

**MITIGATING SECONDARY IMPACTS FROM
THE WASTEWATER FACILITIES PROGRAM
AN EPA CASE STUDY SERIES**

OFFICE OF EPA LAND USE COORDINATION

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INTRODUCTION

The Case Study Series on mitigating secondary impacts provides an opportunity for a detailed examination of the variety of ways in which projected impacts have been resolved within the Wastewater Facilities Program. The approach draws from cases where realistic solutions were instituted and builds on the accumulated regional experience and knowledge in this area. In certain instances, the study may serve to bring to light constructive opportunities for new Agency initiatives in mitigating impacts.

The series arose in response to the charge that new regional sewage facilities may in certain cases be facilitating rapid population growth and that such growth may be unplanned, resulting in adverse impacts on water quality and the total physical environment as well as on the fiscal resources of local communities.

NEPA, as implemented by the guidelines of the Council on Environmental Quality, requires that agencies analyze the primary and secondary effects of all major Federal actions with significant impact on the quality of the human environment and determine means of avoiding or mitigating these effects. Section 511(c)(1) of the Federal Water Pollution Control Act Amendments specifically provides that NEPA requirements apply to the construction grants program. EPA's final regulations implementing the requirements of NEPA (40 CFR Part 6) and EPA's Program Guidance Memorandum No. 50 were issued to comply with and clarify EPA's responsibility in mitigating secondary impacts.

The introduction provides background material for the Case Studies including a detailed description of the many stages a wastewater treatment project goes through from its inception to final operation and maintenance. A number of opportunities or involvement points are also indicated within the process where secondary impacts can be identified and mitigated. The Studies which follow describe how mitigation was accomplished.

Purposes and Objectives

The general purposes for undertaking the case study series are: first, to provide a forum for information exchange. A description of successful mitigation in one part of the country will provide examples of how similar impacts may be mitigated in other regions. EPA regional representatives, states, grantees and the professional engineering community engaged in wastewater facility planning and design will be able to look to the Case Study Series for guidance in implementing the 201 grants process. A second purpose involves land use policy development. Thorough discussion of the impacts will contribute a deeper understanding of the issues involved and will serve to sharpen the focus of EPA policy in this area.

More specific objectives include: first, to demonstrate the need to make an early determination of projected secondary impacts and to insure that these impacts are mitigated early on in the 201 process; second, to develop a documented set of workable mitigation measures which may be adopted in the various regions; third, to provide background material for developing supplemental criteria where and if needed for evaluating the secondary impacts of proposed projects; fourth, to demonstrate the need for ensuring that the gain in improved water quality resulting from a new project going on-line is not offset by the adverse impacts from induced new development within environmentally sensitive areas such as wetlands and floodplains. In such cases, residuals from the new development would have the potential to repollute the surface and groundwater systems. A fifth objective is to encourage increased awareness of secondary impacts questions so that the EPA funded facility remains compatible with local community growth objectives.

Case Study Approach

A large variety of land use issues involving secondary impacts are raised in conjunction with the construction of wastewater treatment facilities. Many of these issues tend to fall within certain broad categories such as the general question of reserve capacity or the placement of interceptor lines. The case study approach will document regional office experiences in dealing with each of these broad categories. Each case will be carefully chosen on the basis of how well it exemplifies the successful resolution of the issues. Wherever possible, the analysis will attempt to bring out the items of general applicability within each case.

As mentioned in the objectives above, many of the potential impacts could be more easily resolved if they were raised early in the facility planning process. Consequently, the case studies will indicate when the issues were raised and discuss how they surfaced in facility planning as opposed to a late public appeal or court suit.

Each case study will include a description of:

- o The Project describing the facilities which are to be constructed.
- o The Problem describing the water quality problem the facilities were designed to correct.
- o The Land Use Issues describing the land use context within which the secondary impacts are to be considered.

- o The EPA Regional Involvement Points describing where and when the Regional Office became involved in considering secondary impacts.
- o The Mitigating Measures describing the mitigating measures which were taken in each case.
- o The Continuing Regional Involvement describing what has occurred since the mitigating measures were taken.
- o The Regional Contact naming a person in each Region who can provide additional information.
- o The Sources listing available sources and background material used in writing the study.

Program Description

The Wastewater Treatment Facility Program (Section 201 of the Federal Water Pollution Control Act Amendments of 1972) represents a Federal commitment of \$18 billion for the planning, design, and construction of treatment facilities. These funds are obligated for projects on state priority lists. The lists, developed by applying EPA and State criteria, rank proposed projects within each State on the basis of water pollution control need. The Federal share is 75% of the capital costs for planning and construction of each facility funded under the FWPCA. Once a plant is completed, its operation and maintenance becomes the responsibility of the local municipality, although EPA maintains an enforcement role through the municipal permit authority. After completion, EPA and the States continue to make inspections and to provide training and technical assistance.

The funding process for planning, design and construction of wastewater facilities involves three major steps. Step I facility planning, entails a comprehensive study of the need for public wastewater treatment for a given area. It also includes an assessment of the various alternatives available for pollution control and an evaluation of the environmental impact of the feasible alternatives. Designs and specifications are developed in Step II for the treatment alternative selected in Step I. Step III involves the construction of the treatment facilities. All three steps are generally funded by separate EPA grants. In addition to the three step funding process, each project goes through a pre-application period which includes placement on the state priority list and an operation and maintenance stage which starts after construction has been completed.

Secondary Impacts

The major secondary impacts within the 201 program result from the placement, sizing, and staging of interceptor sewers and the provision of reserve capacity in those sewers. Primary impacts are usually of a temporary nature, resulting from construction at the treatment plant site and laying down the interceptor sewer within the right-of-way corridor. Primary impacts are easily conceived of as being directly related to the construction process and are generated from a specific activity, at a specific location, at a specific time.

Secondary impacts are more difficult to determine and consequently, more difficult to mitigate. They result from indirect or induced changes in the patterns of land use and population growth and the environmental effects resulting from those changes. Examples of secondary impacts are as follows:

- A. Changes in the timing, density, type and location of development including residential, commercial, industrial development, or changes in the use of open space or other categories of land. The provision of public sewage capacity is recognized as a determinant in facilitating growth particularly for those land uses for which on-site systems would not be feasible. The cumulative results of these impacts may or may not adversely affect the environment.
- B. Changes in air, water, noise, solid waste or pesticides pollution stemming from the induced changes in population and land use. The induced changes have the potential to further aggravate the water pollution problem the waste treatment facility was designed to alleviate or to create new pollution problems from effluent disposal or non-point sources of pollution.
- C. Damage to sensitive ecosystems (wetlands, habitats of endangered species) or culturally important areas (parks, historic sites) resulting from changes in population densities and land use.

One of the most comprehensive reviews of the secondary impacts of sewer extensions is contained in EPA publication 600/5-75-002 entitled Secondary Impacts of Transportation and Wastewater Investments: Review and Bibliography (Bascom et al., 1975). The report generalizes from a number of research efforts on the impact of providing sewer capacity on growth within four different land use categories as follows:

Residential: Generally, significant increases in single-family housing construction can be expected to follow new sewer investments in areas where there is little vacant, sewerred land, where vacant land prices are low relative to the regional average, and where large tracts of contiguous undeveloped land exists. Any variation from these conditions reduces the likelihood of major secondary impacts on single-family housing.

Residential: The most significant impact on multi-family development will occur when sewer service is provided to areas with high access to existing employment centers and with substantial amounts of vacant lands. This situation seldom occurs except in conjunction with highway investments, where previously inaccessible, partially undeveloped areas are made accessible. The combination of high accessibility and land availability is ideal for major, intensive residential development.

Commercial: Conditions under which a new sewer investment will have important secondary effects are: availability of vacant, previously unsewered land available at low cost, relative to average cost for comparable commercial sites, and having high access to households. Individual stores or small office structures of low density may not require sewer service. Therefore, some low density commercial development is possible without public sewers.

Industrial: Industrial location depends primarily on access to labor and to external markets. So important are these factors that the relative influence of public sewer service is usually small. The absence of sewer service in a particular location may nevertheless effectively constrain development. While most industries are not sensitive to marginal differences in land costs, the need to fund their own private wastewater system may prove prohibitive in terms of additional expense.

EPA Policy on Secondary Impacts

Section 511(c)(1) of the Federal Water Pollution Control Act Amendments specifically provides that NEPA requirements apply to the construction grants program. Current EPA policy on analysis of secondary impacts of wastewater treatment facilities is contained in the final regulations implementing the requirements of NEPA (40 CFR Part 6) which were published in April, 1975. In June, 1975 EPA issued Program Guidance Memorandum No. 50

entitled, "Consideration of Secondary Environmental Effects in the Construction Grants Process". The Memorandum states that where analysis has shown that,

....secondary effects of a project can reasonably be anticipated to contravene an environmental law or regulation, or a plan or standard required by an environmental law or regulation, the Regional Administrator shall withhold approval of a Step II or Step III construction grant until the applicant revises the plan, initiates steps to mitigate the adverse effects or agrees to conditions in the grant document requiring actions to minimize the effects.

In 1973, EPA issued a policy statement entitled, "Protection of the Nation's Wetlands" (38 Federal Register, page 10834, May 2, 1973). The policy statement recognizes the Nation's wetlands as a unique, valuable and irreplaceable resource which needs to be protected. It specifically mentions the construction grants program as follows:

....it shall be the policy of this Agency not to grant Federal funds for the construction of municipal wastewater treatment facilities or other waste treatment associated appurtenances which may interfere with the existing wetland ecosystems, except where no other alternative of lesser environmental damage is found to be feasible.

Mitigation of Secondary Impacts

When secondary impacts are found to "contravene environmental standards, plans or regulations" as indicated above, action is then taken to mitigate or lessen their effects. There are a large variety of actions which can provide successful mitigation. PGM No. 50 lists a number of examples including:

- phasing and orderly extension of sewer service.
- project changes.
- improved land use planning
- better coordination of planning among communities affected by the project
- sewer use restrictions

- modification or adoption of environmental programs or plans such as Air Quality Maintenance Plans
- improved land management controls to protect water quality, such as sedimentation, erosion control, and flood-plain management.

The Facilities Grants process offers a number of opportunities for applying the kinds of mitigating actions mentioned above. These opportunities can be referred to as involvement points since they represent points in the process where adverse effects on land use and the environment can be resolved.

Many of the case studies in the series were chosen because they exemplify successful mitigation by taking advantage of one or more of the involvement points. A detailed outline of the process shown on the next page reveals a number of points where significant impacts should be considered and mitigated early in the life of the proposed project.

Where Are The Involvement Points

As an aid in identifying the involvement points, the process has been disaggregated to provide a step-by-step analysis with a brief description of the opportunities at each step. Not all of the involvement points are formally specified in Agency regulations. In some instances, opportunities have been identified for providing technical assistance. Other points provide a chance for unofficial discussions with the applicant. Once again, the emphasis has been placed on early identification and mitigation of the impacts.

TYPICAL STAGES OF DEVELOPMENT IN A MUNICIPAL WASTEWATER TREATMENT FACILITIES PROJECT

<u>Preapplication Stage</u>	<u>Facilities Planning Stage</u>	<u>Design Stage</u>	<u>Construction Stage</u>	<u>Operation and Maintenance Stage</u>
<ul style="list-style-type: none"> o State places project on priority list. o Applicant selects consultant. o Applicant and consultant have pre-application conference with State and EPA. o Applicant prepares plan of study and submits to A-95 Review Process. 	<ul style="list-style-type: none"> o Application for Step I grant submitted to State and EPA including the plan of study for review and approval. o Consultant prepares facilities plan including an environmental assessment. o Facilities plan is submitted to A-95 Review. o Consultant conducts public hearing on the facilities plan. o EPA and State review and approve facilities plan. o EPA prepares environmental impact statement, if necessary, or declares none is needed in a negative declaration and environmental appraisal. o Public hearing is conducted as part of EIS process when required. 	<ul style="list-style-type: none"> o Consultant prepares and submits application for Step II grant to State and EPA for approval. o EPA may condition Step II grant on mitigating secondary impacts. o Consultant prepares and submits plans and specifications. o EPA and State reviews and approves project plans and specification o In projects where there is no Step I, NEPA requirements would still have to be performed prior to awarding the Step II or Step III grant. 	<ul style="list-style-type: none"> o Consultant prepares and submits application for Step III grant to State and EPA for approval. o EPA may condition Step III grant on mitigating secondary impacts o Grantee advertises for construction bids selects responsive low bidder, submits all bids in tabular form to State and EPA for approval, and upon approval awards contracts. o Project is constructed. o EPA and State conducts final inspection. o EPA conducts final audit and makes payment. 	<ul style="list-style-type: none"> o Plant operated and maintained for life of project. o State and EPA make operation maintenance and permit compliance inspections. o Municipality collects sewer service charges and promulgates sewer use regulations.

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One of the early opportunities for mitigation involves the listing of proposed projects on the state priority list. States in reviewing projects for inclusion on the priority list could be encouraged to apply secondary impact criteria on incoming projects. A general indicator of possible secondary impacts at this early stage is the amount of reserve capacity to be provided by a new plant. Agency policy on this issue is that "construction grant funds are intended to be used primarily for abatement of existing pollution rather than treatment of expected future wastewater flows. Thus, where population affected is used as a priority system criterion, population should be defined as that presently existing." (State Priority Systems Used in the Development of State Project Priority Lists", September 29, 1975, PGM: SAM-9).

The engineering consultant selected by the local jurisdiction has an opportunity to exert a strong influence on the project plans and designs and on the approach toward secondary impacts. The consultant could be encouraged to develop a further understanding of secondary land use impacts identification and mitigation, and to attend EPA sponsored training sessions and workshops on this subject.

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➡ The pre-application conference between EPA, the State, the applicant, and the consultant, generally represents the first direct contact between the applicant and the Agency. It is important at the conference that the EPA representative stress the applicant's and the consultant's responsibility for evaluating secondary impacts under NEPA and analyzing mitigation methods. It is also important to clearly define the extent to which EPA funds can and cannot be used in financing reserve sewage capacity.

➡ The Plan of Study, should include in its itemized tasks provision for an evaluation of the environmental impacts of the proposed alternatives as well as the selected plan.

➡ An environmental assessment which analyzes any environmental impacts is prepared as an integral part of the facility plan. As required by EPA regulation 40 CFR 6.512, the environmental assessment must include a description of secondary land use impacts involved in all feasible alternatives.

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The hearing provides an opportunity for public comment on any predicted significant impacts. Citizens likely to be concerned about the proposed project should be encouraged to attend and state their concerns at this early stage so that the issues can be resolved. Public concerns expressed at the later stages in the development of the proposed project become more difficult to resolve as they may require costly revisions in previous work.

OMB Circular A-95 can be an effective tool for resolving secondary land use issues. The "Project Notification and Review System" provides a forum for State and local governments to comment on the facilities plan and provides an additional opportunity for public comment.

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The EPA review of the Step I facilities plan includes an examination of the secondary land use impacts. This represents the key involvement point for mitigating these impacts. Prior to funding the Step II grant, EPA must decide whether or not to require a further look at the proposed project's impacts. This decision is based on a regional review of the environmental assessment. The Agency then decides if an Environmental Impact Statement (EIS) will be required. An EIS must be filed if the Region decides that the project will have a significant adverse environmental impact or if the project's impact is likely to be highly controversial. If a project's impacts can be mitigated by changes made at this stage of the process, an EIS may not have to be prepared.


When an environmental review indicates there will be no significant impact or that significant adverse impacts have been eliminated by making changes in the project, EPA prepares a negative declaration to allow for public review of this decision before it becomes final. An environmental appraisal supporting the negative declaration is also prepared.

When an EIS is required, a draft impact statement is then prepared and circulated to interested parties, a public hearing is held and a minimum 45-day review period is established for public comment on the draft EIS. The EIS is then revised and a final draft is issued with an ensuing 30 day comment period.

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 If the Agency determines that a public hearing is warranted, the hearing will be held after the draft EIS is prepared. The hearing provides the last opportunity for comments prior to the design stage. At this point in the life of the project, the secondary land use impacts ought to have been clearly defined with an agreed determination of recommended mitigating measures.

 A further opportunity for mitigating secondary impacts involves the conditioning of Step II or III grants. This is done with the stipulation that the local jurisdiction adopt certain specified growth management measures. These measures can range from protecting environmentally sensitive areas, to a staging of new hook-ups in previously undeveloped areas, to the adoption of a revised local zoning ordinance. The conditioning of grants on the adoption of land use measures raises a series of legal and political questions in terms of how far the Agency can go in controlling what should be local land use decisions. If not properly instituted, grant conditions can create a considerable administrative burden within EPA Regional Offices in overseeing local adherence to the conditions. Most of the case studies involve grant conditions, however, they were written so as to reinforce existing State or local legislation thereby leaving the administrative responsibilities with the local government involved.

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When Step II work is complete, flexibility in alternative treatment processes and location of facilities or plant size is considerably diminished. The Step II Design Stage represents a large investment in local and federal funds. To change the location of an interceptor, or of the facility itself, may require a reworking of the Step II designs. Mitigating secondary effects by altering the configuration of the facility or changing the treatment alternative will be more costly at this point.

After the project has been constructed, the local regulations and service charges become instrumental in determining the rate of new sewer hook-ups. The sewer use charge regulations should be carefully drawn up so as not to allow the excess capacity to be fully committed before the design life of the plant. As is often the case, the local jurisdiction is tempted to fully commit the excess capacity as early as possible so that the service charges will pay off the local debt incurred in the plant planning, design and construction.

The Case Study Series seeks to resolve secondary impact issues affecting the Agency by contributing a clearer understanding of the issues involved, presenting the different experiences within each of the EPA Regions and providing a basis for further policy development in the area of secondary impacts. The cases will be analyzed for policy impacts or changes. To aid the users of this report, EPA documents relating to secondary impacts have been included as an appendix. These include: Program Guidance Memorandum No. 50, "Consideration of Secondary Environmental Effects in the Construction Grants Process"; Final Regulations, "Preparation of Environmental Impact Statements" for EPA; and "EPA Policy to Protect the Nation's Wetlands", Administrator's Decision Statement No. 4 issued February, 1973.

Acknowledgement

This report represents a joint effort by a number of individuals both at Headquarters and in the Regional Offices. The Introduction was principally authored by Thomas H. Pierce, Office of Land Use Coordination with assistance and review by Allen Olson, Office of Water Program Operations, Susan Watkins, Office of Federal Activities, Martha Burke, Office of Transportation and Land Use Planning, Cheryl Wasserman, Office of Planning and Evaluation, and Peter Haller, Office of General Counsel. The above individuals also took part in reviewing and editing the Case Study drafts by EPA Summer interns Michael Desautels, and Bruce Barnes and HUD interns Helen Shimbo and Carol Jones, on rotational assignment to the Office of Land Use Coordination. The Regional Offices reviewed, commented on and signed-off on their respective studies. Those involved included the Regional Contact listed on the first page of each Case Study and others who administered the original grant or EIS including Ray Pfortner, Bob Pickett, Wes Wilson and Peter Perez.

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BLOCK ISLAND, RHODE ISLAND

BLOCK ISLAND WASTEWATER FACILITIES PROJECT
NEW SHOREHAM, RHODE ISLAND

PROJECT NUMBER : C-44-0074-01

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Environmental Protection Agency
Boston, Massachusetts 02203

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|-----------------------------------|--|
| The Project | o Combined Step II, and III grant for a collection and treatment system with ocean outfall sewer |
| The Problem | o Ocean discharge of raw sewage.
o Malfunctioning on-site sewage systems |
| Land Use Issues | o The size and location of the service area as a determinant of the total amount of new growth to be served
o Encroachment by new facilitated development on environmentally sensitive areas |
| EPA Region I
Involvement Point | o Initial issuance of a Negative Declaration
o Later preparation of a Draft and Final EIS in response to a high degree of public controversy |
| Mitigating Measures | o Scaling down original project design which would have covered a larger service area
o Grant conditioned on not accepting discharge from new development on wetlands in accordance with State law |
| Sources | o Draft EIS issued March, 1975
o Final EIS issued September, 1975
o Draft Case Study on Block Island From a Community handbook prepared by Barry Lawson, Boston University, under a grant from HEW |

The Project:

The proposed project involves a combined Step II/III grant for the design and construction of a wastewater collection and treatment system. The effluent is to be discharged into the ocean via an outfall sewer. The system will have a design capacity of 0.30 mgd and will serve existing and future needs of both the Old and New Harbor areas on Block Island within the township of New Shoreham (see accompanying map). The total eligible cost of the project amounts to \$4,083,000. The Federal share of the eligible costs will be 75%, the State of Rhode Island will fund 15% of the eligible costs and the remainder will be financed by the applicant.

Block Island is located in Long Island Sound roughly 10 miles off the coast of Rhode Island. The Island's land area comprises approximately 11 square miles.

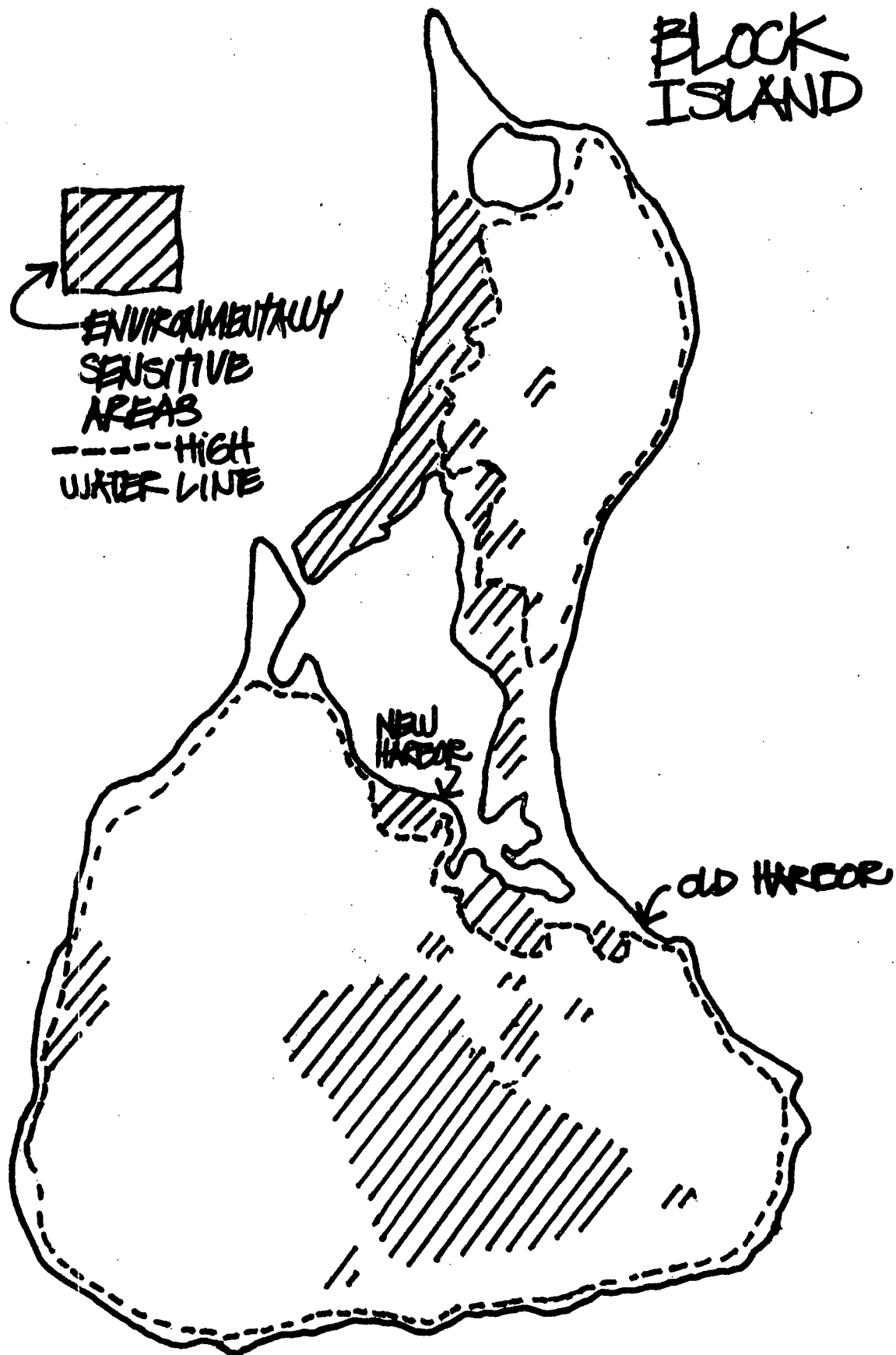
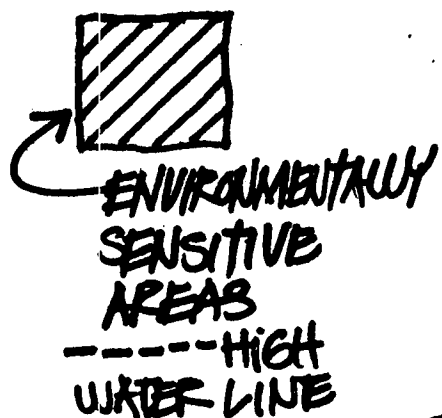
The Problem:

Block Island's existing wastewater disposal problems indicate an immediate need for a public sewage treatment and collection system. The need is particularly evident in the Old Harbor area where early development clustered closely together. The Old Harbor community had previously relied on on-site sewage systems and direct ocean disposal of raw wastewater. Since the latter technique is no longer acceptable and the tightly clustered housing pattern does not allow sufficient land area for adequate on-site systems, the community must turn to public wastewater collection and treatment.

