Guidance for preparing the

PRELIMINARY ENGINEERING REPORT
&
ENVIRONMENTAL INFORMATION DOCUMENT

for
Clean Water State Revolving Fund Projects

Unless Categorically Excluded, all projects funded through the CWSRF must develop a Preliminary Engineering Report (PER) and an Environmental Information Document (EID). Categorical Exclusions may be issued for projects that only affect previously impacted areas such as rehabilitation of existing systems, in which case, a PER and EID are not required.

In 2012 the USDA, Rural Development (RD), Rural Utilities Service, Water and Environmental Programs formed a working group to develop an interagency template for PERs for use by both federal agencies and state administering agencies. On January 16, 2013, the principals of the federal participants executed an interagency memorandum supporting use of the following interagency PER template.

An EID (required by 40CFR, Part 6, Volume 40, April 14, 1975, as amended) is an environmental review that evaluates the proposed work, site, cost, and environmental impacts of the project. The EID may be incorporated into the PER or submitted as a separate document.

The PER and EID example formats are attached. Discuss additional topics and add sections if necessary. These formats cover only the minimum topics that must be considered. Provide sources for all data, maps, tables, charts, etc.

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PRELIMINARY ENGINEERING REPORT

ABBREVIATIONS

NEPA – National Environmental Policy Act
NPV – Net Present Value
O&M – Operations and Maintenance
OMB – Office of Management and Budget
Report – Preliminary Engineering Report
SPPW – Single Payment Present Worth

1) PROJECT PLANNING

Describe the area under consideration. Service may be provided by a combination of central, cluster, and/or centrally managed individual facilities. The description should include information on the following:

a) Location. Provide scale maps and photographs of the project planning area and any existing service areas. Include legal and natural boundaries and a topographical map of the service area.

b) Environmental Resources Present. Provide maps, photographs, and/or a narrative description of environmental resources present in the project planning area that affect design of the project. Environmental review information that has already been developed to meet requirements of NEPA or a state equivalent review process can be used here.

c) Population Trends. Provide U.S. Census or other population data (including references) for the service area for at least the past two decades if available. Population projections for the project planning area and concentrated growth areas should be provided for the project design period. Base projections on historical records with justification from recognized sources.

d) Community Engagement. Describe the utility's approach used (or proposed for use) to engage the community in the project planning process. The project planning process should help the community develop an understanding of the need for the project, the utility operational service levels required, funding and revenue strategies to meet these requirements, along with other considerations.

2) EXISTING FACILITIES

Describe each part (e.g. processing unit) of the existing facility and include the following information:

a) Location Map. Provide a map and a schematic process layout of all existing facilities. Identify facilities that are no longer in use or abandoned. Include photographs of existing facilities.

b) History. Indicate when major system components were constructed, renovated, expanded, or removed from service. Discuss any component failures and the cause for the failure. Provide a history of any applicable violations of regulatory requirements.

c) Condition of Existing Facilities. Describe present condition; suitability for continued use; adequacy of current facilities; and their conveyance, treatment, storage, and disposal capabilities. Describe the existing capacity of each component. Describe and reference compliance with applicable federal, state, and local laws. Include a brief analysis of overall current energy consumption. Reference an asset management plan if applicable.

d) Financial Status of any Existing Facilities. (Note: Some agencies require the owner to submit the most recent audit or financial statement as part of the application package.) Provide information regarding current rate schedules, annual O&M cost (with a breakout of current energy costs), other capital

improvement programs, and tabulation of users by monthly usage categories for the most recent typical fiscal year. Give status of existing debts and required reserve accounts.

e) Water/Energy/Waste Audits. If applicable to the project, discuss any water, energy, and/or waste audits which have been conducted and the main outcomes.

3) NEED FOR PROJECT

Describe the needs in the following order of priority:

a) Health, Sanitation, and Security. Describe concerns and include relevant regulations and correspondence from/to federal and state regulatory agencies. Include copies of such correspondence as an attachment to the Report.

b) Aging Infrastructure. Describe the concerns and indicate those with the greatest impact. Describe water loss, inflow and infiltration, treatment or storage needs, management adequacy, inefficient designs, and other problems. Describe any safety concerns.

c) Reasonable Growth. Describe the reasonable growth capacity that is necessary to meet needs during the planning period. Facilities proposed to be constructed to meet future growth needs should generally be supported by additional revenues. Consideration should be given to designing for phased capacity increases. Provide number of new customers committed to this project.

4) ALTERNATIVES CONSIDERED

This section should contain a description of the alternatives that were considered in planning a solution to meet the identified needs. Documentation of alternatives considered is often a Report weakness. Alternative approaches to ownership and management, system design (including resource efficient or green alternatives), and sharing of services, including various forms of partnerships, should be considered. In addition, the following alternatives should be considered, if practicable: building new centralized facilities, optimizing the current facilities (no construction), developing centrally managed decentralized systems, including small cluster or individual systems, and developing an optimum combination of centralized and decentralized systems. Alternatives should be consistent with those considered in the NEPA, or state equivalent, environmental review. Technically infeasible alternatives that were considered should be mentioned briefly along with an explanation of why they are infeasible, but do not require full analysis. For each technically feasible alternative, the description should include the following information:

a) Description. Describe the facilities associated with every technically feasible alternative. Describe source, conveyance, treatment, storage and distribution facilities for each alternative. A feasible system may include a combination of centralized and decentralized (on-site or cluster) facilities.

b) Design Criteria. State the design parameters used for evaluation purposes. These parameters should comply with federal, state, and agency design policies and regulatory requirements.

c) Map. Provide a schematic layout map to scale and a process diagram if applicable. If applicable, include future expansion of the facility.

d) Environmental Impacts. Provide information about how the specific alternative may impact the environment. Describe only those unique direct and indirect impacts on floodplains, wetlands, other important land resources, endangered species, historical and archaeological properties, etc., as they relate to each specific alternative evaluated. Include generation and management of residuals and wastes.

e) Land Requirements. Identify sites and easements required. Further specify whether these properties are currently owned, to be acquired, leased, or have access agreements.

f) Potential Construction Problems. Discuss concerns such as subsurface rock, high water table, limited access, existing resource or site impairment, or other conditions which may affect cost of construction or operation of facility.

g) Sustainability Considerations. Sustainable utility management practices include environmental, social, and economic benefits that aid in creating a resilient utility.

i) Water and Energy Efficiency. Discuss water reuse, water efficiency, water conservation, energy efficient design (i.e. reduction in electrical demand), and/or renewable generation of energy, and/or minimization of carbon footprint, if applicable to the alternative. Alternatively, discuss the water and energy usage for this option as compared to other alternatives.

ii) Green Infrastructure. Discuss aspects of project that preserve or mimic natural processes to manage stormwater, if applicable to the alternative. Address management of runoff volume and peak flows through infiltration, evapotranspiration, and/or harvest and use, if applicable.

iii) Other. Discuss any other aspects of sustainability (such as resiliency or operational simplicity) that are incorporated into the alternative, if applicable.

h) Cost Estimates. Provide cost estimates for each alternative, including a breakdown of the following costs associated with the project: construction, non-construction, and annual O&M costs. A construction contingency should be included as a non-construction cost. Cost estimates should be included with the descriptions of each technically feasible alternative. O&M costs should include a rough breakdown by O&M category (see example below) and not just a value for each alternative. Information from other sources, such as the recipient's accountant or other known technical service providers, can be incorporated to assist in the development of this section. The cost derived will be used in the life cycle cost analysis described in Section 5 a.

