

**FINAL  
ENVIRONMENTAL  
IMPACT STATEMENT**

**CITY OF JEROME  
JEROME COUNTY, IDAHO**



FINAL ENVIRONMENTAL IMPACT STATEMENT

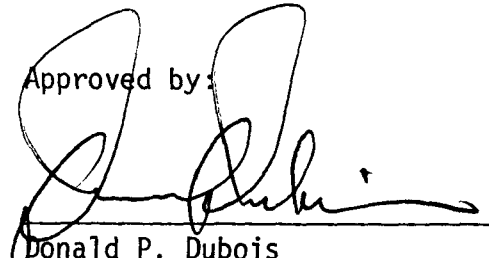
CITY OF JEROME WASTEWATER FACILITIES PROJECT  
JEROME COUNTY, IDAHO

EPA Project No. C-160179  
EPA-10-ID-Jerome-Jerome WWTW-76

Prepared by  
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SEATTLE, WASHINGTON 98101

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Approved by:



Donald P. Dubois  
Regional Administrator

March 29, 1977

Date

## PREFACE

Upon the completion of an environmental review of the City of Jerome's Draft Facilities Plan, the Environmental Protection Agency (EPA) determined that an Environmental Impact Statement (EIS) was required to meet Federal regulations. The City of Jerome had applied to EPA for grant assistance for construction of a sewage treatment facility, with potential Federal funding of 75% of eligible costs. On August 20, 1976, EPA released the Draft EIS on the proposed action for public review and comment, and a public hearing was held in Jerome, Idaho on September 17, 1976. This Final EIS is submitted for additional public review and comment.

EPA's Final EIS evaluates the environmental impacts associated with the eight alternatives presented in the Draft EIS. During this evaluation, it became apparent that more detailed cost information on the treatment alternatives was needed. This additional information, requested from the City's facilities planning consultant, CH2M/Hill, resulted in the preparation of an Addendum to the Facilities Plan. A cost analysis, using current pricing information and consistent cost factors for all alternatives, revealed that Alternative 4, the construction of a new treatment plant on the Near-West Site, is the most cost-effective alternative. A matrix of the cost, environmental, legal and overall rankings of all alternatives can be found in Section III, page 46. It should be noted that although Alternative 4 ranks Number 1 environmentally, other alternatives which include construction of a new treatment plant at the Near-West Site; construction of a new treatment plant on the existing site; or rehabilitation of the existing plant are also within range of environmental impact acceptability. The environmental quality objectives providing guidance to EPA in the selection of these alternatives are those specified in the Federal Water Pollution Control Act Amendments of 1972, the National Environmental Policy Act of 1969, and implementing Federal regulations.

During the 45-day Draft EIS review period, EPA received a number of letters on the proposed project. The letters and EPA's responses are reproduced in Section VIII. This Section also includes a summary of the Public Hearing Record. All comments received on the draft have been considered in EPA's decision-making process, and appropriate corrections or revisions to the statement have been made.

The Environmental Protection Agency has determined that Alternative 4, the most cost effective of the alternatives, should be constructed. However, cost information for this selection is subject to change. The design flow rate used for each alternative included wastewater flow from Ida-Gem Dairy. Since release of the Draft EIS the Dairy has announced closure, and its future use is not known. If wastewater loads are eliminated or significantly reduced because of the Dairy closure, all environmentally acceptable alternatives would need to be re-examined for relative costs.

In expectation of variations in final costs, EPA will prepare an Addendum to this Final EIS. Using reevaluated cost data, EPA will select an Alternative for grant funding based on a cost-effective ranking of environmentally acceptable alternatives. The Addendum will include EPA's final recommendation, revised cost data and environmental impact changes, if any. Federal, State and local agencies and interested individuals will be allowed to comment during a 30 day review period. Upon completion of the Addendum review period and evaluation of comments received, the Regional Administrator will make a final decision concerning a grant for the City of Jerome's proposed sewerage treatment system.



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## SUMMARY

### FINAL ENVIRONMENTAL IMPACT STATEMENT JEROME, IDAHO WASTEWATER FACILITIES PROJECT

Environmental Protection Agency  
Region X  
1200 Sixth Avenue  
Seattle, Washington 98101

1. Type of Statement: Draft ( ) Final (X)
2. Type of Action: Administrative (X) Legislative ( )
3. Description of Action:

The EPA action that requires this Environmental Impact Statement is the awarding of grant funds to provide an adequate wastewater treatment and disposal program for the City of Jerome, Idaho, located near the Snake River in Jerome County, Idaho. This Statement identifies alternatives and proposes that a recommended alternative be constructed to provide the City with wastewater facilities designed to meet the needs of the residents and maintain environmental quality. The City service area presently consists of approximately 1,170 acres of land and has a present population of approximately 5,625 residents. The Project will expand the service area to 5,030 acres to serve a forecasted population of 12,000 people by the year 1995.

Most of the major treatment units of the existing treatment plant are over 20 years old and in poor condition. The facility is unable to treat existing wastewater to meet Federal and State discharge requirements. Hydraulic and organic overloads at the plant have caused concern about aesthetic and health conditions.

During 1973 through 1976, the City prepared a Wastewater Facilities Plan identifying a number of alternatives for providing sewerage service to the City and areas adjacent to the City.

4. Summary of Environmental Impacts and Adverse Environmental Effects

The impacts and magnitude of the impacts of the proposed action vary and include both beneficial and adverse impacts.

Short-term impacts will include the temporary loss of vegetation, disruption of wildlife, traffic problems, sewer service utility disruption, soil erosion, air pollution from particulates, visual impacts and noise.

Long-term impacts will include protection of ground and surface waters, the elimination of odor impacts, impacts upon vegetation and wildlife, changes in the visual character, increased

recreational facilities and consumption of resources. Adverse impacts upon land use and land use planning, population densities, and redevelopment and potential income-buying power reduction for individuals on fixed incomes are also anticipated.

## 5. Alternatives Considered

Numerous alternatives were considered in the facilities plan and were grouped into eight general alternative categories as follows:

Alternative 1 - Alternative 1, "No Action" Alternative, proposed to continue to operate the existing plant without modification.

Alternative 2 - Construction of a new complete mix activated sludge plant at the Far-West Site with discharge to the "N-3" Canal. Total present worth - \$5,574,000.

Alternative 3 - Identical to Alternative 2 except that a pump station and a 5-1/2 mile force main would be constructed from the new treatment plant site to the Snake River to discharge effluent. Total present worth - \$6,634,000.

Alternative 4 - Construction of a new complete mix activated sludge plant at the Near-West Site immediately adjacent to and northwest of the existing treatment plant site. The effluent discharge from the new plant would continue to be into the "J" Canal. This is the recommended alternative. Total present worth - \$5,539,000.

Alternative 5 - Identical to Alternative 4 except that a pump station and 7-1/2 mile force main would be constructed to discharge effluent into the Snake River. Total present worth - \$6,992,000.

Alternative 6 - A Jerome-Twin Falls regional treatment plant including a pump station and a 12-mile force main to transport untreated sewage from the City to the existing Twin Falls Sewage Treatment Plant. Total present worth - \$6,585,000.

Alternative 7 - Spray irrigation. This alternative proposes to build a complete mix activated sludge plant at the Far-West Site; a pump station and 3-mile force main; and a 360-acre spray irrigation disposal site. In addition to the irrigation equipment, storage lagoons would be built to store the treated effluent for approximately 7 months; this is necessary because spray irrigation can only be accomplished in the Jerome area during the late spring through early fall months when the weather is hot and dry. Total present worth - \$8,508,000.

Alternative 8 - Upgrading of existing treatment plant facilities at the existing site. This alternative would replace and repair worn-out units and construct new units where necessary. The discharge from this plant would continue to be into the "J" Canal adjacent to the existing site. Total present worth - \$5,974,000.

6. Organizations Invited to Comment

The following State, Federal and local agencies and interested groups were invited to comment on this Environmental Impact Statement as follows:

FEDERAL AGENCIES

Council on Environmental Quality  
U.S. Department of Agriculture  
U.S. Department of Defense  
U.S. Department of Interior  
U.S. Department of Health, Education and Welfare  
U.S. Department of Housing and Urban Development  
U.S. Department of Transportation  
Federal Energy Office  
National Marine Fisheries Service

MEMBERS OF CONGRESS

Frank Church  
U.S. Senate

Steve Symms  
U.S. House of Representatives

James A. McClure  
U.S. Senate

George Hansen  
U.S. House of Representatives

STATE

Governor of Idaho  
Idaho State Clearinghouse  
Division of Budget, Policy,  
Planning and Coordination  
Department of Fish and Game

Department of Health and Welfare  
Department of Parks and Recreation  
Department of Lands

## LOCAL AGENCIES AND INTERESTED INDIVIDUALS

Mayor, City of Jerome  
Jerome County Planning and  
Zoning Commission  
Board of County Commissioners  
North Side Canal Company, Ltd.

Rotary Club of Jerome  
Idaho Environmental Council  
Frank Davis  
Karen L. James  
B. Roy Prescott  
Charles E. Henley  
Mr. & Mrs. James R. Prunty  
Mr. & Mrs. D. L. Hendry  
Frederick F. Plankey  
Mr. & Mrs. James Underwood  
Mr. & Mrs. William B. Holland  
Mr. & Mrs. John D. Webster  
Mr. & Mrs. A. L. Blades  
Mr. & Mrs. Herman Jacobsen  
Mr. & Mrs. Gorman Miracle  
Michael K. Staples  
Sonnich Sonnichsen  
Mary H. Mann  
Bernice Johnson  
Mr. & Mrs. Edwin Nutsch  
Albert M. Dalton  
Claude R. & Leona Norman

Jerome Planning Council  
Jerome City Planning and  
Zoning Commission  
Idaho Wildlife Federation  
CH<sub>2</sub>M/Hill, Inc.  
Jerome Chamber of Commerce  
Jack Allison  
Charles Ireton  
Mr. & Mrs. Hollis V. Neal  
Mr. & Mrs. Leonard B. Scheer  
Bill Morgan  
Mr. & Mrs. Laurel D. Ploss  
Mr. & Mrs. Keith Lierman  
Patrick D. McCoid  
Mr. & Mrs. George McCormack  
John A. Dalton  
Mrs. Jay Overmon  
Bob Berentz  
Mr. & Mrs. Allen P. Burnham  
Mr. & Mrs. Kenneth Staples  
Mr. & Mrs. John Miller  
V. E. Camozzi  
Forrest P. Hymas  
Ken Baumgartner  
Dr. Jack N. Adams

This Final Environmental Impact Statement was made available to the Council on Environmental Quality (CEQ) and the Public on April 20, 1977.