The concentration of a number of failing on-site systems has resulted in a situation which is aesthetically displeasing to residents and visitors and which according to the State Health Department, represents a potential health hazard. The small leaching fields which serve many of the hotels and commercial establishments appear sufficient for winter operation but are undersized for the great demands put on them by the large influx of summer residents and daily tourists. The State Department of Health has indicated that a number of warnings have been issued to establishments on the Island which are in violation of the State Sanitary Code. The State has been hesitant to close these establishments because of the community's intention of building a municipal collection and treatment system.

In both the Old and New Harbor, motor boats and cruisers discharge raw sewage and other wastes directly into the water. No public disposal

BLOCK
ISLAND



facilities, such as pump-out stations, are presently provided at the marinas for proper handling of boat wastes. The situation violates existing State and Federal ocean discharge regulations.

Land Use Issues:

Development on the Island has been concentrated in the Old Harbor Area. Old hotels, inns, rooming houses, restaurants and shops are clustered along the harborfront. Within a few blocks of the old harborfront, houses are spaced further and further apart, with stone-walls enclosing bayberry heath and abandoned pastureland. 1.5 miles to the northwest, smaller scale, newer development has taken place in the New Harbor area. The remainder of the Island is largely open heath, pasture, numerous ponds and inland wetlands. Of the Island's nearly 7,000 acres, over 5,000 are in heath and open pasture and another 1,000 acres are in water and wetlands.

The Island's population and economic activity reached its peak shortly after the turn of the century. By that time, total year round population had reached 1,400. The Old Harbor area supported a prosperous summer tourist trade. The fishing industry provided steady employment. Since the 1920's the year-round residential population has declined to its present level of roughly 500. In the summer, however, the population increases by approximately 1,200 seasonal residents, 1,000 overnight visitors and an average of 1,000 day visitors, although on peak week-ends, this figure has run as high as 3,000.

In 1972, the Island adopted a Comprehensive Community Plan (CCP). The plan was prepared by the Rhode Island Department of Community Affairs in consultation with the Island's Town Council and Planning Board. The goals and policies outlined in the CCP include protection of environmentally sensitive lands and natural areas, preserving the rural New England character of the Island and confining development utilizing septic tanks to lands with good subsurface drainage. The plan also cites the marked upturn in construction of new summer houses as a warning to plan wisely to protect the Island's future environment and charm. In 1973, New Shoreham up-dated its 1967 zoning ordinance to conform with the new plan and to ensure the protection of wetlands, ponds and streams.

New Shoreham's policies toward future growth reflect a major goal in the State Land Use Plan--the control of urban sprawl. Policies outlined in the State Plan with specific regard to utilities include:

- Policy #5: Locate public water and sewer facilities so as to shape development in accordance with the State Land Use Plan.
- Policy #10: In developments which are of an intensity to support public water and sewer facilities, coordinate development with provision of facilities so as to assure availability of these facilities at the time the area is developed.
- Policy #12: Minimize extensions of water and sewer systems, consistent with goals to reduce existing pollution, in order to discourage urban sprawl.

EPA Role:

In April, 1973, New Shoreham signed a contract with a consulting firm to design and construct a sewage treatment plant. In August of that year, the town applied to EPA for a grant for construction of the consulting firm's design and reimbursement for planning and design. A public hearing was held and a number of comments were received from Federal and State agencies and from the general public. When these findings were presented in an Environmental Impact Assessment in April, 1974, EPA initially determined that environmental concerns had been considered in the final design of the plant. The Regional Office, therefore, issued a Negative Declaration on the project. By mid-September, however, public controversy surrounding the project's possible growth implications had grown to the point where the Region decided that an Environmental Impact Statement would be required and reversed its original decision.

The EIS was the first to be written on a Region I construction grants project. EPA decided to write the Impact Statement "in-house" rather than hire an outside consulting firm. Responsibility for researching and writing the document was divided between the Environmental Impact Office and the Water Planning and Construction Grants Division. The Draft EIS was issued in March 1975 and provided a focal point for local debate which had been steadily growing more heated on the merits of the proposed project. The Final EIS was issued six months later in September, 1975.

Both the Draft and Final Environmental Impact Statements discussed in some detail the project's possible secondary land use impacts. Based on development pressures along the Island's coastline and proximity to the Northeast's recreation demand centers, construction of sewer lines and waste treatment capacity could predictably facilitate new growth within the service area. A major concern, however, was that such growth could take place at an accelerated rate if the sewer system were permitted to expand with complementary changes in zoning densities either by variance, special exception or by-law amendment. The Draft and Final EIS warned that, based on the experience of other Island resort communities and depending on the strength of development demand to force zoning changes and further expand treatment capacity, an extreme growth situation could result in the following secondary impacts:

- o Impose resort complexes and residences on wetland and shoreland ecosystems and on flood hazard areas. Especially adverse would be encroachment upon the salt water marshes of the Great Salt Pond embayments as well as fresh water marshes; also, vulnerable would be the south shoreline of Great Salt Pond and extensive areas in the south central sector of the Island proposed for "conservation" or "open space recreation" in the CCP.
- o Facilitate condominium and high density residential development in the extensive open moors, dotted with small lakes, to the southwest of New Harbor. Intrude upon open space character, marsh and upland vegetation and general sense of openness of the Great Salt Pond area and view of Great Salt Pond and Block Island Sound.
- o Stimulate medium density residential development (1 acre lots) on the extensive "low density residential" and "conservation" areas southeast and south of Old Harbor proposed in the CCP. These areas embrace perched fresh water marshes, ponds, water supply recharge areas, and the picturesque pasture-bayberry moor vistas of Old Harbor and the ocean from the Upland Plateau.
- o Greater numbers, densities, and range of activities on the Island would have an overall adverse impact on the high quality of the existing environment:

- on water quality through runoff from additional paved and impervious surfaces, through some erosion and sedimentation of fragile ponds and wetlands associated with construction and continuing earth disturbance, and through additional solid waste-septage disposal and septic system operation--all associated with a higher level of development;
- on noise levels through additional vehicles, lawnmowers, and human activities;
- on air quality through additional motor vehicles and power boats;
- on visual appeal of sweeping vistas of sea, sand, and sky; of rolling moors, pastures, ponds, and vegetation;
- on fragile ecosystems; salt and fresh water marsh associations, dunes associations, and upland plant and animal associations.

The proposed project alternatives were carefully analyzed to ensure that an extreme growth situation would not occur and that the above impacts would be avoided. The analysis concentrated on what were considered the four most practical choices.

Alternative A Construction of the project proposed by the applicant's consultant, which includes a treatment facility and collection system to serve the Old and New Harbor sections of the Island (Stage I) with provisions to serve the area south of Old Harbor in the future (Stage II).

Alternative B Construction of the project (Stage I) without provisions for sewerage the area south of Old Harbor in the future.

Alternative C No sewer construction, but a comprehensive program for the rehabilitation of individual septic systems.

Alternative D Construction of a treatment facility and collection system for the Old Harbor area only, with rehabilitation of individual septic systems in the New Harbor area.

The draft EIS recommended against allowing the situation to remain unchanged (the "do nothing" alternative) or that the problem could be solved simply by upgrading existing individual septic systems (Alternative C). Also rejected was the original proposal (Alternative A) which was about to be enacted when the citizens raised their protests. This alternative was eliminated because a large portion of the area proposed to be sewerred by Stage II was comprised of wetlands and other environmentally sensitive areas. The Draft EIS recommended two alternatives:

- o The first would provide sewers in both commercial areas of the Island, but eliminate the "Phase II extension" into residential areas contained in the original proposal (Alternative B).
- o The second would provide public sewage capacity only in the dense Old Harbor commercial area, and rely on improved septic systems in the less dense New Harbor area (Alternative D).

Of the two alternatives, the draft concluded that the second was more appropriate. Pressures for induced growth would be minimized, particularly along the strip between the two harbors. However, due to comments received on the Draft, largely due to the insistence by the Rhode Island Department of Health that septic systems could not be made adequate in the New Harbor area, the Final EIS recommended the first of the two alternatives mentioned above, advocating that both commercial areas be serviced by public sewers rather than the Old Harbor alone.

Mitigation:

Scaling down the originally proposed project design represented the first mitigating measure. Elimination of Alternative A reduced the size of the service area and meant that the project would not induce growth on wetlands and other environmentally sensitive lands within the originally proposed Phase II area. Service was thereby restricted primarily to the Old and New Harbor communities. The question remained, however, of protecting environmentally sensitive lands primarily wetlands on the periphery of the two harbors as well as lands adjacent to interceptors carrying wastes from the New Harbor to the treatment plant in the Old Harbor.

The second mitigating measure involves a specific condition to protect these areas from encroachment by new facilitated development. EPA's responsibility for protecting wetlands has been clearly enunciated in the Agency's Wetlands Policy Statement published in the Federal Register on May 2, 1973 (F.R., Vol. 38, No. 84 pages 10834-5). The Policy Statement includes the following wording:

- o "In its decision processes, it shall be the Agency's policy to give particular cognizance to and consideration to any proposal that has the potential to damage wetlands...."
- o "In compliance with the National Environmental Policy Act of 1969, it shall be the policy of the Agency not to grant Federal funds for the construction of municipal wastewater treatment facilities or other waste treatment associated appurtenances which may interfere with the existing wetland ecosystem, except where no other alternative of lesser environmental damage is found to be feasible."

The Region I Office therefore decided to condition the grant to protect wetlands by partially controlling the distribution of the limited amount of new growth the project may facilitate. The condition reads as follows:

"The Town (New Shoreham) shall not permit any person to discharge wastewater into any collection line, lateral sewer, interceptor or other means of conveying wastewater to the treatment plant if such wastewater originates from any building, facility or other manner of construction which is hereafter erected or otherwise placed, in whole or in part, upon land which is a wetland area within the means of G.L.R.I. Title 2, §2-1-13 and §2-1-14 (Supp. 1974) (Rhode Island State Law). This condition is deemed to be for the protection of wetland areas and shall constitute a bilateral agreement between EPA and the Town which may be enforced by any person who has an interest in the protection of such wetland areas, including year-round and part-time residents of Block Island."

It is important to note that the above condition reaffirmed Rhode Island State Law on the protection of wetlands and that it supports policies enunciated in the local comprehensive plan and zoning ordinance.

ROCKAWAY, NEW JERSEY

Rockaway Valley Regional Sewer Authority
Morris County, New Jersey

Project Number : C-34-389-01

Regional Contact: Barbara Metzger, Chief
Environmental Impacts Branch
Environmental Protection Agency
Region II
New York City, New York

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|-------------------------------------|--|
| Project Description | <ul style="list-style-type: none">o Regional Interceptor to service the Rockaway Valley in Morris County, New Jersey as one segment in an overall plan |
| Water Quality Problem | <ul style="list-style-type: none">o Raw sewage discharge into Rockaway River due to overloaded and failing interceptor deemed to be an emergency situationo Contamination of surface and ground water by malfunctioning on-site sewage systems |
| Land Use Issues | <ul style="list-style-type: none">o Court ordered building ban imposed in 1968 due to overloaded interceptoro Ability of the service area to accommodate induced new growtho Protection of environmentally sensitive areas |
| EPA Region II
Involvement Points | <ul style="list-style-type: none">o Pre-application and plan formulation meetings with consultant and applicanto Review of Environmental Assessment Statement found it to be inadequateo Public information meetings and work sessions with the applicant, public interest groups, consultant and county and regional planning agencieso Negative Declaration issued April 23, 1976 on the interceptor only |

Mitigating Measures

- o Reduction of population projection for the total project including treatment plant based on a "Carrying Capacity" study
- o Grant conditioned on limiting the number of new hook-ups to the interceptor once it is constructed

Continuing Region II Involvement

- o Construction is expected to begin on the interceptor in the Spring of 1977
- o Region II is publically committed to preparing an EIS on the remainder of the project

Sources

- o Negative Declaration, issued April 23, 1976
- o Secondary Impact of Regional Sewage Systems, by New Jersey Department of Community Affairs, June, 1975
- o Water and Sewer Service Areas and Land Development Capacity by Tri-State Regional Planning Commission, November, 1973 -- Interim Technical Report 4416-3603

The Project

The Rockaway Valley Regional Sewerage Authority (RVRSA) has proposed a wastewater management plan for the Upper Rockaway Basin. The initial project consists of the design and construction of a replacement interceptor through a combined Step II and Step III grant.

The interceptor will be 13.7 miles long and will cost \$25.2 million. 75% of this cost will be paid by EPA, 8% by the State and the remaining 17% by the applicant. The 55 square mile service area for the proposed interceptor sewer includes roughly half of the Upper Rockaway Basin within the Passaic River Valley. The area is located in Morris County, New Jersey, roughly 30 miles west of New York City.

Future components of the RVRSA plan, not contained within the present application, include the construction of branch interceptors and an advanced wastewater treatment facility with reserve capacity based on a projected population increase of 78% by 2020. The facility will be built and funded in modules. The initial phase, plans to provide additional capacity only through 1985, and will serve a population only slightly larger (8%) than the existing service needs. The remaining growth, 70%, will be accommodated in future phases of plant expansion. The ultimate population increase is, however, subject to the outcome of the EIS being prepared by Region II.

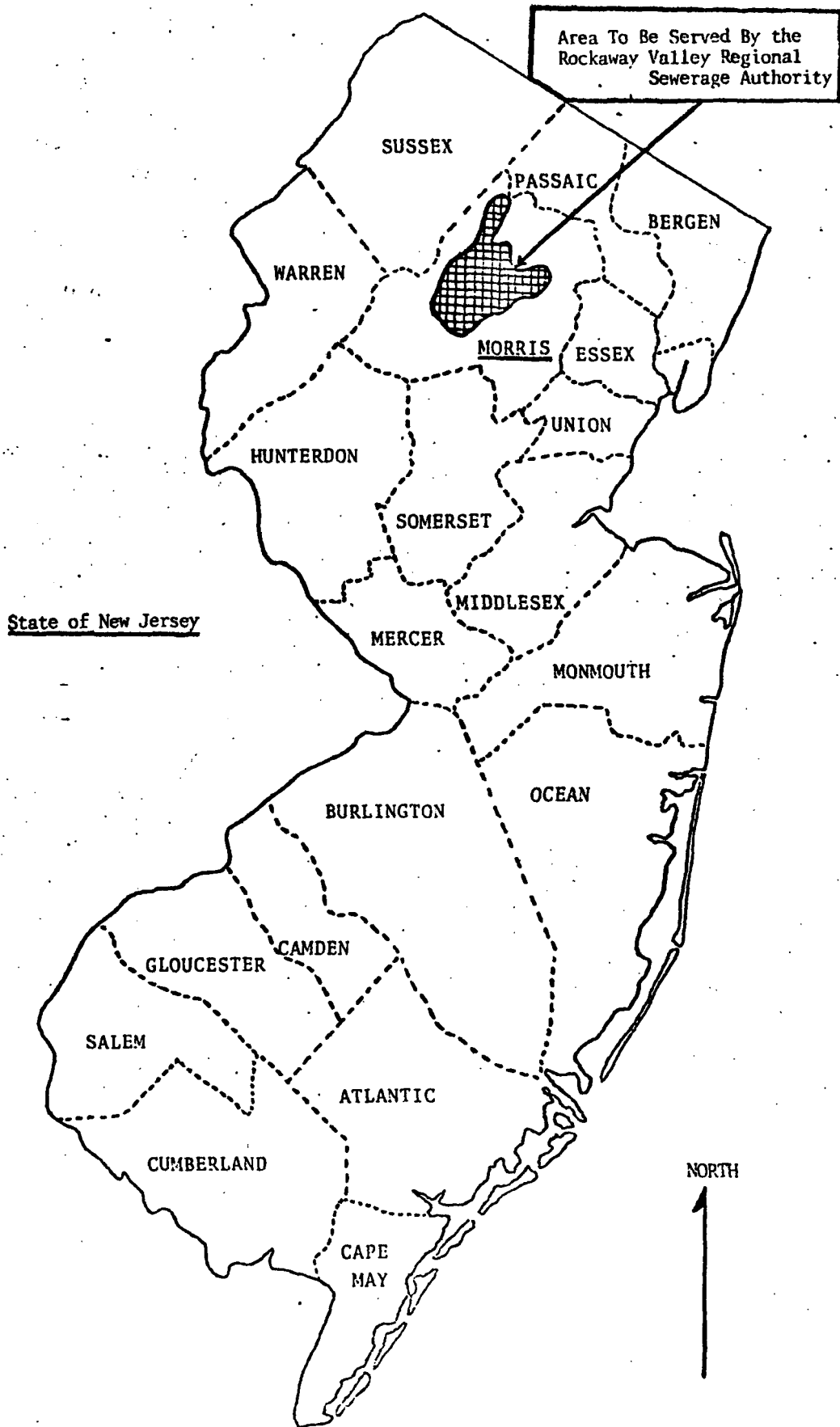
The Water Quality Problem

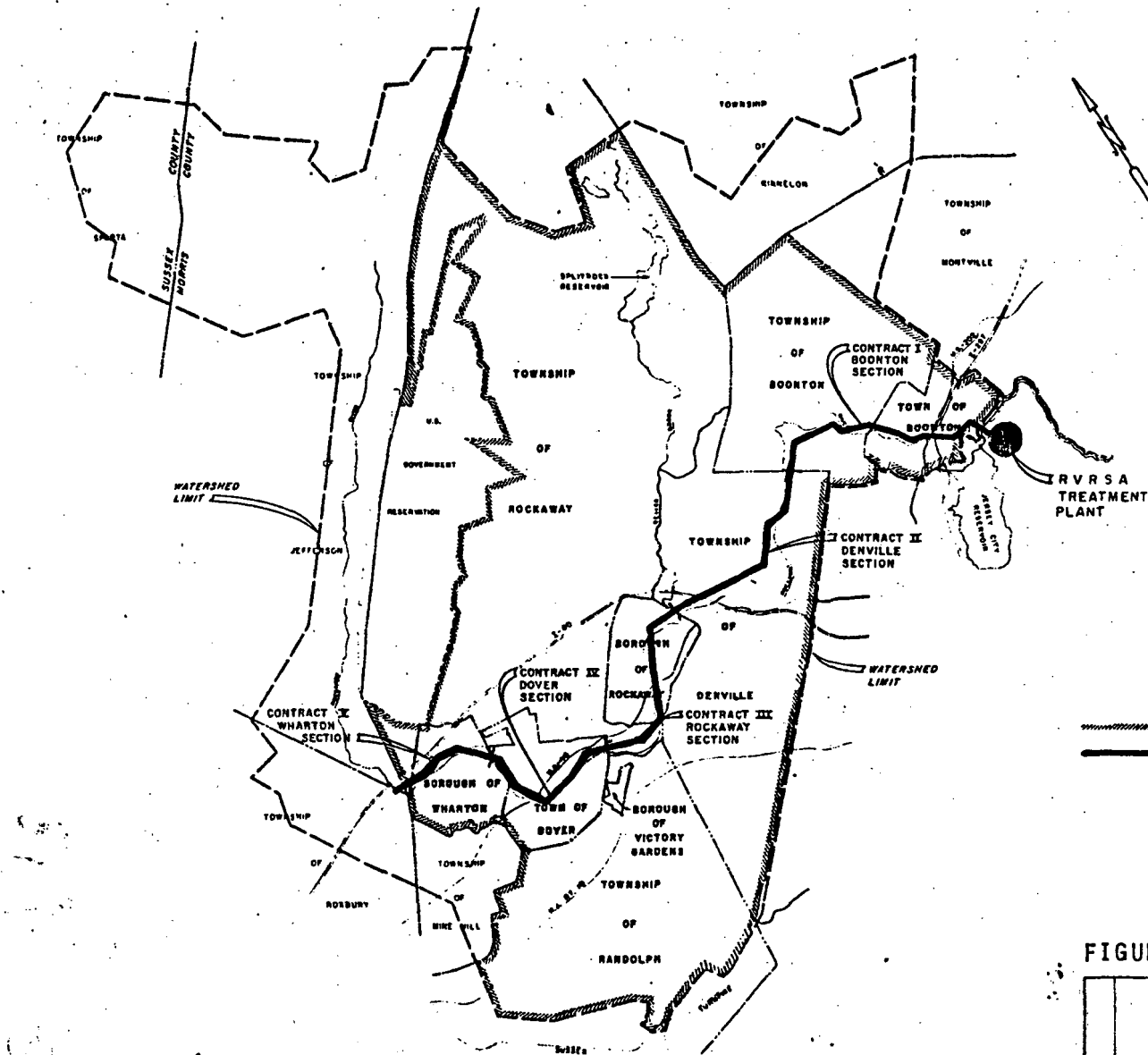
The interceptor is proposed as an emergency measure to replace the existing inadequate regional interceptor which was built in 1923. A court ordered building ban has been in effect since 1968 due to severe overloading of the existing interceptor. Overflows have on occasion resulted in surcharge of raw sewage, into the Rockaway River upstream from a regional water supply reservoir. In addition the structural failure of sections of the old, clay-tile interceptor is a real possibility.

Failure of on-site systems resulting from dwelling units on soils unsuitable for such systems has caused localized overflows and contamination of groundwater supplies.

Land Use Issues

The service area is located within the New Jersey Highlands. The Highlands are noted for their varied topography, shallow soil mantle and steep slopes. Due to its glacial history, the area contains restricted





LEGEND

- LIMITS OF EXISTING RVRSA SERVICE AREA
- PROPOSED INTERCEPTOR SEWER

FIGURE I

ROCKAWAY VALLEY REGIONAL SEWERAGE AUTHORITY BORO OF WHARTON, N.J.	
INTERCEPTOR SEWER	
LOCATION MAP	
DESIGNED: D.S.M.	CHECKED: P.B.R.
DATE: 4/76	DATE: 5/76
APPROVED:	REVISIONS:
PERSON T. WILLIAM ASSOCIATES, INC. 16 South 1st Street, Suite 200, New York, N.Y. 10003	

SCALE: 1" = 12000'

APR 15 1976

aquifers directly overlaid by their recharge zones. The service area is totally reliant on the aquifers for its water supply, since surface waters have already been committed to the downstream city of Jersey City.