Example O&M Cost Estimate	
Personnel (i.e. Salary, Benefits, Payroll Tax, Insurance, Training)	
Administrative Costs (e.g. office supplies, printing, etc.)	
Water Purchase or Waste Treatment Costs	
Insurance	
Energy Cost (Fuel and/or Electrical)	
Process Chemical	
Monitoring & Testing	
Short Lived Asset Maintenance/Replacement*	
Professional Services	
Residuals Disposal	
Miscellaneous	
Total	

* See Appendix A for example list

5) SELECTION OF AN ALTERNATIVE

Selection of an alternative is the process by which data from the previous section, "Alternatives Considered" is analyzed in a systematic manner to identify a recommended alternative. The analysis should include

consideration of both life cycle costs and non-monetary factors (i.e. triple bottom line analysis: financial, social, and environmental). If water reuse or conservation, energy efficient design, and/or renewable generation of energy components are included in the proposal provide an explanation of their cost effectiveness in this section.

a) Life Cycle Cost Analysis. A life cycle present worth cost analysis (an engineering economics technique to evaluate present and future costs for comparison of alternatives) should be completed to compare the technically feasible alternatives. Do not leave out alternatives because of anticipated costs; let the life cycle cost analysis show whether an alternative may have an acceptable cost. This analysis should meet the following requirements and should be repeated for each technically feasible alternative. Several analyses may be required if the project has different aspects, such as one analysis for different types of collection systems and another for different types of treatment.

   i) The analysis should convert all costs to present day dollars;
   ii) The planning period to be used is recommended to be 20 years, but may be any period determined reasonable by the engineer and concurred on by the state or federal agency;
   iii) The discount rate to be used should be the "real" discount rate taken from Appendix C of OMB circular A-94 and found at (http://www.whitehouse.gov/omb/circulars_a094/a94_appx-c);
   iv) The total capital cost (construction plus non-construction costs) should be included;
   v) Annual O&M costs should be converted to present day dollars using a uniform series present worth (USPW) calculation;
   vi) The salvage value of the constructed project should be estimated using the anticipated life expectancy of the constructed items using straight line depreciation calculated at the end of the planning period and converted to present day dollars;
   vii) The present worth of the salvage value should be subtracted from the present worth costs;
   viii) The net present value (NPV) is then calculated for each technically feasible alternative as the sum of the capital cost (C) plus the present worth of the uniform series of annual O&M (USPW (O&M)) costs minus the single payment present worth of the salvage value (SPPW(S)):

      i. $NPV = C + USPW (O\&M) – SPPW (S)$

   ix) A table showing the capital cost, annual O&M cost, salvage value, present worth of each of these values, and the NPV should be developed for state or federal agency review. All factors (major and minor components), discount rates, and planning periods used should be shown within the table;
   x) Short lived asset costs (See Appendix A for examples) should also be included in the life cycle cost analysis if determined appropriate by the consulting engineer or agency. Life cycles of short lived assets should be tailored to the facilities being constructed and be based on generally accepted design life. Different features in the system may have varied life cycles.

b) Non-Monetary Factors. Non-monetary factors, including social and environmental aspects (e.g. sustainability considerations, operator training requirements, permit issues, community objections, reduction of greenhouse gas emissions, wetland relocation) should also be considered in determining which alternative is recommended and may be factored into the calculations.

6) PROPOSED PROJECT (RECOMMENDED ALTERNATIVE)

The engineer should include a recommendation for which alternative(s) should be implemented. This section should contain a fully developed description of the proposed project based on the preliminary description under the evaluation of alternatives. Include a schematic for any treatment processes, a layout of the system, and a location map of the proposed facilities. At least the following information should be included as applicable to the specific project:

a) Preliminary Project Design.

i) Drinking Water:

(1) Water Supply. Include requirements for quality and quantity. Describe recommended source, including site and allocation allowed.
(2) Treatment. Describe process in detail (including whether adding, replacing, or rehabilitating a process) and identify location of plant and site of any process discharges. Identify capacity of treatment plant (i.e. Maximum Daily Demand).
(3) Storage. Identify size, type and location.
(4) Pumping Stations. Identify size, type, location and any special power requirements. For rehabilitation projects, include description of components upgraded.
(5) Distribution Layout. Identify general location of new pipe, replacement, or rehabilitation: lengths, sizes and key components.

ii) Wastewater/Reuse:

(1) Collection System/Reclaimed Water System Layout. Identify general location of new pipe, replacement or rehabilitation: lengths, sizes, and keycomponents.
(2) Pumping Stations. Identify size, type, site location, and any special power requirements. For rehabilitation projects, include description ofcomponents upgraded.
(3) Storage. Identify size, type, location and frequency of operation.
(4) Treatment. Describe process in detail (including whether adding, replacing, or rehabilitating a process) and identify location of any treatment units and site of any discharges (end use for reclaimed water). Identify capacity of treatment plant (i.e. Average Daily Flow).

iii) Solid Waste:

(1) Collection. Describe process in detail and identify quantities of material (in both volume and weight), length of transport, location and type of transfer facilities, and any special handling requirements.
(2) Storage. If any, describe capacity, type, and site location.
(3) Processing. If any, describe capacity, type, and site location.
(4) Disposal. Describe process in detail and identify permit requirements, quantities of material, recycling processes, location of plant, and site of any process discharges.

iv) Stormwater:

(1) Collection System Layout. Identify general location of new pipe, replacement or rehabilitation: lengths, sizes, and key components.
(2) Pumping Stations. Identify size, type, location, and any special power requirements.
(3) Treatment. Describe treatment process in detail. Identify location of treatment facilities and process discharges. Capacity of treatment process should also be addressed.
(4) Storage. Identify size, type, location and frequency of operation.
(5) Disposal. Describe type of disposal facilities and location.
(6) Green Infrastructure. Provide the following information for green infrastructure alternatives:

- Control Measures Selected. Identify types of control measures selected (e.g., vegetated areas, planter boxes, permeable pavement, rainwater cisterns).
- Layout: Identify placement of green infrastructure control measures, flow paths, and drainage area for each control measure.
- Sizing: Identify surface area and water storage volume for each green infrastructure control measure. Where applicable, soil infiltration rate, evapotranspiration rate, and use rate (for rainwater harvesting) should also be addressed.
- Overflow: Describe overflow structures and locations for conveyance of larger precipitation events.

