

REPORT TO THE COLORADO WATER QUALITY CONTROL
COMMISSION REGARDING RECOMMENDATIONS FOR THE
ESTABLISHMENT OF A DUAL PRIORITY POINT SYSTEM
FOR EPA-FUNDING OF MUNICIPAL WASTEWATER
TREATMENT FACILITIES

Submitted By:

Committee at Large
208 Areawide Planning Committee
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and

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Larimer-Weld Regional Council of Governments

August 2, 1977



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August 2, 1977

Colorado Water Quality
Control Commission
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Dear Members of the Commission:

Attached is a report prepared jointly by the Larimer-Weld Regional Council of Governments 208 Water Quality Planning Department and the Committee at Large which is one of five subcommittees to the 81-member Citizen 208 Advisory Committee. The report concerns recommendations for the establishment of a dual priority list for EPA funding of municipal wastewater treatment facilities.

Based on 1976 Needs Survey data provided by the Water Quality Control Division, we conducted an in-depth analysis of current waste treatment requirements for the State of Colorado. We believe the formula proposed for allocation of grant funds coupled with consideration for two priority lists based on population ranges will result in a more fair and equitable distribution of available Federal grant assistance resulting in protection of public health and high quality waters.

So as not to prejudice our analysis and conclusions, we did not test the formula to see what the relative standing of communities in Larimer and Weld Counties would have with those in other areas of the state. This consideration along with resource limitations and lack of familiarity with the status of other communities with regard to their problems and needs precluded us from computing the necessary numbers.

We trust that if the Commission finds merit in our proposal, that it will complete the necessary documentation and proceed to formal public hearings as soon as possible, if necessary. We have included recommendations for two-phase implementation of the proposal, the first phase of which could be readily implemented with existing resource capabilities in the Water Quality Control Division.

We sincerely appreciate the opportunity of assisting you in your deliberations.

Very truly yours,

F. A. Eidsness, Jr.
Director, 208 Water Quality Planning

FAE:psj
Enc.

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1. STATEMENT OF THE PROBLEM

Each federal fiscal year (October 1 through September 30), the United States Environmental Protection Agency (EPA), allocates a certain amount of grant dollars to the State of Colorado for the construction of municipal wastewater treatment facilities. It is anticipated that approximately \$23 million will become available to the State of Colorado for the fiscal year 1978. A problem arises in allocating these limited federal dollars in such a way as to maximize the return in water quality benefits. According to the 1976 Needs Survey conducted jointly by the EPA and the Colorado Water Quality Control Division, an investment of \$879 million is needed to satisfy wastewater collection, treatment, and disposal statewide.

According to a 1976 Needs Survey, at least 75 communities throughout the State of Colorado do not meet minimum secondary treatment and disinfection requirements of which the deadline for compliance was imposed under Federal statute for July 1, 1977. An additional 58 communities need to upgrade to advanced waste treatment, making a total of at least 133 communities who need major treatment plant expansions and upgrading.

A significant weakness in the system of allocating federal grant funds arises when major emphasis is given to population served. While existing population becomes a significant weighing factor in determining grant eligibility, funds are awarded to satisfy growth demands 20 years into the future. This fact, coupled with the high (75 percent) degree of federal participation, tends to result in the federal government (with state sanction)

subsidizing new growth in certain areas and not satisfying existing needs statewide. In a relative sense, this "new growth subsidizing" is more apparent for large metropolitan communities rather than smaller rural communities. Funding for substantial new growth, coupled with the high cost of advanced waste treatment (roughly twice that of secondary treatment), consumes available grant dollars at the expense of many communities who cannot meet minimum=secondary treatment requirements because of their inability to secure funding assistance.

The National strategy for wastewater treatment has been to provide funds for the major dischargers first. Because of the problems encountered as described above in following this somewhat simplistic approach, it seems appropriate to reassess the fundamental criterion upon which grant dollars are allocated for construction of municipal wastewater treatment facilities. Some mechanism needs to be developed whereby smaller communities who have serious wastewater treatment deficiencies become eligible for limited grant assistance in the near term.

In addition, some consideration should be given to reducing the percent of Federal participation with the following objectives in mind:

1. Spreading available federal grant dollars around more to increase the number of grants;
2. Encourage more fiscal responsibility on the part of the community by placing more of the payback burden on the local entity;
3. Having new growth pay a greater proportionate share of providing facilities.

