EPA-908/5-77-003A

FINAL ENVIRONMENTAL IMPACT STATEMENT

UPPER EAGLE VALLEY AND VAIL WASTEWATER FACILITIES PLAN

OCTOBER 1977

U. S. Environmental Protection Agency
Region VIII
Denver, Colorado

0115607

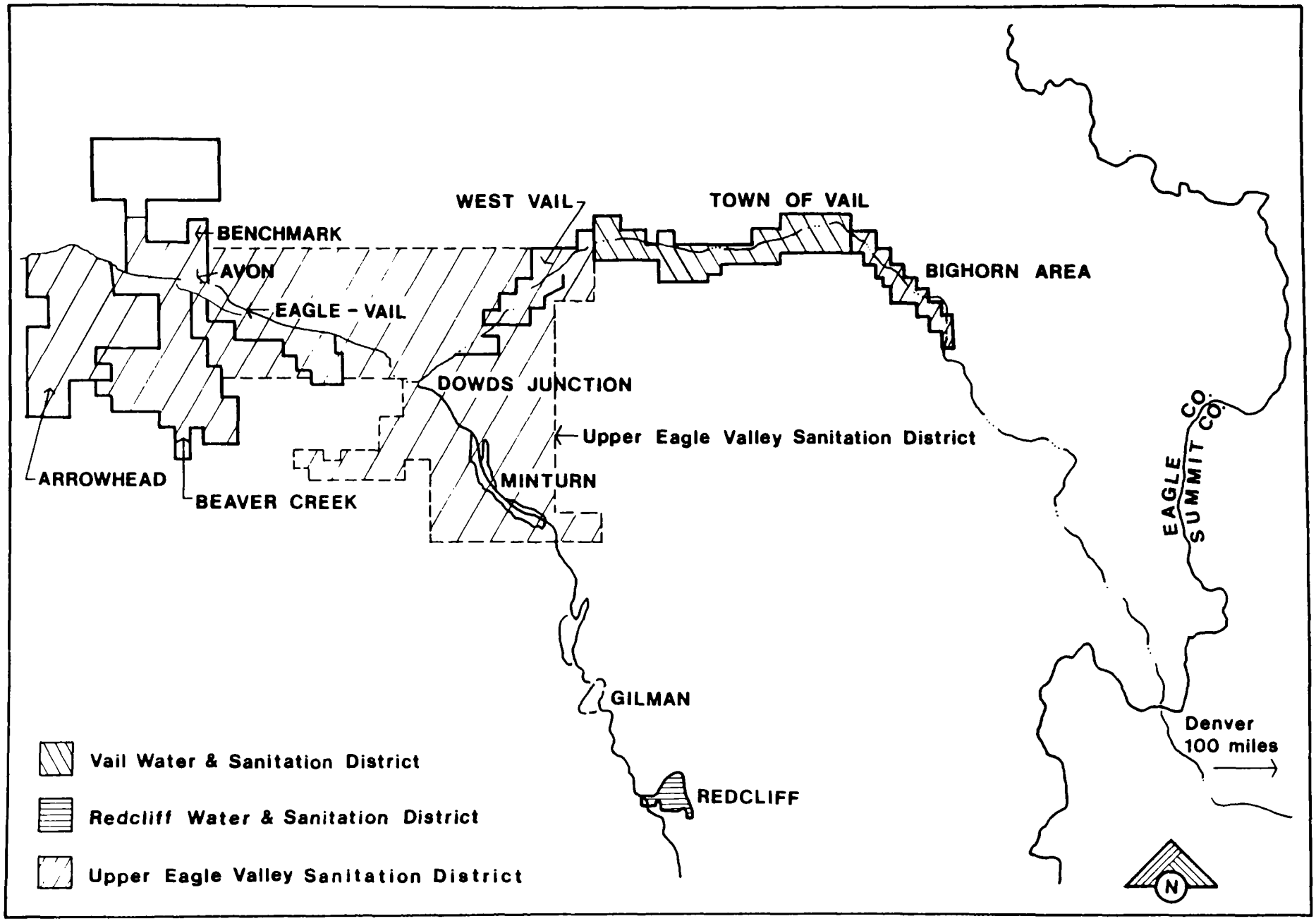
FINAL ENVIRONMENTAL IMPACT STATEMENT
UPPER EAGLE AND VAIL WASTEWATER FACILITIES PLAN

Prepared by
U.S. Environmental Protection Agency
Region VIII - Denver, Colorado

Approved by

Alan Merson
Regional Administrator

October, 1977


WEST VAIL
TOWN OF VAIL
BENCHMARK
AVON
EAGLE - VAIL
BIGHORN AREA
DOWDS JUNCTION
Upper Eagle Valley Sanitation District
ARROWHEAD
BEAVER CREEK
MINTURN
EAGLE CO.
SUMMIT CO.
GILMAN
Denver
100 miles
REDCLIFF
Vail Water & Sanitation District
Redcliff Water & Sanitation District
Upper Eagle Valley Sanitation District
N

SUMMARY SHEET

Environmental Impact Statement
for
Upper Eagle Valley and Vail
Wastewater Facilities Plan

( ) Draft (x) Final

1. Name of Action: (x) Administrative ( ) Legislative

2. Description of Action:

The Upper Eagle Valley Sanitation District and Vail Water and Sanitation District have proposed the expansion and improvement of their respective wastewater facilities located at Avon and Vail, Colorado. Under these proposals the treatment plant at Avon would be expanded from a capacity of 1.65 million gallons per day (MGD) to 3.5 MGD to meet the projected 1985 flows, and treatment efficiency improved to meet stream standards for the Upper Eagle River. The treatment plant at Vail would be expanded, under the District's proposal, from 1.5 MGD to 3.0 MGD to meet projected 1995 flows with treatment improved to meet stream standards for Gore Creek.

The treatment capacities proposed by the two Districts are based on a per capita water use rate of 150 gallons per day. EPA believes this figure to be excessive for this area and will fund capacity to treat waste water from the projected population at a rate of 135 gallons per capita per day. This reduces the plant capacities to 2.7 MGD for Vail and 3.1 MGD for Avon. EPA will provide Step II design funds for the proposed treatment facilities at these reduced capacities.

The availability of Step III funds for construction of the improvements and expansions (at reduced size) of these wastewater treatment facilities will be made available when the following conditions are met.

1) The Districts require the metering of all water service for the purpose of pricing to encourage water conservation and the installation of water conserving appliances and devices in all buildings, prior to providing any new service in the form of collection or treatment to any portion of the Districts' service areas.

2) The Districts require the enactment of an effective and enforceable particulate control ordinance by the Town of Vail, prior to providing any new service in the form of collection or treatment to areas within the Town of Vail.

3. Environmental Impacts:

Secondary impacts of the proposed action will be the result of population growth, land use conversion, and consequent resource utilization. The average daily (winter) population within the study area is projected to increase nearly three fold from a 1975 population of 16,000 to a 1995 population of 47,560. Most of this population growth (23,850) is projected to occur in the Upper Eagle Valley area. By contrast, the average daily population of Vail is projected to increase by 7,980 by 1995. The Avon facility will support the developments of Arrowhead, Beaver Creek, Benchmark, Eagle Vail, and West Vail along with development in Avon and Minturn. The Vail wastewater treatment plant will provide capacity for continued development of Vail and the Bighorn area (see preceding map). Consequently, the sizing and location of the treatment plants may have some influence on the location of growth, but, this effect is substantially reduced by the interconnection of the plants and by other overriding influences, including topography, land ownership, local zoning, state and federal approvals. It is not believed that the EPA action of providing federal grant funds for design and construction of these facilities will in itself promote development. Several alternatives exist to federal funding of these facilities which would allow for continued development, although possibly at a slower pace. The secondary impacts on environmental and human resources which will result from population growth in the area include:

1) degraded air quality

2) increased nonpoint source pollution from construction and urban runoff

3) depleted stream flows

4) reduced scenic values

5) increased demand on many urban services and potential shortages

6) loss of wilderness and wildlife habitat

7) greater demand on recreation facilities.

8) different employment opportunities benefiting some but not all.

Mitigative measures are proposed as part of the EPA action to reduce air quality, nonpoint source pollution and stream flow impacts.

Construction impacts of the proposed action include minor disturbance and/or destruction of vegetation and wildlife. There will be some

erosion and sedimentation. Unavoidable adverse impacts will be the temporary loss of terrestrial and aquatic habitat along the interceptor replacement route and permanent removal of vegetation on land to be used for plant expansion. No impact to archeological or historical sites are anticipated.

4. Alternatives Evaluated

The alternatives to the proposed action which were evaluated are:

Alt. 1 - Upgrade Vail plant (same capacity)

- Construct new Dowds Junction plant at 2.6 MGD for 1995 flows.

- Upgrade and expand Avon plant to 2.5 MGD for 1985 flows and later expand plant to 4.7 MGD for 1995 flows.

Alt. 2 - Abandon Vail Plant

- Construct new Dowds Plant at 4.1 MGD for 1995 flows

- Upgrade and later expand Avon Plant to 2.5 MGD for 1985 flows and expand Plant to 4.7 MGD for 1995 flows.

Alt. 3 - (Districts' Recommended Alternative)

- Upgrade and expand Avon Plant to 3.5 MGD for 1985 flows and later expand Plant to 5.8 MGD or construct new 2.3 MGD plant downstream at Squaw Creek.

Alt. 4 - Assumes no Vail participation

- Upgrade and expand Avon Plant to 3.5 MGD for 1985 flows and later expand plant to 5.8 MGD or construct new 2.3 MGD plant downstream at Squaw Creek.

Alt. 5 - No Project (No federal funding is considered under institutional and financial conditions.)

5. Distribution:

(See list at end of this document).

6. Final Statement Sent to Council on Environmental Quality:

SEP 29 1977

INTRODUCTION

The purpose of this Final Environmental Impact Statement (EIS) is to present the decisions of EPA and resulting environmental impacts of providing federal grant funds for expansion and improvement of wastewater treatment facilities in the Upper Eagle Valley and Vail area of Colorado. The Upper Eagle Valley Sanitation District and Vail Water and Sanitation District have received a federal grant for developing plans to examine various alternative solutions to the collection and treatment of waste water generated in the area. A draft EIS was issued by EPA in April of 1977 which addressed these alternatives, including the Districts recommended plan, and their environmental impacts. Subsequently, on May 26, 1977, EPA held a public hearing on this draft EIS in Vail Municipal Building. The Upper Eagle Valley Sanitation District also held a public meeting on the District's recommended action on April 20, 1977. All written comments received by EPA on the draft EIS are included in this document along with EPA's response. In making decisions on this action, EPA has reviewed and evaluated the Districts recommendations, the impacts discussed in the draft EIS and all comments received on the draft EIS.

EIS FORMAT

This Final EIS does not use the standard EIS format normally used by Federal Agencies. The reason for using this modified format is to highlight and bring to the reader's attention what EPA believes to be the most important aspects of this action while allowing a complete review if desired. This Final EIS is broken into two documents. This document, being the smaller of the two, attempts to summarize EPA's decisions so that previous reviewers and commentors may quickly determine the results of this EIS and wastewater facilities planning process. The second document entitled "Attachment to Final EIS" is a revision of the draft EIS in accordance with comments that EPA has received on the draft. The following portions of this document will address EPA's proposed action, the more significant issues, mitigation measures which will be incorporated in the action, comment letters on the draft EIS and EPA's responses, and finally, pertinent enclosures. The "Attachment to the Final EIS" follows the more conventional EIS format. For more detailed information, the reader is referred to this second and larger document. The responses to comments also expands on the discussion of issues and mitigations which follow the description of the proposed action.

PROPOSED ACTION

The Upper Eagle Valley Sanitation District and Vail Water and Sanitation District have proposed to EPA the expansion and improvement of their respective wastewater treatment facilities along with some

needed replacement of interceptor sewer for this expanded capacity. In recommending a plan to EPA for further funding of design and construction, the Districts evaluated, in some detail, four alternatives These alternatives along with the no-project and no-federal funding alternatives are explained in the Attachment and also in the Facilities Plan submitted to EPA and the State by the Districts earlier this year. The Districts recommended a plan for expansion and upgrading their existing facilities which is labeled 3a, b. In recommending this alternative, the option was left open on whether to expand, at some later date (possibly 1985), the Upper Eagle facility located at Avon (3a) or to build a new plant downstream (3b) when this proposed expansion of the Avon facility would be at capacity. EPA will not make a decision on this aspect of the project at this time and will require a new facilities plan and environmental assessment, possibly an EIS, prior to considering this future action.

Other aspects of the recommended plan include the upgrading of wastewater treatment efficiency and effluent discharge to meet stream standards, including those only presently proposed by the State for unionized ammonia and residual clorine (both being toxic to fish at certain concentrations). This improved treatment will include ammonia removal, filtration, declorination or ozonization and special sludge handling along with the more conventional treatment processes. The recommended plan calls for improvement of the existing facilities at Vail and Avon with upstream areas being served by each facility with the ability to transport wastewater downstream to Avon under emergency or overload conditions. Sludge from the Vail facility would be transported via the same connecting interceptor line to Avon for dewatering and handling there. EPA approves of this recommended treatment process but will review the predesign engineering work on the ammonia removal process, disinfection process and sludge handling to insure these processes are workable prior to funding construction of the project.

The Districts recommended plan calls for expansion of the Upper Eagle facility to 3.5 million gallons per day (MGD) from its present capacity of 1.65 MGD to handle flows from the projected 1985 population. At Vail the proposed expansion is from the existing 1.5 MGD to 3.0 MGD for the projected 1995 population. These capacities are based upon an estimated per capita flow rate of 150 gallons per day. EPA believes this per capita flow rate to be excessive given information presented in the 201 Facilities Plan and data on water usage in other similar areas. (See comments from North West Colorado Council of Governments and EPA's responses on water conservation issue). Therefore, EPA will fund the facilities design and construction only for 135 gallons per capita per day, which reduces the proposed plant expansions to 3.1 MGD for Upper Eagle (Avon) and 2.7 MGD for Vail. This figure of 135 gallons was derived using information in the 201 Facilities Plan which indicated that a possible range in per capita wastewater generation of 125 to 150 gallons per day exists in Vail during the winter ski season. Use of 135 gallons per capita per day is a reasonable midvalue which, if low, will not require unreasonable water conservation efforts to achieve and, if high, will not result in excessive treatment capacity.

The expansion of capacity to handle wastewater will also require the replacement of certain segments of sewer interceptor lines where existing pipe size and slope would be restrictive. The Districts' proposed plan estimated the need to replace 5.25 miles of interceptor sewer. Exact sewer replacement needs will be determined after completion of survey work under the predesign effort. A per capita waste flow figure of 135 gallons per capita per day will be used to determine the need to replace sewer lines. It is not expected that use of this figure rather than the 150 gallons will result in significant changes in the plan regarding sewer replacement. Since sewer replacement may temporarily impact water quality, aquatic life and wildlife, coordination by the District with the Colorado Division of Wildlife to minimize such impacts will be required as part of the grant. Also, the Districts' will be required to stop work on any portion of the construction and contact the State Historic Preservation Officer, if buried material of potential archaeological value is encountered.

ISSUES

Water Conservation

Comments on the draft EIS concerning the need for water conservation and the consideration of such practices in sizing the wastewater treatment facilities were received by both Eagle County and the North West Colorado Council of Governments. Reasons cited for the need for water conservation included; reduced water and wastewater treatment capacity and costs, reduced streamflow depletion thus mitigating adverse impacts on aquatic life and reduced financial risk to existing water users if the projected growth does not occur.

There is a limited amount of water within the study area which is readily available for the projected peak population during winter ski season. Therefore water conservation must be practiced to protect stream values as well as to adequately support population growth. Significant streamflow depletion could occur as a result of the projected growth in the area. Such an impact may be properly mitigated through the use of water conserving applicances and devices, water use metering with a rate scale to discourage overuse of water, and developing new more sophisticated water supply systems possibly including upstream discharge or shallow ground water injection of sewage effluent during winter months.

Since the peak population within the study area is principally transient skiers and visitors, pricing incentives to encourage water conservation may not be as effective as in areas with a large permanent population. Generally, visitors do not recognize the costs associated with water use and therefore higher prices may not be attributed to the cost of water. However, pricing may be effective in promoting property owners and managers to encourage water conservation by tenants through

education and encouraging proper use of water conserving appliances and devices. Education of the tourist to the problem and costs of misusing water may be a more important component of an overall water conservation program than in other, more typical, urban areas.

