Appendix M

EEC MITIGATION REQUIREMENTS FOR COE LANDS

ELBA EXPRESS MITIGATION REQUIREMENTS FOR US ARMY CORPS OF ENGINEERS LANDS

BACKGROUND

The Federal Energy Regulatory Commission (FERC) is evaluating a request to expand the Liquefied Natural Gas (LNG) facility in Savannah and construct a pipeline across the state to join an existing pipeline near Hartwell, GA. The US Army Corps of Engineers, Savannah District is a Cooperating Agency on preparation of the Environmental Impact Statement that is a part of that evaluation.

The Corps is involved in four aspects in the proposed action: (1) Regulatory issues for expanding the existing LNG terminal, (2) Regulatory issues for constructing the pipeline across the state, (3) civil works issues where the pipeline crosses Corps-managed lands at Savannah District's reservoir projects, and (4) civil works issues where the pipeline crosses Corps mitigation lands in Georgia at the reservoir projects.

For impacts to the civil works projects (issues #3 and 4 above), the Corps followed the procedures described in EC 1130-2-540, titled "Evaluating Requests For Development Or Use Of Corps Land And Water Resources". An entity proposing to use Corps lands must pay fair market value for the lands to be used, compensate for impacts to project operations, and address impacts to any special lands (in this case, mitigation lands).

PROPOSED ACTION

Elba Express proposes to use Corps lands to install, operate and maintain a gas pipeline to transport natural gas. The new gas line would be part of a line connecting the Southern LNG terminal in Savannah to the Transco line near Hartwell, Georgia. The Corps would need to issue easements to allow use of the property they own or manage. The Corps would also need to modify the mitigation plan it has in place to compensate for impacts of constructing the Richard B. Russell Lake Project.

The proposed action would impact Corps-owned or managed lands to the following extent:

LOCATION	PERMANENT IMPACTS	TEMPORARY IMPACTS	TOTAL ACRES
Richard B. Russell	5.40 acres	13.83 acres	19.23
J. Strom Thurmond	3.03 acres	6.68 acres	9.71
Hartwell	4.60 acres	15.13 acres	19.73
Dilane Plantation	0	41.33 acres	41.33

Only temporary impacts would occur to mitigation lands at the DiLane Plantation.

PROPOSED MITIGATION

The Corps coordinated with natural resource agencies and determined that the following ratios would be appropriate to replace wildlife values of the properties that would be adversely impacted and compensate for other impacts to projects operations on those lands:

MITIGATION RATIOS: 3:1 for permanent impacts
0.5:1 for temporary impacts to project lands and DiLane
1:1 for temporary impacts to Richard B. Russell collar lands

Applying those ratios to the acreage that would be impacted results in the following mitigation requirements:

LOCATION	PERMANENT IMPACTS	TEMPORARY IMPACTS	TOTAL MITIGATION ACRES
Richard B. Russell	16.2 acres	13.83 acres	30.03
J. Strom Thurmond	9.09 acres	3.34 acres	12.43
Hartwell	13.8 acres	7.57 acres	21.37
Dilane Plantation	0	20.67 acres	20.67
Total:	39.09 acres	45.41 acres	84.5 acres

If the permanent and temporary impacts are combined, the overall mitigation ratio for the proposed project is as follows: 84.5 acres / 90 acres = 0.94:1

MITIGATION PLAN

During review of the proposed action, Elba Express agreed to relocate where the proposed pipeline would cross Corps lands at the Hartwell Lake Project to portions of an existing pipeline corridor. That relocation minimized use of Corps lands to the extent possible with the pipeline alignment that was selected; therefore, we will not require any additional mitigation land acreage for the Hartwell project.

Elba Express would mitigate for the impacts of its project on Corps lands through two main avenues. The first is through actions taken during and soon after construction to minimize the effects of those activities.

