity, and function. Lake configuration(s) should incorporate both visual and natural system input and influence. Again, within this alternative, physical recreation should not be encouraged. Being that the area is in the vicinity of vital wellfields, the recreational and aesthetic quality should not encourage the same quantity of visitation as our national parks and other ecotourism areas in South Florida. One possibly is that the lakes can be configured in a form in which those waters furthers from wellfields contain richer bio-diversity and aesthetic quality, and those closer to wellfields hold less. This would provide recreation activity and opportunity for South Florida residents and provide more protection for our wellfields and wellfield recharge resources. The mid-range or buffer lakes may even function as filtration areas for water entering recharge areas.

### **Access/Treatment of Existing R.O.W's**

Existing Right of Ways should be disregarded wherever necessary. When these area were designated Right of Ways, there was no need for such a high level of scrutiny. Post mining, the entire area will need to be re-evaluated. Right of Ways should only exist as a necessity and their access and usage should be tightly controlled/restricted.

**Analysis:**

In my professional opinion, a combination of the Recreational, Lake Configurations, and Access alternatives would serve as the most viable and sensible alternative. Controlled access and recreational usage will provide the public with an opportunity to experience nature's beauty. With the large areas of open water, there will be a desire to operate small motorized vehicles in the area (ie; jet skis and motor boats). Unfortunately, these personal watercraft are sources of pollution via fuel and engine lubricant leakage. RV and camper usage should be restricted/prohibited in camping areas also. I believe in the principle of the less luggage campers can bring in, the less garbage they can leave behind.

What needs to be kept in mind is that this area should **not** be designed to attract a large number of visitors, especially from areas abroad. Controlled access will act to monitor and restrict the quantity and quality of visitors to the area. The entire existing Right of Way system would need to be revamped due to the shift in areas of critical importance within post mining conditions.

As far as Private Land Use and Development are concerned, that alternative should not be considered or even discussed. If private interest and development are allowed to occur, the possible future natural beauty of the area will be nothing more than a dream. The area will be covered with "Lake Front" housing and apartment communities. The need to preserve water quality in and around wellfields also prohibits this type of development. It is hardly practical to have a housing complex around one of Dade County's most important wellfields. Having a commercial corridor in this area is equally as impractical.

**Comments regarding the May 17<sup>th</sup> Committee meeting**

*Discussion on alternatives:*

**Development vs. Wellfield Protection**

I noticed a difference in the priority between the intensified development and recreational usage alternatives that protection of water quality received. Figures 6 and 7 within the [Lake Belt Phase II Detailed Master Plan Preliminary Draft (Alternative Concepts Memorandum)] both illustrate an overall ideology of 'No Access' for areas in proximity to wellfields. The legends denote "Potential Lakes without access" for those areas. The waters outwardly adjacent to those restricted waters are only accessible to non-motorized craft, in both illustrations. This leads me to believe that the enhancement and preservation of water quality of the wellfields is of utmost importance.

Unfortunately, figure 4 within the same document (Intensified Development Scenario) does not have such a high regard for water quality surrounding the wellfields. The legend does not even include a symbol for waters with limited or no access. Figure 4 seems to ignore the fact that there is a wellfield and that there will be large areas of standing water surrounding these wellfields. The wellfields are to be surrounded by low-density rural residential land uses for the most part.

Joe Podger (attendant at meeting) reminded the Lake Belt Committee that Miami-Dade has a dark history of wellfields being destroyed by pollution once development encroached. According to Mr. Pogder, this has resulted in a trend of wellfields drifting westward. If we loose these wellfields due to pollution, we cannot go any further west, without further robbing our already dehydrated Everglades. With the Northwest and West wellfields being such a vital resource for Miami-Dade drinking water, it just is not practical to allow an activity that has a history of polluting wellfields to occur in their vicinity.



### **Recreation Safety**

The lakes which result from rock mining activity are extremely deep (approximately 80 feet). Past the littoral zones are vertical walls that drop down to the bottom. This environment is not safe for swimming and other water recreation. Being an avid jet skier, I have personally witnessed many riders doing so without proper training, instruction, or safety equipment. Many children wear adult sized life vests, which usually come off when the child hits the water. With a depth of 80 feet, there is no way anyone will be able to rescue a child that has gone under without proper scuba diving equipment. Unfortunately a drowning child does not have the luxury of waiting for such a savior.

### **Conclusions and Recommendations**

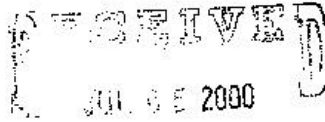
Jim Jackson suggested that the final preferred alternative will likely be a mosaic of various alternatives. This possibility may be feasible, but the fact that the alternatives are not compatible makes it almost impossible. In order to mesh these alternatives into one that is mutually acceptable, they need to be compatible. Moderate/Low Intensification of densities can be applicable with proper regard to wellfield water quality protection and enhancement. The structure of these alternatives almost forces Lake Belt committee members to choose one or the other.

Another area of concern is the high priority given to sports fishermen. In the waters adjacent to the wellfields, non-motorized access may possibly be granted. Fishermen voiced about the spatial extent of the area, which would require the use of a motor to cover. Audubon's concern is towards protecting a vital water supply resource for Miami-Dade County, not providing yet another fishing area. There is currently no fishing activity in the restricted areas (due to the fact that they are no lakes). If the fishermen are not using and have never used the area to fish, then what have they lost by not being allowed to utilize the areas them once they are created?

AGGREGATES GROUP: 155 East 21st Street / P.O. Box 4667 / Jacksonville, Florida 32201 / (904) 355-1781  
**FLORIDA ROCK INDUSTRIES INC** Mining, Ready Mix Concrete, and Construction  
Products

Reply to Florida Division Office: 14341 Alico Road, Fort Myers, FL 33913 / (941) 267-1803 / FAX (941) 267-2887

June 29, 2000



Mr. David Sacks  
Wallace, Roberts & Todd, LLC  
191 Giralda Ave., Penthouse  
Coral Gables, FL 33134

RE: Lake Belt Phase Two Master Plan – Alternative Concepts

Dear Mr. Sacks:

In reviewing the three alternate concept plans that were presented at the last Lake Belt Meeting, I wanted to acquaint you with a specific item regarding our property owned in Section 21.

Specifically, the concept plans show that there will be a land connection from the south portion of Section 21 through to the tree island. Our plans are to preserve the tree island, but excavate south of it to our property line, of course observing the appropriate setbacks.

We recommend that you change the concept plans for Section 21, Township 53S, Range 39E, to be consistent with the above.

Please call if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald E. Inge". The signature is fluid and cursive, written over a horizontal line.

Ronald E. Inge (941) 437-7837

REI/m

AGGREGATES GROUP: 155 East 21st Street / P.O. Box 4667 / Jacksonville, Florida 32201 / (904) 355-1781

**FLORIDA ROCK INDUSTRIES INC** Mining, Ready Mix Concrete, and Construction Products

Reply to Florida Division Office: 17595 S. Tamiami Trail, Suite 108-7, Fort Myers, FL 33908 / Phone (941) 437-7837  
FAX (941) 454-6148



August 15, 2000

Mr. David Sacks  
Wallace, Roberts & Todd, LLC  
191 Giralda Ave., Penthouse  
Coral Gables, FL 33134

RE: Lakebelt Phase II Master Plan - Alternative Concepts

Dear Mr. Sacks:

Following are our comments concerning the alternative concept plans presented and discussed at the recent Lakebelt Committee meetings. We will use Alternative Concept Plan "B" as a base plan and suggest the following changes be made:

- 1) The proposed Greenway Corridor should be moved from the middle of the excavation lakes to the Pennsuco area, on its easterly edge. Easterly and westerly Greenway "fingers" can extend from this relocated Greenway to the four tree islands noted on Concept Plan "B", please see attached. In addition, a north/south Greenway Corridor joining the westerly tree islands that are in the Pennsuco may be worthy of consideration.

A study should be undertaken to determine which of the tree island and other archaeological sites are still viable, have not been relocated, or are of a sufficient caliber, before we make special note of them in the Master Plan.

Part of the concept of the Lakebelt Plan was to assure the mining companies of a 50-year mining reserve and the Greenway, as proposed, interferes with that ability by making excavation more difficult in those lakes in which the Greenway is indicated. We own the property in Section 21 in which a tree island is located. Our company has no objection to working with the various regulatory agencies to provide for some type of access along the northerly section line from the Revised Greenway Corridor to the tree island located in our property.

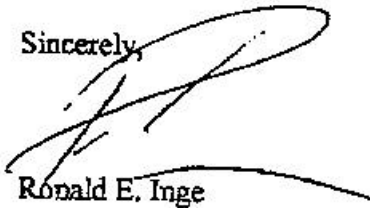
- 2) As we previously wrote to you on June 29, please delete the land area and Greenway south of the tree island in Section 21. Our current plans involve preserving the tree island as noted above, but excavating the remainder of the section.
- 3) We currently have excavation plans for Section 22, which is just east of the FP&L substation. Concept Plan "A" indicates some type of land area separating non-accessible lakes from a small accessible lake within this section. This significantly hampers our excavation abilities in Section 22. Accordingly, we prefer the lake to be indicated as shown in Concept Plan "B" as a non-accessible lake for the entire section.
- 4) There is still much discussion about setbacks from the northwest wellfield and protection measures relating thereto. As such, we offer the following general comments that need to be considered in drafting the final Concept and final detailed Master Report:
  - As a planning assumption, continue to show the setback at 2500 feet from the wellheads, which is the 60-day travel time in current regulations.
  - Impose a 30-day travel time setback(1250 ft.) for lakes excavated to a 40 ft. depth and note that this setback may become smaller if the appropriate protection measures are implemented.
  - Combine lakes where possible to eliminate land areas on section lines, which attract humans and wildlife.
  - Modify the littoral zones inside the non-accessible lake areas to minimize wildlife usage and the resultant bacteria concerns. In lieu of these littoral zones, remove the vegetation and create a vehicular access with an adjacent sloped "safety" area. This would discourage wildlife usage and still provide access to county personnel.
  - Raise the areas around the wellheads through the placement of muck, fill, fines from the production process, etc. in order to eliminate standing water and flooding concerns and to provide access to county personnel.
  - Create a vegetative berm with restricted access around the outside perimeter of the non-accessible lake areas to restrict the view and accessibility.
  - Eliminate wildlife, farming and human use inside the non-accessible lake areas.

Mr. David Sacks  
August 15, 2000  
Page 3

- Ultimately, the public (WASA) should secure ownership of the land inside the wellfield setback and, perhaps, inside of all the non-accessible lake areas.

Please give consideration to the above points and call if you would like to discuss these further.

Sincerely,



Ronald E. Inge

cc: Jim Jackson, South Florida Water Management District  
Bob O'Brien, Florida Rock Industries  
Paul Larsen, Larsen & Assoc.

# This Map Removed for Security Purposes

June 18, 2000

NOTICE: This map is a conceptual and subject to project development only. This map is not a guarantee of binding, and shall not constitute any vested right or existing use of real property.

Lake Belt Phase II Detailed Master Plan  
Alternative Concept Plan "B"

Walter Baker & Todd, LLC  
EAB Engineering Inc.



AGGREGATES GROUP: 155 East 21st Street / P.O. Box 4667 / Jacksonville, Florida 32201 / (904) 355-1781

**FLORIDA ROCK INDUSTRIES INC** Mining, Ready Mix Concrete, and Construction Products

Reply to Florida Division Office: 17695 S. Tamiami Trail, Suite 108-7, Fort Myers, FL 33908 / Phone (841) 437-7537  
FAX (841) 454-8146



September 6, 2000

VIA FAX 305-443-8431

Mr. David Sacks  
Wallace, Roberts & Todd, LLC  
191 Giralda Ave., Penthouse  
Coral Gables, FL 33134

RE: Lakebelt Phase II Master Plan – Alternative Concepts

Dear David:

I wanted to follow-up on the discussion you and I had after the last Lakebelt Committee meeting relative to recommendations for changes to be made in the alternative concept plans for the Lakebelt Area. These items were generally outlined in my letter to you of August 15<sup>th</sup>.