Presently, water metering is required by both the Upper Eagle Valley Sanitation District and the Vail Water and Sanitation District for all new taps. However, a significant percentage of the existing dwellings do not presently have meters. It is expected that all existing unmetered uses will also be forced to meter water use in the near future.

Use of water-saving devices, appliances, and plumbing fixtures, such as fine spray shower heads, low flush toilets, washers with suds savers, and flow restrictors may be very effective in reducing water use in the Vail and Avon area. Using results from previous studies, EPA has estimated that laws and ordinances requiring installation of water saving plumbing fixtures and appliances in new dwellings could reduce wastewater flows from new developments by 30 to 35 percent. Retrofit of water devices such as toilet dams and fine spray showerheads could reduce community wastewater flows by 15 to 20 percent. However, these estimates are preliminary since experience is limited and may also be different for a ski resort community where the incentive to conserve water may be limited.

Presently, the Upper Eagle Valley Sanitation District is adopting regulations requiring water-saving shower fixtures and toilet facilities. Eagle County and the Town of Vail also are considering the adoption of such regulations for new structures.

Nonpoint Pollution Control

The draft EIS along with preliminary results of the North West Colorado 208 Water Quality Management Plan indicate the general significance of nonpoint pollution in the area. The projected development, unless carefully controlled to mitigate nonpoint pollution sources, will add to the existing problem. Generally, the control of nonpoint pollution (urban runoff, erosion from construction, etc.) is not evaluated in the development of a 201 facilities plan. However, the importance of nonpoint sources can not be ignored in selecting solutions to wastewater treatment as both are integral parts of a water quality management plan. Since high levels of wastewater treatment are proposed for the Vail and Avon areas, effective nonpoint source controls are needed in order to maintain high standards for water quality in the area. The proposed wastewater facility improvements will support the continued development of the area by providing capacity for future populations which in turn will affect water quality through increased nonpoint source pollution. To date, a nonpoint source control plan has not been developed for any portion of the study area.

Air Quality

The draft EIS recognizes the problem of air pollution in the Gore Valley where the Town of Vail is located. During the winter ski season of 1976-1977 both State and Federal air quality standards for particulates were violated. These violations are largely attributable to use of wood burning fireplaces in the Valley. The following particulate concentrations which exceeded State and/or Federal standards were measured during 1977 in the Gore Valley.

Date	24-hour Concentration in Micrograms	Location	Standard Violated
9 Jan 77	240	Vail	State
21 Jan 77	350	Vail	State & Fed.
21 Jan 77	220	West Vail	State
25 Jan 77	763	West Vail	State & Fed.
22 Mar 77	284	West Vail	State & Fed.
7 Apr 77	280	Vail	State & Fed.

The State 24-hour standard for particulates has been exceeded in the Gore Valley since 1973 when monitoring was begun. These high particulate concentrations during the 1977 season represent the first time Federal standards have been exceeded.

The draft EIS indicated that without control of fireplace emissions or burning, violations of State and Federal particulate standards would continue in the future due to more development. The draft EIS also indicated the possibility of exceeding the particulate standard in the Avon area by 1985 unless fireplace use is adequately controled. The Town of Vail has, in cooperation with other mountain towns, been developing information to support a program to control particulate emissions. However, to date, there is no law or ordinance enacted to control particulate emissions in Gore Valley

Reuse of Wastewater

In comments that EPA received from the Colorado Water Quality Control Commission and the Colorado Open Space Council it is stated that the draft EIS and facilities plan did not adequately analyze the land treatment or reuse alternatives. EPA requires each applicant for construction grant funds to make a conscientious analysis of wastewater management alternatives with the burden upon the applicant to examine all available alternative technologies including land treatment and reuse. The Federal Water Pollution Control Act Amendments of 1972 encourages the consideration of wastewater reclamation and recycling by land treatment processes. President Carter's recent Environmental Message to the Congress emphasized the design and construction of cost-effective publicly-owned wastewater treatment facilities that encourage water conservation as well as adequately treat

wastewater. Therefore, if a method that encourages water conservation, wastewater reclamation and reuse is not recommended, the applicant should be required to provide complete justification for the rejection of land treatment and reuse.

In evaluating this issue, it is EPA belief that the downstream land treatment alternatives were legitimately dismissed during development of the facilities plan for reasons of cost, environmental impact and difficulty of implementation. Basically, the limited growing season, remoteness of suitable land, the possibility of significant stream flow depletion and water rights conflict, high land costs, limitation of suitable winter storage sites, and the winter limitations on discharge of ammonia, make land treatment neither the most cost effective solution nor an environmentally sound alternative.

However, the reuse of wastewater effluent should be considered for use in alleviating future demands on water supplies. Presently, limited benefits can be achieved with summer reuse of wastewater on golf courses and other open space lands in the vicinity of Vail and Avon. This situation occurs principally because winter discharge limitations are more restrictive than summer limitations for unionized amonia, suspended solids, residual clorine and biochemical oxygen demand. Also, low flows which are subject to serious depletion, occur during the winter. Therefore, normal land application systems can not be used, in this climate, to alleviate winter pollution control requirements nor to benefit winter stream flows. It is possible, however, that with the additional use of effluent for snow making and shallow ground water injection, to augment winter stream flows, reuse might become a realistic alternative to future development of additional water supplies. The proposed treatment improvements are consistent with any future scheme which might reuse wastewater effluent for several purposes during both the summer and winter months. See discussion of mitigations regarding this issue.

Construction Impacts

Certain comments received on the draft EIS from U.S. Forest Service, Colorado Division of Wildlife, U.S. Department of the Interior, State Historical Society of Colorado and Federal Highway Administration addressed the direct, construction impacts of the proposal. These potential construction impacts are addressed in EPA's responses to comments. They include impacts on archaeologic and historical resources, aquatic and wildlife habitat impacts from construction near and through streams, disruption of recreational sites and opportunities, and conflicts with highway transportation facilities. EPA will require that such potential impacts be mitigated to minimize the effects of construction. See discussion under mitigation measures.

MITIGATION MEASURES

Water Conservation

EPA will require prior to providing grants funds for construction of the proposed project, the implementation of a water conservation program within the 201 project area. This water conservation program will require the metering of all water service for the purpose of pricing to encourage water conservation and the installation of water conserving appliances and devices in all structures. As a condition to receiving federal funds for construction of the proposed wastewater treatment improvements, the Districts' must require the enactment of such a water conservation program prior to providing additional service. Presently, water metering is required by both the Upper Eagle Valley and Vail sanitation districts for all new taps. The use of water saving fixtures is under consideration by Eagle County, Vail and the Upper Eagle Valley Sanitation District for new structures.

In taking the action to reduce the capacities of the proposed wastewater treatment plants, EPA believes that water conservation should be encouraged in the area. A successful water conservation program may easily reduce wastewater generation below the estimated per capita flow rate of 135 gallons per day. If so, the effective service life of the facilities would be extended, making the present investment good for a longer period of time. This potential benefit should be a significant contributor to the efforts already underway in the area to promote water conservation.

Nonpoint Pollution Control

As a condition to the approval of the facilities plan, EPA will require the two Districts to actively participate in a nonpoint source pollution control program, to be funded by EPA, and to pursue, within their jurisdictional authorities, the implementation of the plan recommendations. A joint agreement to participate in the program and to pursue implementation on nonpoint source controls has been signed between EPA and Town of Vail, Town of Minturn, Northwest Colorado Council of Governments, Vail Water and Sanitation District, Upper Eagle Valley Sanitation District and the State of Colorado. Such an agreement has also been requested of Eagle County, but has not yet been received by EPA, although we understand that it has been signed. The joint agreements so far signed and received by EPA are included in this document as Enclosure 1. The joint agreement which has been modified and signed by Upper Eagle is not acceptable to EPA and will have to be further negotiated in order to approve the 201 facilities plan. EPA does not intend to use the results of the nonpoint source pollution control program to hold up funds or to modify the proposed action being considered at this time. However, the use and need for future federal funds for water quality improvements in this area beyond this 201 planning, design and construction process, may be affected by the results of this nonpoint control plan.

Air Quality

EPA will require prior to providing grant funds for construction of the proposed project the implementation of a particulate air pollution control ordinance by the Town of Vail. This particulate control ordinance must be effective in addressing fireplace emissions and enforceable by the Town. As a condition to receiving federal funds for construction of the proposed wastewater facility improvements, the Districts must require the enactment of this air pollution ordinance prior to providing any new service to the Town of Vail.

Reuse of Wastewater

As a condition to approval of the facilities plan, EPA will require the sanitation districts to fund a study of wastewater resue in conjunction with the on-going comprehensive water study for the area. We believe this to be an appropriate approach in that there appears to be no obvious water quality benefits or cost savings from reuse of effluent on golf courses or other open space lands at this time. Therefore, our approach for this project will be to require study of these options, in the belief that economics may be favorable in the future as water demands and costs increase. See comments from the Colorado Open Space Council and the Colorado Department of Health on wastewater reuse and EPA's responses.

Construction Impacts

1. Archaeological and Historical Resources - EPA will require the districts to minimize any direct impact to archaeological or historical resources which might result from construction operations. The following procedures will be required of the sanitation districts in a special condition to their grant.

> "In the event that subsurface materials, possibly constituting an historical or archaeologic find, are uncovered during construction, the following procedures will be adhered to by the contractor.
>
> 1) Construction shall be halted with as little disruption to the archaeological or historical site as possible.
>
> 2) A representative of the Sanitation District shall notify the State Historic Preservation Officer and EPA of the find and ask for guidance.
>
> 3) The State Historic Preservation Officer may decide to have an archaeologist inspect the site, and make recommendations about steps needed to protect the site, before construction in the area is resumed.
>
> 4) The entire event shall be handled as quickly as possible in order to hold the loss in construction time to a minimum while still protecting archaeological or historical finds."

2. Aquatic and Wildlife Habitat Impacts - The districts will be required, as a special condition to their grant, to coordinate construction activities with the Colorado Division of Wildlife with respect to minimizing impacts to terrestrial and aquatic habitats. Potential mitigations to reduce adverse impacts to trout, deer etc., are listed on pages 143 through 146 of the Attachment of the Final EIS.

3. Recreational Impacts - As a special condition to the districts' grant, they will be required to coordinate construction activities with the Towns of Minturn and Vail and Eagle County to minimize the disruption of recreational activities in the area. Mitigations may include limiting construction to certain times of year, limiting duration of open trenching and setting time requirements for restoration of land to previously existing conditions.

4. Highway Conflicts - A special condition to the districts' grant will require coordination with State, County and Towns to safely convey and minimize traffic conflicts with sewer line construction areas in the vicinity of any highways and local roads. Such mitigations may include barricading, lighting, use of hazard and directional signs and seasons when construction can be done.

COMMENT LETTERS AND RESPONSES

The following letters are all of the written comments that EPA received on the draft EIS. Each response by EPA follows the comment letter and is keyed to the letter by the numbers along the left margin. All those that testified at the public hearing also submitted written comments and so the hearing testimony is not included in this document, but is available for review at EPA offices in Denver.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P. O. Box 17107, Denver, Colorado 80217

May 17, 1977

19170

Mr. John A. Green
Regional Administrator
U. S. Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

We have reviewed the Draft Environmental Impact Statement for the Upper Eagle and Vail Wastewater Facilities Plan.

(1) We feel the draft EIS is well written and adequately covers the items in which the Soil Conservation Service has expertise. However, we would like to call your attention to an error on page 173, last sentence. Crested wheatgrass is not an exotic annual species as described in the last sentence. It is an introduced perennial and would probably be a suitable species for revegetation purposes.

We appreciate the opportunity to review and comment on this project.

Sincerely,

Robert G. Halstead
State Conservationist

cc: R. M. Davis, Administrator, SCS, Washington, D.C.
Office of the Coordinator of Environmental Quality Activities
Office of the Secretary, USDA, Washington, D.C.
Council on Environmental Quality (5 copies)

5/23/77
orig - Geise
copy - Murray
circulate copy - (3)

Response to Soil Conservation Service

1. Your correction concerning crested wheatgrass has been noted and the text changed accordingly.

EAGLE COUNTY

DEPARTMENT OF PLANNING AND DEVELOPMENT

McDonald Bldg. 550 Broadway P.O. Box 179 Eagle, Colorado 81631

1 June 1977

U.S. Environmental Protection Agency
Region VIII
Attn: John A. Green,
Regional Administrator
Denver, Colorado

The 201 Facilities Plan of the Upper Eagle Valley Sanitation District has been reviewed by the Eagle County Planning Commission and the Eagle County Planning Department.

The Plan is readable and appears to be comprehensive in scope. The financial estimates of recommended construction are well documented. Public involvement has been adequate considering strictures of time.

The following comments and concerns are offered for your consideration before final implementation of the construction phase.

1 1. There appears to be very little imagination in addressing the problems of effluent treatment and water conservation. Sludge treatment by hauling to a distant county dump is simplistic but should not be considered an effective disposal solution over the short or long term.

2 2. Water conservation should be addressed as a positive program to alleviate effluent generation. Public awareness of the need for conservation should be considered as an ongoing public relations project of the District.

3 3. Serious inadequacies in effluent discharges into the Eagle River and Gore Creek should be emphasized. Base data should reflect current problems during periods of low stream flow and peak discharges and possible administrative solutions.

4 4. Lessened stream flow where upstream diversions come on line need to be considered especially in water quality projections.

5 5. Consolidation of water and sanitation districts should be considered in depth to reduce costly duplication and divergent planning.

6 6. Non point generation of pollutants should be considered and possibly included in the plan as a part of the district projections of potential effluent sources.

7 7. Limitation of densities within the service area should be considered as a short term solution of discharge problems.

(8) 8. Costing of current treatment may have an economic impact on Minturn residents.

Endorsement of this 201 Facilities Plan in no way sets land use patterns. In general, assumptions presented by the plan are consistent with county projections, however, each zoning and subdivision decision must be based on its' individual merits and the County Master Plan.

We would appreciate comments and suggestions as to how County Planning can assist in solving your problems.

by: Michael S. Blair
Sec.
for:
Donald Price
Chairman,
Eagle County Planning Commission

DP/kp

cc: Board of County Commissioners

Response to Eagle County Department of Planning and Development

1. Regarding effluent treatment, many treatment processes were considered and evaluated in the course of the plan development. Since advanced treatment must be provided at both plants, the proposed processes will significantly reduce the wastes presently being discharged to Gore Creek and the Eagle River. This advanced treatment will be achieved by adding the necessary treatment units to the already operating facilities, including the addition of nitrofication, filtration and dechlorination or ozonization. EPA considers these improvements to have significant water quality benefits and to be cost effective, given the existing facilities.

   Regarding water conservation, EPA will require, prior to funding construction of the facilities, the institution of water conserving devices and water meters or other pricing incentives to encourage conservation within the study area. (See discussion of water conservation under Issues and Mitigations.)

   Regarding disposal of sludge at the Eagle County land fill, the preferred alternative of both EPA and the two Sanitation Districts is to recycle dewatered sludge residues back to the land on golf courses, interstate median strips, public greenbelt areas and private lands where use agreements can be developed. Presently, sludge from these wastewater facilities is being used in pasture land on an as needed basis. Expansion of this program will require recognition, by both public and private land managers, of the value and acceptability of sludge for land application.

2. See response to 1. above on water conservation.

3. The proposed improvements at both facilities will significantly improve the quality of effluent discharges and represent the solution to present problems over the next ten to twenty years. Since expansion and improvement of the Avon wastewater treatment facility will occur prior to that at Vail, it is recognized that interim improvements at Vail, such as additional clarifier capacity, may need to be provided first.

4. See response to Northwest Colorado Council of Governments letter on the subject of future water diversions.

5. EPA agrees that consolidation of water and wastewater treatment services should be encouraged. We understand that water districts in the areas are presently studying this matter under a recently developed "Water Authority." This matter is best handled on the local and regional level, and we encourage Eagle County to pursue such consolidation of services. However, we do not believe that the projects being considered should be held up awaiting the establishment of a single authority.