## I. INTRODUCTION



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## SECTION I

### INTRODUCTION

#### PURPOSE AND OBJECTIVES

The National Environmental Policy Act of 1969 (NEPA) requires that all agencies of the Federal government prepare Environmental Impact Statements (EIS) for projects that may significantly affect the quality of the human environment. NEPA requires that agencies include in their decision-making processes all considerations of environmental aspects of proposed actions, the environmental impacts of the proposed project and its alternatives, and a discussion of the ways to avoid or minimize adverse effects. This Environmental Impact Statement for the Jerome, Idaho Wastewater Facilities Project is intended to be a full disclosure document following the specific regulatory requirements as contained in 40 CFR, Part 6, as published in the Federal Register, Volume 40, No. 172, April 14, 1975.

Because the eligible costs of the treatment and interceptor components of Jerome's Wastewater Facilities Project are fundable by a 75% grant to the City of Jerome, as authorized by the Construction Grants Program (Federal Water Pollution Control Act Amendments of 1972 - PL 92-500), NEPA action is required. After reviewing the proposed Wastewater Facilities Plan for Jerome, Idaho, it was decided by EPA that an EIS was needed based on the degree of expected growth in the area, the effect of this growth on present agricultural or undeveloped lands, the potential conversion of approximately 40 acres of existing agricultural land for use as the proposed new treatment plant facility site, (EPA Regulation 40 CFR, Part 6) and because of concerns and objections raised by some local citizens. EPA's regulations under 40 CFR 36.200(b) direct EPA to prepare an environmental impact statement when environmental impacts of a proposed EPA action are likely to be controversial.

Data for this EIS have been compiled from various existing studies in the Jerome area: the Jerome, Idaho Wastewater Facilities Plan; field reconnaissance; and numerous personal contacts with involved individuals. A complete listing of references is contained in the bibliography portion.

The EIS process encouraged public input into the decision-making process. On May 25, 1976 at 8:15 p.m. in the Jerome Jr. High School Auditorium, the Environmental Protection Agency, in cooperation with the City of Jerome, held a public information

meeting to inform concerned members of the public in the Greater Jerome Area of the environmental impact statement process, the EIS timing, and their opportunities to provide input into the EIS process. The Environmental Impact Statement was then prepared in draft form and widely circulated for public comments. A public hearing was held on September 16, 1976 to solicit comments and responses. A summary of the public hearing and written comments received during the 45-day comment period can be found in Section VIII. In this Final EIS, the EPA Regional Administrator has recommended selection of Alternative No. 4. A discussion of the recommended Alternative is presented in Section IV.

## BACKGROUND OF PAST EVENTS

In the early 1930's the City of Jerome began sewerage service for the City. The sewer was originally of wood-stave and Orangeburg pipe. In 1949, the wood-stave and Orangeburg pipe were replaced with concrete pipe and service was extended to the entire City. In 1950, the existing treatment plant was constructed on the present site. Today it is a conventional trickling filter system modified in 1962 by the addition of a grit chamber preceding the comminutor and in 1969, by addition of an activated biological filter tower, one filter pump station, and one aerated lagoon. The majority of the existing treatment units at the treatment plant site are over 20 years old and are generally in poor physical condition. Presently, the facility is unable to treat existing wastewater at a level of efficiency that meets National Pollutant Discharge Elimination System (NPDES) requirements. Hydraulic and organic overloads have caused concern about aesthetics and other problems associated with non-compliance discharges. Because of the poor condition and need of repairs at the treatment plant, there was a general need for an adequately-functioning sewer system in the City of Jerome and, in May of 1973, the City of Jerome authorized the firm of CH2M/Hill Inc. of Boise, Idaho, to develop a Wastewater Facilities Plan for the City of Jerome.

In May of 1975, the Wastewater Facilities Plan for Jerome, Idaho was completed and forwarded to the Environmental Protection Agency. Preceding the publication of the Wastewater Facilities Plan, two public meetings and two public hearings were held on November 21, 1974; January 29, 1975; February 20, 1975; and February 28, 1975. The results of public input were utilized in developing the list of issues described in the "Important Issues and Considerations" segment of this section.

During the review of the Wastewater Facilities Plan by the Environmental Protection Agency, it became evident that an environmental impact statement should be prepared for the proposed project. On January 19, 1976 EPA issued a Notice of Intent to prepare an EIS. On May 10, 1976 work began on the Impact Statement, with the first public information meeting held on May 25, 1976. Work proceeded on the Environmental Impact Statement through July and culminated in production of a Draft Environmental Impact Statement on August 20, 1976. Review of the Draft proceeded through the beginning of 1977 and comments will be received for 30 days after publication of this Final EIS.

#### IMPORTANT ISSUES AND CONSIDERATIONS

In the course of preparing this Environmental Impact Statement, it became evident that several key environmental issues relate to the construction of the proposed Wastewater Facilities Project in the Jerome, Idaho area. These issues were identified through discussions with involved City of Jerome and Jerome County residents and personnel of various local, State and Federal agencies having an interest in the project. Issues of particular importance, listed below and identified and evaluated in the "Environmental Setting" portion of this section and in Section III, "Environmental Impacts of Alternatives," are as follows:

1. The effect the proposed Wastewater Facilities Project may have in the conversion of agricultural and undeveloped lands to residential and other more urban uses.
2. Conversion of approximately 40 acres of existing agricultural cropland for use as the proposed new treatment plant site.
3. The land use compatibility of the proposed action and the effect of the proposed project on land use and land use planning in general. The potential impacts upon aesthetics by the location of the plant and any associated impact generators such as noise or odor.
4. The effect upon groundwater of the spray irrigation alternative.
5. Potential impacts associated with discharging of treated wastewaters into the irrigation canal system.
6. Operation and maintenance of the new plant after construction.

## INTERRELATIONSHIPS WITH OTHER PROJECTS

The Wastewater Facilities Plan for Jerome, Idaho<sup>(1)</sup> was one of several planning projects undertaken by the City of Jerome within the past two years. In addition to the Wastewater Facilities Plan, the City of Jerome has prepared a plan for, and is now constructing, a Water System Improvement Program. Additionally, the City of Jerome is in the process of completing a Comprehensive Land Use Plan for the City. The City's Land Use Plan is proceeding concurrently with the re-evaluation of the Jerome County Comprehensive Land Use Plan.

A review of the City of Jerome Water System Improvement Program Study<sup>(2)</sup> and the Proposed Comprehensive Plan for the City of Jerome<sup>(3)</sup>, in comparison with the Wastewater Facilities Plan, showed that sufficient service area was allowed to more than accommodate the service area proposed in the Water System Improvement Program and the planning area proposed in the City of Jerome Proposed Comprehensive Land Use Plan. Potential impacts and inconsistencies are discussed later in the Land Use portion of Section III, "Environmental Impact Alternatives."

Two planning studies prepared by the State of Idaho address concerns associated with the Jerome Wastewater Facilities Project, the State of Idaho 303(e) Water Quality Management Plan<sup>(4)</sup> and the State of Idaho Water Plan for the Snake River Basin.<sup>(5)</sup>

A review of the 303(e) Water Quality Management Plan showed that a wastewater facilities project in Jerome is necessary and called for in the Plan. However, the implementation of such a wastewater facilities project for the City of Jerome is behind schedule according to the State's Plan.

The State Water Plan includes discussion of groundwater and agricultural land development. The proposed Wastewater Facilities Project is in conformance with the State Water Plan. More detailed discussions of the relationships of the Jerome Wastewater Facilities Project to the State Water Plan are included in the "Groundwater" and "Land Use" portions of Section III, "Environmental Impacts of Alternatives."

Jerome County has two existing studies that relate to the Wastewater Facilities Project, the existing Comprehensive Zoning Plan<sup>(6)</sup> and the Jerome County Comprehensive Rural Water and Sewerage Planning Study.<sup>(7)</sup> The Zoning Plan has been adopted by

the Jerome County Board of Commissioners. Additionally, the County is presently engaged in a Comprehensive Land Use Planning Study which will update the existing Zoning Plan to conform to the new Land Use Planning Act, Chapter 65, Title 67 of the Idaho Code. Impacts and relationships of the Jerome Wastewater Facilities Project to the County Zoning and Land Use Plans are discussed in the "Land Use" portion of Section III.