First, please make sure that you delete the land area located south of the tree island in Section 21. Since we own all of this section, save the Florida Power & Light facilities, we plan on excavating it in its entirety, except for the area that we will preserve as part of the tree island. Our studies indicate that we will not need to preserve the area south of the tree island, so please delete this land bridge from the plans.

Second, the general consensus you received from the Committee was to "square off" the inner protection zone, which would eliminate our concern over having an inner and outer protection zone located within our lake in Section 22. This will resolve our concerns over this land area that would have made excavation much more difficult.

Third, please modify one or all of the concepts to eliminate the greenway and land area that runs north and south between the tree islands, which are located east of the Dade-Broward Levee. This land area would require that two key excavation cuts be created and would make excavation and blasting much more expensive and may increase the vibration levels resulting from blasting, in certain areas. You mentioned the thought that the dual excavations in each section might not be as crucial if the one square mile concept is eliminated and we are allowed to excavate across the section lines. Our concern is that this may not occur for several reasons:

- Different property owners will be involved and it is difficult to get agreement to join lake areas between adjacent property owners.

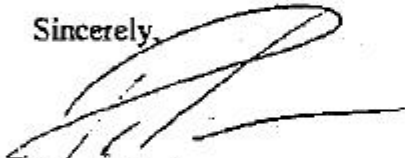
Mr. David Sacks  
September 6, 2000  
Page 2

- The section lines may be re-instituted as land barriers to address the seepage problem.
- If the area up to the Dade-Broward Levee is found to be part of the inner protection zone, it would be undesirable to have a land bridge that would attract wildlife and human activity.
- Straight excavation cuts are much more economical and add to the effective recovery of the resource, as envisioned by the Lakebelt Legislation.

There were also several ideas in the August 15<sup>th</sup> letter concerning strategies for protecting the wellfield. Please review those items again to see if there are any that have not been forwarded by other sources and that you can utilize in drafting the written report to accompany the alternatives.

As always, please feel free to contact me if you have any questions.

Sincerely,



Ronald E. Inge

cc: Bob O'Brien - VIA FAX 904-355-0469  
Paul Larsen - VIA FAX 305-371-5234





## Memorandum

To: Members, Northwest Miami-Dade County Lake Belt Plan Implementation Committee

Date: September 12, 2000

From: Wallace Roberts & Todd LLC  
David Sacks, ASLA

Ref. No. 991728

Project: Lake Belt Phase II Master Plan

Fax: Re: Action Items for Follow-Up from

Tel:

CC: Jim Jackson (JJackson@sfwmd.gov)

---

Under separate cover from the SFWMD you have been provided copies of the updated Lake Belt Alternative Concept Plans (A through C) revised as per the August 31 meeting. Attached is an updated copy of the "evaluation criteria" and "evaluation form" distributed in the meeting. (Minor changes to the cover document are indicated in ***bold italics***; the only substantive change to the evaluation form is the inclusion of additional references to FDEP as a primary reviewer for certain topics.)

As discussed in the meeting, we are soliciting active and intensive participation of all Committee members in this evaluation process. The proposed schedule and process are as follows;

1. Open discussion and submittal of written comments in the September 20 Meeting.
2. An additional week for further submission of initial written comments (by Friday September 29)
3. All comments to be collated and re-distributed for your consideration by Friday October 6. Also included will be a summary of public comments received September 28 at the evening workshop.
4. Final evaluation of the Alternatives and development of a preferred or "consensus" plan to be the primary objective of the late October meeting(s).

Please contact Jim Jackson or me with questions. Thank you.

**Lake Belt Phase II Master Plan  
Evaluation of Alternative Concepts:  
Summary of Criteria and  
Assignment of Lead Roles for Initial Evaluations**  
August 31, 2000  
*Revised 9/12/00*

This summarizes the criteria developed to date which can be used to begin evaluation of Alternative Concepts for the lake Belt Phase II Detailed Master Plan.

The project schedule calls for a set of three Alternatives to be finalized at the August 31, 2000 Committee Meeting, and for a process of evaluation then to commence which will result in the identification of a “consensus” or “preferred” plan concept within approximately 45 calendar days.

The proposed process includes initial reviews and evaluations of the selected three Alternatives to be undertaken by Committee members in a very brief, succinct written form. **Draft** assignments of “*lead responsibility*” for each topic are proposed in the attached chart (“Evaluation Form”). The purpose of this format is to utilize the specialized expertise of each member to most effectively address each topic. ***It will be most helpful, and is critically important to include, the policy position that can be expected from member agencies (to the extent that any have regulatory responsibility) with regard to the various concepts and elements shown in each of the three Alternatives.***

Comments from all Committee members on all topics are of course appropriate. The attached Form should be used to provide the evaluation (digital copies are available on request). More extensive written review comments can be attached at the member’s option, and “lead” reviewers are encouraged to do so. Where quantitative comparisons cannot be made or are not deemed useful, qualitative comparisons or rankings can be provided.

The initial reviews will be received and assembled by staff / consultants, and re-distributed before the **following** meeting at which evaluation of the Alternatives is to be considered. These initial reviews will form a basis for further discussion and the second stage of review, in which a dialogue among Committee members will be undertaken for the purpose of defining a consensus or preferred concept.

It is anticipated this second stage of review will be intensively addressed in the **October 2000** meeting ***at which the goal will be to develop a consensus “preferred plan”***. However, additional workshop/meetings or other work efforts may also need to be identified at that time.

### **Legislative Mandate**

The legislative mandate for the Lake Belt Plan (373.4149, F.S.) directs the Committee to “develop a plan which:

- 1) Enhances the water supply for [Miami-]Dade County and the Everglades.
- 2) Maximizes the efficient recovery of limestone while promoting the social and economic welfare of the community and protecting the environment; and
- 3) Educates various groups and the general public of the benefits of the plan.”

## **Committee's Prior Recommendations for Phase II Detailed Master Plan Goals**

Also relevant to consider at this time are the general goals of the Phase II Detailed Master Plan as recommended by the Committee in its approved Phase I Report ("Making a Whole, Not Just Holes," February 1997, page 24). These included:

- Concentrate mining and ancillary facilities in appropriate areas
- Coordinate the Lake Belt Plan with the Restudy [sic]
- Protect private property rights
- Protect and enhance urban water resources
- Enable compatible recreational use of appropriate areas

The Committee further noted that "while future land uses must be consistent with [Miami-Dade County's Comprehensive Development Master Plan and wellfield protection regulations, the Committee sees the need to develop a detailed master plan to achieve the foregoing goals, identify other compatible uses, eliminate the potential for future land uses and zoning changes that would conflict with these goals, and provide an access management plan for these areas."

## **Committee's Prior Recommendations for Evaluation Criteria ("Measures of Success")**

Below are the criteria for evaluating the overall success of the Lake Belt Plan were adopted by the Lake Belt Committee in 1995 as "Initial Objectives and Measures of Success."

### ***Objective 1: Enhance Water Supply for Miami-Dade County and the Everglades***

#### Measures of Success

- Extent to which water supply for Miami-Dade County is enhanced
- Extent to which hydroperiod and flows are enhanced for the Everglades including Florida Bay
- Extent to which wet and dry season flows to Biscayne Bay are enhanced
- Extent to which the Lake Plan meshes with state and regional plans being developed
- Amount of water available during drought conditions for Miami-Dade County and the Everglades system including Biscayne Bay, Florida Bay, and South Florida estuaries.
- Effects of plan on potable water quality and Northwest Wellfield groundwater designation
- Quality of the water being made available for Miami-Dade County and the Everglades system

## **Objective 2: Maximize Efficient Rockmining**

### Measures of Success

- Total volume of rock available for mining through 2050
- Proximity of lands available for rockmining to processing and transportation facilities
- Quality of rock in lands available for mining
- Extent to which future governmental permitting requirements are made more certain

## **Objective 3: Promote the Social and Economic Welfare of the Community**

### Measures of Success

- Extent of recreational opportunities
- Diversity of opportunities
- Economic vitality of rockmining industry
- Economic vitality of other industries
- Compatibility of land uses
- Addresses rights of all private and public land owners, large and small
- Economic value of clean, quality environment
- Compatibility with transportation plans
- Extent to which the Lake Plan provides for a sustainable South Florida
- Costs of infrastructure construction, operation, and maintenance
- Protection of public health
- Avoidance of risk to potable water quality and preservation of groundwater designation of the Northwest Wellfield
- Provision for the acquisition or compatible lawful use of parcels not intended for rockmining

#### **Objective 4: Protect the Environment**

##### Measures of Success

- Extent to which the Everglades including WCAs are preserved, enhanced, and restored
- Amount, quality, and the extent to which the habitat within Lake Belt is created, preserved, enhanced, and restored including biological productivity of lakes and littoral areas
- The extent to which the habitat created, preserved, enhanced, and restored provides improved functions to the natural communities.
- Amount of exotic vegetation removed and controlled
- Extent to which impacts from future development are eliminated
- Extent to which water quality is enhanced

These elements – along with additional factors noted in preceding pages, such as compatibility with “Restudy” and with the County’s Master Development Plan – form the basis of the attached Evaluation Form. (It is recognized that certain of these criteria may be considered more relevant to Phase I than Phase II planning efforts, and were already addressed to a great extent in Phase I: for example, the total volume and general location of rockmining.) Procedures for performing these initial evaluations will be further addressed in the August 31 meeting.

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<p><b>Enhancement of Water Supply :</b></p> <p>Extent of enhancement of County water supply (<b>WASD, SFWMD, DEP</b>)</p>			
<p>Effects of plan on potable water quality and Northwest Wellfield groundwater designation (<b>DERM, DEP</b>)</p>			
<p>Extent of enhancement of hydroperiod &amp; flows to Everglades &amp; Florida Bay (<b>SFWMD</b>)</p>			
<p>Extent of enhancement of wet &amp; dry season flows to Biscayne Bay (<b>SFWMD</b>)</p>			

<b>Criteria</b> (Proposed "Lead" Reviewer)	<b>Alternative Concept "A"</b>	<b>Alternative Concept "B"</b>	<b>Alternative Concept "C"</b>
<p><b><i>Enhancement of Water Supply (continued) :</i></b></p> <p>Water quantity available in drought conditions for County &amp; Everglades system incl. Biscayne &amp; Florida Bays &amp; regional estuaries                      (SFWMD)</p>			
<p>Quality of water being made available                      (SFWMD, DEP, DERM)</p>			
<p>Extent of plan's meshing with state and regional plans being developed                      (SFWMD, WASD, DEP)</p>			
<p>Coordination with CERP (formerly Restudy)                      (SFWMD, CORPS)</p>			

<b>Criteria</b> (Proposed "Lead" Reviewer)	<b>Alternative Concept "A"</b>	<b>Alternative Concept "B"</b>	<b>Alternative Concept "C"</b>
<b>Maximizing Efficient Rockmining:</b>  Total volume of rock available through 2050 ( <b>INDUSTRY</b> )			
Proximity of proposed mining lands to processing & transport facilities ( <b>INDUSTRY</b> )			
Quality of rock in lands available for mining ( <b>INDUSTRY</b> )			
Extent of increased certainty of future permitting** ( <b>INDUSTRY</b> ) <i>**not a factor / variable in Master Plan Alternative Concepts</i>			



Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<p><b>Promoting Social &amp; Economic Welfare of the Community :</b></p> <p>Extent and diversity of recreational opportunities (<b>SFRPC, ENP, MDPR*</b>)</p> <p><i>* MDPR= Miami-Dade Parks &amp; Recreation; invited reviewer, not a member</i></p>			
<p>Economic vitality of rock-mining industry (<b>INDUSTRY</b>)</p>			
<p>Economic vitality of non-rock-mining industries (<b>All</b>)</p>			
<p>Economic value of clean, quality environment (<b>All</b>)</p>			
<p>Protection of public health (<b>All</b>)</p>			