Reserve sewage capacity to be provided by the interceptor will facilitate new growth potentially straining other public facilities and services, particularly the supply of drinking water. It may also induce development to occur in environmentally sensitive areas. At present, new growth is carefully monitored by the court ordered building ban. The ban controls the issuance of new building permits and is based on a proportional allocation by municipality of the remaining gallonage. New permits are issued by the court at the request of the Regional Sewer Authority or the municipality. As of this writing, two of the nine municipalities in the service area have used all of their presently allocated gallonage. Construction of the interceptor alone, however, will not cause the building ban to be lifted. This will happen only upon completion of an expanded treatment capacity. EPA has publically committed itself to fund a small increase in plant capacity, sufficient to accommodate moderate growth through 1985, but the Step II application for the expansion has yet to be received by the regional office.

The extent of new growth to be facilitated by the project is tied to both the lifting of the building ban and the amount of reserve treatment capacity to be funded by EPA.

Region II Involvement Points

The interceptor sewer forms a portion of an overall system consisting of connector interceptors and expansion of the existing treatment plant. Region II and its predecessor agency has been reviewing the entire RVRSA project since the beginning of the building ban in 1968. During this time, many modifications have been made in the project as it was originally submitted, for example, an update in population projection resulted in a decrease in the ultimate capacity of the project.

In August 1974, EPA indicated to the New Jersey Department of Environmental Protection (NJDEP) that insufficient data was provided in the Sewer Authority's Engineering Report and Environmental Assessment Statement (EAS) to allow for further review. Additional information was requested on existing water resources and on the carrying capacity or the amount of new growth which could be reasonably accommodated within the service area. Region II indicated that a new

determination should be made of the amount of land still vacant and suitable for development and that the projected population used for sizing the interceptor be compared both with this figure and available drinking water supplies.

In April 1975, an addendum to the EAS was submitted. However, the new analysis of land suitable for development and the available water supply, both of which confirmed the original projections, were found to contain substantial errors. Considerable discrepancies in population figures between the applicant's projections and Morris County Planning Board (MCPB) and Tri-State Regional Planning Commission (TSRPC) projections in all the work submitted up to that point, suggested that the need for the applicant to consult with both planning agencies along the lines of an A-95 review. An EPA letter to NJDEP in August of 1974 formalized the suggestion.

In October 1975, the engineering consultant submitted the outcome of the consultation with MCPB and TSRPC: an apparent agreement on projections. However, a meeting with the Tourne Valley Coalition (TVC), a local environmental group, later that month presented detailed documentation of substantial errors in both the April addendum and the updated A-95 review. This prompted MCPB, TSRPC and EPA to agree to a review of all the data, including that presented by the Coalition.

Further discussions between EPA and the two planning agencies revealed a fundamental problem with regard to their own population projections. In the past neither MCPB nor TSRPC based their projections on a detailed environmental analysis. Thus a simple agreement on projections did not necessarily reflect an agreement on the actual population the Basin could support.

To arrive at a reasonable figure which would reflect the area's environmental constraints and simultaneously review MCPB and TSRPC planning, the staffs of EPA, MCPB and TSRPC agreed to undertake a detailed study of vacant land suitable for development in the service area as a major determinant for projecting the population the land could support. The categories of land unsuitable for development were agreed to after several working sessions involving MCPB, TSRPC and EPA. These included already developed areas, parklands, other lands in public ownership and the following environmentally sensitive areas:

1. Steep slopes
2. Shallow depth to bedrock areas

3. Areas with seasonably high water table
4. Areas with frequent flooding
5. Aquifer recharge areas

The study participants clearly recognized the environmental consequences which would occur if these sensitive lands were not properly protected: increased siltation, increased storm water run-off, pollution and a decreasing of groundwater sources and degradation of water quality in general. They also recognized the economic costs involved. The development of steep slopes, for example, also involves higher site development costs and thus more costly housing and higher operating and maintenance expenses for the owner for such things as landscaping and soil stabilization. Such financial consequences also effect municipal services and utilities in terms of higher costs for installation, maintenance and operation of the required infrastructure from telephone poles to sewers and streets. The consequences could also extend to the health, safety and welfare of citizens in such areas in terms of degraded surface water for drinking and recreation, depleted groundwater supplies for drinking and fire fighting and loss of property and life due to landslides and flooding.

The study recommended a much lower figure for vacant land, suitable for development than was computed in the April 1975 addendum. The determination was that 40% of the remaining available vacant land would be suitable. The final population projection was reduced accordingly to a figure of 168,000 for the year 2020, 78% greater than the estimated 1975 population but nearly 30,000 less than the 197,000 projection originally made by the applicant.

This projection was then compared with guaranteed potable water supply for the service area. Analyses concluded that guaranteed water supplies were adequate to support the revised population projection of 168,000 people, provided that water conservation was employed and that water allocation for industrial use would be reallocated for domestic use.

On March 25, 1976, EPA, MCPB and TSRPC presented the assumptions, the methodology and the findings of the joint study of the area's carrying capacity at a public information meeting sponsored by the applicant, but held at EPA's request. The purpose of the meeting was: 1) to air the assumptions made in the joint study with regard to the protection of the area's, many environmentally sensitive areas; 2) to discuss the need to provide for protection of environmentally sensitive

areas through local land use planning and ordinances, and; 3) to present the potential water quality and water supply consequences for the area if proper measures were not taken.

Mitigation Measures

Mitigation of secondary impacts was accomplished through scaling down the population projections for the overall wastewater facilities plan on the basis of the carrying capacity study described above. Although not specifically described above, earlier capacity reductions were also agreed to prior to this study in previous consultation with the applicant.

The second mitigation measure was tied to the interceptor itself. Due to severe water quality problems caused by the outdated existing interceptor and the need for emergency action, the Region issued a combined Step II/III on June 30, 1976 to design and construct the replacement interceptor only. The grant was issued, however, with the following condition:

The interceptor sewer being funded under this grant agreement is intended to be available for "hook-up" only by those sewage sources now "hooked-up" to the existing interceptor sewer which is being replaced by this new interceptor sewer. No additional "hook-ups" shall be made to the new interceptor sewer except as may be specifically approved in writing in advance (1) by EPA and NJDEP or (2) by specific order or decree of a Court of competent jurisdiction. Approval of further "hook-ups" by EPA and the NJDEP will be dependent upon the conclusions in the EIS on the Rockaway Valley Regional Sewerage Authority, the draft of which is anticipated to be completed on or before December, 1977.

Continuing Regional Involvement

Stemming from meetings both at EPA Headquarters and at the Regional Office with the Tonne Valley Coalition and the applicant, Region II has decided to conduct an EIS review of the entire plan for the Upper Rockaway Basin including connection interceptors and treatment plant expansion through 2020. The EIS will examine the questions of plant sizing, and the secondary impacts of facilitated development on both water quality

and quantity. As a preliminary step two requests for proposals have been issued by Region II to investigate potential water supply problems and to collect and quantify existing land use data within the service area.

As indicated above, due to the severity of existing and potential problems with the present interceptor, the replacement interceptor will be built as soon as possible. Sewer right-of-way easements are being negotiated and construction of the interceptor is expected to begin in the Spring of 1977.

FALLING CREEK, VIRGINIA

FALLING CREEK WASTEWATER TREATMENT FACILITY
CHESTERFIELD COUNTY, VIRGINIA

PROJECT NUMBER : C-510484-01

REGIONAL CONTACT: Steve Torok, Chief
Environmental Impact Statement
Preparation Section
Environmental Protection Agency
Region III - Curtis Building
6th and Walnut Streets
Philadelphia, Pennsylvania 19106

Project Description	o Upgrading and expansion of Falling Creek Wastewater Treatment Facility
Problem	o Eutrophication of water supply reservoirs
Land Use Issues	o The impact of induced secondary effects on the Swift Creek Reservoir
EPA Region III Involvement Points	o Additional Information Request issued by Region to applicant after review of Environmental Assessment o Preparation of a Draft and Final EIS
Mitigating Measure	o Region III decision to fund a 3 mgd expansion as opposed to a 6 mgd expansion o Step II grant conditioned on the development and adoption of a Swift Creek Watershed Management Plan
Continuing Regional Involvement	o Implementation of the Swift Creek Watershed Management Plan
Sources	o Draft EIS issued July, 1975 o Final EIS issued March, 1976

Project Description

The Project

The proposed action involves a Step II grant to design the up-grading and expansion of the existing Falling Creek Wastewater Treatment Facility from 6 to 9 MGD's. The plant expansion, in conjunction with a locally funded interceptor and collector system, is designed to gradually eliminate on-lot septic tanks and place future growth in the area on public sewers as much as possible.

The Service Area of the proposed project lies within Chesterfield County, southwest of Richmond in east-central Virginia. With a land area of 441.6 square miles (1143.7 km), the county has an estimated population of 116,548. The existing facility at Falling Creek serves only the northern section of Chesterfield County. The planned expansion will include the areas that are now excluded. At this time the only other wastewater facilities in the Service Area are on-lot systems and one small STP.

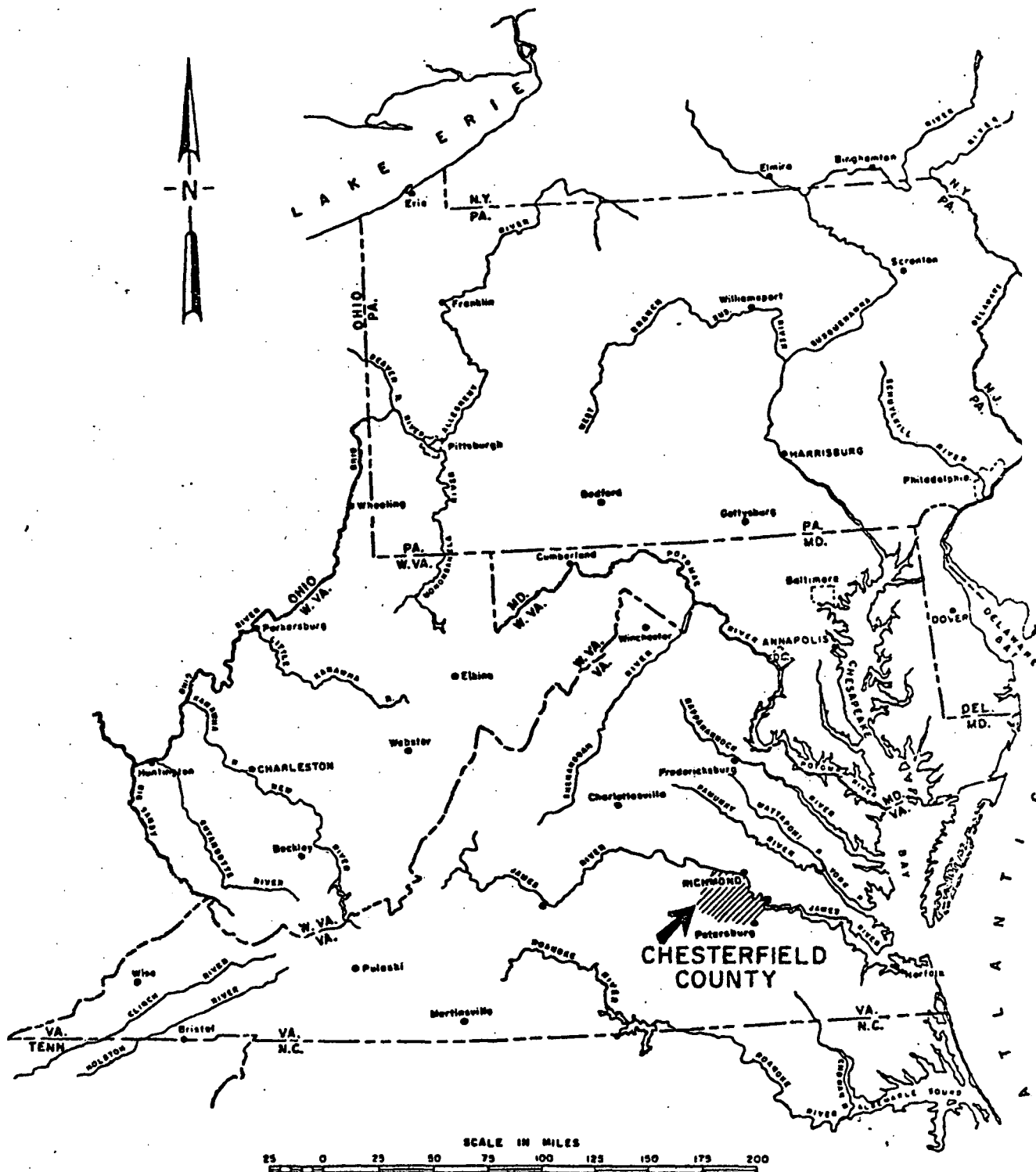
The proposed project is a major component of the first of three phases of Chesterfield County's Sewerage Improvement Program. Other EPA-financed facilities of the Phase I program (to be completed by 1078) include a 4.0 mgd treatment plant and associated trunk sewers serving three drainage basins in the County. Additional Phase I interceptors and collectors are being financed through an \$18 million County bond issue.

The projected construction cost of the treatment plant expansion and upgrading is estimated at \$10 million. EPA will contribute 75 percent of the eligible costs or \$7.5 million. An additional, as yet undetermined, percentage will be financed by the State (approximately 7%) with the remaining costs being borne by Chesterfield County.

Problem

Unsuitable soils have caused a number of on-site septic systems to malfunction within the service area. This problem combined with non-point sources of pollution carried by stormwater runoff has affected groundwater supplies and accelerated eutrophic conditions within the two county reservoirs - Falling Creek and Swift Creek.

The Swift Creek Reservoir is an artificial impoundment that was created in 1964 by Chesterfield County. It has been the subject of



LOCATION OF CHESTERFIELD COUNTY
IN EPA Region III

continued public awareness and concern. There are several natural characteristics in the Reservoir and its Watershed which tend to produce eutrophic conditions: the water level in many areas is less than five feet deep, allowing sunlight to penetrate to the bottom (this is an important criteria in algal productivity); the low stream-flows of the drainage basin produce a relatively slow flushing rate, increasing nutrient residence time within the reservoir (this results in an increase of biological assimilation and associated algal growth); and The soil is highly erodable causing considerable siltation. When the ground cover and surface soil is removed, erosion levels range from moderate to severe. The net effect of these combined natural characteristics is the magnification of adverse water quality impacts resulting from construction-related soil disturbances in the drainage basin.

Land Use Issues

Due to the fact that the immediate watershed of Falling Creek Reservoir was largely developed at the time of the grant application, the Region concentrated its attention on secondary impacts within the relatively undeveloped Swift Creek area. The provision of increased sewage capacity has the potential to facilitate new development in addition to a large subdivision already under development in the Swift Creek watershed. It is evident, however, that Chesterfield County will continue to grow with or without an expanded treatment facility. The County's proximity to the "urban crescent" from Washington D.C. through Richmond to the Tidewater Area indicates considerable future population growth. An analysis of existing land use patterns shows that northern and eastern sections of the county adjacent to Richmond have already been largely developed. A change in future residential use within the County is projected from predominantly single family to a mixture of single and multi-family dwellings.

The future growth has the potential to further degrade the already eutrophic Swift Creek Reservoir. Highly erodable soils combined with the non-point source pollution from new development will necessitate adoption of specific management measures including both in-lake treatment and land development controls.

The second land use issue concerns the right of public access and recreational use of the Swift Creek Reservoir, a public water supply impoundment. In an effort to further protect the Reservoir's water supply function, the County has prohibited body contact sports and the

use of internal combustion engines on the Reservoir. Public fishing and non-engine boating is, however, permitted at two access points. Although water supply constitutes the primary use, the Reservoir's recreation potential also constitutes an important County asset. Further discussion and recommendation on the issue of recreational use may be found in the Final EIS.

State and County Background

In 1972, the Virginia General Assembly passed legislation directing the Division of State Planning and Community Affairs to identify critical environmental areas within the State. The Swift Creek Reservoir was identified in the State study as a natural area with significant recreational potential in the midst of an urbanizing region. The Richmond Regional Planning District Commission proposed that the area surrounding the Reservoir be set aside as a park. However, the recommendation was not acted on by the local governments involved.

The responsibility for protecting both Swift and Falling Creek Reservoirs lies within the County's jurisdiction. Chesterfield County has adopted a 1995 General Plan, a zoning ordinance and a subdivision ordinance containing provisions to control runoff and erosion.

As mentioned above, development has begun on a large subdivision comprising some 1,600 acres along the southern and eastern shores of Swift Creek Reservoir. In recognizing the area's environmentally sensitive nature, the County Board of Supervisors imposed a number of development restrictions as conditions to the project's subdivision approval. These include: runoff and sediment retention basins; various soil conservation measures; restrictive use of specific environmentally sensitive areas; and, establishing buffer zones. The County has thus demonstrated an awareness of the relationship between land use practices and water quality.

EPA ROLE

The initial facilities planning was done on the Falling Creek Project as part of the overall county sewer plan prior to the time EPA issued its regulations on Step I plan submittal. Consequently, the Environmental Assessment, submitted in the Summer of 1974, was on a Step II grant application. In addition, the Environmental Assessment was on the entire County plan. Consequently, the Regional Office felt that it needed more information on the Falling Creek

portion of the overall County program. In October, 1974, the Region issued an Additional Information Request on the up-grading and expansion of the Falling Creek Wastewater Treatment Facility. In the intervening period, the Region and the applicant met on several occasions to discuss the secondary impacts involved with the proposed project.

The possibility of controversy and the potential impact of the secondary effects on Swift Creek Reservoir identified the project from its early stages as a candidate for an environmental impact statement. The EPA Regional Office filed its Notice of Intent for preparation of an EIS in February, 1975 and indicated that an EIS would focus on the following:

1. The appropriate sewage treatment plant expansion capacity, and
2. The primary and secondary effects of the project on water quality and water supply, with particular reference to the Swift Creek Reservoir.

Mitigating Measures

The County's original application requested funds to upgrade and expand the Falling Creek Wastewater Treatment Facility from its present 6 MGD to 12 MGD. Based on a reexamination of population projections and other pertinent data, during the EIS process, EPA ruled that only a 3 MGD increase would be funded, expanding the capacity to 9 MGD.

The decision to fund a smaller facility expansion represents the first mitigating measure. That decision was based on the following considerations:

1. An actual per capita sewage flow of 80 gpcd was used instead of a general 100 gpcd assumed figure.
2. The Region's analysis of population projections for the service area led to the conclusion that long term dependence on a recently experienced high growth rate was unwarranted.
3. The 3 mgd expansion would be sufficient to serve the existing population needs, as well as providing adequate reserve capacity for a moderate level of growth.
4. A cost-effectiveness analysis revealed no significant savings involved with the construction of

a 6 mgd expansion versus two 3 mgd expansion.

5. After the first 3 mgd expansion, the Region would be able to conduct a "mid-course" evaluation of the effectiveness of the revised 1995 General Land Use Plan, and the development and implementation of the Swift Creek Watershed Management Plan in mitigating the project's secondary impacts. At this point both the Region and the applicant could consider funding the additional 3 mgd if it were still deemed necessary.
6. Provision of a 6 mgd expansion would provide excessive initial capacity which might unduly stimulate new growth. If a lower growth rate were to prevail, however, the drop in expected user revenue could create an increased financial burden to local tax payers who would be called on to make up the difference. Each resident who receives sewer service will pay a connection fee of at least \$300; a yearly service charge of approximately \$70 and an amount for installation of hook-in sewers that average \$400 but may vary from \$250 to \$1,000. The cost of the County share for interceptors and collectors makes it necessary for the County to maintain a 5.8 percent rate of growth on public sewers in order to meet bond obligations using sewer connection fees and service charges.

Even with the 3 mgd expansion, the Region felt that local planning and management initiatives were needed to protect Swift Creek Reservoir from the secondary impacts of the proposed project. As a result of the EIS process, Region III conditioned the Step II grant award on the County developing and adopting a "Swift Creek Watershed Management Plan". EPA maintained that special provisions would have to be taken to assure that growth in the Swift Creek Watershed would be managed to minimize its adverse environmental effects upon both the Watershed and the Reservoir itself. The Plan is to include the elements listed below.

Elements of the Plan

"In order to protect the integrity of the Reservoir's resources and to minimize future degradation, the County of Chesterfield must prepare a watershed management plan incorporating the following general

provisions:

- a. establish a monthly tributary and in-lake monitoring program of sufficient duration and scope to completely describe the physical and biological conditions of the hydrologic regime and of sufficient sensitivity to discriminate seasonal and annual changes in the water quality for all measured parameters.
- b. revise the 1995 Land Use Plan for the Swift Creek Watershed to indicate the following:
 1. delineation of buffer zones, steep slopes, critical soils and other sensitive areas where development (either by sewer or septic tanks) must be prohibited or limited;
 2. location of soils unsuitable for septic tank installation noting all specific limiting factors; and
 3. based primarily on the information developed for No. 1 and No. 2., a determination of the recommended development patterns and/or densities permitted in the Watershed based on water quality effects.
- c. prepare standards for all construction in the Watershed, compatible with the erosion and sedimentation controls of the Brandermill development. Part of the construction standards will be an established procedure for mandatory site inspection by the County Engineering Department during construction. Enforcement of compliance with the Watershed construction standards (as well as the standards of the Chesterfield County Erosion and Sediment Control Ordinance) is provided in Section I (Part 1) of the Chesterfield County Erosion and Sediment Control Handbook.
- d. establish a Swift Creek Watershed Committee with the following responsibilities:
 1. review the monitoring and management programs, providing recommendations for future additions or deletions when required.

2. cooperate with the County Engineering and Planning Departments to periodically review and modify, if appropriate, the Watershed construction standards and 1995 Land Use Plan.
3. solicit Virginia SWCD or other appropriate assistance when necessary.
4. coordinate with the Recreation and Planning Departments for the development of recreational resources in the Swift Creek Watershed. The Committee will serve in an advisory capacity to the Planning Commission with respect to implementing the Chesterfield County Park and Open Spaces Plan.
5. assist the County in administering and maintaining any programs implemented with Section 314 funds (see below).
6. prepare an annual report indicating progress being made in implementing the management plan; results of implemented procedures; description of current and anticipated quality of the Watershed and Reservoir; and recommendations for revising the management plan.

The organization of the Committee will be the responsibility of the County. Representative members from all relevant and interested parties, both private and governmental should be included. Regularly scheduled meetings will be held on a sufficient basis to fulfill its responsibilities."

Continuing Regional Involvement

EPA and Chesterfield County have established communications regarding the implementation of the Management Plan. Although the Step II grant has not yet been offered to the applicant, the order of events necessary for the plan's successful implementation will follow these general steps:

1. Chesterfield County will prepare the management plan;
2. The Virginia State Water Control Board will review, modify, and ultimately approve the County plan (EPA will be apprised during SWCB progress and will offer comments);

3. Chesterfield County implements the plan (assisted by the advisory committee formed as part of the plan);
4. the advisory committee operates and reviews the plan and data as made available, makes recommendations to the County when appropriate, and assumes other responsibilities as outlined in the Final EIS (assisted by the County).
5. EPA receives Step III grant application and concurrently reviews progress of the management plan (assisted by both County and advisory committee).
6. the advisory committee continues its responsibilities under the management plan, including the preparation of an annual status report (assisted by the County).

RENNER SANITARY DISTRICT
RENNER, SOUTH DAKOTA

PROJECT NUMBER: C-460313

REGIONAL CONTACT: William Geise, Chief
Environmental Evaluation Branch
Environmental Protection Agency
Region VIII
Denver, Colorado

- | | | |
|-----------------------------|---|---|
| Project Description | o | Collection system and four lift stations connecting into the existing treatment facility of the adjacent City of Sioux Falls, South Dakota |
| Problem | o | Groundwater contamination caused by failing on-site disposal systems and possible contamination of an aquifer which provides the region with drinking water |
| Land Use Issues | o | Allowing sewer connections for new development within the floodplain of the Big Sioux River |
| | o | Determining proper sizing of the collection system to adequately serve the District's present needs and to allow for a "moderate" amount of new growth |
| EPA Region VIII Involvement | o | Step 1 review of facilities plan and environmental assessment |
| | o | Joint meetings between EPA and the County to discuss the secondary impacts of the project on the Big Sioux River Floodplain |
| | o | Issuance of a Negative Declaration and Environmental Appraisal |
| Mitigating Measures | o | The Step II grant was conditioned so that no connections would be allowed for future development within the 100-year floodplain |
| | o | The Region recommended that the collection line be sized to serve existing residents plus a "moderate" amount of new growth |
| Continuing Involvement | o | The County Planning and Zoning Commission foresees little difficulty in enforcing the conditions under its existing floodplain ordinance |
| Sources | o | Negative Declaration and Environmental Appraisal issued August 22, 1975 |

PROJECT DESCRIPTION

The Project

Renner Sanitary District is located in Mapleton Township within Minnehaha County one mile north of the corporate limits of Sioux Falls, South Dakota. The proposed service area contains 614 acres consisting of scattered residential and commercial development. 700 residents presently reside in the District. A portion of the service area lies within the Big Sioux River's floodplain. Renner is also located within the recharge zone of an aquifer which supplies drinking water to Sioux Falls and surrounding areas. Residents in the service area are currently served by on-site sewer systems--septic tanks with or without proper drainage fields and what are called dry wells, or outhouses.