b) Project Schedule. Identify proposed dates for submittal and anticipated approval of all required documents, land and easement acquisition, permit applications, advertisement for bids, loan closing, contract award, initiation of construction, substantial completion, final completion, and initiation of operation.

c) Permit Requirements. Identify any construction, discharge and capacity permits that will/may be required as a result of the project.

d) Sustainability Considerations (if applicable).

i) Water and Energy Efficiency. Describe aspects of the proposed project addressing water reuse, water efficiency, and water conservation, energy efficient design, and/or renewable generation of energy, if incorporated into the selected alternative.
ii) Green Infrastructure. Describe aspects of project that preserve or mimic natural processes to manage stormwater, if applicable to the selected alternative. Address management of runoff volume and peak flows through infiltration, evapotranspiration, and/or harvest and use, if applicable.
iii) Other. Describe other aspects of sustainability (such as resiliency or operational simplicity) that are incorporated into the selected alternative, if incorporated into the selected alternative.

e) Total Project Cost Estimate (Engineer's Opinion of Probable Cost). Provide an itemized estimate of the project cost based on the stated period of construction. Include construction, land and right-of-ways, legal, engineering, construction program management, funds administration, interest, equipment, construction contingency, refinancing, and other costs associated with the proposed project. The construction subtotal should be separated out from the non-construction costs. The non-construction subtotal should be included and added to the construction subtotal to establish the total project cost. An appropriate construction contingency should be added as part of the non-construction subtotal. For projects containing both water and waste disposal systems, provide a separate cost estimate for each system as well as a grand total. If applicable, the cost estimate should be itemized to reflect cost sharing including apportionment between funding sources. The engineer may rely on the owner for estimates of cost for items other than construction, equipment, and engineering.

f) Annual Operating Budget. Provide itemized annual operating budget information. The owner has primary responsibility for the annual operating budget, however, there are other parties that may provide technical assistance. This information will be used to evaluate the financial capacity of the system. The engineer will incorporate information from the owner's accountant and other known technical service providers.

i) Income. Provide information about all sources of income for the system including a proposed rate schedule. Project income realistically for existing and proposed new users separately, based on existing user billings, water treatment contracts, and other sources of income. In the absence of historic data or other reliable information, for budget purposes, base water use on 100 gallons per capita per day. Water use per residential connection may then be calculated based on the most recent U.S. Census, American Community Survey, or other data for the state or county of the average household size. When large agricultural or commercial users are projected, the Report should identify those users and include facts to substantiate such projections and evaluate the impact of such users on the economic viability of the project.
ii) Annual O&M Costs. Provide an itemized list by expense category and project costs realistically. Provide projected costs for operating the system as improved. In the absence of other reliable data,

base on actual costs of other existing facilities of similar size and complexity. Include facts in the Report to substantiate O&M cost estimates. Include personnel costs, administrative costs, water purchase or treatment costs, accounting and auditing fees, legal fees, interest, utilities, energy costs, insurance, annual repairs and maintenance, monitoring and testing, supplies, chemicals, residuals disposal, office supplies, printing, professional services, and miscellaneous as applicable. Any income from renewable energy generation which is sold back to the electric utility should also be included, if applicable. If applicable, note the operator grade needed.

iii) Debt Repayments. Describe existing and proposed financing with the estimated amount of annual debt repayments from all sources. All estimates of funding should be based on loans, not grants.

iv) Reserves. Describe the existing and proposed loan obligation reserve requirements for the following:

(1) Debt Service Reserve – For specific debt service reserve requirements consult with individual funding sources. If General Obligation bonds are

(2) proposed to be used as loan security, this section may be omitted, but this should be clearly stated if it is the case.

(3) Short-Lived Asset Reserve – A table of short lived assets should be included for the system (See Appendix A for examples). The table should include the asset, the expected year of replacement, and the anticipated cost of each. Prepare a recommended annual reserve deposit to fund replacement of short-lived assets, such as pumps, paint, and small equipment. Short-lived assets include those items not covered under O&M, however, this does not include facilities such as a water tank or treatment facility replacement that are usually funded with long-term capital financing.

7) CONCLUSIONS AND RECOMMENDATIONS

Provide any additional findings and recommendations that should be considered in development of the project. This may include recommendations for special studies, highlighting of the need for special coordination, a recommended plan of action to expedite project development, and any other necessary considerations.

Appendix A: Example List of Short-Lived Asset Infrastructure

Estimated Expenses by Item within up to 20 Years from Installation)

Drinking Water Utilities	Wastewater Utilities
Source Related	Treatment Related
Pumps	Pump
Pump Controls	Pump Controls
Pump Motors	Pump Motors
Telemetry	Chemical feed pumps
Intake/ Well screens	Membrane Filters Fibers
Water Level Sensors	Field & Process Instrumentation Equipment
Pressure Transducers	UV lamps
Treatment Related	Centrifuges
Chemical feed pumps	Aeration blowers
Altitude Valves	Aeration diffusers and nozzles
Valve Actuators	Trickling filters, RBCs, etc.
Field & Process Instrumentation Equipment	Belt presses & driers
Granular filter media	Sludge Collecting and Dewatering Equipment
Air compressors & control units	Level Sensors
Pumps	Pressure Transducers
Pump Motors	Pump Controls
Pump Controls	Back-up power generator
Water Level Sensors	Chemical Leak Detection Equipment
Pressure Transducers	Flow meters
Sludge Collection & Dewatering	SCADA Systems
UV Lamps	Collection System Related
Membranes	Pump
Back-up power generators	Pump Controls
Chemical Leak Detection Equipment	Pump Motors
Flow meters	Trash racks/bar screens
SCADA Systems	Sewer line rodding equipment
Distribution System Related	Air compressors
Residential and Small Commercial Meters	Vaults, lids, and access hatches
Meter boxes	Security devices and fencing
Hydrants & Blow offs	Alarms & Telemetry
Pressure reducing valves	Chemical Leak Detection Equipment
Cross connection control devices	
Altitude valves	
Alarms & Telemetry	
Vaults, lids, and access hatches	
Security devices and fencing	
Storage reservoir painting/patching	

ENVIRONMENTAL INFORMATION DOCUMENT

1) DESCRIPTION OF THE PROBLEM

Generally describe the purpose of this project. This description should clearly identify the existing pollution problem(s) and the circumstances, which cause the problem(s). Violations of existing NPDES permits, pollution of surface or ground water, and health problems should be documented.

a) Briefly describe the treatment process(es) now in use.

b) State the current influent and effluent quality and give the present degree of treatment in terms of BOD_5, TSS, NH_3, DO and any other permit limitations.

c) Identify the receiving stream and its Stream Subsegment and Drainage Basin number for the present treatment plant.

d) Briefly describe the collection system and any improvements and/or rehabilitation needed.

