

ADMINISTRATOR'S DECISION ON THE PROPOSED DICKERSON  
WASTEWATER TREATMENT PLANT GRANT APPLICATION

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INTRODUCTION

On March 19, 1976, the State of Maryland transmitted to the Environmental Protection Agency a construction grant application for an advanced wastewater treatment (AWT) facility proposed for construction by Montgomery County in the vicinity of Dickerson, Maryland. The proposed facility would have a wastewater treatment capacity of 60 million gallons per day (mgd) and would have a capital cost of about \$273 million to build. In early April, EPA issued a preliminary draft National Environmental Policy Act (NEPA) review of the proposed project which raised several concerns about the project. Perhaps foremost among these were concerns with respect to the high construction and operating costs, and uncertainty about possible drinking water and water quality impacts. These concerns were sufficient to raise serious questions as to the appropriateness of proceeding with that grant application.

The State of Maryland, Montgomery County and the Washington Suburban Sanitary Commission (WSSC) were provided copies of the preliminary draft NEPA statement and asked to comment upon it. The following month the State provided its response. The response document addressed many of the same issues raised in the preliminary draft NEPA statement, but it also raised additional issues, and on the basis of its analysis, reached different conclusions.

Because of the complex, controversial nature of the issues surrounding the proposed treatment plant, I appointed a senior Executive Review Panel\* within the Agency to analyze and assess all major issues relating to the March grant application. I asked the Panel to prepare a discussion and options paper for me and to recommend a specific course of action. The Panel has done that.

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\*Paul A. Brands, Deputy Assistant Administrator for Planning and Evaluation; John T. Rhett, Deputy Assistant Administrator for Water Programs Operations; and Daniel J. Snyder III, Regional Administrator, Region III.

In addition, to help insure that I had maximum information and a wide spectrum of views available to me prior to making a decision, I held a five-hour public meeting on August 11, 1976 to discuss these issues.

### MY DECISION

After extensive review of the available information, consultation with public officials, and reflection upon the views provided at the public meeting, I have decided to return the March 19, 1976 Dickerson AWT grant application to the State of Maryland and the Washington Suburban Sanitary Commission and thereby suspend further processing of it.

### BASIS FOR THE DECISION

Though there are several important issues associated with this grant application, my decision is based primarily upon two factors: (1) plant capacity, given projected sewage flows; and (2) cost-effectiveness considerations.

Projected flow requirements. A review of population projections and sewage flow requirements was undertaken, as is the case with the processing of all construction grant applications. The Executive Panel's estimate of treatment capacity needs for Montgomery County indicate that about 35 mgd capacity beyond the 76.6 mgd allocation to the Blue Plains treatment plant will be needed by the year 2000. This flow estimate is substantially lower than the 60 mgd estimate contained in the grant application and is based upon our review of more recent population projections prepared by various local and regional planning entities. In fact, the population projection selected as most appropriate by the Panel lies roughly in the middle of a range of available projections. It is consistent with numerous projections indicating a substantially reduced rate of population growth for the entire metropolitan area.

A 60 mgd capacity plant, such as that proposed in the March grant application, could be justified only if its capacity is allocated to serve existing and projected regional needs, not just Montgomery County needs. Since no other jurisdictions have formally requested permanent sewage treatment capacity, and no commitments of capacity to other jurisdictions accompany this application, I do not see the justification for a 60 mgd plant.

Cost-effectiveness. Standard EPA cost-effectiveness analysis procedures call for development of comparable alternatives which meet the wastewater treatment needs of communities applying for construction grants. An analysis is to be performed to determine which waste management system will result in the minimum total resources, over time, to meet Federal, State and local requirements. Non-monetary factors are to be accounted for descriptively in the analysis to determine their impact and significance. If the cost of the selected alternative is significantly greater than other options, the grant applicant must either select a less expensive alternative or demonstrate that there are overriding adverse environmental and social impacts associated with the less costly alternatives.

The design for the Dickerson plant incorporated in the March application calls for a capital expenditure of about \$273 million to construct the facility. Associated operation and maintenance cost would be about \$108 million over the project life. The high cost of the project stems from two factors: (1) the need to provide a high level of treatment to minimize potential health risks to drinking water supplies; and (2) the substantial operating costs associated with the treatment plant and conveyance facilities.

The cost-effectiveness review compared the designed plant at the Dickerson site with two possible alternative 60 mgd treatment plants -- a modified version of the proposed plant, which would result in a somewhat lower quality effluent at the Dickerson site, and a plant in the vicinity of Piscataway (Prince Georges County), which would discharge into the Potomac River estuary below water supply intakes. This comparison indicates that, on a 20-year present worth basis, the two alternatives would be about \$44 million and \$145 million less costly, respectively, than the plant in the grant application. These added costs would appear especially burdensome to the citizens in the metropolitan area in view of the fact that WSSC currently estimates that sewage rates are already expected to double between now and 1984.