<b>Criteria</b> (Proposed "Lead" Reviewer)	<b>Alternative Concept "A"</b>	<b>Alternative Concept "B"</b>	<b>Alternative Concept "C"</b>
<p><b>Promoting Community Social &amp; Economic Welfare (continued) :</b></p> <p>Address rights of all private &amp; public land owners, large and small;                      Protect private property rights  <b>(Non-mining Landowners; P&amp;Z, SFRPC)</b></p>			
<p>Compatibility of land uses;                      Elimination of potential for future conflictual land uses &amp; zoning changes;                      Consistency with County land use planning  <b>(P&amp;Z, SFRPC)</b></p>			
<p>Provision of acquisition or compatible lawful use of parcels not intended for mining  <b>(To be determined)</b></p>			

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<b>Promoting Community Social &amp; Economic Welfare (continued) :</b>			
Provides for a sustainable South Florida ( <b>SFRPC; P&amp;Z</b> )			
Avoidance of risk to potable water quality and preservation of groundwater designation of the Northwest Wellfield ( <b>DERM, WASD, DEP</b> )			
Costs of infrastructure construction, operation and maintenance ( <b>P&amp;Z</b> )			

<b>Criteria</b> (Proposed "Lead" Reviewer)	<b>Alternative Concept "A"</b>	<b>Alternative Concept "B"</b>	<b>Alternative Concept "C"</b>
<b><i>Protecting the Environment:</i></b>  Extent of preservation, enhancement & restoration of Everglades including WCA's <b>(CORPS; Environmental Organizations; ENP; SFWMD)</b>			
Amount / quality / extent of habitat creation, preservation, enhancement & restoration; including biological productivity of lakes & littoral areas <b>(Environmental Organizations; ENP; FFWCC)</b>			
Extent to which habitats created, preserved, enhanced and restored provide improved functions to natural communities <b>(Environmental Organizations; ENP; FFWCC)</b>			
Amount of exotic vegetation removed and controlled ** <b>(To be determined)</b>  <i>**not a factor / variable in Master Plan Alternative Concepts</i>			

<b>Criteria</b> (Proposed "Lead" Reviewer)	<b>Alternative Concept "A"</b>	<b>Alternative Concept "B"</b>	<b>Alternative Concept "C"</b>
<p><b><i>Protecting the Environment</i></b>                      (<b><i>continued</i></b>):</p> <p>Extent to which impacts from future development are eliminated                      (<b><i>Environmental organizations;</i></b>  <b><i>Regulatory agencies; P&amp;Z</i></b>)</p>			
<p>Extent to which water quality is enhanced                      (<b><i>Environmental organizations;</i></b>  <b><i>Regulatory agencies; WASD</i></b>)</p>			

AGGREGATES GROUP: 155 East 21st Street / P.O. Box 4667 / Jacksonville, Florida 32201 / (904) 355-1781

**FLORIDA ROCK INDUSTRIES INC** Mining, Ready Mix Concrete, and Construction Products

Reply to Florida Division Office: 17595 S. Tamiami Trail, Suite 108-7, Fort Myers, FL 33908 /Phone (941) 437-7837  
FAX (941) 454-8146



September 21, 2000

VIA FEDERAL EXPRESS

Mr. David Sacks  
Wallace, Roberts & Todd, LLC  
191 Giralda Ave., Penthouse  
Coral Gables, FL 33134



Dear David:

Please consider the attached as a follow-up to my comments mentioned at the Wednesday Lakebelt meeting. We would prefer Alternate A; eliminate the land barrier between the two tree islands, which are located just east of the Pennsuco area. The lakes would now all be indicated as "inaccessible" up to the Pennsuco area.

In order to propose an alternate that would show an accessible/inaccessible lake area, adjacent to the Pennsuco, please change Concept Plan "B" to show that the western portion of the lakes, westward of the land bridge between the two tree islands, to be shown as accessible lake areas.

Concept Plan "A" is our best estimate of where our mining should take place and indicates the final footprint of mining areas on those lands that we either own, lease, or plan to acquire and/or lease in the future. Please make this change to Concept Plans "A" and "B" so that they will reflect our mining footprint and provide the accessible/inaccessible lake separation, adjacent to the Pennsuco as was previously shown in Plan "A".

Please contact me if you have any questions.

Sincerely,

  
Ronald E. Inge

REI/m

cc: Bob O'Brien  
Don Darley  
Paul Larsen

# This Map Removed for Security Purposes

**NOTICE:** This map is a conceptual tool offered for informational purposes only. This map is not intended for use in any legal proceeding, and does not constitute an offer of insurance or any other financial product. It is not intended to be used as a basis for any investment decision. It is not intended to be used as a basis for any investment decision. It is not intended to be used as a basis for any investment decision.

Sept. 6, 2000

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**Wallace Roberts & Todd, LLC**  
HAS Engineering Inc.

**Lake Belt Phase II Detailed Master Plan**  
**Alternative Concept Plans A, B, C**

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# BRIGHAM MOORE

Eminent Domain & Property Rights Counsel

a limited liability partnership including professional associations

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Mark Andrew Tobin  
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tbrigham@brighammoore.com

RECEIVED  
SEP 28 2000

September 26, 2000

Jim Jackson, AICP  
South Florida Water  
Management District  
3301 Gun Club Road  
West Palm Beach, FL 33406

David Sacks, ASLA  
Wallace, Roberts & Todd, LLC  
191 Giralda Avenue, PH  
Coral Gables, FL 33134

Re: Lake Belt Phase II Detailed Master Plan  
Alternative Concept Plans A, B & C  
Review Comments by Kendall Properties

Gentlemen:

Please be advised that this firm represents Kendall Properties and Investments, owners of Sections 24, 25 & 36, Township 54S, Range 38E which are the three sections of land located at the Southwest extremity of the Lake Belt in Dade County, Florida. Pursuant to your invitation for the owners to review and comment upon the Lake Belt Phase II Detailed Master Plan Alternative Concept Plans A, B & C, please be advised as follows:

1. These three sections constitute a zoned and permitted active rock quarry at a railhead with high quality and quantity of limestone remaining to be mined and shipped by rail directly from the property to the consumer. The use and operation of the whole property for mining has received all necessary governmental approvals. The owners and the tenant operator have invested large sums of money in engineering, construction, machinery and equipment and other operational facilities of a successful rock mine. In addition to being at a railhead, the rock mine is remote from any residential community so that appropriate blasting is not a problem.
2. The owners respectfully object to any concept or plan which would limit or deprive them of the vested rights they have to mine their property; and to use the residual property for their own planned industrial purposes. Accordingly, the owners hereby object to the following provisions of Concept Plans A, B & C:
  - a. All three alternative concept plans locate a proposed park/recreation



node on lands reserved by the owners' mining plan for industrial use upon completion of the mining operation which is non-jurisdictional upland. (The planners might wish to consider placing the park/recreational node west of the railhead so that the public could enjoy both east and west of the node. Furthermore, such a location could be reached by tram on the former railroad tracks.)

- b. All three alternative concept plans suggest that mining within them will be subject to DERM restrictions for wellfield protection based on regulations premised or sized for 140 million gallons per day. These owners object to any such limitation or restriction by DERM as to their vested right to already approved mining activity, including the already approved depth to which they may mine.

They object because the proposed DERM restrictions are sized for 140 million gallons per day when the West Dade wellfield is only permitted for 25 million gallons per day. In addition, the owners have engaged MacVicar, Federico and Lamb to model and delineate the actual cone of influence as opposed to the cone adopted as an interim protection zone in 1984. This study will be sent to you under separate cover.

Furthermore, the enclosed Stipulation and Order in the case of *General Portland, Inc. v. Dade County*, Case No. 82-15182 CA 22 exempts the subject property from the regulatory jurisdiction of DERM.

- 3. As to Alternative Concept Plan C; these owners object to the provision of an area for wetland restoration on the following grounds:
  - a. These wetlands are cutoff by the L31 Canal and Levee from other wetlands on the west and by the Krome Detention Center to the north.
  - b. The Everglades National Park Extension provides for wetland restoration to the west. It is a waste of high quality rock and the investment in railroad transportation facilities to devote rock mining land at the railhead for wetlands restoration.
  - c. These owners have a vested right to mine the area, have invested significant sums in reliance of that fact and are obliged to pay mitigation for the purchase and restoration of other wetlands or participate in the Lake Belt Mitigation Programs.

Page 3  
Jackson/Sacks  
September 26, 2000

Any public use or acquisition of their lands would require an enormous amount of just compensation, under the Constitutions of Florida and the United States of America, not only for the rock mining value of the land taken; but also for severance damages to the remainder including, land and building improvements, machinery and equipment, together with business damages to the owners and tenant's enterprises located and operating on the property.

For all of the above reasons, Kendall Properties and Investments respectfully request that all of the features of the Alternative Concept Plans A, B & C to which it has objected as stated above be deleted from any Lake Belt Phase II Detailed Master Plan.

Yours very truly,

  
TOBY PRINCE BRIGHAM

TBP/pc

POSTAL FAX NO. 7571	DATE 3/20/87	BY 34
TO Bill Murphy	FROM Collins Foran	
PHONE 746-2221	PHONE 746-0005	
FAX 746-5471	FAX 746-1478	

IN THE CIRCUIT COURT OF THE 11TH  
JUDICIAL CIRCUIT IN AND FOR DADE  
COUNTY, FLORIDA

GENERAL JURISDICTION DIVISION

CASE NO. 82-15182 CA 22

GENERAL PORTLAND INC.

Plaintiff,

vs.

DADE COUNTY,

Defendant.

STIPULATION FOR SETTLEMENT  
AND  
ORDER APPROVING STIPULATION

General Portland Inc., Plaintiff, and Dade County, Defendant, hereby stipulate and agree to settle the above-styled cause amicably as follows:

1) The Letter Agreement of August 29, 1983 entered into by and between General Portland Inc. and Department of Environmental Resource Management of Dade County is incorporated herein by reference made a part hereof, marked as Exhibit "A". All terms, conditions, and covenants contained in the aforesaid Letter Agreement dated August 29, 1983 are reaffirmed, ratified and approved in their entirety.

2) That the area to be excluded from the Class IV jurisdiction of the Department of Environmental Resource Management of Dade County in Section 24, Township 54S, Range 38E, Dade County, is legally described as follows:

A portion of the East 1/2 of Section 24, Township 54 South, Range 38 East, Dade County, Florida, being particularly described as follows:

Commence at the Southeast corner of said Section 24; thence run S89°30'09"W along the South line of said Section 24 for 180.08 feet to a point lying on the West Right-of-Way line of Krone Ave., said point also being the Point of Beginning of the parcel of land herein described; thence from the above established Point of Beginning continue S89°30'09"W along the South line of said Section 24 for 1673.00 feet; thence N02°12'51"W for 3537.56 feet; thence N89°30'09"E for 1673.00 feet; thence S02°12'51"E along the said West Right-of-Way line of Krone Ave. for 3537.56 feet to the Point of beginning.

The aforesaid legal description was prepared by Jack Muller & Associates, Inc., Surveyor No. 1813, prepared on September 29,

1983 under Job No. 88-5543-C. The referenced survey accurately reflects the area to be deleted from the jurisdiction of the Department of Environmental Resources Management of Dade County.

APPROVED BY DADE COUNTY

APPROVED BY GENERAL PORTLAND INC.

By: Robert A. Duval  
Robert Duval, Esq.  
County Attorneys Office  
1626 Dade County Courthouse  
Miami, Florida 33139  
Attorney for Defendant

By: M. Lewis Hall  
M. Lewis Hall, III  
1104 Peninsula Federal S & L  
200 South East First Street  
Miami, Florida 33131  
Attorney for Plaintiff

ORDER APPROVING STIPULATION

THIS CAUSE having come on for hearing on the foregoing stipulation between the parties and it appearing that the parties have agreed to amicably settle their differences, it is upon consideration

ORDERED AND ADJUDGED the the foregoing stipulation is hereby approved, ratified and confirmed.

DONE AND ORDERED in Chambers at Dade County, Florida this 20 day of June, 1984.

ROBERT P. KAYE  
CIRCUIT COURT JUDGE

\_\_\_\_\_  
CIRCUIT JUDGE

Copies furnished Counsel.