2) PROJECT DESCRIPTION

Describe the proposed treatment facility.

a) Briefly describe the treatment process(es) proposed

b) If existing treatment facilities are present

i) Outline future plans for the plant(s)
ii) State which units will be retained
iii) State if the existing site will be retained.

c) Indicate the size of the facilities based on:

i) Average daily flow for both current & design years
ii) Peak flow for both current & design years
iii) Population for both current & design years
iv) List the planning area population in 10 year increments through the design year for the project, usually 20 years).

d) State the expected influent and effluent quality and degree of treatment to be obtained in terms of BOD_5, TSS, NH_3, DO and any other factors limited by the NPDES permit.

e) Identify the receiving stream and its Stream Subsegment and Drainage Basin number.

f) Identify land required for the treatment plant (If land is not already owned by the loan applicant, provide the following information).

i) Has the land owner been contacted?
ii) Has the land been appraised by an independent appraiser?
iii) Has owner agreed to settlement?
iv) Does the land acquisition involve relocating any residents?
v) Is the land acquisition expected to be controversial?

g) Describe the method of sludge disposal. If sludge is to be landfilled, give permit status and location of the landfill.

h) Describe the method of effluent disinfection to be utilized.

i) Describe any proposed additions, improvements or repair to the collection system. Demonstrate that the receiving facilities have or will have adequate capacity to treat any added flows for the design life of the project.

j) Describe the total area to be affected by this project. A map depicting the location of all proposed elements in relation to existing residences and commercial establishments and the limits of the service area must be included.

k) Discuss the consistency with the project and the applicable Water Quality Management Plan and the community's plan of development.

3) ALTERNATIVES TO THE PROPOSED ACTION

This section shall contain a systematic development of feasible alternatives for the solution of the water quality problems. The "NO ACTION" alternative must be one of the alternatives considered. Emphasis should be placed on projects that will involve new site selection, interceptor route, or construction in environmentally sensitive areas.

a) These alternatives must be screened with respect to physical, legal, or institutional constraints; regulatory requirements; capital and operating costs; and significant primary and secondary environmental effects and irreversible and unavoidable impacts. The analysis should discuss:

i) Alternative processes and/or locations considered. Include a map showing all locations considered.
ii) Alternative collection systems, flow and waste reduction measures, including infiltration and inflow (I/I) reduction.
iii) Alternative methods of sludge disposal, including process options, disposal options, and disposal locations.
iv) Cost analysis for each process.
v) Reasons for accepting and rejecting alternatives must be presented with their significant environmental impacts. Greater cost shall not be the sole consideration for rejection of an alternative. If project alternatives involve impacts to environmentally sensitive areas, care should be taken that adequate consideration is given to those alternatives which would not involve these impacts.

b) If any part of the project is being planned in a 100-year floodplain then the following procedures in accordance with Executive Order 11988 (See Attachment B) must be followed. It must be demonstrated that no direct or indirect impacts upon floodplains will result from the project unless it can be shown that there is no practical alternative or that no significant impacts--increased flood elevations, danger to public health and safety, or damage to the natural functions of the floodplain--will result from the action. Include a copy of the Federal Emergency Management Agency Flood Boundary and Floodway Map for the planning area.

i) Direct Impact--Consider and discuss alternatives to avoid construction within the floodplain. Demonstrate by analyzing environmental, cost, and technical factors that there is no practicable alternative to construction in the floodplain.

(1) If no alternatives are practicable other than using the floodplain, then prior to taking action, design or modify the proposed project to minimize potential harm to the floodplain. Provide a description of the measures to be taken and:
(2) Prepare and circulate a Floodplain Management Notice containing an explanation of why the action is proposed to be located in the floodplain. The notice should be a maximum of three pages in length including a location map, and should be distributed to the local Council of Governments, the appropriate district or field office of the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service, the Federal Emergency Management Agency, and the Louisiana Department of Environmental Quality (See Attachment B). This notice may be circulated with the EID if it is a separate clearly identified document. The notice shall include:

(a) The reasons why the action is proposed to be located in a floodplain;
(b) A statement indicating how the action will conform to applicable Federal, State or local floodplain protection standards;
(c) A list of the alternatives considered;
(d) A map showing the relationship between the floodway and the floodplain that includes the maximum flood elevation and the elevation to which the facilities will be protected.

(3) This notice shall also be made available for public review during the public hearing.

c) Procedure for construction taking place in wetlands (See Attachment C).

i) As with floodplains, show that no practicable alternative to construction in the wetlands exists and demonstrate that the proposed action includes any practicable measure to minimize harm to wetlands, which may result from such use. Include maps illustrating the relationship between the construction and the wetlands.
ii) Economic, technological and environmental factors should be taken into account, in making the above finding. These include:

(1) Public health, safety and welfare; including the supply, quality, recharge and discharge, and pollution of water; flood and storm hazards; and sediment and erosion.
(2) Maintenance of natural systems, including conservation and long-term productivity of existing flora and fauna; species and habitat diversity and stability; hydrologic utility; and fish wildlife,

timber and food and fiber resources.

(3) Other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

(4) Review of any plans or proposals for new construction in wetlands shall be made available for public review during the public hearing.

4) ENVIRONMENTAL SETTING

Describe the existing environment without the proposed project. Use existing data sources when possible and provide bibliographic references.

a) Geological Elements--Describe the general topography and geology of the area with special attention to any geologic structures or formations that have a direct influence on ground or surface water. If a land application system is proposed or septic tanks are to be replaced, provide descriptions of the soils series and a map of their location. Identify any important farmland in the planning area. Discuss the entire planning area but give special attention to the existing and alternative treatment facilities sites.

b) Hydrological Elements--Discuss the relevant surface water bodies and groundwater aquifers of the area. Discuss water quality of the receiving stream using physical, chemical and biological parameters. Identify court-ordered allotments and other Federal, State and local permits in the area. Discuss the present and future water supply and uses for both surface and groundwater resources.

c) Climatic Elements--Describe temperature, precipitation and prevailing wind characteristics of the area. Discuss existing air quality in relation to the State Implementation Plan for the National Ambient Air Quality Standard.

d) Biological Elements--Discuss the major plant and animal species which occur in the planning area. Special attention should be given to any endangered or threatened species.

e) Ecological Elements--Describe the major ecosystems of the planning area and the biological significance of the ecosystems to the surrounding community. Describe any critical habitats, national parks and forests, fish and wildlife refuges, important farmlands, barrier islands or other environmentally sensitive areas that may be in the planning area. Provide a map(s) delineating these elements.

f) Cultural Resources--Describe any historical, cultural, or archeological resources and national natural landmarks in the planning area.

g) Briefly summarize the future environment without a project in terms of the environmental setting developed in Section 4).

5) ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION

a) Primary Impacts. Discuss all impacts which can be attributed directly to the proposed action. These would normally be related to construction and operation of the collection and treatment facilities and the land use changes at the treatment plant site.

b) Short-Term Impacts

i) Describe alterations to landforms, streams, and natural drainage patterns.
ii) Describe the extent to which area watercourses will be affected by siltation and sedimentation and the mitigative measures to be taken. Specify the erosion and sediment runoff control measures to be employed.
iii) Discuss the effects of dredging, tunneling, and trenching on area watercourses and mitigative measures to be taken.
iv) Describe the precautions to be taken to avoid injury to cover vegetation, including trees.
v) If land clearing will involve the use of herbicides, defoliants, blasting, cutting or burning, identify and describe the precautionary measures to be taken to protect the area's environment.
vi) Specify the final disposal method for soil and vegetative spoil. If a landfill or other permitted form of disposal is to be used, indicate compliance with the local, State, and Federal regulations.
vii) If land is to be acquired discuss the project's effect on adjacent land values and the land use changes that will take place at the facility site.
viii) If facilities are to be abandoned, describe what will be done with the existing structures and to what use the land will be put.
ix) Indicate how NPDES permit requirements will be met should the need for bypassing sewage arise during construction.
x) Describe the procedures to be followed to comply with all required Army Corps of Engineers permits for any construction that will occur in a waterway.
xi) Specify the measures to be taken to control dust during construction.
xii) Specify the precautions to be taken to protect area residents and wildlife from construction related noise. Demonstrate compliance with OSHA standards.
xiii) Describe the precautions to be taken to minimize vehicular and pedestrian traffic disruption and describe the safety provisions required to protect the public from construction hazards.
xiv) Discuss the effects of night work, if any, on the environment.

c) Long-Term Impacts

i) Specify the type (current use) and amount of land that will be affected by construction of the project. e.g., Is this important farmland or are wetlands to be impacted?
ii) Describe any beneficial uses of this land that will be eliminated by construction of the project and why it will be necessary to do so.
iii) Describe how the natural or present character of the plant site or project area will be altered.
iv) Indicate the degree to which the proposed structures will interfere with or obstruct scenic views.
v) Describe the architectural techniques that will be used to blend the structure with the environment and any landscaping to be provided.

vi) Indicate the prevailing wind patterns in relation to the project site and the residential and business community. Present a comprehensive assessment of the project's potential odor problems and measures taken to control odors.

vii) State whether the project will conform with the basin or areawide plans for meeting water quality standards and discuss the effects of the project on present water quality.

viii) If land application of effluent or sludge is proposed, describe its effects on ground and surface water quality and quantity. Particular emphasis should be placed on the potential for contamination of shallow or localized groundwater resources.

ix) Indicate any beneficial or adverse effects of the project on aquatic biota. Describe any effects that chlorine residuals may have upon aquatic life.

x) Describe the project's effects on historical sites, cultural and archeological resources, threatened or endangered species, Wild & Scenic Rivers, the Coastal zone, parks and other recreation areas, and any environmentally sensitive area in the planning area.

xi) Identify the measures to be taken to eliminate noise hazards.

xii) Specify the precautions to be taken to control access by unauthorized persons to the facility.

d) Discuss insect control programs that may be needed as a result of the project. If pesticides are to be used, the method of application should be described. Also discuss their potential effects on water quality and non-target species.

e) Secondary Impacts. Discuss those impacts, adverse and beneficial, that result from indirect and induced changes caused by the proposed project.

f) Discuss the economic impacts including the estimated monthly charge for operation and maintenance, the estimated monthly charge for debt service, the estimated connection charge, and the total monthly charge to the average residential customer for the new system being funded. Describe the revenue source to repay the loan and the amount of reserves required for the loan.

g) The impacts of the project on future development must be assessed. If the project is expected to contribute to significant changes in the rate, density, or type of development in the planning area, the effect of those changes on the following factors should be assessed and necessary mitigative measures described.

i) air quality
ii) water quality (both surface and ground water)
iii) public services
iv) land use
v) floodplains
vi) wetlands
vii) threatened and endangered species
viii) critical habitats
ix) important farmlands
x) barrier islands
xi) any other environmentally sensitive areas

6) ADVERSE IMPACTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSAL BE IMPLEMENTED

All adverse impacts described above should be discussed further in this section. Describe in detail the structural (facility design, size and location) and nonstructural (staging facilities, developing or enforcing land use regulations) measures to be taken to mitigate or eliminate significant adverse effects. Those impacts which cannot be reduced to acceptable levels shall be described in detail, regardless of the reasons why the action is being taken.

7) RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND LONG-TERM SAFETY AND PRODUCTIVIVE

Describe the extent to which the proposed action involves tradeoffs between short-term environmental gains at the expense of long-term gains or vice versa and the extent to which the proposed action forecloses future options. Special attention shall be given to effects which narrow the range of future uses of land and water resources or pose long-term risks to health or safety. Explain the reasons the proposed action is believed justified now, rather than reserving a long term option for other alternatives.

8) IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES TO THE PROPOSED ACTION, SHOULD IT BE IMPLEMENTED

Describe the extent to which the proposed action requires commitment of land, construction materials, labor, and funds to design and implement the project.

Describe any irreversible environmental damage that might result from equipment malfunctions or industrial accidents at the project site.

Describe the irretrievable commitments of resources required for operation and maintenance of these facilities.

9) ENVIRONMENTAL JUSTICE

Describe any known minority populations, low-income populations, or Native American communities or their resource areas in the planning area which would be negatively impacted by this project or any alternative considered. Are there are populations who bear a disproportionate share of the negative impacts of this project?

10) PUBLIC PARTICIPATION

Discussion. This section should contain a discussion and proposed resolution of any objections, complaints, or problems that have been voiced against the proposed action.

a) Public Hearing

i) General: The applicant must hold a public hearing before adopting the PER. This hearing may be combined with a required hearing on the Environmental Information

Document/Environmental Impact Statement.

ii) Notice of Meetings & Pubic Hearing: At least 30 days prior to the hearing a written notice of the hearing must be sent to appropriate Federal and State agencies (see Attachment A), interested environmental groups, appropriate local public officials, appropriate minority leaders and groups, and at least one local newspaper. The notice shall include:

(1) The date, time, and place of the hearing

(a)A brief description of the proposed project, including the location(s) of any new treatment facilities
(b) The cost of the project, including the estimated monthly bill to a typical residential household and any connection fee
(c)The availability of the PER and EID for the proposed project for public examination.
(d) The following statement: "One of the purposes of this hearing (meeting) is to discuss the potential environmental impacts of the project and alternatives to it."

iii) Public Review of Documents Pertaining to the Hearing

(1) A copy of the PER and EID shall be displayed at the hearing and at a convenient local site for public review 30 days before the hearing.

iv) Format of Public Hearing. The hearing shall conform to the following general format:

(1) Call to Order
(2) Sign-in of everyone in attendance
(3) Statement of the purpose of the hearing which will include the following: "One of the purposes of this hearing is to discuss the potential environmental impacts of the project and alternatives to it."
(4) The considerations to be taken into account under law and regulations; a brief description of the proposed project; the cost of the project, including the estimated monthly bill to a typical residential household and any connection fee; and information which is particularly solicited from the public.
(5) A question-and-answer and/or comment period

v) Hearing Record: The hearing record, which will be made a part of the EID, shall include the following:

(1) A copy of the public hearing notice (proof of publication).
(2) A sample letter and a list of all addressees notified of the hearing.
(3) A statement, signed by the applicant, stating that the Hearing was held in conformance with the Public Hearing Notice.
(4) A list of all persons in attendance at the Hearing
(5) A verbatim transcript, not a summary, of the entire Hearing.

b) Coordination of Review

i) Along with notice of the Hearing, the applicant must send a copy of site maps showing the location of all line work and building site(s) to the agencies listed on Attachment A.
ii) A copy of all response letters from the above agencies must be included in the final EID. All issues raised by the commenting agencies must be addressed in a responsiveness summary.

11) RESPONSIVENESS SUMMARY

Write a summary of each response received from the applicable cross-cutting agencies. Describe any mitigative measures in detail. Describe what action, if any, will be taken to come into compliance with a particular cross-cutter. Provide all documentation of any correspondence such as emails, etc. If no action is needed, then state that in the summary.

Attachment A

Commenting Agencies

In the State Revolving Loan Fund (SRF) program, cross-cutters apply to projects and activities receiving federal financial assistance. EPA regulations at 40 CFR 35.3140 and 35.3580 require recipients to conduct an environmental review, or NEPA-like review, for projects funded with CWSRF program funds. The CWSRF program requires that cross-cutting authorities requirements must be met by the projects. The CWSRF program requires that the project must comply with the following cross-cutting authorities:

Archeological and Historic Preservation Act

Attn: State Historic Preservation Officer
P. O. Box 44247
Baton Rouge, LA 70804
(225) 342-8160

Clean Air Act

Executive Management Officer
Office of the Secretary
Louisiana Department of Environmental Quality
P.O. Box 4301
Baton Rouge, LA 70821-4301
Phone (225) 219-3958

Coastal Barriers Resources Act (in Coastal Areas)

Attn: Field Supervisor
U.S. Fish and Wildlife Service
646 Cajundome Blvd., Suite 400
Lafayette, LA 70506
(318) 291-3100

Coastal Zone Management Act (in Coastal Areas)

Attn: Louisiana Coastal Management Division
Department of Natural Resources
P. O. Box 44487 Capitol Station
Baton Rouge, LA 70804

Endangered Species Act and Fish and Wildlife Coordination Act

U.S. Fish & Wildlife Service
646 Cajundome Blvd., Suite 400
Lafayette, LA 70506
(318) 291-3100

Attn: Louisiana Natural Heritage Program
Louisiana Department of Wildlife and Fisheries
P.O. Box 98000
Baton Rouge, LA 70898
(225) 765-2821

Farmland Protection Act

Attn: State Conservationist Engineer
Natural Resources Conservation Service
3737 Government Street
Alexandria, LA 71302
(318) 473-7673

Floodplain Management, Executive Order 11988

Attn: Regional Director
Federal Emergency Management Agency, Region 6
Federal Regional Center
800 North Loop 288
Denton, Texas 76209

Attn: Floodplain Insurance Manager
Louisiana Department of Transportation & Development
P. O. Box 94245
Baton Rouge, LA 70804
(225) 274-4316

Attn: Projects Branch
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160
(504) 862-1556

National Historic Preservation Act

Attn: State Historic Preservation Officer
P.O. Box 44247
Baton Rouge, LA 70804
(225)342-8160

National Parks, Monuments

Southeast Region
National Park Service
Attn: Anital J. Jackson
100 Alabama St. SW
1924 Building
Atlanta, GA 30303

Protection of Wetlands, Executive Order 11990

Attn: Chief Regulatory Branch
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160
(504)862-2257

Attn: Wetlands Regulatory Coordinator-Louisiana
Marine and Wetlands Section (6WQ-EM)
EPA Region 6
1445 Ross Ave., Suite 1200
Dallas, TX 75202

Safe Drinking Water Act

Contract and Grants
Louisiana Department of Environmental Quality
P. O. Box 4314
Baton Rouge, LA
(225)219-3815

Groundwater

Attn: Groundwater/UIC Section (6WQ-SG)
EPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202
(214)665-8324

Sole Source Aquifer

Attn: Source Water Protection Branch (6WQ-S)
EPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202

Wild and Scenic Rivers Act

Attn: Scenic Streams Coordinator
Louisiana Department of Wildlife & Fisheries
368 Century Park Dr.
Monroe, LA 71203
(318) 473-7160

Wilderness Act

For projects located in Claiborne, Grant, Natchitoches, Rapides, Vernon, Webster, and Winn Parishes:

Forest Service
U.S. Department of Agriculture
Kitsatchie National Forest
P.O. Box 5500
Pineville, LA 71360
(318) 473-7160

For Projects located in Cameron Parish:

Southwest Louisiana National Wildlife Refuge Complex
U.S. Fish & Wildlife Service
1428 Highway 27
Bell City LA 70630
(337)598-2216

For intergovernmental reviews see below for appropriate agency

Intergovernmental Review Contacts

Parishes Covered	Contact
District 1: Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany	Mr. Walter R. Brooks, Executive Dir. Regional Planning Commission 1340 Poydras Street, Suite 2100 New Orleans, LA 70112 Phone (504) 568-6611 Fax (504) 568-6643 www.norpc.org
District 2: Ascension, East & West Baton Rouge, East & West Feliciana, Iberville, Livingston, Pointe Coupee, St. Helena, Tangipahoa, Washington	Mr. Don Neisler, Executive Director Capital Region Planning Commission P.O. Box 3355, 333 N. 19th. St. Baton Rouge, LA 70821 Phone (225) 383-5203 Fax (225) 383-3804 www.crpc-la.org
District 3: Assumption, Lafourche, St. Charles, St. James, St. John, Terrebonne	Mr. Kevin P. Belanger, Executive Director South Central Planning & Development Commission P.O. Box 1870 5058 West Main St. Gray, LA 70359 Houma, LA 70360 Phone (985) 851-2900 Fax (985) 851-4472 www.scpdc.org
District 4: Acadia, Evangeline, Iberia, Lafayette, St. Landry, St. Martin, St. Mary, Vermilion	Mr. Stan McGee, Chief Administrative Officer Acadiana Regional Development District P.O. Box 90070 601 Loire Ave. Suite C Lafayette, LA 70507 Phone (337) 886-7782 Fax (337) 886-7081 www.ardd.org
District 5: Allen, Beauregard, Calcasieu, Cameron, Jefferson Davis	Mr. James Porter, Executive Director Imperial-Calcasieu Regional Planning & Development Commission P.O. Box 3164, 120 West Pujo Street Lake Charles, LA 70602 Phone (337) 433-1771 Fax (337) 433-6077 www.imcal.org
District 6: Avoyelles, Catahoula, Concordia, Grant, LaSalle, Rapides, Vernon, Winn	Ms.Heather Smoak Urena, Executive Director Kisatchie- Delta Regional Planning & Development District 3516 Parliament Court Alexandria, LA 71303 Phone (318) 487-5454 Fax (318) 487-5451 www.kdelta.org
District 7: Bienville, Bossier, Caddo, Claiborne, DeSoto, Lincoln, Natchitoches, Red River, Sabine, Webster	Ms. Dianna Roarke, Vice President The Coordinating & Development Corporation 5210 Hollywood Ave. P.O. Box 37005 Shreveport, LA 71133-7005 Phone (318) 632-2022 Fax (318) 632-2099 www.cdconline.org
District 8: Caldwell, East & West Carroll, Franklin, Jackson, Madison, Morehouse, Ouachita, Richland, Tensas, Union	Mr. David Creed, Executive Director North Delta Regional Planning & Development District 1913 Stubbs Avenue Monroe, LA 71201 Phone (318) 387-2572 Fax (318) 387-9054 www.northdelta.org