## ENVIRONMENTAL SETTING

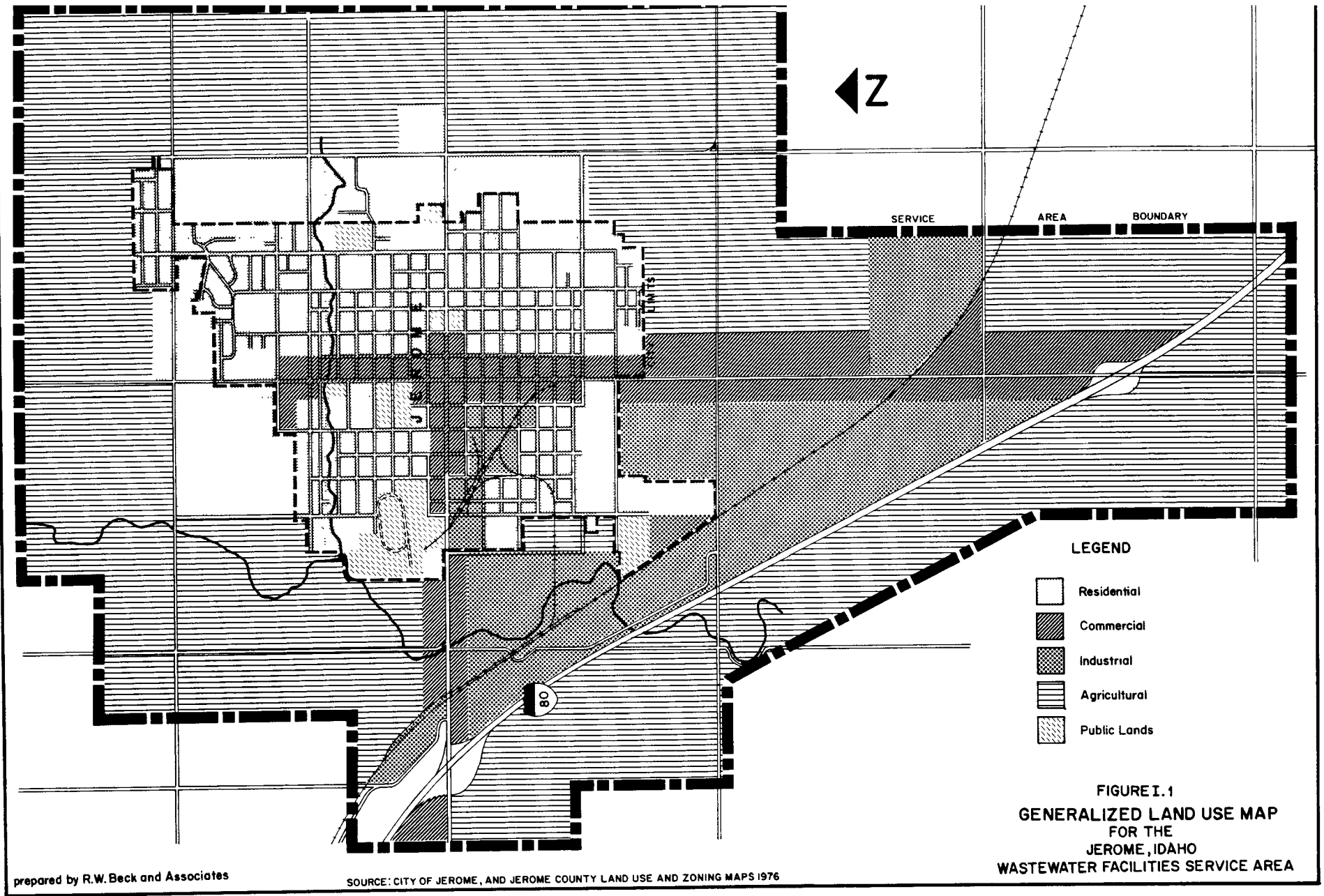
### Location

As stated in the Wastewater Facilities Plan, the Jerome study area lies in an elongated-intermountain basin which trends from east to west with slopes from the northeast to the southwest. The major water body in the area is the Snake River which is to the south and is downcut several hundred feet below the plateau. In this area the Snake River flows to the west. The terrain of the study area is generally a smooth-rolling alluvial surface broken by small escarpments, called buttes, and outcrops of volcanic material.

The study areas lies within the jurisdictional boundaries of both the City of Jerome and Jerome County. Jerome County consists of approximately 379,520 acres located in the upper Snake drainage in the center of the Magic Valley area of Central Idaho. The County area affected by the Wastewater Facilities Plan generally lies within a 1-1/2 mile perimeter of the City limits to the north, west and east within approximately 3 miles of the City limits to the south (Figure I.1). The City of Jerome, located in the western portion of the County, due north of the City of Twin Falls, is adjacent to the Snake River and Interstate 5. With an elevation of approximately 3,750 feet above sea level, it has a population of approximately 5,625 people (1974) and serves as a regional center for the County, providing principal retail services and farm equipment maintenance.

### Climate

The Jerome area is located within a semi-arid steppe type of climate. This type of climate is relatively warm and dry with a mean annual precipitation of 8.73 inches and a winter snowfall totalling approximately 24 inches per year. Temperatures vary from a January mean low of 27°F to a July mean high of 91°F. (7) The growing season, or frost-free period, averages approximately 125 to 135 days. The growing season (less than 145 days) is the reason that there are no Class I agricultural lands located within Jerome County according to the USDA Soil Conservation Service. (8)





The frost-free period usually lasts from late April or early May to October or early November. The U.S. Department of Commerce, ESSA, Environmental Data Services reports that the predominant wind direction in the Jerome-Twin Falls area is from the west; however, during the months of February, November and December predominant wind direction is from the east, and during the months of July, August and September the predominant wind direction is from the south. Approximately 70% of the winds are less than 12 mph in velocity. The highest wind velocities occur in April and May reaching wind speeds of 20 to 30 knots and higher.<sup>(9)</sup>

#### Air Quality

The air quality of the Greater Jerome Area is generally excellent, with no recorded ambient air quality standard violations. According to an air quality report completed by Region X of the U.S. Environmental Protection Agency<sup>(10)</sup> excellent air quality in the rural areas of Idaho is a common occurrence. However, in areas of rapid urbanization, such as the Twin Falls area to the south, urban sources of particulate matter can cause the Federal ambient air quality standards for particulates to be exceeded. For this reason, even though the air quality of the Greater Jerome Area at present is considered excellent, if rapid urbanization continues in the area, there may be potential for air quality degradation from particulate sources.

#### Water Resources

Surface Water - The study area contains no perennial streams other than the Snake River which borders it on the south. The water resources in the area consist of the Snake River and tributary springs and the Northside Canal and Irrigation systems. The canal and irrigation systems provide water for irrigation and stock watering during the months of April through early December, with flows varying from 20 cubic feet per second (cfs) to 380 cfs in the "N" Canal, and 20 cfs to 70 cfs in the "J" Canal. Many of the natural drainages in the near proximity of the study area have been modified so as to be incorporated by the District into the canal system. The "N" Canal travels south and a little west, traversing through an area that is rapidly converting to rural homes and ranchettes. This urbanization trend will probably continue and result in increased numbers of small animals, livestock and animals. The source of water for the Northside Canal District is Milner Dam located upstream on the Snake River in Jerome County. The Northside Irrigation District diverts approximately 1.7 million acre-feet from the Milner Dam into and through Jerome County.

The water quality of both the canals and the Snake River is poor.<sup>(4)</sup> Poor water quality occurs primarily because of the pollution condition in Milner Reservoir. Federal recommended ambient water quality standards are periodically violated for dissolved oxygen, turbidity and coliform bacteria. The sources of pollution include industrial, municipal, nonpoint, and agricultural irrigation return flow discharges. Water quality in the Snake River south of the City is also poor, with concentrations of dissolved oxygen, turbidity, and coliform bacteria periodically present at non-recommended levels. The sources of pollution to the Snake River in this area include polluted small creeks, municipal nonpoint and irrigation return flow sources. Table I.1 illustrates concentrations of various chemical and biological water quality parameters in the canals and Snake River.

Groundwater - The groundwater resources underlying the study area are described by the U.S. Geological Survey, Idaho Department of Recreation<sup>(11)</sup> to be part of Idaho's largest and highest-yielding aquifer. The Snake River Plain Aquifer is comprised of a series of basaltic lava and sedimentary rock forms which underlay the soils in Jerome County. These massive basalt geologic forms have few if any interconnected pore spaces and therefore are practically impermeable. For these reasons, groundwater movement is largely in and related to interflow zones, cracks or openings in the basalt bedrock layer. These permeable openings may range in size from large cracks or fissures to capillary openings in sedimentary interbeds. These interflow zones are not completely separated from one another but are interconnected along vertical rock joints or along fault zones.

The depth to the groundwater in the study area normally ranges between about 200 and 500 feet. However, to the southwest of the City of Jerome some wells are operating at depths as shallow as 130 feet. Most irrigation wells penetrating the aquifer produce more than 1,000 gallons per minute (gpm).<sup>(11)</sup> The water quality of the groundwater in the Jerome area is of high quality and is reported by the Water Resources Board<sup>(12)</sup> to be suitable for domestic irrigation and industrial use. The USGS<sup>(5)</sup> reports that the primary recharge for the Snake River Plain Aquifer is percolation, through unsaturated soils and indiscriminate flow; however, the Snake River recharges the aquifer in those stretches where springs do not occur. Downward rate of percolation and thus, rate of recharge, is unknown because of the extreme amount of perched water in the main aquifer area. Table I.2 illustrates measured water quality of the groundwater.

TABLE I.1

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## JEROME AREA WATER QUALITY

<u>Parameter</u>	<u>Snake River(a) Above Jerome</u>	<u>Snake River (a) Below Jerome</u>	<u>Milner (b) Dam</u>	<u>Northside (b) Main Canal</u>
pH	7.7	7.6	8.3	8.2
Suspended Solids (ppm)	NA(c)	NA	NA	39(d)
CaCO <sub>3</sub> (ALK, mg/l)	180	152	182	138
CaCO <sub>3</sub> (Hardness mg/l)	220	180	228	NA
NO <sub>3</sub> (mg/l)	1.45	2.50	0.3	0.1
NH <sub>3</sub> (mg/l)	0.31	0.30	0.6	1.3
BOD (mg/l)	NA	NA	2.9	8.7
COD (mg/l)	NA	NA	0.5	68.0
DO	9.2(b)	9.5(b)	10	9.2
Fecal Coli (MPN/100 ml)	NA	NA	1,330	NA
Total Coli (MPN/100 ml)	NA	NA	14,607	NA

Source:

- (a) - Reference 1
- (b) - Environmental Protection Agency Storet Retrieval System, Region X, Seattle, Washington 1976.
- (c) - Not Available
- (d) - Source: M.J. Brown; D. L. Carter, and J. A. Bonderant, Sediment in Irrigation and Drainage Waters and Sediment Inputs and Outputs for Two Large Tracts in Southern Idaho, Journal of Environmental Quality, Vol. 3, No. 4, Oct.-Dec., 1974.