This latter subject is a matter of debate both within the EPA and the 95th Congress. It is not recommended that the Commission address this issue at this time but do so for consideration of a further refinement of the allocation formula for Fiscal Year 1979.

It is recognized that the fundamental criteria upon which grant dollars are to be allocated is the preservation of high quality water. It is felt that meeting minimum health standards should be considered at least co-equal, if not more important than preservation of high quality waters (in terms of allocating future grant dollars).

2. APPROACH

The approach taken in this recommendation is to allocate grant dollars according to two priority point lists which are developed utilizing the same basic formula. The dual priority point list approach recognizes the inherent problems of population being a significant weighing factor in the allocation of grant funds. Additionally this approach recognizes that many smaller communities have serious health problems associated with inadequate wastewater treatment and disposal, frequently resulting in localized degradation of instream water quality rendering it unsuitable for the highest attainable beneficial use.

3. DATA EVALUATED IN THIS ASSESSMENT

The data which was utilized in this evaluation was extracted from the 1976 Needs Survey developed by the Water Quality Control Division and the Environmental Protection Agency. The needs of 183 communities were evaluated. The number of communities listed on the proposed revised priority list dated May 31, 1977, number 311.

4. COLORADO'S NEEDS

As previously stated, \$879 million (measured in 1976 dollars) are needed to satisfy wastewater collection, treatment, and disposal throughout the State of Colorado. A breakdown of needs by category is shown on the following table:

TABLE 1
NEEDS (1976 NEEDS SURVEY)

	<u>Millions</u>
Secondary Treatment	\$ 91
Advanced Waste Treatment	300
Infiltration Inflow	29
Sewer Rehabilitation or Replacement	237
Collection Lines	8
New Interceptors	37
Combined Flow Separation	3
Treatment/Control of Stormwater	<u>174</u>
<u>TOTAL</u>	\$879

It should be noted that \$91 million is required to meet minimum secondary treatment requirements. An additional \$300 million is needed to both meet basic secondary treatment requirements, in addition to advanced waste treatment requirements. The needs survey does not distinguish how much of the \$300 million is applied to advanced waste treatment components only. Based upon the information provided in the 1976 Needs Survey, it would appear that at least 133 communities statewide need major wastewater treatment improvements, both to satisfy minimum health requirements as well as preserve high-quality waters.

5. FORMULA FOR DISTRIBUTING EPA GRANT FUNDS (Large Communities Versus Small Communities)

An assessment was conducted to determine the distribution of communities throughout the State by population levels in regard to wastewater treatment needs. Table 2 presents the pertinent statistics:

TABLE 2

	A	B	C	D	TOTAL
Population	Less than 5,000	5,000 to 10,000	10,000 to 25,000	25,000 +	
Total # of communities/ communities surveyed	232/132	23/15	37/20	19/16	311/183
# not in compliance with secondary treatment*	51	10	5	9	75
# needing secondary + AWT	31	5	10	12	58
Millions \$ for treatment facility	68.4	19.0	42.6	254.9	384.9
Total costs (treatment & appurtances)	86.6	25.7	49.7	536.5	698.5

*(Secondary only required to meet standards).

Ninety-seven communities (Column A plus Column B), less 10,000 population, require 22 percent of the total dollar needs to construct wastewater treatment plants. Additionally, 36 communities (Column C plus Column D), greater than a population of 10,000, require 78 percent of the funds to construct wastewater treatment plants.

The following formulae are proposed to determine distribution of available grant funds to communities of various population levels:

$$\text{Category 1 funds} = (\text{remaining funds}) \times \frac{\text{large municipality needs}}{\text{Total needs}}$$

$$\text{Category 2 funds} = (\text{remaining funds}) \times \frac{\text{small municipality needs}}{\text{Total needs}}$$

Needs are assessed on the basis of cost of treatment plant only and not total costs.

Category 1 communities are communities greater than 10,000 population, whereas Category 2 communities are less than 10,000.