Attachment B

Floodplain Management - Statement of the President
Re: Executive Order 11988.
May 24, 1977

Statement of the President

The floodplains which adjoin the Nation's inland and coastal waters have long been recognized as having special values to our citizens. They have provided us with wildlife habitat, agricultural and forest products, stable ecosystems, and park and recreation areas. However, unwise use and development of our riverine, coastal, and other floodplains not only destroy many of the special qualities of these areas but pose a severe threat to human life, health, and property.

Since the adoption of a national flood control policy in 1936, the Federal Government has invested about $10 billion in flood protection works. Despite substantial efforts by the Federal Government to reduce flood hazards and protect floodplains, annual losses from floods and adverse alteration of floodplains continue to increase.

The problem arises mainly from unwise land use practices. The Federal Government can be responsible for or can influence these practices in the construction of projects, in the management of its own properties, in the provision of financial or technical assistance including support of financial institutions, and in the uses for which its agencies issue licenses or permits. In addition to minimizing the danger to human and nonhuman communities living in floodplains, active floodplain management represents sound business practice by reducing the risk of flood damage to properties benefiting from Federal assistance.

Because unwise floodplain development can lead to the loss of human and other natural resources, it is simply a bad Federal investment and should be avoided. In order to avoid to the extent possible the long- and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, I have issued an Executive order on floodplain management.

Executive Order 11988. May 24, 1977 Floodplain Management -

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001 et seq.), and the Flood Disaster Protection Act of 1973 (Public Law 93-234, 87 Stat. 975), in order to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, it is hereby ordered as follows:

Section 1. Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

Section 2. In carrying out the activities described in Section 1 of this order, each agency has a responsibility to evaluate the potential effects of any actions it may take in a floodplain; to ensure that its planning programs and budget requests reflect consideration of flood hazards and floodplain management; and to prescribe procedures to implement the policies and requirements of this Order, as follows:

(a)(1) Before taking an action, each agency shall determine whether the proposed action will occur in a floodplain--for major Federal actions significantly affecting the quality of the human environment, the evaluation under Section 102(2) (C) of the National Environmental Policy Act. This determination shall be made according to a Department of Housing and Urban Development (HUD) floodplain map or a more detailed map of an area, if available. If such maps are not available, the agency shall make a determination of the location of the floodplain based on the best available information. The Water Resources Council shall issue guidance on this information not later than October 1, 1977. (2) If an agency has determined to, or proposes to, conduct, support, or allow an action to be located in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains. If the head of the agency finds that the only practicable alternative consistent with the law and with the policy set forth in this Order requires siting in a floodplain, the agency shall, prior to taking action, (i) design or modify its action in order to minimize potential harm to or within the floodplain, consistent with regulations issued in accord with Section 2(d) of this Order, and (ii) prepare and circulate a notice containing an explanation of why the action is proposed to be located in the floodplain., (S) For programs subject to the Office of Management and Budget Circular *A-95,* the agency shall send the notice, not to exceed three pages in length including a location map, to the state and areawide A-95 clearinghouses for the geographic areas affected. The notice shall include: (i) the reasons why the action is proposed to be located in a floodplain; (ii) a statement indicating whether the action conforms to applicable state or local floodplain protection standards and (iii) a list of the alternatives considered. Agencies shall endeavor to allow a brief comment period prior to taking any action. (4) Each agency shall also provide opportunity for early public review of any plans or proposals for actions in floodplains, in accordance with Section 2(b) of Executive Order No. 11514, as amended, including the development of procedures to accomplish this objective for Federal actions whose impact is not significant enough to require the preparation of an environmental impact statement under Section 102(2) (C) of the National Environmental Policy Act of 1969, as amended.

(b) Any requests for new authorizations of appropriations transmitted to the Office of Management and Budget shall indicate, if an action to be proposed will be located in a floodplain, whether the proposed action is in accord with this Order

(c) Each agency shall take floodplain management into account when formulating or evaluating any water and land use plans and shall require land and water resources use appropriate to the degree of hazard involved. Agencies shall include adequate provision for the evaluation and consideration of flood hazards in the regulations and operating procedures for the licenses, permits, loan or grant-in-aid programs that they administer. Agencies shall also encourage and provide appropriate guidance to applicants to evaluate the effects of their proposals in floodplains prior to submitting applications for Federal licenses, permits, loans or grants.

(d) As allowed by law, each agency shall issue or amend existing regulations and procedures within one year to comply with this Order.

These procedures shall incorporate the Unified National Program for Floodplain Management of the Water Resources Council, and shall explain the means that the agency will employ to pursue

the nonhazardous use of riverine, coastal and other floodplains in connection with the activities under its authority. To the extent possible, existing processes, such as those of the Council on Environmental Quality and the Water Resources Council, shall be utilized to fulfill the requirements of this Order.

Agencies shall prepare their procedures in consultation with the Water Resources Council, the Federal Insurance Administration, and the Council on Environmental Quality, and shall update such procedures as necessary.

Section 3. In addition to the requirements of Section 2, agencies with responsibilities for Federal real property and facilities shall take the following measures:

(a) The regulations and procedures established under Section 2(d) of this Order shall, at a minimum, require the construction of Federal structures and facilities to be in accordance with the standards and criteria and to be consistent with the intent of those promulgated under the National Flood Insurance Program. They shall deviate only to the extent that the standards of the Flood Insurance Program are demonstrably inappropriate for a given type of structure or facility.

(b) If, after compliance with the requirements of this order, new construction of structures or facilities are to be located in a floodplain, accepted flood proofing and other flood protection measures shall be applied to new construction or rehabilitation. To achieve flood protection, agencies, shall, wherever practicable, elevate structures above the base flood level rather than filling in land.

