Environmental Assessment of the Demolition of Conrail Bridge and Embankment Middlesex Borough, Middlesex County and South Bound Brook, Somerset County, New Jersey for the Green Brook Flood Control Project

February 2007



U.S. Army Corps of Engineers New York District

Finding of No Significant Impact **Environmental Assessment of the Demolition of Conrail Bridge and Embankment** Middlesex Borough, Middlesex County and South Bound Brook, Somerset County, New Jersey for the Green Brook Flood Control Project

The U.S. Army Corps of Engineers, New York District, proposes to incorporate a project change to the National Economic Development plan for the Green Brook Flood Control Project, Green Brook Sub-Basin of the Raritan River Basin, Middlesex, Somerset, and Union Counties, New Jersey. The project modification involves the removal of an abandoned Conrail Bridge that crosses the Raritan River from Middlesex Borough, Middlesex County to South Bound Brook, Somerset County. The proposed demolition would also involve removal of the bridge deck and piers, the northern shore abutment, the railroad embankment between River Road and the Raritan River, the remaining bridge structure over River Road and its two abutments.

The purpose of this demolition action is to accommodate for potential temporary induced flooding along the Raritan River that may be experienced during interim project build out years. The removal of the bridge structures and embankment material from the floodway and floodplain of the Raritan River would improve water (hydraulic) conveyance. The improved water conveyance would yield reduction of potential induced flooding to an acceptable level. The proposed action was selected as the most cost efficient and environmentally acceptable alternative to address the identified problem. The proposed action is integral for continuance of implementation of the Green Brook Flood Control Project, which will ultimately provide flood damage reduction measures for 14 municipalities within the Green Brook Sub-Basin.

To further describe the potential temporary induced flooding, the construction associated with Segments T, U, R-1 and R-2 of the Bound Brook portion of the flood control project alters both the hydraulics and hydrology of the Raritan River and the lower reach of the Green Brook within the project study area. Subsequent to the construction of these segments, and prior to construction of the remainder of the project upstream in Middlesex and Union Counties, the change in hydrology and hydraulics increases the potential for induced flooding to a level greater than the 0.2 ft allowed by the rules of the State of New Jersey, Flood Hazard Area Control Act (N.J.A.C. 7:13-1.3). Upon completion of the entire Green Brook Flood Control Project, change in the Green Brook/Raritan hydrology would eliminate this temporary induced flooding potential. The proposed demolition action would alleviate the potential for unacceptable induced flooding during interim project build out vears.

Based on my review and evaluation of the environmental effects as presented in the Environmental Assessment, I have determined that the proposed project modification is not a major Federal action significantly affecting the quality of the human environment. I have reviewed the proposed action in terms of overall public interest and have found the proposed action does not warrant the preparation of a supplemental environmental impact statement.

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Colonel, Corps of Engineers Commanding

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LIST OF ACRONYMS

Acronym	Title
CFR	Code of Federal Regulation
Corps	U.S. Army Corps of Engineers
EA	Environmental Assessment
EPA	United States Environmental Protection Agency
FDRP	Flood Damage Reduction Project
FONSI	Finding of No Significant Impact
FEIS	Final Environmental Impact Statement
FSEIS	Final Supplemental Environmental Impact Statement
GDM	General Design Memorandum
HTRW	Hazardous, Toxic and Radioactive Waste
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
N.J.A.C.	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NJHPO	NJDEP, Division of Parks and Forestry, Historic Preservation Office
NRDCSCC	Non-Residential Direct Contact Soil Cleanup Criteria
NRHP	National Register of Historic Places
OMRR&R	Operation, Maintenance, Repair, Replacement, and Rehabilitation
OSHA-HASP	Occupational Health and Safety Administration–Health and Safety Plan
PA	Programmatic Agreement
PCB	Polychlorinated Biphenyl
PM	Particulate Matter
PPM	Part per Million
Service	United States Department of Interior, Fish and Wildlife Service
RDA	Water Resources Development Act

Environmental Assessment of the Demolition of Conrail Bridge and Embankment Middlesex Borough, Middlesex County and South Bound Brook, Somerset County, New Jersey for the Green Brook Flood Control Project

1.0 Introduction

This environmental assessment serves as documentation of a specific project change to the construction of the Green Brook Flood Control Project. The environmental impacts of the Green Brook Flood Control Project were previously assessed in the U.S. Army Corps of Engineers (Corps), New York District, *Final Environmental Impact Statement (FEIS) for the Proposed Plan for the Green Brook Flood Control in the Green Brook Sub-Basin, Somerset, Middlesex and Union Counties, New Jersey*, filed August, 1980 and the *Final Supplemental Environmental Impact Statement (FSEIS) for the Proposed Plan for the Green Brook Sub-Basin, Somerset, Middlesex and Union Counties, New Jersey, filed August, 1980 and the Final Supplemental Environmental Impact Statement (FSEIS) for the Proposed Plan for the Green Brook Flood Control in the Green Brook Sub-Basin, Somerset, Middlesex and Union Counties, New Jersey, filed in May 1997.* The purpose of this environmental assessment is to evaluate potential environmental impacts that were not previously addressed in the *FEIS* and *FSEIS*, to determine that the potential environmental impacts of the proposed action are not significant, and thereby determine that the proposed project change does not warrant preparation of a supplemental environmental impact statement to the *FSEIS* and *FEIS*.

This environmental assessment evaluates the following proposed project change:

Removal of an abandoned Conrail Bridge that crosses the Raritan River from Middlesex Borough, Middlesex County to South Bound Brook, Somerset County. The proposed demolition would involve removal of the bridge deck and piers, the northern shore abutment, the railroad embankment between River Road and the Raritan River, the remaining bridge structure over River Road and its two abutments (Figure 1).

The purpose of this demolition action is to accommodate for potential temporary induced flooding along the Raritan River that may be experienced during interim project build out years. The removal of the bridge structures and embankment material from the floodway and floodplain of the Raritan River would improve water (hydraulic) conveyance. The improved water conveyance would yield reduction of potential induced flooding to an acceptable level.

The construction associated with Segments T, U, R-1 and R-2 of the Bound Brook portion of the flood control project alters both the hydraulics and hydrology of the Raritan River and the lower reach of the Green Brook within the project study area (Figure 2&3). Subsequent to the construction of these segments, and prior to construction of the remainder of the project upstream in Middlesex and Union Counties, the change in hydrology and hydraulics increases the potential for induced flooding to a level greater than the 0.2 ft allowed by the rules of the State of New Jersey, Flood Hazard Area Control Act (N.J.A.C. 7:13-1.3). Upon completion of the entire Green Brook Flood Control Project, change in the Green Brook/Raritan hydrology

FIGURE 1

Proposed Railroad Spur Removal Project Aerial Photograph (Source: NJDEP)







would eliminate this temporary induced flooding potential. However, in the interim years, an alternative solution to alleviate induced flooding was required. The proposed action would address the identified temporary induced flooding problem.

2.0 Green Brook Flood Control Project Background

The overall Green Brook basin encompasses sixty-five square miles within the State of New Jersey in the counties of Somerset, Middlesex and Union, and incorporates the Green Brook subbasin of the Raritan River Basin, a short reach of the Raritan River along the border of the Borough of Bound Brook and the Middle Brook tributary to the Raritan River. Flooding has been a longstanding problem in the Green Brook Sub-Basin. Tropical Storm Floyd in September 1999 caused significant flood damages throughout the Sub-Basin, with the most extreme damages experienced in the Borough of Bound Brook. The recommended plan for the Green Brook Flood Control Project will provide flood protection to the lower portion of the basin and the Stony Brook portion of the basin through various structural and non-structural flood control elements including approximately 14 miles of levees and floodwalls along Green Brook with supporting pump stations and closure structures, bridge replacements and removals, approximately 1 mile of channel modification in the Stony Brook portion of the basin have been deferred for reevaluation at a later time.

The Green Brook Flood Control Project was authorized for construction in Section 401a of the Water Resources Development Act of 1986. A Project Cooperation Agreement was signed in June 1999 by the Corps and the State of New Jersey, Department of Environmental Protection (NJDEP), the project non-federal partner. Construction of the project began in 2001 in Segment T of the project with removal and replacement of the East Main Street Bridge. Since construction started in 2001, the Project has continued with implementation of levees, floodwalls and associated pump stations and drainage features in Bound Brook, Somerset County, NJ, at Segments T, U, R-1 and Floodproofing of 500 Union Avenue. These construction segments are substantially complete and will be undergoing final construction inspections and modifications. These segments will be turned over to the NJDEP and the local project partners, Somerset County and the Borough of Bound Brook for operation in accordance with an Operation, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) Manual. The OMRR&R Manual for the Bound Brook Segments is currently under interagency review.

The volunteer buyout and demolition of homes at Prospect Place in Middlesex Borough, Middlesex County, was completed in 2003 as a non-structural element of Segment N of the project. It should be noted that the buy-out of homes was addressed in the *Green Brook Flood Control Project Segments A and N, Final Environmental Assessment and Finding of No Significant Impact* (June 2002). The Floodproofing of 500 Union Avenue was constructed as part of Segment N. Several other properties were offered floodproofing options such as ringwalls, raising, and additions to replace basements as part of Segment N, but declined participation. Segment A levee was eliminated due to the buyout of homes on Raritan Avenue by the Federal Emergency Management Agency's Hazard Mitigation Grant Program. Three properties on Lincoln Boulevard were offered participation in the Green Brook Project's nonstructural volunteer buyout program as part of Segment A, but two have declined participation and one has deferred participation to date.

Construction of the Finderne Wetland Mitigation Site, referred to as Site 17-41-2 in FSEIS 1997, began in Fall 2005, and is now substantially complete (Figure 4). The Finderne Wetland Mitigation Site serves as off-site wetland and habitat mitigation acreage for environmental impacts of the Bound Brook construction segments that could not be mitigated for on-site, and provides surplus mitigation credits for construction of future structural project elements in Middlesex County.

Additional Project Background Information can be viewed online at the Corps project website: <u>http://www.nan.usace.army.mil/business/prjlinks/flooding/greenbk/index.htm</u>.

3.0 Need for Proposed Action

The Green Brook Flood Control Project is anticipated to involve over 366 million dollars of project design and construction work. The project involves construction of seven (7) different elements in three different counties (Table 1). Each element consists typically of multiple construction segments or contract reaches. Two of the elements in the Upper Basin have been

deferred for reanalysis, but the other elements will be constructed as federal and state partnered funding becomes available.

Construction to date has been focused on Construction of Element No. 1. As mentioned previously Segments T, U, N and A are substantially complete. Segment R was subdivided into several construction contracts: Segment R-1, Talmadge Avenue Bridge Replacement, and Segment R-2. As mentioned previously, Segment R-1 construction is substantially complete. Talmadge Avenue Bridge is planned for construction in fiscal year 2007. Segment R-2 will likely be subdivided into several separate construction contracts for implementation of the

Project Project Segments		
Elements		
Element 1	A, N, R, T, U	
Element 2*	0, S	
Element 3	B, C, D, H, I, J, K	
Element 4	P, Q	
Element 5*	М	
Element 6	E, F, G	
Element 7	L	

South Main Street Closure Structure, the NJ Transit Closure Structure, the R-2 Levee, the R-2 Pump Station, the R-2 Floodwall, and Diversion Culvert Pipes.

Limitations on funding availability and constructability issues require construction to be scheduled over a minimum duration of twelve years. Due to the time delay that will exist between construction completion of various elements, an analysis was performed to determine if any temporary flooding implications could result from partial build out. The analysis showed that the potential existed for temporary induced flooding to occur if Element No. 1, specifically Segment R-2, was fully constructed without full build out of the remaining construction elements. The analysis prompted the Corps to evaluate measures to avoid the identified unacceptable temporary induced flooding problem.



Figure 4 Finderne Wetland Mitigation Site Map

The construction associated with Element No. 1 (Segments T, U and R) alters both the hydrology and hydraulics of the Raritan River and the lower reach of the Green Brook within the project study area. Subsequent to the construction of Segments T, U and R (R-1 and R-2), and prior to the construction of the remainder of the project, the change in hydraulics and hydrology increases the potential for induced flooding to a level greater than 0.2 feet allowed by the NJDEP Flood Hazard Area Control Act Rules (N.J.A.C. 7:13-1.3).

The proposed action of demolition of the abandoned Conrail Bridge and its associated embankment was determined as the most cost-effective and suitable alternative to alleviate the potential induced flooding from partial build out of the project.

The proposed removal action is necessary prior to construction completion of Segment R-2 to avoid induced flooding above state regulation.

The proposed action has associated benefits, as it will increase the reliability of the Element No. 1 levee system during partial build out years, due to the reduction of flooding. Upon full project build out, the flooding potential along the Raritan River will be further reduced by the removal of the bridge in comparison to the original project plan. The removal thus provides an additional long-term safety factor to the design, in addition to its interim benefits.

4.0 Alternatives Analysis

The Corps evaluated several alternative solutions to the identified induced flooding problem. The no-action alternative was immediately screened from consideration, as without reduction of the induced flooding condition, the remainder of the flood protection features in Bound Brook, New Jersey could not be completed. The no-action plan would leave the affected communities subject to flooding, and would prohibit achievement of the flood damage reduction goals of the congressionally authorized project.

Hydraulic improvement alternatives to increase conveyance were evaluated for three locations on the Raritan River (listed from downstream to upstream) (*Corps 2001*):

- At the "Falls" abandoned remnants of a spillway (Fieldsville Dam), located just upstream of the eastern I-287 crossing over the Raritan River
- Abandoned Railroad Bridge just downstream of the Green Brook/Raritan River confluence
- South Main Street Bridge (Queens Bridge) over the Raritan River

Several iterations of the hydraulic improvement alternatives were modeled:

- Existing "Falls" (Fieldsville Dam) Upstream of I-287 Complete Removal of Dam
- Existing "Falls" (Fieldsville Dam) and Causeway Upstream of I-287 Complete Removal of Dam and Causeway
- Railroad Bridge Deepen Channel by 1 Ft.
- Railroad Bridge Replace Structure and Raise Bottom of Bridge Deck 1 ft.

- Railroad Bridge Replace Structure and Raise Bottom of Bridge Deck 2 ft.
- Railroad Bridge Complete Removal of Bridge Deck and Piers
- Queens Bridge (So Main St.) Deepen Channel by 2 ft.
- Queens Bridge (So. Main St.) Replace Structure and Raise Bottom of Bridge Deck 1 ft.

Bridge structure replacement with raised deck was eliminated based on cost considerations. Channel deepening was screened from further consideration due to the lesser effect this alternative had on reducing flood levels, and the potential for channel maintenance costs and repeated environmental disturbance.

Three alternatives were evaluated in greater detail and include:

Alternative 1: Complete Removal of Railroad Bridge, Deck, Piers, Abutments and Embankment Alternative 2: Complete Removal of Fieldsville Dam & Causeway, and Complete Removal of Railroad Bridge

Alternative 3: Removal of only the Causeway at Fieldsville Dam & Causeway, and Complete Removal of Railroad Bridge.

Temporary induced flooding was modeled and shown to be reduced by all of the above three design scenarios. The proposed complete removal of the Contrail Railroad Bridge was selected as the most cost effective alternative to relieve the temporary induced flooding potential. The feasibility and environmental acceptability of the removal action also factored into the selection of Alternative 1 as the proposed plan, as did a potential partnership that emerged during analysis.

The Elizabethtown Water Company had been working with Conrail Bridge to purchase an easement within the railroad spur alignment. The Water Company obtained a permit to install a 72-inch water main underneath the Raritan River and to remove the Conrail Bridge and associated berm within the easement. There appeared at the time, an opportunity for joint work and benefit by the Water Company and the Corps. The Water Company has since modified its plans for water main installation, but measures were taken to have NJDEP - Engineering and Construction Office serve as the permit applicant for the State Stream Encroachment and Freshwater Wetlands Permit, so that it would be transferable to the Green Brook Flood Control Project. NJDEP - Engineering and Construction Office typically serves as the flood control project applicant as the project's non-federal cost-share partner. The permit was issued October 16, 2002 with an October 16, 2007 expiration date and is enclosed in Appendix A.

The Corps is now working with StarLink Logistics, the current property owner of the embankment and spur, and with Union Carbide Corporation, the adjacent property owner, to coordinate removals and site access through Right-of-Entry agreements.

5.0 Proposed Action

The proposed removal of the abandoned Conrail Bridge over the Raritan River just downstream of Green Brook includes the following (See Appendix B Site Photographs):

- Complete removal of the bridge deck
- Complete removal of the five bridge piers
- Removal of the bridge abutment on the north shore of the Raritan River
- Removal of the railroad embankment between River Road and the Raritan River
- Removal of the bridge over River Road and its two abutments. The abutments will be removed to 2 feet below grade.

The southern abutment on the south shore of the Raritan River will remain intact. The embankment removal area will be reshaped to match existing grades, receive topsoil, and native or naturalized species seeding for restoration of the area.

Approximately 240 gross tons of steel will be salvaged from the railroad alignment. The estimated volume of embankment material to be removed is 7,000 cubic yards.

Equipment likely to be used includes 100 ton cranes with booms to 250 feet for performing demolition of the bridge over the Raritan River. Other construction equipment to be used on the embankment area and for demolition of the piers includes 5 cubic yard front end loader, 48 horsepower backhoe, 80-300 horsepower bulldozer, dump truck, vibratory hammer & generator, hand tools and chipping machine.

Site access will be from the southeast of the embankment through the adjacent property and an existing dirt access road connecting to River Road. Use of this access will minimize disturbance to existing floodplain vegetation. Once embankment material is removed, the railroad corridor will be utilized for work access to the river. Limiting work access to the river within the railroad alignment (that will be disturbed for embankment removal), will also minimize disturbance to surrounding floodplain vegetation.

6.0 Affected Environment

The existing condition of the proposed project area is dominated by the abandoned Conrail Railroad Bridge, which is in a dilapidated condition. The bridge poses a safety risk for the community. Pedestrians access the bridge directly from the Delaware-Raritan Canal towpath. Fencing and warning signs regarding the unsafe condition of the bridge have unfortunately not eliminated people from risking the walk across the bridge, as individuals and groups have been observed on the bridge during site visits by the Corps' team. As will be further described in 6.5 Environmental Contamination, the surrounding floodplain area on the northern shore of the Raritan River in the project area has been disturbed due to ongoing site remediation activities. Please refer to Photos 1-15 in Appendix B for views of the affected environment.

6.1 Wildlife and Fisheries Resources

The habitat of the project area includes state open water of the Raritan River, as well as floodplain forested and scrub-shrub habitat on the riverbanks. Wetland area was delineated as a forested riparian buffer with a width of 60-90 feet from the top of bank on both the northern and

southern shore of the Raritan River, and one small isolated forested wetland area parallel to the railroad embankment on its southern side, approximately 30 feet interior of River Road.

The freshwater, non-trout production and non-trout maintenance classified river supports fish species such as common carp (*Cyprinus carpio*), white perch (*Morone Americana*), channel catfish (*Ictalaurs punctatus*), eastern silvery minnow (*Hybognathus regius*) and other warm water fisheries species and anadromous fish. The floodplain habitat of the project area exists in a disturbed state, but does support habitat for mammals such as squirrel (*Sciurus carolinensis*), eastern cottontail (*Sylvilagus foridanus*), white-tailed deer (*Odocoileus virginianus*) and other species. Bird species tolerant of urban-suburban areas, such as American robin (Turdus migratorius), European starling (Sturnus vulgaris), northern cardinal (Baeolophus bicolor), and gray catbird (Dumetella carolinensis), utilize the riparian habitat of the project area, as does the occasional great egret (*Casmerodius albus*), snowy egret (*Egretta thula*) or great blue heron (*Ardea herodias*). Potentially some passerine birds or other avifauna such as the little brown bat (*Myotis lucifugus*) utilize the bridge deck for nesting or as a perch during foraging. Further information on fisheries and wildlife resources is included in the U.S. Fish and Wildlife Service (Service), Fish and Wildlife Coordination Act Section 2(b) Report included in Appendix C.

The Corps coordinated with the Service in 2005 to evaluate the site's habitat, and to identify if any federally listed threatened or endangered species utilized the project area. As a result of the Service coordination, it was determined that the disturbed forested floodplain habitat was not likely to support the federally endangered Indiana bat (*Myotis sodalis*), nor any other federally listed or proposed endangered or threatened flora or fauna under Service jurisdiction. An occasional transient bald eagle (*Haliaeetus leucocephalus*) may be observed in the project vicinity.

The southern riverbank forested habitat has a sparse understory, with several mature trees such as red maple (*Acer rubrum*), silver maple (*Acer saccharinum*), black locust (*Robinia pseudoacacia*), green ash (*Fraxinus pennsylvanica*) and northern red oak (*Quercus rubra*). The railroad embankment on the northern riverbank and the floodplain area east of the embankment supports similar flora, along with numerous invasive plant species such as tree-of-heaven (*Ailanthus altissima*), multiflora rose (*Rosa multiflora*), and knotweed (*Polygonum cuspidatum*).

The floodplain area bordering the northern embankment on its west side has been completely disturbed due to site contamination remediation activities. Much of this area has been surfaced with impervious material or gravel and provides minimal habitat. The area across River Road, is completely urbanized with gravel and impervious cover. The railroad embankment on the northwestern side of River Road was removed by others due to site remediation activities.

6.2 Water Quality

The Raritan River is classified as a FW-2 NT or freshwater river not supporting trout spawning or maintenance. The river is suitable for a wide variety of warm water fisheries species. There is known groundwater contamination in the project area on the northern riverbank and River Road vicinity. Arsenic, as well as methylene chloride, toluene, and 1-1 dichloroethylene are the contaminants of concern for groundwater. Site remediation for groundwater and contamination

is ongoing by private entities. The adjacent property is listed as a Known Contaminated Site by the NJDEP.

6.3 Air Quality

In accordance with the Clean Air Act of 1977, as amended, the U.S. Environmental Protection Agency developed criteria to establish the maximum allowable atmospheric concentrations of pollutants that may occur while ensuring protection of public health and welfare, with a reasonable margin of safety. Areas where the criteria pollutant level exceeds National Ambient Air Quality Standards are designated as "nonattainment". The project area is located within a moderate nonattainment zone for 8-hour ozone, and a noattainment zone for particulate matter (PM 2.5).

6.4 Environmental Contamination

The project area, on the northern floodplain area and at River Road, has known soils and groundwater contamination. At the Rhone-Poulenc/Bayer CropScience site in Middlesex Borough, a groundwater collection and treatment system is being installed to treat arsenic. A ditch liner system was installed bordering the west side of the railroad embankment, to limit release of contaminants into the river. The Union Carbide River Road Landfill borders the east side of the railroad embankment. This Known Contaminated Site is also listed as an active multi-phased remedial action area.

There is an arsenic concentration above the allowable limit of 20 mg/kg (ppm) in the first 0.5 ft to 10 ft below existing grade (Environmental Baseline Report, July 2003, Elizabethtown Water Company by Hatch Mott MacDonald and Lichtenwalner Clyde Report). The allowable limit refers to the NJDEP Non-Residential Direct Contact Soil Cleanup Criteria for arsenic, which is 20 mg/kg (ppm).

The Corps conducted soil testing of the railroad embankment material proposed for removal on March 14, 2006 to supplement testing done by others. Soil samples were tested for magnesium and arsenic metals, as well as PCBs. Of the seven embankment soil samples tested, one sample had a level of 24.9 mg/kg for arsenic, which exceeds NJDEP NRDCSCC. The other samples had arsenic levels ranging from 0-15.8 ppm, which are below NJDEP soil cleanup criteria standards. No PCBs were detected in the soil samples. Magnesium levels ranged from 2,570 to 10,900 mg/kg. There is no regulatory limit for magnesium.

The Corps also conducted testing of paint chips from the Railroad Bridge over the Raritan River and River Road to determine lead content. The paint chip samples had lead levels ranging from 12.8% to 27.2%, and an average 22.6% lead content. Paint is considered lead based if over 0.5% lead by weight. Lead paint isn't considered a hazard if in good condition, and can be disposed of as household waste. As a comparison, homes constructed prior to 1950 commonly have paint with 20%-70% lead content.

6.5 Cultural Resources

The Conrail Railroad Bridge was formerly known as the Ruberoid Company Port Reading Railroad Spur. The spur was constructed in 1928 to provide a rail connection from the Ruberoid Company plant in South Bound Brook to the Port Reading Railroad. The spur has been determined eligible for the National Register of Historic Places as a contributing element to the Port Reading Railroad historic district and to the potentially eligible Ruberoid Company plant (now demolished). The southern abutment, sections of the embankment and the southern 75 feet of the railroad bridge fall within the boundaries of the Delaware and Raritan (D&R) Canal Historic District.

6.6 Landscape Aesthetics

The southern end of the proposed project area overlaps the scenic corridor of the Delaware and Raritan (D&R) Canal Historic District. The railroad bridge provides a man-made historic structure of interest in the viewshed from the Queens Bridge. The northern riverbank area of the proposed project area, due site remediation disturbance and impervious cover, has limited aesthetic quality as viewed from River Road.

6.7 Socioeconomic Environment

South Bound Brook, Somerset County, has a population of 4,505 (2005 U.S. Census Bureau) with 5,766 persons/square mile (2000 U.S. Census Bureau). The median household income is \$48,984 (2000 U.S. Census Bureau). The area, south of the project area, on the southern side of the D&R Canal has undergone recent redevelopment as residential housing. Middlesex Borough, Middlesex County has a population of 13,938 (2005 U.S. Census Bureau) with 4,068 persons/square mile (2000 U.S. Census Bureau). The median household income is \$60,723 (2000 U.S. Census Bureau). The project area is surrounded by urban/industrial land uses on the northern riverbank.

7.0 Environmental Impacts

Because the proposed action is a removal not development, and due to the disturbed condition of the project area, the environmental impacts of the proposed federal action are not expected to be significant. Table 2 summarizes the environmental impacts of the project plan compared to the no-action alternative.

7.1 Wildlife and Fisheries Resources

The proposed project is not anticipated to adversely affect wildlife and fisheries resources. Wildlife of the area may be temporarily displaced due to noise disturbance from active construction, but would be anticipated to return to the area post-construction. The project may redirect flow due to cofferdam use as the bridge piers are removed, but will not block flow for fish access upstream and downstream.

The U.S. Fish and Wildlife Service's Fish and Wildlife Coordination Act 2(b) Report included in Appendix C discusses the benefits to wildlife habitat that could result from the removal of the embankment fill and man-made structure in the floodplain, and reestablishment of floodplain vegetation in the riparian corridor. Reseeding of the disturbed riverbank area with native or naturalized grasses, wildflowers and shrub species will serve as on-site mitigation for both wetland and upland habitats.

In-stream construction activities shall occur outside of a fisheries window from April 1 through June 30th in accordance with the project's freshwater wetlands and stream encroachment permit from NJDEP dated October 16, 2002 and included in Appendix A. No rare plants, animals, or natural communities have been identified for this project area per coordination with the Natural Heritage Program.

7.2 Water Quality

The proposed action may have minor turbidity increases to surface waters of the Raritan River during bridge pier removal and due to unavoidable backhoe or other construction equipment access within the river during demolition. The turbidity impacts are anticipated to be minor and will be controlled to the extent practicable through use of best management practices identified in the soil and sedimentation erosion control plan. The Corps will be applying for Soil and Sedimentation Erosion Control and Request for Authorization permits from the Freehold and Somerset-Union Soil Conservation Districts prior to construction. Cofferdams or turbidity level increases. Silt fences will be utilized on the floodplain to delineate the construction work area and to control soil erosion. It is unlikely that turbidity impacts will extend across the full river width, and instream silt curtains will be utilized to minimize impacts to the downstream aquatic environment.