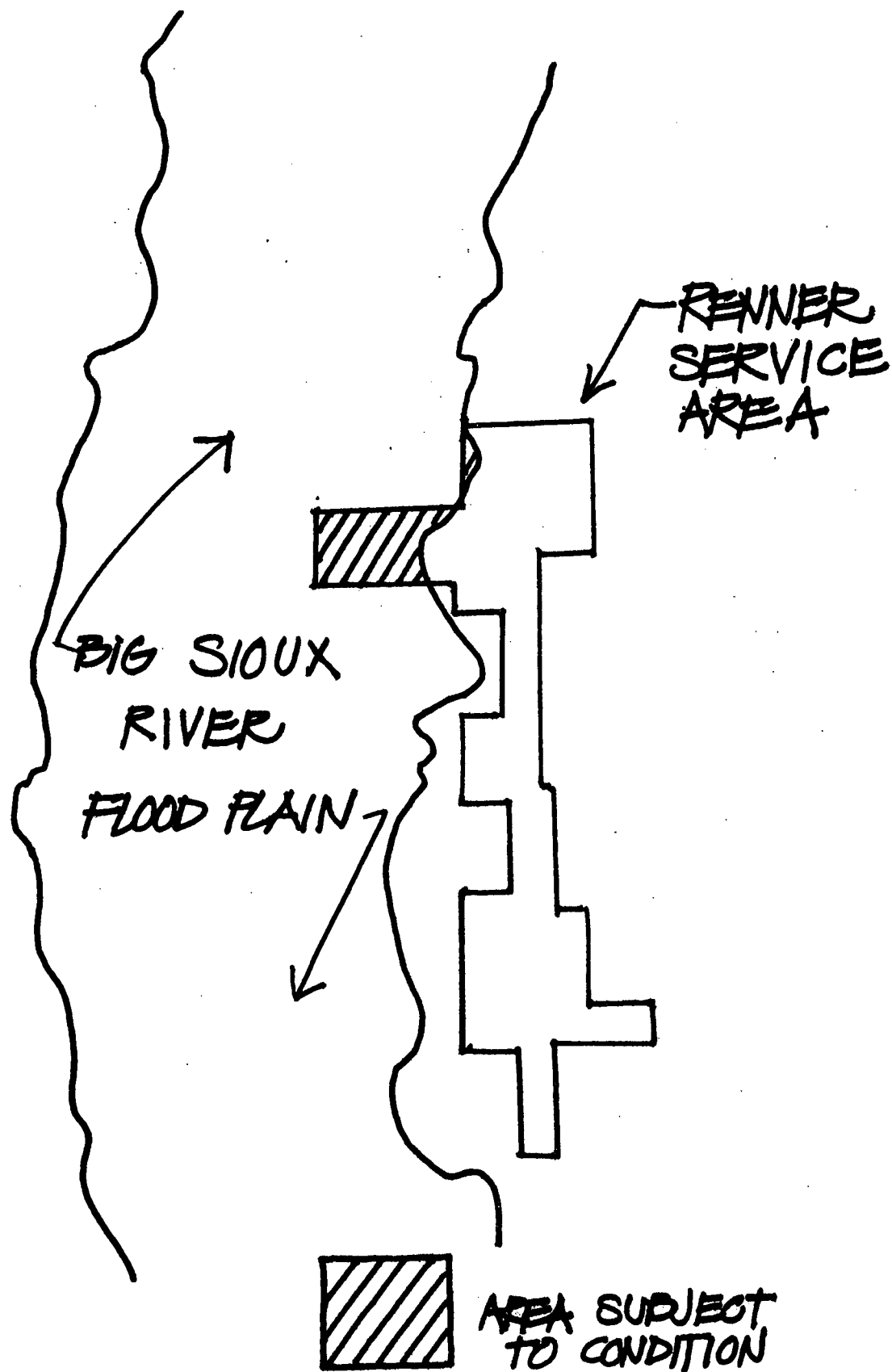
The proposed project will consist of a collection system of the minimum-recommended capacity to serve all existing residences and four lift stations with force mains to transport the wastes to the City of Sioux Falls for treatment.

The Step I grant was approved by EPA on September 1, 1975. The Step II grant for design was awarded on October 19, 1976, following EPA and State approval. Step III (construction) is scheduled to begin on March, 1977.

The estimated cost for Step II and III is \$693,228. Of this amount, \$519,921 will be paid by EPA; \$34,661 will be paid by the State, and \$138,646 will be paid by Renner.

The Problem

In early 1972, the Minnehaha County Department of Health discovered that the groundwater supply had been contaminated by malfunctioning on-site systems in a number of low-lying areas, including Renner. The results of the County investigation indicated that although health standards had not as yet been violated, serious health hazards could develop if the problem continued unattended. Since most of the proposed service area is located within the recharge zone of a major regional aquifer, it was singled out for special attention. The Minnehaha Planning Commission indicated that no building permits would be issued for new or improvement construction until such time as public sewer facilities were constructed. Only then would the building ban be lifted.



Land Use Issues

Two major land use issues are involved in planning for Renner's wastewater facility needs. The first concerns the question of how to treat that portion of the district located within the 100-year floodplain of the Big Sioux River. The second concerns the question of providing reserve capacity, which may facilitate new growth within the recharge zone of an aquifer which provides the region with drinking water.

Out of the fifty-odd lots subdivided for single family dwelling within the floodplain, thirty-five have already been developed. In July, 1975, the County's Planning and Zoning Commission decided that development of the remaining lots must await the completion of the wastewater treatment system. At this point, new development could locate in the floodplain, provided that it met the requirements of the local floodplain ordinance. However, one year later in July, 1976, the County revised its ordinance to prohibit the location of any new dwelling units within the 100 year floodplain of the Big Sioux River.

The second issue involves determining the proper capacity for the collection system to adequately serve the district's need without unduly inducing new growth. The Renner Sanitary District represents one of the fastest growing areas surrounding the City of Sioux Falls. Federal Census Bureau figures show that Mapleton Township, which includes Renner, grew 44% during the decade of the 1950's and another 41% during the 1960's. By 1970, the population had grown to 1,105 residents. These figures represent a sizeable immigration from the rural areas surrounding Sioux Falls, one of the few urbanizing centers in the region.

Judging from past growth the Consulting Engineer projected future population for the service area to be four times the existing number of 700 residents by 1995. As will be seen below, these projections were not used in final project design primarily because the City of Sioux Falls imposed limits on the quantity of sewage it would accept for treatment from the Renner collection system.

EPA Role

EPA Region VIII first became involved when reviewing the facilities plan and environmental assessment. The Region decided that an EIS would not be necessary and issued a Negative Declaration on August 22, 1975.

Prior to issuing a Negative Declaration, however, EPA and Minnehaha County Planning and Zoning Commission held a series of joint meetings to discuss the secondary impacts the proposed collection system could have on the Big Sioux River floodplain. As a result of these meetings, it was agreed by both the County and the Regional Office that EPA would condition Step II and III grants disallowing connection from any future dwellings within the 100-year floodplain.

EPA's decision to condition the grant was based in part on Executive Order (E.O.) 11296 which states that "all executive agencies responsible for the administration of federal grant.... programs involving the construction of buildings, structures, roads, or other facilities shall evaluate flood hazards in connection with such facilities and....shall, as far as practicable, preclude the uneconomic, hazardous, or unnecessary use of floodplains in such connection."

In addition, EPA's own regulations (40 CFR 6.214(b)(2)) states that:

"If an EPA action may directly cause or induce the construction of buildings or other facilities in a floodplain, the responsible officials shall evaluate flood hazards in connection with these facilities as required by Executive Order 11296 and shall, as far as practicable, consider alternatives to preclude the uneconomic, hazardous or unnecessary use of floodplains to minimize the exposure of facilities to potential flood damage, lessen the need for future Federal expenditures for flood protection and flood disaster relief and preserve the unique and significant public value of the floodplain as an environmental resource."

This section emphasizes the need to consider alternatives to preclude the unnecessary use of floodplains. Further, while E.O. 11296 could be read to apply only to construction arising directly as a result of a Federal grant, Section 6.214(b) expands the scope of the Executive Order to include projects which may "induce" construction of buildings in a floodplain.

In July, 1975, after weighing these considerations, the Regional Office decided that it was permissible to allow existing dwelling units and any units to be built in the future on the platted lots to connect into the system but to preclude connections by any future dwelling units constructed on currently unplatted floodplain land.

The Regional Office interpreted E.O. 11296 and Section 6.214(b) as only affecting that future development which would be considered as being induced by the proposed project, i.e., that which would occur on the unplatted land. However, since the Minnehaha County Planning and Zoning Commission revised their regulations in July, 1976, to prohibit the building of new dwelling units within the floodplain on either platted or unplatted land, they requested that EPA condition the grant so as to uphold the revised county regulation by prohibiting hookups from platted floodplain land as well.

Further rationale for the Regional decision may be found in EPA Program Guidance Memo #50 which states in part that "The policy of the Agency is:

"that environmental assessments and environmental impact statements shall indicate whether secondary effects may contravene Federal, State and local environmental laws and regulations, and plans and standards required by environmental laws or regulations. Where such contravention is possible, the best available data and analytical techniques should be applied to analyzing the likelihood and extent of such violations.

Where careful analysis leads to the conclusion that the secondary effects of a project can reasonably be anticipated to contravene an environmental law or regulation, or a plan or standard required by an environmental law or regulation, the Regional Administrator shall withhold approval of a Step II or Step III construction grant until the applicant revises the plan, initiates steps to mitigate the adverse effects, or agrees to conditions in the grant document requiring actions to minimize the effects."

In the case of Renner, a local ordinance was in effect for the floodplain in question which might have been contravened by the secondary effects of the project. The Regional Office, therefore, established the policy that whenever a proposed service area is subject to a floodplain ordinance, the grant should be conditioned to reinforce the goals and purposes of the ordinance. Thus, if the local ordinance prohibits development within the floodplain, EPA's grant should not make service available to those areas.

Mitigating Measures:

As the first mitigation action, the Region recommended that the service capacity be limited to the 700 existing residents plus a reasonable amount of new growth, instead of the 3,200 residents originally proposed by the consulting engineer in the initial facilities plan. A subsequent agreement initiated by the City of Sioux Falls and signed on September 20, 1976 by the city and the Renner Sanitation District limits the flow of sewage to the Sioux Falls treatment system to an 840 population equivalent over the next 20 years. This amounts to a 20% growth rate through 1996. The system will therefore be designed with an interceptor line of minimum recommended size (8 inches) to serve the area.

As the second mitigation measure, Region VIII conditioned the Step II and Step III grant as follows:

"Within the 100-year floodplain as defined by the official zoning map of the Board of County Commissioners, Minnehaha County, it shall be permissible to only connect existing residential housing as of the date of this grant. Further, any residential construction after the date of this grant, within the 100-year floodplain, shall not connect to this collection system."

Continuing Involvement:

The applicant agreed to the above grant condition on November 1, 1976. The Minnehaha County Planning and Zoning Commission foresees no difficulty in enforcing the provision under its existing floodplain ordinance. The Renner Sanitation District is currently designing the collection system and plans to commence construction by March, 1977.

EAST BAY, CALIFORNIA

EAST BAY DISCHARGERS AUTHORITY
WATER QUALITY MANAGEMENT PROGRAM

Alameda County, California
Project Number: C-06-0868-010

Regional Contact: Director
Water Division
Region IX
San Francisco, California

- | | |
|---------------------------------|--|
| The Project | ◦ Subregional wastewater treatment conveyance and disposal system |
| The Problem | ◦ Shallow shoreline effluent discharges into southeastern areas of San Francisco Bay |
| Land Use Issues | ◦ Increased non-point surface runoff from increased development affecting water quality and critical environmental areas
◦ Projected growth leading to increased VMT and subsequent decline in air quality
◦ Loss of agricultural and open lands
◦ Mudslide and seismic hazards |
| EPA Region IX Points | ◦ EIS process raised the secondary impacts for governmental and public review.
◦ Regional office negotiated with individual communities to develop satisfactory mitigation measures during Step 1 planning. |
| Mitigation Measures | ◦ Step 2 and 3 grants to be conditioned requiring municipalities' implementation of VMT reduction strategies, including transportation control plans and other land use planning measures
◦ Moratorium on hillside development proposed by EPA but not accepted by local government |
| Continuing Regional Involvement | ◦ Final EIS published 8/17/76
◦ Step 2 grant awarded 9/21/76 |
| Sources | ◦ Draft EIS issued December 1975
◦ Final EIS issued August 1976 |

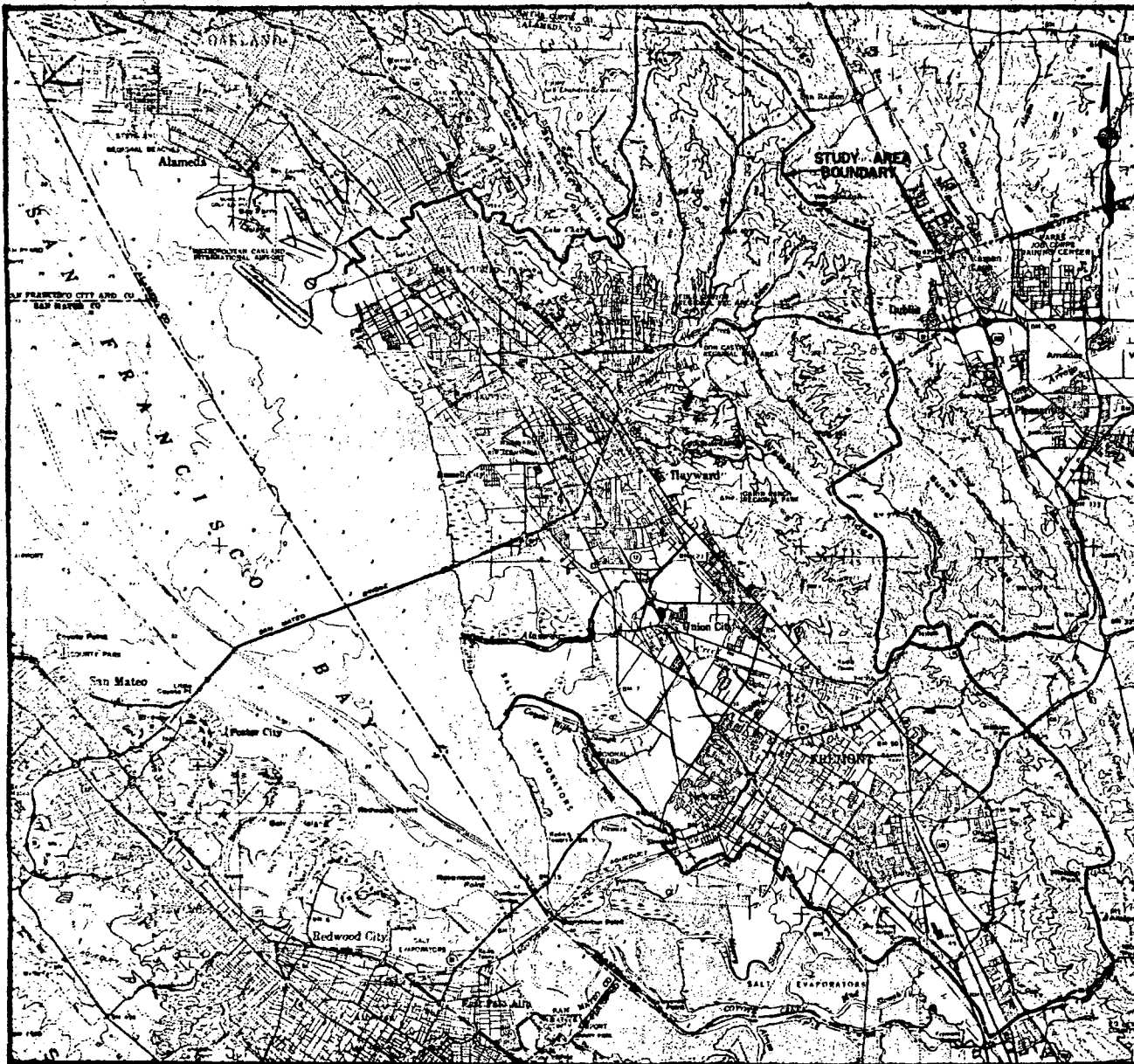
The Project

On February 15, 1974, the East Bay Dischargers Authority (EBDA) was formed as a joint powers authority to implement a subregional wastewater treatment conveyance and disposal program in the East Bay area adjacent to eastern San Francisco Bay (see maps). The program would eliminate six shallow shoreline discharges of moderately treated, chlorinated effluent from the eastern shore of Lower and South San Francisco Bay. The EBDA is composed of two incorporated cities and three sanitary districts in southwestern Alameda County, including the City of San Leandro, the Oro Loma Sanitary District, the Castro Valley Sanitary District, the City of Hayward, and the Union Sanitary District (serving Union City, the City of Fremont, and the City of Newark).

The major portion of the EBDA project includes construction of a force main interceptor and outfall system with a 1995 PWWF design capacity of 185 mgd extending approximately 31 miles from the site of the existing Union Sanitary District Irvington wastewater treatment plant in the south portion of the City of Fremont to a discharge point in north-central San Francisco Bay. It also includes the conversion of Union Sanitary District's existing treatment plants at Irvington and Newark to raw sewage pumping stations and the consolidation of Union Sanitary District's wastewater facilities at an expanded Union-Alvarado treatment plant with a 1987 ADWF design capacity of 19.5 mgd. The three existing plants for the City of Hayward, Oro Loma-Castro Valley Sanitary District and the City of San Leandro, with a combined 1987 ADWF design capacity of 40.5 mgd, will discharge secondary treated effluent to the EBDA interceptor. The interceptor and outfall are sized to take in additional PWWF of approximately 19.7 mgd from the Livermore-Amador Valley Water Management Agency, which consists of the cities of Pleasanton and Livermore, and the Valley Community Services District, all of which are located outside the EBDA service area.

The Problem

Although water quality in the entire Bay system has been improving over the last several years as the result of improved point source control, some beneficial uses of the Bay waters are still impaired. These include a restriction on shellfish harvesting for human consumption. Dissolved oxygen depression and toxicity are other localized problems in the Bay, attributable to municipal discharges. Localized pollution conditions persist around much of the Bay shoreline where surface discharges of treated effluent occur. The



STUDY AREA

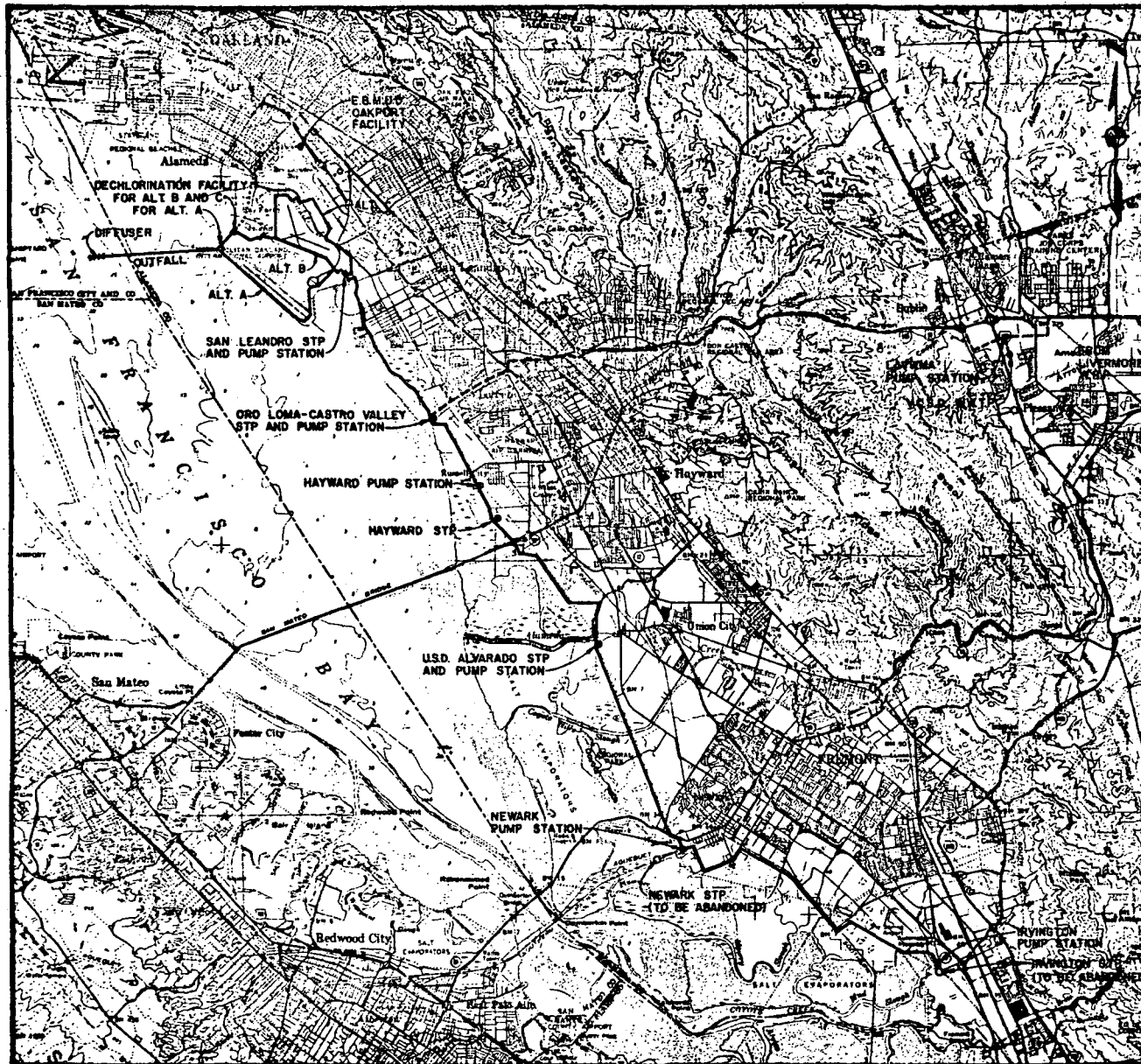
EAST BAY DISCHARGERS AUTHORITY WATER QUALITY MANAGEMENT PROGRAM ENVIRONMENTAL IMPACT STATEMENT

U.S. ENVIRONMENTAL
PROTECTION AGENCY

PACIFIC ENVIRONMENTAL
LABORATORY
SEDNEY/COOKE

SCALE IN MILES
0 1 2 3

RECOMMENDED PHASE I PROJECT



LEGEND:

- PROPOSED E.B.D.A. INTERCEPTOR ALIGNMENT
- PROPOSED L.A.V.M.A. CONNECTION TO THE E.B.D.A. INTERCEPTOR
- PROPOSED E.B.M.U.D. CONNECTION TO THE E.B.D.A. INTERCEPTOR

EAST BAY DISCHARGERS AUTHORITY WATER QUALITY MANAGEMENT PROGRAM ENVIRONMENTAL IMPACT STATEMENT

U.S. ENVIRONMENTAL
PROTECTION AGENCY
PACIFIC ENVIRONMENTAL
LABORATORY
SEDRY/COOKE

SCALE IN MILES
0 1 2

Phase I Project would improve water quality along the east shoreline of the south area of the Bay by providing a deepwater central Bay discharge point to replace shallow shoreline discharges, allowing for increased dilution of effluent. The project also would eliminate two discharges of moderately treated sewage to sloughs upstream from the San Francisco Bay National Refuge and provide wastewater reclamation opportunities in the East Bay.