In discussions with state and county officials, as well as potentially impacted citizens, it has been repeatedly stated that the possible Piscataway alternative is "politically" unacceptable. I recognize that cost comparisons must be based upon potentially viable alternatives. At the same time, however, the fact that our analysis shows that at least two potential alternatives are substantially less costly than the proposed facility necessitates that the grant applicant explore other more cost-effective plant designs, alternative approaches to treating wastewater and/or other treatment plant sites.

## OTHER IMPORTANT FACTORS

Several additional issues have been raised in the review of this grant application: health considerations with respect to drinking water supplies; land treatment of sewage; land use implications; meeting sewage treatment needs on a regional basis; potential costs of construction delay; augmentation of drinking water supplies; and others. The August 6, 1976 Executive Panel Report addresses most of these issues. I want to discuss three of them: health considerations with respect of drinking water supplies, the land treatment of sewage, and resolution of treatment capacity needs on a regional basis.

### Health considerations and drinking water supplies.

The March grant application calls for wastewater effluent discharge about 20 miles above the Washington, D.C. drinking water intakes and about 8 miles above the proposed drinking water intakes for Leesburg, Virginia. Because of the possibility that small quantities of organic contaminants, trace metals and viruses could be found in the proposed plant's effluent, such a discharge would tend to decrease the margin of safety associated with the metropolitan area's drinking water supplies. The scientific unknowns make it impossible to quantify this decrease; however, our conclusion at this time is that the risks to the drinking water supplies would be minimal.

In many areas of the country, no alternatives exist for communities to discharge above another community's drinking water supply intakes. However, to my knowledge, few communities with other choices have chosen to discharge wastewater effluents above their own water supply intakes. EPA'S Cincinnati research laboratory and Water Supply Office have concluded that because of the unknowns associated with a situation such as this, "the best alternative would be to discharge all sewage below the water intakes." As actions are considered toward meeting the long-term sewage treatment needs in the metropolitan area, it is imperative that great care be taken to minimize any health risks associated with impacts on drinking water supplies.

Land treatment of sewage. Much data and information indicate that we should proceed expeditiously with the development of land treatment facilities as a means of providing additional sewage treatment capacity where such an approach is economically and environmentally sound. Numerous citizen comments at the August 11th public meeting also made this point.

Regardless of the overall approach selected by the jurisdictions in the Washington metropolitan area to provide for the long-term regional sewage treatment needs, the development and utilization of land treatment facilities should be examined without delay. Land application employs natural processes to provide waste treatment and holds the potential of saving millions of dollars in both capital and annual operating costs. Additional benefits can be derived from the sale of forage crops and from the preservation of open space areas in urban corridors. Years of testing, demonstration, and experience across the United States and in several foreign countries support the feasibility of land treatment in appropriate situations.

More specifically, preliminary surveys indicate that a 1.5 - 5.5 mgd land treatment system would be feasible on Federal surplus land currently available at the Beltsville Agricultural Research Station. In addition, the Montgomery County ten-year water and sewer plan suggests that a land treatment system at Seneca could provide up to 15 mgd of treatment capacity. Finally, it should be noted that EPA grant monies are available for the acquisition of land to be used in a land treatment system.

As alternatives to resolution of the area's sewage treatment needs are considered, I strongly urge the leaders of each of the jurisdictions, singularly and jointly, to investigate the advantages of land treatment and to move aggressively, where appropriate, toward implementing land treatment systems in the metropolitan area.

Meeting Sewage treatment capacity needs on a regional basis. At several points in the August 11th public meeting, the question was raised by State and local officials as to EPA's commitment to encouraging the resolution of the metropolitan area's treatment capacity needs on a regional basis. I want to state emphatically that there has been no waivering on our part with respect to this question. The very complex nature of sewage treatment requirements in the D.C. metropolitan area mandates that these long-term requirements be assessed and resolved on a regional basis, since economically efficient and environmentally adequate long-term treatment capacity cannot be achieved without a cooperative regional approach. It also requires that treatment capacity commitments on the part of each jurisdiction be specified and agreed upon before EPA can commit funds for construction of a plant.

I strongly encourage the regional leadership to initiate the effective planning required to provide for additional regional sewage treatment needs as soon as possible. The technical and professional resources of the Washington metropolitan area are among the finest in the country. If they are utilized in an integrated manner, I am sure an appropriate long-term plan can be developed expeditiously.

Monetary resources are available to support such a regional facilities planning effort. EPA grant funding of 75% of project costs is available through the state priority system for facilities planning. The ongoing Section 208 program provides a source of expertise and Federal funds as well as a vehicle for effective regional planning.

In view of the strong need for an effective regional solution to the metropolitan area's sewage treatment needs, and the availability of funds to help provide for it, I am instructing EPA's Mid-Atlantic Regional Office to give very serious consideration to the deferral of any substantial treatment capacity related grants to the Washington metropolitan area jurisdictions until an adequate long-term regional sewage treatment plan is developed.

#### "GUIDANCE" TO THE APPLICANT

Both the Executive Review Panel and the public officials with whom I have discussed this issue have stated that if the decision is to terminate further consideration of the March grant application, then some EPA "guidance" should be provided indicating how the applicant should proceed to meet its future sewage treatment needs.