LAW OFFICES OF  
**HALL & HEDRICK**

SUITE 1104 PENNSULA FEDERAL BUILDING  
 200 SOUTHEAST FIRST STREET  
 MIAMI, FLORIDA 33131

TELEPHONE 315-0335  
 AREA CODE 305

August 29, 1983

**RECEIVED**  
 AUG 30 1983

ENVIRONMENTAL  
 RESOURCES MANAGEMENT

Mr. Anthony Clemente  
 Dade County Department of  
 Environmental Resource Management  
 909 Brickell Plaza  
 Miami, Florida 33131

Re: General Portland Inc. vs. Dade County

Dear Tony:

This letter will confirm the agreement reached on Monday, August 15, 1983, between Dade County Department of Environmental Resources Management (DERM) and General Portland Inc. (General Portland)

DERM will waive jurisdiction for all General Portland lands in Section 36, Section 25 and that portion of Section 24 not subject to the Corps of Engineers jurisdiction and that which is currently subject to the Corps of Engineers Permit #82B-0753, all in Township 54 South, Range 38 East, Dade County, Florida. The balance of land in Section 24 and all wetlands in Sections 26 and 35, Township 54 South, Range 38 East will be subject to a Class 4 permit under current Dade County Code, Chapter 9 and under the proposed amendments thereto which will be contained in Chapter 24 of the Dade County Code.

In order to establish the exact location of the areas under DERM's jurisdiction and those not subject to DERM's jurisdiction, General Portland will procure a survey and provide an accurate legal description of the area in Section 24 which will be subject to DERM's jurisdiction. The land will be staked by a registered land surveyor so that DERM may verify the correctness of the survey.

General Portland agrees to dismiss its law suit against Dade County bearing Case No. 82-15182 and further agrees to submit an application for a Class 4 permit prior to undertaking any activities in areas subject to the jurisdiction of DERM.

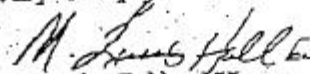
EXHIBIT "A"

Mr. Tony Clemente  
August 29, 1983  
Page Two

5. Comply with posted safety notices and barrier restrictions.

These requirements shall be included in any contact between Dade County and an agent or independent contractor who will conduct testing on General Portlands' Dade County plant.

Very truly yours,

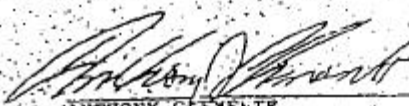
  
M. Lewis Hall, III

MLH, III/dls

CC: Mr. William H. Winders  
Mr. Barry Faulk

NOTE:

If the foregoing meets with your approval, please sign the attached copy of this letter and return to this office.

  
ANTHONY CLEMENTE

DATE: 8/30/83

Suggested Entries  
Lake Belt Alternative Concepts--Evaluation Form  
Robert Usherson, Miami-Dade County Department of Planning and Zoning  
September 29, 2000

**Page 5 of 8, First Row**

***...Rights of Land Owners...:***

Before considering differences among alternative land use configurations, consideration should be given to recommending legislation pertaining solely to the Lake Belt which would provide the following: a) any State, regional, or County agency acquisition activities undertaken to implement adopted Phase 2 Lake Belt Plan recommendations would be based on appraised land values in the area on or around September 1, 2000, and b) such acquisitions would include a right of first refusal for the seller (or heirs) to reacquire the property (at purchase price plus land inflation factor) if the agency later finds that it does not need the property for natural resource management purposes.

**In the Evaluation Form "*...Rights of Land Owners...*", under "*Alternative Concept A*", Insert the following:**

Resulting additions to existing property rights:

In Stairstep area: 1,328 DUs (+ 400%), and 4 Business districts;

In North Trail area: 2,360 DUs added (@ 3.75 du/ac) (18X increase), plus  $\pm$ 200 Ac Industrial and 2 business districts;

In Central Lake Belt area,  $\pm$ 1,700 acres with rights for 340 DUs warrant acquisition by mining companies if deemed by the Plan to be acceptable for mining, or by environmental mitigation entity. Where private entities acquire such sites for mitigation bank operations and not for other economic development, consideration could be given to allow transfer of development rights from such sites to other Lake Belt property approved for development at higher than currently allowed density, with the caveats discussed elsewhere in this form.

**Under "*Alternative Concept B*", Insert the following:**

Resulting additions to existing property rights:

In Stairstep area: No change in residential development rights; 3 Business districts added.

In North Trail area: No change in residential development rights although absence of recommendation to urbanize the area may partially deflate speculative increment of land value; One Business district added.

Central Lake Belt area: Same observation as noted for Alt. A.

**Under "*Alternative Concept C*", Insert the following:**

In Stairstep area: 217 DUs added @ 1du/3ac (67% increase); or 1,302 DUs added @ 1du/1Ac (400% increase); and 2 Business districts added.

In North Trail area: 4,160 DUs added @ 3.75 du/ac (31X increase) includes  $\pm$  200  
Ac changed from Industrial to Low Density Residential ;  
 $\pm$  240 Acres planned Industrial remains unchanged;  
One Business district added.  
Central Lake Belt area: Same observation as above.

[Note: This Alternative provides that allowances for increased residential density in the Stairstep and North Trail areas could be made contingent upon acquisition/transfer of development rights from other Lake Belt properties, such as from out-parcels in the Central Lake Belt or per haps from property recommended for conservation but which is not sold to government agencies. This provision would moderate the creation of new development rights by sharing some of the created rights with the owners of the parcels from which the development rights were sent.]

***Compatibility of Land Uses...Elimination of Potential for Conflicts:***

Before considering differences among the various alternatives, to promote compatibility between mining and non-mining land uses, consideration should be given to recommending a mining phasing policy such as the following, to be implemented through State and County development regulation authority including, but not limited to, environmental permitting: Any land to be mined within 1 mile of, a) the UDB (where designated in the CDMP on September 1, 2000), b) the Broward County boundary, or c) land recommended for increased residential density in the Phase 2 Lake Belt Plan, must file all necessary requests for development orders within 18 months after the publication date of the Phase 2 Lake Belt Plan; mining of the property must commence within 2 years after issuance of the development orders and must terminate not later than 10 years after publication date of this Lake Belt Plan. Land between 1 and 2 miles of the foregoing boundaries and areas would have an additional 5 years to terminate quarrying activities.

**Under "Alternative Concept A", Insert the following:**

Blasting activity is incompatible with adjacent land uses existing or planned at the Urban Development Boundary (UDB) and at the Broward County boundary.

Introduction of suburban residential development in the Lake Belt area will increase the occurrence of incompatibility between existing and planned quarries in the Lake Belt area and residential uses.

CDMP Land Use Element amendments will be required for Stairstep area proposals for increased residential density, TDR provisions, and Business nodes; and for the North Trail area UDB extension, expansion of the planned industrial area, and introduction of suburban residential and business development. Associated amendments to the Traffic Circulation, Conservation and/or Capital Improvements elements may also be required. A problematic aspect of Alternatives A and C that should be addressed is that once suburban



development is introduced into an area, little can be done to prevent it from being approved on adjacent land. Any recommendation of the Committee to introduce such uses into the area should be done with the recognition that the use could readily be expanded to adjacent areas.

**Under "Alternative Concept B", Insert the following:**

Blasting incompatibilities will remain essentially unaffected.  
CDMP amendments will be required for Business nodes.

**Under "Alternative Concept C", Insert the following:**

Comments are the same as for Alt A; plus approximately 200 acres would require be redesignation on the CDMP Land Use Plan map from Industrial to Low Density Residential.

**Page 6 of 8:**

**...Sustainable South Florida:**

***Alternative Concept A:***

This alternative would introduce suburban residential community development west of the Turnpike in north Miami-Dade without significantly increasing the population capacity of the County. Such a spread form of residential development has repeatedly been demonstrated to be very counterproductive in many respects. One noteworthy issue is the distance-related costs for labor-intensive services. Examples of these include police, fire and rescue services, solid-waste pickup and school bussing. Moreover, this is a highly flood-prone basin, lower in elevation than the urbanized areas to the east and the Everglades to the west. It will not readily drain by gravity, can pond water for lengthy periods, and would be subject to pressure for flood protection by installation and operation of pumping facilities, as recently demanded to remedy flooding in other poorly drained areas of the County. Among the other reasons Miami-Dade County's comprehensive plan has not provided for the urbanization of this and other interior wetlands is that the draining of these areas would be detrimental to the County's existing and potential water supplies and other environmental resources dependent on a semblance of the native hydrologic regime.

***Alternative Concept B:***

This alternative introduces only 4 new business development nodes. It will not directly require additional drainage, but development of business districts may invite additional land speculation and development pressure on surrounding land.

***Alternative Concept C:***

As with Alternative A, this Alternative would introduce suburban expansion into far northwest Miami-Dade, an area intrinsically unsuited for such development. Spread residential development on 1-acre to 3-acre lots is, in particular, fiscally detrimental, and the general area would be prone to flooding. A development scheme that would cluster the allowed dwellings into compact enclaves could slightly moderate some labor-intensive public service costs such as those noted above, but would introduce other costs for central stormwater, and possibly potable water and wastewater, facilities. Additionally, the land parcelization pattern does not readily enable such a pattern of development. Accordingly, some type of development rights transfer program would have to be created at public expense. The transfer of development rights out of the Lake Belt into the urban core or serviced suburbs could be fiscally advantageous for taxpayers, but would not produce the development expressly desired by Lake Belt property owners. Similarly, transfer of development rights into enclaves in the Lake Belt may not produce a type of residential arrangement expressly desired by the property owners, and may not significantly reduce the public service cost deficit. While the additional costs to serve 500 to 1,500 additional households in the Stairstep area may not be significant from a Countywide perspective, this action should be viewed as a precedent and would not necessarily remain the limit of such development in the area.

The North Trail residential proposal is not inconsistent with the Urban Expansion designation of that area or the general trend of development on adjacent land. While residential development at typical low density takes many decades to pay for itself, this area is relatively compact and contiguous to the existing urbanized area and would not be as fiscally negative as the estate density residential requested for the more distant Stairstep areas.

***Costs of Infrastructure Construction, O&M***

***Alternative Concept A:***

Additional streets and stormwater management facilities will be required in addition to the services noted above for the 3,600 DUs, 6 business nodes, and 200 acres of additional industrial development. The business and industrial areas will also require extension of central sanitary facilities or exceptions to these requirements.

***Alternative Concept B:***

This alternative produces no change in service requirements for residential development, only for the business districts.

***Alternative Concept C:***

This Alternative may require central sanitary facilities and stormwater management facilities for the residential clusters, depending on the density and layout. Delivery of the distance-affected labor-intensive services noted above would also be required. If a TDR program is required, a cost will be borne by the public to formulate and start an equitable, acceptable program. The open spaces to be preserved by the TDR program would require maintenance, or enforcement oversight, particularly if they are numerous or small.

**Page 8 of 8**

***Extent...Impacts ...Eliminated***

***Alternative Concept C:***

3,600 additional DUs; 576 acres of additional Industrial  
Impacts not eliminated.

***Alternative Concept B:***

4 additional Business nodes;  
The least additional impact of the alternatives; Reduction to 1 node in each region, with recreation the dominant use and business a secondary use in a single centrally located north node, would further reduce impacts.

***Alternative Concept B:***

5,400 additional DUs;  
3 additional Business nodes;  
200 fewer acres of Industrial in North Trail area.  
Impacts not eliminated unless a TDR program neutralizes number of DUs in Lake Belt area or produces more compact and environmentally superior spatial distribution of them.

**To: David Sacks, ASLA**

**From: Karsten Rist**

**Subject: Lake Belt Alternative Concepts - Comments**

Given the open ended response format I decided it would be easiest to give you a narrative response to the 29 issue questions:

**1) Enhancement of Water Supply (pages 1 and 2):**

Enhancement of water supply, the hydroperiod in the Pennsuco wetlands and fresh water flows into Biscayne Bay all depend on the specifics of the Corps' design for containing seepage on the eastern edge of the Pennsuco wetlands. This applies not only to the physical features of the design (seepage barrier, canals pumps, etc.) but also to the future regulation schedules which implement the hydrologic targets for the areas in question. The conservation groups alternative (called "D" hereafter) offers the most flexibility to the Corps for choosing a design most suitable to Everglades restoration goals, and is, for that reason, the most desirable. C is second, A third and B fourth.