(c) If property used by the general public has suffered flood damage or is located in an identified flood hazard area, the responsible agency shall provide on structures, and other places where appropriate, conspicuous delineation of past and probable flood height in order to enhance public awareness of and knowledge about flood hazards.

(d) When property in floodplains is proposed for lease, easement, right-of-way, or disposal, to non-Federal public or private parties, the Federal agency shall (1) reference in the conveyance those uses that are restricted under identified Federal, State, or local floodplain regulations; and (2) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors, except where prohibited by law; or (3) withhold such properties from conveyance.

Section 4. In addition to any responsibilities under this Order and Sections 202 and *205* of the Flood Disaster Protection Act of 1973, as amended (42 U.S.C. 4106 and 4128), agencies which guarantee, approve, regulate, or insure any financial transaction which is related to an area located in a floodplain shall, prior to completing action on such transaction, inform any private parties participating in the transaction of the hazards of locating structures in the floodplain.

Section 5. The head of each agency shall submit a report to the Council on Environmental Quality and to the Water Resources Council on June 30, 1978, regarding the status of their procedures and the impact of this Order on the agency's operations. Thereafter, the Water Resources Council shall periodically evaluate agency procedures and their effectiveness.

Section 6. As used in this Order;

(a) The term "agency" shall have the same meaning as the term "Executive agency" in Section 105 of Title 5 of the United States Code and shall include the military departments; the directives contained in this Order, however, are meant to apply only to those agencies which perform the

activities described in Section 1 which are located in or affecting floodplains. (b) The term "base flood. shall mean that flood which has a one percent or greater chance of occurrence in any given year (c) The term "floodplain" shall mean the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

Section 7. Executive Order No.11296 Of August 10, 1966, is hereby revoked. Alll actions, procedures, and issuances taken under that Order and still in effect shall remain in effect until modified by appropriate authority under the terms of this Order.

Section 8. Nothing in this order shall apply to assistance provided for emergency work essential to save lives and protect property and public health and safety, performed pursuant to Sections 305 and 306 of the Disaster Relief Act of 1974(88 Stat. 148,42 U.S.C. 5145 and *5146).*

Section 9. To the extent the provisions of Section 2(a) of this Order are applicable to projects covered by Section 104(h) of the Housing and Community Development Act of 1974, as amended (88 Stat. 640, 42 U.S.C. *5304(h)),* the responsibilities under those provisions may be assumed by the appropriate applicant, if the applicant has also assumed, with respect to such projects, all of the responsibilities for environmental review, decisionmaking, and action pursuant to the National Environmental Policy Act of 1969, as amended.

Jimmy Carter

The White House, May 24, 1977.

Attachment C

Protection of Wetlands - Statement of the President
Re: Executive Order 11990.
May 24, 1977
Statement by the President

The Nation's coastal and inland wetlands are vital natural resources of critical importance to the people of this country. Wetlands are areas of great natural products, rivers, and habitat for fish and wildlife resources. Wetlands contribute to the production of agricultural products and timber, and provide recreational, scientific, and aesthetic resources of national interest.

The unwise use and development of wetlands will destroy many of their special qualities and important natural functions. Recent estimates indicate that the United States has already lost over 40 percent of our 120 million acres of wetlands inventoried in the *1950's.* This piecemeal alteration and destruction of wetlands through draining, dredging, filling, and other means has had an adverse cumulative impact on our natural resources and on the quality of human life.

Executive Order 11990. May 24, 1977 Protection of Wetlands

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), in order to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative, it is hereby ordered as follows:

Section 1. (a) Each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

(b) This Order does not apply to the issuance by Federal agencies of permits, licenses, or allocations to private parties for activities involving wetlands on non-Federal property.

Section 2.

(a) In furtherance of Section 101(b)(3) of the National Environmental Policy Act Of 1969 (42 U.S.C. 4331 (b)(3)) to improve and coordinate Federal plans, functions, programs and resources to the end that the Nation may attain the widest range of beneficial uses of the environment without degradation and risk to health or safety, each agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. In making this finding the head of the agency may take into account economic, environmental and other pertinent factors.

(b) Each agency shall also provide opportunity for early public review of any plans or proposals for new construction in wetlands, in accordance with Section 2(b) of Executive Order No.11514,

as amended, including the development of procedures to accomplish this objective for Federal actions whose impact is not significant enough to require the preparation of an environmental impact statement under Section 102(2)(C) of the National Environmental Policy Act Of 1969, as amended.

Section 3. Any requests for new authorizations or appropriations transmitted to the Office of Management and Budget shall indicate, if an action to be proposed will be located in wetlands, whether the proposed action is in accord with this Order.

Section 4. When Federally-owned wetlands or portions of wetlands are proposed for lease, easement, right-of-way or disposal to non-Federal public or private parties, the Federal agency shall (a) reference in the conveyance those uses that are restricted under identified Federal, State or local wetlands regulations; and (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal.

Section 5. In carrying out the activities described in Section I of this Order, each agency shall consider factors relevant to a proposal '5 effect on the survival and quality of the wetlands. Among these factors are:

(a) public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion;

(b) maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber and food and fiber resources; and

(c) other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

Section 6. As allowed by law, agencies shall issue or amend their existing procedures in order to comply with this Order. To the extent possible, existing processes, such as those of the Council on Environmental Quality and the Water Resources Council, shall be utilized to fulfill the requirements of this Order.

Section 7. As used in this Order:

(a) The term "agency" shall have the same meaning as the term "Executive agency" in Section 105 of Title 5 of the United States Code and shall include the military departments; the directives contained in this Order, however, are meant to apply only to those agencies which perform the activities described in Section 1 which are located in or affecting wetlands.

(b) The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of this Order.

(c) The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and

similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

Section 8. This Order does not apply to projects presently under construction, or to projects for which all of the funds have been appropriated through Fiscal Year 1977, or to projects and programs for which a draft or final environmental impact statement will be filed prior to October 1, 1977. The provisions of Section 2 of this Order shall be implemented by each agency not later than October 1, 1977.

Section 9. Nothing in this Order shall apply to assistance provided for emergency work, essential to save lives and protect property and public health safety, performed pursuant to Section *305* and 306 of the Disaster Relief Act of 1974 (88 Stat. 148, 42 U.S.C. 5145 and 5146).

Section 10. To the extent the provisions of Sections 2 and 5 of this Order are applicable to projects covered by Section 104(h) of the Housing and Community Development Act of 1974, as amended (88 Stat. 640, 42 U.S.C. 5304(h)), the responsibilities under those provisions may be assumed by the appropriate applicant, if the applicant has also assumed, with respect to such projects, all of the responsibilities for environmental review, decision-making, and action pursuant to the National Environmental Policy Act of 1969, as amended.

Jimmy Carter

The White House, May 24, 1977.