The Corps has continued to coordinate with the property owners and the NJDEP Site Remediation case worker to include proper safety and environmental measures in the construction documents for work within the groundwater contamination areas identified in 6.6 Environmental Contamination. Equipment will be washed to minimize spread of contamination. Bridge materials known to have lead paint will be handled in accordance with state and federal regulations. The proposed project has been permitted by the NJDEP in accordance with the Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A) and Flood Hazard Control Act Rules (N.J.A.C. 7:13).

7.3 Air Quality

Construction emissions for the proposed project have been estimated to be below the Federal de minimis thresholds in accordance with the Clean Air Act. The emissions will be below the thresholds of 100 tons/year for NOx, 50 tons/year for VOC, and below 100 tons/year for PM2.5. The emissions from the project are considered to have an insignificant impact on the regional air quality, and according to 40 CFR 93.153 (f) and (g), the proposed project is presumed to conform to the State Implementation Plan. A General Conformity, Record of Non-Applicability (RONA) and associated air emissions calculations are included in Appendix D of this document.

Bridge and Embankment		
	No Action Alternative	Proposed Demolition Project
Fish and Wildlife	There would be no anticipated change to fisheries habitat in the	State open water will be increased via removal of the bridge piers for improvement of
Resources	area under the no action alternative. Future site remediation	fisheries habitat. Temporary water quality impacts during construction are anticipated to
	activities by others may result in temporary or permanent	be minor. Construction will be scheduled outside of the anadromous fisheries window
	wildlife and habitat impacts on the northern riverbank of the	(April 1-June 30). Wildlife may be temporarily displaced during construction due to noise
	Raritan River. Railroad embankment fill within the floodplain	disturbance. The proposed project will benefit the floodplain habitat, as fill will be
	could potentially remain indefinitely, and thereby limit habitat	removed, and the area will be restored with seeding. Seeding of native grass, shrub and
	restoration of the riparian habitat.	wildflowers will serve as on-site mitigation for disturbed wetland and upland habitats.
Water Quality	Water Quality of both groundwater and surface waters of the	Water quality may be temporarily impacted during construction due to turbidity associated
	Raritan River may improve in the area due to ongoing	with unavoidable use of construction equipment within the river. Best management
	groundwater remediation activities by others. Lead paint chips	practices, in coordination with the soil and sedimentation erosion control plan to be
	from the bridge and or chemical interactions of the man-made	permitted by the Soil Conservation Districts of Freehold and Somerset-Union, will
	structure with surface waters of the Raritan may potentially	minimize temporary impacts. Removal of the bridge and pier structures that could
	continue to impair the immediate water quality to a very limited	potentially contribute lead pain chips or other undesirable materials into the surface waters
	extent.	of the Raritan River in the future, will benefit water quality in the project area.
Air Quality	The study area would be managed in accordance with the State	The proposed project would not significantly impact the air quality of the region.
	Implementation Plan.	Expected emissions are below Federal de minimis levels.
Environmental	Private entities and other stakeholders would continue with	The proposed project will not adversely impact the ongoing remedial action plans.
Contamination	remedial action plans for the adjacent lands and project area to	Removal and disposal of embankment materials and bridge structures will be
	address known contamination. Potential release of	accomplished in accordance with applicable laws and regulations. A health and safety
	contaminants to the surface waters of the Raritan would likely	work plan will be adhered to during construction in accordance with OSHA requirements.
	be minimized by such efforts.	
Cultural	The railroad bridge and embankment would remain a cultural	The impact would be the loss of the spur as a contributing element to the Port Reading
Resources	resource in the landscape, unless potentially removed for site	Railroad historic district and also the loss of the spur structure determined eligible for the
	remediation or community safety.	National Register of Historic Places. As mitigation for the identified impact, the Corps
		will be preparing a public document that discusses the historic importance of the railroad
		spur, other bridges and transportation networks within the Green Brook Flood Control
		Project. This mitigation was agreed to by the SHPO (See correspondence in Appendix A).
Landscape	The railroad bridge would likely remain a cultural resource	The railroad bridge would be removed from the river viewshed from Queens Bridge.
Aesthetics	structure in the viewshed. The southern riverbank would not be	Dependent upon the viewer, this could be regarded as a loss of a cultural resource interest,
	anticipated to change under the no-action alternative, but the	or an improvement of riparian habitat quality and aesthetics.
	northern riverbank will likely be modified in the future due to	
	site remediation activities.	
Noise	Suburban sound environment.	Increased noise levels during construction
Socioeconomic	Continued redevelopment of the area (southern riverbank). The	Job opportunity for NJ small business construction contractor. The dilapidated bridge
Environment	dilapidated structure would continue to be a safety hazard in the	structure would be removed as a safety hazard.
	environment.	
Flooding	Flood damage reduction within the Green Brook Basin would	The proposed action will allow the completion of flood control segments for Element No.
	not be achievable under the no action alternative. Flooding of	1 of the Green Brook Flood Control Project. The implementation of the proposed action
	communities would continue, with potential loss of life,	will alleviate potential induced flooding associated with partial build out of Segments T,
	destruction of property, and associated adverse environmental	U, and R.
	impacts (e.g., pollution of waterways, loss of vegetation)	

Table 2 Comparison Table of the No-Action Alternative (Future-Without-Project Condition) and the Proposed Demolition of Conrail Railroad Bridge and Embankment

7.4 Environmental Contamination

The Corps has continued to coordinate with the property owners and NJDEP Site Remediation Office case worker regarding known site contamination of the northern embankment area. Soil testing for the embankment material to be removed has shown that much of the material had acceptable arsenic levels and could potentially be disposed of without regulatory restriction, such as use as landfill cover. The construction contractor shall be responsible for additional testing during construction to determine proper off-site disposal of material in accordance with state and federal regulations.

Cranes will be utilized for reach across the river to lift bridge piers and deck for removal, and precautions will be taken to avoid paint chipping during demolition. The bridge materials will be handled by the construction contractor for proper washing of lead paint prior to salvage.

The construction contractor will be required to develop a Health and Safety Work Plan to be followed during all construction activities to minimize any release of contaminated materials, and also to protect worker's health.

Site access has been coordinated with the property owners to avoid impact to existing remediation structures (e.g. wells, lined ditch) and to avoid the spread of contamination off-property. Equipment washing will be required for construction vehicles that have entered specific zones with the construction area.

Additionally, the northern embankment area will receive 4" of topsoil cover post-embankment removal and grading, and will be seeded to prevent erosion of subsurface existing soils that potentially have elevated arsenic levels.

7.5 Cultural Resources

The proposed action would result in the loss of the railroad spur as a cultural resource that is a contributing element to the Port Reading Railroad historic district. Coordination has been ongoing with the State Historic Preservation Office to address impacts to the Ruberoid Company/Port Reading Railroad Spur which is eligible for listing on the National Register of Historic Places. Pertinent correspondence is included in Appendix A. As mitigation for impacts to the spur and several other resources associated with other project actions, the Corps will be preparing a book for public distribution that discusses the historic importance of the railroad spur, other bridges, and transportation networks within the Bound Brook vicinity. These mitigation measures are spelled out in the Standard Mitigation Agreement developed as per the signed Programmatic Agreement included in Appendix A.

7.6 Landscape Aesthetics

Removal of the railroad bridge would change the viewshed of the Raritan River, as viewed from Queens Bridge to the east. A structure that is eligible for the National Register of Historic Places will be lost; however, the scenic habitat quality of the corridor will be mitigated for in place through site restoration with seeding. The native or naturalized species to be seeded include riverbank wild rye (*Elymus riparius*), annual rye (*Lolium multiflorum*) as a companion crop for site stabilization, little bluestem (*Andropogon scoparius*), deer tongue (*Panicum clandestinum*), meadow foxtail (*Alopercurus pratensis*), silky wild rye (*Elymus villosus*), rice cutgrass (*Leersia oryzoides*), fringed sedge (*Carex crinita*), pin oak (*Quercus palustris*), grey dogwood (*Cornus racemosa*), nannyberry (*Viburnum lentago*), joe pye weed (*Eupatorium fistulosum*), black-eyed Susan (*Rudbekia hirta*), common milkweed (*Asclepias syriaca*), New York ironweed (*Veronia noveboracensis*), New England aster (*Aster novae-angliae*), showy tickseed sunflower (*Bidens aristosa*). The viewshed of the project area from River Road could be potentially enhanced through removal of man-made structures and restoration of the site with seeding.

7.7 Socioeconomic Environment

The proposed action will not adversely impact the socioeconomic environment of the area. The construction contract for demolition will generate work for a state owned small business firm. The removal of the unsafe bridge, which presently exists as a hazard to human health, will benefit the social environment of the community.

7.8 Noise and Traffic Impacts

The proposed action would increase noise levels in the immediate vicinity due to operation of construction equipment. Due to the surrounding industrial uses and ongoing site remediation construction on the northern side of the Raritan River, and due to ongoing construction of residential housing on the southern side of the Raritan River (south of the D&R Canal), the project is not anticipated to significantly adversely impact any residential communities. Wildlife in the area may be temporarily displaced during active construction, but would be expected to return to the project area post-construction. The impacts of noise will be mitigated to the extent possible through restriction of the work hours within normal operating hours (7 a.m. to 7 p.m.), and by coordinating with the local communities to comply with any locally enforced noise ordinances or work periods.

Potential traffic impacts are anticipated to be minor, and would be associated with truck removal of the bridge sections, and active removal of the bridge over River Road. During recent months, River Road has been closed at various times due to utility work, and is also closed during significant flooding events. Any potential road closure will be coordinated with the local police, government and affected businesses.

7.9 Cumulative Impacts

The proposed demolition action potentially may not overlap any new construction segments for the Green Brook Flood Control Project. The overlap of demolition activities with ongoing minor construction modifications at Segments T, U and R1 will not result in any cumulative adverse environmental impacts. Replacement of the Talmadge Avenue Bridge on the western limit of Bound Brook, New Jersey, is a project that is reasonably foreseeable to begin construction in fiscal year 2007 (October 1, 2006 – September 20, 2007). The overlap of demolition and construction activities of the Talmadge Avenue Bridge with the proposed demolition action is

not anticipated to result in any adverse environmental impacts. The two activities will cumulatively improve floodwater conveyance and reduce flooding of the project vicinities.

8.0 Public and Agency Coordination

The Draft Environmental Assessment was coordinated with the public and involved agencies through targeted mailings, placement of the report in public repositories such as the local library and town hall and by advertisement of the documents availability on the New York District's website and the local newspaper.

The Notice of Availability of the Draft EA was issued on August 30, 2006 and had a 30-day public comment period, ending on September 30, 2006. The District received correspondence from Regent Chemical, NJDEP Bureau of Air Quality, and the Delaware and Raritan Canal Commission commenting on the Draft EA. Their correspondence and associated response from the District can be found in Appendix E.

The proposed demolition of the Conrail Railroad Bridge and Embankment has been coordinated with the NJDEP Land Use Regulation Program Office. A Stream Encroachment and Freshwater Wetlands Permit has been issued for the project (Appendix A). The Corps has continued to coordinate with the property owners and the NJDEP Site Remediation Office to address site concerns and develop demolition plans and specifications in accordance with applicable agency regulations. The Corps has coordinated the demolition action with the State Historic Preservation Office. Pertinent correspondence is included in Appendix A. The Corps has coordinated the proposed action with the U.S. Fish and Wildlife Service (Appendix C). The circulation of this Environmental Assessment for public comment fulfills public coordination requirements in accordance with the National Environmental Policy Act of 1970. The action has been coordinated with the State and local partners of the Green Brook Flood Control Project, including NJDEP, Somerset County and Middlesex County, as well as with the Green Brook Flood Control Commission.

9.0 Conclusion

In summary, the proposed demolition of the Conrail Railroad Bridge and Embankment is not anticipated to have significant adverse impacts on the environment, and is therefore documented with a Finding of No Significant Impact (FONSI). The removal of the bridge structures and embankment materials will benefit the habitat of the Raritan River floodplain. Temporary disturbance to floodplain and wetland habitat will be mitigated on-site through site landscaping. As discussed previously, the Corps will be conducting mitigation for impacts to cultural resources. The proposed project is necessary for construction of Segment R2 levee of the Green Brook Flood Control Project, to alleviate induced flooding expected as a result of partial project build out of Segments T, U, R1 and R2. The Green Brook Flood Control Project will ultimately provide flood damage reduction for 14 municipalities in the Green Brook Sub-Basin. Table 3 summarizes compliance of the proposed action with applicable state and federal regulations.

10.0 References

- Corps. August 1980. Feasibility Report for Flood Control: Green Brook Sub-Basin, Somerset, Middlesex and Union Counties, New Jersey, Main Report and Final Environmental Impact Statement (FEIS).
- Corps. May 1997. Final General Reevaluation Report and Supplemental Environmental Impact Statement (FSEIS) Green Brook Sub-Basin of the Raritan River Basin, Middlesex, Somerset, and Union Counties, State of New Jersey.
- Corps. October 2001. Green Brook Flood Control Project: Analysis of Alternatives to Mitigate Temporary Induced Flooding Potential along the Raritan River.

Legislative Title	U.S. Code/Other	Compliance
Clean Air Act	42 U.S.C. §§ 7401-7671g	An air quality analysis was completed for the project. Based upon the completed analysis, the emissions from the project are considered to have an insignificant impact on the regional air quality, and according to 40 CFR 93.153 (f) and (g) the proposed project is presumed to conform to the SIP. See RONA in Appendix D.
Clean Water Act	33 U.S.C. §§ 1251 et seq.	The NJDEP has issued a Freshwater Wetlands and Stream Encroachment Permit for the proposed action, which fulfills the requirement for review under Section 404(b) of the Clean Water Act. See Appendix A.
Comprehensive, Environmental Response, Compensation and Liability Act of 1980	42 U.S.C. §§ 9601 et seq.	The Corps has coordinated the proposed project with stakeholders and State caseworkers for site remediation of the project area. Liability of the existing groundwater and soil contamination will remain a remedial action requirement of the identified responsible parties. The U.S. Government will not be acquiring real estate interests in any of the project area property. Construction will be undertaken through a right- of-entry agreement with the property owners.
Endangered Species Act of 1973	16 U.S.C. §§ 1531 et seq.	Information provided by the U.S. Fish and Wildlife Service indicates that the proposed project will not have adverse impacts to any endangered or threatened species.
Fish and Wildlife Coordination Act	16 U.S.C. § 661 et seq.	The Corps has coordinated with the U.S. Fish and Wildlife Service. See Appendix C.
National Environmental Policy Act of 1969	42 U.S.C. §§ 4321-4347	The circulation of this Environmental Assessment fulfills requirements of this act.
National Historic Preservation Act of 1966	16 U.S.C. §§ 470 et seq.	The Corps has continued to coordinate with the State Historic Preservation Office to fulfill requirements of this act.
Executive Order 11990, Protection of Wetlands	May 24, 1977	Circulation of this report for public and agency review fulfills the requirements of this order. The NJDEP has issued a Freshwater Wetlands and Stream Encroachment Permit for the proposed action. Temporary disturbance to existing forested floodplain wetlands will be mitigated on- site through native grass and shrub seeding.
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Population and Low Income Populations	February 11, 1994	Circulation of this report for public and agency review fulfills the requirements of this order. The removal action will not adversely impact a minority population or low income population.
Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks	April 21,1997	Implementation of this project will reduce environmental health risks. Circulation of this report for public and agency review fulfills the requirements of this order.

Table 3 Summary of Primary Laws and Regulations Applicable to the Proposed Project

APPENDIX A

Project Permit and Pertinent Correspondence

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STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION (See Issuing Division below)



The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to the further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit. 0000-02-0025.1FHA020001 Application No. Permit No. 0000-02-0025.1FWW020001 (GP2) 0000-02-0025.1FWW020002 (FWTW4R) Effective Date Expiration Date Issuance Date OCT 1 6 2002 OCT 1 6 2007, CCT 1 6 2092 Name and Address of Owner Name and Address of Operator Name and Address of Applicant NJDEP – Engineering & Construction PO Box 419 Trenton, NJ 08625 Location of Activity/Facility (Street Address) Issuing Division Statute(s) various Lots: NJSA 13:1D-1 various Blocks: Land Use Regulation Program NJSA 13:9B-1 Middlesex/South Bound Boros: NJSA 58:10A-1 Brook NJSA 58:16A-50, et. seq. Counties: Middlesex/Somerset Maximum Approved Capacity, Stream Encroachment Type of Permit if applicable Freshwater Wetlands

This permit grants permission to:

install a 72-inch water main underneath the Raritan River, to remove a Conrail Bridge and associated berm, and to suspend the water main across an existing bridge crossing the Delaware and Raritan Canal, at a location approximately 1,000 feet easterly of the intersection of Main Street and Canal Road, within the Borough of Middlesex, Middlesex County, and the Borough of South Bound Brook, Somerset County. This permit also authorizes the disturbance of 0.278 acres of freshwater wetlands/State open waters under Freshwater Wetlands Statewide General Permit 2 for the installation of the utility line. Under this permit, 3,308 square feet of transition area will be disturbed for the removal of the railroad berm.

Prepared By: Vetu De Meo

(See page 5 for Section Chief's signature.)

Revised Date	Approved by the Department of Environmental Protection		
	Name (Print or Type)	Title	
	Signature	Title	

Stream Encroachment Permit 0000-02-0025.1FHA020001 Freshwater Wetlands Statewide General Permit 0000-02-0025.1FWW020001 (GP2) Freshwater Wetlands Transition Area Waiver 0000-02-0025.1FWW020002 (FWTW4R)

Terms And Conditions

This permit is subject to the following terms and conditions:

- 1. This permit is revocable, or subject to modification or change at any time, pursuant to the applicable regulations, when in the judgement of the Department of Environmental Protection of the State of New Jersey such revocation, modification or change shall be necessary.
- 2. The issuance of the permit shall not be deemed to affect in any way action by the Department of Environmental Protection of the State of New Jersey on any future application.
- 3. The works, facilities, and/or activities shown by plans and/or other engineering data, which are this day approved, subject to the conditions herewith established, shall be constructed and/or executed in conformity with such plans and/or engineering data and the said conditions.
- 4. No change in plans or specifications shall be made except with the prior written permission of the Department of Environmental Protection of the State of New Jersey.
- 5. The granting of this permit shall not be construed to in any way affect the title or ownership of property, and shall not make the Department of Environmental Protection or the State a party in any suit or question of ownership.
- 6. This permit does not waive the obtaining of Federal or other State or local government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained.
- 7. A copy of this permit shall be kept at the work site, and shall be exhibited upon request of any person.
- 8. In cases of conflict, the conditions of this permit shall supersede the plans and/or engineering data.
- 9. Limit and Extent of Approval
 - a. This approval grants permission to the applicant and/or its agents to undertake an activity regulated by the State of New Jersey as described by the text of this permit and as detailed by the herein approved plans. Any construction, grading, removal of vegetation, or other activity at this site within or affecting a regulated flood plain, other than specifically approved by this permit or as detailed by the approved drawings, shall require additional approvals from the Department. The commencement of such regulated activities without the appropriate approvals shall be in violation of State law.
 - b. All activities authorized by this permit shall be completed within five years of the issuance date as listed on the first page of this document. At that time, this approval, if not previously revoked, shall automatically become null and void, and none of the activities referenced herein may commence or continue until a new approval has been granted by the Department.

10. Method of Construction

a. All activities approved by this permit shall be performed under the supervision and direction of a Professional Engineer licensed in the State of New Jersey, and shall be undertaken using the best management practices available. Furthermore, the site shall

Stream Encroachment Permit 0000-02-0025.1FHA020001

Freshwater Wetlands Statewide General Permit 0000-02-0025.1FWW020001 (GP2) Freshwater Wetlands Transition Area Waiver 0000-02-0025.1FWW020002 (FWTW4R)

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Terms And Conditions

be subject to inspection at any time by representatives of the Department to ensure the continuous application of the provisions of this permit.

- b. During the course of construction, neither the applicant nor its agents shall cause or permit any unreasonable interference with the free flow of the stream by placing or dumping any materials, equipment, debris or structures within or adjacent to the stream corridor. Upon completion or abandonment of the work, the applicant and/or its agents shall remove and dispose of in a lawful manner all excess materials, equipment and debris from the stream corridor and adjacent lands.
- c. All activities authorized by this permit shall be stabilized in accordance with the *Standards for Soil Erosion and Sediment Control in New Jersey* (obtainable from local Soil Conservation District offices), or equal engineering specifications, to prevent eroded soil and sediment from entering adjacent waterways and wetlands at any time during and subsequent to construction. The Department reserves the right to order the suspension of any activity if unacceptable levels of erosion or turbidity result from the approved drawing/s for either such time as is required for the channel and/or banks to become reasonably stabilized, or for one year after completion of the project (as evidenced by a Certificate of Completion), whichever period of time is longer.

11. Responsibilities of Applicant

- a. The granting of this permit does not in any way relieve the applicant and/or its agents from the responsibility for damages caused by any construction or activities hereby approved, nor does the Department accept responsibility for any structural designs.
- b. No construction authorized by this permit may begin until the enclosed **permit acceptance form** has been signed by the applicant and is returned to the Department. By signing and submitting this form, the applicant accepts this permit in its entirety and agrees to adhere to all of its terms and conditions. Please be advised that this permit may be declared null and void should it be determined that adequate measures had not been taken by the applicant and/or its agents to ensure the continuous implementation of these terms and conditions.
- c. Within ten (10) days of the receipt of this permit by the applicant, this permit shall be recorded in its entirety in the office of the County Clerk or the Registrar of Deeds and Mortgages for each county where this permit is located. Verified notice of this action shall be forwarded to the Department immediately thereafter.
- d. The enclosed **construction notice** shall be completed by the applicant or its agent and submitted to the Department at least fourteen (14) days prior to the commencement of the herein approved activities.
- e. The enclosed **completion report** shall be completed by a Professional Engineer licensed in the State of New Jersey and submitted to the Department within thirty (30) days after completion of the herein approved activities.
- 12. All excavated material must be disposed of in a lawful manner outside of any regulated flood plain, open water, freshwater wetlands or adjacent transition areas, and in such a way as to not interfere with the positive drainage of the receiving area.
- 13. In order to protect the anadromous fishery resource within the Raritan River, any proposed grading or construction activities within the banks of this or any other stream on site are

Stream Encroachment Permit 0000-02-0025.1FHA020001 Freshwater Wetlands Statewide General Permit 0000-02-0025.1FWW020001 (GP2) Freshwater Wetlands Transition Area Waiver 0000-02-0025.1FWW020002 (FWTW4R)

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prohibited between April 1 and June 30 of each year. In addition, any activity within the 100-year flood plain or flood hazard area of this watercourse that could introduce sediment into said watercourse or that could cause an increase in the natural level of turbidity is also prohibited during this period. The Department reserves the right to suspend all regulated activities on site should it be determined that the applicant has not taken proper precautions to ensure continuous compliance with this condition.

- 14. Trees, shrubs, grasses, and other vegetation within 25 feet from the top of all stream banks on site shall not be disturbed for any reason, except as approved by the Department and as shown on the approved site plans. This condition applies to all streams and waterways on site, regardless of the contributory drainage area.
- 15. Provisions of Freshwater Wetlands Statewide General Permit 2

This portion of the permit authorizes the total disturbance of 0.278 acres (12,138 square feet) of freshwater wetlands and/or State open waters for the installation of the 72-inch water main under General Permit 2. Any additional disturbance of freshwater wetlands, State open waters or transition areas shall be considered a violation of the Freshwater Wetlands Protection Act unless another permit is obtained from the Land Use Regulation Program prior to the start of the disturbances. The authorization of activities under this Freshwater Wetlands Statewide General Permit includes a transition area waiver which allows encroachment only in that portion of the transition area which has been determined by the Department to be necessary to accomplish the authorized activities. In addition, this permit to conduct a regulated activity in a wetland or open water includes the Department's approval of a Water Quality Certificate for these activities.

- 16. Provisions of the Freshwater Wetlands Transition Area Waiver Averaging Plan
 - a. This permit authorizes the disturbance of 3,308 square feet of freshwater wetlands transition area for the removal of the railroad berm under a Special Activity Transition Area Waiver Redevelopment.
 - b. In addition to the standard conditions set forth in Section 7:7A-6.1, the following special conditions must be met for the activity authorized under this transition area waiver:
 - 1. Proposed disturbance authorized under Special Activities Transition Area Waiver – Redevelopment shall not expand beyond the footprint of the pre-existing disturbed area.
- 17. All necessary local, Federal, and other State approvals must be obtained by the applicant prior to the commencement of the herein-permitted activities. Approvals from the following may be required: NJDEP Division of Solid and Hazardous Waste, NJDOH, EPA, and OSHA.
- 18. This permit only approves the installation of the water main and the removal of the Conrail bridge and associated berm. It does not in any way approve of any other portion of the Green Brook Flood Control Project. This permit has been approved because the permitted activities meet the requirements set forth in the Flood Hazard Area Control Act Rules and the Freshwater Wetlands Protection Act Rules. This decision does not in any way indicate that future permits will also be approved.

Stream Encroachment Permit 0000-02-0025.1FHA020001 Freshwater Wetlands Statewide General Permit 0000-02-0025.1FWW020001 (GP2) Freshwater Wetlands Transition Area Waiver 0000-02-0025.1FWW020002 (FWTW4R)

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19. The drawings hereby approved are seven (7) sheets prepared by Killam Associates/Hatch Mott MacDonald, undated, unrevised, unless otherwise noted, entitled:

"ELIZABETHTOWN WATER COMPANY 72" EASTERN TRANSMISSION MAIN PHASE II SOMERSET AND MIDDLESEX COUNTY LOCATION PLAN AND GENERAL NOTES", Sheet LP-1,

"ELIZABETHTOWN WATER COMPANY 72" EASTERN TRANSMISSION MAIN PHASE II SOMERSET AND MIDDLESEX COUNTIES PLAN AND PROFILE", Sheet P-1, last revised February 6, 2002,

"ELIZABETHTOWN WATER COMPANY 72" EASTERN TRANSMISSION MAIN PHASE II RARITAN RIVER AND D&R CANAL CROSSINGS PLAN AND PROFILE", Sheets P-2 and P-3, Sheet P-2 last revised September 3, 2002, Sheet P-3 last revised February 4, 2002,

"ELIZABETHTOWN WATER COMPANY 72" EASTERN TRANSMISSION REINFORCEMENTS SOMERSET COUNTY AND MIDDLESEX COUNTIES, NEW JERSEY PHASE II CONSTRUCTION DETAILS", Sheet D-1, last revised October 8, 2002,

"ELIZABETHTOWN WATER COMPANY 72" EASTERN TRANSMISSION MAIN PHASE II RARITAN RIVER AND D&R CANAL CROSSINGS STRUCTURAL – D&R CANAL BRIDGE"

"PLAN & SECTIONS", Sheet ST-1, and "DETAILS", Sheet ST-2.