TABLE I.2  
QUALITY OF GROUNDWATER  
CITY OF JEROME, IDAHO

<u>Test Parameter</u>	<u>Jerome Groundwater Public Supply 6/02/53(a)</u>
pH	7.7
Turbidity (JTU)	-
TDS (mg/l)	265
CaCO <sub>3</sub> (ALK)	-
CaCO <sub>3</sub> (Hardness)	176
Ca (mg/l)	41.0
Mg (mg/l)	18
FE (mg/l)	0.07
Mn (mg/l)	-
Na (mg/l)	21
Cl (mg/l)	25
SO <sub>4</sub> (mg/l)	41.0
NO <sub>3</sub> (mg/l)	2.00
PO <sub>4</sub> (mg/l)	-
SiO <sub>2</sub> (mg/l)	31.0
NH <sub>3</sub> - N (mg/l)	-

(a) - Source: Reference 1

## Soils

The soils of the study area have been classified by the Soil Conservation Service<sup>(13)</sup> to be predominantly Class 4 soils, with some classified as high as Class 2 and as low as Class 6. Despite the fact that the soils of the study area have only a moderate cultivability classification, these soils are one of the major resources of the area, and the economic base of the Greater Jerome Area. The soils of the study area consist mainly of wind deposited sandy and silt loams of varying depths over underlying basalt bedrock. The average soil mantle depth throughout the area averages less than 40 inches.

Soil conditions that pose potential hazards include disturbed soils along hillside slopes, uncovered irrigation ditches, and areas where soils have been removed during construction or mining activities. Additionally, two areas near the City having slopes between 0 and 30%, which are primarily outcrop areas, also are unsuitable for many building types. Flood hazards have occurred, primarily caused from snowmelt and water runoff from Flat Top Butte located approximately 5 miles east of the City. This butte has caused flood conditions in the early spring and winter months primarily in the area of M-Coulee, a major lateral for the North-side Canal District running east to west through the City through 6th and 7th Avenues.<sup>(3)</sup>

The soils of the Jerome area are not generally suited for even moderately-dense concentrations of septic tanks and drainfields.<sup>(14)</sup> Septic tank effluents can become suspended in the soil, plugging soil pores and causing blockages of drainfields. This results in outbreaks of sewage on the ground surface.

Additionally, the State of Idaho in its Idaho Environmental Overview<sup>(15)</sup> has defined the soils of the Twin Falls, Cassia, Jerome, Monodoka and Blaine County areas as sensitive soil areas. In these areas mismanaged or mistreated soils stand a moderate risk of being eroded and transported as blowing dust or through runoff systems, potentially decreasing soil productivity, water quality, aquatic habitats, and general aesthetics of the area.

## Fish and Wildlife

Because most of the study area has been modified from its original wild condition through either agricultural or urban use, only a few small game animals appear to depend upon specific sites within the study area for support. Alfalfa and corn fields furnish excellent cover and food during the summer months for populations of Hungarian partridge, pheasants, and several species

of ducks. Additionally, a considerable number of waterfowl species nest and raise their broods in and adjacent to the many canal systems in the area, including mallards, teal, pintails, widgeons, shovelers, scaup, coots, sora rails, common snipe and others. A variety of shore birds also use the canals for nesting and feeding. A partial listing of bird life in the area is included in Table I.3.

There is a State Game Farm located within the study area. This farm has been operated by the Idaho Fish and Game Department since the 1930's and is the only game farm in Idaho that hatches pheasants. The 40-acre property is located one mile south and one mile east of the City center. The farm contains 18 acres under wire and two 6-acre fields for raising feed. The property includes three brooder houses and one residence. On the average, some 16,000 pheasants and 1,000 chukars are raised on the farm each year. From April until mid-June there are many public tours to see the chicks.<sup>(3)</sup>

Due to the shortage of streams in the area, the most important nearby fishery is in the main Snake River. Game fish found in this section of the Snake River include rainbow trout, cutthroat trout, brown trout, whitefish, largemouth and smallmouth bass, channel catfish, bullhead catfish, bluegill, yellow perch and white sturgeon. Large hatcheries are located to the south and downstream on the Snake River and rear over 70% of the commercially-marketed trout in the U.S.

The State of Idaho has classified the Snake River adjacent to Jerome as a significant habitat area for white sturgeon and cutthroat trout. Additionally, the Snake River Canyon in the vicinity of Jerome has been designated as the State potential bald eagle habitat; bald eagles are a rare and endangered species. The State has also identified the Greater Jerome Area as a mule-deer habitat and potential water fowl production area.<sup>(15)</sup>

### Population

A special City of Jerome Census dated September 30, 1974 reports a population in 1974 of 5,625 people. This figure represents an increase of 34.5% in four years for an average annual increase of approximately 8.6%. If this growth rate were to continue, the population of Jerome would reach approximately 44,500 people by the year 2000. While increases in the Jerome population over the past four years have been dramatic, it is unrealistic to believe that growth can continue at its present rate.

TABLE I.3

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A PARTIAL CHECKLIST OF BIRDLIFE FOUND  
IN THE JEROME AREA

<u>Common Name</u>	<u>Scientific Name</u>
Rough-legged hawk	Buteo Lagopus
Sparrow hawk	Falco sparverius
Swainson hawk	Buteo swainsoni
Ring-necked pheasant	Phasianus colchicus
Hungarian partridge	Perdix perdix
Mallard	Anus platyrhynchos
Magpie	Pica pica
Mourning dove	Zenaidura macroura
Oregon junco	Junco organus
Western meadowlark	Sturnella neglecta
Eastern kingbird	Tyrannus tyrannus
Western kingbird	Tyrannus verticalis
Killdeer	Charadrius vociferus
Source: Reference 1	

Several studies have been done for the City of Jerome in recent years, with population estimates for the year 1990 varying from a low projection of 10,000 in the year 1990 by the Water Resources Board<sup>(7)</sup> to a high of 19,700 projected by the Idaho Housing Agency for the year 1980.<sup>(16)</sup> The most recent study<sup>(17)</sup>, conducted by the Center for Business and Economic Research at Boise State University for the Idaho Department of Water Resources and utilizing summary output for the population employment forecasting model, projects that Jerome County will obtain a population of 20,220 by the year 1990. According to the U.S. Census data, assuming that the population distribution in the City and the County will remain the same as it has for the last 20 years, the population of the City of Jerome is estimated to reach 8,300 by the year 1990. Because of the rapid growth rate and wide range of population estimates by various credible agencies, the CH<sub>2</sub>M/Hill estimate of approximately 12,000 people by 1995 seems to be reasonable.

### Economic Development

An analysis of the economic base of the area by the City of Jerome Planning Department<sup>(3)</sup> indicates positive growth in all the economic indicators surveyed. Three new industries have located in Jerome since the 1970 Census. The construction industry is booming, the City's assessed value shows a steady climb, and total sales in the County report a consistent upswing.

Employment - In 1970, the Department of Employment reports surveyed by the City of Jerome<sup>(3)</sup> showed a total work force for Jerome County of 3,850 and an unemployment rate of 4.8%. Jobs were categorized with agricultural employment totalling 1,700 workers and non-agricultural employment having 1,960 workers. According to the State of Idaho Department of Employment records, fiscal year 1975 unemployment in Jerome County peaked at 7.8% in January of 1975 and the lowest rate was recorded in October of 1974, when only 3.3% of the labor force was unemployed. Fiscal year 1975 ended with a rate of 4.3% unemployed.

A recent Manpower Planning report, published by the Idaho State Department of Employment,<sup>(18)</sup> stated that the labor force in Jerome County continued to show strong growth in 1975. Most of the expansion was centered in the service-oriented businesses. New businesses included a bank, a survey and loan company, a grocery store, a farm implement retail store, a diesel repair shop, several general retail stores, and a professional medical building.



Income Levels - Idaho State Department of Employment data report that the median family income in 1969 was \$6,600 but the mean family income was \$7,531, a significant spread. The 1970 Census data listed the total number of families for the County at 2,706 with 336 families (or 12.4% of all families) having incomes less than the poverty level.

Industry - Agriculture provides the economic base in the Jerome area.<sup>(19)</sup> Gross farm income has been steadily rising for the County, as shown by crop and livestock summaries since 1970:

<u>Year</u>	<u>Total Crop</u>	<u>Total Livestock</u>	<u>Gross Farm Income</u>
1970	\$24,546,978.00	\$ 9,783,300.00	\$29,390,661.00
1971	25,791,199.20	14,043,420.00	31,819,663.00
1972	28,829,302.00	16,596,657.00	36,616,759.00
1973	43,963,840.00	12,140,500.00	45,079,580.00
1974	66,578,482.50	10,020,975.00	54,470,652.50

Six major industries in the Jerome area are the Ida-Gem Dairymen, Inc. Creamery; Moore Business Forms, Inc.; the Tupperware Company; Volco Inc. (building materials); Watts Manufacturing (farm implement manufacturing); and Western Farm Service (irrigation equipment sales)<sup>(3)</sup>.

Airport Regional Plans - For general aviation, Jerome is served by the Jerome County Airport, just over three miles east of the City off State Highway 25. The facility has one east-west paved runway that is 3,317 feet long and 40 feet wide and provides 11 hangers and 8 tie-downs. The Idaho Airport System<sup>(20)</sup> calls for \$70,425 worth of improvements by 1977, including purchase of 15 acres of land, pavement, repair, enlargement of paved apron, and relocation and construction of hangers and fencing. By 1982, the Plan suggests extending and paving the runway. Principal traffic at the airport is agriculture and business-related.