Land Use Issues

The EIS analysis concluded that the project is not a direct causative element in the location or rate of future growth. However, construction of the wastewater treatment system will remove existing constraints to development and accommodate a projected 23.9 percent population increase, from 456,300 persons in 1975, to 565,700 persons in 1995. Many land use impacts resulting from this projected population increase can be classified as secondary land use impacts. These impacts fall mainly into three categories: those affecting water quality and the aquatic environment, those affecting air quality, and those affecting agricultural and open lands.

A population increase could have an indirect impact on non-point sources of pollutants to the South Bay ecosystem, affecting local biology and water quality. Permeable land surfaces would be covered with impermeable surfaces such as streets and buildings. Surface runoff would increase over the next 20 years as development occurs. The main aquatic habitats adversely affected by an increase in surface runoff would be those shoreline areas located in the southern half of the study area. This would include principally the salt marsh, salt pond and mudflat habitats within the present boundaries of the San Francisco Bay National Wildlife Refuge. These habitats provide great potential for human aesthetic enjoyment as open space and are of considerable biological value, providing homes to many species of animals, some of them rare and endangered.

A population increase has the potential of adversely affecting air quality, since the type of development likely to occur would add considerably to the total vehicle miles traveled (VMT) in the area. (Approximately 21.1 million VMT would be generated daily by vehicle trips to, from and within the EBDA study area in 1995. This is a 21 percent increase over 17.4 million VMT in 1975.) Federal air quality standards are presently exceeded in the project service area.

Even assuming certain reductions in air pollutant emissions per VMT over the next 20 years, it appears that Federal standards would continue to be violated.

Residential and industrial development is projected to occur on prime agricultural land in the study area to accommodate the anticipated increase in population. Of the estimated 19,600 acres of land designated for future residential use by local general purpose governments, 5,900 acres are prime agricultural land, of which about 5,000 acres can be expected to be developed during the 1975 to 1995 period. A major portion of the absorbed agricultural land would be in Fremont if the Northern Plain area is allowed to be developed. Projected industrial development would absorb from 250 to 1,100 acres of an additional 3,160 acres of prime agricultural land which is now designated for industrial use by existing public policy.

Other potential indirect impacts include increased mudslide and seismic damage resulting from development of areas both west and east of the presently developed corridor.

EPA Role

Planning for the Phase 1 Project officially began in 1971. The preliminary steps of the Facilities Planning Stage were completed prior to EPA involvement. On November 12, 1974, EPA made a Step 1 grant offer to EBDA for the eligible portion of EBDA's facilities planning, as well as other preliminary planning.

EPA's review of the environmental assessment required of EBDA revealed an insufficient investigation of possible secondary land use issues. As a result of the environmental review, EPA made the decision to issue an EIS and asked the EBDA member agencies to submit mitigation proposals for land use issues identified during EIS preparation. As a result of the mitigation proposals, resolutions were passed by the local general purpose governments to perform additional studies, implement specific infrastructure investment proposals, and implement land use measures. The applicant, EBDA, will be required by Step 2 and 3 grant contract conditions to take all reasonable steps to achieve implementation of these measures.

Mitigation

Although the new longer outfall pipe is expected to improve water quality along the east shore of the Bay, there is no existing plan for mitigating the project's secondary land use impacts on water quality and the aquatic environment. Mitigation is however expected to be accomplished by implementing the Bay Area 208 Areawide Waste Management Plan.

The EPA regional office has suggested curtailing the loss of agricultural and open lands by deferring any further development on large scale sites with prime agricultural soils until completion of a study of the economic value and need for such lands. The regional office has also proposed that the communities reevaluate the areas now designated for residential development on the hillsides, with special reference to potential safety hazards for road and utility linkages needed to service those areas in an effort to mitigate possible mudslide and seismic hazards. However, there is no indication that the grantee or general purpose governments will agree at this time to the mitigation measures, and Region IX feels that it does not have the authority to require the measures.

Primary emphasis was placed on reducing projected VMT within the EBDA Study Area. A number of Mitigation measures were proposed by the regional office as elements within two major strategies. The first strategy is in two parts, Transportation Mitigations A and B: Transportation Mitigation A is a change or improvement of existing transportation facilities and services and Transportation Mitigation B is a plan for auto use disincentives. The second strategy, Land Use Mitigation C, achieves impact reduction by altering current land use policies or regulations. Best mitigation results occur when Mitigation C is used in conjunction with Mitigations A and B.

The following charts have been prepared which show the main mitigation measures agreed to by the local general purpose governments, suggested by EPA. Because some condensing and rewording was necessary to prepare the charts, some measures may appear different from the original measures submitted. A more exact assessment of measures actually planned for mitigation by the cities is available in the Final EIS. A key feature of the mitigation measures is a commitment to participate in the area-wide Air Quality Maintenance Planning effort.

VWT Reduction Strategy # 1
 Transportation Mitigation A
 Improvement of Existing Transportation Facilities

	San Leandro	Hayward	Union City	Newark	Fremont
1. Extend Rapid Rail Service; add new service areas, bus stops and/or routes.		x		x	x
2. Provide transit rights-of-way: peak or 24 hr. transit lines and busways.		x		x	
3. Redesign terminals, stations, and bus stops to improve functionality.	x	x			x
4. Establish local transit service districts and improve existing service.	x	x	x	x	x
5. Incorporate subscription and charter service into local transit. Incorporate subscription/vanpool services at large employment centers.		x	x	x	
6. Develop bicycle routes.	x	x	x	x	x
7. Permit and encourage use of local, short-range, low-power vehicles.	x	x			
8. Coordinate schedules, fares, and transfers among systems.	x	x		x	
9. Improve services information system.		x			
10. Improve transit pricing structures, including generally lowered fares, and reimbursement of transit costs to shoppers.	x	x			

VMT Reduction Strategy # 1
 Transportation Mitigation B
 Auto Use Disincentives

	San Leandro	Hayward	Union City	Newark	Fremont
1. Control parking supply. Reduce and limit public and employee parking on-street and in suburban lots.	x	x	x	x	x
2. Promote car-pooling by providing special bus/carpool lanes, preferential job sites parking, other free parking					
3. Encourage/require flexible and staggered work hours.		x			
4. Make downtown area parking requirements (for city planning) substantially less than city-wide standards.		x			x

VMT Reduction Strategy # 2
 Land Use Mitigation C

	San Leandro	Hayward	Union City	Newark	Fremont
1. Increase planned intensity of all land use activities near transit stations and major transit corridors.	x	x	x		
2. Require minimum levels of land use intensity to be developed near transit stations and major transit corridors.	x			x	x
3. Phase location of development with respect to transit access.	x	x		x	
4. Increase planned intensity and variety of land use activities in major activity centers.	x	x	x	x	x
5. Regulate minimum levels of land use intensity to be developed in major activity centers.					
6. Have site plan review allowing city to require buffer zones.	x	x			

FAIRFIELD, CALIFORNIA

Fairfield-Suisun Wastewater Conveyance, Treatment
and Disposal Facilities, Solano County, California

Project Number : C-06 0810-01

Regional Contact: Director, Water Division
Environmental Protection Agency
Region IX
San Francisco, California 94111

- | | |
|-------------------------------------|---|
| Project Description | o Interceptor sewers and treatment facilities for four sub-areas in Solano County, California |
| Problem | o Inadequate conveyance and treatment facilities resulting in deteriorated surface and ground-water quality |
| Land Use Issues | o Pressures for increased industrial and low density residential development on or near Suisun Marsh

o Pressures for development of nearby agricultural areas with resulting air quality and wildlife impacts |
| EPA Region IX
Involvement Points | o Review of applicant's final environmental assessment

o Meetings with local officials directed at ensuring preservation of the Marsh |
| Mitigating Measures | o Step III grant conditioned on not providing service to new development on or immediately adjacent to Suisun Marsh pursuant to pending State protection legislation |
| Continuing Involvement | o The State of California passed the Suisun Marsh Preservation Act of 1974 which defined interim marsh and buffer zone boundaries and mandated preparation of a marsh protection plan. Hearings are presently being conducted on this plan. |

Project Description

The Project:

The project involves a step III grant for construction of interceptor/force mains, treatment and disposal facilities for four sub-areas in Solano County, California. The service area of roughly 100 square miles is a prime target for future residential and industrial growth by virtue of low land prices and excellent nearby transportation facilities. The area encompasses a major military base (Travis Air Force Base), two cities which support the military base, two undeveloped valleys that are presently used for agriculture and grazing and Suisun Marsh which is a major recreational area.

The total bid cost of the project is \$45,122,678 of which EPA will provide \$20,316,888, the State of California will provide \$3,386,149, Anheuser-Busch will provide \$10,000,000 and the cities and county will provide \$11,419,641. The treatment plant is sized for ten years expected development (8.85 mgd + 1.5 mgd for Anheuser-Busch) and the pipelines will be sized for twenty years expected growth. The wastewater will be disposed of in two ways: a portion will be conveyed to the Solano Irrigation District for reuse via agricultural irrigation and the remainder will be discharged to Boyton slough in Suisun Marsh for flow augmentation. (The Bureau of Reclamation is conducting a study with a number of state agencies to determine how the effluent might be used to benefit marsh wildlife).

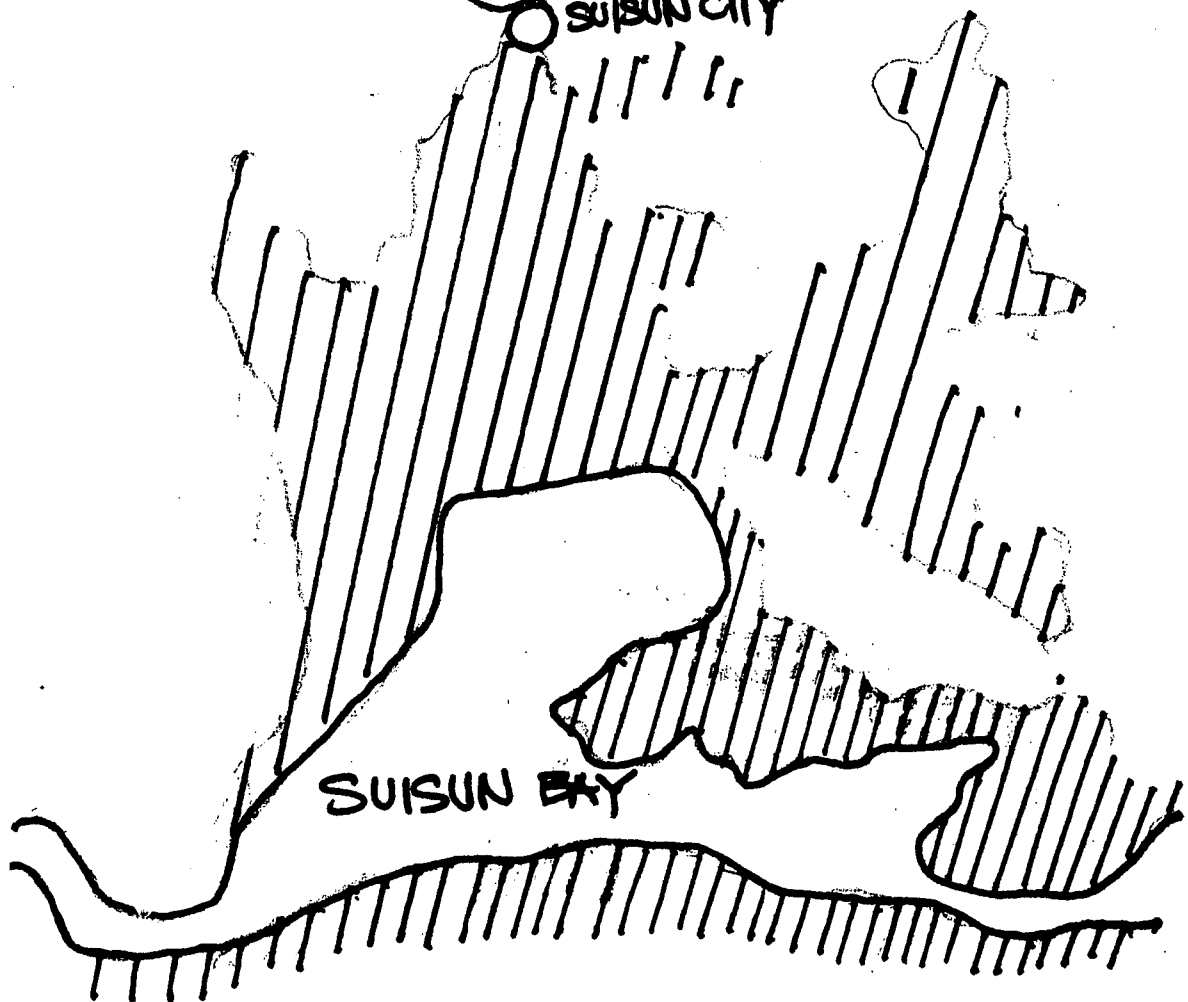
The Problem:

The three existing plants serving the cities of Fairfield and Suisun and Travis Air Force Base were incapable of providing the treatment necessary (BOD of 10 mg/l, chlorine residual of 0.0) to protect the waters of Suisun, Honker and Grizzley Bays. Fringe area development serviced by on-site systems threatened groundwater quality. Cost-effectiveness analysis indicated that the best alternative would be a regional treatment and disposal system. The regional system will provide filtration and dechlorination in addition to secondary treatment.

← SUISUN
MARSH

AIR FORCE
BASE

FREED
CITY
SUISUN CITY



Land Use Issues:

Suisun Marsh, which lies above Suisun, Grizzley and Honker Bays on the San Francisco Bay-estuary complex, encompasses a total of roughly 84,000 acres. This area consists of about 44,000 acres of leveed or partially leveed islands and perimeter areas surrounded by tidal channels, permanent ponds, and other open water areas. It is the largest contiguous marsh in the continental United States and represents about 10 percent of the remaining natural wetlands in California.

The Marsh, which serves as a principal wintering ground for migratory birds using the Pacific Coast Flyway, supports as much as twenty percent of California's winter water fowl population. This includes a significant resident water fowl population as well as a wide variety of other aquatic and terrestrial species including many designated as rare or endangered. About 38,500 acres is maintained as a water fowl hunting area of which about 28,000 acres are under the control of private hunting clubs and 10,500 acres are under the control of the State for game management purposes.

The land use issues concern direct development pressures on the marsh and its buffer zones, and indirect impacts from continued low density development of Green and Suisun Valleys. Other concerns include loss of agricultural land, wildlife habitat, and open space, and increased air pollution from fringe area commuter traffic.

The service area is in predominately private ownership. It is mid-way between the major cities of Sacramento and San Francisco but is beyond commuting distance to either area. The cities of Pittsburg, Antioch and Concord are located across Suisun Bay to the south. Plans have been drawn up and set aside periodically for the last twenty years for a major new bridge which would connect the cities north of the Bay with those to the south. Such a bridge would have a profound impact on service area development. Also under consideration have been a \$1 billion chemical plant, a \$1/2 billion refinery and a major nuclear power facility. Thus far, the only major industrial facility to obtain approval from all regulatory agencies is an Anheuser-Busch brewery under construction west of Fairfield and adjacent to the treatment site. Because of stringent discharge requirements, poor soils and high water tables, new development was dependent on the expansion and construction of new wastewater facilities. Although much of the service area was and is zoned for development, local land use plans did not provide for protection of the marsh or adequately recognize the need for a protective buffer zone.


EPA Role and Mitigation:

The importance of the Marsh and the need for its protection under both NEPA and the Agency's Wetlands Policy was stressed by EPA staff from the first pre-application meeting in September, 1972. The applicant's environmental consultants were asked to pay particular attention to the nature and extent of the secondary impacts of the proposed facilities.

On May 7, 1973, EPA addressed a letter to the applicant noting the inadequacy of the environmental assessment and again stressed the importance of resolving secondary impact questions relating to the Marsh and air quality. However, on June 11, 1974, the State of California certified the project to EPA without conditions. Faced with considerable pressure to correct existing water quality problems and not delay project construction, EPA offered the construction grant on August 2, 1974, but with the following condition:

Utilization of sewage treatment capacity in facilities constructed pursuant to this grant agreement shall be prohibited to residential, commercial, and industrial wastewater services initiated after the execution of this agreement that are located within the Suisun Marsh Protection Zone as it may in the future be defined by the California Legislature in any legislative enactment designed to protect the environmental quality of the Suisun Marsh area. Pending any such definition of the zone boundaries by the California legislature the boundaries shall be those as stated by the California Department of Fish and Game in its study entitled "A Land Protection Plan for the Suisun Marsh" dated April 1, 1974.

The "Legislative enactment" referred to in the grant condition was a reference to the Suisun Marsh Preservation Act pending before the California State Legislature at the time the grant was issued. The Regional Office felt that the condition fulfilled EPA's responsibilities under NEPA and EPA's Wetlands Policy to protect the Marsh from secondary impacts which might be induced by the project.



Continuing Involvement

In late August, 1974, the Governor signed the Suisun Marsh Preservation Act of 1974. The Act recognized the Marsh as a unique and irreplaceable resource. It also required that a "Suisun Marsh Protection Plan" be prepared by December 1, 1976, and placed restrictions on incompatible development. The Act also authorized purchase of critically important fish and wildlife habitat found to be threatened by development or conflicting use.

NORTH FREEMONT, IDAHO

NORTH FREMONT COUNTY, ISLAND PARK AREA
WASTEWATER FACILITIES
FREMONT COUNTY, IDAHO

PROJECT NUMBER : C-160186-01

REGIONAL CONTACT: Richard Thiel, Chief
Environmental Impact Section
Environmental Protection Agency
Region X
Seattle, Washington

- | | |
|------------------------------------|--|
| Project Description | o Individual collection, interceptor and treatment facilities for four sub-areas in North Fremont County, Idaho |
| Problem | o Contamination of surface and groundwater by inadequate on-site septic systems |
| Land Use Issues | o Pressures for increased recreational development |
| | o Protection of environmentally sensitive areas for fishing and wildlife management |
| EPA Region X
Involvement Points | o Pre-application meetings between Region X and the applicant |
| | o Field study review of project's potential impacts |
| | o Preparation of a draft and final Environmental Impact Statement |
| Mitigating Measures | o Separate facilities for sub-areas built in phases in lieu of one large Regional plant with long interceptors |
| | o Step II and III grant conditioned on County compliance with State law requiring development of growth controls and a comprehensive land use plan |
| Continuing Regional
Involvement | o Step II grant awarded June 30, 1976 |
| | o Fremont County accepted grant conditions and has prepared a draft comprehensive plan |
| Sources | o Draft EIS North Fremont County, August, 1975 |
| | o Final EIS North Fremont County, January, 1976 |

PROJECT DESCRIPTION

The Project

The proposed project involves a Step II grant for design of individual collection, interceptor and treatment facilities for each of four sub-areas in the Island Park area of North Fremont County, Idaho. The facilities will be located in areas of concentrated existing or predicted future development.

The major use within the service area is recreational. Its nearby location to Grand Teton and Yellowstone National Parks make it a popular summer and winter resort area. The proposed service area is composed of 596,000 acres owned by the U.S. Forest Service and the Bureau of Land Management, 1,700 acres are owned by the State of Idaho, leaving only 2,300 acres in private ownership.

The total cost of the project is estimated at \$6,941,500.* From this total cost, EPA will contribute 75% of the eligible cost of Phase I or \$2,102,500, the State of Idaho will finance 15% of the eligible cost and Fremont County will contribute the remaining balance. Since the project will be constructed in phases, costs will be spread over twenty years. The first phase entails the construction of a collection system, interceptor and treatment facility for the first of four sub-areas. Similar facilities will be built in later phases for the three remaining areas. The capacity for each sub-regional system will range from roughly 50,000 gpd to 250,000 gpd.

The Problem:

Both EPA and County water quality studies have documented contamination of surface and groundwater from malfunctioning on-site sewage systems and septic tank discharges of inadequately treated domestic sewage. Groundwater and domestic well tests indicate considerable contamination of subsurface water by septic tank drainfield effluent.

With the exception of a small evaporative lagoon serving the Forest Ranger Station, all treatment units in the Study Area are individual septic tanks with drainage field systems. One major reason for the malfunction of many of these systems has been attributed to the high groundwater table found in most of the developed areas.

* This figure includes the total cost of all phases of the project as well as the collection system not funded under the EPA grant.

The existing conditions resulted in levels of fecal coliform within surface waters including segments of streams and lakes in excess of State and Federal standards. The State Department of Fish and Game reported localized trout dieoffs in late winter in the area's major sportfishing lake because trout were forced by anaerobic conditions to over-concentrate in warmer spring waters. Nutrients from septic tank fields as well as from natural sources are presumed to have caused the heavy blooms of blue-green algae that resulted in the oxygen deficiencies.

Land Use Issues

Northern Fremont County is an environmentally sensitive and unique area. The geography is that of a high plateau with lakes, meadows, marshes and timber stands interlaced by high quality creeks and streams, within the headwaters of the Snake River. Much of the area can be considered to have the wilderness character of parts of adjacent Yellowstone and Teton National Parks. Moose, eagles, rare swan and cranes, wolves, wolverine, and other unique wildlife are found, and substantially all of the surface waters support highly desirable sport fisheries.

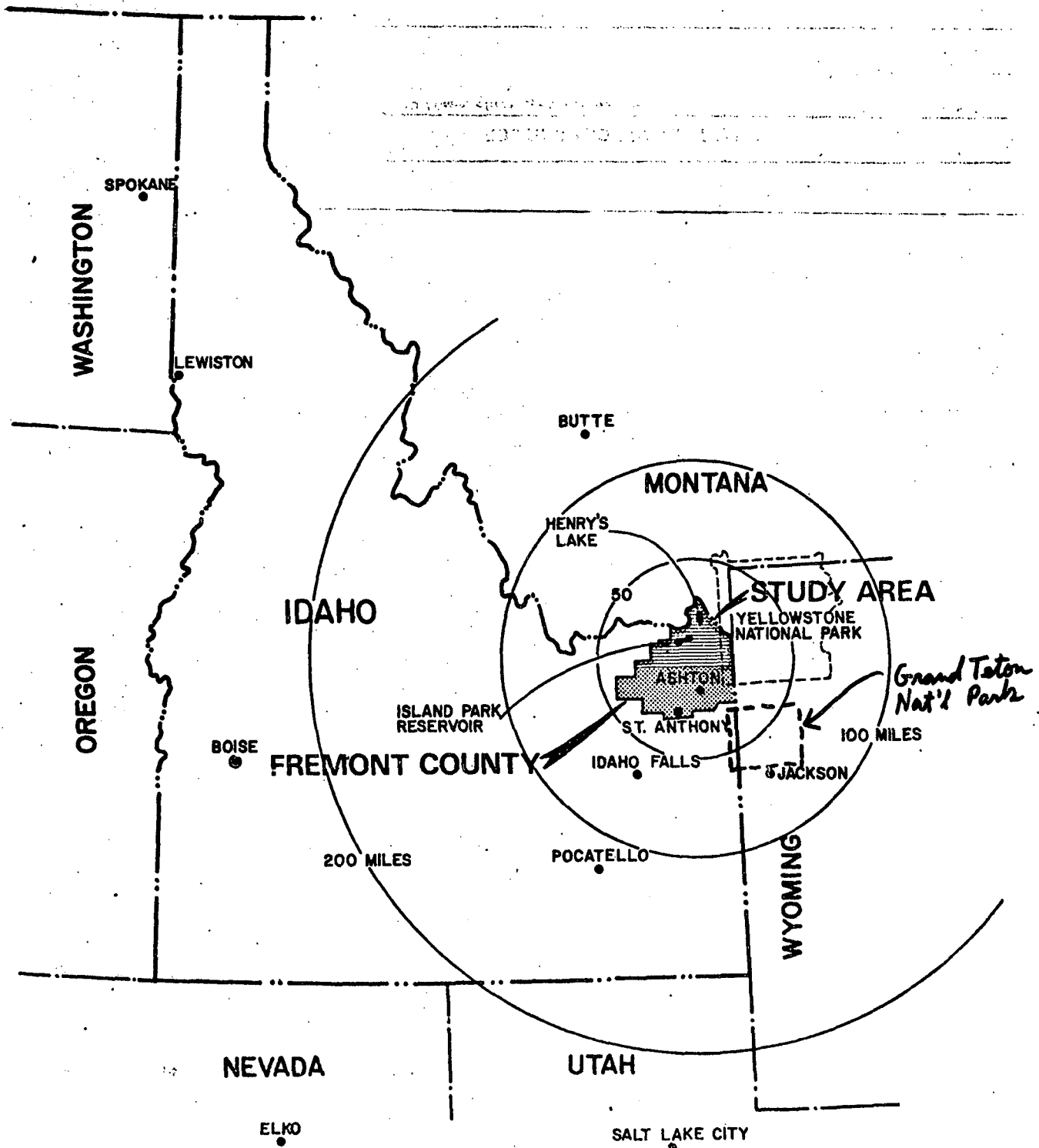
Significant private and public recreational development have made this a popular recreation site in summer. Now, with the advent of the snowmobile, it attracts a considerable number of people in the winter and has prompted seasonal residents to winterize their summer houses. Pressures for new development have risen in recent years due, among other things, to the close proximity to two heavily used national parks, Yellowstone and Teton. Relatively low land values and minimal zoning or other land use controls have facilitated unplanned, sprawl development. Unless properly planned and managed, much of the projected growth for the area will occur on environmentally sensitive lands with serious adverse impacts on vegetation, wildlife habitats and degradation of surface and groundwater supplies.