6. We agree that nonpoint sources must be considered in developing a complete water quality management plan for the area. EPA will be funding a nonpoint source study for the area which will include a set of implementation recommendations. Because Eagle County has direct land use and other jurisdictional authority in this area, substantial participation by the County in this effort will be encouraged through a joint agreement between the County and EPA, and others. (See copies of the Joint Agreement included as Enclosure 1.) Also see responses (8) through (10) to Northwest Colorado Council of Governments comments.

7. EPA does not disagree with this concept, but believes that it is the authority of Eagle County and other local governments with land use jurisdiction to implement such controls.

8. It is true that service charges are expected to increase for all users. However, this is a result of anticipated increased operation and maintenance costs attributable to the higher levels of treatment required to be provided by the improved facilities (e.g. ammonia reduction, dechlorination, etc.). These costs should obviously be shared by all users. Costs attributable to expanded capacity will be paid for by tap fees, thus new users will pay fully for their share of capacity which is built for them.

The Board of County Commissioners—Eagle County, Colorado

EAGLE, COLORADO 81631

Phone 328-6377

31 May 1977

Keith Troxel
District No. 1
Dan Williams
District No. 2
DALE F. GRANT
District No. 3

U.S. Environmental Protection Agency
Region VIII
Attn: John A. Green,
Regional Administrator
Denver, Colorado

Re: Draft Environmental Impact Statement -
Upper Eagle Valley and Vail Wastewater Facilities Plan

Dear Mr. Green:

The Eagle County Board of Commissioners has reviewed the Upper Eagle Valley 201 Facilities Plan and has made the following evaluation.

In general, the Plan appears to meet the requirements for a 201 plan and is reasonably consistent with County Planning policy. Population projections upon which the report is based are within an acceptable range of County 208 land use and population estimates. The selected alternative appears to be a positive step toward water quality improvement in the Upper Eagle Valley.

(1) The Board feels that the change in water use patterns from agricultural (6 month consumption period) to domestic (12 month consumption period) will have significant impact on stream flows and thus on discharge limitations.

Water availability based on change in use could seriously affect growth rate and location and should be included in the report.

(2) Cost of service projections are based on growth projections. In the event that growth does not occur at the projected rate, there will be a severe impact on current user costs. This contingency should be included in the plan in order to effectively deal with all future situations.

(3) Although the 201 plan was allowed to precede the 208 plan, the subject of non point sources should be addressed. No plan can effectively deal with stream quality without addressing this major contributor to stream pollution. Some interchange and coordination is required in order to meet the goal of high water quality in the Upper Eagle Valley.

Page 2

4 The Board endorsed the comments of the Planning Commission as stated in their letter of 20 April 1977. Major points which the Board feels should be emphasized are: effect of reduced stream flow (and resultant effect on discharge limitations) of transbasin diversions, study of consolidation of special districts, water conservation impacts, and sludge disposal alternatives.

W. Keith Troxel
Chairman,
Board of County Commissioners

WKT/TK/ge

Response to The Board of County Commissioners-Eagle County, Colorado

1. These comments regarding water supply, availability, and quality impacts are nearly impossible to adequately address at this time, due to the unknowns regarding water use and development decisions that are outside EPA's or the Sanitation District's control. To some degree this issue is addressed on pages 120-122 in the Attachment to the Final EIS. For further clarification an example can be given for the Vail-Gore Creek area which indicates that the level of treatment to be provided will protect water quality against future stream depletions to a reasonable degree. Assume that low flows on Gore Creek are depleted by 25 percent, which is consistent with 1995 growth projections for the Gore Valley. Assuming such a decrease in flows would result in an equal increase in pollutant concentrations in the creek, instream limits as shown in Tables 23, 24 and 25 would still not be exceeded. It should be recognized that any reduced treatment efficiency during such depleted, low flow periods would more significantly impact stream quality than presently projected. Therefore, stream flows should be maintained as a protection to water quality, fisheries and aesthetics. Such protection will require the development of more innovative water supply methods than presently provided within the area.

2. It is agreed that if growth does not occur as projected, costs for wastewater services would probably increase. However, the population projections are consistent with Eagle County and Town of Vail projections and there is little reason to believe that such growth will not be accomodated and supported by other public services as well. We believe the issue, while possible, is not predictable.

3. We agree on the subject of nonpoint pollution and control. Please see response (6) to comments received from Eagle County Department of Planning and Development and responses (8) through (10) to comments received from the Northwest Colorado Council of Governments.

4. See responses to comments received from the Eagle County Planning Department dated 20 April 1977.

EAGLE COUNTY

DEPARTMENT OF PLANNING AND DEVELOPMENT

McDonald Bldg. 550 Broadway P.O. Box 179 Eagle, Colorado 81631

201 Facilities Plan Review
Eagle County Planning Department
20 April 1977

The Planning Department has reviewed the Unit 1 Activities for 201 Facilities Planning Study for the Upper Eagle Valley. In general the concept of a coordinated plan for ensuring high quality water in the Upper Eagle Valley is acceptable. The following comment apply to specific areas of the Plan.

NON POINT SOURCES

1 The intent of the Water Pollution Control Act - Amendments 1972 was to set a process for water quality control through a designated series of steps, however, in the Upper Eagle Valley the process was changed to speed the approval process for wastewater treatment facilities. This change puts the domestic treatment facilities planning ahead of the area review of other pollution sources, specifically, non point sources. Without an integration plan to relate all sources of pollution prior to approval of specific plant construction grants the goal of high quality water cannot be met.

2 Although the Environmental Impact Statement does briefly address non point sources the 201 Plan does not. An amendment to the plan to deal with potential problems and mitigation measures should be added. The 201 Plan was allowed to proceed before the 208 Water Quality Management Plan but it should not be completed without addressing the major issue conformance with the goals of the overall Water Quality Management program.

3 Eagle County has begun to set requirements for construction of urban run-off control devices for new development, however, as a plan for mitigation of sources of pollution, this does not provide a solution. Cooperation between all entities is essential to ensure success of water quality programs and should be an integral part of the study.

WATER CONSERVATION

4

The water use projections in the 201 Report do not deal with potential impacts of water conservation measures. It is apparent that not only is water conservation becoming more popular, it is essential. Eagle County has begun to review possible changes to its' regulations to require water saving appliances with all new development. The impact of such change of water use will be significant, therefore, sizing of the proposed facilities must reflect use patterns in order to provide cost effective treatment.

Water quality management plans could provide a basis for public review of water conservation programs.

WATER QUANTITY

5

Transbasin water diversions, if constructed, will impact the stream quality. At this time there is no reliable method of determining what effect and how much effect they will have. Since the 201 Plan will possibly need to be revised based on change in stream flow, the plan should allow for these changes.

LAND USE DECISIONS

6

As a general guide for wastewater treatment in the Upper Eagle Valley the plan appears to be workable. Land use decisions, however, must be based on individual site characteristics and their relationship to the County Master Plan. Acceptance of the 201 Plan and related population estimates does not set land use patterns or initiate any development plans.

Response to Eagle County Planning Department

1. We do not agree that "the goal of high quality water cannot be met" without a plan to control all water pollutant sources prior to the proposed action to improve and expand wastewater treatment in the area. While it is desirable to have and implement such an integrated plan, realities dictate that action on improvement of wastewater treatment not await the development and implementation of a nonpoint source control plan. This action in no way precludes control of other pollutant sources.

2. This is in part a procedural question. The Final Environmental Impact Statement was developed during the 201 planning process and is considered by EPA to be a part of the 201 plan. EPA is proposing to conditionally approve the 201 Facilities Plan upon completion of recommendations for nonpoint pollution controls to insure the goals of the Water Quality Management Program. Construction on these wastewater facilities cannot proceed with federal grant money until this 201 Plan is fully approved.

3. See response (3) to Eagle County Department of Planning and Development.

4. We agree that water conservation is an important means to reduce associated environmental impact and investment requirements in water and wastewater treatment facilities. See responses (1) through (7) to Northwest Colorado Council of Governments comments.

5. We agree that there is the possibility that future transbasin diversions may impact water quality in the area. However, this 201 Facilities Plan must be based on the stream flow information which includes the effects of only those projects which are fully developed or approved. To do otherwise would be to prejudice the decision making process in favor of such diversion projects. Further wastewater treatment planning may need to take into account the effects of transbasin diversion which are not now active.

6. We agree that acceptance of the 201 Plan does not set county and local use and development decisions.

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
11177 West 8th Avenue
P.O. Box 25127
Lakewood, Colorado 80225

8430

June 3, 1977

John A. Green, Regional Administrator
U. S. Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

Thank you for the opportunity to review the Draft Environmental Statement for the Upper Eagle Valley and Vail Wastewater Facilities. Our comments are mostly editorial in nature and are offered for your consideration in strengthening the statement.

1 The statement could be strengthened by eliminating repetitious and other narrative material not directly related to the proposed action.

The maps would have greater utility if the project site was shown on them. The problem being addressed by the proposed action is not well defined.

2 Alternatives 3a and 3b are apparently favored. It is difficult to tell from the statement if peak flows from Vail are by-passed to Avon, if so can Avon handle them between now and 1985?

3 Page 1, should reference the National Environmental Policy Act, not Protection Act.

Page 5 should be Redcliff, not Red Cliff.

Page 10 Terrestrial Wildlife - There is no white-tailed rabbit. White-tailed jackrabbit was probably intended, but if so, it is not a game species. Also, elk winter and calve on south-facing slopes. Same on page 75.

Page 10 Aquatic Biology - The third paragraph may contain some typographical errors. As written, it is either obscure in meaning or inaccurate.

Page 36 (2nd full paragraph) - There is a recommendation for fishing flows on Beaver Creek as well as those mentioned here and on page 180.

4 Page 61 - Statement on Cultural Resources appears to be inadequate. Where ground distributing projects are to be authorized, a cultural resource inventory (archeological surveys) must be conducted on the ground where impacts are to be. The statement addresses a Level I intensity inventory, when a Level IV intensity inventory would be more appropriate.

5 Page 75 (bottom) - Should read Endangered and Threatened Species.

Page 79, Table 16 - If the Beaver Creek listed is the stream flowing through the proposed ski development at Avon, its ranking is too low. Does the dash in the column headed "Condition of Fish" mean that the stream has no fish (see bottom of page 80)? Condition of trout in Beaver Creek is very good -- should be rated about as high as any other stream in the list.

Page 175 - "Channelization of stream flows around disturbed portion of streams" could cause more damage than it prevents.

6 Page 180, Table 39 - It should not be assumed that the Forest Service concurs in these recommended flows. Eventually, the Forest Service may make claims in state court for instream flows under Authority of the Reservation Principle.

7 Page 187 - "Potential artifacts" -- they either are artifacts or they are not.

Sincerely,

S. H. HANKS
Deputy Regional Forester Resources

Response to the United States Forest Service

1. This new format for the Final EIS is in part an effort to respond to this comment.

2. It is not planned to bypass peak flows from the Gore Creek area to the Avon facility, but rather to design both plants to handle peak flows.

3. The appropriate corrections have been made on the referenced page or was deleted for the sake of clarity.

4. EPA does not require field surveys to identify cultural resources for all construction projects. EPA's responsibility to conduct or fund such surveys on primary impact areas is limited by the following standard: The extent of survey activities should be based on the degree of probability with which cultural resources can be expected to be found. Such probability is determined through consultation with the State Historial Society Preservation Officer. See comments and responses to the State Historical Society of Colorado (June 9, 1977 and June 29, 1977).

5. The appropriate corrections have been made.

6. It is not stated or assumed that the Forest Service concurs in these minimum stream flow recommendations.

7. The word "potential" has been deleted.

FEDERAL ENERGY ADMINISTRATION
REGION VIII
1075 South Yukon
P.O. Box 26247, Belmar Branch
Lakewood, Colorado 80226

June 8, 1977

Mr. John A. Green
Regional Administrator
Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Jack:

The Federal Energy Administration Region VIII office has reviewed the draft EIS on the "Upper Eagle and Vail Wastewater Facilities Plan." From our review, it appears that alternatives 3a through 5 are the most promising of the 10 listed, due to their cost effectiveness and flexibility.

(1) There is some question about the proposed sludge processing and disposal procedures discussed on page 129. The description mentions the aerobic digestion process is adversely affected by cold temperatures, but by increasing the holding time and by heating the reaction buildings, this problem is partially mitigated. Considering this problem, it appears that a closer look should be made of the anaerobic digestion process. At least a cost/benefit and energy consumption comparison should be considered for the two processes to pick the best alternative.

(2) There is also some concern about the discussion of water disinfectants as mentioned on pages 131 and 133. The discussion mentions there is some uncertainty whether the proposed use of chlorination will meet the 1977 kill level and still maintain acceptable chlorine residual discharge levels. Since this is a recognized problem, should not more emphasis be placed on researching and solving this problem? Will comparisons of the costs/benefits and energy consumptions be used to make the final decision?

Thank you for the opportunity to comment on this draft statement.

Sincerely,

C. Dale Erikson

for Dudley E. Faver
Regional Administrator

Response to Federal Energy Administration

1. Cost/benefit and energy consideration were an integral part of the decision to use aerobic sludge digestion. Normally, the higher capital costs of anaerobic digestion are offset by production of digester gas which ordinarily provides a net credit to a plants' overall energy consumption. However, the highly variable loadings in the Vail and UEVSD systems makes reliable gas production highly questionable. Additionally, at smaller plants, aerobic digestion is often the method of choice to avoid imposing a more complex (anaerobic digestion) system on a necessarily small operating force. Additionally, since there will be only waste activated sludge produced at the plants (no primary treatment) the aerobic digestion process is very directly compatible with the main flow processes in the treatment facilities.

2. It is presently anticipated that if chlorination is the method of disinfection, that dechlorination will follow to reduce chlorine residuals to acceptable levels in the stream. The final choice between chlorination/dechlorination and ozonation will be based on cost/benefit and energy consumption requirements. The problem is complex, however, since ozonation has relatively high on-site power requirements but no off-site demands, chlorination/dechlorination requires less on-site power, but also requires chemically manufactured off-site and transportation to the site. The sources and types of fuel for the various power requirements are varied and very difficult to predict for a given operation.

3. EPA is currently formulating guidelines for making energy comparisons for these kinds of alternative analysis, but they will not be available in this case. The energy consumption for any of the possible disinfection methods will not have a major effect on the overall energy consumption for the treatment facilities.

Department of Local Affairs
Colorado Division of Planning

Philip H. Schmuck, Director

Richard D. Lamm, Governor

June 6, 1977

Mr. John A. Green
Regional Administrator
U. S. Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

SUBJECT: Draft Environmental Impact Statement
Upper Eagle Valley and Vail Wastewater Facilities

Dear Mr. Green:

The Colorado Clearinghouse has received and distributed copies of the above-referenced draft environmental statement for review by state agencies pursuant to the National Environmental Policy Act and OMB Circular A-95. The comments of interested agencies are enclosed herewith.

Thank you for the opportunity to participate in your planning.

Very truly yours,

Charles G. Jordan
Senior Planner

Reviewed: Philip H. Schmuck, Director

CGJ/vt
Enclosures

cc: Office of the Governor
Department of Health
Department of Natural Resources
Northwest Colorado Council of Governments

520 State Centennial Building, 1313 Sherman Street, Denver, Colorado 80203 (303) 892-2351

STATE OF COLORADO
Richard D. Lamm, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
Jack R. Grieb, Director
6060 Broadway
Denver, Colorado 80216 (825-1192)

RECEIVED
JUN 6 1977

June 1, 1977

Referral # 77-110

TO: Philip H. Schmuck, Director
Colorado Clearinghouse

FROM: Jack R. Grieb, Director
Colorado Division of Wildlife

SUBJECT: Draft Environmental Impact Statement - Upper Eagle Valley and Vail Wastewater Facilities Plan

The statement is both comprehensive and objective in considering existing wildlife, wildlife habitats and the possible impacts on both that may result from the proposal.

(1) Apparently alternatives 3a or 3c (page 119) would cause the least disturbance to existing habitat so would be our choice of plans. As stated, Gore Creek and this general area have already been impacted by other types of construction and by growth. Alternative #1 (page 114), the no-expansion proposal, may slow the rate of development but would also probably result in each new development building a separate facility. This piecemeal approach would do more damage than would the construction and use of a common treatment system. As in most cases, the concomitant development will probably bring greater impacts than will the base facility.