The basic environmental protections are described in Elba's Upland Erosion Control, Revegetation and Maintenance Plan (Appendix E of EIS). In addition to those requirements, Elba will also implement the following procedures on US Army Corps of Engineers properties:

- During construction within any wetlands, topsoil will be stripped, segregated and used in final grading and revegetation.
- Construction time for all stream or wetland crossings will be kept to the minimum necessary to complete the crossing. Once initiated, construction and then site

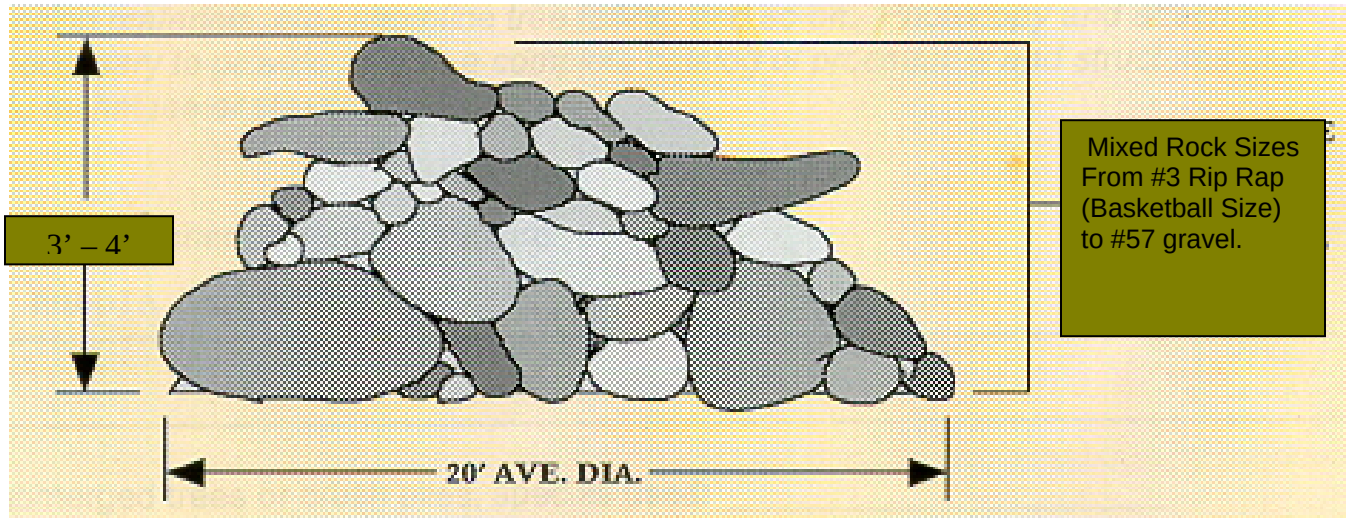
restoration activities will be performed continuously until completed, unless prior approval from the Corps is received.

- All disturbed areas will be seeded with a temporary cover immediately following final grading and, where appropriate, completion of directional drill.
- Permanent seeding will consist of native, warm season grasses such as bluestems and Indian grass (Andropogon spp. and Sorghastrum spp.) and occur during appropriate seeding dates.
- With the exception of the DiLane Plantation, all other temporary workspaces will be planted with native hardwood seedlings (oak or hickory with 18-24" height) at a 10'X10' spacing, with a minimum survival rate of 70% after one-year. An independent agent of the easement holder will monitor survival at one-year and replant if necessary to achieve the designated survival rate of 300 seedlings per acre.
- Mowing the Elba Express permanent right-of-way will not be allowed between April 1st and June 15th to minimize impacts to ground nesting birds. Due to DiLane being managed as a quail area, mowing the Elba Express permanent right-of-way will not occur until after September 1st.
- Three Grady ponds occur at DiLane within the boundary of the existing pipeline ROW or in the proposed temporary ROW. Grady ponds are wetlands listed as priority habitats by the Georgia DNR. The hydrology of the pond could be adversely affected (possibly draining the wetland) by placement of the pipeline. An independent agent of the easement holder will monitor and evaluate this site at 6 and 12 months after construction is completed to determine if any long-term impacts to hydrology and wetlands have occurred at the site. The agent will submit a report of his findings to the easement holder and the US Army Corps of Engineers. Using that information the Corps will determine if impacts have occurred that require Elba Express to perform additional mitigation.
- Silt curtains will be used at the crossings of Little River, Beaverdam Creek, and Coldwater Creek.
- The shoreline at Little River crossing, Beaverdam Creek Crossing, and Coldwater Creek crossing will be planted in shallow-rooted shrubs. Immediately adjacent to shoreline and above (475' amsl at Russell and 330' amsl at Thurmond) or in wet areas buttonbush (Cephalanthus occidentalis) and/or silky dogwood (Cornus ammomum) will be planted within the temporary and permanent easement; wax myrtle (Myrica cerifera) and/or flowering dogwood (Cornus florida) can be used in drier areas. Planting should extend in a band beginning at the shoreline to a distance of 15-20 feet from the shoreline.
- In addition to contour mats; rip-rap and gravel will be placed along the lake bottom (below 475' amsl at Russell and 330' amsl) at Thurmond. Specifications are as follows:
    - Two rock piles should be constructed adjacent to the river crossing at Beaverdam Creek. Rock piles should be placed at elevation 460' m.s.l. or lower and within 300' upstream and 300' downstream of the Beaverdam Creek crossing. Exact locations of the rock piles will be determined by the U.S. Army Corps of Engineers, Richard B. Russell Operations Manager's Office.