There are, of course, certain risks inherent in such a course of action. In view of the apparent commitment, at least at this time, of state and local political leadership to the Dickerson plan, I have to assume that specific alternative proposals put forward by EPA would be subjected to critical analysis. I am also aware that in as controversial a situation as the planning of a major sewage treatment facility for a metropolitan area, there is seldom, if ever, a solution which commends itself to universal approval. To offer specific alternatives is therefore to invite shifting the burden of justification to the Federal government rather than to keep it in the appropriate regional, state, and local hands.

While necessarily the municipal waste treatment program requires shared responsibilities, the statutory plan requires that the fundamental planning decisions as to location, capacity, etc., must be made by the appropriate local authorities subject to Federal review. I believe strongly that the integrity of this process should be preserved and that the Federal government should not arrogate to itself state and local responsibilities. At the same time, in view of the extensive history of this particular issue, as well as my recognition of the desirability of working together toward its solution, I believe it appropriate that EPA present "guidance" if not express specific alternatives.

Keeping in mind the three important factors noted in the previous section -- i.e., health considerations with respect to drinking water supplies, the need to move ahead with the land treatment of sewage, and the necessity to proceed with capacity planning on a regional basis -- as well as the sewage flow projections and cost-effectiveness criteria, I see the applicant's adoption of any of the following three courses of action as being acceptable from EPA's point of view:

1. A modified version of the present Dickerson grant application which:
  - has specific regional flow commitments for at least 90% of the 20-year 60 mgd plant design capacity,
  - represents a reasonable cost-effective solution to the need for additional regional treatment capacity, and
  - adequately safeguards the metropolitan area's drinking water supplies.
  
2. A new application for a 60 mgd capacity plant at another location or a smaller capacity modular plant (range of 30-35 mgd) at Dickerson or at another location. Review of alternative sites should include, among others, consideration of "down-county" sites in Montgomery County with outflows below the water intakes, and sites in the vicinity of Piscataway. This course of action would involve a concentrated facilities planning process followed by 9-24 months for the development of plans and specifications. Such an application must:



- be accompanied by regional flow commitments for at least 90% of the 20-year plant design capacity,
  - be a reasonably cost-effective solution to additional regional treatment capacity needs, and
  - adequately safeguard the metropolitan area's drinking water supplies.
3. Applications for small treatment plants (including land treatment facilities) in areas impacted by sewer moratoria, in conjunction with the development of a long-term regional facilities plan. Small treatment plants (which are already planned) not yet under construction are eligible for EPA 75% grant funds, as is land acquisition for land treatment facilities. These (1 to 5 mgd) plants, or land treatment variations of them, would provide Montgomery County with adequate treatment capacity until 1988. Assessment of this course of action should recognize that:

- construction of the 1-5 mgd plants would provide adequate capacity and time (until 1988) to develop a sound long-term regional solution;
- this would provide an excellent opportunity to move forward with a substantial land treatment program; and
- Federal facilities planning and Section 208 grant monies are available to help provide for this planning.

As with the first two alternatives, this course of action must consider the cost-effectiveness criteria and potential impacts on drinking water supplies.

#### SUMMARY

I am terminating further consideration of the March 19, 1976 construction grant application and am returning it to the State of Maryland and the Washington Suburban Sanitary Commission. My decision is based primarily upon concerns related to projected sewage flow requirements and cost-effectiveness analysis.

I have outlined three alternative courses of action which seem appropriate from EPA's point of view. These alternatives should provide adequate "guidance" to help insure a more expeditious resolution to the long-term treatment capacity problem.

And, finally, I cannot emphasize too strongly the need for all the jurisdictions in the metropolitan area to work together to develop and implement an effective regional plan to provide for additional treatment capacity needs, and to investigate thoroughly the possibilities of utilizing land treatment of sewage. I want to assure the officials and citizens of the local jurisdictions that the EPA will be more than willing to contribute on a cooperative basis our expertise and resources to help bring about an expeditious resolution to the metropolitan area's sewage treatment needs.

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I am sensitive to the fact that the planning for additional sewage treatment facilities for Montgomery County (which we all agree will be needed) has extended over a prolonged period of time. The extended duration may be attributed in part to the many political jurisdictions involved and the many unusual complexities involved. Of key importance to the current reassessment has been the radically reduced population growth projections for the National Capital area in general and the Montgomery County area specifically. These reduced growth projections, involving the formation of significantly fewer households, must result in substantially reduced estimates of future sewage capacity needs. Unfortunately, these new projections, locally generated, became available only toward the close of 1975.

While I am aware of the disadvantages some will see in any form of delay, the responsible administration of this program, involving the expenditure of many millions of public dollars, would in my opinion make failure to reconsider the present Dickerson proposal irresponsible. In addition, in view of the significantly reduced sewage flow projections, sufficient time exists to accomplish the regional planning urged by this decision. Thus, while some further delay is inevitable, it is delay which we can afford and which will, if properly utilized, be in the public interest.