Based upon this allocation formulae and the \$23 million available to the State of Colorado for 1978, the following distribution of grant funds results:

Category 1: \$17.7 million

Category 2: \$ 5.2 million

It is recommended that 5 percent of the available grant funds be applied as a reserve for grant increases under both categories, as recommended on pages 8 and 9 of the May 31, 1977, Proposed Revision to the Priority Point System. In addition, some percentage of the funds in each category should be reserved for initiation of Step I facility plans. The exact percentage should be established with the objective of ensuring completion of enough high priority plans to fully allocate Step II and Step III funds in ensuing years. Initially, 2 percent to 8 percent of the total should be considered for allocation to Step I planning.

6. RECOMMENDED PRIORITY POINT FORMULAE TO BE APPLIED TO BOTH CATEGORY I AND 2

TABLE 3
ALLOCATION OF GRANT FUNDS
(Categories I and II)

I.	<u>Basic Points</u>	
I-A	Population	50 points maximum
I-B	Discharge to High Quality Waters	15
II.	<u>Project Points</u>	
II-A	Secondary Plant Biologically or Hydraulically Overloaded, Primary Treatment Only or No Existing Wastewater Treatment System	40
	or	
II-B	Treatment Plant 80 Percent of Capacity	20
	and	
II-C	Advanced Waste Treatment Needed to Attain or Preserve High Quality Waters	10
	and	
II-D	Serious Health Problems ((includes bypassing of raw sewage, contamination of ground or surface water supplies due to failing septic tank systems)	40
	and	
II-E	Interceptor Sewer That Would Eliminate Treatment Facility (or need for)	5
III.	<u>Special Points (to be awarded after Step I Planning)</u>	
III-A	Completed 201 (or equivalent)	50
	and	
III-B	Reuse (year around)*	20
	or	
III-C	Reuse (more than six months)	10
	and	
III-D	Maintenance of Low Flow for Fisheries	20

*Reuse may or may not be an integral part of the treatment process. In the case of reuse being a substitute for mechanical tertiary treatment (i.e., land application following secondary treatment) Category II-C points would not be awarded in addition to III-B or C points. The term reuse should be construed as any system which does not result in a direct discharge into a classified water body.

Basic Points

I-A. Population - 50 points maximum - population points should be awarded as indicated in the May 27, 1977, Proposed Revision.

I-B. Discharge to High Quality Waters - 15 points - We believe that under the current classification system, high quality water should be considered as cold water fisheries only, and that the 15 points should be awarded regardless of whether advanced waste treatment or secondary treatment is required, the premises being that high water quality will be preserved regardless of what treatment level is appropriate. Consideration of I-B points should be given to communities whose discharge enters a viable warm water fishery. Only discharges entering water bodies which are "classified" are eligible. In such cases certification from the State Division of Wildlife to that effect should be obtained along with a justification statement. When the Commission adopts a revised classification system, it may be desirable to reassess criteria upon which the 15 points would be awarded. For example, warm water fisheries may then be considered high quality waters. This provides an incentive for regions to classify stream segments as a warm water fishery versus an agricultural classification as an immediate goal.

Project Points

The objective of allocating points to the various sub-categories under the project points category is to:

1. Assist communities who have serious health problems;
2. Assist communities who have overloaded secondary treatment plants or do not meet minimum treatment requirements;
3. Assist communities who require treatment upgrading to preserve high quality waters.

We recognize the philosophical argument surrounding whether or not the State should be giving preference to communities who have overloaded treatment facilities versus those who have consistently been ahead of the game. We believe that a majority of the communities who have overloaded treatment facilities find themselves in that situation because of financial problems encountered in funding wastewater treatment facilities coupled with their inability to get sufficiently high on the priority point system to receive grant assistance. Should a community that has an overloaded treatment facility and which finds itself eligible for grant assistance in a given year not pursue a grant, then the Commission should institute enforcement action against that community for violation of standards. This is consistent with the National EPA policy.

For the purposes of awarding project points under Subcategories II-A and II-B, the term (secondary) treatment plant means:

"treatment facility, and any integral component thereof including sludge handling facilities, chlorination or other disinfection facilities, and outfall lines discharging to irrigation ditches, lakes, reservoirs, or streams."

II-A. Secondary treatment biologically or hydraulically overloaded or discharge does not meet minimum secondary treatment - 40 points - These points or those of subcategory II-B could be awarded along with Subcategories II-C, D, and E. Therefore, the highest number of project points which could be awarded is $II-A + II-B + II-C + II-D + II-E = 95$ points.