- The composition of the rock piles should be mixed sized rock, with the largest rock a #3 rip rap (basketball size) down to #57 gravel. The rock piles should be at least 20' in diameter at the base and 3' to 4' in height. See Figure 1.

- A layer of #3 rip rap (basketball size) should be placed over the entire length of the stream crossings at Beaverdam Creek and Coldwater Creek up to elevation 475 m.s.l..

Figure 1 – Rock Pile Dimensions – Beaverdam Creek



The second avenue of mitigation is through acquisition of lands to replace the attributes of those that would be impacted by their new use as a pipeline crossing. With the assistance of the Georgia Department of Natural Resources, the US Army Corps of Engineers developed a list of properties that would assist wildlife management at these projects. This list is shown on the following page and ordered according to the priorities for each area. Figures showing the location of various potential sites for the Russell and Thurmond Projects are included on the 13 pages after the list. The sites would serve specific purposes, such as providing access roads to otherwise landlocked tracts. Obtaining access to such tracts would allow us to manage and operate them better for wildlife purposes. Other sites would provide wildlife habitat similar to what is being impacted, while other small tracts may even up boundary lines or similarly make our wildlife management operations more effective or efficient.

Elba Express would obtain those lands either in fee or by easement. If easements are pursued, the Corps will be provided the opportunity to review their wording to ensure they include all the needed uses for the site. To provide flexibility and allow acquisition from willing sellers, the list of properties consists of more acreage than the applicant would need to acquire to fill the mitigation requirement. Elba would pursue properties from that initial list to secure the required mitigation acreages. If this list is exhausted before reaching the required acreages, the Corps will provide additional properties for Elba to pursue. Unless a tract is particularly small, a property owner will generally be considered unwilling to sell if multiple written offers of up to 110% of the fair market

value of the property are not accepted. Any mitigation acreages which cannot be secured by Elba Express, from willing sellers, before the lands are impacted or by 12/31/2008 whichever is earlier, will be compensated for by other equivalent compensation which is mutually agreeable to the Corps and Elba Express.