Recently, however, the County Planning Commission passed a subdivision ordinance requiring State Department of Health approval of the sewage system for all new subdivision proposals.

Since most of the land in private ownership has a high water table, making it unsuitable for on-site systems, and since developers have been reluctant to construct treatment facilities for their subdivisions, many developers are awaiting completion of the new public system. Consequently, the location and size of that system will be a determinant of where new growth will occur.

NORTH FREMONT COUNTY IDAHO

CANADA



NORTH
FREEMONT
COUNTY

SUB-AREA

HENRY'S
LAKE

← HENRY'S
FORK

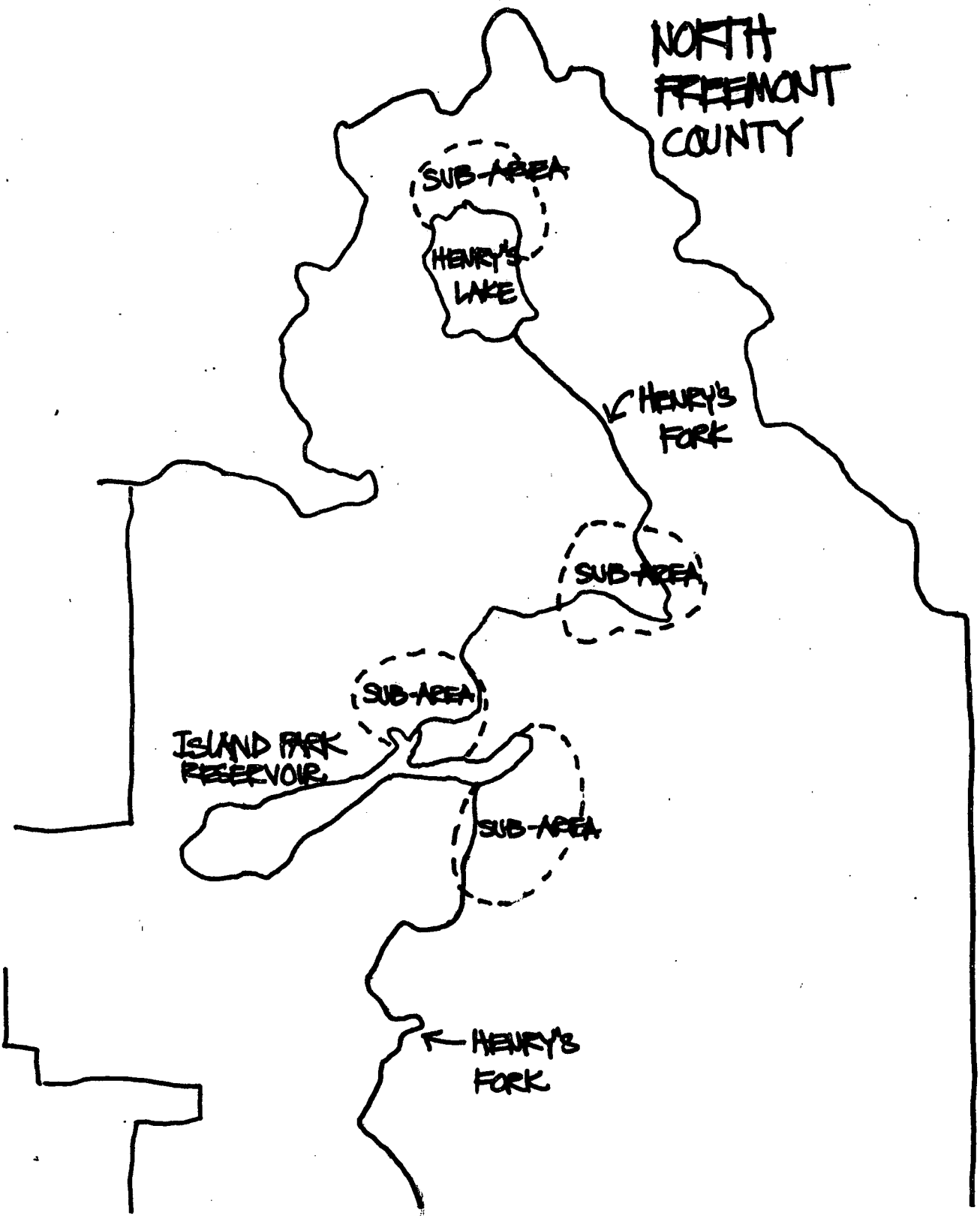
SUB-AREA

SUB-AREA

ISLAND PARK
RESERVOIR

SUB-AREA

← HENRY'S
FORK



EPA Role

The need for a thorough environmental assessment was discussed with the grantee and consultant in pre-application meetings held in the spring of 1974. The possibility of controversy, the nature of the sensitive environment, the potential for significant land use changes identified the project from its early stages as a candidate for an environmental impact statement.

In the fall of 1974 the Regional Office conducted a field study review, evaluating secondary impacts of the proposed project. The field study resulted in a recommendation to the Regional Administrator that an EIS be prepared. After review of the Step I plan, the Regional Administrator concurred, declaring that the EIS should address the following concerns:

1. The extent to which continued recreational development will impact the area resources;
2. The extent to which the availability of sewerage facilities will facilitate land use changes or growth rate changes;
3. The absence of local land use planning which might serve to control development or mitigate adverse impacts; and
4. Significant adverse secondary effects on the ecosystem in general and especially on fish and wildlife habitat.

A Draft EIS was prepared in August, 1975 and the Final was later issued in January of 1976. The EIS process served as a vehicle to bring out comments from a number of agencies organizations and concerned individuals. Concern for adequate mitigation of secondary land use impacts was voiced in many of the responses to the Draft EIS.

The U.S. Department of the Interior stated in a letter dated November 11, 1975, commenting on the Draft EIS, "Much of what now makes the Island Park Area (Fremont County) a scenic, and aesthetic and recreational attraction would be lost if the sewage system is constructed and development of further sub-divisions is allowed. A more detailed discussion of the proposed project's secondary environmental impacts on the quality of recreational experiences in the Island Park Area would aid in project assessment".

The State Department of Health and Welfare recommended in their November 3, 1975 letter that the Final EIS should address the secondary impacts of induced growth in much greater detail than that given in the Draft. The letter went on to offer the following comment: "We must emphasize that to be completely effective the project should be constructed in conjunction with a comprehensive land use plan for the area. This would serve to limit growth and development in the area and insure that the project achieves its objectives of reducing water pollution".

The State League of Women Voters also indicated a concern about unplanned sprawl and the secondary land use impacts of the proposed project. In their October 27, 1975 letter they stated.... "we do wonder about the statement that development will tend to be confined to those areas having a regional system. May we suggest that without proper countywide planning and zoning, development is going to continue wherever an enterprising developer believes it is economically feasible". These and other comments served to highlight to possible secondary impacts involved and underlined the need for effective mitigation measures.

Mitigating Measures

The major secondary impacts were resolved both through changes in the design and location of the facilities themselves and through conditioning the Step II and Step III grant on the county adopting growth management measures.

As the first mitigation measure, after early consultation with the Regional Office, the consultant decided to plan for smaller treatment systems to serve the problem areas of greatest development activity as opposed to the originally proposed single regional system with connecting interceptors. This decision would tend to limit induced growth to areas previously committed to development rather than encouraging sprawl along interceptor routes or into environmentally sensitive areas.

The smaller systems would be developed in phases. The construction of each phase would depend on the severity of the local contamination problem and the size of the population to be served. The combined design technique of phased construction and individual facilities with limited reserve capacity would minimize the problem of induced growth associated with large facilities with uncommitted excess capacity.

Preliminary cost estimates were prepared for a large regional system alternative serving all four sub-areas. No formal cost/benefit analysis

was performed on this alternative, however since it was screened from further consideration during early phases of facility planning. This was done for several practical reasons. (1) There was considerable separation and distance between sub-areas with growth being clearly concentrated in the identified sub-areas. Transmission costs would be prohibitive and technical problems would result when trying to move low off peak volumes of sewage long distances. (2) Sub-regional phasing recognized the practical limits of cost to users. User charges of a large regional system would have been prohibitive during early development of service areas with scarce concentration of connections. (3) Sub-regional phasing recognized the reality of the State of Idaho's priority system, i.e., with limited funds available to the State for the construction grant program and with the project serving a developing recreational area, the likelihood of obtaining priority for full funding of a large regional system was questionable. Phasing permitted funding over a several year period. (4) In the absence of land use controls in an area with significant growth potential, sub-regional phasing permits on-going evaluation of growth impacts and adjustment of projects for later phases as necessary. This in itself is a meaningful measure available to mitigate adverse impacts. If adverse impacts do result and do appear to be unavoidable, later phases of the project could be reconsidered by both the applicant and EPA.

The grant condition constituted the second mitigating measure. It was evident that a certain amount of growth would occur within the service area of the proposed sub-regional facilities. In the absence of planning, such growth would predictably occur in a haphazard fashion with adverse environmental impacts. The key component in managing this growth so as to avoid further environment degradation was the extent to which Fremont County developed, adopted and implemented an effective comprehensive land use plan with companion zoning ordinances.

With proper planning and management, EPA felt that the provision of a sewerage system would help protect environmental quality while at the same time insure that development occurred in a manner which would be sensitive to environmental problems. The Regional Office therefore concluded that the following grant condition was necessary:

Fremont County shall, in accordance with the State of Idaho Local Planning Act of 1975 (Chapter 65, Title 67, Idaho Code), develop and properly adopt a com-

prehensive land use plan and implementing zoning ordinances applicable to the project area. The comprehensive plan shall include the participation of land use management agencies in its formulation, implementation, and regular review and evaluation. Agencies considered for participation shall include such agencies as the Idaho State Land Board, the Idaho Department of Fish and Game; the Forest Service, U.S. Department of Agriculture, and the Bureau of Land Management, U.S. Department of the Interior. This condition shall be applicable to the Step II design grant and, as the project progresses, shall be carried over to apply to the Step III construction grant award. Payment beyond 80% on the Step III construction grant shall be contingent upon the satisfaction of this condition.

Regional justification for requiring that the county adopt a comprehensive plan and zoning ordinance was based on requirements in the Idaho Local Planning Act of 1975. The Act calls for each county planning commission to adopt a comprehensive land use plan. Section 67-6508 of the Idaho Code specifies that:

"It shall be the duty of the planning or planning and zoning commission to conduct a comprehensive planning process designed to prepare, implement, and review and update a comprehensive plan...." (emphasis added).

In similar language, Section 67-6511 requires each county governing board to adopt a zoning ordinance:

"Each governing board shall, by ordinance.... establish within its jurisdiction one (1) or more zones or zoning districts where appropriate. The zoning districts shall be in accordance with the adopted plan". (emphasis added).

The Idaho Local Planning Act was unclear, however, about 1) what actions the State might take in the event that a county did not develop the required measures or 2) the question of establishing a timetable for counties with no planning or zoning to comply with the requirements of the Act. Nonetheless, the Region felt that it was clearly the intent of the Act to institute comprehensive planning and zoning at the local level and that the grant condition reinforced that intent.

Continuing EPA Involvement

Due to heavy consultant workload (and partially due to loss of the consultants office in the Teton Dam failure and flooding), the Step II grant was not awarded until June 30, 1976. The County, State and Federal agencies accepted the grant conditions as proposed in the Final EIS. The conditions were therefore included in the Step II grant. Fremont County has prepared a draft of their comprehensive plan. The County Planning and Zoning Commission has established community development goals and has scheduled hearings on the proposed plan for this Fall.

WETLANDS POLICY STATEMENT

ENVIRONMENTAL PROTECTION AGENCY

PROTECTION OF NATION'S WETLANDS Policy Statement

Purpose.—The purpose of this statement is to establish EPA policy to preserve the wetland ecosystems and to protect them from destruction through waste water or nonpoint source discharges and their treatment or control or the development and construction of waste water treatment facilities or by other physical, chemical, or biological means.

The wetland resource.—a. Wetlands represent an ecosystem of unique and major importance to the citizens of this Nation and, as a result, they require extraordinary protection. Comparable destructive forces would be expected to inflict more lasting damage to them than to other ecosystems. Through this policy statement, EPA establishes appropriate safeguards for the preservation and protection of the wetland resources.

b. The Nation's wetlands, including marshes, swamps, bogs, and other low-lying areas, which during some period of the year will be covered in part by nat-

ural nonflood waters, are a unique, valuable, irreplaceable water resource. They serve as a habitat for important fur-bearing mammals, many species of fish, and waterfowl. Such areas moderate extremes in waterflow, aid in the natural purification of water, and maintain and recharge the ground water resource. They are the nursery areas for a great number of wildlife and aquatic species and serve at times as the source of valuable harvestable timber. They are unique recreational areas, high in aesthetic value, that contain delicate and irreplaceable specimens of fauna and flora and support fishing, as well as wildfowl and other hunting.

c. Fresh-water wetlands support the adjacent or downstream aquatic ecosystem in addition to the complex web of life that has developed within the wetland environment. The relationship of the fresh-water wetland to the subsurface environment is symbiotic, intricate, and fragile. In the tidal wetland areas the tides tend to redistribute the nutrients and sediments throughout the tidal marsh and these in turn form a substrate for the life supported by the tidal marsh. These marshes produce large quantities of plant life that are the source of much of the organic matter consumed by shellfish and other aquatic life in associated estuaries.

d. Protection of wetland areas requires the proper placement and management of any construction activities and controls of nonpoint sources to prevent disturbing significantly the terrain and impairing the quality of the wetland area. Alteration in quantity or quality of the natural flow of water, which nourishes the ecosystem, should be minimized. The addition of harmful waste waters or nutrients contained in such waters should be kept below a level that will alter the natural, physical, chemical, or biological integrity of the wetland area and that will insure no significant increase in nuisance organisms through biostimulation.

Policy.—a. In its decision processes, it shall be the Agency's policy to give particular cognizance and consideration to any proposal that has the potential to damage wetlands, to recognize the irreplaceable value and man's dependence on them to maintain an environment acceptable to society, and to preserve and protect them from damaging misuses.

b. It shall be the Agency's policy to minimize alterations in the quantity or quality of the natural flow of water that nourishes wetlands and to protect wetlands from adverse dredging or filling practices, solid waste management practices, siltation or the addition of pesticides, salts, or toxic materials arising from nonpoint source wastes and through construction activities, and to prevent

violation of applicable water quality standards from such environmental insults.

c. In compliance with the National Environmental Policy Act of 1969, it shall be the policy of this Agency not to grant Federal funds for the construction of municipal waste water treatment facilities or other waste-treatment-associated appurtenances which may interfere with the existing wetland ecosystem, except where no other alternative of lesser environmental damage is found to be feasible. In the application for such Federal funds where there is reason to believe that wetlands will be damaged, an assessment will be requested from the applicant that delineates the various alternatives that have been investigated for the control or treatment of the waste water, including the reasons for rejecting those alternatives not used. A cost-benefit appraisal should be included where appropriate.

d. To promote the most environmentally protective measures, it shall be the EPA policy to advise those applicants who install waste treatment facilities under a Federal grant program or as a result of a Federal permit that the selection of the most environmentally protective alternative should be made. The Department of the Interior and the Department of Commerce will be consulted to aid in the determination of the probable impact of the pollution abatement program on the pertinent fish and wildlife resources of wetlands. In the event of projected significant adverse environmental impact, a public hearing on the wetlands issue may be held to aid in the selection of the most appropriate action, and EPA may recommend against the issuance of a section 10 Corps of Engineers permit.

Implementation.—EPA will apply this policy to the extent of its authorities in conducting all program activities, including regulatory activities, research, development and demonstration, technical assistance, control of pollution from Federal institutions, and the administration of the construction and demonstration grants, State program grants, and planning grants programs.

WILLIAM D. RUCKELSHAUS,
Administrator.

MARCH 20, 1973.

[FR Doc.73-3579 Filed 5-1-73; 8:45 am]



Program Requirements Memorandum PRM No. 75-26

Program Guidance Memo #50

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

JUN 6 1975

OFFICE OF THE
ADMINISTRATOR

SUBJECT: Consideration of Secondary Environmental Effects in
the Construction Grants Process

FROM: Russell E. Train
Administrator (A-100)

TO: Regional Administrators
Regions I - X

Purpose

This policy statement provides guidance on consideration of secondary environmental effects during review of plans to construct publicly-owned treatment works with Federal grants under Title II of the Federal Water Pollution Control Act as amended.

Background

Municipalities are required when planning for construction of publicly-owned treatment works to evaluate the environmental impacts of the construction and subsequent operation of the treatment works and prepare an environmental assessment. The Agency reviews the environmental assessment along with the rest of the facility plan and ultimately either issues a negative declaration or, if the project is anticipated to have significant adverse primary or secondary environmental effects or to be highly controversial, prepares an environmental impact statement.

Primary effects are those directly related to construction and operation of the project. Secondary effects of a project are (1) indirect or induced changes in population and economic growth and land use, and (2) other environmental effects resulting from these changes in land use, population, and economic growth. Secondary effects can be of great importance to the environment but normally are much more difficult to predict in advance than primary effects.

This guidance is aimed at assuring that secondary effects of a project are analyzed and taken into account during the grants process in comparable manner throughout the ten regions.

Evaluation of Secondary Effects

The policy of the Agency is that environmental assessments and environmental impact statements shall analyze secondary as well as primary environmental effects, and shall indicate whether such effects may

contravene Federal, State and local environmental laws and regulations, and plans and standards required by environmental laws or regulations. Where such contravention is possible, the best available data and analytical techniques should be applied to analyzing the likelihood and extent of such violations.

Projects which have passed through the initial planning stage but have not yet received a grant for construction should also be assessed in accordance with this policy. Particular attention should be given to large projects to be phased over several years so that the funding of the current project does not commit EPA to future actions which will result in significant adverse effects on the environment.

Actions to be Taken Before Grant is Awarded

Where careful analysis leads to the conclusion that the secondary effects of a project can reasonably be anticipated to contravene an environmental law or regulation, or a plan or standard required by an environmental law or regulation, the Regional Administrator shall withhold approval of a Step 2 or Step 3 construction grant until the applicant revises the plan, initiates steps to mitigate the adverse effects, or agrees to conditions in the grant document requiring actions to minimize the effects.

Secondary effects may be mitigated by a large variety of actions, including, but not limited to:

- phasing and orderly extension of sewer service
- project changes
- improved land-use planning
- better coordination of planning among communities affected by the project
- sewer use restrictions
- modification or adoption of environmental programs or plans such as Air Quality Maintenance Plans
- improved land management controls to protect water quality, such as sedimentation and erosion control and flood plain management.

Care must be exercised if a condition is to be imposed in the grant document to assure that the requirements are reasonable and that the applicant possesses the authority to fulfill the conditions.

The applicant should be required to demonstrate "good faith" and be clearly moving toward proper mitigative action before the grant is awarded.

Actions to be Taken After Grant is Awarded

The regions should follow-up after a grant is made to ensure that the applicant continues to make progress on mitigative actions and to

meet any special conditions imposed by the grant document. Among the actions which the Regional Administrator may take if the applicant fails to abide by the grant agreement are:

- withhold payments
- refuse to process subsequent grant applications from the municipality
- refuse to approve grants for future phases of the projects
- enter an injunction against the grant recipient
- suspend project work
- terminate the grant and recover unexpended EPA funds

Such action should be continued until satisfactory progress has been made.

Special Attention Required

Special attention is required for construction grants projects with secondary environmental effects which may reasonably be expected to require action under this policy. The process of considering and acting on adverse secondary environmental effects in these cases will be time-consuming and must be conducted with care. Projects with secondary impacts which may be subject to such action should be identified early and receive attention from the time they appear on the project priority list so that suitable agreements can be reached without delaying the project. Regions should work closely with States and local communities to ensure that evaluation of environmental impacts is fully integrated into the planning process.

federal register

MONDAY, APRIL 14, 1975

WASHINGTON, D.C.

Volume 40 ■ Number 72

PART III



ENVIRONMENTAL PROTECTION AGENCY

Preparation of Environmental Impact Statements

■

Final Regulations

Title 40—Protection of Environment
CHAPTER I—ENVIRONMENTAL
PROTECTION AGENCY

[FRL 327-5]

PART 6—PREPARATION OF ENVIRONMENTAL IMPACT STATEMENTS

Final Regulation

The National Environmental Policy Act of 1969 (NEPA), implemented by Executive Order 11514 of March 5, 1970, and the Council on Environmental Quality's (CEQ's) Guidelines of August 1, 1973, requires that all agencies of the Federal Government prepare detailed environmental impact statements on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment. NEPA requires that agencies include in their decision-making process an appropriate and careful consideration of all environmental aspects of proposed actions, an explanation of potential environmental effects of proposed actions and their alternatives for public understanding, a discussion of ways to avoid or minimize adverse effects of proposed actions and a discussion of how to restore or enhance environmental quality as much as possible.

On January 17, 1973, the Environmental Protection Agency (EPA) published a new Part 6 in interim form in the FEDERAL REGISTER (38 FR 1696), establishing EPA policy and procedures for the identification and analysis of environmental impacts and the preparation of environmental impact statements (EIS's) when significant impacts on the environment are anticipated.

On July 17, 1974, EPA published a notice of proposed rulemaking in the FEDERAL REGISTER (39 FR 26254). The rulemaking provided detailed procedures for applying NEPA to EPA's nonregulatory programs only. A separate notice of administrative procedure published in the October 21, 1974, FEDERAL REGISTER (39 FR 37419) gave EPA's procedures for voluntarily preparing EIS's on certain regulatory activities. EIS procedures for another regulatory activity, issuing National Pollutant Discharge Elimination System (NPDES) discharge permits to new sources, will appear in 40 CFR 6. Associated amendments to the NPDES operating regulations, covering permits to new sources, will appear in 40 CFR 125.

The proposed regulation on the preparation of EIS's for nonregulatory programs was published for public review and comment. EPA received comments on this proposed regulation from environmental groups; Federal, State and local governmental agencies; industry; and private individuals. As a result of the comments received, the following changes have been made:

(1) Coastal zones, wild and scenic rivers, prime agricultural land and wildlife habitat were included in the criteria to be considered during the environmental review.