II-B. Secondary Treatment Plant 80 Percent of Capacity - 20 points - self-explanatory.

II-C. Advanced Waste Treatment Needed to Attain or Preserve High Quality Waters - 10 points - High quality waters are defined as cold water fisheries. Assignment of 10 points, coupled with the 15 points which would be awarded for discharging to high quality waters would allow a community 25 points preference for advanced waste treatment. Recommendations concerning the method of determining advanced waste treatment needs are presented later in this report.

II-D. Serious Health Problems - 40 points - Serious health problems include bypassing of raw sewage, contamination of ground or surface water supplies due to failing septic tank systems. The determination of serious health problems should be made jointly by the District Engineer and County Health Department Officer. An assessment as to whether or not adequate operation and maintenance has been provided by the community should be made prior to the award of 40 points for a serious health problem. This would be an incentive to communities paying adequate attention to operation and maintenance requirements.

II-E. Interceptor sewer that would eliminate treatment facility (or need for new facility) - 5 points - It is believed that points should be awarded for interceptor sewers only in this instance. The net effect is to place emphasis for funding in a relative sense on wastewater treatment and not on interceptor sewers to serve new growth.

Special Points

Special points would be awarded only after completion of Step I Facility Planning. This would in effect necessitate a more close tracking of the progress of communities towards construction of their facilities.

Additional points would be awarded for Step II or Step III grants based on Step I performance. Additionally, special points could be awarded for communities in which 208 agencies have conducted the appropriate analysis on a (sub)basin-wide basis. This would provide an incentive for 208 agencies to more thoroughly address these issues.

III-A. Completed 201 Facility Plan (or equivalent) - 50 points - This follows the recommendations contained in the May 21 Revised Point System. Additionally, we believe that consideration should be given to communities who have an equivalent of a 201 Facility Plan as determined by the District Engineer, the Division, and with recommendations of the 208 COGs. Emphasis should be placed on awarding bonus points for an equivalent 201 Plan on smaller communities (i.e., less than 10,000 population). The Commission should work with the EPA to determine acceptable means to reduce 201 administrative technical procedure requirements which would lower the cost of 201 Step I planning.

III-B. Reuse year around - 20 points - Additional points should be awarded to communities who have demonstrated as a result of the 201 Facility Plan that year-around reuse (including land application) will be designed, constructed, and operated. Cost effective considerations, however, must also be satisfied.

III-C. Reuse (greater than six months) - 10 points - We believe that special points should be awarded to communities who can satisfy reuse principals at least one-half of the year. The rationale for awarding points for a partial reuse system are as follows.

By providing no incentive for part-time reuse, communities who face legal or physical constraints may give up an assessment of reuse altogether versus achieving reuse goals on a part-time basis.

III-D. Maintenance of low flow for fisheries in conjunction with upgrading or expanding wastewater treatment - 20 points - It is believed that in at least the Plains area of Colorado, the limiting factor in attaining a year-around fishery is adequate flow. In conjunction with upgrading or expanding wastewater treatment facilities, communities should be encouraged to assess the feasibility of flow exchanges or increased storage to maintain low flows for establishment of year-around fisheries or to improve conditions for aquatic life on a part-year basis. By awarding additional bonus points for this category, communities will have an incentive of doing a more thorough analysis in the context of their 201 Facilities Plan. Additionally, this will provide an incentive for Council of Governments who are designated 208 Areawide Planning Agencies to conduct such analysis which would place their communities in better stead for grant assistance for Step II and Step III grants.

7. ASSESSMENT OF NEEDS FOR ADVANCED WASTE TREATMENT

In recent years there has been considerable discussion surrounding the benefits derived from construction of advanced waste treatment facilities versus their costs. Considerable doubt has been raised regarding the viability of a waste load allocation model to determine treatment level requirements above minimum secondary treatment. The Larimer-Weld COG found that the waste load allocation model which determines treatment level requirements to be inadequately calibrated primarily in the area of hydrology simulation. Upon accurate calibration of the model, it became apparent that most communities who discharge in the vicinity of a diversion or in a stretch of the river which experiences zero flow conditions due to climatological and watershed conditions would have to construct advanced waste treatment. Inherent assumptions in this somewhat simplistic