Robert B. Piel, Jr., Manager Bureau of Inland Regulation

State of New Jersey

Department of Environmental Protection Division of Parks & Forestry, Historic Preservation Office PO Box 404, Trenton, NJ 08625 TEL: (609) 292-2023 FAX: (609) 984-0578 www.state.nj.us/dep/hpo Bradley M. Campbell Commissioner

HPO-C2003-4 03-0308-1 Prod

March 3, 2003

Leonard Houston Chief, Environmental Analysis Branch Department of the Army Corps of Engineers, New York District Jacob K. Javits Federal Building New York, NY 10278-0090

ATTN: Lynn Rakos

Dear Mr. Houston:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the Federal Register on 18 May 1999 (64 FR 27071-27084), I am providing Continuing Consultation Comments for the following project:

Middlesex, Somerset, and Union Counties Green Brook Flood Control Project

These comments were prepared in response to your request for HPO review and comment on the following report:

"Evaluating the National Register of Historic Places Eligibility of Three Bridges and a Railroad Spur and Assessing the Potential for Mill Related Archaeological Remains; Green B rook Flood Control Project, Middlesex Borough, Middlesex County, New Jersey" by Hunter Research, Inc. (June 2002).

SUMMARY: Three new historic properties have been identified. The project will have an adverse effect on identified historic properties.

800.4 Identifying Historic Properties

Archaeology

Intact remains associated with the eighteenth century Field Gristmill Site possess the potential to yield information important in history and therefore, if present, to be eligible for inclusion in the National Register of Historic Places under Criterion D.



ames E. McGreevey Governor

Architecture

The buried stone arch bridge was found eligible by my opinion dated May 24, 2002.

The Ruberoid Company Factory Complex was found eligible by my opinion dated February 5, 2003.

The Ruberoid Company/Port Reading Railroad Spur is eligible to be listed in the National Register of Historic Places as both a contributing resource within the Port Reading Railroad Historic District (which received a SHPO Opinion on 3/15/2002) and as a contributing resource within the Ruberoid Company Factory Complex.

I concur with your opinion that the Raritan Road/Plainfield Road/Landing Road/Railroad Avenue Iron Truss Bridge over Green Brook (Structure #18H0708) is individually eligible to be listed under Criteria A, C and D.

800.5 Assessing Effects

Archaeology

If intact structural remains or artifact deposits associated with the Field Gristmill Site exist within the Area of Potential Effects of the project, then the project will adversely effect those remains. Activities with the potential for impact include: excavation for the placement of riprap and activities associated with the placement itself. I concur with your recommendation for construction monitoring by a qualified archaeologist as the construction proceeds. In keeping with the Programmatic Agreement for the project and your recommendation for work in the vicinity of the site, the treatment plan for the work should be coordinated with the Historic Preservation Office.

Architecture

The project will have and adverse effect on the Raritan Road/Plainfield Road/Landing Road/Railroad Avenue Iron Truss Bridge over Green Brook (Structure #18H0708) since it will be removed.

The project will have an adverse effect on the Ruberoid Company/Port Reading Railroad Spur since it will be removed. Since the Spur is a contributing element to both the Ruberoid Company Factory Complex and the Port Reading Railroad Historic District, both of these resources will be adversely effected by the spur's removal.

The project will have no effect on the buried stone arch bridge.

I look forward to additional consultation on measures to avoid, reduce, or mitigate the adverse effects outlined above. I concur that a meeting format may be the most productive means for this continuing consultation.

Report Review Comments

In future project reports please incorporate a copy of the USGS topographic map directly into the report.

For this, and all future project reports, the HPO will need to receive a CD with copies of the project photographs to the following specification:

Survey reports submitted to the HPO displaying digital images rather than original photographs must incorporate a sturdy sleeve containing a CD with all of the digital images used in the report. Photographs must be of sufficient visual quality and clarity to accurately convey the subject matter, and provide a comprehensive record of the findings. Image files in the CD must be in .jpeg or.tif format and have a minimum resolution of two megapixels (approximately 1600 x 1300 pixels). The CD should be provided with the draft report. Both the CD itself and the CD over should be labeled with project/site name, county, municipality, etc. and the names of the firm and/or individuals who created the images. If a revised report is provided to the HPO it should also incorporate a sleeve into which the CD initially provided to the Office can be inserted.

If you have any questions regarding this letter, please contact Andrea Tingey regarding architecture at (609-984-0539) or Deborah Fimbel regarding archaeology at (609-633-2397). Thank you.

Sincerely,

Dorothy P. Guzzo Deputy State Historic Preservation Officer

John Reiser, Middlesex County Engineer Anna Aschkenes, Middlesex County Cultural and Heritage Commission Michael Amorosa, Somerset County Engineer Tom D'Amico, Somerset County Cultural and Heritage Commission

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DEPARTMENT OF THE ARMY NEW YORK DISTRICT, CORPS OF ENGINEERS JACOB K. JAVITS FEDERAL BUILDING NEW YORK, N.Y. 10278–0090

October 24, 2002

Environmental Assessment Section Environmental Analysis Branch

Ms. Dorothy P. Guzzo Deputy State Historic Preservation Officer Historic Preservation Office New Jersey Department of Environmental Protection CN 404 Trenton, New Jersey 08625-0404

Dear Ms. Guzzo:

The U.S. Army Corps of Engineers, New York District (Corps), is proceeding with the construction of the Green Brook Flood Control Project. In compliance with the existing Programmatic Agreement, the Corps is continuing to identify and evaluate cultural resources and historic properties associated with project components. Enclosed for your review is the draft report by Hunter Research, Inc., entitled "Evaluating the National Register of Historic Places Eligibility of Three Bridges and a Railroad Spur and Assessing the Potential for Mill Related Archaeological Remains," that addresses the resources within the currently active segments of the project (Enclosure 1). The locations of the resources discussed below are depicted on Enclosure 2.

1. Iron Truss Bridge over the Green Brook (Structure #H0708), Middlesex Borough, Middlesex County

Please note that the Middlesex/Somerset County boundary is often considered to be the present channel of the Green Brook. Historically, however, the boundary was the former channel of the Green Brook that ran beneath a now partially buried historic stone arch bridge, to the west. The new channel was never legally adopted as the county boundary so the bridge, in fact, is completely within Middlesex County.

The iron truss bridge over the Green Brook is a riveted, four-panel, double intersection Warren through-truss. The bridge carried Raritan Road, now abandoned, over the Green Brook (historically called the Bound Brook). The road alignment was in place as early as 1760. The structure is in extremely poor condition. The bridge was evaluated in 1992 as part of a survey of truss bridges in Somerset County and was considered not eligible. This determination was based solely on the bridge's condition. The Corps' survey has determined that the bridge possesses historical significance under Criterion C due to the fact that the bridge is one of few iron truss bridges remaining in the county and is the only known surviving bridge of its type in Somerset and Middlesex Counties. The structure may also be considered eligible under Criterion D as the abutments may be a re-use of supports from an earlier bridge and therefore may yield, through archaeology, additional important information about the bridge's method of construction.

2. Field Gristmill Site, Middlesex Borough, Middlesex County

The Field Gristmill stood at the mouth of the Green Brook, on the east bank, by 1760. The mill and its hydropower system were clearly key components of the complex drainage and transportation system in this area. The mill was abandoned *circa* 1870, when the Lehigh Valley Railroad acquired the land for a new rail line. In 1880, under court order, the milldam was dismantled by the railroad. The mill building itself burned *circa* 1879-1880.

A substantial amount of fill now covers the location of the mill, much of which was added when the Lehigh Valley Railroad constructed its line in 1875. The alignment of the Green Brook was heavily modified in connection with railroad company activities. Initially, the main channel ran beneath the stone arch bridge to the west of its current position and the current alignment served as the raceway for the mill. Although historically there was considerable modification to the topography in this area, including excavation associated with the rerouting of the watercourse, there remains a chance that deeply buried remnants of the mill may be *in situ*.

3. Ruberoid Company Port Reading Railroad Spur, Middlesex Borough and South Bound Brook Borough, Middlesex County

This railroad spur was constructed in 1928 to provide a rail connection from the Ruberoid Company plant in South Bound Brook to the Port Reading Railroad. The spur runs for approximately 2,700 feet atop a massive berm and includes two bridges, one across the Raritan River and one that carries the rails over River Road. The bridge over the Raritan River is a six-segment simple-span crossed braced steel girder bridge that dates to 1928. It measures approximately 495 feet in length and is supported by five concrete piers and abutments on either side of the structure. The bridge over River Road is approximately 56 feet long and is a 1928 through-girder steel bridge supported by concrete abutments.

The significance of the Ruberoid Company Port Reading Railroad Spur was assessed within several contexts. One is the spur's association with the Port Reading Railroad, the alignment of which received a New Jersey Historic Preservation Office opinion of eligibility on March 15th of this year. The consultant determined that the spur, as part of the railroad company's push to diversify its market beyond anthracite, could be considered a contributing element to the linear Port Reading Railroad historic district under Criteria A and C. The spur was further considered in light of its association with the Ruberoid Company plant in South Bound Brook. An eligibility assessment of the plant was not within the scope of this project, however, the report suggests that the plant is likely eligible under Criteria A and that the spur would be a contributing element to any NRHP eligibility designation of the property. Furthermore, the southwestern abutment, sections of embankment and the southern 75 feet of the Ruberoid Company Port Reading Railroad Spur Raritan River Bridge fall within the boundaries of the Delaware and Raritan (D & R) Canal Historic District. The consultant has concluded that due to the Ruberoid property's close association with the canal, the plant can be seen as a contributing resource to the D&R Canal Historic District. The spur, by association with the Ruberoicd property, is a contributing element within the canal historic district.

4. Concelusion and Recommendations

It is Corps' opinion that the iron truss bridge over the Green Brook (Structure # H0708) and the FRuberoid Company Port Reading Railroad Spur are eligible for the National Register of Historic ? Places. The truss bridge was initially proposed to be left in place but has since deteriorzated and has become a safety hazard. The truss bridge will be removed, which will have an advertse effect on the resource. The spur and associated bridges are proposed for removal as construction of the project has the potential to induce flooding elsewhere until construction is complete. Eliminating the railroad berm will help prevent this induced flooding. The removal of the sppur and its associated bridges will have an adverse effect on this historic resource. The Corps' rremoval action will stop at the southern embankment of the bridge over the Raritan, on the Sound Brook shoreline. No work will be undertaken by the Corps on the railroad bridge oover the D&R Canal. Elizabethtown Water Company (Elizabethtown) is proposing to install a 3 waterline along the railroad spur right-of-way. This proposed pipeline will then cross the D&ER Canal. The Corps is working with Elizabethtown in an attempt to have one construction episode that would entail the removal of the spur (by the Corps) followed by the installation of the waterline (by Elizabethtown). The Corps has taken the lead on the spur up to the southing the Raritan River while Elizabethtown is conducting cultural resource work on the LD&R property. Coordination on mitigation measures may be undertaken with Elizaberethtown.

The cultural resource concern at the Field Gristmill Site involves the placement of rip-rap along the Green Brook banks. The construction of which requires excavation of up to 4 feet of materiaial from the channel bed. The Corps proposes to have a qualified archeologist monitor excavatation in the vicinity of the mill as construction proceeds. Should structural remains be encountiered they will be recorded through photography and drawings before construction will be alloweded to continue. This work will be coordinated with your office.

While we concur with the recommendations set forth in the enclosed report with regard to mitigatizion for the Iron Truss Bridge and Ruberoid Company Port Reading Railroad Spur, the Corps is is interested in the possibility of pursuing alternate mitigation plans. The rather small geogramaphic area in which these resources lie has a long and fascinating history in terms of the Revolututionary War, the development of transportation routes and associated political disputes and rescolutions, as well as 18th and 19th century mill related technology. Geography and topogramaphy influenced many of the historical activities occurring in this area and often resulted in major tc topographical modifications. We suggest that rather than conducting detailed recordation of the br bridges and spur we might conduct more detailed research on the history of this intersection of waterways, roadways and railways leading to the production of a booklet and/or signage ge for the public. As preliminarily discussed with Andrea Tingey of your staff, the Corps would Id like to set up a meeting with your office, on site, to discuss possible mitigation measures before we proceed.
Please review the enclosed attachments and provide Section 106 comments on the eligibility of these resources, pursuant to 36 CFR 800.5. If you or your staff require additional information or have any questions, please contact Lynn Rakos, Project Archaeologist, at (212) 264-0229. Ms. Rakos will be in contact with your staff to set up a meeting if you agree that an on-site discussion is warranted.

Sincerely, Hruston

Leonard Houston Chief, Environmental Analysis Branch

Attachments

CF (w/ enclosures) D'Amico (Somerset County Cultural and Heritage Commission) Aschkenes (Middlesex County Cultural and Heritage Commission)

CF (w/out enclosures) Manning (Middlesex Borough) Cilo (Bound Brook Borough) Fazen (Bound Brook Planning Board) Wolan (Elizabethtown Water Company) Bower McEwan Havens Wright





PROGRAMMATIC AGREEMENT AMONG THE U. S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND THE NEW JERSEY STATE HISTORIC PRESERVATION OFFICER REGARDING THE GREEN BROOK FLOOD CONTROL PROJECT

WHEREAS, the U.S. Army Corps of Engineers, New York District, (New York District) proposes to construct a flood control project in the Green Brook Sub-Basin (the Project), channel modifications, levees, flood walls, bridge replacements, and closure structures, as well as the flood proofing or purchase of properties in flood prone locations (a map depicting the Green Brook Sub-Basin and its constituent Lower, and Stony Brook basins and detailed description of project actions are provided in Appendix 1 of this Programmatic Agreement [PA]), located in Middlesex, Somerset, and Union Counties, New Jersey;

WHEREAS, proposed flood protection in the Upper Basin of the Green Brook Basin in Union and Somerset counties, consist of two dry detention structures and channel modification, and bridge replacement, has been deferred, pending a reanalysis by the Upper Basin Task Force which will evaluate additional alternatives to be described in supplemental engineering, environmental, and cultural resource documents to be circulated by the NY District for public comment;

WHEREAS, the New York District is authorized to undertake these studies by the Water Resources Development Act of 1986 (PL99-662);

WHEREAS, the New York District and State of New Jersey intend to execute a Project Cooperation Agreement to formalize the roles and responsibilities of the federal and state governments in he implementation of the Green Brook Flood Control Project;

WHEREAS the Project will be implemented in phases anticipated over the next 12 years as specified in Appendix 1 of this PA;

WHEREAS, the New York District will implement the provisions of this PA as funding for the project is appropriated in future years;

WHEREAS, the New York District has defined the "Area of Potential Effect" for this undertaking to included all areas impacted by activities required to construct the channel modifications, the levees, flood walls, the bridge replacements, and closure structures, as well as the flood proofing or purchase of properties in flood prone areas, including all construction staging and borrow areas, all access roads, all ponding areas, all flowage easement acquisitions, viewsheds, and all environmental mitigation measures (a detailed

description is provided in Appendix 2 of this PA which also defines the proposed project relative to the National Economic Development [NED] Plan);

WHEREAS, the New York District has determined that properties listed and/or eligible for listing on the National Register of Historic Places (National Register) may be adversely affected by implementation of the Project;

WHEREAS, the New York District is applying the National Register Criteria (Criteria) to properties identified within the "Area of Potential Effect" on a phased basis, and to date has completed substantial surveys within the lower, Stony Brook, and upper portions of the Green Brook basin (as specified in Appendix 2 of this PA) which shall be hereafter referred to as the "Investigated Portion of the Area of Potential Effect" with the recognition that additional identifications and evaluations are required for project actions which have not yet been finalized, as specified in Appendix 2 of this PA;

WHEREAS, the New York District, in consultation with the State Historic Preservation Office (SHPO), has identified and developed treatment plans for two historic properties, the Bound Brook [Railroad] Station in Bound Brook and the Lincoln Boulevard/ East Main Street Bridge, in Bound Brook, which if implemented in accordance with SHPO correspondence, Appendix 3 of this PA, the SHPO agrees will not adversely affect these properties;

WHEREAS, the project actions described in the General Re-evaluation Report (Final May 1997) and Appendix 1 of this PA shall be detailed in the development of the Feature Design Memoranda and in subsequent Plans and Specifications construction documents (as described in the project schedule provided in Appendix 1 of this PA);

WHEREAS, the New York District has identified several interested parties to participate in the Section 106 consultation process and project planning, to include the Union County Department of Operational Services; South Plainfield Environmental Commission; and the North Plainfield Historical Society, and will consider subsequent requests as appropriate;

WHEREAS the New York District is coordinating, and shall continue to coordinate a public outreach program for this undertaking (detailed in Appendix 4 of this PA) which in the past has consisted of a number of public hearings and the circulation of cultural resource and environmental documents related to the Section 106 review process; and

WHEREAS, in accordance with 36 CFR Part 800.13, the New York District, the SHPO, and the Advisory Council on Historic Preservation (Council) have determined that execution of this PA and the Project Cooperation Agreement will establish alternative procedures to streamline the coordination of the Project;

WHEREAS, the New York District shall continue to consult with the SHPO regarding plans and surveys to identify, evaluate and treat historic properties as the New York

District and its agents implement all phases of the Green Brook Flood Control Project;

WHEREAS, the New York District shall provide the SHPO all plans and reports, including but not limited to all comments, notifications, and scope of works by certified mail; and

NOW, THEREFORE, the New York District, the Council, and the SHPO agree that the Project shall be administered in accordance with the following stipulations to satisfy the New York District's Section 106 responsibility for all individual undertaking of the Project.

Stipulations

The New York District shall ensure that the following measures are carried out:

I. IDENTIFICATION AND EVALUATION

- A. The New York District, in consultation with the SHPO, has determined that the following historic properties located within the Investigated Portion of the Area of Potential Effect, are eligible for or listed on the National Register:
 - 1. the Lehigh Valley Railroad and Port Reading Railroad Bridges in Bound Brook,
 - 2. the Central Railroad of New Jersey Main Line Corridor Historic District,

3. the Deserted Village of Feltville Historic District, the Washington Park Historic District, Prehistoric Site 28-Mi-150, and

4. the Vail/Randoph Mill Complex Site 28-So-106.

B. The New York District shall consult with the SHPO to develop Plans to complete the identification of historic properties within the remaining portion of the Project's Area of Potential Effect. The SHPO will provide comments on the scope of work and final Plans within 30 days of receipt.

C. The New York District shall revise Plans to address comments and recommendations provided by the SHPO prior to proceeding with identification and evaluation activities.

D. The New York District shall ensure that qualified professionals meeting the National Park Service professional qualifications for the appropriate discipline [National Park Service Professional Qualification Standards, Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44738-39)] are used to complete all identification and evaluation plans related to this undertaking, to include archaeological surveys and testing, historic structure inventories, and documentation.

E. The New York District and the SHPO shall consider the views of the public or interested parties in completing its identification and evaluation responsibilities.

F. The New York District shall maintain records of all decisions it makes related to the

National Register eligibility of properties.

G. Application of National Register Criteria

1. The New York District, in consultation with the SHPO, shall evaluate historic properties using the criteria:

a. If the New York District and the SHPO agree that the Criteria apply or do not apply, in evaluating the National Register eligibility of a property, the property shall be treated accordingly for purposes of this PA.

b. If the New York District and the SHPO disagree regarding National Register eligibility, or if the Council or the National Park Service so request, prior to the start of any Project-related work at the site or in the vicinity of the property, the New York District shall obtain a formal Determination of Eligibility (DOE) from the Keeper of the National Register (Keeper), National Park Service, whose determination shall be final.

2. Prior to the initiation of construction related activities, which are not exempt under the terms of this PA and which may affect historic properties in unsurveyed project areas, the New York District, in consultation with the SHPO, shall identify and evaluate:

a. Archaeological Sites

i. The New York District shall ensure that archaeological surveys within the uninvestigated portions of the Area of Potential Effect are conducted in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23) and the New Jersey Historic Preservation Office's (HPO) Guidelines for Phase 1 Archaeological Investigations: Identification of Archaeological Resources (January 17, 1996), and take into account the National Park Service publication The Archaeological Survey: Methods and Uses (1978) and the statewide historic contexts developed by the SHPO.

ii. The survey shall be conducted following consultation with the SHPO, and a report of the survey, consistent with the SHPO's <u>Guidelines for Preparing Cultural</u> <u>Resource Management Archaeological Reports Submitted to the HPO</u> (December 1994), shall be submitted to the SHPO for review and consultation.

b. Traditional Cultural Properties.

i. The New York District and the SHPO have agreed that no Traditional Cultural Properties are located within the Investigated Portion of the Area of Potential Effect.

ii. The New York District shall ensure that future surveys within the uninvestigated portions of the Area of Potential Effects includes procedures to identify Traditional Cultural Properties and to consult with Native Americans and other affected parties in accordance with the guidelines provided by National Park Service Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties.

iii. In the event that a Native American Tribe or affected group contacts the New York District regarding its recognition of a Traditional Cultural Property, located within the Area of Potential Effect, the New York District shall notify the SHPO and initiate

discussions with all parties to evaluate whether the property is a Traditional Cultural Property that meets the Criteria.

c. Buildings and Structures

i. The New York District shall ensure that surveys are conducted for buildings and structures in the Project's uninvestigated portion of the Area of Potential Effect in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23) and which takes into account the statewide historic contexts developed by the SHPO. The survey shall be conducted following consultation with the SHPO, and a report of the survey, consistent with the SHPO's Guidelines for Architectural Survey (1998), shall be submitted to the SHPO for review and consultation.

ii. The New York District, in consultation with the SHPO, shall identify and evaluate buildings and structures that are located adjacent to listed or eligible National Register Historic Districts to determine whether such properties should be considered as part of the Historic District or an expanded District.

d. Historic Districts or Multiple Areas (MRA) Resource

i. The New York District shall ensure that surveys to identify other historic districts or MRAs will be performed in the uninvestigated portion of the Area of Potential Effects.

ii. As surveys for all types of historic properties are completed, the New York District shall consult with the SHPO to determine whether the surveyed properties should be considered a District of Multiple Resource Area. The New York District and SHPO shall establish the historic context for any Historic District or Multiple Resource Area so as to facilitate its evaluation.

e. Historic Landscapes and View Sheds

i. The New York District shall consult with the SHPO to identify and evaluate historic landscapes and viewsheds located within the uninvestigated portion of the Project's Area of Potential Effect. The New York District shall consult National Park Service Bulletins 18, How to Evaluate and Nominate Designed Historic Landscapes, and 30 Guidelines for Evaluating and Documenting Rural Historic Landscapes, National Park Service Preservation Brief 36, Protecting Cultural Landscapes, and other publications and materials made available by the SHPO to assist in defining the criteria that should be applied to such properties.

ii. The objective in conducting the surveys is to identity National Register listed or potentially eligible Historic Landscapes and affected View Sheds within the project area that may be adversely affected by the Project implementation, and to determine whether they meet the National Register criteria set forth in 36 CFR Part 60.4.

3. The New York District shall ensure that the identification and evaluation of historic properties that may be affected by each phase of Project activities is completed prior to the initiation of any formal action by the Corps including rehabilitation, relocation,

ciemolition, etc.

III. INTERIM PROTECTION OF PROPERTIES

A. As the New York District facilitates the buyout of historic properties in the Area of Potential Effect, the New York District shall take appropriate measures to preserve and protect historic properties pending their ultimate disposition and treatment and to ensure that historic properties are not inadvertently demolished or damaged. Protection of all buildings shall be consistent with the guidelines set forth in Preservation Brief #31, Mothballing Historic Buildings (1993).

B. The New York District shall submit procedures for the protection of historic properties to the SHPO for review and comment. The New York District shall revise the procedures to address comments and recommendations provided by the SHPO and take into consideration comments provided by interested parties. The New York District shall implement the procedures once they are approved by the SHPO.

LII. TREATMENT OF HISTORIC PROPERTIES.

The New York District shall adhere to the following treatment strategies in order to avoid adverse effect to historic properties.

A... The New York District shall ensure that treatment plans are developed and implemented for all properties within the Investigated Portion of the Area of Potential Effect consistent with the terms of the PA, determined eligible for listing in the National Register (Appendix 3 of this PA).

B. The New York District, in consultation with the SHPO, shall develop appropriate treatment plans for historic properties identified within the unsurveyed portion of the Area of Potential Effect which may be affected by the Project. Unless the SHPO objects within 30 days of receipt of any plan, the New York District shall ensure that treatment plans are implemented by the New York District or its representative(s). The New York District shall revise Plans to address comments and recommendations provided by the SHPO.

C. The New York District shall ensure that qualified professionals meeting the National Park Service professional qualifications for the appropriate discipline [National Park Service Professional Qualification Standards, Secretary of the Interior's Standards and Gruidelines for Archaeology and Historic Preservation (48 FR 44738-39)] are used to develop and implement all treatment plan.

D. Avoidance. The preferred treatment is avoidance of effects to historic properties.

The New York District shall, to the extent feasible, avoid historic properties either through project design changes, use of temporary fencing or barricades, realignments, landscaping, or other measures that will protect historic properties. The New York District, and the SHPO shall consult to develop plans for avoiding impacts to historic properties. The New York District shall incorporate feasible avoidance measures into project activities as part of the implementation of the Project. If, in consultation with the SHPO, avoidance is determined to be infeasible, the New York District shall develop and implement treatment/mitigation plans consistent with Stipulations III and IX of this PA.

<u>E. Preservation In Place</u>. When the New York District and SHPO agree that complete avoidance of historic properties is infeasible, the New York District shall explore preservation in place, if appropriate. Preservation in place may entail partial avoidance or protection of historic properties against project related activities in proximity to the property. The New York District shall preserve properties in place through project design, i.e incorporating color, texture, scale, materials which are compatible with the architectural or historic character of the historic property, use of fencing, berms or barricades, preservation of vegetation including mature trees, landscaping and planting which screen the property. If the New York District, in consultation with the SHPO, determines that preservation in place is infeasible, the New York District shall develop and implement treatment/mitigation plans consistent with Stipulations III and IX of this PA.

F. When the New York District, in consultation with the SHPO, determines that project activities will have an effect on buildings, districts, and structures, the District shall ensure that a treatment plan is developed for these properties.

1. Buildings and Structures and Districts

a. The New York District, in consultation with the SHPO, shall determine the effect the Project will have on listed or eligible historic building, district, and structure and ensure that a treatment plan be developed for these properties.

b. The New York District and the SHPO have identified select Project related-activities as set forth in Appendix 6 of this PA which are exempt from further review under this PA, since these activities have limited potential to affect historic properties. No further review of these activities is required when the project activity is limited solely to those listed in Appendix 6.

c. When avoidance or preservation in place is infeasible, treatment plans for buildings, structures, and historic districts shall adhere to the following guidelines.

i. Rehabilitation/Alteration

The New York District shall ensure that plans and specifications for rehabilitation/alteration activities for historic buildings and structures shall adhere to the recommended approaches in The Secretary of the Interior's Standards and Guidelines for Treatment of Historic Properties (1995) [Standards].

ii. New Construction/Additions

The New York District shall ensure that the design of new construction and additions

to hnistoric buildings required for flood protection are compatible with the architectural chanracter, scale, setting, massing, size and color, of adjacent historic properties or the historic district in which the site is located. If the New York District and the SHPO conccur that the addition may affect a building or structure that is part of a viewshed, then the ! New York District shall document the relationship between the historic property and its vviewshed and, as appropriate consider, additional mitigation measures to preserve the viewwshed.

iii. Relocation

(a) When the New York District determines that historic properties within the Area of Potential Effect must be removed to provide flood protection, the New York District shall consult with the SHPO to determine the feasibility of marketing historic propperties for relocation. As appropriate, the New York District shall develop and impblement a marketing plan to advertise the availability of the affected buildings or strucctures in order to facilitate their relocation to alternative sites where the properties can be ppreserved. The New York District shall submit the marketing plans to the SHPO, for review and approval. The New York District shall distribute the marketing plan to interrested parties, affected landowners, and appropriate local groups for their inforrmation. The New York District shall ensure that marketing plans include proposed preservation covenants or easements approved by the SHPO.