The Coastal Zone Management Act and the Wild and Scenic Rivers Act are intended to protect these environmentally sensitive areas; therefore, EPA should consider the effects of its projects on these areas. Protection of prime agricultural lands and wildlife habitat has become an important concern as a result of the need to further increase food production from domestic sources as well as commercial harvesting of fish and other wildlife resources and from the continuing need to preserve the diversity of natural resources for future generations.

(2) Consideration of the use of floodplains as required by Executive Order 11296 was added to the environmental review process.

Executive Order 11296 requires agencies to consider project alternatives which will preclude the uneconomic, hazardous or unnecessary use of floodplains to minimize the exposure of facilities to potential flood damage, lessen the need for future Federal expenditures for flood protection and flood disaster relief and preserve the unique and significant public value of the floodplain as an environmental resource.

(3) Statutory definitions of coastal zones and wild and scenic rivers were added to § 6.214(b).

These statutes define sensitive areas and require states to designate areas which must be protected.

(4) The review and comment period for negative declarations was extended from 15 days to 15 working days.

Requests for negative declarations and comments on negative declarations are not acted on during weekends and on holidays. In addition, mail requests often take two or three days to reach the appropriate office and several more days for action and delivery of response. Therefore, the new time frame for review and response to a negative declaration is more realistic without adding too much delay to a project.

(5) Requirements for more data in the negative declaration to clarify the proposed action were added in § 6.212(b).

Requiring a summary of the impacts of a project and other data to support the negative declaration in this document improves its usefulness as a tool to review the decision not to prepare a full EIS on a project.

(6) The definitions of primary and secondary impacts in § 6.304 were clarified.

The definitions were made more specific, especially in the issue areas of induced growth and growth rates, to reduce subjectivity in deciding whether an impact is primary or secondary.

(7) Procedures for EPA public hearings in Subpart D were clarified.

Language was added to this subpart to distinguish EPA public hearings from applicant hearings required by statute or regulation, such as the facilities plan hearings.

(8) The discussion of retroactive application (§ 6.504) was clarified and abbreviated.

The new language retains flexibility in decision making for the Regional Administrator while eliminating the ambiguity of the language in the interim regulation.

(9) The criteria for writing an EIS if wetlands may be affected were modified in § 6.510(b).

The new language still requires an EIS on a project which will be located on wetlands but limits the requirements for an EIS on secondary wetland effects to those which are significant and adverse.

(10) A more detailed explanation of the data required in environmental assessments (§ 6.512) was added.

Requiring more specific data in several areas, including energy production and consumption as well as land use trends and population projections, from the applicant will provide a more complete data base for the environmental review. Documentation of the applicant's data will allow EPA to evaluate the validity of this data.

(11) Subpart F, Guidelines for Compliance with NEPA in Research and Development Programs and Activities, was revised.

ORD simplified this subpart by removing the internal procedures and assignments of responsibility for circulation in internal memoranda. Only the general application of this regulation to ORD programs was retained.

(12) The discussions of responsibilities and document distribution procedures were moved to appendices attached to the regulations.

These sections were removed from the regulatory language to improve the readability of the regulation and because these discussions are more explanatory and do not need to have the legal force of regulatory language.

(13) Consideration of the Endangered Species Act of 1973 was incorporated into the regulation.

EPA recognizes its responsibility to assist with implementing legislation which will help preserve or improve our natural resources.

The major issues raised on this regulation were on new and proposed criteria for determining when to prepare an EIS and the retroactive application of the criteria to projects started before July 1, 1975. In addition to the new criteria which were added, CEQ requested the addition of several quantitative criteria for which parameters have not been set. These new criteria are being discussed with CEQ and may be added to the regulation at a future date. Changes in the discussion of retroactive application of the criteria are described in item 8 above.

EPA believes that Agency compliance with the regulations of Part 6 will enhance the present quality of human life without endangering the quality of the natural environment for future generations.

Effective Date: This regulation will become effective April 14, 1975.

Dated: April 3, 1975.

RUSSELL E. TRAIN,
 Administrator.

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EXHIBITS

- 1. (Page 1.) Notice of Intent Transmittal Memorandum Suggested Format.
- (Page 2.) Notice of Intent Suggested Format.
- 2. Public Notice and News Release Suggested Format.
- 3. Negative Declaration Suggested Format.

- 4. Environmental Impact Appraisal Suggested Format.
- 5. Cover Sheet Format for Environmental Impact Statements.
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- 7. Flowchart for Solid Waste Management Program Operations.
- Appendix A—Checklist for Environmental Reviews.
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- Appendix C—Availability and Distribution of Documents.

Authority: Secs. 102, 103 of 83 Stat. 854 (42 U.S.C. 4321 et seq.)

Subpart A—General

§ 6.100 Purpose and policy.

(a) The National Environmental Policy Act (NEPA) of 1969, implemented by Executive Order 11514 and the Council on Environmental Quality's (CEQ's) Guidelines of August 1, 1973 (38 FR 20550), requires that all agencies of the Federal Government prepare detailed environmental impact statements on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment. NEPA requires that agencies include in the decision-making process appropriate and careful consideration of all environmental effects of proposed actions, explain potential environmental effects of proposed actions and their alternatives for public understanding, avoid or minimize adverse effects of proposed actions and restore or enhance environmental quality as much as possible.

(b) This part establishes Environmental Protection Agency (EPA) policy and procedures for the identification and analysis of the environmental impacts of EPA nonregulatory actions and the preparation and processing of environmental impact statements (EIS's) when significant impacts on the environment are anticipated.

§ 6.102 Definitions.

(a) "Environmental assessment" is a written analysis submitted to EPA by its grantees or contractors describing the environmental impacts of proposed actions undertaken with the financial support of EPA. For facilities or section 208 plans as defined in § 6.102 (j) and (k), the assessment must be an integral, though identifiable, part of the plan submitted to EPA for review.

(b) "Environmental review" is a formal evaluation undertaken by EPA to determine whether a proposed EPA action may have a significant impact on the environment. The environmental assessment is one of the major sources of information used in this review.

(c) "Notice of intent" is a memorandum, prepared after the environmental review, announcing to Federal, regional, State, and local agencies, and to interested persons, that a draft EIS will be prepared.

(d) "Environmental impact statement" is a report, prepared by EPA, which identifies and analyzes in detail the environmental impacts of a proposed EPA action and feasible alternatives.

(e) "Negative declaration" is a written announcement, prepared after the environmental review, which states that EPA has decided not to prepare an EIS and summarizes the environmental impact appraisal.

(f) "Environmental impact appraisal" is based on an environmental review and supports a negative declaration. It describes a proposed EPA action, its expected environmental impact, and the basis for the conclusion that no significant impact is anticipated.

(g) "NEPA-associated documents" are any one or combination of: notices of intent, negative declarations, exemption certifications, environmental impact appraisals, news releases, EIS's, and environmental assessments.

(h) "Responsible official" is an Assistant Administrator, Deputy Assistant Administrator, Regional Administrator or their designee.

(i) "Interested persons" are individuals, citizen groups, conservation organizations, corporations, or other non-governmental units, including applicants for EPA contracts or grants, who may be interested in, affected by, or technically competent to comment on the environmental impacts of the proposed EPA action.

(j) "Section 208 plan" is an areawide waste treatment management plan prepared under section 208 of the Federal Water Pollution Control Act (FWPCA), as amended, under 40 CFR Part 126 and 40 CFR Part 35, Subpart F.

(k) "Facilities plan" is a preliminary plan prepared as the basis for construction of publicly owned waste treatment works under Title II of FWPCA, as amended, under 40 CFR 35.917.

(l) "Intramural project" is an in-house project undertaken by EPA personnel.

(m) "Extramural project" is a project undertaken by grant or contract.

§ 6.104 Summary of procedures for implementing NEPA.

(a) *Responsible official.* The responsible official shall utilize a systematic, interdisciplinary approach to integrate natural and social sciences as well as environmental design arts in planning programs and making decisions which are subject to NEPA review. His staff may be supplemented by professionals from other agencies, universities or consultants whenever in-house capabilities are insufficiently interdisciplinary.

(b) *Environmental assessment.* Environmental assessments must be submitted to EPA by its grantees and contractors, as required in Subparts E, F, G, and H of this part. The assessment is used by EPA to decide if an EIS is required and to prepare one if necessary.

(c) *Environmental review.* Environmental reviews shall be made of proposed and certain ongoing EPA actions as required in § 6.106(c). This process shall consist of a study of the action to identify and evaluate the environmental impacts of the action. Types of grants, contracts and other actions requiring study are listed in the subparts following

Subpart D. The process shall include a review of any environmental assessment received to determine whether any significant impacts are anticipated, whether any changes can be made in the proposed action to eliminate significant adverse impacts, and whether an EIS is required. EPA has overall responsibility for this review, although its grantees and contractors will contribute to the review through their environmental assessments.

(d) *Notice of intent and EIS's.* When an environmental review indicates that a significant environmental impact may occur and the significant adverse impacts cannot be eliminated by making changes in the project, a notice of intent shall be published, and a draft EIS shall be prepared and distributed. After external coordination and evaluation of the comments received, a final EIS shall be prepared and distributed. EIS's should be prepared first on those proposed actions with the most adverse effects which are scheduled for earliest implementation and on other proposed actions according to priorities assigned by the responsible official.

(e) *Negative declaration and environmental impact appraisal.* When the environmental review indicates no significant impacts are anticipated or when the project is changed to eliminate the significant adverse impacts, a negative declaration shall be issued. For the cases in Subparts E, F, G, and H of this part, an environmental impact appraisal shall be prepared which summarizes the impacts, alternatives and reasons an EIS was not prepared. It shall remain on file and be available for public inspection.

§ 6.105 Applicability.

(a) *Administrative actions covered.* This part applies to the administrative actions listed below. The subpart referenced with each action lists the detailed NEPA procedures associated with the action. Administrative actions are:

- (1) Development of EPA legislative proposals;
- (2) Development of favorable reports on legislation initiated elsewhere and not accompanied by an EIS, when they relate to or affect matters within EPA's primary areas of responsibility;
- (3) For the programs under Title II of FWPCA, as amended, those administrative actions in § 6.504;
- (4) For the Office of Research and Development, those administrative actions in § 6.504;
- (5) For the Office of Solid Waste Management Programs, those administrative actions in § 6.702;
- (6) For construction of special purpose facilities and facility renovations, those administrative actions in § 6.504; and
- (7) Development of an EPA project in conjunction with or located near a project or complex of projects started by one or more Federal agencies when the cumulative effects of all the projects will be major alterations of resources or disturbances of future land use options.

(b) *Administrative actions excluded.* The requirements of this part do not apply to environmentally protective regulatory activities undertaken by EPA or to projects exempted in § 6.504, § 6.505, and § 6.702.

(c) *Application to ongoing actions.* This regulation shall apply to uncompleted and continuing EPA actions initiated before the promulgation of these procedures when modifications of or alternatives to the EPA action are still available, except for the Title II construction grants program. Specific application for the construction grants program is in § 6.504(c). An EIS shall be prepared for each project found to have significant environmental effects as described in § 6.200.

(d) *Application to legislative proposals.* (1) As noted in paragraphs (b) (1) and (2) of this section, EIS's or negative declarations shall be prepared for legislative proposals or favorable reports relating to legislation which may significantly affect the environment. Because of the nature of the legislative process, EIS's for legislation must be prepared and reviewed according to the procedures followed in the development and review of the legislative matter. These procedures are described in Office of Management and Budget (OMB) Circular No. A-19.

(2) A working draft EIS shall be prepared by the EPA office responsible for preparing the legislative proposal or report on legislation. It shall be prepared concurrently with the development of the legislative proposal or report and shall contain the information required in § 6.304. The EIS shall be circulated for internal EPA review with the legislative proposal or report and other supporting documentation. The working draft EIS shall be modified to correspond with changes made in the proposal or report during the internal review. All major alternatives developed during the formulation and review of the proposal or report should be retained in the working draft EIS.

(i) The working draft EIS shall accompany the legislative proposal or report to OMB. EPA shall revise the working draft EIS to respond to comments from OMB and other Federal agencies.

(ii) Upon transmittal of the legislative proposal or report to Congress, the working draft EIS will be forwarded to CEQ and the Congress as a formal legislative EIS. Copies will be distributed according to procedures described in Appendix C.

(iii) Comments received by EPA on the legislative EIS shall be forwarded to the appropriate Congressional Committees. EPA also may respond to specific comments and forward its responses with the comments. Because legislation undergoes continuous changes in Congress beyond the control of EPA, no final EIS need be prepared by EPA.

§ 6.105 Completion of NEPA procedures before continuing administrative action.

(a) No administrative action shall be taken until the environmental review

process, resulting in an EIS or a negative declaration with environmental appraisal, has been completed.

(b) *When an EIS will be prepared.* Except when requested by the responsible official in writing and approved by CEQ, no administrative action shall be taken sooner than ninety (90) calendar days after a draft EIS has been distributed or sooner than thirty (30) calendar days after the final EIS has been made public. If the final text of an EIS is filed within ninety (90) days after a draft EIS has been circulated for comment, furnished to CEQ and made public, the minimum thirty (30) day period and the ninety (90) day period may run concurrently if they overlap. The minimum periods for review and advance availability of EIS's shall begin on the date CEQ publishes the notice of receipt of the EIS in the *Federal Register*. In addition, the proposed action shall be modified to conform with any changes EPA considers necessary before the final EIS is published.

(c) *When an EIS will not be prepared.* If EPA decides not to prepare an EIS on any action listed in this part for which a negative declaration with environmental appraisal has been prepared, no administrative action shall be taken for at least fifteen (15) working days after the negative declaration is issued to allow public review of the decision. If significant environmental issues are raised during the review period, the decision may be changed and a new environmental appraisal or an EIS may be prepared.

§ 6.110 Responsibilities.

See Appendix B for responsibilities of this part.

Subpart E—Procedures

§ 6.200 Criteria for determining when to prepare an EIS.

The following general criteria shall be used when reviewing a proposed EPA action to determine if it will have a significant impact on the environment and therefore require an EIS:

(a) *Significant environmental effects.*

(1) An action with both beneficial and detrimental effects should be classified as having significant effects on the environment, even if EPA believes that the net effect will be beneficial. However, preference should be given to preparing EIS's on proposed actions which, on balance, have adverse effects.

(2) When determining the significance of a proposed action's impacts, the responsible official shall consider both its short term and long term effects as well as its primary and secondary effects as defined in § 6.304(c). Particular attention should be given to changes in land use patterns; changes in energy supply and demand; increased development in floodplains; significant changes in ambient air and water quality or noise levels; potential violations of air quality, water quality and noise level standards; significant changes in surface or groundwater quality or quantity; and encroach-

ments on wetlands, coastal zones, or fish and wildlife habitat, especially when threatened or endangered species may be affected.

(3) Minor actions which may set a precedent for future major actions with significant adverse impacts or a number of actions with individually insignificant but cumulatively significant adverse impacts shall be classified as having significant environmental impacts. If EPA is taking a number of minor, environmentally insignificant actions that are similar in execution and purpose, during a limited time span and in the same general geographic area, the cumulative environmental impact of all of these actions shall be evaluated.

(4) In determining the significance of a proposed action's impact, the unique characteristics of the project area should be carefully considered. For example, proximity to historic sites, parklands or wild and scenic rivers may make the impact significant. A project discharging into a drinking water aquifer may make the impact significant.

(5) A proposed EPA action which will have direct and significant adverse effects on a property listed in or eligible for listing in the National Register of Historic Places or will cause irreparable loss or destruction of significant scientific, prehistoric, historic or archaeological data shall be classified as having significant environmental impacts.

(b) *Controversial actions.* An EIS shall be prepared when the environmental impact of a proposed EPA action is likely to be highly controversial.

(c) *Additional criteria for specific programs.* Additional criteria for various EPA programs are in Subpart E (Title II Wastewater Treatment Works Construction Grants Program), Subpart F (Research and Development Programs), Subpart G (Solid Waste Management Programs) and Subpart H (Construction of Special Facilities and Facility Renovations).

§ 6.202 Environmental assessment.

Environmental assessments must be submitted to EPA by its grantees and contractors as required in Subparts E, F, G, and H of this part. The assessment is to ensure that the applicant considers the environmental impacts of the proposed action at the earliest possible point in his planning process. The assessment and other relevant information are used by EPA to decide if an EIS is required. While EPA is responsible for ensuring that EIS's are factual and comprehensive, it expects assessments and other data submitted by grantees and contractors to be accurate and complete. The responsible official may request additional data and analyses from grantees or other sources any time he determines they are needed to comply adequately with NEPA.

§ 6.204 Environmental review.

Proposed EPA actions, as well as ongoing EPA actions listed in § 6.106(c), shall be subjected to an environmental

review. This review shall be a continuing one, starting at the earliest possible point in the development of the project. It shall consist of a study of the proposed action, including a review of any environmental assessments received, to identify and evaluate the environmental impacts of the proposed action and feasible alternatives. The review will determine whether significant impacts are anticipated from the proposed action, whether any feasible alternatives can be adopted or changes can be made in project design to eliminate significant adverse impacts, and whether an EIS or a negative declaration is required. The responsible official shall determine the proper scope of the environmental review. The responsible official may delay approval of related projects until the proposals can be reviewed together to allow EPA to properly evaluate their cumulative impacts.

§ 6.206 Notice of intent.

(a) *General.* (1) When an environmental review indicates a significant impact may occur and significant adverse impacts cannot be eliminated by making changes in the project, a notice of intent, announcing the preparation of a draft EIS, shall be issued by the responsible official. The notice shall briefly describe the EPA action, its location, and the issues involved (Exhibit 1).

(2) The purpose of a notice of intent is to involve other government agencies and interested persons as early as possible in the planning and evaluation of EPA actions which may have significant environmental impacts. This notice should encourage agency and public input to a draft EIS and assure that environmental values will be identified and weighed from the outset rather than accommodated by adjustments at the end of the decision-making process.

(b) *Specific actions.* The specific actions to be taken by the responsible official on notices of intent are:

(1) When the review process indicates a significant impact may occur and significant adverse impacts cannot be eliminated by making changes in the project, prepare a notice of intent immediately after the environmental review.

(2) Distribute copies of the notice of intent as required in Appendix C.

(3) Publish in a local newspaper, with adequate circulation to cover the area affected by the project, a brief public notice stating that an EIS will be prepared on a particular project, and the public may participate in preparing the EIS (Exhibit 2). News releases also may be submitted to other media.

(c) *Regional office assistance to program offices.* Regional offices will provide assistance to program offices in taking these specific actions when the EIS originates in a program office.

§ 6.208 Draft EIS's.

(a) *General.* (1) The responsible official shall assure that a draft EIS is prepared as soon as possible after the release of the notice of intent. Before releasing

the draft EIS to CEQ, a preliminary version may be circulated for review to other offices within EPA with interest in or technical expertise related to the action. Then the draft EIS shall be sent to CEQ and circulated to Federal, State, regional and local agencies with special expertise or jurisdiction by law, and to interested persons. If the responsible official determines that a public hearing on the proposed action is warranted, the hearing will be held after the draft EIS is prepared, according to the requirements of § 6.402.

(2) Draft EIS's should be prepared at the earliest possible point in the project development. If the project involves a grant applicant or potential contractor, he must submit any data EPA requests for preparing the EIS. Where a plan or program has been developed by EPA or submitted to EPA for approval, the relationship between the plan and the later projects encompassed by it shall be evaluated to determine the best time to prepare an EIS. Whenever possible, an EIS will be drafted for the total program at the initial planning stage. Then later component projects included in the plan will not require individual EIS's unless they differ substantially from the plan, or unless the overall plan did not provide enough detail to fully assess significant impacts of individual projects. Plans shall be reevaluated by the responsible official to monitor the cumulative impact of the component projects and to preclude the plans' obsolescence.

(b) *Specific actions.* The specific actions to be taken by the responsible official on draft EIS's are:

(1) Distribute the draft EIS according to the procedures in Appendix C.

(2) Inform the agencies to reply directly to the originating EPA office. Commenting agencies shall have at least forty-five (45) calendar days to reply, starting from the date of publication in the Federal Register of lists of statements received by CEQ. If no comments are received during the reply period and no time extension has been requested, it shall be presumed that the agency has no comment to make. EPA may grant extensions of fifteen (15) or more calendar days. The time limits for review and extensions for State and local agencies, State, regional, and metropolitan clearinghouses, and interested persons shall be the same as those available to Federal agencies.

(3) Publish a notice in local newspapers stating that the draft EIS is available for comment and listing where copies may be obtained (Exhibit 3), and submit news releases to other media.

(4) Include in the draft EIS a notice stating that only those Federal, State, regional, and local agencies and interested persons who make substantive comments on the draft EIS or request a copy of the final EIS will be sent a copy.

(c) *Regional office assistance to program office.* If requested, regional offices will provide assistance to program offices in taking these specific actions when the EIS originates in a program office.

RULES AND REGULATIONS

§ 6.210 Final EIS's.

(a) Final EIS's shall respond to all substantive comments raised through the review of the draft EIS. Special care should be taken to respond fully to comments disagreeing with EPA's position. (See also § 6.304(g).)

(b) Distribution and other specific actions are described in Appendix C. If there is an applicant, he shall be sent a copy. When the number of comments on the draft EIS is so large that distribution of the final EIS to all commenting entities appears impractical, the program or regional office preparing the EIS shall consult with OFA, which will consult with CEQ about alternative arrangements for distribution of the EIS.

§ 6.212 Negative declaration and environmental impact appraisals.

(a) *General.* When an environmental review indicates there will be no significant impact or significant adverse impacts have been eliminated by making changes in the project, the responsible official shall prepare a negative declaration to allow public review of his decision before it becomes final. The negative declaration and news release must state that interested persons disagreeing with the decision may submit comments for consideration by EPA. EPA shall not take administrative action on the project for at least fifteen (15) working days after release of the negative declaration and may allow more time for response. The responsible official shall have an environmental impact appraisal supporting the negative declaration available for public review when the negative declaration is released for those cases given in Subparts E, F, G, and H.

(b) *Specific actions.* The responsible official shall take the following specific actions on those projects for which both a negative declaration and an impact appraisal will be prepared:

(1) *Negative declaration.* (i) Prepare a negative declaration immediately after the environmental review. This document shall briefly summarize the purpose of the project, its location, the nature and extent of the land use changes related to the project, and the major primary and secondary impacts of the project. It shall describe how the more detailed environmental impact appraisal may be obtained at cost. (See Exhibit 3.)

(ii) Distribute the negative declaration according to procedures in Appendix C. In addition, submit to local newspapers and other appropriate media a brief news release with a negative declaration attached, informing the public that a decision not to prepare an EIS has been made and a negative declaration and environmental impact appraisal are available for public review and comment (Exhibit 2).

(2) *Environmental impact appraisal.* (i) Prepare an environmental impact appraisal concurrently with the negative declaration. This document shall briefly describe the proposed action and feasible alternatives, environmental impacts of

the proposed action, unavoidable adverse impacts of the proposed action, the relationship between short term uses of man's environment and the maintenance and enhancement of long term productivity, steps to minimize harm to the environment, irreversible and irretrievable commitments of resources to implement the action, comments and consultations on the project, and reasons for concluding there will be no significant impacts. (See Exhibit 4.)

(ii) Distribute the environmental impact appraisal according to procedures in Appendix C.

§ 6.214 Additional procedures.

(a) *Historical and archaeological sites.* EPA is subject to the requirements of section 106 of the National Historic Preservation Act of 1986, 16 U.S.C. 470 *et seq.*, Executive Order 11593, the Archaeological and Historic Preservation Act of 1974, 16 U.S.C. 469 *et seq.*, and the regulations promulgated under this legislation. These statutes and regulations establish environmental review procedures which are independent of NEPA requirements.