theoretical approach is that with the construction of advanced waste treatment to remove primarily ammonia and residual chlorine will come conditions for year-around sustainment of a high quality fishery including fish propagation. This, of course, is not the case in many instances. Diversions and returns due to agricultural and other water supply and storage practices result in many stream segments becoming dry frequently throughout the year. Additionally, it is found that particularly in the plains area, bottom conditions are not conducive to sustaining a high-quality fishery on a year-around basis due to sediment loads, etc., the sources of which are a combination of natural runoff, runoff from agricultural areas, and residual sludges discharged from municipal and industrial waste treatment systems. An additional dilemma has resulted from disagreement over the definition of aquatic life as described in Public Law 92-500. There has been an inherent assumption on the part of many individuals that in order to achieve conditions for a viable fishery and other aquatic life, advanced waste treatment is required. This is not the case. For example, on the Poudre River below Fort Collins it has been documented that there is a remarkably healthy and diverse aquatic system in spite of conditions where there is no flow, conditions of fluctuating temperatures, and conditions where 100 percent of the water in the river are return flows from agriculture. In other words, it is possible to sustain a healthy ecosystem with secondary treatment rather than tertiary treatment resulting in uncertain benefits in many instances. Emphasis should be placed upon:

1. Improving conditions in the river bottom itself such as the provisions for more pools so that when there is low flow there is adequate water in certain sections to support fish;

2. More put-and-take type fisheries for sport fishing;
3. Supply of water during low flow conditions to sustain conditions for aquatic life year around.

In view of the uncertainties with regard to the benefits derived from advanced waste treatment, it is recommended that the Water Quality Control Commission require the following steps be completed before a determination be made as to advanced waste treatment requirements:

1. Review of waste load allocation model from two standpoints:
 - A. Determine adequacy of water quality data used for model calibration;
 - B. Determine whether or not the model accurately reflects the hydrology of the stream segment being analyzed;
2. Evaluate the hydrology below the point of discharge to determine the fate of discharge;
3. Conduct an intensive field study below the point of discharge to determine conditions for supporting aquatic life, including bottom physical conditions, benthic conditions, and the presence of species which constitute the aquatic system.

8. RULE CHANGE REGARDING WASTE STABILIZATION PONDS

The Environmental Protection Agency is proposing a rule change to relax the suspended solids concentration in effluents from waste stabilization ponds. The final rule change will allow communities with flows of 2 million gallons per day (gpd) or less to comply with minimum treatment level requirements using best waste stabilization pond technology. The final rule change is imminent.

According to the 1976 Needs Survey information provided to the Larimer-Weld COG, 86 communities in the State of Colorado are utilizing waste stabilization ponds.

Not all of these communities are in violation of minimum secondary treatment requirements, as some of them have added rock filters or other appurtenances to achieve the 30 mg/l suspended solids limitation which is currently in force. The finalization of this rule change will have a significant impact on the cost of wastewater treatment for these 86 municipalities and special districts. The Water Quality Control Division should move immediately to establish the appropriate suspended solids limitation as defined in a formula provided in the rule change. Due to the relative high cost of securing EPA grant funds, it is recommended that modifications to existing waste stabilization ponds could be made without the involvement of Title II grant funds. A possible source of funds would be the Division of Local Affairs. Coordination of local 208 Areawide Planning agencies in this effort is essential.

9. RELATIONSHIP TO THE DIVISION OF LOCAL AFFAIRS FUNDING PROGRAM

Currently the Division of Local Affairs funds the construction of wastewater treatment facilities based upon financial need for communities of a population of less than 5,000. The degree of participation by the Division of Local Affairs is purely discretionary. In consideration of the numbers of communities of less than 5,000 which will be included in the Category 2 priority funding list, these communities should first be directed to the Division of Local Affairs for determination as to whether or not they can be funded based upon financial need criteria. The Division should be asked to certify those communities who in their judgement do not satisfy the financial need requirement. In such cases, the community would then seek funding under the priority point system for Category 2.