List of Properties for Elba Express Mitigation Acreages	Acres
DiLane Plantation	
Overall objective of proposed mitigation is to provide access to DiLane Plantation from Highway 56 along DiLane Plantation Road	
Frank C. Griffin tract north of DiLane Plantation Road. Tract is woodland/agriculture.	39.00
Frank C. Griffin tract south of DiLane Plantation Road. Tract is woodland/agriculture.	33.00
Raymond Delaigle, Jr. tract north of DiLane Plantation Road. Woodland will require access easement from Georgia Hwy. 56.	40.00
Replacement of bridge and culvert along DiLane Plantation Road approximately 0.30 miles easterly of Georgia Hwy. 56.	TBD
Charles Brightman Skinner Revocable Living Trust property north of DiLane Plantation Road. Tract is woodland.	76.00
Russell Lake	
Access road R-1, located off the Dan Tucker Road in Elbert County, 60 ft. in width, 30 ft. on either side of center line, with an estimated length of 6,000 linear ft.	8.50
Access road #1 located in Elbert County in the area of Blue Branch, 60 ft. in width, 30 ft. either side of center line, with an estimated length of 3,000 linear ft.	4.25
Access road #2 located in Elbert County in the area of Blue Branch, 60 ft. in width, 30 ft. either side of center line, estimated length of 5,000 linear ft.	6.50
Access road #1 located in Elbert County in the area of Dry Fork Creek, 60 ft. in width, 30 ft. either side of center line, with an estimated length of 4,000 linear ft.	5.50
Access road #2 located in Elbert County in the area of Dry Fork Creek, 60 ft. in width, 30 ft. either side of center line, estimated length of 5,000 linear ft.	6.50
Access road located in Abbeville County, South Carolina, near Beulah Land Farm, 60 ft. in width, 30 ft. on either side of center line, estimated length 4,000 linear feet.	5.50
Purchase of a tract located off Middelton Branch in Elbert County. This tract is entitled "Heardmont" and is currently in the ownership of a timber company. The location is within the existing ACOE buffer.	5.60
Purchase of a tract located off Ruckersville Road in Elbert County. This tract is adjacent to the ACOE buffer to the northeast and is also judged to be in the ownership of a timber company.	10.00
Thurmond Lake	
Purchase of a tract located off Poland Road adjacent to ACOE lands to the west and the Pleasant View Subdivision along the lake front on the north and east.	1.02
Access road at "Dry Fork Creek". 60 ft. in width, 30 ft. on either side of center line. This road leads from Old Petersburg road to ACOE lands to the northeast.	1.71
Access road located in the area of what is believed to be Dry Fork Creek. This access road leads from a county maintained road to the lands owned by the ACOE to the southeast.	3.34
Access road located off Smith Chapel Road with the ACOE lands located to the north.	2.20
Access road at "Fishing Creek Marina", 60 ft. in width, 30 ft. on either side of center line. This road leads from County Road 525 to ACOE lands to the west.	7.90
Purchase of a tract located on GA Hwy. 220 between GA Hwys. 43 and 47. This tract is on the southerly side of GA Hwy. This tract is bordered by lands owned by the ACOE to the southwest.	0.82
Access road at "Dooleys Bottom" 60 ft. in width, 30 ft. on either side of center line. Road leads from Wrightsboro Road to ACOE lands to the north.	9.91
Access road located in the area of what is believed to be Soap Creek. This access road leads from a county maintained road to the lands owned by the ACOE to the north.	3.87

Non-Internet Public

FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED ELBA III PROJECT
Docket Nos. CP06-470-000, CP06-471-000, CP06-472-000, CP06-473-000, and CP06-474-000

APPENDIX M

Aerial and Topographic Maps of Pipeline Mitigation Sites for Di-Lane Plantation WMA, Lake Richard B. Russell, and Thurmond Lake

Pages M7-M24

Public access for the above information is available only through the Public Reference Room, or by e-mail at public.referenceroom@ferc.gov.

AGENCY COMMENTS

The Corps of Engineers has coordinated with the natural resource agencies on the extent of the impacts on Corps lands and the mitigation that would be appropriate. This coordination included numerous conversations, site visits, and meetings. Agreements reached through that coordination have been documented through letters and emails. The following 6 pages contain a letter from the Corps to the US Fish and Wildlife Service, followed by their response, and then a letter from the Corps to the Georgia Department of Natural Resources followed by their response.

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
Richard B. Russell Lake Project Office
4144 Russell Dam Drive
Elberton, GA 30635

REPLY TO
ATTENTION OF:

May 15, 2007

Office of the
Operations Manager

Mr. Ed EuDaly
Charleston Field Office
U.S. Fish and Wildlife Service
176 Croghan Spur Road, Suite 200
Charleston, South Carolina 29404

Dear Mr. EuDaly:

As discussed in our meeting on May 2, 2007, El Paso Corporation is planning a natural gas pipeline which will impact Richard B. Russell (RBR) mitigation lands. The proposed route would impact DiLane Plantation and RBR collar lands at Beaverdam and Coldwater creeks. Permanent impacts will occur within a 50-foot wide right-of-way (ROW) and temporary construction impacts vary along the route. Total permanent impacts at RBR would be 5.4 acres. There will be no permanent impacts at DiLane because they will collocate the pipeline within an existing ROW. Temporary construction impacts at RBR and Dilane total 13.83 and 41.33 acres, respectively.