**2) Maximizing Efficient Rockmining (page 3):**

B obviously maximizes rockmining. A portion of the mitigation funds should be made available to buy land from willing sellers when it becomes available in the residential enclaves north of Okeechobee Road. Over a fifty year period few if any residential owners will be left. Such a plan would remove potential sources of contamination from the Lake Belt area.

**3) Promoting Social and Economic Welfare of the Community (pages 4, 5 and 6).**

Protection of the water quality and available water quantity of the northwest wellfield is the most important public purpose of the Lake Belt. Rockmining has been discussed in section #2. Non-rockmining industries should be discouraged because of their potential for introducing sources of contamination into the Lake Belt area. Features to contain spills from major accidents on the turnpike should be added to the design. Private property rights are and should remain the same in the Lake Belt area as they are in the rest of Dade County. Recreational opportunities should be encouraged as long as access and uses are controlled in a manner which protects water quality.

**4) Protecting the Environment (pages 7 and 8).**

Rockmining destroys wetlands and the least rockmining will be best for the environment as long as the non-mined lands are brought into public ownership and are not available for private development. Rockmining is preferable to other private development of lands in the Lake Belt area. Because of CERP's size and significance for the future of South Florida all of its features should be accommodated in the final Lake Belt plan. Transfer of all mined out properties into public ownership should be part of the final Lake Belt plan. D is the most desirable plan from an environmental point of view. C is second.

OCT 18 2000

Letter A with the following amendments will be the most appropriate to all the lake belt interest it should bring consensus.

Comments # 1:

Move well field outer line along 58 St. west to reflect, lake belt boundary, east coast buffer boundary, this strip is non-mining owned and should be respected as such.

Comments # 2:

Non-mining Proposal for the south which includes purchase of two section of land for well field protection, purchasc strip of land around the well field for mayor public park and allow the remaining parts of the three sections to build out as surrounding land uses.

Comment # 3:

If PenSucos are going to be endorse for preservation, which is detrimental to the non-mining land owner propose a fair acquisition \$\$ offer to those owners or a land swap.

The government owns or controls with the mining companies 80% +/- interest in the Pensucos you must finalize your position regarding the Pensucos. Plus you must have implemented the Reverter Clause.

Further, We must move forward and adopt the non-mining Relief Package which among other things it includes, Reverter Clause and the Non-mining Mitigation.

DOMINGO RODRIGUEZ, COMMITTEE MEMBER, NON-MINING  
OWNER.

DRAFT

Lake Belt Alternative Concepts - Evaluation Form 09/12/00

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<b>Enhancement of Water Supply :</b>  Extent of enhancement of County water supply (WASD, SFWMD, DEP)	1	3	2
Effects of plan on potable water quality and Northwest Wellfield groundwater designation (DERM, DEP)	3	3	3
Extent of enhancement of hydroperiod & flows to Everglades & Florida Bay (SFWMD)	2	2	3
Extent of enhancement of wet & dry season flows to Biscayne Bay (SFWMD)	3	3	3

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<b>Enhancement of Water Supply (continued) :</b>  Water quantity available in drought conditions for County & Everglades system incl. Biscayne & Florida Bays & regional estuaries (SFWMD)	2	2	3
Quality of water being made available (SFWMD, DEP, DERM)	3	3	3
Extent of plan's meshing with state and regional plans being developed (SFWMD, WASD, DEP)	3	3	3
Coordination with CERP (formerly Restudy) (SFWMD, CORPS)	3	3	3

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<b>Maximizing Efficient Rockmining:</b>  Total volume of rock available through 2050 (INDUSTRY)	3	3	1
Proximity of proposed mining lands to processing & transport facilities (INDUSTRY)	3	3	1
Quality of rock in lands available for mining (INDUSTRY)	3	2	1
Extent of increased certainty of future permitting** (INDUSTRY) **not a factor / variable in Master Plan Alternative Concepts	0	0	0



Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<p><b>Promoting Social &amp; Economic Welfare of the Community :</b></p> <p>Extent and diversity of recreational opportunities (SFRPC, ENP, MDPR*)</p> <p>* MDPR= Miami-Dade Parks &amp; Recreation; invited reviewer, not a member</p>	3	2	1
Economic vitality of rock-mining industry (INDUSTRY)	3	2	1
Economic vitality of non-rock-mining industries (AII)	3	2	2
Economic value of clean, quality environment (AII)	2	2	3
Protection of public health (AII)	2	2	2

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<p><b>Promoting Community Social &amp; Economic Welfare (continued) :</b></p> <p>Address rights of all private &amp; public land owners, large and small; Protect private property rights <i>(Non-mining Landowners; P&amp;Z, SFRPC)</i></p>	3	2	2
<p>Compatibility of land uses; Elimination of potential for future conflictual land uses &amp; zoning changes; Consistency with County land use planning <i>(P&amp;Z, SFRPC)</i></p>	2	2	3
<p>Provision of acquisition or compatible lawful use of parcels not intended for mining <i>(To be determined)</i></p>	0	0	0

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<b>Promoting Community Social &amp; Economic Welfare (continued) :</b>			
Provides for a sustainable South Florida (SFRPC; P&Z)	3	2	2
Avoidance of risk to potable water quality and preservation of groundwater designation of the Northwest Wellfield (DERM, WASD, DEP)	3	3	3
Costs of infrastructure construction, operation and maintenance (P&Z)	3	2	1

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<b>Protecting the Environment:</b>  Extent of preservation, enhancement & restoration of Everglades including WCA's (CORPS; Environmental Organizations; ENP; SFWMD)	2	2	3
Amount / quality / extent of habitat creation, preservation, enhancement & restoration; including biological productivity of lakes & littoral areas (Environmental Organizations; ENP; FFWCC)	3	3	3
Extent to which habitats created, preserved, enhanced and restored provide improved functions to natural communities (Environmental Organizations; ENP; FFWCC)	2	2	3
Amount of exotic vegetation removed and controlled ** (To be determined)  **not a factor / variable in Master Plan Alternative Concepts	3	2	2

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<b>Protecting the Environment (continued):</b>  Extent to which impacts from future development are eliminated (Environmental organizations; Regulatory agencies; P&Z)	2	2	3
Extent to which water quality is enhanced (Environmental organizations; Regulatory agencies; WASD)	1	2	3

A = 69

B = 64

C = 63

∴ ALTERNATIVE "A"

IS MY ENDORSEMENT  
 AMONG A-B-C.

*[Signature]*  
 10/11/00

# This Map Removed for Security Purposes

June 19, 2000

NOTICE: This map is a conceptual tool utilized for project development only. This map is not self-securing or binding, and does not otherwise affect the interests of any person, including any vested rights or existing uses of real property.

Lake Belt Phase II Detailed Master Plan  
Alternative Concept Plan "A"

Wallace Roberts & Todd, I.L.L.C.  
EAS Engineering, Inc.

Legend  
Scale  
North Arrow  
Date  
Sheet No.

**CRITERIA:**

***Effects of Plan on Potable Water Quality and Northwest Wellfield Groundwater Designation***

***Quality of Water Being Made Available***

***Avoidance of Risk to Potable Water Quality and Preservation of Groundwater Designation of the Northwest Wellfield***

Except for the suggested modifications below, the following aspects of Alternative C appear to best meet the above criteria:

- Alternative C exhibits less mining on the west side of the wellfields that Alternatives A & B. Decreasing the amount of mining/surface water decreases the aerial extent of potential sources of pathogens.
- Approximately ½ mile of unexcavated rock remains between the Dade-Broward Levee borrow canal, which will be improved to provide water supply to South Dade, and the proposed excavated pits around the Northwest Wellfield and between the L-31N Canal and the West Wellfield. This ½ mile of rock may help to attenuate the transport of contaminants from the canals to the excavated pits near the wellfields and would result in the calcite precipitation process occurring closer to the wellfield. The extent of enhanced littoral edges along this ½ mile of unexcavated rock will depend on whether DERM's study places the adjacent pits within the inner protection area for the wellfields.
- Strips of aquifer remain around the lakes in the vicinity of the wellfield. The County is currently investigating the potential for these strips of aquifer to assist in water quality protection, such as reduction in the velocity of flows toward the wellfield and enhancement of the calcite precipitation process. For planning purposes, the chosen alternative should show aquifer strips between pits since they may provide water quality protection.

Modifications:

- The portion of the rockmine setback line within the 3 square miles owned by the County should be removed.
- The outer wellfield protection zone should be indicated on the master plan map. The existing outer boundary should be utilized.

**CRITERION:**

***Amount/ quality/ extent of habitat creation, preservation, enhancement & restoration including biological productivity of lake & littoral areas***

- The congregation of larger littoral mitigation areas along the western side of the FP&L strip in Alternative C generally appears to best meet this criterion. Larger (300 to 500 foot wide), consolidated littoral shelves are more desirable from a biological standpoint than smaller ( $\leq 100$  foot wide) shelves. Aggregation of littoral areas is more cost effective and more conducive to avian survival rates than creation of

disaggregated smaller areas. Larger areas are also more likely to survive over time and not be eroded by wind and waves.

- It is also desirable to create littoral areas around any lakes that are going to be designated for recreational fishing.
- Berms should be created on the water ward edge of the slope to reduce erosion and loss of organic material from the slope into the deep lake area. The berms should have cuts in them to allow flow or movement from deep lake areas to littoral areas.
- Slopes should generally be seven (or more) to one. Given the lack of precise information about future hydrologic conditions, diverse, littoral slopes with topographic variability (e.g. raised areas, depressions and channels are more desirable than creating littoral shelves to meet the requirements of a single species (e.g. wood stork). Littoral slopes should be designed to meet a range of normal high to normal low water conditions. There should be saucer-shaped depressional areas within the slopes with maximum depths that are generally no more than three feet below the lowest normal ground water level.
- Littoral slopes should be designed to meet long (11 to 12 month) hydroperiod requirements and refugia should remain wet during all but the most severe droughts. Any shorter hydroperiod areas should be designed so that they can be accessed for management and maintenance, possibly through the incorporation of recreational trails that could also be used to provide access for exotic plant maintenance.
- The plan should identify suitable areas to build some prototype small (>100 foot wide) and larger (300 to 500 foot wide) littoral shelves. It may be desirable to build some of the littoral shelves using a series of terraces.

***CRITERION:***

***Extent to which habitats created, preserved, enhanced and restored provide improved functions to natural communities.***

- The congregation of littoral areas adjacent to existing natural areas and the incorporation of existing bird rookeries into the plan design in Alternative C generally appears to best meet this criterion.
- In any of the alternatives, it would be a good idea to remove melaleuca and keep areas relatively melaleuca free by mowing in advance of rockmining activity. However, it would be necessary to determine how rockmining companies might be “credited” for such work.



<b>Criteria</b> (Proposed "Lead" Reviewer)	<b>Alternative Concept "A"</b>	<b>Alternative Concept "B"</b>	<b>Alternative Concept "C"</b>
<b>Enhancement of Water Supply :</b> Extent of enhancement of County water supply ( <i>WASD, SFWMD, DEP</i> )	There do not appear to be major differences among the alternatives in terms of additional water quantity.	There do not appear to be major differences among the alternatives in terms of additional water quantity	There do not appear to be major differences among the alternatives in terms of additional water quantity
Effects of plan on potable water quality and Northwest Wellfield groundwater designation ( <i>DERM, DEP</i> )	Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones.	Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones.	Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones. However, this alternative appears to be more restrictive with respect to recreation and littoral zone areas than may ultimately be required by wellfield protection studies.
Quality of water being made available ( <i>SFWMD, DEP, DERM</i> )	Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones.	Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones.	Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones.
Extent of plan's meshing with state and regional plans being developed ( <i>SFWMD, WASD, DEP</i> )	All the alternatives have been designed to be consistent with CERP.  Consistency with wellfield protection plan can not yet be determined.	All the alternatives have been designed to be consistent with CERP.  Consistency with wellfield protection plan can not yet be determined.	All the alternatives have been designed to be consistent with CERP.  Consistency with wellfield protection plan can not yet be determined.