Now in the master plan stage<sup>(20)</sup> is a proposed regional airport to be located about six miles south and four miles east of the City. Both the City and County are part of the Regional Airport Authority and the site under consideration is bounded by the Snake River Canyon on the south, Interstate 80N on the north and U.S. Highway 93 on the west. When constructed, the regional airport can be expected to alleviate the problems of inadequate air freight and passenger service. It can be anticipated that the economic and growth impacts on the City and County will also be significant in the future, as the master plan moves into the construction phase.

The Wastewater Facilities Plan considers serving the proposed airport in the Jerome-Twin Falls regional alternative.

### Land Use

While most of the area within the City is low-density urban, the general land use character of the County is agricultural, with irrigation being used extensively. In the County over 150,000 acres are presently irrigated, and an additional 40,000 to 50,000 acres are designated for potential application.<sup>(13)</sup> However, farm population has been diminishing in the County. Domestic crop production is principally alfalfa, with addition of wheat, barley, corn, potatoes and beans. Jerome County has the following land use distribution:

Private Land .....	215,133 Acres
Cropland .....	158,100
Permanent Pasture .....	7,000
Range .....	33,333
Miscellaneous .....	16,700
Federal Land .....	154,740
Urban or Buildup Area .....	7,747
Water .....	1,900
	<u>379,520 Acres</u>

The private land is managed by approximately 1,200 operating units. The private land acreage will increase due to the Desert Entry Act and the irrigated cropland will increase due to the deep well method of obtaining water.<sup>(21)</sup>

With agriculture being the main land use, only 8% of the County is utilized for urban uses, with the remaining 35 to 40% undeveloped. The density of the unincorporated area equals about 10 people per square mile in contrast to the City of Jerome which attains a density of 3,000+ per square mile.

The land use of the proposed service area is diverse and includes the following approximate land use acreages as illustrated in Figure I.1.

Agricultural Lands .....	2,835 Acres
Residential .....	1,135 Acres
Commercial .....	700 Acres
Industrial .....	320 Acres
Public Lands .....	<u>40 Acres</u>
TOTAL .....	5,030 Acres

The County and City are both currently involved in completing separate comprehensive land use plans. The County's Planning Study is to serve as an update to their existing Comprehensive Zoning Plan and Regulations. Zoning is presently utilized to implement land use policies, and ultimate growth bounds have been established by the City. The City's Proposed Comprehensive Plan effectively treats both Jerome access points from Interstate 80 in addition to existing industrial facilities, the core area, and new residential development. Early development of new housing immediately north and east of the City is recognized in the Land Use and Facilities Plans as the first area for service. Urban services are believed to be important in maintaining the City's continuity and reducing pressure to move into adjoining farmlands.

### Public Service and Utilities

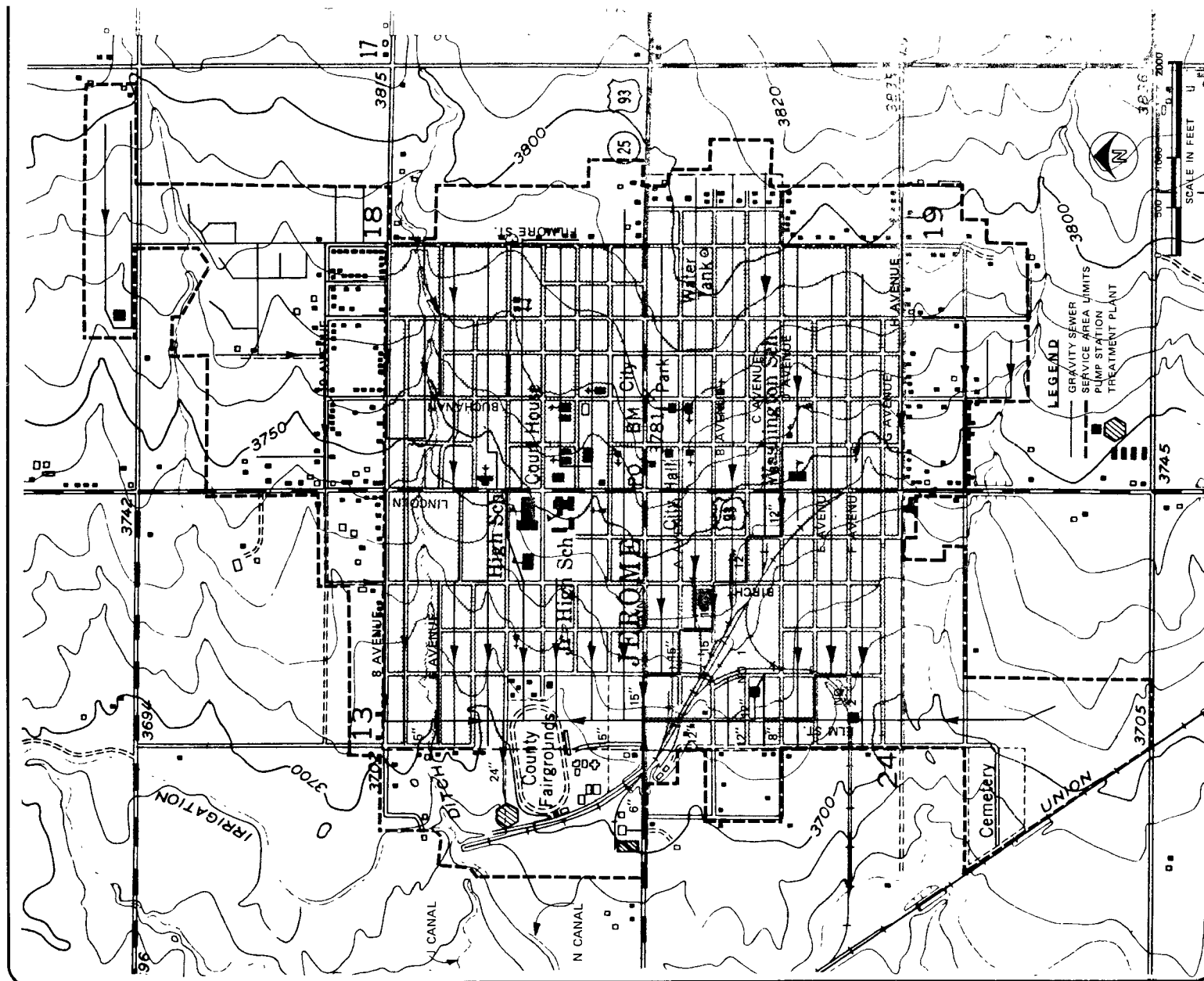
Solid Waste Management - The City of Jerome contracts with a private firm for refuse pickup. The waste is hauled and dumped at the Jerome County landfill northeast of the City near Highway 93. The open pit landfill is covered daily and has separate areas to dispose of old car bodies, trees, and brush. No dead animals can be disposed of at the site. The landfill is inspected by the South Central Health Department.

Sewage Facilities and Services - The Wastewater Facilities Plan states that the City is served by a wastewater collection system, a portion of which is gravity flow and 1,170 acres which require two lift stations. Of the six major industries mentioned previously, only Ida-Gem Dairymen, Inc. discharges process wastewater to the municipal system. The existing facilities are illustrated in Figure I.2.

The existing treatment plant was constructed in 1950. It is a conventional trickling filter system, modified by the addition of a grit chamber preceding the comminutor in 1962. Further modifications were made in 1969 with the addition of one activated biological filter tower, one filter pump station and one aerated lagoon. The majority of the existing major treatment units are over 20 years old and are generally in poor physical condition. The facility is unable to treat existing wastewater at a level of efficiency that meets discharge requirements, and hydraulic and organic overloads have caused concern about aesthetics and health conditions. The sewer system was installed in the early 1930's; in 1949 the original wood-stave and Orangeburg pipe were replaced with concrete pipe and service was extended to the entire town-site.

Effluent from this plant flows through approximately 18 miles of canal before discharging into the Snake River. Although between December and April treatment plant effluent is the only flow in the canals, no significant health problems have resulted





**FIGURE I.2**  
**EXISTING SERVICE AREA**  
**AND COLLECTION SYSTEM**

**LEGEND**

- GRAVITY SEWER
- - - SERVICE AREA LIMITS
- ⬮ PUMP STATION
- ⬮ TREATMENT PLANT
- ➔ DIRECTIONAL FLOW ARROW

SOURCE: REFERENCE 1

B 8039.0



specifically from the canal system. Odors which emanate from the plant and discharge of wastewater into a dry canal are causes for environmental and health concerns. There is a potential for nuisance and health hazard conditions because of slime growth, odors and algae blooms in the canals.

Storm Sewers - Storm sewers exist in the City in areas where collection of runoff water is a necessity, specifically in the northeast section. Developers are being required to install storm sewers, as needed, in new developments. The City hopes to install a storm drain system with curb and gutter installation in the southwest and northwest sections of Jerome if local and grant monies become available. The sewers are needed to control surface runoff, to prevent flooding of property.

Transportation - Primary transportation is highway oriented with good immediate access to Interstate 80 and County arterials. In 1970, the Interstate maintained an average of 6,516 vehicles per day near the two Jerome interchanges and conveyed 3,071 vehicles per day on State Highway 25 in Jerome. A new regional Airport is being planned near Twin Falls about 12 miles south of Jerome. (3)

Water Supply - The original central water system for Jerome was established in 1907 by the Jerome Water Company. (7) The system provides services to the entire community, with sources of supply being five wells, two in the northern section and three along the eastern boundary. The Water Resources Board reported that "These wells produce a good quality of water but collectively have insufficient pumping capability to meet the future water demands."

Storage of the water is supplied by a 50,000-gallon elevated tank and a 100,000-gallon ground level concrete reservoir as an emergency unit. The Water Resource Board commented, "This storage capacity is quite inadequate to provide for the projected peak demands."