We are proposing mitigation at a level of 3:1 for permanent impacts and 1:1 for temporary impacts. Total mitigation we would require at RBR would be 30.03 acres and 41.33 acres at DiLane. We have identified several tracts of land adjacent to these mitigation tracts and will require that El Paso Corporation purchase land to mitigate for the pipeline impacts. Fee-title ownership of these lands will then be transferred to the Corps and managed by the Corps at RBR and the Georgia Department of Natural Resources at DiLane.

In addition to the land mitigation requirement, several mitigation measures will be incorporated into the construction process and are identified in Appendix E of the Draft EIS. We have specifically requested the following environmental requirements for Corps properties:

- During construction within any wetlands, topsoil will be stripped segregated and used in final grading and revegetation
- Construction time for all stream or wetland crossings will be kept to the minimum necessary to complete the crossing
- All disturbed areas will be seeded with a temporary cover immediately following final grading and completion of directional drill

- Permanent seeding will consist of native, warm season grasses and occur during appropriate seeding dates
- With the exception of DiLane Plantation, all other temporary workspaces will be planted with hardwood seedlings (oak or hickory with 18-24" height) at a 10'X10' spacing, with a minimum survival rate of 70% after one-year. An independent agent of the easement holder will monitor survival at one-year and replant if necessary to achieve the designated survival rate of 300 seedlings per acre.
- Mowing the permanent right-of-way will not be allowed between 1 April and 15 June to minimize impacts to ground nesting birds.
- A Grady pond occurs at DiLane; possible draining of the pond could result from placement of the pipeline; this area will be evaluated after one-year to determine any impacts that require mitigation. Grady ponds are listed as priority habitats by the GADNR. An independent agent of the easement holder will monitor and evaluate this site between 6 and 12 months after construction is completed at the site to determine if any long term impacts to hydrology and wetlands at the site have occurred; the agent will submit a report of his findings to the easement holder and the US Army Corps of Engineers, using that information the Corps will determine if impacts have occurred that require additional mitigation.

If you have any questions or need additional information, please contact Jeff Brooks at 706-213-3424 or myself at ext. 3401. Request your concurrence with this mitigation proposal.

Sincerely,

M. Keith Crowe
Operations Manager

Enclosures: Draft Plats for Pipeline

United States Department of the Interior

FISH AND WILDLIFE SERVICE
176 Croghan Spur Road, Suite 200
Charleston, South Carolina 29407

May 22, 2007

Mr. M. Keith Crowe
Operations Manager
Savannah District, Corps of Engineers
Richard B. Russell Lake Project Office
4144 Russell Dam Road
Elberton, Georgia 30635

Dear Mr. Crowe:

Thank you for your letter of May 15, 2007, regarding the El Paso Corporation natural gas pipeline that will impact Richard B. Russell (RBR) mitigation lands, including RBR collar lands and DiLane Plantation. We also discussed the mitigation plans at our May 2, 2007, meeting. These comments are submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The proposed mitigation includes purchase of replacement lands at a level of 3:1 for permanent impacts and 1:1 for temporary impacts, resulting in a total purchase of about 30 acres at RBR and about 41 acres at DiLane. The lands would be transferred to the Corps at RBR and to the Georgia Department of Natural Resources at DiLane. A number of other mitigation measures will be incorporated during construction to minimize wetland and stream crossing impacts and to restore or manage temporary impact areas.

The proposed mitigation plan includes measures to minimize impacts and adequate compensation for unavoidable impacts. Therefore, the Service concurs with the proposed mitigation plan. We appreciate the opportunity to review the proposed mitigation plan. Please contact Ed EuDaly at 843-727-4707 ext. 227 if you have any questions.