(1) An information package including but not limited to photographs of the historic property; a parcel map; information on the property's historic significance; information on the historic property's cost; information on tax benefits for rehabilitation of historic properties; notification that the purchase shall be required to move the historic property to a location acceptable to the New York District and subject to review and comment by the SHPO; notification that the moving of the historic property shall confform to the approaches recommended in <u>Moving Historic Buildings</u> (John Obed Curtiis, 1979, American Association for State and Local History; notification that the move shall be conducted by a professional mover possessing the capability to appropriately relocate historic structures; and notification that the purchaser shall be required to rehabilitate and maintain the building in accordance with a preservation covernant specific to the historic property and the recommended approaches in the Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings (U.S. Department of the Interior, National Park Service, 1992),

(2) A distribution list of potential purchasers or transferees,

(3) An advertising plan and schedule, and

(4) A schedule for receiving and reviewing offers.

(b) Review of Offers. The New York District, in consultation with the SHPO shall review each offer it receives in response to the marketing plan and select the one that meets the following criteria:

(1) the offer provides for relocation and rehabilitation of the building as stipulated in the marketing package, including information on the location and suitability of the new site;

(2) the offerer has the financial and technical ability to carry out the terms of the offer; and

(3) the offerer agrees to accept transfer of the historic property with

the proposed preservation covenant or easement within a reasonable time frame.

(c) Modification of requirements. If the New York District receives no offers that meet the review criteria, the New York District, in consultation with the SHPO, may modify the requirements and re-offer the building with a modified convenant, or may demolish the historic property in accordance with Stipulation IX of this PA. Should the SHPO disagree with the New York District's decision regarding the marketing of the historic property, the New York District shall consult with the Council and implement Stipulation XIV of this PA.

(d) Within 90 days of the move, the New York District shall request that the SHPO re-evaluate the NR eligibility of the historic property at its new site.

iv. Transfer of Historic Properties

Should the New York District or its designee determine that properties which were the subject of Project buyouts will not be included in the Project, the New York District shall submit the location of the property, a current photograph and proposed convenant language to the SHPO for review and comment prior to making the historic property available for transfer. The New York District shall not convey historic properties until the SHPO has approved the proposed covenant language.

2. Archaeological Sites

a. Archaeological Data Recovery

The District shall develop a data recovery plan for archaeological sites eligible solely under National Register Criterion D which the New York District and the SHPO agree cannot be avoided or appropriately preserved in place. The data recovery plan to retrieve significant archaeological information, will be developed and implemented by the New York District or its representative(s), following approval from the SHPO and prior to the implementation of project-related activities within or in the vicinity of the archaeological sites.

b. The New York District shall ensure that the data recovery plan for each eligible site addresses substantive research questions developed in consultation with the SHPO. The plan shall be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44734-37) and take into account the Council's publication, Treatment of Archaeological Properties. Each plan shall specify, at a minimum, the following:

(i) the property, properties, or portions of properties where data recovery is to be carried out;

(ii) the research questions to be addressed through the data recovery, with an explanation of their relevance and importance;

(iii) the methods to be used, with an explanation of their relevance to and effectiveness in addressing the research questions;

(iv) a discussion of the potential research value of any human remains that may be encountered, as well as a process for consultation with the SHPO, the Council, any descendent communities, and any persons or groups that have expressed an interest, to develop a treatment plan for human remains; and

(v). a proposed schedule for the submission of progress reports and the draft data recovery report to the SHPO.

c. The New York District shall submit data recovery plans to the SHPO for review and approval. The New York District and SHPO shall consult to resolve any objections to the data recovery plan as proposed. The data recovery plan shall then be implemented by the New York District once approved by the SHPO. If no response is received from the SHPO after 30 days of receipt of adequate documentation, the New York District may assume the SHPO's concurrence and proceed with implementation of the plan submitted.

d. The New York District shall ensure that data recovery plan(s) will be carried out by or under the direct supervision of an archaeologist(s) who meets, at minimum, the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9).

e. The New York District, in consultation with the SHPO, shall develop adequate provisions for site security during data recovery to avoid vandalism.

f. If any human remains and/or grave-associated artifacts are encountered during data recovery, the New York District, the SHPO, and the Council shall consult to develop a treatment plan for human remains that is responsive to the Council's "Policy Statement on Human Remains" (September 27, 1988), the Native American Grave Protection and Repatriation Act (PL 101-601) and, U.S. Army Corps of Engineers, Policy Guidance Letter No. 57, (1998) Indian Sovereignty and Government-to-Government Relations With Indian Tribes (see Appendix 5 of this PA).

g. Curation and Dissemination of Information:

i. The New York District or its designee, in consultation with the SHPO shall ensure that all materials and records resulting from the survey, evaluation, and data recovery conducted for the Project will be curated in accordance with 36 CFR Part 79 "Curation of Federally-Owned and Administered Archaeological Collections" and ER 1130-2-433 "Project Operations: Collections Management and Curation of Archaeological and Historical Data." All material and records recovered from non-Federally owned land shall be maintained in accordance with 36 CFR Part 79 until their analysis is complete and, if necessary, are returned to their owner(s).

ii. The New York District shall ensure that all final reports resulting from actions pursuant to this PA will be provided, to the SHPO, and upon request, to other interested parties. All such plans shall be responsive to contemporary standards. Final plans shall be submitted to SHPO for review and approval. The New York District shall implement approved final plans.

3. Traditional Cultural Properties

a. The New York District shall develop a plan to involve, or continue to involve, Native Americans and communities, persons or groups that could be affected by the District's proposed project activity at a specific historic site or property. The plan shall describe 1) a process for the analysis of options responsive to the continued use and access to traditional cultural properties; 2) development of measures for the safe ingress and egress use of the traditional cultural properties during construction; 3) analysis of treatment options, including the recommended treatment; and 4) the measures which will be implemented to ensure that project activities do not compromise the analysis of treatment options.

b. The New York District shall submit the final to the SHPO and to the affected group

and shall implement the plan in accordance to the procedures outlined in the plan, if formal objectives are not received within 30 days following its distribution.

c. If the New York District and SHPO or affected groups cannot resolve the objection, the New York District shall request the comments of the Council in accordance with Stipulation VI.

IV. TREATMENT OF HISTORIC LANDSCAPES

A. The New York District, in consultation with the SHPO, shall develop a plan to identify and evaluate design alternatives which will avoid, minimize, or compensate for impacts when it is determined that a historic landscape will be affected by Project activities.

B. Treatment measures for historic landscapes shall consider, in order of priority, preservation, rehabilitation, restoration, reconstruction, and additions in accordance with The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes (1996) and Protecting Cultural Landscapes, National Park Service Preservation Brief Number 36.

V. EMERGENCY ACTIVITIES

A. The New York District shall consider an emergency to exist when a structure, building or site poses an immediate threat to life, safety, or property. Such situations should require an immediate response (30 days or less) based upon the findings of an engineer, architect, emergency response professional, or project manager, representing the New York District or a participating community. If an action is not required by the New York District within thirty days or less the project activity shall not be considered an emergency and should be reviewed under terms of PA.

B. The New York District shall immediately notify the SHPO of any such emergency via certified mail and the proposed response and request a written approval within five (5) business days unless the nature of the emergency does not allow for such a delay. The District shall submit relevant background information including current photographs, engineering or structural reports, local citations, etc. If an immediate response is required, the New York District shall undertake the action and subsequently provide SHPO with documentation.

If the SHPO fails to respond within five (5) business days, the New York District may assume concurrence with its proposed response and proceed.

VI. RESOLUTION OF ADVERSE EFFECTS

A. When the New York District, in consultation with the SHPO, determines that Project related activities cannot adhere to treatment plans developed in accordance with

Stipulation III.E. or would otherwise have an adverse effect, the New York District shall:

1. Develop a Standard Mitigation Agreement (SMA) with the SHPO; or

2. Consult with the Council to develop a Memorandum of Agreement (MOA) in accordance with 36 CFP. Part 800.5 (e).

B. The New York District shall invite the Council to participate in consultation when:
1. The New York District and SHPO determine that an agreement or a SMA cannot be reached;

2. a National Historic Landmark is involved;

3. human remains have been identified; or

4. there is widespread public interest in a historic property or properties.

C. The New York District and the SHPO, and interested parties as appropriate, shall consult to develop alternatives to mitigate or minimize adverse effects. The analysis of alternatives shall consider program needs, cost, public benefit and values, and design feasibility.

D. Development of Standard Mitigation Agreements (SMA).

1. The New York District, in consultation with the SHPO and interested parties, as appropriate, shall develop SMAs for historic properties which will be adversely affected by the Project. The New York District shall submit the SMA to the SHPO for review and approval by certified mail. The SHPO shall have 30 days from receipt of adequate information in which to review and comment on the SMA(s). If the SHPO fails to respond within 30 days, or if there is disagreement, the New York District shall notify the Council and consult to develop the propose SMA into an MOA and submit copies of background information and the proposed SMA to facilitate consultation to develop an MOA in accordance with 36 CFR Part 800.

2. After signing by the New York District and SHPO, the New York District shall file all SMAs with the Council.

E. Standard Mitigation Agreements (SMA)

1. SMAs developed between the New York District and the SHPO, may include one or more of the following stipulations which address routine adverse effects that may occur to historic properties as a result of project implementation.

2. Recordation. The New York District shall consult with the SHPO or Historic American Building Survey/Historic American Engineering Record (HABS/HAER) to determine the appropriate level and type of recordation for affected resources. For historic properties with state and/or local significance, recordation shall be consistent with the requirements and standards of the Department of the Interior (October 1997). All documentation must be submitted to SHPO and HABS/HAER for acceptance, prior to the initiation of project activities, unless otherwise agreed to by the SHPO or NPS.

3. Salvage and Donation of Significant Architectural Elements. Prior to demolition, partial demolition, or substantial alteration of historic properties, the New York

District, in consultation with the SHPO, shall develop a salvage and donation plan to identify appropriate parties willing and capable of receiving and preserving the salvaged significant architectural elements. The New York District shall submit the plans to the SHPO for review and approval.

4. Alternative Treatments or Design Plan which meet the Standards. Prior to demolition partial demolition, or substantial alteration of historic properties, the New York District, in consultation with the SHPO, shall develop a plan identifying protocols for developing treatment guidelines and evaluating design standards for new construction within historic districts in keeping with the Secretary's Standards. The New York District shall submit the plans to the SHPO for review and approval.
5. Rehabilitation and new construction which does not adhere to the Standards. The New York District shall consult with the SHPO to develop alternate treatment plans or designs for those elements or features, which cannot meet the Standards. The District shall submit final plans and specifications to the SHPO for review and approval.

6. Transfer or conveyance without convenants. In instances where the historic properties will not be conveyed or transferred with preservation convenants (vis a vis Section III.F.1.), the New York District shall record these properties to SHPO or HABS/HAER standards and provide prospective owners of the properties with information about Preservation Tax Incentives for Historic Buildings, sources of funding for historic properties, and information regarding rehabilitation of historic properties including the Secretary of the Interior's Standards. Prior to demolition, partial demolition, or substantial alteration of historic properties, the New York District, in consultation with the SHPO, shall develop a plan to transfer and convey the historic property without convenants. The New York District shall submit the plans to the SHPO for review and approval.

7. Data recovery for archaeological sites eligible under Criterion D and others and data recovery and treatment of archaeological sites where data recovery will not result in a finding of no adverse effect. The New York District shall conduct data recovery on archaeological sites following agreement on the perspective data recovery and treatment plans between the New York District and the SHPO when the archaeological sites are eligible for National Register inclusion under additional Criteria than Criterion D (for the information which they contain) or when the full informational value of the site cannot be substantially preserved through the conduct of appropriate research to professional standards and guidelines. To the maximum extent feasible, data recovery and treatment plans shall be developed to take into account and mitigate for the fullest range of archaeological site values and significance. Prior to construction, the New York District shall develop a data recovery plan for archaeological sites eligible under Criterion D and others. The New York District shall submit the plans to the SHPO for review and approval.

8. Off-site mitigation for the loss of a historic property. The New York District, with the approval of the SHPO, may preserve similar property types or sites outside the Area of Potential Effect in lieu of preservation of properties that are within strategic locations within the Greenbrook Flood Control Project area. The New York District and the SHPO will consult to develop appropriate easements, convenants and other mechanisms for the protection of these properties. Prior to demolition, partial

demolition, or substantial alteration of historic properties, the New York District, in consultation with the SHPO, shall develop an off-site mitigation plan to compensate for the loss of historic properties. The New York District shall submit the plans via certified mail to the SHPO for review and approval.

VII. INTERPRETIVE EXHIBIT

A. The New York District shall consult with the SHPO to develop a plan for the creation of an interpretive exhibit as part of mitigation for project related impacts. The Scope of Work prepared for the interpretative exhibit shall be submitted with the New York District's schedule for implementation to the SHPO for review and approval. The New York District and the SHPO shall consult to resolve any objections. The final plan shall be implemented by the New York District once approved by the SHPO. If no response is received from the SHPO within 30 days following receipt of adequate documentation the plan shall be implemented as submitted.

B. The New York District shall consult with the SHPO and the public to ensure that the location of the exhibit is publicly accessible and has appropriate management and maintenance.

C. The New York District shall include in the interpretive exhibit for the Project the findings of cultural resources investigations and all records resulting from HABS/HAER or, where the New York District and SHPO concur is appropriate, SHPO level documentation and historical research.

D. The New York District shall consult with the SHPO to develop a plan for the creation, reproduction, and distribution of a brochure describing the Project, findings generated by the investigation undertaken as part of this PA, and pertinent information on the location and access to the interpretive exhibit.

E. The New York District, in consultation with the SHPO, shall develop and disseminate a press release to publicize the interpretive exhibit, brochure, and substantive contributions of the cultural resource program for the Project.

VIII. DISCOVERY

A. If previously unidentified properties are discovered during Project implementation, the New York District shall cease all work in the vicinity of the discovered historic property until it can be evaluated pursuant to the guidelines in Stipulation I of this PA. If the property is determined to be eligible, the New York District shall consult with the SHPO to develop a treatment plan or SMA in accordance with Stipulations III and VI of this PA.

B. The New York District shall implement the treatment or SMA once approved by the SHPO.

IX. COORDINATION OF REVIEWS FOR PROJECT ACTIVITIES

A. All plans, documents, reports, and materials shall be submitted by the New York District (or its representative) to the SHPO by certified mail, for a 30 day review period unless otherwise stipulated in this PA. If the SHPO fails to comment within the specified time, the New York District must request the Council's comments unless the PA provides for the New York District to assume the SHPO's concurrence when the 30-day review period has elapsed.

B. When interested parties are participating in the review of activities or actions outlined in this PA the New York District shall ensure that all interested parties are provided documentation at the time it is forwarded to the SHPO and afforded a 30 day review period. As appropriate, the New York District shall submit the comments of interested parties to the SHPO to facilitate further consultation.

C. If after consulting with the SHPO and interested parties for a period of 90 days on any action or activity provided for in this PA, the New York District or SHPO concludes there is no progress in developing treatment/mitigation plan or other documents required by this PA, the New York District or SHPO may notify the Council and request the Council's involvement to expedite completion of the consultation process.

D. The New York District shall ensure that all submissions to the SHPO, interested parties, and the Council include all relevant information to facilitate their review. The New York District shall provide all additional information requested by SHPO, interested parties, or Council within a timely manner unless the signatories to this PA agree otherwise.

E. The New York District shall ensure that all draft and final reports resulting from actions pursuant to the Stipulations of this PA will be provided to the SHPO, and upon request, to other interested parties and will identify the Principal Investigator responsible for the report. All reports will be responsive to contemporary standards, and as appropriate to the <u>Department of the Interior's Format Standards for Final Reports of Data Recovery Programs</u> (42 FR 5377-79) and HPO report standards. Precise locational data may be provided only in a separate appendix if it appears that its release could jeopardize archaeological sites consistent with National Register Bulletin Number 29, Guidelines for Restricting Information about Historic and Prehistoric Resources.

F. SHPO Review of Treatment/ Mitigation Pans.

1. The New York District shall ensure that all treatment/mitigation plans are submitted to the SHPO for review and comment. The New York District shall also obtain the comments of all interested parties, affected landowners, and appropriate local interest groups during the development of treatment/ mitigation plans and SMAs. All comments shall be made available to the SHPO with a recommendation from the

New York District regarding the need for further consultation among all parties.

2. If the New York District and SHPO do not concur on the adequacy, appropriateness, or extent of

treatment/mitigation plans, or SMAs, the New York District and the SHPO shall consult in an attempt to resolve the

disagreement. If the disagreement is limited to treatment the New York District shall consult with the SHPO in

accordance with Stipulation VI. If the disagreement is related to mitigation in a proposed SMA, in compliance

with the terms of an executed SMA or PA the New York District shall involve the Council in accordance with

Stipulation X of this PA.

G. If the District proposes revisions or addenda to SHPO approved treatment/ mitigation plans or other documents, the New York District and SHPO shall consult to determine whether additional conditions or mitigation measures are appropriate.

H. The New York District shall certify in writing that all requirements for identification and evaluation, and the implementation of treatment/mitigation plans have been satisfactorily completed prior to the initiation of construction activities for a specified portion of the Project. The New York District shall submit a copy of this certification to the SHPO by certified mail. The SHPO shall have 30 days to object to the certification based on the SHPO's finding of incomplete compliance or inadequate compliance with the terms of this PA. If the SHPO does not object, the District may proceed with construction for the specified segment of the Project.

X. DISPUTE RESOLUTION

A. The SHPO shall have 30 days to object to determinations, evaluations, plans, and documents submitted by the New York District. The New York District and SHPO shall attempt to resolve any disagreement arising from implementation of this PA. If there is a determination that the disagreement cannot be resolved, the New York District shall request the Council's recommendations or request the comments of the Council in accordance with 36 CFR Part 800.6(b).

B. Any Council recommendations or comments provided in response will be considered in accordance with 36 CFR Part 800.6(c)(2), with reference only to the subject of the dispute. The New York District shall respond to Council recommendations or comments indicating how the New York District has taken the Council's recommendations or comments into account and complied with same prior to proceeding with Project activities that are subject to dispute. Responsibility to carry out all other actions under this PA that are not the subject of the dispute will remain unchanged.

XI. PUBLIC INVOLVEMENT

A. In consultation with the SHPO, the New York District shall develop a plan to inform:

* **4**10-

the interested public of the existence of this Agreement, and the New York District plan for meeting the terms of this PA. Copies of this Agreement and relevant documentation prepared pursuant to the terms of this PA shall be made available for public inspection (information regarding the locations of archaeological sites will be withheld in accordance with the Freedom of Information Act and National Register Bulletin 29, if it appears that this information could jeopardize archaeological sites). Any comments received from the public under this Agreement shall be taken into account by the New York District.

B. Public Objections. The New York District shall review and resolve timely substantive public objections. Public objections shall be considered timely when they are provided within the review periods specified in Appendix 4 of this PA public participation plan specified. The New York District shall consult with the SHPO, and as appropriate with the Council, to resolve objections. Project actions which are not the subject of the objection may proceed while the consultation is conducted.

XII. MONITORING

A. Upon execution of the Project Cooperation Agreement, the New York District shall prepare annual reports summarizing the status of compliance with the terms of this PA and a summary of the completed activities and the exempt activities for the past year and proposed activities for the next fiscal year to the SHPO, Council, and interested parties by the New York District. Reports shall be submitted by January 31 of every year. The Annual Reports shall be provided to Council, SHPO, and interested parties until the Project-related activities are complete.

B. The Council and the SHPO may request a site visit to follow up information in the annual Report or to monitor activities carried out pursuant to this PA. The Council and the SHPO shall provide the New York District with 30 days written notice when requesting a site visit unless otherwise agreed. The New York District may also schedule a site visit with the SHPO and the Council at its discretion.

XIII. AMENDMENTS

Any signatory to this PA may request that it be amended, whereupon all the parties will consult in accordance with 36 CFR Part 800.13 to consider such amendment.

XIV. TERMINATION

Any signatory to this PA may terminate it by providing thirty days notice to the other parties, provided that the parties will consult during the period prior to termination by certified mail to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the New York District will comply with 36 CFR Parts 800.4 through 800.6 with regard to individual undertakings covered by this Agreement.

XV. SUNSET CLAUSE.

A. This PA will continue in full force and effect until the construction of the Project is complete and all terms of this PA are met, unless the Project is terminated or authorization is rescinded.

Execution and implementation of this PA evidences that the New York District has satisfied its Section 106 responsibilities for all individual undertakings of the Project, and that the New York District has afforded the Council and the SHPO an opportunity to comment on the undertaking and its effects on historic properties.

ADVISORY COUNCIL ON HISTORIC PRESERVATION

Bv: Date: John M. Fowler, Executive Director

NEW JERSEY STATE HISTORIC PRESERVATION OFFICE

By: <u>Multur</u> P <u>Au</u> Date: <u>6 - 26 - 58</u> Dorothy P. Guzzo, Deputy State/Historic Preservation Officer

U.S. ARMY CORPS OF ENGINEERS

By: Gary Thomas

Date: June 1, 1988

District Engineer, New York District

Appendix 1 Map of the Green Brook Sub-Basin, and Lower, Middle and Upper Basins Detailed Description of Project Actions and Proposed Schedule for Implementation of the Green Brook Flood Control Project

Appendix 2 Area of Potential Effect, Percentage of Area of Potential Effect Identified to Date, and Investigated Portion of Area of Potential Effect

Appendix 3 SHPO Approval Letters for Plans for Historic Properties Identified in the Investigated Portion of the Area of Potential Effect

The Project will have no effect on the Central Railroad of New Jersey Middle Brook Bridge and the Central Railroad of New Jersey East Main Street Bridge, which are part of the Central Railroad of New Jersey Main Line Corridor Historic District, or on Central Railroad of New Jersey Main Line Corridor Historic District. The Deserted Village of Feltville Historic District may be affected and require development of a treatment/mitigation plan consistent with the terms of this PA.

The New York District, in consultation with the SHPO, has developed treatment plans for one building and one structure affected by the Project as defined in Appendix 1 of this PA, in the Investigated Portion of the Area of Potential Effect. The New York District shall implement the following treatment plans. Design modifications have been included in the Project to avoid impacts to the setting of the Bound Brook [Railroad] Station in Bound Brook. The Project will have an effect on the Lincoln Boulevard Bridge, in Bound Brook. The New York District shall ensure that prior to construction, archival documentation is prepared to record the Lincoln Boulevard Bridge is prepared in accordance with SHPO guidance. The lamp stanchions from the bridge will be removed and stored in a secure location. The New York District shall design the replacement bridge to be in keeping with the original balustrade features subject to SHPO review and shall re-install the original lamp stanchions to the extent feasible. Plans and specifications for the replacement structure shall be provided to the SHPO for review and comment prior to the initiation of any project actions in the vicinity of the bridge.

Appendix 4 Public Coordination for the Green Brook Flood Control Project

Appendix 5 Native American Graves Protection and Repatriation Act and Council's Policy Statement on Human Remains (September 27, 1988); Corps Guidance on Native Americans.

Appendix 6 Project-Related Activities Exempt from Further Coordination Under the PA. The New York District shall ensure that qualified professionals are used to ensure that project actions meet the requirements of exempt activities. All professionals shall meet the standards set forth in the qualified professionals Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44738-39). Exempt activities are:

Repair in kind of Historic Buildings and Structure

Routine Maintenance of constructed project features such as levees, floodwalls,

channels, pump stations, flood proofing

New construction with compatible materials

Flood-proofing of non-historic buildings

Modifications to non-historic bridges



State of New Jersey

Department of Environmental Protection

Division of Parks and Forestry Office of Natural Lands Management Natural Heritage Program P.O. Box 404 Trenton, NJ 08625-0404 Tel. #609-984-1339 Fax. #609-984-1427

January 4, 2002

David C. Roth Environmental Evaluation Group 1184 Fischer Boulevard, 2nd Floor Toms River, NJ 08753

Re: 72 inch Watermain Crossing Project

Dear Mr. Roth:

DONALD T. DIFRANCESCO

Acting Governor

Thank you for your data request regarding rare species information for the above referenced project site in South Bound Brook and Middlesex Boroughs, Somerset and Middlesex Counties.

The Natural Heritage Data Base does not have any records for rare plants, animals, or natural communities on the site.

Attached are lists of rare species and natural communities that have been documented from Somerset and Middlesex Counties. These county lists can be used as master species lists for directing further inventory work. If suitable habitat is present at the project site, these species have potential to be present. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend you contact the Division of Fish and Wildlife, Endangered and Nongame Species Program.

PLEASE SEE THE ATTACHED 'CAUTIONS AND RESTRICTIONS ON NHP DATA'.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,

Herbert a Lord

Herbert A. Lord Data Request Specialist

cc: Thomas F. Breden Lawrence Niles NHP File No. 02-4007455

RECEIVED KILLAM GROUP, INC. 27 BLEEKER ST., MILLBURN, NJ 07041

REFER DATE SEEN: REFER BACK TO: .

New Jersey is an Equal Opportunity Employer Recycled Paper Robert C. Shinn, Jr. Commissioner

NATURAL LANDS MANAGEMENT

CAUTIONS AND RESTRICTIONS ON NATURAL HERITAGE DATA

The quantity and quality of data collected by the Natural Heritage Program is dependent on the research and observations of many individuals and organizations. Not all of this information is the result of comprehensive or site-specific field surveys. Some natural areas in New Jersey have never been thoroughly surveyed. As a result, new locations for plant and animal species are continuously added to the data base. Since data acquisition is a dynamic, ongoing process, the Natural Heritage Program cannot provide a <u>definitive</u> statement on the presence, absence, or condition of biological elements in any part of New Jersey. Information supplied by the Natural Heritage Program summarizes existing data known to the program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The attached data is provided as one source of information to assist others in the preservation of natural diversity.

This office cannot provide a letter of interpretation or a statement addressing the classification of wetlands as defined by the Freshwater Wetlands Act. Requests for such determination should be sent to the DEP Land Use Regulation Program, P.O. Box 401, Trenton, NJ 08625-0401.

This cautions and restrictions notice must be included whenever information provided by the Natural Heritage Database is published.