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<p><b>Promoting Social &amp; Economic Welfare of the Community :</b> Avoidance of risk to potable water quality and preservation of groundwater designation of the Northwest Wellfield <b>(DERM, WASD, DEP)</b></p> <p><b>Protecting the Environment:</b> Extent of preservation, enhancement &amp; restoration of Everglades including WCA's <b>(CORPS; Environmental Organizations; ENP; SFWMD)</b></p>	<p>Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones</p> <p>Assuming seepage will be addressed, no significant difference among alternatives in northern and central areas. No enhancement in southern area.</p>	<p>Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones</p> <p>Assuming seepage will be addressed, no significant difference among alternatives in northern and central areas. No enhancement in southern area.</p>	<p>Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones</p> <p>Assuming seepage will be addressed, no significant difference among alternatives in northern and central areas. Alternative c provides the most enhancement to Everglades in Southern area due to restoration along western border of Lake Belt.</p>
<p>Amount / quality / extent of habitat creation, preservation, enhancement &amp; restoration; including biological productivity of lakes &amp; littoral areas <b>(Environmental Organizations; ENP; FWCC)</b></p>	<p>Agree that littoral zone enhancement should be removed from the CERP components and consolidated for greater biological productivity.</p>	<p>Agree that littoral zone enhancement should be removed from the CERP components and consolidated for greater biological productivity. Littoral zone area greater than a consolidation of the minimum required for each lake may be difficult to achieve from the standpoint of mineable rock lost.</p>	<p>Agree that littoral zone enhancement should be removed from the CERP components and consolidated for greater biological productivity. While creation of very large littoral zone along the eastern edge of the Pennsuco creates productive habitat, it leaves most of the lakes with little productivity. Need to discuss appropriate balance. May be better to spread out littoral zone into several large areas throughout the lake system, exclusive of CERP components and inner wellfield protection zone.</p>

Criteria (Proposed "Lead" Reviewer)	Alternative Concept "A"	Alternative Concept "B"	Alternative Concept "C"
<b>Protecting the Environment (continued):</b>			
<p>Extent to which habitats created, preserved, enhanced and restored provide improved functions to natural communities <b>(Environmental Organizations; ENP; FFWCC)</b></p> <p>Extent to which impacts from future development are eliminated <b>(Environmental organizations; Regulatory agencies; P&amp;Z)</b></p>	<p>Same comments as above.</p> <p>Allows increased density of development in wetlands in the Stair Step and North Trail basin. Identifying adequate mitigation in these areas is already difficult and would become increasingly so with added density.</p>	<p>Same comments as above.</p> <p>Maintains the status quo with respect to development allowed in wetlands.</p>	<p>Same comments as above. Addition wetland restoration in Southern area provides additional enhancement of natural communities.</p> <p>Allows increased density of development in wetlands in the Stair Step and North Trail basin. Identifying adequate mitigation in these areas is already difficult and would become increasingly so with added density. Allowing some form of "cluster development" with open conservation areas, as proposed for the stairstep area may provide a better environmental result that maintaining the status quo, where all lands are disturbed to some extent. This concept should also be explored for the north trail basin where high quality wetlands are still present.</p>

<p>Extent to which water quality is enhanced  <b>(Environmental organizations;                  Regulatory agencies; WASD)</b></p>	<p>Existing water quality is good. Differences in plan relate more to possible degradation from various alternatives. While alternative C is the most protective, actual needed protection can not be determined until wellfield protection study is completed.</p>	<p>Existing water quality is good. Differences in plan relate more to possible degradation from various alternatives. While alternative C is the most protective, actual needed protection can not be determined until wellfield protection study is completed.</p>	<p>Existing water quality is good. Differences in plan relate more to possible degradation from various alternatives. While alternative C is the most protective, actual needed protection can not be determined until wellfield protection study is completed.</p>
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**LAKE BELT ALTERNATIVE CONCEPTS  
EVALUATION 10/10/00**

**DRAFT**

**SUBMITTED BY MIAMI-DADE PARK AND RECREATION DEPARTMENT  
PLANNING AND RESEARCH DIVISION**

**Promoting Social & Economic Welfare of the Community:  
Extent and diversity of recreational opportunities –**

*Alternative Concept “A”*

The existing Miami-Dade County Park, M. E. Thompson, is located in areas designated as Non-Accessible Lake, Recharge Zone and Wetland Restoration Area. The 630-acre property is leased from the State of Florida under the conditions that it be used as a public park and recreational and educational area. The location of M. E. Thompson Park presents the potential of fulfilling a variety of recreational needs for northwestern Miami-Dade County; however, there must be sufficient upland acreage to operate and provide necessary amenities and infrastructure. An alternate site in the northern portion of the Lake Belt area should be identified if the proposed use designation of the current site is not conducive to recreation activity.

In Alternative “A”, the location of M. E. Thompson provides potential access from Krome Avenue, and positions the park as a possible trailhead within the greenways corridor. The current location of the park is suitable, if Alternative “A” can provide sufficient uplands for both day and overnight recreational use. Overnight use includes activities such as camping, and requires areas for tents, RV’s and group use. Passive day use at this site may be met with the proposed greenways and through the addition of primitive seasonal trails that will provide areas for picnicking, hiking, biking fishing and non-motorized boating. Currently M. E. Thompson Park provides approximately 37 acres for camping and a boat launch, both are on the southeast side of the canal and in the area designated for recharge treatment.

This alternative provides good connectivity to park sites by way of north/south greenways corridors. Sufficient opportunities are provided for primitive trails throughout the Pennsuco Wetland.

For more efficient management, several recreational nodes should be combined to create more concentrated and accessible facilities. The node in the central area of Krome Avenue should be re-designated as an access point to the canal or trailhead (a location of less intense use). The primitive trails in the center of the Pennsuco wetland can be removed and additional primitive trails provided at M. E. Thompson. The two nodes adjacent to the lakes south of the prison, should be combined. This will provide one central area of sufficient size that serves both the passive lake on the north and non-passive lake on the south.

There may be an access problem to the central lake areas designated for passive use. Access is provided only by the proposed greenways or primitive trails, and appears to be over one mile to the nearest road or recreational node. It may be more logical to focus this type of recreational activities in the passive lake area located in the southwestern corner of the Lake Belt.

***Alternative Concept “B”***

This Alternative is more consistent with comments made regarding Alternative “A”. Fewer, more logically placed recreational nodes provide for efficient management and operation of facilities. The recreational node in center portion of Krome Avenue should be noted as an access point to canal, and not necessarily as a recreational node.

Additional primitive trails should be provided at M. E. Thompson Park and in the southern section of the Lake Belt to connect Trail Glades with the recreational node south of the prison.

The central north/south greenway corridor provides connectivity and ample opportunities for passive recreational activities. If the findings from the wellfield protection study indicate that the proposed greenway is in conflict with wellfield protection, a central corridor should be proposed along the western edge of the protection line.

### **Alternative Concept “C”**

This alternative does not adequately address a realistic recreational component for a Lake Belt Master Plan. The diversity of recreational opportunities is limited and there is a lack of connectivity between recreation nodes. In order to control access and inappropriate recreational use within sensitive areas, the Master Plan must provide alternative areas for a variety of recreational activities. Adequate facilities should be designated that accommodate passive recreational opportunities, as well as areas for intense use.

### **General Comments**

Regardless of the preferred Alternative Concept Plan chosen at the conclusion of Lake Belt Phase II Detailed Master Plan, provisions for the following three types of recreational activities should be provided:

1. Active consumptive use such as jet skis, water skis, parasailing, group picnicking-possibly located in south node or adjacent to proposed accessible lake in stair-step area
2. Moderate consumptive use such as shoreline and motorized boat fishing and group picnicking
3. Passive non-consumptive use such as camping, family picnicking, canoe/kayak/sailing and nature trail activities

As discussed under each specific alternative, linkage is needed between proposed recreational nodes, as well as to recreational facilities and centers of activity outside the Lake Belt Area. This may be through greenways, blueways, transportation corridors and/or equestrian trails.

In addition, sufficient upland areas must be designated that can provide the required infrastructures, such as:

- Parking

Miami-Dade County Parks Department Comments  
Lake Belt Alternative Concepts

- Shelter
- Park Manager and Security Office
- Service and Maintenance Areas
- Recreation facilities
- Sewage and water treatment facilities
- Buffers
- Internal linkage and circulation
- Etc.





FRIENDS OF THE  
**EVERGLADES**  
*Founded by Marjory Stoneman Douglas*

Dec. 1, 2000

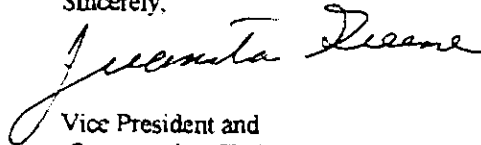
Jim Jackson  
Lake Belt Committee  
South Florida Water Management District

Dear Jim:

I regret to report that I will be unable to attend the Dec. 15 meeting because I will be out of town for the holidays.

However, I would like to register my opposition as the representative of Friends of the Everglades to the draft Phase II plan because Friends considers the mitigation provisions totally inadequate and because there are no guarantees for protecting the parts of the Everglades that fall within the plan. In a way I feel that Friends is a voice crying in the wilderness because of the makeup of the Lake Belt Committee which is heavily weighted in favor of the rock mining industry. Therefore I ask that you make sure that no one gets the impression that Friends approves this plan. I also ask that this letter be included in any information the Committee may distribute about the plan.

Sincerely,



Vice President and  
Conservation Chair



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# **Appendix J**

## **Summary Table of Evaluation Comments**

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**1. ENHANCEMENT OF WATER SUPPLY**

<b>Criteria</b>	<b>Comments to Alternative Concept "A"</b>	<b>Comments to Alternative Concept "B"</b>	<b>Comments to Alternative Concept "C"</b>
<b>Extent of enhancement of County water supply</b>	A) There do not appear to be major differences among the alternatives in terms of additional water quantity.	A) There do not appear to be major differences among the alternatives in terms of additional water quantity	A) There do not appear to be major differences among the alternatives in terms of additional water quantity
<b>Effects of plan on potable water quality and Northwest Wellfield groundwater designation</b>	A) Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones.	A) Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones.	A) Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones. However, this alternative appears to be more restrictive with respect to recreation and littoral zone areas than may ultimately be required by wellfield protection studies.
<b>Extent of enhancement of hydroperiod &amp; flows to Everglades &amp; Florida Bay</b>	No comments received		
<b>Extent of enhancement of wet &amp; dry season flows to Biscayne Bay</b>	No comments received		
<b>Water quantity available in drought conditions for County &amp; Everglades system incl. Biscayne &amp; Florida Bays &amp; regional estuaries</b>	No comments received		
<b>Quality of water being made available</b>	A) Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones.	A) Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones.	A) Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones.
<b>Extent of plan's meshing with state and regional plans being developed</b>	A) Consistency with wellfield protection plan can not yet be determined.	A) Consistency with wellfield protection plan can not yet be determined.	A) Consistency with wellfield protection plan can not yet be determined.
<b>Coordination with CERP (formerly Restudy)</b>	A) All the alternatives have been designed to be consistent with CERP.	A) All the alternatives have been designed to be consistent with CERP.	A) All the alternatives have been designed to be consistent with CERP.
<b>OTHER</b>	A) <b>3rd</b> most desirable for overall enhancement of water supply (see "General Comment," below)	A) <b>4th</b> most [i.e. least] desirable for overall enhancement of water supply (see below)	A) <b>2nd</b> most desirable for overall enhancement of water supply (see below)

**General Comments Received (re: Enhancement of the Water Supply):**

A) Enhancement of water supply, the hydroperiod in the Pennsuco wetlands and fresh water flows into Biscayne Bay all depend on the specifics of the Corps' design for containing seepage on the eastern edge of the Pennsuco wetlands. This applies not only to the physical features of the design (seepage barrier, canals pumps, etc.) but also to the future regulation schedules which implement the hydrologic targets for the areas in question. The conservation groups alternative (called "D" hereafter) offers the most flexibility to the Corps for choosing a design most suitable to Everglades restoration goals, and is, for that reason, the most desirable. C is second, A third and B fourth.