(2) We agree with the mitigative measures listed on pages 172-176. Equipment such as draglines, working from the bank, will do less damage and cause less siltation than would bulldozers working in the stream. Revegetation, as listed, should be a must. We, also, agree that construction should be limited to certain periods of the year.

The sections covering air and water quality and noise pollution appear to be adequate as are other related portions. Overall, it appears the probable impacts have been recognized and provisions have been included to minimize these impacts.

We do appreciate being given the opportunity to review and comment on the statement.

JRG:cs
cc: H. Sherman
P. Olson
USFWS
B. Evans

DEPARTMENT OF NATURAL RESOURCES, Harris Sherman, Executive Director • WILDLIFE COMMISSION, Vernon C. Williams, Chairman
Thomas Farley, Vice Chairman • Sam Caudill, Secretary • Jean K. Tool, Member • Roger Clark, Member
Jay K. Childress, Member • Dean Hull, Member • Dean Suttle, Member

Response to Colorado Division of Wildlife

1. See discussion of EPA Proposed Action.

2. Prior to construction of this project, it will be required that the Sanitation Districts coordinate with the Colorado Department of Natural Resources, Division of Wildlife, to insure proper protection to fish and wildlife by including the necessary mitigations which are described on pages 143 through 146 of the Attachment to the Final EIS.

#77-110

COLORADO DEPARTMENT OF HEALTH

4210 E 11TH AVENUE DENVER 80220 PHONE 388-6111 EXT. 329

ANTHONY ROBBINS, M.D., M.P.A., EXECUTIVE DIRECTOR

MAY 24 1977

DATE: May 23- 1977

SUBJECT: NON-STATE ASSISTANCE

REVIEW AND COMMENTS

TO: Phil Schmuck
Division of Planning
Dept of Local Affairs

TO: NA

PROJECT TITLE: DEIS, Upper Eagle Valley & Vail Wastewater Facilities

STATE IDENTIFIER: NA

COMMENTS DUE BY: May 26

Yes ☐ No ☐ Is this project consistent with the goals and objectives of this agency?

Yes ☐ No ☐ Is there evidence of overlapping of duplication with other agencies?

Yes ☐ No ☐ Is meeting desired with applicant?

Yes ☐ No ☐ A 15-day extension is requested.

Comments: Air Pollution Control: The above-referenced DEIS has adequately addressed air quality impacts. The list of control strategies on pages 182-187 of the analysis provides the local governments a very good basis upon which to implement local control plan(s), which will assist in the attainment and maintenance of air quality standards.

(1) Upon further modeling of the Upper Eagle Valley and the Vail area, it may be determined which of the control strategies or combinations may be most appropriate. The analysis performed in the DEIS is appropriate for the data inputs available. The assumptions used should be analyzed and the model corrected as necessary as further information is acquired.

Name, Title & Phone

SOC-3, Feb 77

ATTACHMENT B

Ron Simsick (ggb)
Ron Simsick, Program Administrator

WR/RS/ggb

Response to Colorado Department of Health

1. See discussion of proposed air quality condition to approval and construction of the proposed facilities under discussion of Issues and Mitigation Measures.

REGION XII

NORTH WEST COLORADO COUNCIL OF GOVERNMENTS

Holiday Center Building Suite 200
P. O. BOX 737
FRISCO, COLORADO 80443

(303) 468-5445

EAGLE COUNTY
BASALT
EAGLE
GYPSUM
MINTURN
RED CLIFF
VAIL

GRAND COUNTY
FRASER
GRANBY
GRAND LAKE
HOT SULPHUR SPRINGS
KREMMLING

JACKSON COUNTY
WALDEN

PITKIN COUNTY
ASPEN

ROUTT COUNTY
HAYDEN
OAK CREEK
STEAMBOAT SPRINGS
YAMPA

SUMMIT COUNTY
BLUE RIVER
BRECKENRIDGE
DILLON
FRISCO
SILVERTHORNE

June 9, 1977

John A. Green, Regional Administrator
U. S. Environmental Protection Agency
1860 Lincoln Street, Suite 105
Denver, Colorado 80205

Subject: Review of Draft EIS on Upper Eagle Valley 201

Dear Mr. Green:

Thank you for the opportunity to review the subject, Environmental Impact Statement. My written comments will clarify and expand on my oral testimony of May 26, 1977. We believe there are three major issues with regard to the proposal which remain unresolved: 1) The implementation of water conservation measures as a partial alternative to plant expansion. 2) The relationship of the proposed project to future development and the generation of non-point source pollution. 3) Future water diversion projects and their effect on minimum streamflows.

I. Water Conservation

A. Per Capita Usage

The per capita water usage developed in the facility plan is 150 gpcd based on estimated existing per capita flow rates in the Vail area, plus an allowance for additional future usage. We believe that an allowance of 150 gpcd is excessive based on the following information:

1

Per Capita Usage	Source
150 gpcd	Upper Eagle Valley 201
100 gpcd	Dillon/Silverthorne 201
90 gpcd	Snowmass 201
90 gpcd	Aspen Metro 201
100 gpcd	Steamboat Springs 201
64 gpcd	National Average based on: USGS - Public Water Supply Bailey- WPC Research Series

1 In summary, the projected per capita sewage generation for this area is over 50% higher than the average of comparable recreation communities within Region 12, even without the application of measures to control per capita usage.

B. Population Growth

The facility plan (and the 208 Study) projects a maximum population growth as follows:

Year	1975	1995
208 Projections-Average Daily Population	19,150	47,560
201 Projections-Average Daily Population	16,000	44,700

2 In other words, within the 20 year planning period, more than half the water and sewage demands are anticipated to be generated by new development. Current national and regional trends towards the use of water conserving fixtures and appliances will mitigate against the high projected per capita usage in over half of the services without any action from local governments. However, because of the critical nature of water supply and sewage treatment within the study area, it is anticipated that the County and municipalities will take action to curb water use. Depending on the level of implementation of water conservation measures, the following water savings could be realized:

	Per Capita Use Source	No Conservation	Water Conservation on New Construction	Water Conservation and Retrofit
Water Demand	UEVSD 201	150 gpcd	114 gpcd[1]	98 gpcd[2]
	Region XII Avg.	100 gpcd	76 gpcd[1]	65 gpcd[2]

[1]Based on 35% water savings on new taps requiring water conservation measures.

[2]Based on 35% water savings on all taps requiring conservation on existing (retrofit) and new development.

C. Benefits of Water Conservation

Re-evaluation of per-capita use figures as an alternative to building plant cpacities as proposed would have the following benefits:

3

1. Reduction of capital and O & M expenditures for wastewater treatment to serve an equivalent level of development.

2. Reduction of capital and O & M expenditures for water supply and treatment. This is particularly true in the Beaver Creek Area where 18,200 new residents (average day) are expected to place demands on a water supply which will come from the mouth of Beaver Creek and must be

pumped some 4 miles and 1200 vertical feet to the point of use.

3. Reduces financial risks to existing users of water and wastewater systems if growth does not occur at projected levels.

4. Increases minimum streamflows and mitigates adverse effects on fish and wildlife.

3

5. The opportunity to balance water supply and wastewater treatment facilities without excessive costs or risks users.

6. A case study of a similar recreation community demonstrated that a water conservation ordinance plus a retrofit program on existing services allowed the community to service 25% more customers without modifying their water or wastewater system.

D. Recommended Actions

The following actions are recommended prior to approval of the facility plan:

4 1. A more detailed investigation of conservation as an alternative or partial solution to expansion of existing wastewater treatment facilities be required.

5 2. The projected wastewater service demands and sizing of facilities to re-evaluated based upon water conservation measures being implemented.

6 3. The County and municipalities should be encouraged to adopt and enforce water conservation ordinances as part of their building codes.

7 4. A "retrofit" program of water conservation measures be undertaken as a cooperative effort of:

Eagle County
Town of Vail
Town of Minturn
Water Districts
Sanitation Districts
Council of Governments

II. Non-Point Source Pollution

A. Relationship of 201 and 208 Plan

8 Both the facility plan and the environmental impact statement place heavy reliance on the completion and implementation of non-point source controls contained in the 208 Walter Quality Plan under development by the Council of Governments. The Council of Governments, Eagle County and municipalities within the area recognize their responsibility to identify, assess and control the impacts of

non-point source pollution which may be a secondary impact of the proposed expansion of wastewater facilities. However, this cannot be practically accomplished without the participation of all entities which influence the location, character and density of future land uses within the study area. It is the council's opinion that the proposal will have a significant impact on the location, density and character of future development and therefore will affect the capabilities of government agencies to deal with non-point source pollution.

8 It is our opinion that before a final decision is made on the sizing and location of wastewater treatment facilities in the Upper Eagle Valley, a more detailed evaluation of the secondary effects of the proposed system on non-point source pollution (such as was performed at Three Lakes) be initiated. This recommendation is substantiated by the following information relative to the findings and of the 208 Plan. It is important that EPA recognize the degree to which non-point sources can be controlled from the mechanisms contained in the 208 Program.

B. Non-Point Source-Overview Assessment

The water quality assessment conducted by USGS as part of the 208 Plan indicates that runoff from urbanized areas and construction activities presently causes water quality degradation in Gore Creek downstream from the Town of Vail. Urban runoff and construction activities can be demonstrated to increase turbidity levels, decrease biological diversity and productivity and increase concentrations of heavy metals, oil and grease.

The 208 water quality data base is intended to identify problem areas such that they can be correlated with other environmental factors to identify mitigation measures which will be applicable to the resource capabilities of the area in question. It is not the intent of the data collection effort to be able to produce a detailed quantitative assessment of non-point source
9 pollution, nor would such an effort produce substantial results. The approach of assessing non-point source pollution from urban runoff using "typical values for urbanized areas" merely tells us that non-point source pollution is significant in terms of pollutant loading, but does not suggest ways of controlling the runoff from urban areas before it is generated. Most importantly, this approach does not lend any insight into the type of control measures which would be most suitable for the particular area in questions.

Table 37 in the draft EIS suggests that urban runoff contributes a significant pollutant load when compared to sewage treatment in the Vail area. However, because of the temporal variations in non-point source generation, it is difficult to compare the impacts of non-point source waste loading as compared to point sources. This quantitative approach certainly suggests the need to control runoff from urbanizing and developing areas within the study area.

Further documentation for the potential severity of non-point source contribution is contained in the DEIS. Applying the methodology described in the "Regional Overview" level 208 study (see attachment), we can presently conclude the following:

1. Water quality degradation from urban runoff in the Vail are presently exists.

2. The most significant future development of recreation/urban development in Region 12 is projected to occur withing the 201 Study area in the next 20 years. An additional 10,000 housing units accomodating 28,700 additional persons and concentrated in the Benchmark, Eagle, Vail, Arrowhead and Beaver Creek Area is projected in the study.

3. A total of 6,730 acres are projected to be developed by 1995. Although the development plans allow for approximately 25% of future development to be left in open space and parks, the location density and amount of development which would be accomodated by the proposed expansion of sewer facilities is significantly pre-determined by the proposal. Although the DEIS states that because additional capacity will be provided at the downstream Avon site, and therefore, location of future development can occur anywhere within the service area of the district (p.57), a glance at Figure 11 reveals that the availability of private bands, topographic constraints and other factors will focus growth into the western end of the service boundaries, much as shown. 9

The factor that has clearly not been investigated or considered in determining the future land use is the effect on non-point source pollution of the proposal. Our investigations have demonstrated that there is a relationship between the potential for generation and transport of non-point source pollutants depending on geologic formation, land use soil type, cover type slope, proximity to streams and other factors. The most important of these facts are geologic formation and land use since many of the other physical resources are in large part characterized by the geology.

The majority of development which could be serviced by the project is located within the Eagle Valley Formation (Bedded Evaporites), the Minturn Formation and to a lesser degree on alluvial deposits in the Eagle Valley floor. Development in the Eagle Valley and Minturn formations has severe implications for the generation of non-point source pollution since the formations and related soil types are subject to extreme to moderate stream, gully and slope wash with the removal of the protective vegetative cover. Mitigation measures discussed in the DEIS do not include consideration of altering the location density or character of development to avoid the generation of non-point source

pollution in critical areas, nor does the DEIS describe any requirements for re-vegetation of disturbed areas outside of construction directly related to the proposal. Rather, the proposal tends to "lock in" future land uses without a thorough evaluation of the total water quality effects (i.e., both point and non-point source).

4. The DEIS states on p.167 that conversion of irrigated agricultural lands to urban uses will be a mitigating factor for non-point sources since the pollutant loads from urban lands will be more than offset by elimination of sediments and salts from agricultural practices. Data from the USGS 208 Study refutes this statement for the type of lands and irrigation practices prevalent withing Region XII and Eagle County. In general, agricultural practices within Region XII cannot be demonstrated to have a significant adverse effect on water quality, while runoff from urban areas can. On the contrary. data on water applied to upland mountain meadows in this area and other parts of the country, suggests that irrigated meadowland is a significant resource in reducing the types of pollutants generated in surrounding urban areas before they can reach the stream course.

9 5. Control of non-point source pollution problems from urbanizing and developing areas can be most effectively and economically achieved by prevention strategies rather than through costly structural abatement techniques which are applied after the fact.

6. Additional stream courses not currently affected by significant point or non-point source discharges will be degraded by the development accomodated by the proposal unless current land use policies and practices are changed. These streams include Beaver Creek, Stone Creek and McCoy Creek.

C. Summary and Recommended Actions

Summary

1. The proposed facility plan is believed to be a significant determinant on future patterns, location and density of development within the study area.

2. The natural characteristics of a large portion of the area to be developed indicate the area is highly susceptable to generation and transport of non-point source contaminants.

Recommended Actions

10 1. Changes in land use policies with respect to location, pattern and density of development and other land use controls should be evaluated before construction of the proposed treatment works.

10

2. A detailed site-specific evaluation of non-point source controls (see attachment - Phase II-208 Water Quality Management Program) should be initiated to determine and implement land use controls, run-off control systems, and structural controls if necessary. The methodology for this type of program has been developed in the four prototype programs demonstrated under the 208 Program. It is anticipated that this could be accomplished within two months of initiation of the site-specific evaluation. It is also proposed that proponents of projects which can be demonstrated to have significant impact on non-point source pollution bear the cost of these detailed studies.

III. Future Water Diversions

A. General

Three basic physical control elements are contained within the 208 Water Quality Management Plan to assure that the water quality goals of the Region are attained:

(1) Point Source Control Element
(2) Non-Point Source Control Element (control of land disturing activities)
(3) Hydrologic Modification Control Element

Implementation of the recommendations contained in this letter will achieve the goal of assuring that the first two elements are achieved. Control of element #3 is broader in perspective than elements #1, #2, since it involves actions of municipalities, private and governmental entities outside of Region XII, the State of Colorado, and the various branches of the Federal Government.

11

Without implementation of controls to assure adequate streamflows for protection of water quality, funds expended for advanced waste treatment and costs incurred by local governments, developers and others to insure that an adequate non-point source control program is initiated will fall short of meeting the water quality objectives established in the 208 Plan.

Control of hydrologic modifications as it affects water quality, was identified as a key element in the water quality management goals and objectives through the input of over 300 citizens in public workshops. The Council of Governments has developed a set of model regulations which can be utilized by local governments in Region XII to help insure that future transbasin diversions will not be in conflict with the design streamflows established in the 208 Plan.

The successful implementation of the effort to maintain minimum streamflows in Region XII and Eastern Eagle County will require a counterpart effort at the State and Federal level. To date, there has been a failure to recognize the need for this effort or to take substantial action at the Federal and State levels. The mitigation measures proposed in the DEIS consist of:

1. Written agreements between Federal Land Management and Regulatory Agencies and the transbasin divertors as to minimum streamflows to be achieved (recommendations from U.S. Fish and Wildlife Service on minimum streamflows necessary to preserve fish habitats).

2. Adjudicated water rights obtained by the Colorado Water Conservation Board to maintain minimum streamflows (recommended flows from the Colorado Division of Wildlife).