Additionally, as a consequence of the proposed rule change for waste stabilization ponds, the Division of Local Affairs should be asked to consider broadening its

eligibility requirements for funding from that source; specifically, in light of the high cost of securing federal grant funds relative to the cost which may be required to upgrade an existing waste stabilization pond to meet the new standard. The Division of Local Affairs should include in its priority for funding consideration for the effectiveness of a relatively small percentage Local Affairs grant which would be expended primarily for plant upgrading and expansion versus a relatively high percent of federal EPA grant dollars which are expended for planning, environmental assessments, in addition to design and construction. To illustrate the point, there are cases in the Larimer-Weld region where the cost of meeting EPA planning requirements, including the Environmental Assessment, has constituted one-third of the total cost of upgrading an existing system.

10. INPUT OF AREAWIDE PLANNING AGENCIES IN THE DEVELOPMENT OF PRIORITY POINT SYSTEMS

The Commission has identified the dilemma faced with regard to integrating priority point systems or priority lists established by designated 208 Areawide Planning Agencies with that developed by the Colorado Water Quality Control Commission for the entire state of Colorado. There appears to be little opportunity to fully integrate both lists at this time because of the relative standing of various 208 planning processes. However, an ultimate goal should be to define with a high degree of accuracy wastewater treatment requirements, annually updated to reflect changing conditions. With more adequate data and information, the State of Colorado can develop a more effective priority point system for future funding allocations.

In the course of our analysis we found the data to be substantially lacking in certain areas, particularly with regard to realistic estimates of current population levels for the communities. Additionally, though the Needs Survey provides a substantial amount of information, there seems to be some significant gaps and inaccuracies. Finally, the District Engineers conduct routine inspections of wastewater treatment facilities around the state of Colorado. A substantial amount of information is available on their inspection forms or could be incorporated into their reporting procedures which would enable the State of Colorado to do a more thorough statistical analysis of future needs in addition to developing more equitable priority point systems. The possibilities of computerizing pertinent data and information should be thoroughly explored by the Division. The time involved in development of the basic information necessary for this analysis was quite substantial and there were many uncertainties with regard to the reliability of the data and information available.

The May 17, 1977, proposed revision addresses in two places the involvement of 208 agencies which appear to be quite appropriate. The 208 Agencies should be able to define in specific terms the appropriate points for an individual community. Additionally, the proposed system presented in this assessment provides incentives for a 208 agency to conduct certain types of analysis which are fundamental to determining the ability to achieve 1983 Goals of the Act.

11. PROCEDURES FOR IMPLEMENTATION OF THE REVISED PRIORITY SYSTEM

We feel that the system described above will meet the State's needs now and in the immediate future. However, we recognize that transitioning into a new priority system will cause some difficulty at the State level. The

procedures for implementing the new priority system set forth below recognize two realities: (1) much of the information needed to implement the revised priority system is not readily available; (2) there is an immediate need to revise the priority system pursuant to EPA requirements.

In recognition of these two facts, we propose a two-phase implementation program. The first phase would result in implementation of the priority system based on information which is presently available and which can be readily obtained. The second phase will result in refinement of the priority system based on the best available data. Each phase is described below.

Phase 1

There are many needs associated with the revision of the priority system. The criterion for identifying needs in Phase 1 is: what must be done initially to implement the priority system given existing and readily available information? The following procedures result from applying that criterion:

1. Communities in each category should be identified based on existing population data;
2. The 1976 Needs Survey should be divided into Category 1 and Category 2 communities;
3. Detailed instructions for implementation of a point system should be developed;
4. Priority points should be assigned to each of the communities based on the revised point system;
5. A preliminary reassessment of advanced waste treatment requirements should be conducted. For those communities which have initiated a construction program, the construction program

should continue because of the many legal difficulties encountered in halting construction programs.

Communities which are in Step 2 - Design Phase - should be given the option of reevaluating whether or not they need advanced waste treatment. This option should be exercised at the community level by local elected officials. All communities involved in Step 1 planning should be required to work with the Water Quality Control Division, designated 208 agencies, the State 208 Coordinator, the Division of Wildlife to determine if advanced treatment is required.