**2. MAXIMIZING EFFICIENT ROCKMINING**

Criteria	Comments to Alternative Concept "A"	Comments to Alternative Concept "B"	Comments to Alternative Concept "C"
<b>Total volume of rock available through 2050</b>		A) [Concept] "B" obviously maximizes rock mining.	
<b>Proximity of proposed mining lands to processing &amp; transport facilities</b> See "General" comments below			
<b>Quality of rock in lands available for mining</b> See "General" comments below			
<b>Extent of increased certainty of future permitting</b> See "General" comments below			
<b>OTHER</b>	<p>A) [The member] would prefer Alternate A; eliminate the land barrier [running north south] between the two tree islands which are located just east of the Pennsuco area. The lakes would now all be indicated as "inaccessible" up to the Pennsuco area.</p> <p>B) Concept Plan "A" is our best estimate of where our mining should take place and indicates the final footprint of mining on those lands we either own, lease or plan to acquire in the future.</p>	A) In order to propose an Alternate that would show accessible [and] inaccessible lake area, adjacent to the Pennsuco, please change Concept Plan "B" to show that the western portion of the Lakes, westward of the land bridge between the two tree islands, to be shown as accessible lake areas.	<p>A) Objections are made to the provision of area for wetland restoration [Sec.s 24, 25, 26, T54S, R38E] for the following grounds:</p> <p>(1) These wetlands are cut off by the L31 Canal and Levee from other wetlands on the west and by the Krome Detention Center to the north.</p> <p>(2) The Everglades National Park Extension provides for wetland restoration to the west. It is a waste of high quality rock and the investment in railroad transportation facilities to devote rock mining land at the railhead for wetlands restoration.</p> <p>(3) These owners have a vested right to mine the area, have invested significant sums in reliance of that fact and are obliged to pay mitigation for the purchase or restoration of other wetlands or participate in the Lake Belt Mitigation Programs.</p>
<b>General Comments Received (re: Mining):</b>			
<p>A) A portion of the mitigation funds should be made available to buy land from willing sellers when it becomes available in the residential enclaves north of Okeechobee Road. Over a fifty year period few if any residential owners will be left. Such a plan would remove potential sources of contamination from the Lake Belt area.</p> <p>B) Sections ...[24, 25 and 26, Township 54S, Range 38E] constitute a zoned and permitted active rock quarry at a railhead with high quality and quantity of limestone remaining to be mined and shipped by rail directly from the property to the consumer. The use and operation of the whole property for mining has received all necessary governmental approvals. The owners and the tenant operator have invested large sums of money in engineering, construction, machinery and equipment and other operational facilities of a successful rock mine. In addition to being at a railhead, the rock mine is remote from any residential community so that appropriate blasting is not a problem.</p> <p>C) The owners [of the above Sections] respectfully object to any concept or plan which would limit or deprive them of the vested rights they have to mine their property; and to use the residual property for their own planned industrial purposes. Accordingly, the owners hereby object to the following provisions of Concept Plans A, B &amp; C:</p> <p>(1) All three alternative concept plans locate a proposed park/recreation node on lands reserved by the owners' mining plan for industrial use upon completion of the mining operations which is non-jurisdictional upland. (The planners might wish to consider placing the park/recreational node west of the railhead so that the public could enjoy both east and west of the node. Furthermore, such a node could be reached by tram on the former railroad tracks.)</p> <p>(2) All three alternative plans suggest that mining within them will be subject to DERM restrictions for wellfield protection based on regulations premised or sized for 140 million gallons per day. These owners object to any such limitation or restriction by DERM as to their vested right to already approved mining activity, including the already approved depth to which they may mine. They object because the proposed DERM restrictions are sized for 140 million gallons per day when the West Dade wellfield is only permitted for 25 million gallons per day. In addition, the owners have engaged MacVicar, Federico and Lamb to model and delineate the actual cone of influence as opposed to the cone adopted as an interim protection zone in 1984. This study will be sent...under separate cover.</p> <p>Furthermore, the...Stipulation and Order in the case of <i>General Portland, Inc. v. Dade County</i>, case No. 82-15182 CA 22 exempts the subject property from the regulatory jurisdiction of DERM.</p> <p>D) Any public use or acquisition of [these] lands [sec.s 24-26, T54S, R38E] would require an enormous amount of just compensation, under the Constitutions of Florida and the United States of America, not only for the rock mining value of the land taken; but also for severance damages to the remainder including, land and building improvements, machinery and equipment, together with business damages to the owners and tenant's enterprises located and operating on the property.</p>			

**3. PROMOTING SOCIAL & ECONOMIC WELFARE OF THE COMMUNITY**

<b>General Comments Received (re: Promoting Social &amp; Economic Welfare)</b>			
<p>A) Protection of the water quality and available water quantity of the northwest wellfield is the most important public purpose of the Lake Belt. Rockmining has been discussed [above].... Non-rockmining industries should be discouraged because of their potential for introducing sources of contamination into the Lake Belt area. Features to contain spills from major accidents on the turnpike should be added to the design. Private property rights are and should remain the same in the Lake Belt area as they are in the rest of Dade County. Recreational opportunities should be encouraged as long as access and uses are controlled in a manner which protects water quality.</p>			
<b>Criteria</b>	<b>Comments to Alternative Concept "A"</b>	<b>Comments to Alternative Concept "B"</b>	<b>Comments to Alternative Concept "C"</b>
<b>Extent and diversity of recreational opportunities</b>	<p>A) This alternative provides good connectivity to park sites by way of north/south greenways corridors. Sufficient opportunities are provided for primitive trails throughout the Pennsuco Wetland.</p> <p>B) For more efficient management, several recreational nodes should be combined to create more concentrated and accessible facilities. The two nodes adjacent to the lakes south of the prison, should be combined. This will provide one central area of sufficient size that serves both the passive lake on the north and non-passive lake on the south.</p> <p>C) The node in the central area of Krome Avenue should be re-designated as an access point to the canal or trailhead (a location of less intense use).</p> <p>D) The primitive trails in the center of the Pennsuco wetland can be removed and additional primitive trails provided at M. E. Thompson.</p> <p>E) There may be an access problem to the central lake areas designated for passive use. Access is provided only by the proposed greenways or primitive trails, and appears to be over one mile to the nearest road or recreational node. It may be more logical to focus this type of recreational activities in the passive lake area located in the southwestern corner of the Lake Belt.</p> <p>F) Greater opportunities, but not desirable.</p>	<p>A) This Alternative is more consistent with comments made regarding Alternative "A". Fewer, more logically placed recreational nodes provide for efficient management and operation of facilities. The recreational node in center portion of Krome Avenue should be noted as an access point to canal, and not necessarily as a recreational node.</p> <p>B) Additional primitive trails should be provided at M. E. Thompson Park and in the southern section of the Lake Belt to connect Trail Glades with the recreational node south of the prison.</p> <p>C) The central north/south greenway corridor provides connectivity and ample opportunities for passive recreational activities. If the findings from the wellfield protection study indicate that the proposed greenway is in conflict with wellfield protection, a central corridor should be proposed along the western edge of the protection line.</p> <p>D) Most appropriate concept and could be enhanced by including elements from Alternative Concept A.</p>	<p>A) This alternative does not adequately address a realistic recreational component for a Lake Belt Master Plan.</p> <p>B) The diversity of recreational opportunities is limited and there is a lack of connectivity between recreation nodes.</p> <p>C) In order to control access and inappropriate recreational use within sensitive areas, the Master Plan must provide alternative areas for a variety of recreational activities. Adequate facilities should be designated that accommodate passive recreational opportunities, as well as areas for intense use.</p> <p>D) Least opportunities.</p>

**3. PROMOTING SOCIAL & ECONOMIC WELFARE OF THE COMMUNITY (continued)**

**General comments received (re: Recreational Opportunities)**

A) The existing Miami-Dade County Park, M. E. Thompson, is located in areas designated as Non-Accessible Lake, Recharge Zone and Wetland Restoration Area. The 630-acre property is leased from the State of Florida under the conditions that it be used as a public park and recreational and educational area. The location of M. E. Thompson Park presents the potential of fulfilling a variety of recreational needs for northwestern Miami-Dade County; however, there must be sufficient upland acreage to operate and provide necessary amenities and infrastructure. An alternate site in the northern portion of the Lake Belt area should be identified if the proposed use designation of the current site is not conducive to recreation activity...the location of M. E. Thompson provides potential access from Krome Avenue, and positions the park as a possible trailhead within the greenways corridor [concepts "A" and "B"]. The current location of the park is suitable, if [the concepts] can provide sufficient uplands for both day and overnight recreational use. Overnight use includes activities such as camping, and requires areas for tents, RV's and group use. Passive day use at this site may be met with the proposed greenways and through the addition of primitive seasonal trails that will provide areas for picnicking, hiking, biking fishing and non-motorized boating. Currently M. E. Thompson Park provides approximately 37 acres for camping and a boat launch, both are on the southeast side of the canal and in the area designated for recharge treatment.

B) Regardless of the preferred Alternative Concept Plan chosen at the conclusion of Lake Belt Phase II Detailed Master Plan, provisions for the following three types of recreational activities should be provided:

1. Active consumptive use such as jet skis, water skis, parasailing, group picnicking- possibly located in south node or adjacent to proposed accessible lake in stair-step area
2. Moderate consumptive use such as shoreline and motorized boat fishing and group picnicking
3. Passive non-consumptive use such as camping, family picnicking, canoe/kayak/sailing and nature trail activities

As discussed under each specific alternative, linkage is needed between proposed recreational nodes, as well as to recreational facilities and centers of activity outside the Lake Belt Area. This may be through greenways, blueways, transportation corridors and/ or equestrian trails. In addition, sufficient upland areas must be designated that can provide the required infrastructures, such as:

- Parking
- Shelter
- Park Manager and Security Office
- Service and Maintenance Areas
- Recreation facilities
- Sewage and water treatment facilities
- Buffers
- Internal linkage and circulation
- Etc.

<b>Economic vitality of rock-mining industry</b>	No comments received		
<b>Economic vitality of non-rock-mining industries</b>	No comments received		
<b>Economic value of clean, quality environment</b>	No comments received		
<b>Protection of public health</b>	Not desirable.	<b>Most appropriate concept. Could be enhanced with elements of Concept C.</b>	<b>Critical elements that can enhance Concept B are: proposed land uses for north trails area (special district &amp; Industrial/office)</b>



**3. PROMOTING SOCIAL & ECONOMIC WELFARE OF THE COMMUNITY (Continued)**

Criteria	Comments to Alternative Concept "A"	Comments to Alternative Concept "B"	Comments to Alternative Concept "C"
<p><b>Address rights of all private &amp; public land owners, large and small; Protect private property rights</b></p>	<p>A) <i>Resulting additions to existing property rights:</i>                      In Stairstep area: 1,328 DUs (+ 400%), and 4 Business districts;                       In North Trail area: 2,360 DUs added (@ 3.75 du/ac) (18X increase), plus ±200 Ac Industrial and 2 business districts;                       In Central Lake Belt area, ±1,700 acres with rights for 340 DUs warrant acquisition by mining companies if deemed by the Plan to be acceptable for mining, or by environmental mitigation entity. Where private entities acquire such sites for mitigation bank operations and not for other economic development, consideration could be given to allow transfer of development rights from such sites to other Lake Belt property approved for development at higher than currently allowed density, with the caveats discussed elsewhere in this form.</p> <p>B) To some extent this option appears to address most concerns of residents located in the C-9 and in the North Trails area with respect to zoning &amp; land-use.</p> <p>C) Full protection of private resident owners rights is linked to final mitigation program</p>	<p>A) <i>Resulting additions to existing property rights:</i>                      In Stairstep area: No change in residential development rights; 3 Business districts added.                       In North Trail area: No change in residential development rights although absence of recommendation to urbanize the area may partially deflate speculative increment of land value; One Business district added.                       Central Lake Belt area: Same observation as noted for Alt. A.</p> <p>B) Similar to option A, this option provides for most resident owners' needs in terms of land-use and zoning.</p> <p>C) Full protection of private resident owners rights is linked to final mitigation program.</p>	<p>A) <i>Resulting additions to existing property rights:</i>                      In Stairstep area: 217 DUs added @ 1du/3ac (67% increase); or 1,302 DUs added @ 1du/1Ac (400% increase); and 2 Business districts added.                       In North Trail area: 4,160 DUs added @ 3.75 du/ac (31X increase) includes ± 200 Ac changed from Industrial to Low Density Residential ; ± 240 Acres planned Industrial remains unchanged; One Business district added.                       Central Lake Belt area: Same observation as noted for Alt. A.</p> <p>[Note: This Alternative provides that allowances for increased residential density in the Stairstep and North Trail areas could be made contingent upon acquisition/transfer of development rights from other Lake Belt properties, such as from out-parcels in the Central Lake Belt or perhaps from property recommended for conservation but which is not sold to government agencies. This provision would moderate the creation of new development rights by sharing some of the created rights with the owners of the parcels from which the development rights were sent.]</p> <p>B) Option similar to A &amp; B, but more restrictive in the C-9 area for resident owners</p> <p>C) Full protection of private resident owners rights is linked to final mitigation program.</p>
<p><b>General comments received (re Rights of Land Owners)</b></p> <p>A) Before considering differences among alternative land use configurations, consideration should be given to recommending legislation pertaining solely to the Lake Belt which would provide the following: a) any State, regional, or County agency acquisition activities undertaken to implement adopted Phase 2 Lake Belt Plan recommendations would be based on appraised land values in the area on or around September 1, 2000, and b) such acquisitions would include a right of first refusal for the seller (or heirs) to reacquire the property (at purchase price plus land inflation factor) if the agency later finds that it does not need the property for natural resource management purposes.</p> <p>B) See other General comments in rock mining section, above.</p>			