There are several basic flaws in the existing method of attempting to control transbasin diversions as an element in an overall water quality management strategy:

1. The existing method does not recognize water quality as a factor in establishing minimum streamflows. This is clearly evidenced in the case of Gore Creek where Division of Wildlife recommends 7 cfs as a minimum streamflow to be obtained and the design of wastewater facilities is based on a 7 day - 10 year low flow between 13.5 and 115.0 cfs depending on the time of year. Clearly even if the DOW recommended streamflows could be achieved, in-stream concentrations of pollutants from point source discharges could be 200% higher than recommended in the facility plan. Thus an investment of approximately $5.35 Million in treatment facility upgrading and expansion along with local ordinances to control non-point source pollution would fall far short of meeting the water quality goals and standards established in the 201 Plan, 208 Plan and by the Colorado Department of Health.

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2. The minimum streamflow program administered through the Colorado Water Conservation Board is dependent on obtaining the necessary water rights. The financial limitations of the program become evident when the number of streams potentially affected by future transbasin diversions is considered. There are presently 16 transbasin diversion projects which affect historic minimum streamflows throughout Region XII. An additional 33 transbasin diversions from the Region are in various stages of development. It is highly unlikely that the financial resources of the Water Conservation Board will be adequate to obtain all the rights necessary to protect water quality in all of the potentially affected streams in the Region. There are no guarantees in the case of Gore Creek or the Eagle River that even the minimum streamflows established by DOW will be obtained.

3. Agreements between Federal agencies and transbasin divertors are in a similar status. There is no consideration of water quality management objectives in establishing minimum flows. Inclusion of minimum streamflows in permit conditions is on a case by case basis and there are no guarantees that such stipulations will be included in the permit or what criteria will be applied by the Federal Agency in determining the need for such stipulations.

4. Section 208 of PL-92-500 stipulates that the planning process of each State shall include a process to identify and set forth procedures to control pollution caused by hydrologic modifications. NWCCOG is the only designated 208 Agency in Colorado addressing this issue. An effective counterpart at the State level to develop procedures, regulations or modification of State statutes to achieve this is lacking at present.

B. Recommended Actions

EPA should consider the ramifications of continued funding of wastewater treatment works and State and areawide planning efforts without making significant headway in controlling the proliferation of hydrologic modifications which will alter the base from which water quality systems are presently being designed. Without inclusion of this element as part of a water quality management strategy at all levels of government, the water quality goals stated in the DEIS will not be achieved. The following actions are recommended:

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1. The Council of Governments will continue to work with local governments to develop necessary regulatory programs to control hydrologic modifications at the county and regional level.

2. The State of Colorado should be requested by EPA to include hydrologic modifications as an element in its continuing planning process. Regulatory programs, legislation, financial and institutional structures necessary to deal with the problem at the State level should be developed and implemented as part of the Statewide water quality program.

3. In its role of evaluating Federal Agency compliance with the requirements of NEPA, the EPA review of Federal permits for transbasin diversion facilities (i.e. Federal Land Management Use Permits) should insure that there is a consistent policy towards inclusion of special conditions for minimum streamflows consistent with water quality goals.

Thank you for the opportunity to comment on the Draft EIS. The staff realizes that many of the comments and recommendations made are relevant to issues that are regional and statewide and not totally within the control of the grant applicant. However, if water quality management goals that have been established by Congress, the State and locally developed plans are to be achieved, it is time that we recognize the interdependence of the systems with which we are dealing and deal with the problem accordingly.

Sincerely,

Phil Overeynder
208 Coordinator

PO:vg

Response to Northwest Colorado of Governments

1. We recognize that the 150 gallons capita per day is a higher figure than normally used for design of waste water facilities. At the beginning of the 201 facilities planning effort, it was decided that the per capita waste flows would be estimated for the Vail area where some information was available on water use, and then applied to the whole study area. This appeared to be the most reasonable approach given the proximity at Vail to newer developments around Avon and the similarity of the developments, both being winter skiing oriented. After examination of water use records, wastewater flow measurements, skier populations, and estimating peak day populations, it was estimated that the per capita waste generation was within a range of 125 to 150 gallons per capita per day. Since these are relatively high figures, it is reasonable to question whether these should be used in a newly developing area where water use could be substantially reduced through conservation practices. Also, the use of 150 gallons per capita per day, (g/c/d) instead of 125 g/c/d, may be questionable for either the Vail or Avon facilities.

2. We believe your statement involves two similar but different aspects of the questions involving per capita flow projections for wastewater facilities. First, is the question of what is the effect, in terms of design capacity, of assuming a per capita flow figure lower than 150 g/c/d; and second what is the effect of requiring additional water conservation practices? Since there are two proposed wastewater facility expansions, both questions must be addressed for each facility. The effect on design capacity of assuming a flow rate of 135 g/c/d and then assuming an additional 30 percent water savings on all new taps is shown in the table below.

FACILITY	PROPOSED DESIGN CAPACITY	CAPACITY AT 135 G/C/D	CAPACITY WITH CONSERVATION[1]
Vail	3.0 MGD[2] (1995)	2.7 MGD	2.5 MGD
Avon	3.5 MGD (1985)	3.1 MGD	2.5 MGD

The service area populations used to determine these various design facilities are:

1. Vail Facility 1975- 15,990
   1995- 20,150

2. Avon Facility 1975- 7,510
   1995- 23,150

[1] Equals 95 g/c/d for all new taps and 135 g/c/d for existing taps.

[2] MGD means million gallons per day.

As is shown in the previous table, additional conservation practices do not have as great an effect on the design flow-capacity for the Vail facility as the Avon facility. This difference is due to the assumption that conservation, through use of water saving fixtures, will only be applied to new taps which are only 20 percent of Vail's total 1995 service area population and nearly 70 percent of Avon's.

If we are to assume that all existing taps where required to retrofit water use systems, including such items as toilet dams and fine spray showerheads, a 15 percent water savings is possible. Presently, such a retrofit program is being pursued within the study area. This additional water savings would lower projected plant capacities to 2.2 million gallons per day (MGD) for Vail and 2.3 MGD for Avon.

3. We generally agree with the points you bring out concerning benefits of water conservation. For these reasons we plan to condition our approval of the facilities plan to require enactment of water conservation incentives and practices. Under this conditional approval no funds for construction will be made available by EPA until metering and installation of water conserving devices is required by each Sanitation District prior to extending new service.

   Certain benefits of water conservation that you have cited do not directly relate to a decision on sizing of the wastewater facilities. The benefits of reducing operation and maintenance (O & M) costs for water supply and increases in minimum stream flows would occur with water conservation regardless of the sizing of the wastewater treatment plants. However, we believe that the sizing decision should reflect reasonable water use projections in order to provide incentive for conservation as well as to receive the direct cost benefits.

   In considering the sizing question, the difference in planning horizons (1995 for Vail, 1985 for Avon) and annual compound growth rates (2.4 percent for Vail, 20 percent for Avon area) should be considered because

of the possibility of severely undersizing the facilities and thus having to expand the facilities again in the near future. For the Vail facility these considerations are not as significant since the planning period is sufficiently long, approximately 17 years, and the growth rate is moderate. However, for the Avon facility, the planning period is much shorter, approximately seven years, and the rate of growth is projected to be much higher. The result of undersizing the facilities would be to either shorten the effective service life of the plant or to reduce the growth rate. If the Avon facility were built at the proposed 3.5 MGD capacity and population growth occurs as projected but water use rates are reduced so that only 2.3 MGD is needed by 1985, the effective service life of the treatment plant would be extended to around 1993 or 1994. On the other hand, if a 2.3 MGD capacity is built at the Avon site and the per capita water use rate is 135 gallons per day, the annual growth rate would have to be reduced to around 8.5 percent for the Avon service area if the capacity were not to be exceeded. A per capita water use figure of 150 gallons per day would require an annual growth rate of 7.4 percent in order to not exceed 2.3 MGD by 1985.

4. In response to items (1) through (3) we have expanded the discussion and investigation of conservation as a partial solution to expansion of existing wastewater treatment facilities. We do not believe that water conservation in itself is an alternative to expansion.

5. The following table summarizes the resulting wastewater treatment plant capacities for various assumed water use practices and estimated usage rates.

CAPACITY
(Million Gallons Per Day)

	PROPOSED (150 G/C/D)	MODIFIED USAGE ASSUMPTION (135 G/C/D)	WATER CONSERVATION WITHOUT RETROFIT (EXISTING-135 G/C/D FUTURE-95 G/C/D)	WATER CONSERVATION WITH RETROFIT (EXISTING-115 G/C/D FUTURE-95 G/C/D)
Vail	3.0	2.7	2.5	2.2
Avon	3.5	3.1	2.5	2.3

6. The purpose of the grant condition explained earlier is to encourage water conservation in the area, through appropriate county and local ordinances.

7. We agree that a retrofit program should be instituted for reducing water use and understand that such a program is being considered by both Eagle County and the Town of Vail.

8. We do not agree that the final decision in sizing of the wastewater facilities expansion at Vail and Avon should await a more detailed evaluation of nonpoint source pollution. However, we do believe that a nonpoint source study must be made which results in controls which will adequately protect water quality and the proposed investment in advanced waste water treatment.

   EPA will be funding a nonpoint source assessment for the 201 study area during the design of these facilities. This assessment should lead to an implementation plan which may recommend land use changes, but it is our belief that it should not affect the sizing of the treatment plants. Also, many other controls, other than land use, exist for abatement of nonpoint pollution. To wait until this nonpoint assessment is completed would substantially delay the proposed water quality improvements proposed for these point source discharges and we do not believe that the benefits of such a delay match the environmental and financial costs.

9. It is true that the land use assumptions used do not include consideration of nonpoint source pollution. However, the assumed land use patterns are in line with approved and projected development of the area by Eagle County and Town of Vail. The proposed facilities do not preclude future land use decisions by either Eagle County, the Town of Vail, or the Town of Minturn. The nonpoint source control assessment which EPA will fund and manage in cooperation with local governments should provide a sound technical basis for recommending solutions to existing and future nonpoint source problems. Such recommendations such as land use controls, structural abatement measures, and nonstructural controls must then be acted on by local governments in order to be implemented. Regarding item 4, the attachment to the Final Environmental Impact Statement has been changed accordingly.

10. The nonpoint source assessment will allow for evaluation of land use policies prior to expansion of the proposed treatment works. The scope of services for this assessment is included as Enclosure 2.

11. We agree with the Northwest Colorado Council of Government's concern for the impact of proposed transbasin diversions and other hydrologic modifications which may affect water quality. However, this subject goes far beyond the scope of the proposed action and cannot be adequately addressed within the planning for this one project. EPA has sent a letter to the state requesting priority treatment of hydrologic modifications in their continuing planning process (Enclosure 3). Also, EPA has and will continue to request that the water quality implications of other federal projects, such as transbasin diversions, be evaluated and considered during the EIS process.

United States Department of the Interior
OFFICE OF THE SECRETARY
MISSOURI BASIN REGION
DENVER, COLORADO 80225

ER 77/385

June 9, 1977

Mr. John A. Green
Regional Administrator
Environmental Protection Agency
Region VIII
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

This is in response to your request of April 23, 1977 for the Department of the Interior review and comment on the Draft Environmental Statement for the Upper Eagle Valley and Vail Wastewater Facilities Plan, Eagle County, Colorado. The following comments are offered for your consideration.

General Comments

1 Although the 201 study area is predominantly recreation oriented, the environmental statement includes no inventory of recreation resources in the description of the existing environment. We believe that such resources, including community-oriented recreation areas, should be included in that section.

2 Any permanent or temporary impacts on recreation resources should be delineated. The streams along which interceptor construction is proposed, for example, presently have adequate water quality to support a good fishery. While the draft document acknowledges the temporary impact which the proposed construction would have upon existing aquatic biota, the effect on fishing activity is not, and should be, discussed.

We also believe that the tourism industry depends, in part, on the aesthetic qualities found within the study area. In terms of viewing duration and high use volume, the valley bottoms are perhaps the most sensitive areas of scenic quality. The final document should acknowledge the direct impacts construction activity, stream turbidity, and interceptor placement (including the several stream crossings) will have upon aesthetic enjoyment of the natural resource.

3 We are particularly concerned with the secondary impacts of increased population, projected to nearly triple between 1975 and 1995, on recreation resources. It is stated in the draft document that these impacts have

"already undergone an extensive evaluation . . . and are not treated here in depth." The reviewer is referred to two Forest Service documents, Final Environmental Statement for the Meadow Mountain Planning Unit and Environmental Analysis Report, Beaver Creek Winter Sports Site and Year-Round Recreation Area, if more information is needed. It is our position that the mitigation of secondary impacts of population growth or recreation resources is not adequately addressed in the referenced Forest Service documents. For example, in the section of the Meadow Mountain environmental statement dealing with mitigation of secondary impacts on the provision of urban services, the document "recommended that Eagle County work towards designation of the general Avon area as an area of State interest." (Under the State Land Act, designation of an area as an "area of State interest" would permit counties to control new development with regulations established under State guidelines.) " A New Town Committee," the document continued, "could be appointed to look into the criteria for establishing a new town." Nowhere is it stated that even this marginal mitigation is actually being contemplated by either Eagle County or the State of Colorado. (3)

We believe the greatest effect of the proposal on the study area may well be the secondary impacts of population growth. The final document should either offer realistic mitigation or acknowledge population growth and increasing pressures on existing recreation and other urban resources as being an unavoidable adverse impact of the proposal.

Specific Comments

(4) Of the five alternative plans, those calling for expansion of existing plants are preferable to construction of new facilities. Subalternative 3b-d would result in an unnecessary loss of riparian habitat. Alternative 3a-c would cause the least environmental damage and is,therefore, the most acceptable alternative.

(5) The projected impact of chlorine residuals as depicted in Table 25, page 141, is significant. A chlorine residual of .003 mg/l in the receiving stream should be achieved to protect most aquatic life.

(6) Mitigative measures discussed on page 172-176 are commendable and should be implemented. However, no provision is made for replacing or compensating for terrestrial and aquatic habitat losses. Discussions with the Colorado Division of Wildlife indicate opportunity exists for stream habit improvement within the study area.

(7) The statement does not clearly confirm consultation with the State Historic Preservation Officer for the State involved. The final environmental statement should reflect that he was consulted to determine whether the proposal will affect any cultural site which may be in the process of nomination to the National Register of Historic Places.

Mr. John A. Green, EPA, Denver, CO
Page three
June 9, 1977

7 We note from pages 38 and 61 that the State Archeologist has been contacted concerning this project. While the State Inventory of Cultural Resource Sites is a valuable source of reference, it is not complete. Consequently, we believe it would be desirable to ascertain from the State Archeologist whether, in his judgment, there is a need for an archeological survey of the terrain that will be disturbed by construction. A certification by him that the likelihood of finding any archeological remains is minimal relieves an undertaking agency of much of the urgency for making a professional survey.

The final environmental statement should include copies of all correspondence with the State Historic Preservation Officer and the State Archeologist concerning the project. Such correspondence facilitates and expedites the final review process.

8 To aid reader understanding, we suggest that the preferred alternative be designated in "No. 2 Brief Description of the action" appearing before the table of contents. We also suggest the same information be supplied in the beginning of the Section on alternatives on page 113.

Sincerely,

John E. Raybourn

JOHN E. RAYBOURN
Regional Environmental Officer

Response to United States Department of Interior

1. The major definable recreational resources are the Vail ski area itself, the golf course and the streams. Although not singled out specifically as "recreation resources" in the description of the existing environment, they are discussed in great detail in this and other sections of the draft EIS in terms of their effect on the proposed project and/or the project's effects on them.

2. Without question, there will be impacts during the time that construction of the improvements is underway. Construction in or near the Eagle River, Gore Creek, or tributaries will limit access for fishing. Such construction may also cause siltation which may temporarily interfere with fishing; and turbid water will temporarily degrade the aesthetic quality of the stream. It is also possible that access to other recreational uses such as the golf course or the ski area itself could be temporarily interrupted depending upon the time of year and the duration of construction activities. Final siting and selection of locations for interceptor lines was not made in the 201 study and is, in fact, normally done in final design. The environmental effects can be greatly mitigated depending upon how the construction activities are carried out. The degree of impact will be much more dependent upon the way in which construction is performed than upon the number of potential interfaces between construction activities and recreational resources. The designers will require, in the construction specifications, that construction contractors minimize the amount of open trench and also require that clean-up activities and restoration to preconstruction conditions be done within certain time frames. With this approach, the total impact on recreational activities should be minimal.