6. The ability of communities in each category to use available funds based on the formulae should be assessed. It is possible in the first year of the revised priority system that many small communities will not have had completed 201 Plans. If this is the case, two things should occur:
 - A. Construction dollars should be reallocated to Category 1 projects;
 - B. More funding should be allocated to Step 1 planning for small communities for the current year in order to insure adequate completion of 201 Plans for the following year.
7. The Water Quality Control Division should implement a construction grants program project management system to track the progress of Step I, II, and III funding and to project cash outflow for the present fiscal year. Timely, meaningful reports should be submitted to the Water Quality Control Commission to keep the Commission informed of progress and projections.
8. A committee should be formed to ensure speedy implementation of the rule change concerning suspended solids limitations from lagoon systems. The committee should also establish the suspended solids limitation for the State of Colorado based on actual field collected data. When the impact of the rule change is defined, the information should be fed back into the priority system.

Implementation of the procedures described above should result in a workable first-year revised priority system. During the first year, the emphasis of implementation should be on the application of principles associated with the new priority system rather than extremely accurate detail.

Phase 2

Phase 2 of the program for implementing the revised priority system could be conducted concurrently with Phase 1 if manpower is available. Phase 2 emphasizes refinement of the system. The second phase should include the following topic areas:

1. Data validation and upgrading.
 - A. Our review of the population data used in the present priority system indicates that population figures come from a variety of sources. These sources should be standardized, and when standardized, all population figures should be updated to represent current populations in the various communities of the state.
 - B. A second need associated with data validation and upgrading includes separation of secondary treatment needs which are now included in the advanced waste treatment category of the 1977 Needs Survey. Three hundred million dollars are included in the advanced waste treatment needs category. This includes an unknown amount of secondary treatment requirements. Secondary treatment needs included in this category should be subdivided out.
 - C. Data needs to fully implement the system should be defined, and sources of data should be defined (basin plans, 208 Plans, 201 Plans, 208 Agencies, etc.). Methods for integrating 208 planning agencies into the validation process must be defined.
2. Advanced waste treatment needs review.
 - A. The review of advanced waste treatment needs should incorporate recommendations discussed under Paragraph 7, "Assessment of Needs for Advanced Waste Treatment." This would appear to be a major undertaking requiring input from the Water Quality Control Division, the Division of Fisheries and Wildlife, 208

designated agencies, and the State 208 Coordinator. In order to focus efforts appropriately, it is suggested that the review be conducted initially on completed 201 Plans which recommend advanced waste treatment. The second priority would be the review of 208 plans which recommend advanced waste treatment. This AWT needs review should have a high priority in the Phase 2 implementation.

3. Establishment of Computerized Construction Grant Program Project Management System.
 - A. After reviewing some of the available information and using that information to develop a revised priority system, we feel that the State is not fully utilizing all the information which is needed for the program and which it has access to. In particular, we feel that a great deal of information is being generated by the Division's District Engineers which is not being applied to reflect needs or to update needs in the priority system. Furthermore, it would appear that there is a need for more systematic approach to tracking progress of the construction grants program and using information to project cash outflow problems in the future. Finally, while a great deal of "data" is available, little in the way of "information" is available, i.e., information which is usable by the Division, the Commission, the EPA, and COGs to assist in decision making.

The project management system should include the procedures by which information is reviewed and updated by 208 planning agencies. Such information would include population data, capacity/flow data, definition of health problems, advanced waste treatment needs, and analysis of low flow requirements.

To overcome this problem, we suggest that the Division and the Commission examine the feasibility of establishing a computerized information system on the construction grants program. This system would incorporate data needed to establish needs, monitor progress being made in Steps I, II, and III of the construction grants program, and project future allocations on a monthly and annual basis given the status of all three elements of the program.

4. Integration of Water Quality Control Commission and Department of Local Affairs Programs
 - A. A committee should be established to examine the interrelationships between the construction grants program and the Department of Local Affairs' sewage treatment facility funding program. Representatives should be selected from the Water Quality Control Commission, Water Quality Control Division, Department of Local Affairs, and perhaps the Governor's office.

5. Manpower Requirements to Implement Phase 1 and Phase 2 of the Revised Priority System
 - A. The Water Quality Control Division should estimate manpower requirements to:
 1. Refine the system under Phase 2;
 2. Maintain the system in future years.

The analysis should include comparison of existing available manpower to manpower required to successfully implement and maintain a multi-million construction program. We feel very strongly that only with such an analysis can realistic goals be set. If it is found that manpower limitations are so severe as to hamper the implementation and maintenance of this important program, the Commission should be prepared to recommend increased staffing in future years to the State Legislature.