(1) If an EPA action may affect properties with historic, architectural, archaeological or cultural value which are listed in the National Register of Historic Places (published in the *Federal Register* each February with supplements on the first Tuesday of each month), the responsible official shall comply with the procedures of the Advisory Council on Historic Preservation (36 CFR 800), including determining the need for a Memorandum of Agreement among EPA, the State Historic Preservation Officer and the Advisory Council. If a Memorandum of Agreement is executed, it shall be included in an EIS whenever one is prepared on a proposed action. See § 6.512(c) of this part for additional procedures for the construction grants program under Title II of the FWPCA, as amended.

(2) If an EPA action may cause irreparable loss or destruction of significant scientific, prehistoric, historic or archaeological data, the responsible official shall consult with the State Historic Preservation Officer in compliance with the Archaeological and Historic Preservation Act (P.L. 93-291).

(b) *Wetlands, floodplains, coastal zones, wild and scenic rivers, fish and wildlife.* The following procedures shall be applied to all EPA administrative actions covered by this part that may affect these environmentally sensitive resources.

(1) If an EPA action may affect wetlands, the responsible official shall consult with the appropriate offices of the Department of the Interior, Department of Commerce, and the U.S. Army Corps of Engineers during the environmental review to determine the probable impact of the action on the pertinent fish and wildlife resources and land use of these areas.

(2) If an EPA action may directly cause or induce the construction of buildings or other facilities in a floodplain, the

responsible official shall evaluate flood hazards in connection with these facilities as required by Executive Order 11203 and shall, as far as practicable, consider alternatives to preclude the uneconomical, hazardous or unnecessary use of floodplains to minimize the exposure of facilities to potential flood damage, lessen the need for future Federal expenditures for flood protection and flood disaster relief and preserve the unique and significant public value of the floodplain as an environmental resource.

(3) If an EPA action may affect coastal zones or coastal waters as defined in Title III of the Coastal Zone Management Act of 1972 (Pub. L. 92-583), the responsible official shall consult with the appropriate State offices and with the appropriate office of the Department of Commerce during the environmental review to determine the probable impact of the action on coastal zone or coastal water resources.

(4) If an EPA action may affect portions of rivers designated wild and scenic or being considered for this designation under the Wild and Scenic Rivers Act (Pub. L. 90-542), the responsible official shall consult with appropriate State offices and with the Secretary of the Interior or, where national forest lands are involved, with the Secretary of Agriculture during the environmental review to determine the status of an affected river and the probable impact of the action on eligible rivers.

(5) If an EPA action will result in the control or structural modification of any stream or other body of water for any purpose, including navigation and drainage, the responsible official shall consult with the United States Fish and Wildlife Service (Department of the Interior), the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration (Department of Commerce), the U.S. Army Corps of Engineers and the head of the agency administering the wildlife resources of the particular State in which the action will take place with a view to the conservation of wildlife resources. This consultation shall follow the procedures in the Fish and Wildlife Coordination Act (Pub. L. 85-624) and shall occur during the environmental review of an action.

(6) If an EPA action may affect threatened or endangered species defined under section 4 of the Endangered Species Act of 1973 (Pub. L. 93-205), the responsible official shall consult with the Secretary of the Interior or the Secretary of Commerce, according to the procedures in section 7 of that act.

(7) Requests for consultation and the results of consultation shall be documented in writing. In all cases where consultation has occurred, the agencies consulted should receive copies of either the notice of intent and EIS or the negative declaration and environmental appraisal prepared on the proposed action. If a decision has already been made to prepare an EIS on a project and wetlands, floodplains, coastal zones, wild

and scenic rivers, fish or wildlife may be affected, the required consultation may be deferred until the preparation of the draft EIS.

§ 6.216 Availability of documents.

(a) EPA will print copies of draft and final EIS's for agency and public distribution. A nominal fee may be charged for copies requested by the public.

(b) When EPA no longer has copies of an EIS to distribute, copies shall be made available for public inspection at regional and headquarters Offices of Public Affairs. Interested persons also should be advised of the availability (at cost) of the EIS from the Environmental Law Institute, 1356 Connecticut Avenue NW., Washington, D.C. 20038.

(c) Lists of EIS's prepared or under preparation and lists of negative declarations prepared will be available at both the regional and headquarters Offices of Public Affairs.

Subpart C—Content of Environmental Impact Statements

§ 6.300 Cover sheet.

The cover sheet shall indicate the type of EIS (draft or final), the official project name and number, the responsible EPA office, the date, and the signature of the responsible official. The format is shown in Exhibit 5.

§ 6.302 Summary sheet.

The summary sheet shall conform to the format in Exhibit 6, based on Appendix I of the August 1, 1973, CEQ Guidelines, or the latest revision of the CEQ Guidelines.

§ 6.304 Body of EIS.

The body of the EIS shall identify, develop, and analyze the pertinent issues discussed in the seven sections below; each section need not be a separate chapter. This analysis should include, but not be limited to, consideration of the impacts of the proposed project on the environmental areas listed in Appendix A which are relevant to the project. The EIS shall serve as a means for the responsible official and the public to assess the environmental impacts of a proposed EPA action, rather than as a justification for decisions already made. It shall be prepared using a systematic, interdisciplinary approach and shall incorporate all relevant analytical disciplines to provide meaningful and factual data, information, and analyses. The presentation of data should be clear and concise, yet include all facts necessary to permit independent evaluation and appraisal of the beneficial and adverse environmental effects of alternative actions. The amount of detail provided should be commensurate with the extent and expected impact of the action and the amount of information required at the particular level of decision making. To the extent possible, an EIS shall not be drafted in a style which requires extensive scientific or technical expertise to comprehend and evaluate the environmental impact of a proposed EPA action.

(a) *Background and description of the proposed action.* The EIS shall describe the recommended or proposed action, its purpose, where it is located and its time setting. When a decision has been made not to favor an alternative until public comments on a proposed action have been received, the draft EIS may treat all feasible alternatives at similar levels of detail; the final EIS should focus on the alternative the draft EIS and public comments indicate is the best. The relationship of the proposed action to other projects and proposals directly affected by or stemming from it shall be discussed, including not only other EPA activities, but also those of other governmental and private organizations. Land use patterns and population trends in the project area and the assumptions on which they are based also shall be included. Available maps, photos, and artists' sketches should be incorporated when they help depict the environmental setting.

(b) *Alternatives to the proposed action.* The EIS shall develop, describe, and objectively weigh feasible alternatives to any proposed action, including the options of taking no action or postponing action. The analysis should be detailed enough to show EPA's comparative evaluation of the environmental impacts, commitments of resources, costs, and risks of the proposed action and each feasible alternative. For projects involving construction, alternative sites must be analyzed in enough detail for reviewers independently to judge the relative desirability of each site. For alternatives involving regionalization, the effects of varying degrees of regionalization should be addressed. If a cost-benefit analysis is prepared, it should be appended to the EIS and referenced in the body of the EIS. In addition, the reasons why the proposed action is believed by EPA to be the best course of action shall be explained.

(c) *Environmental impacts of the proposed action.* (1) The positive and negative effects of the proposed action as it affects both the national and international environment should be assessed. The attention given to different environmental factors will vary according to the nature, scale, and location of proposed actions. Primary attention should be given to those factors most evidently affected by the proposed action. The factors shall include, where appropriate, the proposed action's effects on the resource base, including land, water quality and quantity, air quality, public services and energy supply. The EIS shall describe primary and secondary environmental impacts, both beneficial and adverse, anticipated from the action. The description shall include short term and long term impacts on both the natural and human environments.

(2) Primary impacts are those that can be attributed directly to the proposed action. If the action is a field experiment, materials introduced into the environment which might damage certain plant communities or wildlife species would be a primary impact. If the action

involves construction of a facility, such as a sewage treatment works, an office building or a laboratory, the primary impacts of the action would include the environmental impacts related to construction and operation of the facility and land use changes at the facility site.

(3) Secondary impacts are indirect or induced changes. If the action involves construction of a facility, the secondary impacts would include the environmental impacts related to:

(i) Induced changes in the pattern of land use, population density and related effects on air and water quality or other natural resources;

(ii) Increased growth at a faster rate than planned for or above the total level planned by the existing community.

(4) A discussion of how socioeconomic activities and land use changes related to the proposed action conform or conflict with the goals and objectives of approved or proposed Federal, regional, State and local land use plans, policies and controls for the project area should be included in the EIS. If a conflict appears to be unresolved in the EIS, EPA should explain why it has decided to proceed without full reconciliation.

(d) *Adverse impacts which cannot be avoided should the proposal be implemented and steps to minimize harm to the environment.* The EIS shall describe the kinds and magnitudes of adverse impacts which cannot be reduced in severity or which can be reduced to an acceptable level but not eliminated. These may include water or air pollution, undesirable land use patterns, damage to fish and wildlife habitats, urban congestion, threats to human health or other consequences adverse to the environmental goals in section 101(b) of NEPA. Protective and mitigative measures to be taken as part of the proposed action shall be identified. These measures to reduce or compensate for any environmentally detrimental aspect of the proposed action may include those of EPA, its contractors and grantees and others involved in the action.

(e) *Relationship between local short term uses of man's environment and the maintenance and enhancement of long term productivity.* The EIS shall 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. Consideration should be given to windfall gains or significant decreases in current property values from implementing the proposed action. In addition, the reasons the proposed action is believed by EPA to be justified now, rather than reserving a long term option for other alternatives, including no action, shall be explained.

(f) *Irreversible and retrievable commitments of resources to the proposed action should it be implemented.* The EIS shall describe the extent to which

the proposed action requires commitment of construction materials, person-hours and funds to design and implement the project, as well as curtails the range of future uses of land and water resources. For example, induced growth in undeveloped areas may curtail alternative uses of that land. Also, irreversible environmental damage can result from equipment malfunctions or industrial accidents at the project site. Therefore, the need for any irretrievable and significant commitments of resources shall be explained fully.

(g) *Problems and objections raised by other Federal, State and local agencies and by interested persons in the review process.* Final EIS's (and draft EIS's if appropriate) shall summarize the comments and suggestions made by reviewing organizations and shall describe the disposition of issues raised, e.g., revisions to the proposed action to mitigate anticipated impacts or objections. In particular, the EIS shall address the major issues raised when the EPA position differs from most recommendations and explain the factors of overriding importance overruling the adoption of suggestions. Reviewer's statements should be set forth in a "comment" and discussed in a "response." In addition, the source of all comments should be clearly identified, and copies of the comments should be attached to the final EIS. Summaries of comments should be attached when a response has been exceptionally long or the same comments were received from many reviewers.

§ 6.506 Documentation.

All books, research reports, field study reports, correspondence and other documents which provided the data base for evaluating the proposed action and alternatives discussed in the EIS shall be used as references in the body of the EIS and shall be included in a bibliography attached to the EIS.

Subpart D—EPA Public Hearings on EIS's § 6.400 General.

While EPA is not required by statute to hold public hearings on EIS's, the responsible official should hold a public hearing on a draft EIS whenever a hearing may facilitate the resolution of conflicts or significant public controversy. This hearing may be in addition to public hearings held on facilities plans or section 209 plans. The responsible official may take special measures to involve interested persons through personal contact.

§ 6.402 Public hearing process.

(a) When public hearings are to be held, EPA shall inform the public of the hearing, for example, with a notice in the draft EIS. The notice should follow the summary sheet at the beginning of the EIS. The draft EIS shall be available for public review at least thirty (30) days before the public hearing. Public notice shall be given at least fifteen (15) working days before the public hearing and shall include:

(1) Publication of a public notice in a newspaper which covers the project area, identifying the project, announcing the date, time and place of the hearing and announcing the availability of detailed information on the proposed action for public inspection at one or more locations in the area in which the project will be located. "Detailed information" shall include a copy of the project application and the draft EIS.

(2) Notification of appropriate State and local agencies and appropriate State, regional and metropolitan clearing-houses.

(3) Notification of interested persons.

(b) A written record of the hearing shall be made. A stenographer may be used to record the hearing. As a minimum, the record shall contain a list of witnesses with the text of each presentation. A summary of the record, including the issues raised, conflicts resolved and unresolved, and any other significant portions of the record, shall be appended to the final EIS.

(c) When a public hearing has been held by another Federal, State, or local agency on an EPA action, additional hearings are not necessary. The responsible official shall decide if additional hearings are needed.

(d) When a program office is the originating office, the appropriate regional office will provide assistance to the originating office in holding any public hearing if assistance is requested.

Subpart E—Guidelines for Compliance With NEPA in the TMO II Wastewater Treatment Works Construction Grants Program and the Areawide Waste Treatment Management Planning Program

§ 6.500 Purpose.

This subpart amplifies the general EPA policies and procedures described in Subparts A through D with detailed procedures for compliance with NEPA in the wastewater treatment works construction grants program and the areawide waste treatment management planning program.

§ 6.502 Definitions.

(a) "Step 1 grant." A grant for preparation of a facilities plan as described in 40 CFR 35.930-1.

(b) "Step 2 grant." A grant for preparation of construction drawings and specifications as described in 40 CFR 35.930-1.

(c) "Step 3 grant." A grant for fabrication and building of a publicly owned treatment works as described in 40 CFR 35.930-1.

§ 6.504 Applicability.

(a) *Administrative actions covered.* This subpart applies to the administrative actions listed below:

(1) Approval of all section 208 plans according to procedures in 40 CFR 35.1067-2;

(2) Approval of all facilities plans except those listed in paragraph (a) (5) of this section;

(3) Award of step 2 and step 3 grants, if an approved facilities plan was not required;

(4) Award of a step 2 or step 3 grant when either the project or its impact has changed significantly from that described in the approved facilities plan, except when the situation in paragraph (a) (5) of this section exists;

(5) Consultation during the NEPA review process. When there are overriding considerations of cost or impaired program effectiveness, the Regional Administrator may award a step 2 or a step 3 grant for a discrete segment of the project plans or construction before the NEPA review is completed if this project segment is noncontroversial. The remaining portion of the project shall be evaluated to determine if an EIS is required. In applying the criteria for this determination, the entire project shall be considered, including those parts permitted to proceed. In no case may these types of step 2 or step 3 grants be awarded unless both the Office of Federal Activities and CEQ have been consulted, a negative declaration has been issued on the segments permitted to proceed, and the grant award contains a specific agreement prohibiting action on the segment of planning or construction for which the NEPA review is not complete. Examples of consultation during the NEPA review process are: award of a step 2 grant for preparation of plans and specifications for a large treatment plant, when the only unresolved NEPA issue is where to locate the sludge disposal site; or award of a step 3 grant for site clearance for a large treatment plant, when the unresolved NEPA issue is whether sludge from the plant should be incinerated at the site or disposed of elsewhere by other means.

(b) *Administrative actions excluded.* The actions listed below are not subject to the requirements of this part:

(1) Approval of State priority lists;

(2) Award of a step 1 grant;

(3) Award of a section 208 planning grant;

(4) Award of a step 2 or step 3 grant when no significant changes in the facilities plan have occurred;

(5) Approval of issuing an invitation for bid or awarding a construction contract;

(6) Actual physical commencement of building or fabrication;

(7) Award of a section 208 grant for reimbursement;

(8) Award of grant increases whenever § 6.504(a) (4) does not apply;

(9) Awards of training assistance under FWPCA, as amended, section 109(b).

(c) *Retrospective application.* The new criteria in § 6.510 of this subpart do not apply to step 2 or step 3 grants awarded before July 1, 1975. However, the Regional Administrator may apply the new criteria of this subpart when he considers it appropriate. Any negative declarations issued before the effective date of this regulation shall remain in effect.

§ 6.505 Completion of NEPA procedures before start of administrative actions. See § 6.108 and § 6.504.

§ 6.510 Criteria for preparation of environmental impact statements.

In addition to considering the criteria in § 6.200, the Regional Administrator shall assure that an EIS will be prepared on a treatment works facilities plan, 208 plan or other appropriate water quality management plan when:

(a) The treatment works or plan will induce significant changes (either absolute changes or increases in the rate of change) in industrial, commercial, agricultural, or residential land use concentrations or distributions. Factors that should be considered in determining if these changes are significant include but are not limited to: the vacant land subject to increased development pressure as a result of the treatment works; the increases in population which may be induced; the faster rate of change of population; changes in population density; the potential for overloading sewage treatment works; the extent to which landowners may benefit from the areas subject to increased development; the nature of land use regulations in the affected area and their potential effects on development; and deleterious changes in the availability or demand for energy.

(b) Any major part of the treatment works will be located on productive wetlands or will have significant adverse effects on wetlands, including secondary effects.

(c) Any major part of the treatment works will be located on or significantly affect the habitat of wildlife on the Department of Interior's threatened and endangered species lists.

(d) Implementation of the treatment works or plan may directly cause or induce changes that significantly:

(1) Displace population;

(2) Deface an existing residential area; or

(3) Adversely affect significant amounts of prime agricultural land or agricultural operations on this land.

(e) The treatment works or plan will have significant adverse effects on parklands, other public lands or areas of recognized scenic, recreational, archaeological or historic value.

(f) The works or plan may directly or through induced development have a significant adverse effect upon local ambient air quality, local ambient noise levels, surface or groundwater quantity or quality, fish, wildlife, and their natural habitats.

(g) The treated effluent is being discharged into a body of water where the present classification is too lenient or is being challenged as too low to protect present or recent uses, and the effluent will not be of sufficient quality to meet the requirements of these uses.

§ 6.512 Procedures for implementing NEPA.

(a) *Environmental assessment.* An adequate environmental assessment must be an integral, though identifiable, part

of any facilities or section 208 plan submitted to EPA. (See § 6.202 for a general description.) The information in the facilities plan, particularly the environmental assessment, will provide the substance of an EIS and shall be submitted by the applicant. The analyses that constitute an adequate environmental assessment shall include:

(1) *Description of the existing environment without the project.* This shall include for the delineated planning area a description of the present environmental conditions relevant to the analysis of alternatives or determinations of the environmental impacts of the proposed action. The description shall include, but not be limited to, discussions of whichever areas are applicable to a particular study: surface and groundwater quality; water supply and use; general hydrology; air quality; noise levels; energy production and consumption; land use trends; population projections, wetlands, floodplains, coastal zones and other environmentally sensitive areas; historic and archaeological sites; other related Federal or State projects in the area; and plant and animal communities which may be affected, especially those containing threatened or endangered species.

(2) *Description of the future environment without the project.* The future environmental conditions with the no project alternative shall be forecast, covering the same areas listed in § 6.512 (a) (1).

(3) *Documentation.* Sources of information used to describe the existing environment and to assess future environmental impacts should be documented. These sources should include regional, State and Federal agencies with responsibility or interest in the types of impacts listed in § 6.512 (a) (1). In particular, the following agencies should be consulted:

(i) Local and regional land use planning agencies for assessments of land use trends and population projections, especially those affecting size, timing, and location of facilities, and planning activities funded under section 701 of the Housing and Community Development Act of 1974 (Pub. L. 93-383);

(ii) The HUD Regional Office if a project involves a flood risk area identified under the Flood Disaster Protection Act of 1973 (Pub. L. 93-234);

(iii) The State coastal zone management agency, if a coastal zone is affected;

(iv) The Secretary of the Interior or Secretary of Agriculture, if a wild and scenic river is affected;

(v) The Secretary of the Interior or Secretary of Commerce, if a threatened or endangered species is affected;

(vi) The Fish and Wildlife Service (Department of Interior), the Department of Commerce, and the U.S. Army Corps of Engineers, if a wetland is affected.

(4) *Evaluation of alternatives.* This discussion shall include a comparative analysis of feasible options and a systematic development of wastewater treatment alternatives. The alternatives shall be screened with respect to capital and operating costs; significant primary

and secondary environmental effects; physical, legal or institutional constraints; and whether or not they meet regulatory requirements. Special attention should be given to long term impacts, irreversible impacts and induced impacts such as development. The reasons for rejecting any alternatives shall be presented in addition to any significant environmental benefits precluded by rejection of an alternative. The analysis should consider, when relevant to the project:

(i) Flow and waste reduction measures, including infiltration/inflow reduction;

(ii) Alternative locations, capacities, and construction phasing of facilities;

(iii) Alternative waste management techniques, including treatment and discharge, wastewater reuse and land application;

(iv) Alternative methods for disposal of sludge and other residual waste, including process options and final disposal options;

(v) Improving effluent quality through more efficient operation and maintenance;

(vi) For assessments associated with section 208 plans, the analysis of options shall include in addition:

(A) Land use and other regulatory controls, fiscal controls, non-point source controls, and institutional arrangements; and

(B) Land management practices.

(5) *Environmental impacts of the proposed action.* Primary and secondary impacts of the proposed action shall be described, giving special attention to unavoidable impacts, steps to mitigate adverse impacts, any irreversible or irretrievable commitments of resources to the project and the relationship between local short term uses of the environment and the maintenance and enhancement of long term productivity. See § 6.304 (c), (d), (e), and (f) for an explanation of these terms and examples. The significance of land use impacts shall be evaluated, based on current population of the planning area; design year population for the service area; percentage of the service area currently vacant; and plans for staging facilities. Special attention should be given to induced changes in population patterns and growth, particularly if a project involves some degree of regionalization. In addition to these items, the Regional Administrator may require that other analyses and data, which he determines are needed to comply with NEPA, be included with the facilities or section 208 plan. Such requirements should be discussed during preapplication conferences. The Regional Administrator also may require submission of supplementary information either before or after a step 2 grant or before a step 3 grant award if he determines it is needed for compliance with NEPA. Requests for supplementary information shall be made in writing.

(6) *Steps to minimize adverse effects.* This section shall describe structural and

nonstructural measures, if any, in the facilities plan to mitigate or eliminate significant adverse effects on the human and natural environments. Structural provisions include changes in facility design, size, and location; nonstructural provisions include staging facilities as well as developing and enforcing land use regulations and environmentally protective regulations.

(b) *Public hearing.* The applicant shall hold at least one public hearing before a facilities plan is adopted, unless waived by the Regional Administrator before completion of the facilities plan according to § 35.917-5 of the Title II construction grants regulations. Hearings should be held on section 208 plans. A copy of the environmental assessment should be available for public review before the hearing and at the hearing, since these hearings provide an opportunity to accept public input on the environmental issues associated with the facilities plan or the 208 water quality management strategy. In addition, a Regional Administrator may elect to hold an EPA hearing if environmental issues remain unresolved. EPA hearings shall be held according to procedures in § 6.402.

(c) *Environmental review.* An environmental review of a facilities plan or section 208 plan shall be conducted according to the procedures in § 6.204 and applying the criteria of § 6.510. If deficiencies exist in the environmental assessment, they shall be identified in writing by the Regional Administrator and must be corrected before the plan can be approved.

(d) *Additional procedures.* (1) Historic and archaeological sites. If a facilities or section 208 plan may affect properties with historic, architectural, archaeological or cultural value which are listed in or eligible for listing in the National Register of Historic Places or may cause irreparable loss or destruction of significant scientific, prehistoric, historic or archaeological data, the applicant shall follow the procedures in § 6.214(a).

(2) If the facilities or section 208 plan may affect wetlands, floodplains, coastal zones, wild and scenic rivers, fish or wildlife, the Regional Administrator shall follow the appropriate procedures described in § 6.214(b).

(e) *Notice of intent.* The notice of intent on a facilities plan or section 208 plan shall be issued according to § 6.206.

(f) *Scope of EIS.* It is the Regional Administrator's responsibility to determine the scope of the EIS. He should determine if an EIS should be prepared on a facilities plan(s) or section 208 plan and which environmental areas should be discussed in greatest detail in the EIS. Once an EIS has been prepared for the designated section 208 area, another need not be prepared unless the significant impacts of individual facilities or other plan elements were not adequately treated in the EIS. The Regional Administrator should document his decision not to prepare an EIS on individual facilities.

(g) *Negative declaration.* A negative declaration on a facilities plan or section 208 plan shall be prepared according to § 6.212. Once a negative declaration and environmental appraisal have been prepared for the facilities plan for a certain area, grant awards may proceed without preparation of additional negative declarations, unless the project has changed significantly from that described in the facilities plan.

§ 6.514 Content of environmental impact statements.

EIS's for treatment works or plans shall be prepared according to § 6.304.