Recently, the City of Jerome authorized a water study which made specific recommendations for upgrading the water system by constructing a new reservoir on 10th Avenue E. and by installing some 2,900 feet of new water mains at a cost of over \$100,000. The project cost is covered by local water funds and revenue sharing and it is presently under construction.

Electricity - The Idaho Power Company serves the City of Jerome and surrounding rural areas. The power supply sources are all hydroelectric with the exception of a small amount of power

purchased from Puget Power and Light Company and Idaho Power Company's Wood River oil and gas combined turbine plants.<sup>(22)</sup>

Within the City, the Power Company has one power station; five substations are located in the rural area of Jerome. The firm employs twelve people. Company policy has been to bury electrical cable in subdivisions of more than six lots and in mobile court areas. Plans for expansion are unannounced.

State and Federal Agencies - The following State agencies provide services in Jerome: Department of Highways, State Department of Employment, Department of Fish and Game, Department of Health and Welfare, and the National Guard. Federal agencies with Jerome offices are Department of Agriculture, Agriculture Stabilization Conservation Commission, Farmers Home Administration, Soil Conservation Service and the Post Office.

Recreation - According to the City of Jerome Proposed Comprehensive Plan<sup>(3)</sup>, the City Council's inventory of existing recreational sites lists the City Park on 1st Street, 2.5 acres; North Park, 2 acres; South Park, 2 acres; and the proposed Magic Meadows Park to be developed on 2.3 acres of land donated by the subdivision developer in the northeast part of the City. The City is awaiting \$21,000 requested funding from the Idaho State Parks Department to develop Magic Meadows Park. In addition, the City owns Pioneer Community Hall (on North Lincoln), which is slated for remodeling in 1977. The County fairgrounds, located on a 38-acre site, are available for recreational needs. Future plans for a City Park at the new Jerome High School include construction of a new swimming pool. A private golf course and a private bowling alley are available in the area.

The Tupperware plant operates a recreation center that has become a community resource. The 25-acre site includes two multi-purpose tennis/basketball courts, playground equipment, picnic area, two baseball diamonds and one softball diamond. The center is open to employees and guests but also cooperates with the City Recreation Department in the use of a softball diamond. An Olympic swimming pool is open to children of the community. Tupperware also plans to create a game preserve on some 12 to 14 acres east of their plant.

According to the Idaho State Parks and Recreation Department, in a Jerome Park Model Assessment Study<sup>(23)</sup>, there is a future need of six mini-parks and one neighborhood park of up to 10 acres that could provide various recreational needs. The study suggests that the immediate future recreational demands in Jerome could be met by acquiring the following properties:



1. Property on 10th Avenue (2-3 acres near telephone exchange) for a mini-park.
2. Property along Teton Drive at Fillmore (6-7 acres) for a neighborhood park.
3. Property at Cleveland Street and Avenue I (2-3 acres) for a mini-park.

The Jerome County Planning Council, in an April 1975 report,<sup>(24)</sup> proposed a recreational multipurpose complex, approximately 75 by 100 feet. The complex would include a multipurpose room with stage, indoor areas to accommodate reading, cards, chess, and checkers. An open air balcony is also proposed. Outdoor areas would be planned for roller and ice skating, fireplaces, basketball, tennis, miniature golf, volleyball, badminton and shuffleboard.

#### HISTORIC, ARCHITECTURAL AND ARCHAEOLOGICAL SITES

The following sites were listed on the State Registry of Historic Sites by the Idaho Historical Society in Boise on June 3, 1976:

##### Calvary Episcopal Church

A small wooden church with shingled steeple and tiny windows.

##### Clark Heiss House

At 400 East Avenue A, an example of "modern" style with features (inspired by the Chicago World's Fair of 1933) such as glass brick inserts in rounded corners, parallel horizontal "streamlining" in brick courses and metal railings.

##### Gilbert White House

At 401 East Avenue A, a "modern" white house is an excellent example of the style with interior detail including stair railings, light fixtures, fireplace and hearth. Built about 1939, the house is now owned by the Henry Pharrises.

##### Jerome Cooperative Creamery (now Ida-Gem Dairymen, Inc.)

This two-part stone factory building made of local materials is a distinctive and impressive structure. The style of the first structure was repeated in the second addition nine years later.

Jerome County Courthouse

Architects Sundberg and Sundberg designed this two-story brick modern courthouse. Decorative accents are vertical with terra cotta ornament contrasting with the brick.

Jerome First Baptist Church

T. C. Miller and Ed Gill designed and built this lava rock church with a single frontal tower, constructed about 1910. The church has a rough reddish volcanic stone exterior. The entry is at the base of a three-story square castle keep. Windows are on the sides and to the rear are rectangular double-hung sash windows. the rear sports a gable.

Jerome First Presbyterian Church

A large brick church in Renaissance style.

Lincoln School

A large red brick school of two stories with wide overhanging eaves, built in 1908.

St. Jerome Roman Catholic Church

A brick church in Tudor style, trimmed in terra cotta.

St. Jerome Parish Hall

A wooden frame church of great simplicity constructed about 1908. The church was never used as a Parish Hall and was moved to Shoshone.

The Jerome County Planning Council lists the First Security Bank Building, Heiss Building and the Jerome Abstract and Title Building in addition to the Jerome City Library, Washington School and Pioneer Hall as buildings of distinct architectural character. (3)

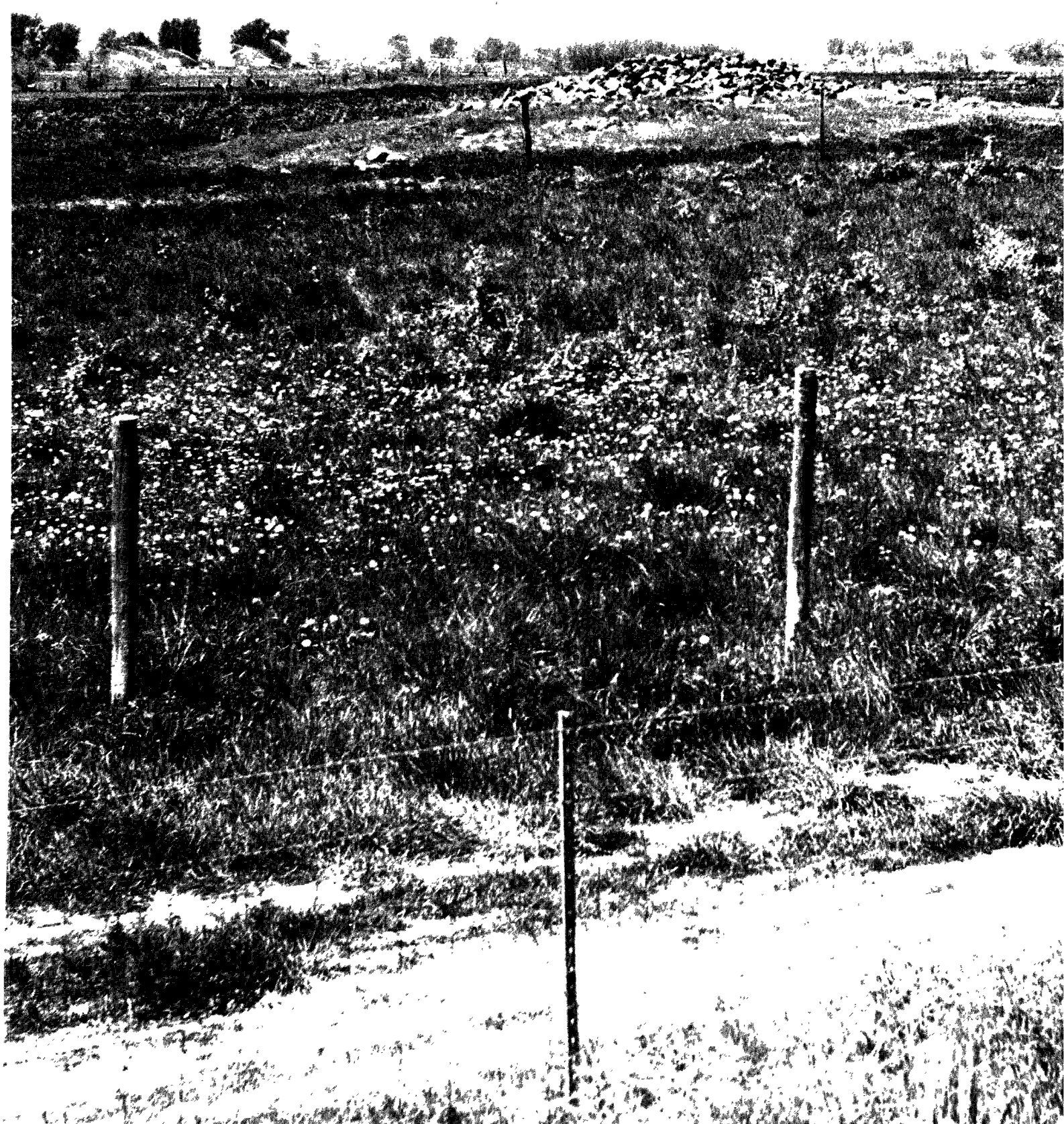
There are at least 25 lava rock structures in the City and County areas. These rock structures were built previous to 1930, from volcanic rocks uncovered from the soil, usually during plowing and cultivating.