**3. PROMOTING SOCIAL & ECONOMIC WELFARE OF THE COMMUNITY (Continued)**

Criteria	Comments to Alternative Concept "A"	Comments to Alternative Concept "B"	Comments to Alternative Concept "C"
<p><b>Compatibility of land uses; Elimination of potential for future conflictual land uses &amp; zoning changes; Consistency with County land use planning</b></p>	<p>A) Blasting activity is incompatible with adjacent land uses existing or planned at the Urban Development Boundary (UDB) and at the Broward County boundary.</p> <p>B) Introduction of suburban residential development in the Lake Belt area will increase the occurrence of incompatibility between existing and planned quarries in the Lake Belt area and residential uses.</p> <p>C) CDMP Land Use Element amendments will be required for Stairstep area proposals for increased residential density, TDR provisions, and Business nodes; and for the North Trail area UDB extension, expansion of the planned industrial area, and introduction of suburban residential and business development. Associated amendments to the Traffic Circulation, Conservation and/or Capital Improvements elements may also be required</p>	<p>A) Blasting incompatibilities will remain essentially unaffected.</p> <p>B) CDMP amendments will be required for Business nodes.</p> <p>C) This option provides for greater compatibility with current land uses and zoning provisions per MDCMDP.</p>	<p>A) Comments are the same as for Alternative Concept A; plus approximately 200 acres would require be redesignation on the CDMP Land Use Plan map from Industrial to Low Density Residential.</p>
<p><b>General comments received (re Compatibility of Land Uses)</b></p> <p>A) A problematic aspect of Alternatives A and C that should be addressed is that once suburban development is introduced into an area, little can be done to prevent it from being approved on adjacent land. Any recommendation of the Committee to introduce such uses into the area should be done with the recognition that the use could readily be expanded to adjacent areas.</p> <p>B) Before considering differences among the various alternatives, to promote compatibility between mining and non-mining land uses, consideration should be given to recommending a mining phasing policy such as the following, to be implemented through State and County development regulation authority including, but not limited to, environmental permitting: Any land to be mined within 1 mile of, a) the UDB (where designated in the CDMP on September 1, 2000), b) the Broward County boundary, or c) land recommended for increased residential density in the Phase 2 Lake Belt Plan, must file all necessary requests for development orders within 18 months after the publication date of the Phase 2 Lake Belt Plan; mining of the property must commence within 2 years after issuance of the development orders and must terminate not later than 10 years after publication date of this Lake Belt Plan. Land between 1 and 2 miles of the foregoing boundaries and areas would have an additional 5 years to terminate quarrying activities.</p>			
<p><b>Provision of acquisition or compatible lawful use of parcels not intended for mining</b></p>	<p>No comments received</p>		

**3. PROMOTING SOCIAL & ECONOMIC WELFARE OF THE COMMUNITY (Continued)**

**Provides for a sustainable South Florida**

A) This alternative would introduce suburban residential community development west of the Turnpike in north Miami-Dade without significantly increasing the population capacity of the County. Such a spread form of residential development has repeatedly been demonstrated to be very counterproductive in many respects. One noteworthy issue is the distance-related costs for labor-intensive services. Examples of these include police, fire and rescue services, solid-waste pickup and school bussing. Moreover, this is a highly flood-prone basin, lower in elevation than the urbanized areas to the east and the Everglades to the west. It will not readily drain by gravity, can pond water for lengthy periods, and would be subject to pressure for flood protection by installation and operation of pumping facilities, as recently demanded to remedy flooding in other poorly drained areas of the County. Among the other reasons Miami-Dade County's comprehensive plan has not provided for the urbanization of this and other interior wetlands is that the draining of these areas would be detrimental to the County's existing and potential water supplies and other environmental resources dependent on a semblance of the native hydrologic regime.

A) This alternative introduces only 4 new business development nodes. It will not directly require additional drainage, but development of business districts may invite additional land speculation and development pressure on surrounding land.

**B) Provides for greater Biological value.**

A) As with Alternative A, this Alternative would introduce suburban expansion into far northwest Miami-Dade, an area intrinsically unsuited for such development. Spread residential development on 1-acre to 3-acre lots is, in particular, fiscally detrimental, and the general area would be prone to flooding. A development scheme that would cluster the allowed dwellings into compact enclaves could slightly moderate some labor-intensive public service costs such as those noted above, but would introduce other costs for central stormwater, and possibly potable water and wastewater, facilities. Additionally, the land parcelization pattern does not readily enable such a pattern of development. Accordingly, some type of development rights transfer program would have to be created at public expense. The transfer of development rights out of the Lake Belt into the urban core or serviced suburbs could be fiscally advantageous for taxpayers, but would not produce the development expressly desired by Lake Belt property owners. Similarly, transfer of development rights into enclaves in the Lake Belt may not produce a type of residential arrangement expressly desired by the property owners, and may not significantly reduce the public service cost deficit. While the additional costs to serve 500 to 1,500 additional households in the Stairstep area may not be significant from a Countywide perspective, this action should be viewed as a precedent and would not necessarily remain the limit of such development in the area.

B) The North Trail residential proposal is not inconsistent with the Urban Expansion designation of that area or the general trend of development on adjacent land. While residential development at typical low density takes many decades to pay for itself, this area is relatively compact and contiguous to the existing urbanized area and would not be as fiscally negative as the estate density residential requested for the more distant Stairstep areas.

**C) Provides for greater wetlands/wellfield protection.**

**3. PROMOTING SOCIAL & ECONOMIC WELFARE OF THE COMMUNITY (Continued)**

<b>Avoidance of risk to potable water quality and preservation of groundwater designation of the Northwest Wellfield</b>	A) Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones	A) Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones	A) Difficult to assess pending the resolution of well field protection study and finalization of location of wellfield protection zones
<b>Costs of infrastructure construction, operation and maintenance</b>	A) Additional streets and stormwater management facilities will be required in addition to the services noted above for the 3,600 DUs, 6 business nodes, and 200 acres of additional industrial development. The business and industrial areas will also require extension of central sanitary facilities or exceptions to these requirements.	A) This alternative produces no change in service requirements for residential development, only for the business districts.	A) This Alternative may require central sanitary facilities and stormwater management facilities for the residential clusters, depending on the density and layout. Delivery of the distance-affected labor-intensive services noted above would also be required. If a TDR program is required, a cost will be borne by the public to formulate and start an equitable, acceptable program. The open spaces to be preserved by the TDR program would require maintenance, or enforcement oversight, particularly if they are numerous or small.

**4. PROTECTING THE ENVIRONMENT**

<b>General comments received (re Protecting the Environment)</b>  A) Rockmining destroys wetlands and the least rockmining will be best for the environment as long as the non-mined lands are brought into public ownership and are not available for private development. Rockmining is preferable to other private development of lands in the Lake belt area. Because of CERP's size and significance for the future of South Florida all of its features should be accommodated in the final Lake belt plan. Transfer of all mined out properties into public ownership should be part of the final Lake Belt plan. [Concept] D [prepared by conservation groups] is the most desirable plan from an environmental point of view. C is second.			
<b>Criteria</b>	<b>Comments to Alternative Concept "A"</b>	<b>Comments to Alternative Concept "B"</b>	<b>Comments to Alternative Concept "C"</b>
<b>Extent of preservation, enhancement &amp; restoration of Everglades including WCA's</b>	A) Assuming seepage will be addressed, no significant difference among alternatives in northern and central areas. No enhancement in southern area.	A) Assuming seepage will be addressed, no significant difference among alternatives in northern and central areas. No enhancement in southern area.	A) Assuming seepage will be addressed, no significant difference among alternatives in northern and central areas. Alternative c provides the most enhancement to Everglades in Southern area due to restoration along western border of Lake Belt.
<b>Amount / quality / extent of habitat creation, preservation, enhancement &amp; restoration; including biological productivity of lakes &amp; littoral areas</b>	A) Agree that littoral zone enhancement should be removed from the CERP components and consolidated for greater biological productivity.	A) Agree that littoral zone enhancement should be removed from the CERP components and consolidated for greater biological productivity. Littoral zone area greater than a consolidation of the minimum required for each lake may be difficult to achieve from the standpoint of mineable rock lost.	A) Agree that littoral zone enhancement should be removed from the CERP components and consolidated for greater biological productivity. While creation of very large littoral zone along the eastern edge of the Pennsuco creates productive habitat, it leaves most of the lakes with little productivity. Need to discuss appropriate balance. May be better to spread out littoral zone into several large areas throughout the lake system, exclusive of CERP components and inner wellfield protection zone.

**4. PROTECTING THE ENVIRONMENT (continued)**

<b>Extent to which habitats created, preserved, enhanced and restored provide improved functions to natural communities</b>	A) Same comments as [comment “A”] above.	A) Same comments as [comment “A”] above.	A) Same comments as [comment “A”] above. Addition wetland restoration in Southern area provides additional enhancement of natural communities.
<b>Amount of exotic vegetation removed and controlled **</b> <i>**not a factor / variable in Master Plan Alternative Concepts</i>	No comments received		
<b>Extent to which impacts from future development are eliminated</b>	<p>A) Allows increased density of development in wetlands in the Stair Step and North Trail basin. Identifying adequate mitigation in these areas is already difficult and would become increasingly so with added density.</p> <p>B) 3,600 additional DUs; 576 acres of additional Industrial. Impacts not eliminated.</p>	<p>A) Maintains the status quo with respect to development allowed in wetlands.</p> <p>B) 4 additional Business nodes; The least additional impact of the alternatives; Reduction to 1 node in each region, with recreation the dominant use and business a secondary use in a single centrally located north node, would further reduce impacts.</p>	<p>A) Allows increased density of development in wetlands in the Stair Step and North Trail basin. Identifying adequate mitigation in these areas is already difficult and would become increasingly so with added density. Allowing some form of “cluster development” with open conservation areas, as proposed for the stairstep area may provide a better environmental result that maintaining the status quo, where all lands are disturbed to some extent. This concept should also be explored for the north trail basin where high quality wetlands are still present.</p> <p>B) 5,400 additional DUs; 3 additional Business nodes; 200 fewer acres of Industrial in North Trail area.</p> <p>Impacts not eliminated unless a TDR program neutralizes number of DUs in Lake Belt area or produces more compact and environmentally superior spatial distribution of them.</p>
<b>Extent to which water quality is enhanced</b>	A) Existing water quality is good. Differences in plan relate more to possible degradation from various alternatives. While alternative C is the most protective, actual needed protection can not be determined until wellfield protection study is completed.	A) Existing water quality is good. Differences in plan relate more to possible degradation from various alternatives. While alternative C is the most protective, actual needed protection can not be determined until wellfield protection study is completed.	A) Existing water quality is good. Differences in plan relate more to possible degradation from various alternatives. While Alternative C is the most protective, actual needed protection can not be determined until wellfield protection study is completed.