   There will be virtually no permanent disruptions to recreational resources since the proposed interceptor construction will parallel or replace existing interceptor lines. Thus, all of the area has been previously disturbed and once construction is complete, and the surface restored to its original condition, there should be no permanent change.

   The designers will be required to coordinate with, and include in their designs, the requirements of the towns of Minturn and Vail and Eagle County with respect to permissible times of year, duration of open trenching and time requirements for restoration to previously existing conditions for

the construction activities. These requirements, along with required permits by county, state and federal agencies will insure that the expected temporary disruptions to recreational resources are minimized.

3. Regarding secondary impacts of population growth in recreational resources, the principal effects will result from the development of additional ski areas, which EPA believes would occur with or without federal funds for expanded and improved wastewater treatment. As indicated in the draft EIS, the potential secondary impacts of these developments have been previously evaluated by the U.S. Forest Service and resulted in approvals by them, the State, and Eagle County. The effect of additional wastewater capacity will not be to create excessive demands on recreational resources, but rather to maintain and improve water quality in the area thus benefiting opportunities for water oriented recreation, including fishing, boating and aesthetics. Since certain development decisions have already been made and approved by the controlling authorities it is our belief that growth will occur. EPA, by conditioning the availability of funds for construction of the wastewater facilities, expects significant mitigation of air quality, nonpoint pollution and water use impacts. Mitigation of these secondary impacts should benefit recreation opportunities in the area.

4. The project will consist of expansion and upgrading the existing facilities at Vail and Avon as described in the section entitled "Proposed Action." A decision to build a new plant downstream near Squaw Creek will not be considered by EPA at this time. Any future proposal to build such a downstream facility must be completely evaluated in a separate facility plan and include an environmental assessment of the project's direct and secondary impacts.

5. The State is proposing to require an instream standard for chlorine residual of .002 milligrams per liter. This will require dechlorination or use of ozone instead of chlorine for disinfection. EPA and the State will review the design specification to insure that this instream level will not be exceeded. The referenced table has been modified accordingly.

6. Coordination with the Colorado Division of Wildlife to insure protection of fish and wildlife, including possible habitat improvement (where consistent with the project scope) will be required of the Sanitation Districts during construction of this project.

7. See letters from State Historical Society (historical preservation and archaeological resources) and EPA responses.

8. The format of the final EIS has been revised to make it easier for the reader to find and understand EPA's proposed action.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGION VIII
FEDERAL OFFICE BUILDING
19TH AND STOUT STREETS
DENVER, COLORADO 80294

June 10, 1977

OFFICE OF THE REGIONAL DIRECTOR

Mr. John A. Green
Regional Administrator
U.S. Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear John:

Thank you for the opportunity to review the draft environmental impact statement for the Upper Eagle and Vail Wastewater Facilities Plan.

No Response Required

It appears that the impacts expected to result from this proposed project and reasonable alternatives thereto have been adequately addressed.

Sincerely yours,

Edwin R. LaPedis
Acting Regional Director

cc:
Office of Environmental Affairs
HEW, Washington, D.C.

Council of Environmental Quality
Washington, D.C. (2 copies)

Department of Local Affairs
Colorado Division of Planning

Philip H. Schmuck, Director

Richard D. Lamm, Governor

June 13, 1977

Mr. John A. Green
Regional Administrator
U. S. Environmental Protection Agency
1860 Lincoln
Denver, Colorado 80203

SUBJ:ECT Draft Environmental Impact Statement
Upper Eagle Valley and Vail Wastewater Facilities

Dear Mr. Green:

We are enclosing the comments of the State Engineer's Office which supplements our previous response to the above-referenced Environmental Impact Statement.

Very truly yours,

Charles G. Jordan
Senior Planner

Reviewed: Philip H. Schmuck, Director

CGJ/vt
Enclosure

cc: Office of the Governor
Department of Natural Resources
Northwest Colorado Council of Governments

520 State Centennial Building, 1313 Sherman Street, Denver, Colorado 80203 (303) 892-2351

RICHARD D. LAMM
Governor

C.J. KUIPER
State Engineer

DIVISION OF WATER RESOURCES

Department of Natural Resources
1313 Sherman Street Room 818
Denver, Colorado 80203
Administration (303) 892-3581
Ground Water (303) 892-3587

June 10, 1977

MEMORANDUM

TO: PHILIP H. SCHMUCK, DIRECTOR, STATE CLEARINGHOUSE

FROM: DR. JERIS A. DANIELSON, DEPUTY STATE ENGINEER

SUBJECT: UPPER EAGLE VALLEY AND VAIL WASTEWATER FACILITIES PLAN (201)

This is to acknowledge receipt of the above referenced plan that we have reviewed in accordance with your request, and the following comments are presented for your consideration:

1. The method of treatment selected should not detrimentally affect the availability of water in the Eagle River and its tributaries.

(1) 2. The statement on page 36 concerning the preference of municipal use over other types of water use is not totally correct. The preference can only be invoked by condemnation and payment of just compensation to injured water right owners.

(2) 3. The statement on page 44 on the consumptive use of exported water contains an error in that the "water is <u>not</u> returned to the stream from which diverted."

(3) 4. Table 6 on page 47 appears to contain erroneous values for the amount of water to be diverted under various phases of the Eagle-Piney Project proposed by the Denver Water Board. It would appear that the values should be in thousands of acre-feet rather than as shown.

Memo To:
Philip H. Schmuck -2- June 10, 1977

4 5. The discussion in the re-use of effluent should it become feasible in the future is only correct if the effluent is used to irrigate municipal parks and golf courses.

Jeris A. Danielson

JAD/HDS:mvf

Response to Colorado Division of Water Resources

1. Page 36 has been removed from the final text and on page 149 of the Attachment to the Final EIS your comment is properly noted.

2. This correction has been made on page 6 of the Attachment to the Final EIS.

3. These corrections have been made in Table 3 of the Attachment to the Final EIS.

4. We agree.

Department of Local Affairs
Colorado Division of Planning

Philip H. Schmuck, Director

STATE OF COLORADO 1876

Richard D. Lamm, Governor

June 20, 1977

Mr. John A. Green
Regional Administrator
U.S. Environmental Protection Agency
1860 Lincoln
Denver, Colorado 80203

SUBJECT: Draft Environmental Impact Statement
Upper Eagle Valley and Vail Wastewater Facilities

Dear Mr. Green:

We are enclosing the comments of the State Historical Preservation Officer for architectural and historical properties regarding the above-referenced environmental impact statement. These comments supplement our previous submittals.

Very truly yours,

Charles G. Jordan
Senior Planner

Reviewed: Philip H. Schmuck, Director

CGJ/vt
Enclosure

cc: Office of the Governor
State Historical Society

520 State Centennial Building, 1313 Sherman Street, Denver, Colorado 80203 (303) 892-2351

THE STATE HISTORICAL SOCIETY OF COLORADO

Colorado State Museum, 200 Fourteenth Avenue, Denver 80203

June 9, 1977

Mr. Philip H. Schmuck
Director
State Clearinghouse
520 State Centennial Building
1313 Sherman Street
Denver, Colorado 80203

RE: Upper Eagle Valley and Vail Wastewater Facilities Plan (201)

Dear Mr. Schmuck:

This office shall comment concerning only architectural and historical properties that may be located within the potential environmental impact area of this project; the office of the State Archaeologist will respond separately concerning archaeological properties.

(1) It is our understanding that 40 CFR Part 1500.9(a) instructs federal agencies to include compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, in fulfilling the environmental impact requirements of Section 102(2)(C) of the National Environmental Policy Act. This statement is inadequate in that it does not demonstrate such compliance nor does it contain provisions to insure future compliance.

As set forth in 36 CFR Part 800, the National Historic Preservation Act of 1966, as amended, requires a federal agency to identify and consider cultural properties during the planning stages of an undertaking. These responsibilities, which should be fulfilled in the environmental impact statement, have not been addressed by the Environmental Protection Agency (EPA).

Mr. Philip H. Schmuck
Page 2

2 We note that the EPA has consulted the publications of the National Register of Historic Places, and the Colorado Inventory of Historic Sites to identify properties included in and eligible for inclusion in the National Register (Page 61). As set forth in 36 CFR Part 800.4(a)(1), this is only the first step in identifying cultural properties. Since these registers are in a formative stage, they do not include all properties which possess architectural or historical value that may exist within the project impact area. As set forth in 36 CFR Part 800.4(a)(2), it is the responsibility of the federal agency to identify all other properties which may possess value. There is no indication in this environmental impact statement that the EPA has done this.

3 Once cultural properties of value have been identified, the federal agency is directed to consult with the State Historic Preservation Officer (SHPO) to evaluate the significance of the identified properties, and to assess the extent and nature of impacts that the proposed project may have upon them. If any significant properties are found that will be adversely affected by the project, planning, involving the Advisory Council on Historic Preservation should take place to consider alternatives that will avoid or mitigate these impacts.

4 We look forward to receiving information from the EPA that will establish this project's compliance with federal preservation law. If we can be of further assistance please contact Michael Quinn at the above address or at 892-3394.

FOR THE STATE HISTORIC PRESERVATION OFFICER

Sincerely,

James Edward Hartmann
Curator, Historic Preservation

cc: Land Use Administrator
Land Use Coordinator
Regional Council of Governments

Response to State Historical Society of Colorado - Historic Preservation

1. Included in this Final EIS as Enclosure 4 is EPA's interim policy for identifying and protecting historical, architectural, archaeological and cultural resources. This interim policy requires EPA to: (1) collect information and conduct surveys only for areas of primary effects; (2) use a standard of "reasonably high probability of discovering important cultural resources" in deciding to conduct intensive field surveys; and (3) use the information obtained from the identification activities for determinations of eligibility for listing in the National Register in accordance with Advisory Council procedures.

2. Because the existing wastewater facilities are less than 20 years old and due to the already disturbed nature of the project site (construction will occur at existing plant sites and within existing sewer line corridors), it was decided that there was a very low probability of finding any historical or archaeological properties of value. This determination was made in consultation with the Office of the State Historic Preservation Officer and is supported in the letter which follows, signed by Bruce E. Rippeteau, State Archaeologist. Therefore, a field survey was not considered necessary for this project. EPA does not consider it our responsibility to identify properties which are outside the project's primary impact area.

3. EPA agrees.

4. EPA has contacted Mr. Michael Quinn about this project and believes the project to be in compliance with the federal preservation law.

COLORADO OPEN SPACE COUNCIL 1325 DELAWARE ST. DENVER, COLO. 80204 303/573-9241

30 June 1977

Mr. John Green, Administrator
Region VIII U. S. Environmental Protection Agency
1860 Lincoln Street, Suite 900
Denver, Colorado 80295

Re: 201 Facilities Planning Study, Upper Eagle Valley, Colorado

Dear Mr. Green:

1 The Unit 1 Activities Facilities Plan Report for the Upper Eagle Valley Sanitation District, which serves the Vail area, does not adequately describe or present an optimized land treatment alternative as required under PL 92-500.

2 Alternatives 9 and 10 are based on buying land initially for the 1995 design levels. The selected alternative is based on the 3.5 MGD plant at the Avon site being sized for 1985 conditions. This provides an unfair cost effectiveness comparison.

3 Under the land treatment alternative 9, the Vail Golf Course and other Gore Creek green areas should be irrigated in the initial phase, particularly in light of the water lessons being taught in this drought year. Return flow would help support Gore Creek low flows. This could be done with the Vail plant effluent. The report discusses such irrigation but does not include it as a part of the plan. Sludge is disposed of in a sanitary landfill rather than being recycled.

4 The nitrification towers proposed will be subjected to cold temperatures and will be treating cold sewage. We are concerned about those facilities' ability to perform under low temperature conditions and the potential impact of ammonia on aquatic life.

5 The Eagle Valley and the Gore Valley are special places in Colorado, potentially subject to increasing population pressures and additional non-point pollution.

6 Further, the 201 plan should be based upon the proposed 1983 stream water quality standards rather than the present effluent standards and present stream classifications.

Very truly yours,

Phil Stern

Phil Stern, Chairman
Water Quality Subcommittee

CC: Tom Jorling
Evan Dildine

Response to Colorado Open Space Council

1. The land treatment alternative was evaluated and briefly presented in the 201 Facilities Plan. Subsequently, the Colorado Water Quality Control Commission requested and received from the Sanitation District an addendum of file materials utilized and developed in evaluating land treatment which was not presented in the facilities plan. In summary, land treatment was rejected as an alternative for final evaluation in the EIS due to lack of cost effectiveness, unsuitable soils, existing land use patterns, high land costs, severe climate, water rights problem, possible stream flow depletion, and the lack of a local implementing entity.

2. The economics of each alternative were evaluated and compared for total costs by the year 1995. Regarding land purchase, the immediate purchase of the required land would lead to large economies due to the rapidly escalating real estate costs. A per acre figure for land of $5,000 was utilized in the cost effectiveness analysis and is considerably below current market value with sizeable land cost increases occurring each year, Staging of land acquisition for land treatment for an incremental land requirement of 20-25 percent was not considered wise due to land price increases for lands bordering the original purchase.

3. The plan recommends that reuse of effluent be incorporated into water use such as golf course irrigation. However, the critical discharge period is in the winter when population levels are high and stream flows low. Therefore, savings in treatment costs cannot be realized since irrigation in the winter is impractical. In the summer when golf course irrigation with effluent is possible, flows are near their highest and stream flow benefits from reuse are presently minimal. As water demand and use increases in the future, both economic and environmental benefits of reuse may be better realized. The costs of conveying effluent to golf courses will be considerable due to the need to make major changes in the existing water supply systems. As competition for water increases, these effluent conveyance costs will be a more attractive alternative to development of other water supplies. Regarding sludge disposal, see response (1) to Eagle County Department of Planning and Development.

4. Nitrification to be provided at both treatment facilities is based on demonstration grant evaluations conducted at facilities of the upper Thompson Sanitation District, Colorado. Nitrification of 10-12

mg/l influent ammonia concentrations at temperatures near 10°C have been demonstrated successfully at this facility with effluent values of 1.5 mg/l. The upflow nitrification process recommended will afford media surface areas greatly in excess of those utilized in the demonstration plant work. The recommended unionized ammonia toxicity limitation of 0.02 mg/l for protection of a cold water fishery will be met by the treatment facilities.

5. We agree and a nonpoint source assessment for the area is being initiated by EPA. See response (8) through (10) for the Northwest Colorado Council of Governments comments.

6. The proposed 1983 standards were not available at the time of this study. However, it is expected that effluent values will meet such instream requirements, including unionized ammonia and residual chlorine concentrations.

Department of Local Affairs
Colorado Division of Planning

Philip H. Schmuck, Director

Richard D. Lamm, Governor

July 1, 1977

Mr. John A. Green
Regional Administrator
U.S. Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

SUBJECT: Draft Environmental Impact Statement
Upper Eagle Valley and Vail Wastewater Facilities Plan

Dear Mr. Green:

We are enclosing the comments of the State Historical Preservation Office for archaeological matters regarding the above-referenced Environmental Impact Statement. These comments supplement our previous submittals.

Very truly yours,

Charles G. Jordan
Senior Planner

Reviewed: _____
Philip H. Schmuck, Director

CGJ/vt
Enclosure

cc: Office of the Governor
State Archaeologist

520 State Centennial Building, 1313 Sherman Street, Denver, Colorado 80203 (303) 892-2351

RECEIVED
JUL 5 1977
DIVISION OF PLANNING

THE STATE HISTORICAL SOCIETY OF COLORADO
State Archaeologist ~~(Interim address) Pioneer Hall, University of Denver, Denver 80210~~ 1300 Broadway
Denver, CO 80203

June 29, 1977

Mr. Philip H. Schmuck
Department of Local Affairs
Colorado Division of Planning
520 State Centennial Building
Denver, CO 80203

RE: DEIS Upper Eagle Valley and Vail Wastewater Facilities Plan (EPA): archaeological resources

Dear Mr. Schmuck:

The Office of the State Archaeologist of Colorado has received and reviewed the Draft Environmental Impact Statement for the Upper Eagle Valley and Vail Wastewater Facilities Plan. We apologize for the delay in our response, but we received our copy for review two weeks after the deadline and during our Staff Archaeologist's vacation.