SECTION I  
FOOTNOTES

- (1) CH<sub>2</sub>M/Hill, Inc. Wastewater Facilities Plan for Jerome, Idaho, 1975.
- (2) CH<sub>2</sub>M/Hill, Inc. City of Jerome Water System Improvement Program, Boise, Idaho 1974.
- (3) City of Jerome, Idaho Planning Department, Proposed Comprehensive Land Use Plan, 1975.
- (4) Idaho Department of Health and Welfare, Draft 303e Water Quality Management Plan for the State of Idaho, Boise, Idaho, 1976.
- (5) Idaho Water Resources Board, State of Idaho Water Plan - Volume II, Boise, Idaho, 1975.
- (6) Jerome County, Idaho, Ordinance Establishing a Comprehensive Zoning Plan and Regulations, as amended, Jerome, Idaho, 1973.
- (7) Idaho Water Resources Board, Comprehensive Rural Water and Sewerage Planning Study for Jerome County, Boise, Idaho, 1973.
- (8) U.S. Department of Agriculture, Soil Conservation Service, Jerome Area Interim Soil Survey Report, detailed information and criteria used in its development, Jerome, Idaho, 1973.
- (9) R. Rocenwall, One Year Wind Study for the Twin Falls-Southern Idaho Regional Airport, U.S. Department of Commerce, National Weather Service, 1973.
- (10) Findley, Charles E. and Bray, David C., Attainment of Ambient Particulate Matter Standards in Idaho, U.S. Environmental Protection Agency, Region X, Seattle, Washington, 1973.
- (11) R. F. Norvitch, C. A. Thomas, and R. J. Madison, Artificial Recharge to the Snake Plain Aquifer in Idaho; An Evaluation of Potential Effect, U.S. Geological Survey and Idaho Department of Reclamation, Boise, Idaho, 1969.
- (12) Idaho Department of Water Resources, State Water Plan - Part III, Technical Data Report, Boise, Idaho, 1976.
- (13) U.S. Department of Agriculture, Soil Conservation Service, Jerome Area Interim Soil Survey Report, Jerome, Idaho, 1973.
- (14) U.S. Department of Agriculture, Soil Conservation Service, Septic Tank Soil Suitability (Map), Jerome, Idaho, June, 1976.
- (15) Idaho Department of Water Resources et. al, Idaho Environmental Overview, Boise, Idaho, 1975.

- (16) Idaho Housing Agency, Idaho's Housing Needs Analysis, Boise, Idaho, 1975.
- (17) Boise State University, Center for Business and Economic Research, Summary Output for Population and Employment Model Boise, Idaho, 1975.
- (18) Idaho Department of Employment, Bureau of Research Analysis, Annual Manpower Planning Report - Fiscal Year 1976 (Twin Falls), Boise, Idaho, 1975.
- (19) Idaho, University Cooperative Extension Service, General hand-outs and tables, Jerome, Idaho, 1976.
- (20) T.A.P. Inc., Idaho Airport System Plan, Airports Supplement, Bozeman, Montana, 1973.
- (21) Idaho Water Resource Board, Potentially Irrigable Lands in Idaho, Boise, Idaho, 1970.
- (22) "Electrical World", Directory of Electric Utilities, McGraw-Hill, Inc., New York, 1975.
- (23) Idaho Parks and Recreation Department, Park Model Assessment Jerome, Idaho, Boise, Idaho, 1974.
- (24) Jerome County, Idaho Planning Council, Comprehensive Recreation Plan, Jerome, Idaho, 1975.

## II. ALTERNATIVES





## SECTION II

### ALTERNATIVES

The Wastewater Facilities Plan for Jerome prepared by CH<sub>2</sub>M/Hill, dated May 1975,<sup>(1)</sup> contains four waste treatment alternatives in the cost-effective analysis. The plan was updated by an addendum dated December 16, 1976<sup>(2)</sup> which included eight additional, modified alternatives. The final recommendation described in the addendum is that a new wastewater treatment plant be constructed at a new site just north and west of the City's existing plant (Figure II.1). This treatment plant would employ an extended aeration activated sludge system, with discharge of the treated effluent to the "J" Canal. Additionally, a Twin Falls regional treatment alternative, a spray irrigation alternative and a river discharge alternative are discussed in the two facility plan reports.

If the City of Jerome discharges to the canal system during the winter months the discharge would have to meet, in addition to the other Federal and State discharge standards, more stringent water quality standards for coliforms (50 MPN/100 ml). If the discharge meets these standards, winter storage would not be required. However, if the discharge does not meet the standards, winter storage will have to be provided.

During the public information portion of this Environmental Assessment, citizens suggested that this EIS also look at an upgrade of the existing treatment plant; a new treatment plant at the existing site to discharge to the Snake River; and a new treatment plant at the existing site to discharge into the "J" Canal. Additionally, it was suggested that the two pump stations on the existing interceptor system could be eliminated. All of these alternatives are discussed in the Facilities Plan Addendum and in this EIS.

One additional alternative was also considered in this EIS to ensure that Federal guidelines are met: a "No Action" Alternative.

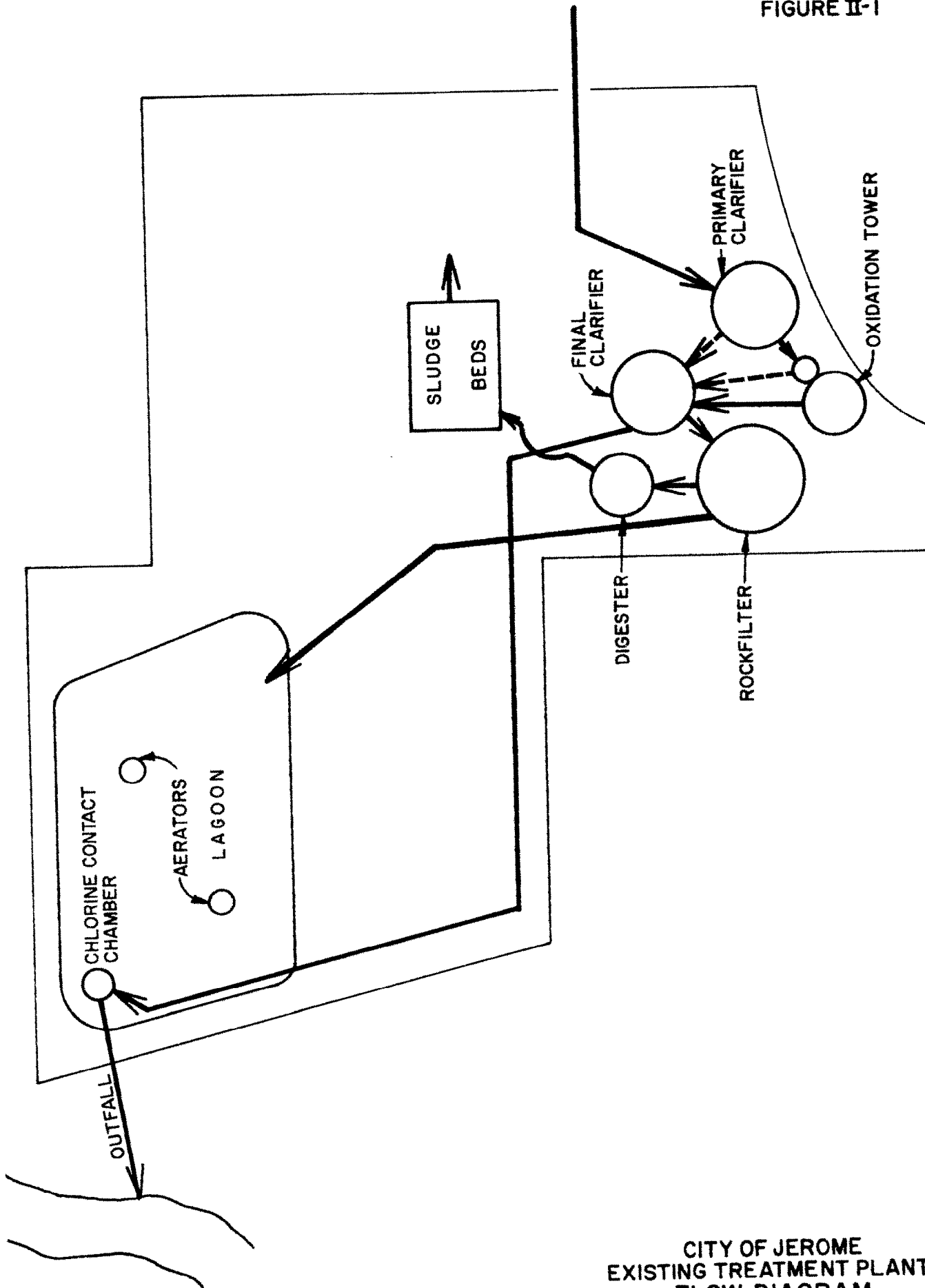
#### FACILITIES DESCRIPTION

The following alternatives in some respects are very similar. It will be helpful to the readers if the following similarities are kept in mind.

##### "No Action" Alternative

The "No Action" Alternative system is the same as the existing system.

FIGURE II-1



CITY OF JEROME  
EXISTING TREATMENT PLANT  
FLOW DIAGRAM



### Action Alternatives 2 Through 8

1. All action alternatives have the same service area.
2. There are only two proposed interceptor systems, one for the Far-West Site alternatives and the second for existing and Near-West Plant Site alternatives. Alternatives 2, 3, 6, and 7 have the Far-West Plant Site interceptors and Alternatives 4, 5 and 8 have the second type of interceptors.
3. The construction time phasing is directly related to interceptor construction and therefore Alternatives 2, 3, 6 and 7 have one construction time phasing program and Alternatives 4, 5 and 8 all have a second type of construction time phasing.

### Alternative 1 - "No Action" Alternative

The "No Action" Alternative continues to operate the existing facility in its present state without further action to upgrade or improve its operation. It is also assumed that no action will be taken to accommodate the demand which will be generated by the expected growth of the area.

The following summary of the existing facilities was abstracted from the Wastewater Facilities Plan for Jerome.<sup>(1)</sup>

Service Area - The present service area, 1,170 acres, is principally the City limits of Jerome and a small perimeter immediately adjacent to the City of Jerome. This perimeter varies from approximately 3,000 feet from the Jerome City boundary to the northeast to an average of less than 500 feet along the east, west and south City limits of the City of Jerome (Figure I.1).

Interceptors - The Jerome collection system is composed mainly of 8-inch diameter pipes which convey wastewater flow from east to west across the present service area. The flow from the 8-inch pipes is then collected into larger 12- to 24-inch diameter pipes running north and south along the eastern edge of the service area, and is carried to the existing treatment plant. The existing system serves an area of approximately 1,170 acres. Figure I.1 shows features and the general layout of the existing collection system and service area.