Sincerely,

Timothy N. Hall
Field Supervisor

TNH/EME

TAKE PRIDE IN AMERICA

DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
Richard B. Russell Lake Project Office
4144 Russell Dam Drive
Elberton, GA 30635

REPLY TO
ATTENTION OF:

May 15, 2007

Office of the
Operations Manager

Mr. Vic VanSant
Regional Supervisor
Wildlife Resources Division
Georgia Department of Natural Resources
142 Bob Kirk Road, NW
Thomson, Georgia 30824

Dear Mr. VanSant:

As discussed in the meeting with Elba pipeline on May 7, 2007, El Paso Corporation is planning a natural gas pipeline which will impact Richard B. Russell (RBR) mitigation lands. The proposed route would impact DiLane Plantation and RBR collar lands at Beaverdam and Coldwater creeks. Also, impacts will occur at Little River on J. Strom Thurmond (JST) managed by your agency as Clarks Hill Wildlife Management Area. Permanent impacts will occur within a 50-foot wide right-of-way (ROW) and temporary construction impacts vary along the route. Total permanent impacts at RBR would be 5.4 acres. There will be no permanent impacts at DiLane because they will collocate the pipeline within an existing ROW. Temporary construction impacts at RBR and Dilane total 13.83 and 41.33 acres, respectively. Permanent impacts at Little River will total 3.03 acres and temporary impacts will total 9.71 acres.

We are proposing mitigation at a level of 3:1 for permanent impacts and 1:1 for temporary impacts. Total mitigation we would require at RBR would be 30.03 acres, 41.33 acres at DiLane, and 15.77 acres at Little River. We have identified several tracts of land adjacent to the mitigation tracts at RBR and Little River and appreciate your assistance in identifying tracts at DiLane. We will require that El Paso Corporation purchase land to mitigate for the pipeline impacts. Fee-title ownership of these lands will then be transferred to the Corps and managed by the Corps at RBR and JST and the Georgia Department of Natural Resources at DiLane.

In addition to the land mitigation requirement, several mitigation measures will be incorporated into the construction process and are identified in Appendix E of the Draft EIS. We have specifically requested the following environmental requirements for Corps properties:

- During construction within any wetlands, topsoil will be stripped segregated and used in final grading and revegetation

- Construction time for all stream or wetland crossings will be kept to the minimum necessary to complete the crossing
- All disturbed areas will be seeded with a temporary cover immediately following final grading and completion of directional drill
- Permanent seeding will consist of native, warm season grasses and occur during appropriate seeding dates
- With the exception of DiLane Plantation, all other temporary workspaces will be planted with hardwood seedlings (oak or hickory with 18-24" height) at a 10'X10' spacing, with a minimum survival rate of 70% after one-year. An independent agent of the easement holder will monitor survival at one-year and replant if necessary to achieve the designated survival rate of 300 seedlings per acre.
- Mowing the permanent right-of-way will not be allowed between 1 April and 15 June to minimize impacts to ground nesting birds.
- A Grady pond occurs at DiLane; possible draining of the pond could result from placement of the pipeline; this area will be evaluated after one-year to determine any impacts that require mitigation. Grady ponds are listed as priority habitats by the GADNR. An independent agent of the easement holder will monitor and evaluate this site between 6 and 12 months after construction is completed at the site to determine if any long term impacts to hydrology and wetlands at the site have occurred; the agent will submit a report of his findings to the easement holder and the US Army Corps of Engineers, using that information the Corps will determine if impacts have occurred that require additional mitigation.

If you have any questions or need additional information, please contact Jeff Brooks at 706-213-3424 or myself at ext. 3401. Request your concurrence with this mitigation proposal.

Sincerely,

M. Keith Crowe
Operations Manager

Enclosures: Draft Plats for Pipeline

Noel Holcomb, Commissioner
Dan Forster, Director

Georgia Department of Natural Resources
Wildlife Resources Division

Game Management Section
142 Bob Kirk Road, N.W., Thomson, Georgia, 30824
(706) 595-4222

MEMORANDUM

TO: Jeff Brooks, Staff Wildlife Biologist, USACE

FROM: Vic VanSant, Region Supervisor, Game Management

SUBJECT: Elba Express Pipeline; mitigation calculations for DiLane Plantation WMA, Lakes RB Russell and Strom Thurmond

DATE: May 16, 2007

This is in reference to your letter of May 15, 2007 concerning mitigation and environmental requirements for the Elba Express natural gas pipeline. As cooperators with the U. S. Army Corps of Engineers on the above tracts, we agree with the methods used to calculate expected mitigation actions.

If you need further information from us, please let me know.

Thanks