Staff Archaeologist David R. Stuart has verbally discussed the proper considerations of archaeological resources with Ms. Pepper of Camp Dresser and McKee, preparers of the EIS (see enclosed). For the 1985 component addressed in the Statement, archaeological resources are adequately considered.

1 We do, however, recommend the following clarifications. (1) It should be emphasized that the Colorado Archaeological Survey Site Inventory (the state-wide data repository which we maintain) contains only recorded archaeological sites, hence previously unrecorded--and possibly significant--sites could well be present. (cf. p. 61). (2) The disturbed nature of the project impact area, however, makes conducting archaeological surveys to identify these previously unrecorded resources largely impractical—previous disturbance would likely have destroyed all surficial manifestations.

2 (3) If subsurface materials are uncovered (cf. p. 187), impacting work shall be halted until the site is evaluated in terms of the National Register of Historic Places eligibility criteria. (These criteria are specified in the Advisory Council on Historic Preservation's "Procedures for the Protection of Historic and Cultural Properties" (36 CFR 800; see 16 U.S.C. 470f, as amended 90 stat. 1320)--note that Executive Order 11593 of 1971 is a separate mandate (cf. p. 187).)

Mr. Philip H. Schmuck
Page 2
June 29, 1977

(5) If the site is determined to be eligible for the National Register, then plans for the mitigation or avoidance of adverse impacts shall be properly arranged (see 36 CFR800). By definition, if a site is "potentially valuable" (cf. p. 187) then it will be eligible.

2

In sum, the statement adequately considers archaeological resources, but several minor misunderstandings of the 36 CFR 800 procedures are apparent. We are available to assist Camp Dresser and McKee clarify these few points in the final statement. (Call upon Staff Archaeologist David R. Stuart at 892-3391.)

(The State Historical Society's Department of Historic Preservation has independently commented regarding architectural/ historical resources.)

For the State Historic
Preservation Officer

Bruce E. Rippeteau, Ph.D.
State Archaeologist Colorado
Phone: (303) 892-3391

BER(DRS):ng
cc: Hart, SHPO

Response to State Historical Society of Colorado - Archaeological Resources

1. EPA agrees that sites could be present which are not yet recorded in the site inventory, but that the probability is low due to the predisturbed nature of the site. (See responses to Historic Society on historic preservation.)

2. EPA agrees that measures must be taken to insure the integrity of any archaeologic find made during construction. The following procedures will be required of the Sanitation Districts in a special condition to any grant for construction of the facilities.

   "In the event that subsurface materials, possibly constituting an historical or archaeologic find, are uncovered during construction, the following procedures will be adhered to by the contractor.

   1. Construction shall be halted with as little disruption to the archaeological or historical site as possible.

   2. A representative of the Sanitation District shall notify the State Historic Preservation Officer and EPA of the find and ask for guidance.

   3. The State Historic Preservation Officer may decide to have an archaeologist inspect the site, and make recommendations about steps needed to protect the site, before construction in the area is resumed.

   4. The entire event shall be handled as quickly as possible in order to hold the loss in construction time to a minimum while still protecting archaeological or historical finds."

COLORADO DEPARTMENT OF HEALTH

4210 E. 11TH AVENUE DENVER 80220 PHONE 388-6111

ANTHONY ROBBINS, M.D., M.P.A. EXECUTIVE DIRECTOR

July 7, 1977

Mr. John A. Green, Regional Administrator
Region VIII
U.S. Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

The Colorado Water Quality Control Commission (WQCC) wishes to respond to the draft Environmental Impact Statement on the Upper Eagle Valley and Vail Wastewater Facilities Plan, April, 1977, with the following comments:

1 1. Neither the 201 Facilities Planning Study nor the EIS adequately analyzed a land treatment alternative as required by EPA regulations. Neither of the land treatment alternatives (Nos. 9 and 10) were reviewed by the EIS, having been rejected at an earlier stage. The 201 states that "any detailed study of land application could best be conducted under the 208 Water Quality Management Activities of the NWCRCOG". Interestingly, the 208 plan prepared by the Denver Regional Council of Governments does not adequately address the land treatment opportunities in the DRCOG region either with the excuse that land treatment is site specific and should therefore be analyzed in the 201s. If we and EPA continue to permit this shifting of responsibility, land treatment will always fall between the cracks.

2 2. The WQCC requested and has received an Addendum from the Upper Eagle Valley Sanitation District, dated June 27, 1977, which attempts to explain in more detail why the land application alternatives were rejected. EPA is not on the list of recipients; therefore, we enclose a copy for EPA review and analysis as to adequacy and accuracy.

3 3. The 201 plan, the EIS, and the Addendum, all mention that at some future date golf courses, etc. may be irrigated with sewage effluent but it is stated that this is not cost effective now. However, the land treatment alternatives (Nos. 9 and 10) do not include these methods, nor do any of the other alternatives. There are no costs, application rates, techniques, etc. presented regarding such irrigation. Instead of addressing this at some later date, the 201 is the proper vehicle to fully analyze it. It could then become part of Step II design and Step III construction. The 201 is a plan for 1995; irrigation with effluent should be integrated into the plan now.

Mr. John A. Green
July 7, 1977
Page 2

(4) 4. The same can be said for sludge disposal. Both the 201 and the EIS indicate that recycling of sludge is either possible (201 1-3) or already partially being accomplished (EIS 134). Yet the proposed alternative is to dewater the sludge and truck it to a landfill site. This is disposal instead of use of a resource, and such disposal can create additional pollution of groundwaters. The 201 and the EIS should address recycling now.

(5) 5. The plan recommends transporting the waste activated sludge from the Vail plant several miles through an interceptor to the Avon plant for full treatment. We question the advisability of separating the solids at the Vail plant and then mixing them with raw sewage only to be separated again at the Avon plant. This does not seem prudent for a long-range solution.

(6) 6. The chosen alternative and all of the other conventional alternatives have been phased so that present construction would entail treating a total of 6.5 mgd (1985 design condition), with a new plant to be built in 1985 for an additional 2.3 (1995 design condition), making a total of 8.8 mgd, yet the land treatment alternatives are designated from the outset to provide for the total 8.8 mgd flow. This puts land treatment at a distinct disadvantage from a cost-effective standpoint.

(7) A recent news release quotes Assistant EPA Administrator Tom Jorling as stating that EPA will promote recycling of sewage water for irrigation and land treatment systems to use sludge for fertilizer or mulch. Senator Wendell Anderson suggested that such innovative systems should receive priority funding. With this new direction coming from Washington, the WQCC believes the time has come to be serious about implementing various forms of land treatment in Colorado.

The WQCC has voted, with some reservation, to approve the grant for Upper Eagle Step II. This action was taken with the conviction that the EPA would participate in further analysis and encouragement of the possibilities of land treatment in this area. We are hopeful that EPA will follow national guidelines in assisting Upper Eagle to implement more innovate forms of wastewater treatment and address these comments specifically.

Sincerely yours,

Evan D. Dildine, P.E.
Technical Secretary
Water Quality Control Commission

EDD:rr

Enclosure

Response to Colorado Department of Health

1. Both EPA and the State must continue and increase our efforts to encourage land treatment and reuse of sewage effluent. We agree that the investigation of land treatment alternatives could have been better documented in both the 201 facilities plan and draft EIS. However, in our opinion, the downstream land treatment alternatives were legitimately dismissed during development of the facilities plan for reasons of cost, environmental impact and difficulty of implementation. Basically, the limited growing season, remoteness of suitable land, the possibility of significant stream flow depletion and water rights conflict, high land costs, limitation of suitable winter storage sites, and the winter limitations on discharge of ammonia, make land treatment neither the most cost effective solution nor an environmentally sound alternative.

2. We have reviewed this document and believe that evaluation of land treatment is not sufficiently documented in the facilities plan or addendum. In the future, EPA will require a more complete documentation of the evaluation of land treatment and reuse alternatives, whether recommended or not.

3. You are correct that this alternative was not adequately analyzed. As a condition to approval of the facilities plan, we will require the Sanitation Districts to fund a study of wastewater reuse in conjunction with the ongoing comprehensive water study for the area. We believe this to be an appropriate approach in that there appears to be no obvious water quality benefits or cost savings from reuse of effluent on golf courses and other open space lands at this time. This situation occurs principally because winter discharge requirements are most restrictive and use of normal land application systems, in this climate, will not relieve this limitation and therefore will not reduce treatment costs. It is possible that, with the additional use of effluent for snow making and shallow groundwater injection, reuse might become a very realistic option. However, to study the water requirements, costs, and environmental effects of such a sophisticated system at this date would severely jeopardize already needed wastewater treatment improvements in the area. Therefore, our approach for this project will be to require study of these options, in the belief that economics may be favorable in the future as water demands and costs increase. Because a very substantial redevelopment of

existing water supply systems and pumping of effluent would be required to develop a total wastewater reuse system in the area, the costs are not expected to be low in comparison to the proposed action. Since the benefits of such a system are principally in the area of water supply, we believe the costs are best borne by the water users rather than under federal funds for water quality improvement. In other words, the proposed action will insure the necessary water quality improvements without bearing the additional water supply costs.

4. See response (1) to Eagle County Department of Planning and Development.

5. The proposed sludge handling system provides economics of scale by centralizing dewatering and hauling requirements. Clarifier sizing will not be affected at Vail and only minimally at Avon since the sludge wasted at Vail will be only 30,000 gallons per day compared with a 3.1 MGD capacity at Avon. In addition, space is limited at the Vail plant site and sludge handling at Vail would require site and access acquisition resulting in greater costs than the proposed plan.

6. All alternatives were costed for requirements to 1995, even though the construction will be staged, so that costs are comparable.

7. EPA agrees that greater consideration of land treatment and reuse systems must be required in order to realize the benefits that such systems may have over conventional treatment. All things considered, we believe it would be seriously detrimental to water quality in Gore Creek and the Upper Eagle River to require a total reexamination of reuse for this area. We believe that this position is consistent with that taken by the Water Quality Control Commission in approving the Step II grant for Upper Eagle.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION EIGHT
BUILDING 40, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

July 26, 1977

IN REPLY REFER TO:
HED-08

Mr. John A. Green
Regional Administrator
U.S. Environmental Protection Agency
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

Thank you for the opportunity to review the draft environmental statement for the Upper Eagle and Vail Wastewater Facilities Plan. We offer the following comments:

1 The EIS does not address any possible conflicts with the existing transportation facilities that may occur during construction. If any disruptions of traffic do take place during the construction of collector lines or other facilities, mitigation measures should be discussed as to how traffic will be maintained.

Also, if the project does conflict with highway transportation facilities, this EIS should be coordinated with the Colorado Department of Highways.

Sincerely yours,

B. P. Lautenbach
for F. S. Allison
Director, Office of Environment
and Design

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

Response to Federal Highway Administration

1. The existing sewer lines, which will require replacement in many areas, run alongside and within the U.S. Highway 6 and 24 right-of-way (ROW) near Avon to the junction of Interstate 70 and U.S. 24. From there east to the Vail treatment plant, the lines run parallel to the Eagle River and Gore Creek and in some cases within the I-70 ROW. Another sewer line parallels the Eagle River along the ROW from U.S. 24 through Minturn. In Vail and east of Vail, the sewer lines run alongside pedestrian streets and other residential access streets. Replacement of these sewers within the existing easements will require coordination with the State, County and Towns involved to insure safety to motorists, adequate traffic control and flow. The construction contract will have special conditions for work along highways to include compliance with State, County and Town requirements such as barricades, signs, lights, seasons when work can be done, etc. This construction will temporarily disrupt the flow of traffic at various times during the construction season on all of the previously mentioned roadways. Every reasonable effort will be made to minimize this disruption and provide for safe travel through coordination with the responsible State, County and local authorities.

Enclosure 1 - Nonpoint Source Control Program
Joint Agreements

REGION XII

NORTH WEST COLORADO COUNCIL OF GOVERNMENTS

Holiday Center Building Suite 200
P. O. BOX 739
FRISCO, COLORADO 80443

(303) 468-5445

19652

EAGLE COUNTY
BASALT
EAGLE
GYPSUM
MINTURN
REDCLIFF
VAIL

GRAND COUNTY
FRASER
GRANBY
GRAND LAKE
HOT SULPHUR SPRINGS
KREMMLING

JACKSON COUNTY
WALDEN

PITKIN COUNTY
ASPEN

ROUTT COUNTY
HAYDEN
OAK CREEK
STEAMBOAT SPRINGS
YAMPA

SUMMIT COUNTY
BLUE RIVER
BRECKENRIDGE
DILLON
FRISCO
SILVERTHORNE

September 8, 1977

Mr. Alan Merson
Regional Administrator
Environmental Protection Agency
1860 Lincoln Street, Suite 105
Denver, Colorado 80203

Dear Mr. Merson:

The Northwest Colorado Council of Governments is pleased to announce that they will participate in the development of a non-point source management study and program of implementation as suggested in the letter from John Green of August 29, 1977.

The attached joint agreement indicates our commitment to actively particpate in the study development and in implementation of non-point source controls. Thank you for the opportunity to participate in the study and assist in formulating solutions which will be effective mechanisms for controlling water pollution on a total system basis.

Sincerely,

Phil Overeynder
208 Coordinator

PO:vg
Enclosure

cc: Upper Eagle Non-Point Source Team

(24-D)

Orig: Elise Doyle
Cys: Murray, Sodeill
9/14/77

JOINT AGREEMENT

The Environmental Protection Agency issued a draft environmental impact statement (EIS) on the Upper Eagle Valley and Vail Wastewater Facilities Plan in April, 1977. This EIS recognized, through a very generalized evaluation, the potential significance of nonpoint pollution in the study area. Comments received from the North West Colorado Council of Governments 208 coordinator, the Eagle County Planning Commission, and the Eagle County Board of County Commissioners indicated further assessment of the nonpoint pollution problem is needed to provide an integrated water quality management plan. As a result of these concerns, EPA is proposing to fund a nonpoint pollution study including a recommended plan for implementation for the 201 study area. This study should be managed by a team of representatives from Eagle County, the North West Colorado Council of Governments, the Town of Vail, the Town of Minturn, the Upper Eagle Valley Sanitation District, the Vail Water and Sanitation District, the Colorado 208 Executive Committee, and the Environmental Protection Agency.

The undersigned hereby agree to provide active participation in the management of a nonpoint source pollution study leading to a recommended plan of implementation for the Upper Eagle Valley and Vail 201 facilities plan study area. We recognize the need to provide for implementation of nonpoint source pollution controls in this area and, given adequate public involvement in development of the recommendations, we will, to the best of our abilities and within jurisdictional authorities, pursue the implementation of the study recommendations. The local and County governmental jurisdictions of Eagle County, Town of Vail and Town of Minturn will consider implementation of recommended nonpoint source controls in action before the appropriate elected policy body. We recognize that failure to institute nonpoint source pollution controls may jeopardize the attainment and maintenance of water quality goals for the area as well as the effectiveness of wastewater treatment improvements.

Dale F. Grant
Chairman
North West Colorado Council of Governments

John A. Green
Regional Administrator
EPA Region VIII

Town of Minturn

Box 381
Minturn, Colorado 81645

September 9, 1977

United States Environmental
Protection Agency
Region VIII
1800 Lincoln Street
Denver, CO 80203

Reference: 8W-EE

Attention: John A. Green, Regional Administrator

Dear Mr. Green:

Enclosed is a signed joint Agreement by the Town of Minturn on the non-point source pollution study to be conducted by your agency.

The Town understands that it will not be requested to participate in any manner in terms of funding, and that it will not be under any commitment to implement any of the recommendations if said recommendations are not practical or economically feasible for the community.

I trust that this will be satisfactory with you.

Sincerely,

Robert Manzanares

Robert Manzanares
Town Manager

cd

JOINT AGREEMENT

The Environmental Protection Agency issued a draft environmental impact statement (EIS) on the Upper Eagle Valley and Vail Wastewater Facilities Plan in April, 1977. This EIS recognized, through a very generalized evaluation, the potential significance of nonpoint pollution in the study area. Comments received from the North West Colorado Council of Governments 208 coordinator, the Eagle County Planning Commission, and the Eagle County Board of County Commissioners indicated further assessment of the nonpoint pollution problem is needed to provide an integrated water quality management plan. As a result of these concerns, EPA is proposing to fund a nonpoint pollution study including a recommended plan for implementation for the 201 study area. This study should be managed by a team of representatives from Eagle County, the North West Colorado Council of Governments, the Town of Vail, the Town of Minturn, the Upper Eagle Valley Sanitation District, the Vail Water and Sanitation District, the Colorado 208 Executive Committee, and the Environmental Protection Agency.