SOMERSET COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN THE NEW JERSEY NATURAL HERITAGE DATABASE

SRANK	4		~		-				1					<i>i</i>		•	3			
SRI	S2 S1 8384			53 53	15	52 81	S2	S.I	S.	83 83	S	S.2	S2	ĉ	1 5	5.5	\$3 \$2		S2	S2
GRANK	G4 G3G4 G3G4	63.2		G5 G5	GS	G4G5 G5T57	G4Q	GST5	G4G5T4T5	G5 G5	GS	GS .	GST5	ű	05T5	GS	GST5		GS	GSTS
REGIONAL STATUS	∼ " • • • • •	· •• .	·			LP														
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FEDERAL STATUS			·					-												
. COMMON NAME	LEONARD'S SKIPPER YELLOW LAMPMUSSEL COASTAL BOG METARRANTHIS	PRIMEVAL FOREST		BLACK MAPLE YELLOW GIANT-HYSSOP	LARGE WATER - PLANTAIN	RED MILKWEED WILLOW-LEAF ASTER	BLUNT-LOBE GRAPE FERN	SIDE-OATS GRAMA GRASS	ERECT BINDWEED	SLENDER TOOTHWORT CRAWFORD'S SEDGE	FRANK'S SEDGE	PALE SEDGE	MILLDENOW'S SEDGE	SCARLET INDIAN-PAINTBRUSH	REDBUD	HAIRY LIPFERN	PURPLE CLEMATIS		DOTTED HAWTHORN	WILD COMFREY
NAME	HESPERIA LEONARDUS LAMPSILIS CARIOSA METARRANTHIS PILOSARIA	PRIMEVAL FOREST		ACER NIGRUM AGASTACHE NEPETOIDES	ALISMA TRIVIALE	ASCLEPIAS RUBRA ASTER PRAEALTUS	BOTRYCHIUM ONEIDENSE	BOUTELOUA CURTIPENDULA	CALYSTEGIA SPITHAMAEA	CARDAMINE ANGUSTATA CAREX CRAWFORDII	CAREX FRANKII	CAREX PALLESCENS	CAREX WILLDENOWII VAR WILLDENOWII	CASTILLEJA COCCINEA	CERCIS CANADENSIS	CHEILANTHES LANOSA	CLEMATIS OCCIDENTALIS VAR	OCCIDENTALIS	CRATAEGUS PUNCTATA	CYNOGLOSSUM VIRGINIANUM VAR VIRGINIANUM
		*** Other types	*** Vascular plants														-			

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RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN

14 SEP 2001

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THE NEW JERSEY NATURAL HERITAGE DATABASE

GRANK 63 65 G5 55 G4 REGIONAL STATUS STATUS STATE T/TT/Sм ы FEDERAL STATUS COMMON NAME

NAME

. Star

*** Vertebrates

53B, S4N

SRANK

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E/TT/TT/Ts/s S/S T/TT/Tы 53 ۶ů ы ы F -5 TRAPROCK GLADE/ROCK OUTCROP CAVE TERRESTRIAL COMMUNITY BLUE-SPOTTED SALAMANDER CAVE AQUATIC COMMUNITY RED-HEADED WOODPECKER GRASSHOPPER SPARROW RED-SHOULDERED HAWK LONGTAIL SALAMANDER HENSLOW'S SPARROW FLOODPLAIN FOREST GREAT BLUE HERON UPLAND SANDPIPER SAVANNAH SPARROW VESPER SPARROW COOPER'S HAWK CLIFF SWALLOW WOOD TURTLE BARRED OWL SOG TURTLE COMMUNITY BOBOLLINK BOBCAT EURYCEA LONGICAUDA LONGICAUDA TRAPROCK GLADE/ROCK OUTCROP MELANERPES ERYTHROCEPHALUS CAVE TERRESTRIAL COMMUNITY PASSERCULUS SANDWICHENSIS PETROCHELIDON PYRRHONOTA CAVE AQUATIC COMMUNITY DOLICHONYX ORYZIVORUS MMMODRAMUS SAVANNARUM AMMODRAMUS HENSLOWLI BARTRAMIA LONGICAUDA CLEMMYS MUHLENBERGII POOECETES GRAMINEUS AMBYSTOMA LATERALE ACCIPITER COOPERII CLEMMYS INSCULPTA FLOODPLAIN FOREST ARDEA HERODIAS BUTEO LINEATUS STRIX VARIA LYNX RUFUS COMMUNITY

S2B, S4N

S1B, S2N

SJB

S2B

S2B, S2N

S3

S2

G5T5

*** Invertebrates

*** Ecosystems

ALASMIDONTA UNDULATA ALASMIDONTA VARICOSA GOMPHUS ABBREVIATUS

SPINE-CROWNED CLUBTAIL

TRIANGLE FLOATER

BROOK FLOATER

53? 51?

G4 G2

S2 S3

G47 G47 S2S3

G3G4

S1

63

64

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SOMERSET COUNTY

14 SEP 2001

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RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN THE NEW JERSEY NATURAL HERITAGE DATABASE

NAME

SRANK 51.1 32 SH HS Sl ЯHS 31 $\mathbf{S1}$ 82 sı 52 S1 S1. $\mathbf{S1}$ 52 S 81 GET3TS GRANK GST42 G5T4? GST5 G4G5 G5T? GST5 G4T4GET? 65 GD 65 63 GS 64 GS GS 50 REGIONAL STATUS STATUS STATE េ ۲v1 ω ы м ĿЭ 10 FEDERAL STATUS LARGE-FRUIT BLACK-SNAKEROOT NARROW-LEAF HORSE-GENTIAN LACE-LIP LADIES'-TRESSES VIRGINIA BUNCHFLOWER LONG-AWN SMOKE GRASS SOUTHERN ARROWHEAD HAIRY HEDGE-NETTLE ROBBIN'S PONDWEED ORANGE CONEFLOWER CORNEL-LEAF ASTER WARTY SPIKE-RUSH SMALL RUSH-GRASS ROCK SPIKE-MOSS DWARF PLANTAIN SMALL SKULLCAP LOW SPEARWORT XOTHA ANMOO COMMON NAME WAFER-ASH MUHLENBERGIA CAPILLARIS RANUNCULUS PUSILLUS VAR TRIOSTEUM ANGUSTIFOLIUM POTAMOGETON ROBBINSII SELAGINELLA RUPESTRIS ELEOCHARIS TENUIS VAR STACHYS PALUSTRIS VAR MELANTHIUM VIRGINICUM SCUTELLARIA LEONARDII SAGITTARIA AUSTRALIS SPIRANTHES LACINIATA SPOROBOLUS NEGLECTUS DOELLINGERIA INFIRMA SANICULA TRIFOLIATA PTELEA TRIFOLIATA RUDBECKIA FULGIDA PLANTAGO PUSILIA PHLOX PILOSA HOMOTRICHA VERRUCOSA PUSILLUS

65 Records Processed

SOMERSET COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN

THE NEW JERSEY NATURAL HERITAGE DATABASE

	NAME	COMMON NAME	FEDERAL S'TATUS	STATE STATUS	REGIONAL STATUS	GRANK	SRANK
*** Vertebrates							
	ACCIPITER COOPERII	COOPER'S HAWK		T/T		GS	S3B. S4N
	AMBYSTOMA LATERALE	BLUE-SPOTTED SALAMANDER		21		GS	S1
-	AMMODRAMUS HENSLOWII	HENSLOW'S SPARROW		В	-	G4	ats.
	AMMODRAMUS SAVANNARUM	GRASSHOPPER SPARROW		T/S		GS	HCS
	ARDEA HERODIAS	GREAT BLUE HERON		s/s		GS	S2B_S4N
	BARTRAMIA LONGICAUDA	UPLAND SANDPIPER		ы ы		GS	SIB
	BUTEO LINEATUS	RED-SHOULDERED HAWK		E/T		GS	S1B, S2N
	CLEMMYS INSCULPTA	WOOD TURTLE		Т		G4	53
	CLEMMYS MUHLENBERGII	BOG TURTLE	1,T	ы		63	S2
	DULICHONYX ORYZIVORUS	BOBOLINK		T/T		GS	SZB
	EURYCEA LONGICAUDA LONGICAUDA	LONGTAIL SALAMANDER		т		GSTS	S 2
	TINX KOFUS	BOBCAT		В		G5	83
	MELANERPES ERYTHROCEPHALUS	RED-HEADED WOODPECKER		T/T		G5	S2B, S2N
	PASSERCULUS SANDWICHENSIS	SAVANNAH SPARROW		T/T		G5	S2B, S4N
	PEIKUCHELLIXON PYRRHONOTA	CLIFF SWALLOW		s/s		GS .	S2B
	PODECETES GRAMINEUS	VESPER SPARROW		Ē		GS	S1B, S2N
	WINNA YING	BARRED OWL		T/T		. 55	S3B
*** Ecosystems	•						
	CAVE AQUATIC COMMUNITY CAVE TERRESTRIAL COMMUNITY	CAVE AQUATIC COMMUNITY				G47	52
	FLOODPLAIN FOREST	FLOODPLAIN FOREST				G4 7	83
	TRAPROCK GLADE/ROCK OUTCROP		,			G4	S3?
	COMMUNITY	COMMUNITY				G2	512
*** Invertebrates							
	ALASMIDONTA UNDULATA	TRIANGLE FLOATER	·			G4	, ⁸³
	COMPHIS ARREVIATION	BROOK FLOATER				63	S1
		SETNE-CKUMNED CHUBINID				G3G4	5253

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SOMERSET COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN THE NEW JERSEY NATURAL HERITAGE DATABASE

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	NAME	HESPERIA LEONARDUS LAMPSILIS CARIOSA METARRANTHIS PILOSARIA	PRIMEVAL FOREST	.2.	ACER NIGRUM	AGASTACHE NEPETOIDES ALISMA TRIVIALE	ASCLEPIAS RUBRA	ASTER PRAEALTUS	BOTRYCHIUM ONEIDENSE	BOUTELOUA CURTIPENDULA	CALYSTEGIA SPITHAMAEA	CARDAMINE ANGUSTATA CADEY CEANECONTY	CAREX FRANKIII	CAREX PALLESCENS	CAREX WILLDENOWII VAR	MILLDENOWII	CASTILLEJA COCCINEA	CERCIS CANADENSIS	CHEILANTHES LANOSA	CLEMATIS OCCIDENTALIS VAR	OCCIDENTALIS	CRATAEGUS PUNCTATA	CYNOGLOSSUM VIRGINIANUM VAR	VIRGINIANUM
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SOMERSET COUNTY

RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN THE NEW JERSEY NATURAL HERITAGE DATABASE SRANK

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MUHLENBERGIA CAPILLARIS	LONG-AWN SMOKE GRASS		1		100
PHLOX PILOSA	XOTHA XNMOQ		ш		5165
PLANTAGO PUSILLA	DWARF PLANTAIN		ы		212
POTAMOGETON ROBBINSII	ROBBIN'S PONDWEED		ы		8 8
PTELEA TRIFOLIATA	WAFER-ASH	-	I EL		
RANUNCULUS PUSILLUS VAR	LOW SPEARWORT				
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RUDBECKIA FULGIDA	ORANGE CONEFLOWER		ы		67430
SAGITTARIA AUSTRALIS	SOUTHERN ARROWHEAD		1 14		
SANICULA TRIFOLIATA	LARGE-FRUIT BLACK-SNAKEROOT		i Li		6
SCUTELLARIA LEONARDII	SMALL SKULLCAP		ы		G4T4
SELACINELLA RUPESTRIS	ROCK SPIKE-MOSS				1110
SPIRANTHES LACINIATA	LACE-LIP LADIES'-TRESSES		ជ		2070
SPOROBOLUS NEGLECTUS	SMALL RUSH-GRASS		ы		
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TRIOSTEUM ANGUSTIFOLIUM	NARROW-LEAF HORSE-GENTIAN		ы		GS

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APPENDIX B Site Photographs



Photo 1: View of Railroad Bridge from Queens Bridge



Photo 3: View of northern riverbank and lined ditch bordering embankment to be removed.



Photo 2: View southeast towards Railroad Bridge.



Photo 4: View south towards embankment and river from River Road. Site remediation ditch liner borders west side of embankment to be removed.



Photo 5: Southern riverbank. Embankment to be maintained.



Photo 7: Unsafe bridge deck in dilapidated condition.



Photo 6: Southern riverbank. Embankment to be maintained.



Photo 8: Bridge pier to be removed.



Photo 9: View southwesterly from River Road towards the east side of the northern embankment.



Photo 10: River Road Bridge to be removed.



Photo 11: Remaining bridge structure and embankment to be removed on northern side of River Road.



Photo 12: View of Site Remediation on northern riverbank



Photo 13: View south towards southern riverbank from remedial action site.



Photo 14: Residential housing construction by others south of the D&R Canal in South Bound Brook.



Photo 15: View of northern riverbank from south.
Site Photographs

APPENDIX C U.S. Fish and Wildlife Service Coordination



United States Department of the Interior

FISH AND WILDLIFE SERVICE



In Reply Refer To:

FP-06/05

New Jersey Field Office Ecological Services 927 North Main Street Pleasantville, New Jersey 08232 Phone: (609) 646-9310 FAX: (609) 646-0352 http://fws.gov/northeast/njfieldoffice

AUG 2 2 2006

Leonard Houston, Chief Environmental Analysis Branch U.S. Army Corps of Engineers, New York District 26 Federal Plaza New York, New York 10278-0090

Dear Mr. Houston:

The U.S. Fish and Wildlife Service (Service) has reviewed project information for the U.S. Army Corps of Engineers, New York District's (Corps) Green Brook Flood Control Project: Proposed Removal of Railroad Spur, Middlesex Borough, Middlesex County, and South Bound Brook, Somerset County, New Jersey. The Service provides this final Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) (FWCA) Section 2(b) report in accordance with our Fiscal Year-2005 Interagency Agreement and Scope of Work. Our report is based on plans and information provided by the Corps, and responses to Corps comments are incorporated. This report has been coordinated with the New Jersey Division of Fish and Wildlife (NJDFW); a copy of the NJDFW comments will be forwarded to the Corps when available.

AUTHORITY

The following comments are provided pursuant to Section 2(b) of the FWCA. Comments are also provided under the authority of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) (ESA) and the Migratory Bird Treaty Act of 1918 (40 Stat. 755, as amended; 16 U.S.C. 703-712), and are consistent with the intent of the Service's Mitigation Policy (Federal Register, Vol. 46, No. 15, Jan. 23, 1981).

PROJECT DESCRIPTION

As described in various project materials and communications from Corps staff, the proposed project entails the removal of an abandoned Conrail Bridge that crosses the Raritan River from Middlesex Borough, Middlesex County to South Bound Brook, Somerset County, New Jersey (Enclosure 1) to reduce potential temporary flooding along the Raritan River that may occur during the build-out period of the Green Brook Flood Control Project. Upon removal of the bridge structure, the banks of the river would be restored to provide habitats for wildlife and to aid in flood-water storage.

METHODS

The Service conducted a site visit on November 7, 2005 and noted dominant vegetation and other general conditions of the study site and surrounding area. The Service has coordinated this review with the New Jersey Department of Environmental Protection (NJDEP), Division of Engineering and Flood Control, Bureau of Dam Safety and the NJDFW. Further, we have searched our Geographic Information Systems (GIS) database for known locations of federally listed species, wetlands, and other important wildlife resources within or near the study area. We also searched for State-listed species and State priority species in the area using available GIS database information.

NATURAL RESOURCES

Soils

Soils at the abandoned Conrail Bridge site are classified and mapped as Rowland silt loam (Ro) series on the northeast bank and Sanitary Landfill (SL) on the southwest bank along the Delaware Raritan Canal (Soil Conservation Service, 1975). In general, Ro soil is nearly level, but can include minor hummocky areas and slopes of more than 2 percent. The soil is found on floodplains along major streams. The organic matter content is medium to high. Runoff is slow and the hazard of erosion is slight.

Included with Ro soil in mapping are areas of sandy loam, loam, and gravelly loam soils. Also included are some areas of well-drained soils nearer the streams and at slightly higher elevations, and areas of Bowmansville silt loam (BoyAt) soils in depressions. The 2005 GIS soils mapping from the Natural Resource Conservation Service indicated BoyAt soils along the northeast bank of the site. BoyAt soils are nearly level in depressions and in old stream meanders on floodplains at the base of slopes that rise to terraces or uplands. The organic content is high. Runoff is slow and the hazard of erosion is slight.

The Service understands that there is an arsenic concentration above the allowable limit of 20mg/kg in the first 0.5 feet (ft) (15 centimeters) below the existing grade and at 1.8 ft (0.5 meters [m]). Investigations done for the Corps also show high concentrations of arsenic at 10 ft below grade (3 m). The Corps has stated that it will follow New Jersey Soil Cleanup Criteria for proper removal of contaminated soils and for covering excavated materials.

Vegetative Cover Types

Observations made during the November 7, 2005 site visit, review of the above-mentioned soil maps (Soil Conservation Service, 1975), and a review of the Service's GIS database indicate that the study site was originally part of a palustrine forested wetland floodplain. In fact, palustrine forested wetlands (PFO), as classified by Cowardin *et al.* (1979), still exist on and around the study site (Enclosure 1). The southwest bank of the study site contains a sparse understory and many large, mature trees that form a significant forest canopy along the bank of the river. The northeast bank of the study site also contains some mature trees, but the majority of the site has been disturbed and is open to sunlight. Trees common to riparian corridors in suburban areas,

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such as red maple (Ater rubrum), silver maple (A . pensylvanicum), black locust (Robinia pseudoacacia), green ash (Fraxinus pennsylvanica), northern red oak (Quercus rubra), and American sycamore (Platanus occidentalis), occur on both banks of the river at the study site. Multiflora rose (Rosa multiflora), an exotic, invasive species, was also noted within the study site.

Federally Listed Species

The study site is located within the geographic range of the federally listed (endangered) Indiana bat (Myotis sodalis). Indiana bats hibernate in caves and abandoned mine shafts from October through April. Between April and August, Indiana bats inhabit floodplain, riparian, and upland forests, roosting under loose tree bark during the day, and foraging for flying insects in and around the tree canopy at night. During these summer months, numerous females roost together in maternity colonies. Maternity colonies use multiple roosts in both living and dead trees. From late August to mid-November, Indiana bats congregate in the vicinity of their hibernacula, building up fat reserves for hibernation (Harvey, 1992). Protection of Indiana bats during all phases of their annual life cycle is essential to the long term conservation of this species. Threats to the Indiana bat include disturbance or killing of hibernating and maternity colonies; vandalism and improper gating of hibernacula; fragmentation, degradation, and destruction of forested summer habitats; and use of pesticides and other environmental contaminants.

During the November 7, 2005 site visit, the Service did not identify any potential roosting trees or foraging habitat for the Indiana bat within the planned footprint of disturbance. However, the Service previously recommended a seasonal restriction on clearing trees 6 inches or greater in diameter at breast height (dbh) between April 1 and September 30.

<u>Corp Comment</u>: The District has reviewed the site and has observed limited habitat within the project corridor that would be suitable for Indiana bat roosting. There are some smaller trees and shrubs growing on the embankment (north of the Raritan River), which will be removed as a result of the project. Tree removal is expected to some degree for site access and due to unavoidable tree disturbance during grading and removals; but this vegetation loss is not anticipated to be significant.

<u>Service Response</u>: Following additional coordination with the Corps and assessment of proposed activities, the Service concurs that the Railroad Spur Removal action would have limited potential to impact the Indiana bat and that the tree removal restriction can be lifted for this specific activity. Specifically, railroad bridge removal, including tree clearing between April 1 and September 30, is not likely to adversely affect Indiana bats.

Except for the above-mentioned species and an occasional transient bald eagle (*Haliaeetus leucocephalus*), no other federally listed or proposed endangered or threatened flora or fauna under Service jurisdiction are known to occur within the vicinity of the railroad bridge study area. If new information becomes available, or if project plans change, this determination may be reconsidered. Current information regarding federally listed species and candidate species occurring in New Jersey is enclosed (Enclosure 2).

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State-listed Species

Review of the Service's GIS database indicates that no State-listed species occur on or in the vicinity of the study site. The Service notes that information on State-listed species contained in our GIS database is limited and further consultation with the NJDFW Endangered and Nongame Species Program may be required. Any State-listed wildlife would be addressed during the State permitting process. A list of State-listed wildlife species is enclosed (Enclosure 3).

Other Fish and Wildlife Resources

Fish and wildlife species that may be found on the study site are those tolerant of urban-suburban areas. Bird species likely include American robin (*Turdus migratorius*), European starling (*Sturnus vulgaris*), northern cardinal (*Cardinalis cardinalis*), black-capped chickadee (*Poecile atricapillus*), tufted titmouse (*Baeolophus bicolor*), gray catbird (*Dumetella carolinensis*), and American crow (*Con)us brachyrhynchos*). White-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), and gray squirrel (*Sciurus carolinensis*) are also likely to occur at the study site.

SERVICE COMMENTS AND RECOMMENDATIONS

General Recommendations for Site Restoration

1. Consult the scientific literature for the most appropriate planting elevation, depth, soil type, nutrient requirements, and seasonal timing to ensure best results when revegetating sites. Include subsurface conditions such as soil and sediment geochemistry and physics, groundwater quantity and quality, and infauna when designing riparian, wetland, and stream bank restoration.

<u>Corps Comment</u>: At this time the District is coordinating removal plans with the remediation firm representing the property owner to determine the appropriate surface treatment or stabilization technique to be used post-removal and grading of the embankment area on the north-side of the Raritan River. This railroad corridor provides limited existing habitat. Area surrounding the railroad corridor on the north-side of the river is stabilized with gravel and the neighboring ditch is lined with a concrete mattress as part of the remediation effort...

Any action the District would take would be limited to the railroad project corridor. Future remediation plans may conflict with permanent or temporary creation of wildlife habitat within the railroad spur corridor. As contamination is an issue for the site, restoration as woody riparian habitat may not be appropriate at this time, and may also prove to be difficult giving the disturbed nature of the area.

[The Corps] will take into consideration the site conditions when developing a potential landscape plan for the removals action.

<u>Service Response</u>: The lack of currently available habitat on and surrounding the project site is not a reason to forgo the opportunity to restore wildlife habitat following bridge removal. The value of riparian habitat to migratory birds and resident wildlife, as well as overall stream quality, is well-documented (Federal Interagency Stream Restoration Working Group, 1998; Fischer and Fischenich, 2000; Fischenich and Allen, 2000; Cappiella *et al.*, 2005; New Jersey Division of Fish and Wildlife, 2005). The opportunity afforded by bridge removal to restore riparian habitat along one of New Jersey's major waterways, the Raritan River, should not be lost.

The Service acknowledges that tree-planting may not be appropriate prior to remediation of environmental contamination, but reiterates our recommendation to ultimately restore the project site to a wooded condition. We recommend against interim surface treatments or stabilization techniques that involve non-native vegetation, and against permanent hard structures in place of trees. Upon completion of all work at the site, including both bridge removal and remediation, the Service's *Partners for Fish and Wildlife* (Partners) habitat restoration program may be available to provide technical assistance to the landowner to plant the site with woody vegetation (if not required as a permit condition or compensatory mitigation). Information regarding the *Partners* program is enclosed (Enclosure 4).

2. Maintain mature trees during demolition of the structures on site. The Service is available to help mark trees that should be retained. Shade produced by mature trees along the stream is critical to maintaining summer water temperature regimes and dissolved oxygen favorable to fisheries. In addition, the vertical structure and canopy provided by mature trees is a critical component of habitat for migratory birds, providing food, cover, and nesting structure. If any trees must be removed, preferential protection should be afforded to large, native, mast or fruit producing species.

<u>Corps Comment</u>: In order to achieve the induced flooding reduction goal for this federal action, there is no alternative to removal of vegetation that is physically growing on the railroad embankment itself on the north-side of the river... This vegetation is mixed shrub with some smaller diameter trees. The project does not include any other tree removal; however, some trees may be damaged during the bridge decking or pier removal on the south-side of the river ... The District project specifications will stress the goal to maintain existing environmental resources and to avoid tree removal / damage where possible.

<u>Service Response</u>: The Service acknowledges the need to remove small trees and other vegetation on the embankment in order to achieve the project purpose of reducing induced flooding. We appreciate the Corps' efforts to minimize tree removal, and reiterate our offer of assistance with this effort pursuant to the Interagency Agreement between our agencies.

3. Implement timing restrictions on demolition activities and use best management practices (e.g., hay bales, silt curtains) during demolition and habitat restoration work to avoid adverse impacts to terrestrial and aquatic species at proposed sites. The State's requirements regarding sediment management and erosion control for the project are supported by the Service.

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<u>Corps Comment</u>: The District will follow the timing restriction condition of the NJDEP Stream Encroachment and Freshwater Wetlands Permit [(0000-02-0025.1FHA020001, 0000-02-0025.1FWW0200001 (GP2), 0000-02-0025.1FWW020002 (FWTW4R)] for the project. The restriction prohibits in-stream activities between April 1 and June 30 to protect anadromous fish.

<u>Service Response</u>: The Service reiterates our recommendation to follow State requirements for sediment management and erosion control.

4. Incorporate site remediation for environmental contamination. The Service would likely support any actions the State may require of the Corps or its contractors for identifying, removing, and storing contaminated sediment and debris. Additionally, the Service recommends the Corps and its contractors continue coordination with this office, the State, and the landowner during clean-up of the contaminated site.

<u>Corps Comment</u>: Removal of contaminated materials will be coordinated with the State, property owner, and other involved stakeholders. The scope of removal will be limited to that which is necessary to achieve project grades and or account for over-excavation for capping to grade.

Service Response: None

5. Remove all impervious surfaces related to the railroad bridge. Removing impervious surfaces will improve floodwater storage capacity and infiltration, reduce surface-water runoff, and provide a suitable substrate to establish desired vegetation. Any trash or other human-generated debris should be removed as part of the demolition process.

<u>Corps Comment</u>: Removals will be coordinated with the property owner. The end surface treatment post-embankment removal will be determined with direction from the stakeholders that are conducting remediation on the surrounding properties. Gravel or other nonvegetative materials may need to be used for stabilization of the site.

<u>Service Response</u>: The Service reiterates our recommendation to ultimately restore the project site to a wooded condition. We recommend against interim surface treatments or stabilization techniques that involve non-native vegetation, and against permanent hard structures in place of trees. If gravel or other non-vegetative materials are necessary to stabilize the site, the Service recommends use of temporary materials that can be removed to allow for eventual planting of trees and shrubs. Upon completion of all work at the site, the Service's *Partners* program may be available to provide technical assistance to the landowner to plant the site with woody vegetation (if not required as a permit condition or compensatory mitigation).

6. Till and/or work soils to reduce compaction in conjunction with removal of impervious surfaces. Tilling will further improve the hydrology, flood storage capacity, and growth of desirable vegetation on the study site. Moist soils, which likely comprised the majority of the soil horizon at the study site before development, are most susceptible to compaction. In

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cases of very shallow soil compaction (*i.e.*, 5 inches below grade), a few cycles of freeze and thaw during winter may be sufficient to remove compaction. However, compaction that occurs deeper in the soil column requires excavating, tilling, or disking to be removed.

<u>Corps Comment</u>: It is unlikely that the District will include tilling on a contaminated site. All earthwork will be coordinated with the property owner and remediation stakeholders.

<u>Service Response</u>: The Service recognizes the need to coordinate earthwork with the remediation effort, but recommends final site preparation as needed to support eventual planting of the site with woody vegetation.

 Remove fill from the site to reduce soil compaction and to return the site to more natural elevations and grades. Removal of fill would help restore the natural hydrology and promote re-establishment of wetlands on the sites.

<u>Corps Comment</u>: Embankment removal on the north-side of the Raritan River will be done to meet surrounding floodplain grades. Fill removal will be limited to the necessary quantity to achieve the project goal. Contaminated removals costs are a responsibility of the nonfederal sponsor, the State of New Jersey.

<u>Service Response</u>: The Service recognizes the need to coordinate fill removal and grading with the remediation effort, but recommends final site preparation as needed to support ultimate planting of the site with woody vegetation, as well as hydrologic restoration where possible.

8. Eradicate or control exotic, invasive species (*e.g.*, multiflora rose) to restore wildlife habitats and improve stream bank stability and water storage capacity at the study site. The Corps should coordinate with the landowner to ensure that regular surveys are conducted to identify and remove any undesirable plants beginning to re-colonize during environmental contaminant remediation of the area surrounding the study site. A variety of measures exist for removing undesirable species. For sites with few invasive plants, physical removal may be the least expensive method if the entire plant (including root system) can be extracted and if there are a sufficient number of personnel to carry out the task. In cases where undesirable species have gained a substantial foothold, a glyphoshate-based herbicide engineered for wetland sites, such as *Rodeo* or *Gly-Pro*, is appropriate. Either of the above techniques would be effective at the study site.

<u>Corps Comment</u>: Invasive species management goes beyond the scope of this demolition activity. The District has obtained a Right-of-Entry for construction only. Management of the property will be the responsibility of the private landowner.

<u>Service Response</u>: Section 2(c) of the FWCA states, "Federal agencies authorized to construct or operate water-control projects are authorized to modify or add to the structures and operations of such projects . . . in order to accommodate the means and measures¹ for

[&]quot;... justifiable means and measures for wildlife purposes as the reporting agency finds should be adopted to obtain maximum overall project benefits." (Section 2(b) of the FWCA)

such conservation of wildlife resources as an integral part of such projects. "Furthermore, Executive Order (EO) Number 13112 (entitled *Invasive Species* and dated February 3, 1999) directs federal agencies - within the limits of law, budget, and practicability - to prevent the introduction of invasive species, provide for restoration of native species and habitat conditions in ecosystems that have been invaded, and not authorize, fund, or carry out actions that are likely to cause or promote the introduction or spread of invasive species.

As authorized by the FWCA and supported by EO 13112, the Service encourages the Corps to make a minor modification to the Green Brook Flood Control project to provide for invasive species control on the site of the railroad bridge demolition. Bridge demolition is likely to promote the spread of existing invasive species on the project site, as well as introduce new invasive species, both directly through the use of construction equipment contaminated with plant fragments and indirectly by creating disturbed areas that are vulnerable to invasion. Monitoring and control of invasive vegetation is essential to minimizing such impacts, as well as an opportunity to improve existing conditions for the benefit of wildlife. With cooperation of the landowner, the Service's *Partners* program may be available to provide technical assistance in invasive species control that is not required as a permit condition or for compensatory mitigation.

Specific Recommendations for Forested Wetland and Floodplain Restoration

- Incorporate restoration of forested wetland and floodplain cover types into the project plan. Soil and vegetative surveys suggest that the study site contained PFO cover types and provided habitats for forested floodplain species prior to development.
- 2. Plant species used by Indiana bats on the restoration site to enhance habitat for this federally listed species. The Indiana bat uses forested floodplains and may benefit from restoration of the stream banks to pre-development conditions. Indiana bats could roost in existing and future mature trees and forage along the nearby rivers and in the forest understory following restoration. Therefore, the Service recommends planting a variety of native tree and shrub species common to PFO and area floodplains. The Service encourages the Corps or its partners to plant tree species commonly used by Indiana bats, such as shagbark hickory (*Carya ovata*), northern red oak, white oak (*Quercus alba*), and post oak (*Q. stellata*) for the dry sites and bitternut hickory (*C. cordiformis*), silver maple, green ash, American elm (*Ulmus Americana*), and black locust for the moist sites.
- 3. Re-establish the forest understory cover throughout the study site to improve wildlife habitats. A healthy forest requires an understory to provide multiple canopy layers (thus increasing wildlife diversity), to provide replacement trees and shrubs as the forest matures and older trees die, and to reduce sunlight on the forest floor. Shading the forest floor decreases chances for certain invasive species to become established. Species common to a forest understory are typically shade-tolerant, such as sheep-laurel (Kalmia angustifolia), swamp azalea (Rhododendron viscosum), winterberry (Ilex verticillata), dogwood (Corpus spp.), willow (Salix spp.), alder (Alms spp.), meadowsweet (Spiraea spp.), juneberry (Amelanchier spp.), and gooseberry (Ribes spp.).

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- 4. Employ bioengineering techniques and soft structures to stabilize and restore stream banks if needed. Preferred techniques are described in Muhlenberg and Moore (1998).
 - Bioengineering techniques include regrading banks, using erosion control fabrics and biologs, and planting native trees and shrubs along the banks.

<u>Corps Comments on Recommendations 1-4</u>: As stated previously, re-vegetation of the north-side embankment will be dependent upon remediation activities and coordination with the property owner. The District will keep the listed species in mind for forest understory establishment and to benefit riparian species, such as the Indiana bat. Should re-vegetation be compatible with contamination remediation efforts, the District will focus on bioengineering or stabilization of the riparian buffer with hardy shrub cover and juvenile trees, such as willow, maple, black locust, and dogwood, as well as utilize appropriate erosion control fabrics such as straw blankets and coir mats.

<u>Service Response</u>: The Service reiterates the importance of ultimately vegetating the project site with woody species, recognizing the need to coordinate such restoration with the remediation. The Service appreciates the Corps' efforts to adopt recommendations for understory vegetation and bioengineering, and reiterates that the *Partners* program may be available to provide technical assistance for habitat restoration that is not required as a permit condition or for compensatory mitigation.

Summary Corps Comment

The District shares your desire to restore habitat in floodplain areas where possible; however, for this particular action, riparian habitat restoration of the embankment removal area may not be feasible based on the following:

- The District has obtained a Right-of-Entry for the removal action only. The site landowner is conducting a site-wide remediation effort. The landowner, BayerCorp Science will be consulted during the final design process to determine what surface treatment the embankment removal area shall receive. There is the potential that manmade materials or gravel materials will be used for purposes of stabilization rather than plant material.
- 2) Future remediation plans may conflict with permanent or temporary creation of wildlife habitat within the railroad spur corridor. As contamination is an issue for the site, restoration as woody riparian habitat may not be appropriate at this time, and may also prove to be difficult giving the disturbed nature of the area.
- 3) The corridor site under consideration provides limited habitat at this time.

<u>Service Response</u>: The Service recognizes the need to coordinate habitat restoration with the necessary remediation of the project site, as well as the landowner. However, lack of currently available habitat on and surrounding the project site is not a reason to forgo an opportunity for wildlife habitat restoration following bridge removal. The Service reiterates the importance of ultimately vegetating the project site with woody species, and recommends against interim surface treatments or stabilization techniques that involve non-native vegetation, and against permanent hard structures in place of trees. We also reiterate the importance of controlling existing invasive vegetation, and mitigating the potential spread of invasive species that is likely

to occur due to disturbance of the project site from bridge removal. The *Partners* program may be available to provide technical and other assistance to the Corps and the landowner for any habitat restoration that is not required as a permit condition or for compensatory mitigation. Through a cooperative partnership among the Corps, the Service, and the landowner, and in coordination with remedial activities, minor modifications can be made to the proposed bridge removal project to benefit wildlife resources, as authorized by Section 2(c) of the FWCA. As a member of this partnership, and through our Interagency Agreement, the Service can provide limited planning aid (*e.g.*, a meeting or site visit, review of documents or plans) during the design, construction, and operations phases of the proposed railroad bridge removal in order to help bring about ultimate restoration of the project area.

CONCLUDING REMARKS

The Service supports the removal of the abandoned Conrail Railroad Bridge that crosses the Raritan River and regrading of the northeast bank to pre-construction grade to reduce any temporary flooding along the Raritan River that may occur during the interim build-out period of the Green Brook Flood Control Project. The Service recommends that the Corps continue to coordinate with the non-federal sponsor, landowner, and other interested stakeholders to implement the recommendations provided above to restore the project area to a natural state that would provide wildlife habitat and reduce flooding. To summarize, fish and wildlife will benefit from the removal of the abandon Conrail Bridge that crosses the Raritan River and from retaining mature trees and restoring the floodplain to a forested wetland cover type.

Based on coordination between the Corps and the Service through the informal consultation process, the Service concurs that railroad bridge removal, including tree clearing between April 1 and September 30, is not likely to adversely affect Indiana bats, pursuant to Section 7 of the ESA.

To benefit native wildlife, the Service recommends that the Corps remove exotic invasive plants and revegetate using native canopy and understory species that provide food and cover for wildlife. For example, shagbark hickory, when mature, will provide potential roosting sites for the Indiana bat. Removal of impervious surfaces and fill material and tilling the soil to reduce soil compaction will enhance floodwater storage and support revegetation. Fish and wildlife will benefit further from the use of bioengineering for any necessary erosion control and from followup monitoring and long-term management to ensure stream bank stabilization and successful establishment of a native plant community.

The Service appreciates the opportunity to comment on the proposed plan and is pleased to submit this FWCA Section 2(b) report as technical input to the *Green Brook Flood Control Project: Proposed Removal of Railroad Spur.*

Should you have any questions, please contact John Staples or Wendy Walsh of my staff at (609) 646-9310, extension 12 or 48, respectively. Please contact Ron Popowski of my staff, Ron_Popowski@fws.gov, regarding future FWCA Section 2(b) products for the Green Brook Flood Control Study, and to arrange for Service planning aid during the remaining phases of the railroad bridge removal project.

Sincerely,

Clifford G. Day Supervisor

Enclosures

LITERATURE CITED

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DEPARTMENT OF THE ARMY NEW YORK DISTRICT, CORPS OF ENGINEERS JACOB K. JAVITS FEDERAL BUILDING NEW YORK, N.Y. 10278–0090

REPLY TO ATTENTION OF

January 24, 2006

Planning Division Environmental Analysis Branch

Mr. Clifford G. Day Supervisor United States Department of Interior Fish and Wildlife Service New Jersey Field Office Ecological Services 927 North Main Street, Building D Pleasantville, New Jersey 08232

Dear Mr. Day:

The U.S. Army Corps of Engineers, New York District (District), will utilize the information provided by the Service in the Draft Fish and Wildlife Coordination Act 2(b) Report for the *Green Brook Flood Control Project: Proposed Removal of Railroad Spur, Middlesex Borough, Middlesex County, and South Bround Brook, Somerset County, New Jersey* dated November 23, 2005 to shape final plans and specifications for this federal removal action. Our current schedule is to release a supplemental environmental assessment document in January 2006, proceed towards final plans and specifications in late April 2006, and award a construction contract and conduct the demolition work during summer 2006. A State of New Jersey, Department of Environmental Protection permit has already been obtained for this activity.

The District shares your desire to restore habitat in floodplain areas where possible; however, for this particular action, riparian habitat restoration of the embankment removal area may not be feasible based on the following:

- The District has obtained a Right-of-Entry for the removal action only. The site landowner is conducting a site-wide remediation effort. The landowner, BayerCrop Science will be consulted during the final design process to determine what surface treatment the embankment removal area shall receive. There is the potential that man-made materials or gravel materials will be used for purposes of stabilization rather than plant material.
- 2) Future remediation plans may conflict with permanent or temporary creation of wildlife habitat within the railroad spur corridor. As contamination is an issue for the site, restoration as woody riparian habitat may not be appropriate at this time, and may also prove to be difficult giving the disturbed nature of the area.
- 3) The corridor site under consideration provides limited habitat at this time.

We have attached specific responses to the Service recommendations; however, it should also be highlighted that the District does not agree that a tree clearing restriction should be required for this specific action (Enclosure 1). The Service Report recommended that tree clearing, for trees 6 inches or greater in diameter, occur outside of an April 1 through September 30 window to prevent potential impact to the endangered Indiana bat. The District has reviewed the site and has observed limited habitat within the project corridor that would be suitable for Indiana bat roosting. There are some smaller trees and shrubs growing on the embankment (north of the Raritan River), which will be removed as a result of the project. Tree removal is expected to some degree for site access and due to unavoidable tree disturbance during grading and removals; but this vegetation loss is not anticipated to be significant.

Our District Project Biologist, Ms. Megan Grubb, spoke with Ms. Wendy Walsh of your office via phone on December 13, 2005 regarding Indiana bat habitat and the schedule for the Railroad Spur Removal. Ms. Walsh coordinated with the Endangered Species Biologist at your office and discussed via phone that the Service would agree that the Railroad Spur Removal action would have limited potential to impact the Indiana bat and that the tree removal restriction could be lifted for this specific activity.

It was determined during the phone conversation that the District and the Service would need to look at Segment R2 to determine the potential for Indiana bat impacts in that location. We will soon be forwarding to your office a 90% level design of the levee alignment for Segment R2. The fiscal year 2005 Scope of Work between the District and the Service covers Service review of Segment R2. Ms. Walsh and Ms. Grubb discussed that the site could be reviewed and coordination correspondence could be exchanged in February. At this time, Segment R2 is not funded for fiscal year 2006; however, there may be an opportunity to reuse excavated materials from Finderne for development of or stockpiling of materials for Segment R2 levee in the coming months.

The District has budgeted for additional Service coordination efforts in fiscal year 2006 per the two-phase Scope of Work developed in summer 2005. The additional activities to be covered include PAMHEP review; Segments C, H, B, and D review; Mitigation coordination; and Future Segment overview. We anticipate exchange of funds via amendment of the existing MIPR during late 2nd quarter or early 3rd quarter of fiscal year 2006, after the District has received Finderne coordination task deliverables and coordination tasks associated with Segment R2 are in progress. If you have any questions regarding the project, please feel free to contact Ms. Grubb at (917) 790-8618 or Megan.B.Grubb@usace.army.mil.

Sincerely,

UNJoustan

Leonard Houston Chief, Environmental Analysis Branch

enclosure cf: Ms. Wendy Walsh, USFWS U.S. Army Corps of Engineers, New York District (District), Responses to U.S. Fish and Wildlife Service (Service) Recommendations Listed in the Draft Fish and Wildlife Coordination Act Section 2(b) Report for the Green Brook Flood Control Project: Proposed Removal of Railroad Spur, Middlesex Borough, Middlesex County, and South Bound Brook, Somerset County, New Jersey dated 23 November 2005.

December 28, 2005

Refer to Page 4 of Draft FWCAR under General Recommendations for Site Restoration

District Response to Service Recommendation #1:

At this time the District is coordinating removal plans with the remediation firm representing the property owner to determine the appropriate surface treatment or stabilization technique to be used post-removal and grading of the embankment area on the north-side of the Raritan River. This railroad corridor provides limited existing habitat. Area surrounding the railroad corridor on the north-side of the river is stabilized with gravel and the neighboring ditch is lined with a concrete mattress as part of the remediation effort (*See Photo 1 below*).

Any action the District would take would be limited to the railroad project corridor. Future remediation plans may conflict with permanent or temporary creation of wildlife habitat within the railroad spur corridor. As contamination is an issue for the site, restoration as woody riparian habitat may not be appropriate at this time, and may also prove to be difficult giving the disturbed nature of the area.

The District Project Biologist is trained in horticulture, as well as wetland science, and will take into consideration the site conditions when developing a potential landscape plan for the removals action.



Photo1 Railroad Embankment on North-side of Raritan River. View facing River Road.

District Response to Service Recommendation #2:

In order to achieve the induced flooding reduction goal for this federal action, there is no alternative to removal of vegetation that is physically growing on the railroad embankment itself on the north-side of the river (*Photo 1*). This vegetation is mixed shrub with some smaller diameter trees. The project does not include any other tree removal; however, some trees may be damaged during the bridge decking or pier removal on the south-side of the river (*Photo 2*). The District project specifications will stress the goal to maintain existing environmental resources and to avoid tree removal/damage where possible.



Photo 2 South-side of Raritan River. View Southeast.

District Response to Service Recommendation #3:

The District will follow the timing restriction condition of the NJDEP Stream Encroachment and Freshwater Wetlands Permit [(0000-02-0025.1FHA020001, 0000-02-0025.1FWW0200001 (GP2), 0000-02-0025.1FWW020002 (FWTW4R)] for the project. The restriction prohibits in-stream activities between April 1 and June 30 to protect anadromous fish.

District Response to Service Recommendation #4:

Removal of contaminated materials will be coordinated with the State, property owner, and other involved stakeholders. The scope of removal will be limited to that which is necessary to achieve project grades and or account for over-excavation for capping to grade. District Response to Service Recommendation #5:

Removals will be coordinated with the property owner. The end surface treatment post-embankment removal will be determined with direction from the stakeholders that are conducting remediation on the surrounding properties. Gravel or other non-vegetative materials may need to be used for stabilization of the site.

District Response to Service Recommendation #6:

It is unlikely that the District will include tilling on a contaminated site. All earthwork will be coordinated with the property owner and remediation stakeholders.

District Response to Service Recommendation #7:

Embankment removal on the north-side of the Raritan River will be done to meet surrounding floodplain grades. Fill removal will be limited to the necessary quantity to achieve the project goal. Contaminated removals costs are a responsibility of the nonfederal sponsor, the State of New Jersey.

District Response to Service Recommendation #8:

Invasive species management goes beyond the scope of this demolition activity. The District has obtained a Right-of-Entry for construction only. Management of the property will be the responsibility of the private landowner.

Refer to Page 5 Specific Recommendations for Forested Wetland and Floodplain Restoration

District Response to Service Recommendations #1-#4:

As stated previously, re-vegetation of the north-side embankment will be dependent upon remediation activities and coordination with the property owner. The District will keep the listed species in mind for forest understory establishment and to benefit riparian species, such as the Indiana bat. Should re-vegetation be compatible with contamination remediation efforts, the District will focus on bioengineering or stabilization of the riparian buffer with hardy shrub cover and juvenile trees, such as willow, maple, black locust, and dogwood, as well as utilize appropriate erosion control fabrics such as straw blankets and coir mats.

Refer to Page 6 Concluding Remarks

Service Comment: "Any removal of trees 6 inches dbh or greater should be avoided between April 1 and September 30 to avoid potential adverse impacts to roosting Indiana bats."

District Response: The proposed project corridor provides limited existing Indiana bat habitat. As the construction schedule is anticipated to fall within the April 1-September 30 timeframe, the District coordinated with the Service to forego the tree removal restriction. The Service lifted the tree removal restriction for this specific activity based on coordination with the Service Endangered Species Biologist on December 13, 2005.



United States Department of the Interior

FISH AND WILDLIFE SERVICE



In Reply Refer to

FP-05/47

New Jersey Field Office Ecological Services 927 North Main Street, Building D Pleasantville, New Jersey 08232 Tel: 609/646 9310 Fax: 609/646 0352 http://njfieldoffice.fws.gov

NOV 2 3 2005

Leonard Houston, Chief Environmental Analysis Branch U.S. Army Corps of Engineers, New York District 21st Floor 26 Federal Plaza New York, New York 10278-0090

Dear Mr. Houston:

The U.S. Fish and Wildlife Service (Service) has reviewed project information for the U.S. Army Corps of Engineers, New York District's (Corps) *Green Brook Flood Control Project: Proposed Removal of Railroad Spur, Middlesex Borough, Middlesex County, and South Bound Brook, Somerset County, New Jersey.* The Service provides this draft Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) (FWCA) Section 2(b) report in accordance with our Fiscal Year-2006 scope-of-work agreement. Our report is based on plans and information provided by the Corps. This report has been coordinated with the New Jersey Division of Fish and Wildlife (NJDFW) and a copy has been forwarded to the NJDFW for review and comment.

AUTHORITY

The following comments are provided pursuant to Section 2(b) of the Fish and Wildlife Coordination Act. Comments are also provided under the authority of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) and the Migratory Bird Treaty Act of 1918 (40 Stat. 755, as amended; 16 U.S.C. 703-712), and are consistent with the intent of the Service's Mitigation Policy (Federal Register, Vol. 46, No. 15, Jan. 23, 1981).

PROJECT DESCRIPTION

As described in various project materials and communications from Corps staff, the proposed study entails the removal of an abandoned Conrail Bridge that crosses the Raritan River from Middlesex Borough, Middlesex County to South Bound Brook, Somerset County, New Jersey

(Enclosure 1) to reduce potential temporary flooding along the Raritan River that may occur during the build-out period of the Green Brook Flood Control Project. Upon removal of the structure, the banks of the river would be restored to provide habitats for wildlife and to aid in flood-water storage.

METHODS

The Service conducted a site visit on November 7, 2005 and noted dominant vegetation and other general conditions of the study sites and surrounding area. The Service has coordinated this review with the New Jersey Department of Environmental Protection (NJDEP), Division of Engineering and Flood Control, Bureau of Dam Safety and the NJDFW. Further, we have searched our Geographic Information Systems (GIS) database for known locations of federally listed species, wetlands, and other important habitat types within or near the study area. We also searched for State-listed species and State priority species in the area using available GIS database information.

NATURAL RESOURCES

Soils

Soils at the abandoned Conrail Bridge site are classified and mapped as Rowland silt loam (Ro) series on the northeast bank and Sanitary Landfill (SL) on the southwest bank along the Delaware Raritan Canal (Soil Conservation Service, 1975). In general, Ro soil is nearly level, but there can be minor hummocky areas and slopes of more than 2 percent. The soil is found on floodplains along major streams. The organic matter content is medium to high. Runoff is slow and the hazard of erosion is slight.

Included with Ro soil in mapping are areas of sandy loam, loam, and gravelly loam soils. Also included are some areas of well-drained soils nearer the streams and at slightly higher elevations, and areas of Bowmansville silt loam (BoyAt) soils in depressions. The 2005 GIS soils mapping from the Natural Resource Conservation Service indicated BoyAt soils along the northeast bank of the site. BoyAt soils are nearly level in depressions and in old stream meanders on floodplains at the base of slopes that rise to terraces or uplands. The organic content is high. Runoff is slow and the hazard of erosion is slight.

The Service understands that there is an arsenic concentration above the allowable limit of 20mg/kg in the first 0.5 feet (ft) below the existing grade and at 1.8 ft. Investigations done for the Corps also show high concentrations of arsenic at 10 ft below grade. The Corps has stated that it will follow New Jersey Soil Cleanup Criteria for proper removal of contaminated soils and for covering excavated materials.

Vegetative Cover Types

Observations made during the November 7, 2005 site visit, review of the above-mentioned soil maps (Soil Conservation Service, 1975), and a review of the Service's GIS database indicate that the study site was originally part of a palustrine forested wetland floodplain. In fact, palustrine forested wetlands (PFO), as classified by Cowardin *et al.* (1979), still exist on and around the study site (Enclosure 1). The southwest bank of the study site contains a sparse understory and many large, mature trees that form a significant forest canopy along the bank of the river. The northeast bank of the study site also contains some mature trees, but the majority of the site has been disturbed and is open to sunlight. Trees common to riparian corridors in suburban areas, such as red maple (*Acer rubrum*), silver maple (*A. pensylvanicum*), black locust (*Robinia pseudoacacia*), green ash (*Fraxinus pennsylvanica*), northern red oak (*Quercus rubra*), and American sycamore (*Platanus occidentalis*) occur on both banks of the river at the study site. Multiflora rose (*Rosa multiflora*), an exotic, invasive species, was also noted within the study site.

Federally Listed Species

The study site is located within the geographic range of the Indiana bat (*Myotis sodalis*). Indiana bats are federally listed as endangered pursuant to the ESA. Indiana bats hibernate in caves and abandoned mine shafts from October through April. Between April and August, Indiana bats inhabit floodplain, riparian, and upland forests, roosting under loose tree bark during the day, and foraging for flying insects in and around the tree canopy at night. During these summer months, numerous females roost together in maternity colonies. Maternity colonies use multiple roosts in both living and dead trees. From late August to mid-November, Indiana bats congregate in the vicinity of their hibernacula, building up fat reserves for hibernation (Harvey, 1992). Protection of Indiana bats during all phases of their annual life cycle is essential to the long term conservation of this species. Threats to the Indiana bat include disturbance or killing of hibernating and maternity colonies; vandalism and improper gating of hibernacula; fragmentation, degradation, and destruction of forested summer habitats; and use of pesticides and other environmental contaminants.

During the November 7 site visit, the Service did not identify any potential roosting trees or foraging habitat for the Indiana bat within the planned footprint of disturbance. However, if any tree-clearing activities are required for demolition purposes, the Service recommends that no clearing of trees 6 inches or greater in diameter at breast height (dbh) occur between April 1 and September 30.

Except for the above-mentioned species and an occasional transient bald eagle (*Haliaeetus leucocephalus*), no other federally listed or proposed endangered or threatened flora or fauna under Service jurisdiction are known to occur within the vicinity of the study areas. If any other federally listed species or their habitats are documented in the study area during project planning, the Corps must reinitiate consultation with the Service pursuant to Section 7 of the ESA. The Service then will make recommendations to avoid adverse effects through the informal Section 7

consultation process. Current information regarding federally listed species and candidate species occurring in New Jersey is enclosed (Enclosure 2).

State-listed Species

Review of the Service's GIS database indicates that no State-listed species occur on or in the vicinity of the study site. The Service notes that information on State-listed species contained in our GIS database is limited and further consultation with the NJDFW Endangered and Nongame Species Program may be required. Since the NJDEP is the permit applicant for the project, any State-listed wildlife would be addressed during the permit application process. A list of State-listed wildlife species is enclosed (Enclosure 3).

Other Fish and Wildlife Resources

Fish and wildlife species that may be found on the study site are those tolerant of urban-suburban areas. Bird species likely include American robin (*Turdus migratorius*), European starling (*Sturnus vulgaris*), northern cardinal (*Cardinalis cardinalis*), black-capped chickadee (*Poecile atricapillus*), tufted titmouse (*Baeolophus bicolor*), gray catbird (*Dumetella carolinensis*), and American crow (*Corvus brachyrhynchos*). White-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), and gray squirrel (*Sciurus carolinensis*) are also likely to occur at the study sites.

SERVICE COMMENTS AND RECOMMENDATIONS

General Recommendations for Site Restoration

- 1. Consult the scientific literature for the most appropriate planting elevation, depth, soil type, nutrient requirements, and seasonal timing to ensure best results when revegetating sites. Include subsurface conditions such as soil and sediment geochemistry and physics, groundwater quantity and quality, and infauna when designing riparian, wetland, and stream bank restoration.
- 2. Maintain mature trees during demolition of the structures on site. The Service is available to help mark trees that should be retained. Shade produced by mature trees along the stream is critical to maintaining summer water temperature regimes and dissolved oxygen favorable to fisheries. In addition, the vertical structure and canopy provided by mature trees is a critical component of habitat for migratory birds, providing food, cover, and nesting structure. If any trees must be removed, preferential protection should be afforded to large, native, mast or fruit producing species.
- 3. Implement timing restrictions on demolition activities and use best management practices (*e.g.*, hay bales, silt curtains) during demolition and habitat restoration work to avoid adverse impacts to terrestrial and aquatic species at proposed sites. The State's requirements

regarding sediment management and erosion control for the project are supported by the Service.

- 4. Incorporate site remediation for environmental contamination. The Service would likely support any actions the State may require of the Corps or its contractors for identifying, removing, and storing contaminated sediment and debris. Additionally, the Service recommends the Corps and its contractors continue coordination with this office, the State, and the landowner during clean-up of the contaminated site. The Service would be available for additional technical assistance if necessary.
- 5. Remove all impervious surfaces related to the railroad bridge. Removing impervious surfaces will improve floodwater storage capacity and infiltration, reduce surface-water runoff, and provide a suitable substrate to establish desired vegetation. Any trash or other human-generated debris should be removed as part of the demolition process.
- 6. Till and/or work soils to reduce compaction in conjunction with removal of impervious surfaces. Tilling will further improve the hydrology, flood storage capacity, and growth of desirable vegetation on the study sites. Moist soils, which likely comprised the majority of the soil horizon at the study site before development, are most susceptible to compaction. In cases of very shallow soil compaction (*i.e.*, 5 inches below grade), a few cycles of freeze and thaw during winter may be sufficient to remove compaction. However, compaction that occurs deeper in the soil column requires excavating, tilling, or disking to be removed.
- 7. Remove fill from the site to reduce soil compaction and to return the site to more natural elevations and grades. Removal of fill would help restore the natural hydrology and promote re-establishment of wetlands on the sites.
- 8. Eradicate or control exotic, invasive species (*e.g.*, multiflora rose) to enhance wildlife habitats and improve stream bank stability and water storage capacity at the study sites. The Corps should coordinate with the landowner to ensure that regular surveys are conducted to identify and remove any undesirable plants beginning to re-colonize during environmental contaminant remediation of the area surrounding the study site. A variety of measures exist for removing undesirable species. For sites with few invasive plants, physical removal may be the least expensive method if the entire plant (including root system) can be extracted and if there are a sufficient number of personnel to carry out the task. In cases where undesirable species have gained a substantial foothold, a glyphoshate-based herbicide engineered for wetland sites, such as *Rodeo* or *Gly-Pro*, is appropriate. Either of the above techniques would be effective at the study site.