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Bob Manzanares
Town Manager
Town of Minturn

John A. Green
Regional Administrator
Region VIII

UPPER EAGLE VALLEY SANITATION DISTRICT

0145 Avon Road
P.O. Box Y
Avon, Colorado 81620

September 9, 1977 19677

Mr. John A. Green
Regional Administrator
United States Environmental
Protection Agency, Region VIII
1860 Lincoln Street
Denver, Colorado 80203

Dear Mr. Green:

Enclosed per your request of August 29, 1977 is an executed joint agreement, in which the Upper Eagle Valley Sanitation District commits to provide active participation of the management of a nonpoint source pollution study.

You will notice that the proposed agreement is modified somewhat to reflect our understanding that the point source solutions that Upper Eagle Valley Sanitation District has worked so hard to arrive at will not be jeopardized by delays in the implementation of nonpoint solutions or by someone's perception that the solutions implemented were not satisfactory. We believe we are serving the environment well by solving the wastewater pollution problems and can see no reason why these efforts should be linked to nonpoint pollution problems.

We understand the need to solve the nonpoint pollution problems and commit to work diligently in seeing solutions implemented. We hope you agree with our position and will sign and return to us a copy of the enclosed amended joint agreement.

Sincerely,

James P. Collins
District Manager

John V. Amato,
President

Orig: Doyle
Cys: Kenny
9/14/77

JPC:ajh
Enc.
cc: Thomas T. Grimshaw
Robert Doyle
Kent Rose
Phil Overeynder

JOINT AGREEMENT

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*The Environmental Protection Agency specifically agrees that future funding for the sewage treatment facilities required in the Upper Eagle Valley will not be affected by actions resulting or related to this study.

John V. Amato, President
Upper Eagle Valley Sanitation District

John A. Green
Regional Administrator
Region VIII

JOINT AGREEMENT

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DIRECTOR OF PUBLIC WORKS FOR

Terrel J. Minger
Town Manager
Town of Vail

for

John A. Green
Regional Administrator
EPA Region VIII

JOINT AGREEMENT

The Environmental Protection Agency issued a draft environmental impact statement (EIS) on the Upper Eagle Valley and Vail Wastewater Facilities Plan in April, 1977. This EIS recognized, through a very generalized evaluation, the potential significance of nonpoint pollution in the study area. Comments received from the North West Colorado Council of Governments 208 coordinator, the Eagle County Planning Commission, and the Eagle County Board of County Commissioners indicated further assessment of the nonpoint pollution problem is needed to provide an integrated water quality management plan. As a result of these concerns, EPA is proposing to fund a nonpoint pollution study including a recommended plan for implementation for the 201 study area. This study should be managed by a team of representatives from Eagle County, the North West Colorado Council of Governments, the Town of Vail, the Town of Minturn, the Upper Eagle Valley Sanitation District, the Vail Water and Sanitation District, the Colorado 208 Executive Committee, and the Environmental Protection Agency.

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DISTRICT ENGINEER FOR
Larry Burdick, President
Vail Water & Sanitation
District

John A. Green
Regional Administrator
Region VIII

State of Colorado

EXECUTIVE CHAMBERS

DENVER

19695

RICHARD D. LAMM
Governor

September 2, 1977

Mr. Alan Merson
Regional Administrator
Environmental Protection Agency
1860 Lincoln
Denver, CO 80203

Dear Mr. Merson:

This is in response to the letter of August 29, 1977, from John Green regarding the proposed study of nonpoint sources of pollution within the 201 study area for the Upper Eagle Valley and the Vail Wastewater Facilities study area.

I have signed and am returning the joint agreement attached to Mr. Green's letter. We share your concern over the present and potential impacts of development related nonpoint sources of pollution within this Upper Eagle Valley. The team effort proposed should provide for maximum opportunity for developing an effective, implementable approach to controlling this problem. From our perspective, it would seem appropriate to address nonpoint source controls both in terms of land use and development decisions and in terms of remedial measures once development is in place.

This study effort is closely related to the 201 grant program. Therefore, we are asking the Water Quality Control Division to represent the State on the management team. This would enable the Division to relate nonpoint source features with the wastewater facilities being proposed and to coordinate those results with the activities of our 208 program. In that regard, we need to be fully cognizant of the interrelationship of both point and nonpoint sources on water quality management and the need to proceed promptly with the facilities grants concurrent with this nonpoint source effort.

I trust that this effort will be of particular importance to not only the Upper Eagle area, but to other areas of Region 12 and the State. Please have your staff contact Gary Broetzman regarding any further needs on this matter.

59

RECEIVED
SEP 27 1977
Water Division

Sincerely,

Jim Monaghan, Chairman
208 Executive Committee

enclosure

JOINT AGREEMENT

The Environmental Protection Agency issued a draft environmental impact statement (EIS) on the Upper Eagle Valley and Vail Wastewater Facilities Plan in April, 1977. This EIS recognized, through a very generalized evaluation, the potential significance of nonpoint pollution in the study area. Comments received from the North West Colorado Council of Governments 208 coordinator, the Eagle County Planning Commission, and the Eagle County Board of County Commissioners indicated further assessment of the nonpoint pollution problem is needed to provide an integrated water quality management plan. As a result of these concerns, EPA is proposing to fund a nonpoint pollution study including a recommended plan for implementation for the 201 study area. This study should be managed by a team of representatives from Eagle County, the North West Colorado Council of Governments, the Town of Vail, the Town of Minturn, the Upper Eagle Valley Sanitation District, the Vail Water and Sanitation District, the Colorado 208 Executive Committee, and the Environmental Protection Agency.

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James Monaghan
Assistant to the Governor on
Natural Resources

John A. Green
Regional Administrator
Region VIII

Enclosure 2 - Nonpoint Source Assessment Program
Scope of Services

UPPER EAGLE VALLEY NONPOINT SOURCE ASSESSMENT AND CONTROL PLAN

1. Objectives

   (1) Detailed identification of existing non-point source problem areas within the Upper Eagle Valley. For purposes of this effort, the following source categories will be considered: urban runoff, construction activivity (highway and urban development),highway runoff, mining activities.

   (2) Detailed identification of potential non-point source problem areas within the Upper Eagle Valley.

   (3) Development of site specific solutions for problems identified in objectives 1 and 2 needed to significantly reduce non-point source pollution and to meet water quality standards.

   (4) A recommended management system, model regulations and guidelines shall be provided to local governments for implementation of site specific solutions.

   (5) Integration and program compatibility with water management and recreation objectives established for the area should be achieved. (This includes minimum streamflow, groundwater quality and recharge and water supply systems; Example - Infiltration of runoff.)

   (6) Public acceptance of recommendations of implementation program.

   (7) Provide an assessment of existing land use policies and plans and provide recommended changes.

   (8) Results from the program shall build on data and recommendations of Northwest Colorado Council of Governments' 208 Plan.

2. Scope of Work (Outline)

   TASK A - Preliminary Investigation and Planning

   1. Evaluate Existing Data
   2. Develop Water Quality Monitoring Program
   3. Collect Water Quality Data
   4. Correlate Data with Published Pollutant Loading Rates

TASK B - Water Quality Problem Definition

1. Define Land Use/Water Quality Interface for Existing Problem
2. Define Land Use/Water Quality Interface for Future Development.

TASK C - Solution Definition and Assessment

1. Develop Potential Solutions to Nonpoint Pollution.
2. Assess Implications of Proposals

TASK D - Public Involvement

TASK E - Develop Final Recommendations

Enclosure 3 - Letter to State of Colorado Regarding
Transbasin Diversion Issue

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80203

Ref: 8W-EE

AUG 22 1977

Mr. James Monaghan
Assistant to the Governor
on Natural Resources
Office of the Governor
State Capitol
Denver, Colorado 80202

Dear Mr. Monaghan:

This letter is to bring to your attention recent correspondence that EPA has received from the Northwest Colorado Council of Governments concerning the importance of future hydrologic modifications on the attainment and maintenance of water quality standards in that area. The attached letter from Mr. Phil Overeynder, 208 Coordinator for NWCCOG, comments on the draft EIS for the Upper Eagle Valley and Vail wastewater facilities plan. Starting on page 7 of this letter, the potential impact of future water diversions is discussed.

EPA agrees that the future trans-basin water diversion has the potential for degrading water quality on the Western Slope and therefore, may also reduce the effectiveness of federal and local government investments in wastewater treatment facilities. Although the extent to which future trans-basin diversion, as well as future in-basin water use, will present a water quality problem on the Vail and Upper Eagle Valley area is unknown, the issue deserves greater attention on a statewide basis. We also believe that federal agencies must evaluate to a greater extent, such impacts in funding or approving such projects. Therefore, we recommend that the potential effects of hydrologic modifications, such as trans-basin diversions be given high priority attention through your State Continuing Planning Process. We believe that such attention should lead to effective state measures to control and mitigate any adverse water quality effects of proposed hydrologic modifications.

I would appreciate your careful consideration of this matter and a response as to the level of attention that will be given to this area in developing the State Water Quality Management Plans.

Sincerely yours,

John A. Green
Regional Administrator

Enclosure 4 - Interim Policy on Field Surveys to Identify Cultural Resources

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

100

Program Guidance Memo # 52
(INTERIM POLICY)

SUBJECT: Field Surveys to Identify Cultural Resources Affected by EPA Construction Grants Projects

DATE: JUL 2 1975

FROM: John T. Rhett, Deputy Assistant Administrator for Water Program Operations (WH-446)

Sheldon Meyers, Director
Office of Federal Activities (A-104)

TO: Regional Administrators
Regions I - X

EVP 7-29
WHA 4818-1

PURPOSE

This memorandum sets forth Agency policy to guide decisions in the EPA Title II construction grants program on field surveys for the purpose of identifying historical, architectural, archaeological and cultural resources (hereafter referred to as "cultural resources") in accordance with the "Procedures for the Protection of Historic and Cultural Properties" (36 C.F.R. Part 800.4(a)) issued by the Advisory Council on Historic Preservation.

BACKGROUND

Section 106 of the National Historic Preservation Act of 1966 and Executive Order 11593 impose responsibilities on Federal agencies to consider the effects of Federal, Federally assisted, and Federally licensed undertakings on properties included or eligible for inclusion in the National Register of Historic Places and to afford the Advisory Council on Historic Preservation an opportunity to comment on such undertakings. The Advisory Council has issued "Procedures for the Protection of Historic and Cultural Properties" (36 C.F.R. Part 800) to guide agencies in meeting their responsibilities under the Act and the Executive Order.

Several Regions have raised questions about EPA's specific responsibilities for historic preservation within the Grants program. The central issue is as follows: What are EPA's responsibilities for conducting field surveys to identify cultural resources under the procedures of the Advisory Council on Historic Preservation (30 C.F.R. Part 800.4(a))?

POLICY

Responsibility to Conduct Field Surveys in Areas of Primary Effects Only

EPA has the responsibility to conduct field surveys to identify cultural resources that may be affected by wastewater treatment grant projects only in the primary impact areas of the grant projects. Primary impact areas are those where ground will be disturbed for the project, such as the plant site, pumping station sites, access roads, and rights of way for interceptors.

RECEIVED

JUL 28 1975

EPA Form 1320-6 (Rev. 6-72)

Areas in which the wastewater treatment facilities will have direct visual, odor, or aerosol effects may also be primary impact areas if they are likely to contain cultural properties of a type which are susceptible to such impacts and if the proposed project has been designed so as to be exposed to view or will emit odors or aerosols.

Use Standard of Probability

In areas where there are likely to be primary effects on cultural resources, EPA must identify all properties listed in the National Register of Historic Places by consulting the latest issue of the National Register, including monthly supplements. The current compilation is found in the Federal Register of February 4, 1975 (Federal Register, Vol. 40, No. 24, pp. 5248 - 5345); supplements are published in the Federal Register, usually on the first Tuesday of each month.

EPA must also identify all properties eligible for listing in the National Register within the primary impact area. To do this, EPA shall consult with the State Historic Preservation Officer (SHPO) to determine the extent and adequacy of existing information.

If existing information is insufficient to identify affected properties that may be eligible for the National Register, EPA shall conduct or fund cultural resources surveys at a level adequate to do so. EPA's responsibility to conduct or fund such surveys on primary impact areas shall be limited by the following standard: The extent of survey activities should be based on the degree of probability with which cultural resources can be expected to be found.

Intensive surveys should be conducted only when a sufficient amount of information exists to indicate that there is a reasonably high probability of discovering important cultural resources. In areas where such information does not exist, some or all of the following usually will suffice to determine whether an intensive survey is justified: a documentary search of reference materials on the cultural resources of the area, a walk-over reconnaissance survey for archaeological properties, and a "windshield" or photographic survey of historic and architectural properties.

When necessary, intensive surveys may include ground testing for archaeological resources, or the preparation of a comprehensive map locating historical and architectural resources. The information obtained from any identification activities conducted shall provide the basis for determinations of eligibility for listing in the National Register in accordance with Part 800.4(a) of the Advisory Council procedures.

3

Determine Eligibility of Survey Costs Case-by-Case

The decisions as to what are reasonable survey activities and costs should be made on a case-by-case basis applying the standard of probability described above. Reasonable costs for surveys and other identification activities are to be considered grant eligible. Early assessment of survey needs should be undertaken to avoid project delays. Many survey decisions will require some degree of historical or archaeological expertise in order to weigh the probabilities of discovering particular properties. Regional personnel may find it advantageous to retain the services of a historian or an archaeologist if they anticipate numerous problems in this area.

DISTRIBUTION LIST

Final Environmental Impact Statements
Upper Eagle Valley and Vail 201 Wastewater Facilities Plan

Federal Agencies

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U.S. Forest Service
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Federal Center
Denver, Colorado 80225

Federal Highway Administration
Building 40, Denver Federal Center
Denver, Colorado 80225

State Conservationist
U.S. Soil Conservation Service
2490 West 26th Avenue
Denver, Colorado 80221

Forest Supervisor
White River National Forest
U.S. Forest Service
Glenwood Springs, Colorado
81601

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Education and Welfare
9017 Federal Building
Denver, Colorado 80202

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Eagle, Colorado 81631

Town of Red Cliff
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Eagle County Commission
c/o Mr. Mike Blair, Planning Director
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Eagle County, Colorado 81631

Town of Vail
c/o Mr. Terry Minger, Manager
Vail, Colorado 81657

Town of Minturn
c/o Mr. Bob Manzanares, Manager
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Town of Eagle
Eagle, Colorado 81631

Interest Groups

Vail Associates, Inc.
c/o David Mott
Box 2076
Vail, Colorado 81657

Colorado Open Space Council
1325 Delaware Street
Denver, Colorado 80204

Rocky Mountain Center on Environment
4260 East Evans Avenue
Denver, Colorado 80222

Thorne Ecological Institute
2305 Canyon Blvd.
Boulder, Colorado 80302

Alfie Packer Chapter
Trout Unlimited
P.O. Box 98
Dillon, Colorado 80435

Colorado Wildlife Federation
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Boulder, Colorado 80302

Arrowhead at Vail
Box 1669
Vail, Colorado 81657

National Wildlife Federation
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Washington, D.C. 20036

Environmental Action Committee
1100 14th Street
Denver, Colorado 80202

Environmental Impact Assessment Project
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Denver, Colorado 80203

Colorado Rivers Council
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Aspen, Colorado 81611

Friends of the Earth
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Denver, Colorado 80206

Eagle-Vail
Box 1308
Vail, Colorado 81657

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The Wilderness Society
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Mr. Martin Sorensen
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Izaak Walton League
108 Palisade Circle
Manitou Springs, Colorado
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New Zersey Zinc Co.
Gilman, Colorado 81634

Others

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Denver, Colorado 80203

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Vail, Colorado 81657

KVMT Radio
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Vail, Colorado 81657

The Vail Trail
Vail, Colorado 81086

Denver Board of Water
Commissioners
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Denver, Colorado 80202

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Eagle Valley Enterprise
Eagle, Colorado 81641