Specific Recommendations for Forested Wetland and Floodplain Restoration

1. Incorporate restoration of forested wetland and floodplain cover types into the project plan. Soil and vegetative surveys suggest that the study site contained PFO cover types and provided habitats for forested floodplain species prior to development.

- 2. Plant species used by Indiana bats on the restoration site to enhance habitat for this species. The federally listed Indiana bat uses forested floodplains and may benefit from restoration of the stream banks to pre-development conditions. Indiana bats could roost in existing and future mature trees and forage along the nearby rivers and in the forest understory following restoration. Therefore, the Service recommends planting a variety of native tree and shrub species common to PFO and area floodplains. The Service encourages the Corps or its partners to plant tree species commonly used by Indiana bats, such as shagbark hickory (*Carya ovata*), northern red oak, white oak (*Quercus alba*), and post oak (*Q. stellata*) for the dry sites and bitternut hickory (*C. cordiformis*), silver maple, green ash, American elm (*Ulmus Americana*), and black locust for the moist sites.
- 3. Re-establish the forest understory cover at both study sites to improve wildlife habitats. A healthy forest requires an understory to provide multiple canopy layers (thus increasing wildlife diversity), to provide replacement trees and shrubs as the forest matures and older trees die, and to reduce sunlight on the forest floor. Shading the forest floor decreases chances for certain invasive species to become established. Species common to a forest understory are typically shade-tolerant, such as sheep-laurel (*Kalmia angustifolia*), swamp azalea (*Rhododendron viscosum*), winterberry (*Ilex verticillata*), dogwood (*Cornus spp.*), willow (*Salix spp.*), alder (*Alnus spp.*), meadowsweet (*Spiraea spp.*), juneberry (*Amelanchier spp.*), and gooseberry (*Ribes spp.*).
- Employ bioengineering techniques and soft structures to stabilize and restore stream banks if needed. Preferred techniques are described in Muhlenberg and Moore (1998). Bioengineering techniques include regrading banks, using erosion control fabrics and biologs, and planting native trees and shrubs along the banks.

CONCLUDING REMARKS

The Service supports the removal of the abandoned Conrail Railroad Bridge that crosses the Raritan River and regrading of the northeast bank to pre-construction grade to reduce any temporary flooding along the Raritan River that may occur during the interim build-out period of the Green Brook Flood Control Project. The Service recommends that the Corps continue to coordinate with the non-federal sponsor, landowner, and other interested stakeholders to implement the recommendations provided above to restore the project area to a natural state that would provide wildlife habitat and reduce flooding.

To summarize, fish and wildlife will benefit from the removal of the abandon Conrail Bridge that crosses the Raritan River and from retaining mature trees and restoring the floodplain to a forested wetland cover type. Any removal of trees 6 inches dbh or greater should be avoided between April 1 and September 30 to avoid potential adverse impacts to roosting Indiana bats. To benefit native wildlife, the Service recommends that the Corps remove exotic invasive plants and revegetate using native canopy and understory species that provide food and cover for wildlife. For example, shagbark hickory, when mature, will provide potential roosting sites for the Indiana bat. Removal of impervious surfaces and fill material and tilling the soil to reduce soil compaction will enhance floodwater storage and support revegetation. Fish and wildlife will

benefit further from the use of bioengineering for any necessary erosion control and from followup monitoring and long-term management to ensure stream bank stabilization and successful establishment of a native plant community.

The Service appreciates the opportunity to comment on the proposed plan and is pleased to submit this draft FWCA Section 2(b) report as technical input to the *Green Brook Flood Control Project: Proposed Removal of Railroad Spur*. Should you have any questions, please contact John Staples of my staff at (609) 646-9310, extension 12.

Sincerely,

Clifford G. Day Supervisor

Enclosures

LITERATURE CITED

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. Laroe. 1979. Classification of wetlands and deepwater habitats of the United States. FWS/OBS 79/31. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 103 pp.
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FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN NEW JERSEY



An ENDANGERED species is any species that is in danger of extinction throughout all or a significant portion of its range.

A THREATENED species is any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

	COMMON NAME	SCIENTIFIC NAME	STATUS
FISHES	Shortnose sturgeon*	Acipenser brevirostrum	E
REPTILES	Bog turtle	Clemmys muhlenbergii	Т
	Atlantic Ridley turtle*	Lepidochelys kempii	Е
	Green turtle*	Chelonia mydas	T
	Hawksbill turtle*	Eretmochelys imbricata	E
	Leatherback turtle*	Dermochelys coriacea	E
- 	Loggerhead turtle*	Caretta caretta	Т
BIRDS	Bald eagle	Haliaeetus leucocephalus	Т
	Piping plover	Charadrius melodus	Т
	Roseate tern	Sterna dougallii dougallii	Е
MAMMALS	Eastern cougar	Felis concolor couguar	<u>E</u> +
	Indiana bat	Myotis sodalis	E
	Gray wolf	Canis lupus	E+
	Delmarva fox squirrel	Sciurus niger cinereus	E+
	Blue whale*	Balaenoptera musculus	E
	Finback whale*	Balaenoptera physalus	E
	Humpback whale*	Megaptera novaeangliae	E
	Right whale*	Balaena glacialis	E
	Sei whale*	Balaenoptera borealis	E
	Sperm whale*	Physeter macrocephalus	E

	COMMON NAME	SCIENTIFIC NAME	STATUS
INVERTEBRATES	Dwarf wedgemussel	Alasmidonta heterodon	Е
	Northeastern beach tiger beetle	Cicindela dorsalis dorsalis	т
	Mitchell's satyr butterfly	Neonympha m. mitchellii	E+
	American burying beetle	Nicrophorus americanus	E +
PLANTS	Small whorled pogonia	Isotria medeoloides	Т
	Swamp pink	Helonias bullata	T
	Knieskern's beaked-rush	Rhynchospora knieskernii	Т
	American chaffseed	Schwalbea americana	E
	Sensitive joint-vetch	Aeschynomene virginica	T
	Seabeach amaranth	Amaranthus pumilus	Т

Ę	NET & TENE T.C.		
E	endangered species	PE	proposed endangered
T	threatened species	РТ	proposed threatened
+	presumed extirpated**	- - 	

- * Except for sea turtle nesting habitat, principal responsibility for these species is vested with the National Marine Fisheries Service.
- ** Current records indicate the species does not presently occur in New Jersey, although the species did occur in the State historically.

Note: for a complete listing of Endangered and Threatened Wildlife and Plants, refer to 50 CFR 17.11 and 17.12.

For further information, please contact:

U.S. Fish and Wildlife Service New Jersey Field Office 927 N. Main Street, Building D Pleasantville, New Jersey 08232 Phone: (609) 646-9310 Fax: (609) 646-0352

Revised 12/15/04

New Jersey Division of Fish and Wildlife



Endangered and Threatened Wildlife of New Jersey

Enclosure 3

S.), Devision of Fish & Wildlife Endangenet & Nongame Species Program

Endangered Species are those whose prospects for survival in New Jersey are in immediate danger because of a loss or change in habitat, over-exploitation, predation, competition, disease, disturbance or contamination. Assistance is needed to prevent future extinction in New Jersey.

Threatened Species are those who may become endangered if conditions surrounding them begin to or continue to deteriorate.

Species names link to PDF documents containing identification, habitat, and status and conservation information. Use the Adobe Acrobat Reader to view and print these documents. The Reader is available free from Adobe's Web site.

		BIRDS						
n	ndangered	Threatened						
Bittern, American	Botaurus lentiginosos BR	Botaurus lentiginosos BR Bobolink						
Eagle, bald	Haliaeetus leucocephalus BR **	Eagle, bald	Haliaeetus leucocephalus NB **					
alcon, peregrine	Falco peregrinus	Hawk, Cooper's	Accipiter cooperii					
Soshawk, northern	Accipiter gentilis BR	Hawk, red-shouldered	Buteo lineatus NB					
Grebe, pied-billed	Podilymbus podiceps*	Night-heron, black-crowned	Nycticorax nycticorax BR					
larrier, northern	Circus cyaneus BR	Night-heron, yellow-crowned	Nyctanassa violaceus					
lawk, red-shouldered	Buteo lineatus BR	Knot, red	Calidris canutus BR					
Dwi, short-eared	Asio flammeus BR	Osprey	Pandion haliaetus BR					
Plover, piping	Charadrius melodus**	Owl, barred	Strix varia					
Sandpiper, upland	Batramia longicauda	Owl, long-eared	Asio otus					
Shrike, loggerhead	Lanius Iudovicianus	Rail, black	Laterallus jamaicensis					
Skimmer, black	Rynchops niger BR	Skimmer, black	Rynchops niger NB					
Sparrow, Henslow's	Ammodramus henslowii	Sparrow, grasshopper	Ammodramus savannarum BR					
Sparrow, vesper	Pooecetes gramineus BR	Sparrow, Savannah	Passerculus sandwichensis BR					
Fern, least	Sterna antillarum	Sparrow, vesper	Pooecetes gramineus NB					
Fern, roseate	Sterna dougallii**	Woodpecker, red-headed	Melanerpes erythrocephalus					
<u>Vren, sedge</u>	Cistothorus platensis							
aanadaalan ba aadaa aada aada ba aadig a aadaa baan adaa a daa a dha a dhaadaada a dhaadaada ay ay ay ay ay ay	**Federally end	dangered or threatened						

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End	langered	Threatened									
Rattlesnake, timber	Crotalus h. horridus	Snake, northern pine	Pituophis m. melanoleucus								
Snake, com	Elaphe g. guttata	Turtle, Atlantic green	Chelonia mydas**								
Turtle, bog	Clemmys muhlenbergii**	Turtle, wood	Clemmys insculpta								
Atlantic hawksbill	Eretmochelys imbricata**		·								
Atlantic leatherback	Dermochelys coriacea**										
Atlantic loggerhead	Caretta caretta**										
Atlantic Ridley	Lepidochelys kempi**										

	AMPH	IIBIANS	
Endang	ered	Threa	tened
Salamander, blue-spotted	Ambystoma laterale	Salamander, eastern mud	Pseudotriton montanus
Salamander, eastern tiger	Ambystoma tigrinum	Salamander, long-tailed	Eurycea longicauda
Salamander, Tremblay's	Ambystoma tremblayi		
Treefrog, pine barrens	Hyla andersonii		
Treefrog, southern gray	Hyla chrysocelis		

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	INVERTEBR	ATES	al at provide the
Endangered		Threatened	
Beetle, American burying	Nicrophorus mericanus**	Elfin, frosted (butterfly)	Callophrys irus
Beetle, northeastern beach tiger	Cincindela d. dorsalis**	Floater, triangle (mussel)	Alasmidonta undulata
Copper, bronze	Lycaena hyllus	Fritillary, silver-bordered (butterfly)	Bolaria selene myrina
Floater, brook (mussel)	Alasmidonta varicosa	Lampmussel, eastern (mussel)	Lampsilis radiata
Floater, green (mussel)	Lasmigona subviridis	Lampmussel, vellow (mussel)	Lampsilis cariosa
Mussel, dwarf wedge	Alasmidonta heterodon**	Mucket, tidewater (mussel)	Leptodea ochracea
Satyr, Mitchell's (butterfly)	Neonympha m. mitchellii**	Pondmussel, eastern (mussel)	Ligumia nasuta
Skipper, arogos (butterfly)	Atrytone arogos arogos	White, checkered (butterfly)	Pontia protodice
Skipper, Appalachian grizzled (butterfly)	Pyrgus wyandot		

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- 201 A.M	. :	 							 *****			 itened	warmen and a second second	and an owner of the second		 www.www.wav.alai	COMPANY WARNING		1 - 1 - 4 	
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	MAMMALS
	ndangered
<u>Bat, Indiana</u>	Myotis sodalis**
Bobcat	Lynx rufus
Whale, black right	Balaena glacialis**
Whale, blue	Balaenoptera musculus**
Whale, fin	Balaenoptera physalus**
Whale, humpback	Megaptera novaeangliae**
Whale, sei	Balaenoptera borealis**
Whale,sperm	Physeter macrocephalus**
Woodrat, Allegheny	Neotoma floridana magister
**Fede	rally Endangered

"electrony destar.	FISH
Selden ye Medidan 2.	Endangered
eletis i v eti ett en	Sturgeon, shortnose Acipenser brevirostrum**
- 5	**Federally Endangered

List updated 9/12/02

The lists of New Jersey's endangered and nongame wildlife species are maintained by the DEP's Division of Fish and Wildlife's <u>Endangered and</u> <u>Nongame Species Program</u>. These lists are used to determine protection and management actions necessary to ensure the survival of the state's endangered and nongame wildlife. This work is made possible through voluntary contributions received through Check-off donations to the Endangered Wildlife Conservation Fund on the New Jersey State Income Tax Form, the sale of Conserve Wildlife License Plates, and donations. For more information about the Endangered and Nongame Species Program or to report a sighting of endangered or threatened wildlife, contact the Endangered and Nongame Species, NJ Division of Fish and Wildlife, P.O. Box 400, Trenton, NJ 08625-0400, or call 609-292-9400.



APPENDIX D Air Quality Record of Non-Applicability
GENERAL CONFORMITY - RECORD OF NON-APPLICABILITY

Project/Action Name: Demolition of Contrail Bridge and Embankment
Project/Action Identification Number: N/A
Project/Action Point of Contact: Megan Grubb, Project Biologist, phone: 917-709-8618
Begin Date: To be determined.
End Date: To be determined.

General Conformity under the Clean Air Act, Section 176 has been evaluated for the project described above according to the requirements of 40 CFR 93, Subpart B.

The requirements of this rule are not applicable to this project/action because:

<u>X</u> Total maximum direct and indirect emission from this project/action have been estimated to be below the conformity threshold value established at 40 CFR 93.153(b)(1) for VOC and NOx.

<u>X</u> Total maximum direct and indirect emission from the project/action for Particulate Matter-2.5 have been estimated not to exceed the conformity threshold value established at 40 CFR 93.153(b)(1). AND

The project/action is not considered regionally significant under 40 CFR 93.153(i).

SIGNED

Frank Santomauro, P.E. Chief, Planning Division

SUMMARY OF ESTIMATED CONSTRUCTION AIR EMISSIONS GREEN BROOK FCP - RAILROAD SPUR REMOVAL PROJECT U.S.A.C.E NEW YORK DISTRICT

	Emissions (lbs)						
Equipment	VOC	CO	NOx	PM	SOx		
CHIPPING MACHINE, 12"(305MM)DIA L	3.2	13.2	21.1	2.6	2.2		
CRANE, HYD, TRUCK MTD, 40T	25.8	86.0	210.9	29.5	19.0		
LOADER, F/E, CRWLR, 2.60CY	5.5	26.8	39.8	4.1	3.3		
LOADER, F/E, WHEEL, 3.25CY	211.3	1,026.3	1,524.3	158.5	128.3		
LOADER, F/E, WHEEL, 5.5CY	44.3	215.4	319.9	33.3	26.9		
LDR,BH,WH, 0.8CY FE BKT, 30"DIP	59.7	289.8	430.4	44.7	36.2		
LOADER/BCK-HOE,WH, 0.80CY	2.1	10.0	14.9	1.6	1.3		
PILE HAMMER, VIB	56.4	367.8	440.2	57.6	37.2		
ROLLER, VIB, SD, SP 3.0T	0.3	1.1	3.4	0.3	0.4		
DOZER, CRAWLER, 76-100HP	84.1	280.3	687.3	74.1	56.7		
DOZER, CRAWLER, 251-300HP	512.2	1,707.5	4,187.4	451.3	345.6		
TRUCK, OFF-HWY, REAR-DUMP, 40T	1,045.6	3,485.4	11,950.1	995.8	1,107.9		
GENERATOR, PORTABLE	4.5	18.4	29.4	3.7	3.4		
CHAINSAW, 24" - 42" LONG BAR	198.7	421.6	0.3	1.1	0.5		
Total, lbs	2,254	7,950	19,859	1,858	1,769		
Total, tons	1.13	3.97	9.93	0.93	0.88		

BACKUP DATA FOR EMISSION CALCULATIONS LIST OF EQUIPMENT GREEN BROOK FCP - RAILROAD SPUR REMOVAL PROJECT U.S.A.C.E NEW YORK DISTRICT

Equipment	Fuel	HP	Hours
CHIPPING MACHINE, 12"(305MM)DIA L	Diesel	135	24
CRANE, HYD, TRUCK MTD, 40T	Diesel	240	90
LOADER, F/E, CRWLR, 2.60CY	Diesel	160	24
LOADER, F/E, WHEEL, 3.25CY	Diesel	170	866
LOADER, F/E, WHEEL, 5.5CY	Diesel	300	103
LDR,BH,WH, 0.8CY FE BKT, 30"DIP	Diesel	48	866
LOADER/BCK-HOE,WH, 0.80CY	Diesel	60	24
PILE HAMMER, VIB	Diesel	325	90
ROLLER, VIB, SD, SP 3.0T	Diesel	24	12
DOZER, CRAWLER, 76-100HP	Diesel	80	658
DOZER, CRAWLER, 251-300HP	Diesel	300	1069
TRUCK, OFF-HWY, REAR-DUMP, 40T	Diesel	385	3577
GENERATOR, PORTABLE	Diesel	25	90
CHAINSAW, 24" - 42" LONG BAR	Gasoline	6	48

BACKUP DATA FOR EMISSION CALCULATIONS EMISSION FACTORS GREEN BROOK FCP - RAILROAD SPUR REMOVAL PROJECT U.S.A.C.E NEW YORK DISTRICT

		Emission Factors (g/bhp-hr)					
Equipment	Fuel	Load Factor	VOC	СО	NOx	PM	SOx
CHIPPING MACHINE, 12"(305MM)DIA L	Diesel	37.0%	1.2	5.0	8.0	1.0	0.85
CRANE, HYD, TRUCK MTD, 40T	Diesel	43.0%	1.26	4.2	10.3	1.44	0.93
LOADER, F/E, CRWLR, 2.60CY	Diesel	46.5%	1.4	6.8	10.1	1.05	0.85
LOADER, F/E, WHEEL, 3.25CY	Diesel	46.5%	1.4	6.8	10.1	1.05	0.85
LOADER, F/E, WHEEL, 5.5CY	Diesel	46.5%	1.4	6.8	10.1	1.05	0.85
LDR,BH,WH, 0.8CY FE BKT, 30"DIP	Diesel	46.5%	1.4	6.8	10.1	1.05	0.85
LOADER/BCK-HOE,WH, 0.80CY	Diesel	46.5%	1.4	6.8	10.1	1.05	0.85
PILE HAMMER, VIB	Diesel	62.0%	1.41	9.2	11.01	1.44	0.93
ROLLER, VIB, SD, SP 3.0T	Diesel	57.5%	0.8	3.1	9.3	0.78	1.0
DOZER, CRAWLER, 76-100HP	Diesel	57.5%	1.26	4.2	10.3	1.11	0.85
DOZER, CRAWLER, 251-300HP	Diesel	57.5%	1.26	4.2	10.3	1.11	0.85
TRUCK, OFF-HWY, REAR-DUMP, 40T	Diesel	41.0%	0.84	2.8	9.6	0.8	0.89
GENERATOR, PORTABLE	Diesel	74.0%	1.22	5.0	8.0	1.0	0.93
CHAINSAW, 24" - 42" LONG BAR	Gasoline	50.0%	625.8	1328.1	0.96	3.6	1.6

APPENDIX E

Public Comment Period Documentation

- **1. Public Notice**
- 2. Mailing List
- 3. Correspondence Received and District Response

Public Notice

	Sworn and subscribed before me this day of	NOTARY PUBLIC OF NJ MY COMMISSION EXPIRES MAY 23, 2010	ANDREA L. KEE	8/30/2006, 1x Fee:44.00	2146, 26 Federal Plaza, NY, NY 10278, or via email to: Megan.B.Grubb@usace.army.mil.	public comments must be received by September 30, 2006 via mall to: USACE, NY District, Planning Divi- sion, Attn: Green Brook Project, RM	LEGAL NOTICE Notice of Availability of a Draft Find- ing of No Significant impact/Environmental Assessment of the Demolition of Contral Bridge and Embankment, Middlesex Bor- ough, Middlesex County, and South Bound Brook, Somerset County New Jersey for the Green Brook Flood Control Project. The docu- ment is available for review at Bor- ough of Bound Brook and Borough of Middlesex Municipal Clerk's of- floe and online at the U.S. Army Corps of Engineers, New York Dis- trict. All
Notary Public of N.J.	menic St Andren Mer AD. 2000 History A.	annexed is a true copy, was published in said newspaper in the following issues: 8 3000	County, and State aforesaid; and that a Notice, of which the	published daily in the TOWNSHIP OF BRIDGEWATER, in the	CLASSIFIED MANAGER of the COURIER NEWS, a newspaper	KRISTEN SCHIRO, of full age, being duly sworn, saith; is the	w Jersey } ss



DEPARTMENT OF THE ARMY

NEW YORK DISTRICT, CORPS OF ENGINEERS JACOB K. JAVITS FEDERAL BUILDING 26 FEDERAL PLAZA NEW YORK, N.Y. 10278-0090

August 29, 2006

REPLY TO THE ATTENTION OF Green Brook Flood Control Project Planning Division Environmental Analysis Branch

Dear Interested Party:

The U.S. Army Corps of Engineers, New York District (District), has prepared a Draft Finding of No Significant Impact/Environmental Assessment of the Demolition of Conrail Bridge and Embankment, Middlesex Borough, Middlesex County and South Bound Brook, Somerset County, New Jersey for the Green Brook Flood Control Project. The document is enclosed for your review and comment. The document has been circulated to the affected public in accordance with the National Environmental Policy Act of 1970. The document is also available online at the District's website: <u>http://www.nan.usace.army.mil/</u>.

The environmental impacts of the Green Brook Flood Control Project were previously assessed in the U.S. Army Corps of Engineers (Corps), New York District *Final Environmental Impact Statement* (FEIS) for the Proposed Plan for the Green Brook Flood Control in the Green Brook Sub-Basin, Somerset, Middlesex and Union Counties, New Jersey, filed August, 1980 and the Final Supplemental Environmental Impact Statement (FSEIS) for the Proposed Plan for the Green Brook Flood Control in the Green Brook Sub-Basin, Somerset, Middlesex and Union Counties, New Jersey, filed August, 1980 and the Final Supplemental Environmental Impact Statement (FSEIS) for the Proposed Plan for the Green Brook Flood Control in the Green Brook Sub-Basin, Somerset, Middlesex and Union Counties, New Jersey, filed in May 1997. The purpose of this environmental assessment is to update the administrative record of the project and to evaluate any changes to the project design and related environmental impacts that have been proposed since its evaluation in the FEIS and FSEIS.

The enclosed environmental assessment (EA) documents and addresses the environmental impacts of the following proposed changes:

Removal of an abandoned Conrail Bridge that crosses the Raritan River from Middlesex Borough, Middlesex County to South Bound Brook, Somerset County. The proposed demolition would involve removal of the bridge deck and piers, the northern shore abutment, the railroad embankment between River Road and the Raritan River, the remaining bridge structure over River Road and its two abutments.

The purpose of this demolition action is to accommodate for potential temporary induced flooding along the Raritan River that may be experienced during interim project build out years. The removal of the bridge structures and embankment material from the floodway and floodplain of the Raritan River would improve water (hydraulic) conveyance. The improved water conveyance would yield reduction of potential induced flooding to an acceptable level.

Please review the enclosed document and submit any comments in writing prior to September 30, 2006 at the following address:

U.S. Army Corps of Engineers, New York District Planning Division, Environmental Analysis Branch Attn: Green Brook Project RM 2146 26 Federal Plaza New York, New York 10278-0090

or via email at Megan.B.Grubb@usace.army.mil.

Comments received regarding the enclosed EA will assist in the agency's evaluation of the project changes and will be reflected in the project record.

Sincerely,

- ()) fourton

Leonard Houston Chief, Environmental Analysis Branch

Enclosure

DEPARTMENT OF THE ARMY



NEW YORK DISTRICT, CORPS OF ENGINEERS JACOB K. JAVITS FEDERAL BUILDING 26 FEDERAL PLAZA NEW YORK, N.Y. 10278-0090

August 29, 2006

REPLY TO THE ATTENTION OF Green Brook Flood Control Project Planning Division Environmental Analysis Branch

Municipal Clerk Borough of Bound Brook Municipal Building 230 Hamilton Street Bound Brook, NJ 08805

Dear Municipal Clerk:

The U.S. Army Corps of Engineers, New York District (District), has prepared a Draft Finding of No Significant Impact/Environmental Assessment of the Demolition of Conrail Bridge and Embankment, Middlesex Borough, Middlesex County and South Bound Brook, Somerset County, New Jersey for the Green Brook Flood Control Project. The document has been circulated to the affected public in accordance with the National Environmental Policy Act of 1970. We ask that the Borough of Bound Brook keep this environmental assessment document on file at the clerk's office for a minimum period of one-month, and act as a local document repository for the Green Brook Flood Control Project. The document is also available online at the District's website: <u>http://www.nan.usace.army.mil/</u>. The availability of the document will be advertised in this week's legal notices of the Star Ledger (August 31, 2006) and Courier News (August 30, 2006).

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Document review comments are requested in writing prior to September 30, 2006 at the following address:

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or via email at Megan.B.Grubb@usace.army.mil.

Comments received regarding the enclosed EA will assist in the agency's evaluation of the project changes and will be reflected in the project record. If you have any questions, please contact Ms. Megan Grubb at (917) 790-8618.

Sincerely,

9. Houster

Leonard Houston Chief, Environmental Analysis Branch

Enclosure



DEPARTMENT OF THE ARMY

NEW YORK DISTRICT, CORPS OF ENGINEERS JACOB K. JAVITS FEDERAL BUILDING 26 FEDERAL PLAZA NEW YORK, N.Y. 10278-0090

August 29, 2006

REPLY TO THE ATTENTION OF Green Brook Flood Control Project Planning Division Environmental Analysis Branch

Municipal Clerk Middlesex Borough 1200 Mountain Avenue Middlesex, New Jersey 08846

Dear Municipal Clerk:

The U.S. Army Corps of Engineers, New York District (District), has prepared a Draft Finding of No Significant Impact/Environmental Assessment of the Demolition of Conrail Bridge and Embankment, Middlesex Borough, Middlesex County and South Bound Brook, Somerset County, New Jersey for the Green Brook Flood Control Project. The document has been circulated to the affected public in accordance with the National Environmental Policy Act of 1970. We ask that the Borough of Middlesex keep this environmental assessment document on file at the clerk's office for a minimum period of one-month, and act as a local document repository for the Green Brook Flood Control Project. The document is also available online at the District's website: <u>http://www.nan.usace.army.mil/</u>. The availability of the document will be advertised in this week's legal notices of the Star Ledger (August 31, 2006) and Courier News (August 30, 2006).

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or via email at Megan.B.Grubb@usace.army.mil.

Comments received regarding the enclosed EA will assist in the agency's evaluation of the project changes and will be reflected in the project record. If you have any questions, please contact Ms. Megan Grubb at (917) 790-8618.

Sincerely,

P. Houster

Leonard Houston Chief, Environmental Analysis Branch

Enclosure

Mailing List

Mr. Clifford Day U.S. Fish and Wildlife Service Ecological Services, Region 5 927 North Main street (Bldg D1) Pleasantville, NJ 08232

Ms. Grace Musumeci Environmental Review Section Environmental Protection Agency 290 Broadway New York, NY 10007-1866

Mr. Richard Kropp U.S. Geological Survey 810 Bear Tavern Road, Suite 206 West Trenton, NJ 08628

Mr. Peter DeMeo NJDEP Land Use Regulation Program Stream Encroachment 501 East State Street Plaza 5, 2nd Floor Trenton, NJ 08625

Mr. Charles Defendorf NJ Dept. of Environmental Protection Office of Engineering and Construction Floodplain Management 501 East State Street, CN 419 Trenton, NJ 08625

Mr. Robert James New Jersey Department of Transportation 1035 Parkway Avenue, CN 600 Trenton, NJ 08625-0600

Mr. Joe Debler Green Brook Flood Control Commission P.O. Box 2861 Netherwood Station Plainfield, NJ 07062-2861 Mr. Robert Trantor Federal Emergency Management Agency Region 2 26 Federal Plaza NY, NY 10278-0090

Mr. Robert Hargrove Strategic Planning and Multimedia Programs Branch U.S. Environmental Protection Agency 290 Broadway NY, NY 10007-1866

Ms. Dorothy P. Guzzo Deputy State Historic Preservation Officer Historic Preservation Office NJ Dept. of Environmental Protection CN 404 Trenton, NJ 08625-0404

Ms. Sandy Krietzman Bureau of Air Quality Planning NJ Dept. of Environmental Protection 401 East State Street Trenton, NJ 08625

Mr. Joel Peccioli NEPA Coordinator NJ Dept. of Environmental Protection 501 E. State Street, CN 401 Trenton, NJ 08625-0418

Ms. Virginia Kopkash Land Use Regulation Program – Mitigation NJDEP PO Box 439 Trenton, NJ 08625

Mr. Ernest P. Hahn Delaware & Raritan Canal Commission Route 29 PO Box 539 Stockton, NJ 08559 Susan Herron Delaware and Raritan Canal State Park Kingston Office 145 Mapleton Road Princeton, NJ 08540

Mr. Carl Andreassen County of Somerset DPW, Engineering Division County Administration Building 20 Grove Street PO Box 3000 Somerville, NJ 08876-1262

Middlesex County Administration Building 75 Bayard Street, P.O. Box 1110 County Clerk, 4th Floor New Brunswick, NJ 08901

Mayor Frank J. Ryan Borough of Bound Brook Municipal Building 230 Hamilton St., Bound Brook, NJ 08805

Mayor Gerald D'Angelo Middlesex Borough 1200 Mountain Avenue Middlesex, NJ 08846

Bound Brook Memorial Library 402 East High Street Bound Brook, NJ 08805

Marisol, Inc. 213 W. Union Avenue Bound Brook, NJ 08805-1334 Ms. Anna Aschkenes, Executive Director Middlesex County Cultural and Heritage Commission 703 Jersey Avenue New Brunswick, New Jersey 08901

Mr. Thomas R. D'Amico, Historic Sites Coordinator Somerset County Cultural and Heritage Commission P.O. Box 3000 20 Grove Street Somerville, New Jersey 08876-1262

Borough of South Bound Brook Mayor, Tamas Ormosi 12 Main Street South Bound Brook, NJ 08880

Borough of Bound Brook Municipal Clerk Municipal Building 230 Hamilton St., Bound Brook, NJ 08805

Middlesex Borough Municipal Clerk 1200 Mountain Avenue Middlesex, NJ 08846

Reagent Chemical & Research Inc. 115 US Highway 202 Ringoes, NJ 08551

U.C. & H. c/o Elizabethtown Water Company P Box 788 Westfield, NJ 07091 145 River Road, LLC 79 Rt 520 Englishtown, NJ 07726 The Dow Chemical Company 2030 Dow Center Midland, Michigan 48674

Middlesex County Sewerage Authority Chevalier Avenue Sayreville, NJ 08872

Verizon NJ Room 3137 PO Box 152206 Irving, TX 75015

41 Canal Street Associates PO Box 511 E. Rutherford, NJ 07073

Bayer CropScience Mr. Robert C. Lockemer 2 T W Alexander Drive Research Triangle Park, NC 27709

Phil Cole NJDEP Office of Site Remediation PO Box 028 401 East State Street, 6th Floor Trenton, NJ 08625-0028 Starlink Logistics, Inc. One Copley Parkway #309 Morrisville, NJ 27560

Matzel & Mumford SBB Urban Renewal 100 Village Court Hazlet, NJ 07730

Michael Novak Atlantic Environmental Solutions Inc 5 Marine Hoboken, NJ

Union Carbide Corporation Mr. George A. Humphrey, Jr. 171 River Road Piscataway, NJ 08854-3503

Attn: H. Scott Laird URS Corporation 335 Commerce Drive, Suite 300 Fort Washington, PA 19034-2623

Correspondence Received and District Response Correspondence



September 5, 2006

Leonard Houston Chief, Environmental Analysis Branch U.S. Army Corps of Engineers, New York District Planning Division, Environmental Analysis Branch RM 2146 26 Federal Plaza New York, NY 10278-0090

> RE: Green Brook Project Borough of South Bound Brook, Somerset County, NJ Middlesex Borough, Middlesex County, NJ

Dear Mr. Houston:

I have received an environmental assessment regarding the demolition of the Raritan River Bridge. This Project is within our "A" Zone and will require complete review and approval by the Commission for visual impact. Please submit a DRCC application and elevation drawings. A DRCC application form and checklist is available from our web site: www.dandrcanal.com.

Should you have any questions regarding the above, please don't hesitate to contact me.

Sincerely yours,

Caroline Dougherty

c: Somerset County Planning Board Middlesex County Planning Board

> NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION Jon Corzine, Governor Lisa P. Jackson, Commissioner

PRALLSVILLE MILLS 33 RISLER STREET P.O. BOX 539 STOCKTON, NJ 08559-0539 609-397-2000 FAX 609-397-1081 www.dandrcanal.com

State of New Jersey Department of Environmental Protection Delaware and Raritan Canal Commission Application

PLEA	SEPRINT OR TYPE Charles E Defend	orf P F
1a.	Applicant/Owner_NJDEP - E&C	Telephone (609 292-2296
	Permanent Legal Address P.O.Box	419
		State N . J . Zip Code08625
1b.	Agent/Attorney (if applicable)N/A	Telephone()
	Permanent Legal Address	
	City or Town	StateZip Code
2.	If applicable, give name of Engineer or Archited	t (specify):
	NameN/A	NJ License #
		Telephone ()
	Address	
		Zip Code
3.	Name of Project, if applicable <u>ConRail Br</u> Block(s) Lot(s) Address (Street/Road)	Federal Flood Control idge Removal Total Acreage
4.		been submitted, or have any state permits been
	X Yes No	APPLICATION STATUS (Pending-Approved) Project #
4.01	Freshwater Wetlands Permit	
4.02	Freshwater Wetlands Transitional Area Waiver	App 0000-02-0025.1
4.03	Stream Encroachment	
4.04	Water Quality Certificate (Section 401)	
4.05	Open Water Fill	· · · · · · · · · · · · · · · · · · ·
4.06	Sewer Systems: Collector, Pump Station, etc	
4.07	Exemption from Sewer Ban	
4.08	NJ Pollution Discharge Elimination System (specify)	
4.09	Solid Waste Permits (specify)	
4.10	Hazardous Waste Permits (specify)	

4.11	Air Quality Permits (specify)	
4.12	Other State Agencies' Permits	
4.13	Local Permits	
A 1A	Federal Permits	

Brief Description of the proposed project and intended use: (If residential, include number and 5. type of units-townhouses, single family, etc. If non-residential, specify type of structureswarehouses, office, etc.) INCLUDE TOTAL AREA OF NEW IMPERVIOUS SURFACES, IN ACRES.

See CED Comments &

See Corps of Engineers Project Drwgs &

Draft Finding of No Significant Impact/Environmental Assessment of Conrail Bridge and Embankment

6. List anyone owning 10% or more in the project.

Bayer CropScience Corp

Factory Lane Super Fund Site

(Owner of Embankment and Bridge)

7. I certify under penalty of law that the information provided in this document is true, accurate, and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment.

Charles E. Defendorf, P.E. 1/1/07 Hach 2 Signature of Applicant/Owner 6

Type: Name and Date

Supr Env Engineer

1/1/07

Type: Position

Date

Additional Applicant Comments ConRail Bridge and Embankment Removal

All elements of Work will be performed from Piscataway Side. The D&R Canal, Historic Bridge Dept of Parks Tow Path will not be touched.

As can be seen on Table 2 Comparison of No Action V/S Proposed Demolition the removal of the Bridge returns the valley to its natural beauty and the removal of the Embankment with its Arsenic is clearly benefical.

In its present state, the structure can not be secured and citizens tresspassing on this Bridge are in Grave Danger. This safety hazard must be removed

C. E. Defendorf, PaE.



Reagent Chemical & Research, Inc.

124 RIVER ROAD • MIDDLESEX, NEW JERSEY 08846 OFFICE: (732) 469-0101 • FAX: (732) 469-1074

September 11, 2006

US Army Corps of Engineers, New York District Planning Division, Environmental Analysis Branch Attn: Green Brook Project/ Megan Grubb RM 2146 26 Federal Plaza New York, New York 10278-0090

Dear Megan B. Grubb,

Upon reviewing the "Environmental Assessment of the Demolition of Conrail Bridge and Embankment, Middlesex Borough, Middlesex County and South Bound Brook, Somerset County, New Jersey for the Green Brook Flood Control Project" document submitted to Reagent Chemical & Research, Inc., I would like to submit to you the following comments in order to determine the agency's evaluation of the impact of the project on the local businesses located on River Road and Factory Lane.

First, Section 7.8 "Noise and Traffic Impacts" states "A traffic detour route is already established..." is not entirely correct. The proposed demolition and removal of the Conrail Bridge is located south of the Factory Lane/River Road intersection. Factory Lane is a dead-end street that has its only access from River Road. Several businesses are located on Factory Lane. Reagent Chemical's facility located on Factory Lane is impacted by any River Road closure that would occur anywhere south of the Factory Lane/River Road intersection. Reagent Chemical's Factory Lane facility is a 24-hour distribution facility that employs the use of bulk loaded tractor-trailers that, due to the low railroad bridge (11 feet 6 inches in height) located north of the Factory Lane/River Road intersection, are required to travel south on River Road after exiting Factory Lane. Any closure of River Road past this point would severely impact the business operation of this site.

Second, Regent Chemical also operates a manufacturing site located at 124 River Road. The facility is located between the proposed bridge removal and the low railroad bridge located on River Road. Any road closure of River Road would also severely impact the



Reagent Chemical & Research, Inc. Registered to ISO 9001 File # A6831



arrival of daily raw material shipments received at the facility and the daily shipments of finished products to our customers. As described above, due to the low railroad bridge (11 feet 6 inches in height) located north of the Factory Lane/River Road intersection, commercial truck traffic is required to travel south on River Road when entering and exiting our River Road facility. Due to this singular commercial access to and from the facility, any road closure south of Factory Lane would have severe business consequences.

Reagent Chemical would like to have the agency's consideration of the above mentioned items in order that the project does not negatively impact the business operations of the facilities located in and around the project's vicinity. If any further information is needed or you would like to discuss the project and its impact, please don't hesitate to contact me at the letterhead address. I look forward to your response.

Sincerely

Kobert Dritschel Site Manager

CC: Leonard Houston – Dep't of the Army Brian Skeuse – Reagent Chemical



DEPARTMENT OF THE ARMY NEW YORK DISTRICT, CORPS OF ENGINEERS JACOB K. JAVITS FEDERAL BUILDING NEW YORK, N.Y. 10278-0090

REPLY TO ATTENTION OF Environmental Analysis Branch

December 5, 2006

Robert Dritschel Site Manager Reagent Chemical & Research, Inc. 124 River Road Middlesex, New Jersey 08846

Dear Mr. Dritschel:

This letter is in response to your September 11, 2006 correspondence (enclosed) commenting on the "Draft Environmental Assessment of the Demolition of Conrail Bridge and Embankment, Middlesex Borough, Middlesex County and South Bound Brook Somerset County, New Jersey for the Green Brook Flood Control Project".

We appreciate your concerns with the impact any closure of River Road may have on your business. Currently, it is not known if and to what extent the road may need to be closed for demolition activities. Any potential road closures will be determined once a construction contract is awarded. It will be at this point that we will work closely with you to ensure minimum disruption to business operations.

Should you have any additional questions or concerns with the project, please contact Mr. John O'Connor, Project Manager at (917) 790-8213.

Sincerely,

Leonard Houston Chief, Environmental Analysis Branch

Enclosure



State of New Jersey DEPARTMENT OF ENVIRONMENTAL PROTECTION Environmental Regulation Office of Permit Coordination and Environmental Review 401 East State Street P.O. Box 423 Trenton, New Jersey 08625-0423 Phone: (609) 292-3600 Fax: (609) 777-1330

LISA P. JACKSON Commissioner

September 27, 2006

Mr. Leonard Houston, Chief U.S. Army Corps of Engineers, New York District Planning Division, Environmental Analysis Branch Attn: Green Brook Project RM 2146 26 Federal Plaza New York, NY 10278-0090

RE: Demolition of the Conrail Bridge and Embankment Middlesex Borough, Middlesex County and South Bound Brook, Somerset County for the Green Brook Flood Control Project

Environmental Assessment Comments

Dear Mr. Houston:

JON S. CORZINE

Governor

The Office of Permit Coordination and Environmental Review of the New Jersey Department of Environmental Protection (NJDEP) has completed its review of the Environmental Assessment (EA) submitted for the Demolition of the Conrail Bridge and Embankment in Middlesex Borough, Middlesex County and South Bound Brook, Somerset County, New Jersey for the Green Brook Flood Control Project.

The NJDEP concurs with the draft Finding of No Significant Impact (FONSI) provided the terms and conditions of the Stream Encroachment and Freshwater Wetlands Permits (issued by NJDEP for the project) are met, and the U.S. Army Corps of Engineers continues to coordinate the project with the the NJDEP's Site Remediation Program and Historic Preservation Office.

Thank you for giving the New Jersey Department of Environmental Protection the opportunity to comment on the Environmental Assessment.

Sincerely,

Kenneth C. Koschek Supervising Environmental Specialist Office of Permit Coordination and Environmental Review



September 29, 2006

U. S. Army Corps of Engineers, New York District Planning Division, Environmental Analysis Branch Attn: Green Brook Project RM 2146 26 Federal Plaza New York, New York 10278-0090

Subject: Draft FONSI / Environmental Assessment Demolition of Abandoned Conrail Bridge and Embankment Middlesex Borough

Dear Mr. Houston:

I offer the following comments on the referenced Environmental Assessment report concerning the referenced future demolition project.

On page 9, last paragraph of Section 4.0 of the Environmental Assessment report the owner of the abandoned spur property on the north bank of the Raritan River is incorrectly named as "*Bayer CropSciences*" and also incorrectly named as "*Bayer CropScience*" in the letter to the Fish and Wildlife Service dated January 24, 2006 (Appendix C, page 1, item 1). In each instance, the correct name of the abandoned spur property owner is StarLink Logistics, Inc.

We concur with the conclusion in Section 9.0 that temporary disturbance to floodplain and wetland habitat will be mitigated utilizing on-site landscaping. This landscaping should be designed in such a way that it satisfies engineering and remedial objectives, and is also consistent with adjacent habitat functions.

Yours truly,

N. Scott Said

H. Scott Laird Program Manager

HSL:rrd

- cc: C. Miller
 - R. Lockemer G. Goodridge E. McTiernan

URS Corporation 335 Commerce Drive, Suite 300 Fort Washington, PA 19034-2623 Tel: 215.367.2500 Fax: 215.367.1000

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In Reply Refer to:

2006-FA-0093

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Jersey Field Office Ecological Services 927 North Main Street, Building D Pleasantville, New Jersey 08232 Tel: 609/646 9310 Fax: 609/646 0352 http://www.fws.gov/northeast/njfieldoffice



SEP 2 9 2006

Leonard Houston, Chief Planning Division, Environmental Analysis Branch U.S. Army Corps of Engineers, New York District RM 2146 26 Federal Plaza New York, New York 10278-0090 Attn: Green Brook Project

Dear Mr. Houston:

The U.S. Fish and Wildlife Service (Service) has received the U.S Army Corps of Engineers, New York District's (Corps) draft Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI) for the proposed Demolition of Conrail Bridge and Embankment project (Railroad Spur) located in Middlesex Borough, Middlesex County and South Bound Brook, Somerset County, New Jersey for the Green Brook Flood Control project.

AUTHORITY

The Service provides the following comments pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the Migratory Bird Treaty Act of 1918 (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703-712), and the National Environmental Policy Act of 1969 (NEPA), as amended (83 Stat. 852; 42 U.S.C. 4321 *et seq.*). These comments do not preclude separate Service review and comment pursuant to the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) or the December 22, 1993 Memorandum of Agreement among the U.S Environmental Protection Agency, New Jersey Department of Environmental Protection (NJDEP), and the Service, if project implementation requires a permit from the NJDEP pursuant to the New Jersey Freshwater Wetlands Protection Act (N.J.S.A 13:9B *et seq.*).

FEDERALLY LISTED SPECIES

Except for an occasional transient bald eagle (*Haliaeetus leucocephalus*), no other federally listed or proposed threatened or endangered flora or fauna under Service jurisdiction are known to occur within the vicinity of the proposed project site in New Jersey. If additional information

on federally listed species becomes available, or if project plans change, this determination may be reconsidered.

GENERAL COMMENTS

The Service has been involved in the planning of the Green Brook Flood Control project for over 41 years and has provided planning aid to the Corps, including numerous letters and technical reports (*e.g.*, Planning Aid Report). In addition, we prepared a final FWCA report, dated May 1997, based on review of the draft General Re-evaluation Report and final Supplemental Environmental Impact Statement (SEIS) for the Green Brook Flood Control project. The FWCA report was incorporated into the final SEIS.

The Railroad Spur project is a subset of the larger Green Brook Flood Control project. The purpose of this demolition action is to accommodate for potential temporary induced flooding along the Raritan River that may be experienced during the interim project build-out years. The removal of the bridge structures and embankment material from the floodway and floodplain of the Raritan River would improve water (hydraulic) conveyance. The improved water conveyance is expected to yield reduction of potential induced flooding to an acceptable level.

The proposed demolition would involve removal of the bridge deck and piers, the northern shore abutment, the railroad embankment between River Road and the Raritan River, the remaining bridge structure over River Road and its two abutments. The Service has prepared both draft and final supplemental FWCA reports for the Railroad Spur project, dated November 23, 2005 and August 22, 2006, respectively.

SPECIFIC COMMENTS

The goal of the Service throughout project planning has been to ensure that the adverse environmental effects of the selected plan are minimized and that appropriate compensatory mitigative measures are incorporated into the plan, consistent with our Mitigation Policy (<u>Federal Register</u>, Vol. 46, No. 15, January 23, 1981). The Service's final FWCA report for the Railroad Spur provided a total of 12 recommendations for on-site forested wetland and floodplain restorations.

The Service understands that the riparian habitat restoration of the embankment on the north-side of the Raritan River may not be feasible for the following reasons: (1) remediation activities due to contamination issues, (2) limited existing habitat, and (3) Corps action would be limited to the railroad corridor. The Service recognizes the need to coordinate habitat restoration with the necessary remediation of the project site, as well as the landowner. However, the lack of currently available habitat on and surrounding the project site is not a sufficient reason to forgo the opportunity to restore wildlife habitat following bridge removal.

The value of riparian habitat to migratory birds and resident wildlife, as well as overall stream quality, is well documented (Fischer and Fischenich, 2000; Fischenich and Allen, 2000; Federal Interagency Stream Restoration Working Group, 2001; Cappiella *et al.*, 2005; New Jersey

riparian habitat along one of New Jersey's major waterways, the Raritan River, should not be lost.

The Service acknowledges that tree-planting may not be appropriate prior to remediation of environmental contamination, but reiterates our recommendation to ultimately restore the project site to a wooded condition. We recommend against interim surface treatments or stabilization techniques that involve non-native vegetation, and against permanent hard structures in place of trees. Upon completion of all work at the site, including both bridge removal and remediation, the Service's Partner for Fish and Wildlife (Partners) habitat restoration program may be available to provide technical assistance to the landowner to plant the site with woody vegetation (but only if habitat restoration is not required as a permit condition or as compensatory mitigation for the project).

Correction

Page 14, first paragraph, first sentence, replace "Draft" with "Final" for Fish and Wildlife Coordination Act Report found in Appendix C.

CONCLUDING REMARKS

The Service supports the removal of the abandoned Conrail Railroad Bridge that crosses the Raritan River and regrading of the northeast bank to pre-construction grade for the purpose of reducing any temporary flooding along the Raritan River that may occur during the interim build-out period of the Green Brook Flood Control project. The Service recommends that the Corps continue to coordinate with the non-federal sponsor, landowner, and other interested stakeholders to implement the recommendations provided in our final FWCA report to restore the project area to a natural state that would provide wildlife habitat and reduce flooding. To summarize, fish and wildlife will benefit from the removal of the abandon Conrail Bridge that crosses the Raritan River and from retaining mature trees and restoring the floodplain to a forested wetland cover type.

Based on coordination between the Corps and the Service through the informal consultation process, the Service concurs that railroad bridge removal, including tree clearing between April 1 and September 30, is not likely to adversely affect the federally listed (endangered) Indiana bat (*Myotis sodalis*), pursuant to Section 7 of the ESA.

To benefit native wildlife, the Service recommends that the Corps remove exotic invasive plants (*e.g.*, tree-of-heaven (*Ailanthus altissima*), multiflora rose (*Rosa multiflora*), and knotweed (*Polygonum cuspidatum*) and revegetate the site with native canopy and understory species that provide food and cover for wildlife. For example, shagbark hickory (*Carya ovata*), when mature, will provide potential roosting sites for Indiana bat. Removal of impervious surfaces and fill material and tilling the soil to reduce soil compaction will enhance floodwater storage and support revegetation. Fish and wildlife will benefit further from the use of bioengineering for any necessary erosion control and from follow-up monitoring and long-term management to ensure stream bank stabilization and successful establishment of a native plant community.

If you have any questions regarding these comments, please have your staff contact John Staples at (609) 646-9310, extension 12 or Ron Popowski of my staff. Mr. Popowski is deaf and uses text telephone. Please use the relay Service according to the following protocol:

- (1) Dial the Relay Service at 711:
- (2) Give the operator Ron's phone number: (609) 646-9790
- (3) Once you are connected to Ron, speak to the operator as if you were speaking to Ron. The operator will type what you said to Ron and tell you what Ron had typed in response.
- (4) Thank you for your cooperation in this process.

Sincerely,

Clifford G. Day Supervisor

LITERATURE CITED

- Cappiella, K., T. Schueler, and T. Wright. 2005 Urban watershed forestry manual. U.S. Department of Agriculture, Forest Service, Northeastern Area State and Private Forestry, Newton Square, Pennsylvania. 118 pp. + Appendices.
- Federal Interagency Stream Corridor Restoration Working Group. 2001. Stream corridor restoration: principles, processes, and practices. Prepared by the Federal Interagency Stream Restoration Working Group (15 federal agencies). GPO Item No. 0120-A. <u>http://www.nrcs.usda.gov/technical/stream_restoration/</u>. Accessed September 28, 2006
- Fischenich, J. C., and H. Allen. 2000. Stream management. Water Operations Technical Support Program ERDC/EL SR-W-00_1. U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.
- Fischer, R. A., and Fischenich, J. C. 2000. Design recommendations for riparian corridors and vegetated buffer strips. EMRRP Technical Notes Collection (ERDC TN-EMRRP-SR-24). U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi. 17 pp. <u>http://el.erdc.usace.army.mil/elpubs/pdf/sr24.pdf</u>. Accessed September 28, 2006
- New Jersey Division of Fish and Wildlife. 2005. New Jersey wildlife action plan. New Jersey Department of Environmental Protection, Trenton, New Jersey. 545 pp. + Appendices. <u>http://www.state.nj.us/dep/fgw/ensp/waphome.htm</u>. Accessed September 28, 2006



State of New Iersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

LISA P. JACKSON Commissioner

Division of Air Quality Bureau of Air Quality Planning P.O. Box 418 Trenton, NJ 08625-0418

November 1, 2006

Mr. Leonard Houston Chief, Environmental Analysis Branch U.S. Army Corp of Engineers, New York District Jacob K, Javits Federal Building 26 Federal Plaza New York, New York 10278-0090

Dear Ms. Houston:

The New Jersey Department of Environmental Protection has reviewed the Air Quality section of the Environmental Assessment (EA) for the Demolition of Conrail Bridge and Embankment Middlesex Borough, Middlesex County, New Jersey for the Green Brook Flood Control Project dated August 2006.

The EA does not include the air emissions from the Final Environmental Impact Statement (FEIS) filed in August 1980 or the Final Supplemental EIS (FSEIS) filed in May 1997 for the Proposed Plan for the Green Brook Flood Control in the Green Brook Sub-basin Somerset, Middlesex, and Union Counties. Please forward the air emission estimates from the FEIS, FSEIS and for the EA to the Bureau of Air Quality Planning. Please indicate if the emissions from the EA will cause an increase in the total direct and indirect emissions for the overall project above the levels in 93.153(b).

In a related matter, please direct all correspondence regarding General Conformity matters to the attention of Angela Skowronek from my staff. Thank you in advance for your cooperation in this matter.

Sincerely,

JandyKnetyn

Sandy Krietzman, Chief Bureau of Air Quality Planning

c: Ken Koschek, NJDEP

JON S. CORZINE Governor



DEPARTMENT OF THE ARMY NEW YORK DISTRICT, CORPS OF ENGINEERS JACOB K. JAVITS FEDERAL BUILDING NEW YORK, N.Y. 10278-0090

ATTENTION OF Planning Division

February 5, 2007

Sandy Krietzman, Chief Bureau Air Quality Planning New Jersey Department of Environmental Protection P.O. Box 418 401 East State Street, 7th Floor Trenton, New Jersey 08625-0418

Dear Ms. Krietzman,

This letter responds to your November 1, 2006 correspondence (enclosed) regarding your review of the Environmental Assessment for the Demolition of the Conrail Bridge and Embankment Middlesex Borough, Middlesex County, New Jersey for the Green Brook Flood Control Project.

Per your request, enclosed is the summary of air emissions and the associated back-up information for the project. As indicated in Table 1. Summary of Estimated Construction Air Emissions, total NOx, VOC and PM emissions are 9.93 tons, 1.13 tons and .93 tons respectively.

Additionally, your letter requested us to include the air emissions from the Final Environmental Impact Assessment (FEIS) filed August 1980 or the Final Supplemental EIS (FSEIS) filed in May 1997. Due to the fact that segments of the overall project are constructed as Federal and State funding becomes available, the decision was made to defer calculating air emissions until each segment enters the Plans and Specifications Phase. We would like to note that for this year, construction actions to be taken will include this project along with the raising of the Talmage Avenue bridge. Total emissions for the Talmage Avenue bridge were estimated at 41.63 tons NOx, 12.72 tons CO, 3.72 tons VOC, 3.57 tons PM, and 1.62 tons of SOx. This project will not increase the overall project emissions to exceed the de minimis levels established in 93.153(b).

If you have any questions or require further information, please contact Kimberly Rightler, Project Biologist at (917) 790-8722.

Sincerely,

Leonard Houston Chief, Environmental Analysis Branch

Enclosures (2)