The portion of the existing service area which is north of Avenue E and the railroad tracks is served by gravity flow. A 300 gpm pump station is presently being installed to provide service to the Magic Meadows Subdivision located in the northeast

corner of the service area. As development occurs to the west of this area and new sewer pipes are constructed, this area can be served by gravity flow and use of the pump station can be discontinued.

To provide service to the remaining portion of the service area south of Avenue E and the railroad tracks, two lift stations are required. Lift Station No. 1, located just off Elm Street between Avenue C and Avenue D, has a capacity of 500 gpm. Lift Station No. 2, located on Elm Street between Avenue F and Avenue G, has a capacity of 225 gpm. The original pumps in both stations were replaced with new pumps in 1973.

Because of the generally steep slopes and relatively minor infiltration, most of the system has adequate capacity for present needs, as well as capacity for additional flow from fringe areas to the east of the City, which are yet to be developed. The only exception to this is the 8-inch diameter pipe which runs east along 10th Avenue from Buchanan Street, south along Birch Street to 8th Avenue and east along 8th Avenue to Elm Street. This pipe collects flow from the northeast portion of the existing service area and is presently overloaded during peak flow periods.

Treatment Process - The initial construction of the existing wastewater treatment plant was completed in 1950. It was a conventional trickling filter system designed to treat domestic wastewater, and included the following major units:

1. Comminutor
2. Primary clarifier
3. Rock media trickling filter
4. Secondary clarifier
5. Chlorine contact basin
6. Anaerobic digester
7. Three sludge drying beds

The system was modified in 1962 with the addition of a grit chamber preceding the comminutor.

Further modifications were made in 1969. These changes included the addition of the following units:

1. One oxidation tower
2. One filter pump station
3. One aerated lagoon

Figure II.2 illustrates the existing treatment plant layout.

The incoming wastewater flows initially through the grit chamber for removal of heavy solids such as sand, glass, etc. The large solids remaining in the wastewater flow are then broken down in the comminutor. Following the comminutor, the wastewater is pumped to the primary clarifier, where solids are settled out and wasted to the anaerobic digester for stabilization. The stabilized sludge is dried on drying beds, with final disposal of the dried sludge on land.

Following primary clarification, the wastewater is pumped to the oxidation tower. The wastewater then flows by gravity to the secondary clarifiers where the biological solids settle. The settled solids are recycled back into the system to increase the solids concentration. Further biological treatment is provided for secondary clarifier effluent by the trickling filter. A portion of the effluent from the trickling filter is recycled back into the system. The trickling filter is followed by an aerated lagoon. A portion of the lagoon is isolated by baffling and utilized as a chlorine contact basin for disinfection prior to final discharge to the "J" Canal. Some of the existing mechanical equipment is in fair to poor condition and is creating operational problems.

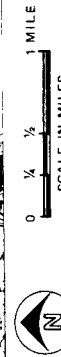
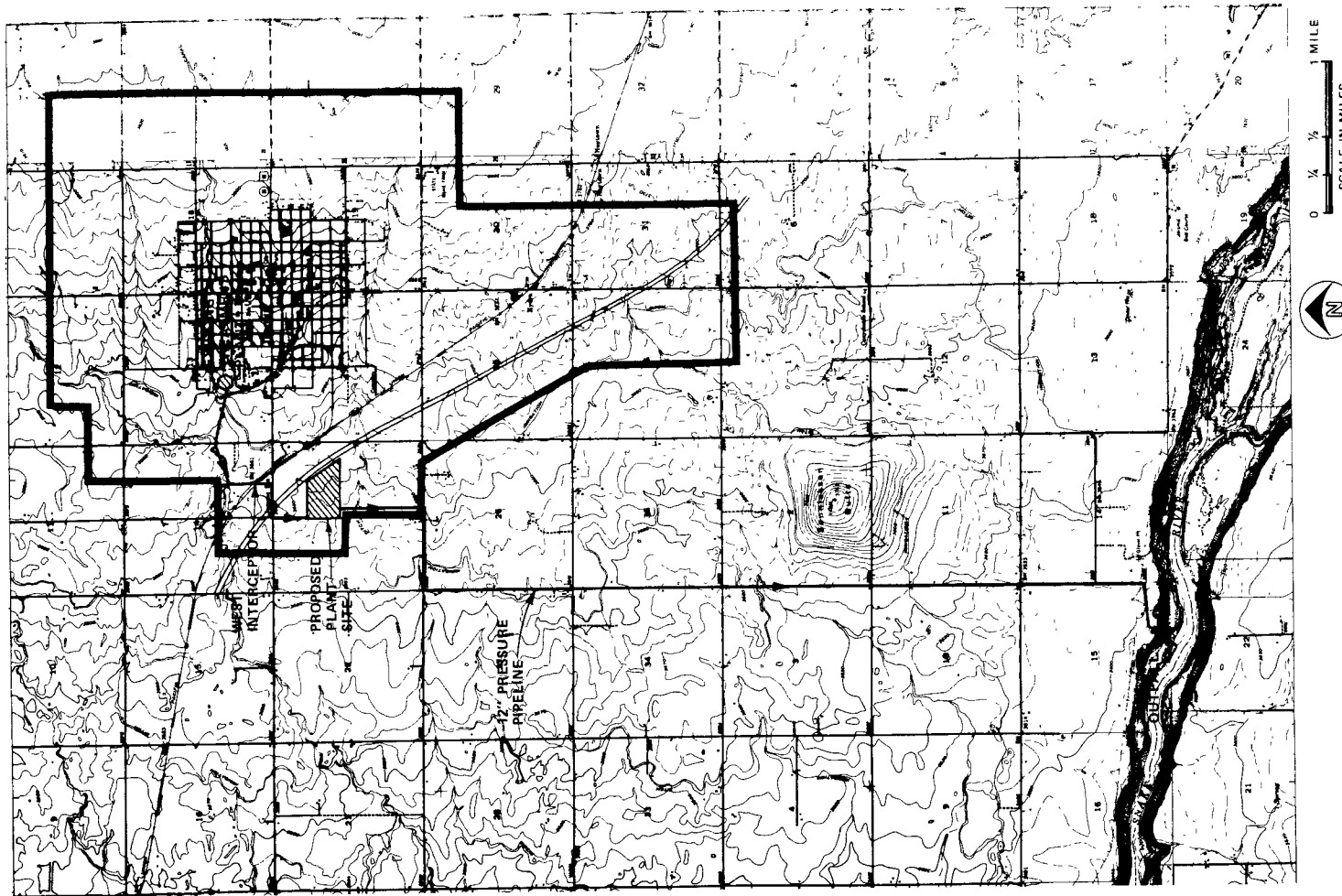
The existing grit chamber is presently hydraulically overloaded, resulting in the discharge of large amounts of grit into the primary clarifier, where it settles and is eventually wasted to the anaerobic digester. The grit is unaffected by the digestion process, but uses up digester volume, causing reduced sludge stabilization efficiencies.

The existing final clarifier is also heavily overloaded, resulting in large volumes of diluted waste solids being discharged to the trickling filter and eventually to the aerated lagoon.

At present, a mixture of waste activated sludge and primary sludge is wasted to the anaerobic digester. This mixture of waste sludge contains a high percentage of silt which uses up digester volume without being affected by the digestion process. Single-stage anaerobic digesters, by nature, are not as efficient as two-stage digesters, and loss of digester sludge volume to grit reduces the detention time and results in an even lower stabilization efficiency. Odors are given off when the partially stabilized sludge is transferred to the drying beds. Digester supernatant from partially stabilized sludge is odorous. The floating cover to the digester leaks, allowing odorous gases produced in the unstable digestion process to escape.

Receiving Stream - Effluent from the Jerome Wastewater Treatment Plant is discharged into the "J" Canal north where it branches into the "J" and "N" Canals. Information about the canal





**FIGURE II. 3**  
**TREATMENT PLANT AND**  
**OUTFALL LOCATIONS**

SOURCE: REFERENCE 1



Alternative 4 - New Secondary Plant at Near-West Site with Discharge to "J" Canal

The interceptor alternative serving the existing site as described in the City of Jerome Wastewater Facilities Plan has been modified in the Addendum to eliminate the need for two existing pump stations located near Elm Street, now part of the existing sewerage for the City of Jerome. These modifications have caused the construction time phasing for the service area to change slightly, as well as the total cost of the facilities to be decreased slightly.

This treatment alternative, while not discussed in the published Facilities Plan, was analyzed by the City and its Consultant in preparation of the Facilities Plan Addendum.

Service Area - Total service area for Alternative 4 is the same as for Alternative 2.

Interceptors - To provide a system of interceptor and main sewer lines to conduct wastewater to the Near-West Plant Site for treatment, the study area was divided into three subareas or phases. Based on current development trends, it is expected that the systems in Phases 1 through 3 will be required in consecutive order as development occurs in each area. Figure II.4 shows the proposed interceptor system for each phase.

Phase 1 - New development is predominantly on the northeastern side of the City. Under Phase 1, the North Interceptor would provide service by gravity flow to this service area of 1,445 acres. Some portions of this area, along the eastern boundary of the existing service area, are presently developing. These fringe areas can best be served by connecting to the existing 8-inch sewers, which flow westerly through the City. The capacity of the existing system is limited, however, and the majority of the flow from the Phase 1 area would have to be carried by the North Interceptor. Additionally, to eliminate the two existing pumping stations, 4,000 feet of the South Interceptor nearest the treatment plant would have to be built during Phase 1. Phase 1 construction is proposed to begin in 1978.

Phase 2 - Under Phase 2, the southeastern and western portions of the study area would be served. The southeastern portion would be served by gravity flow to the plant site. Flow from this area would be carried by Main S, the South Trunk and the portions of the South Interceptor between Main S and the treatment plant.





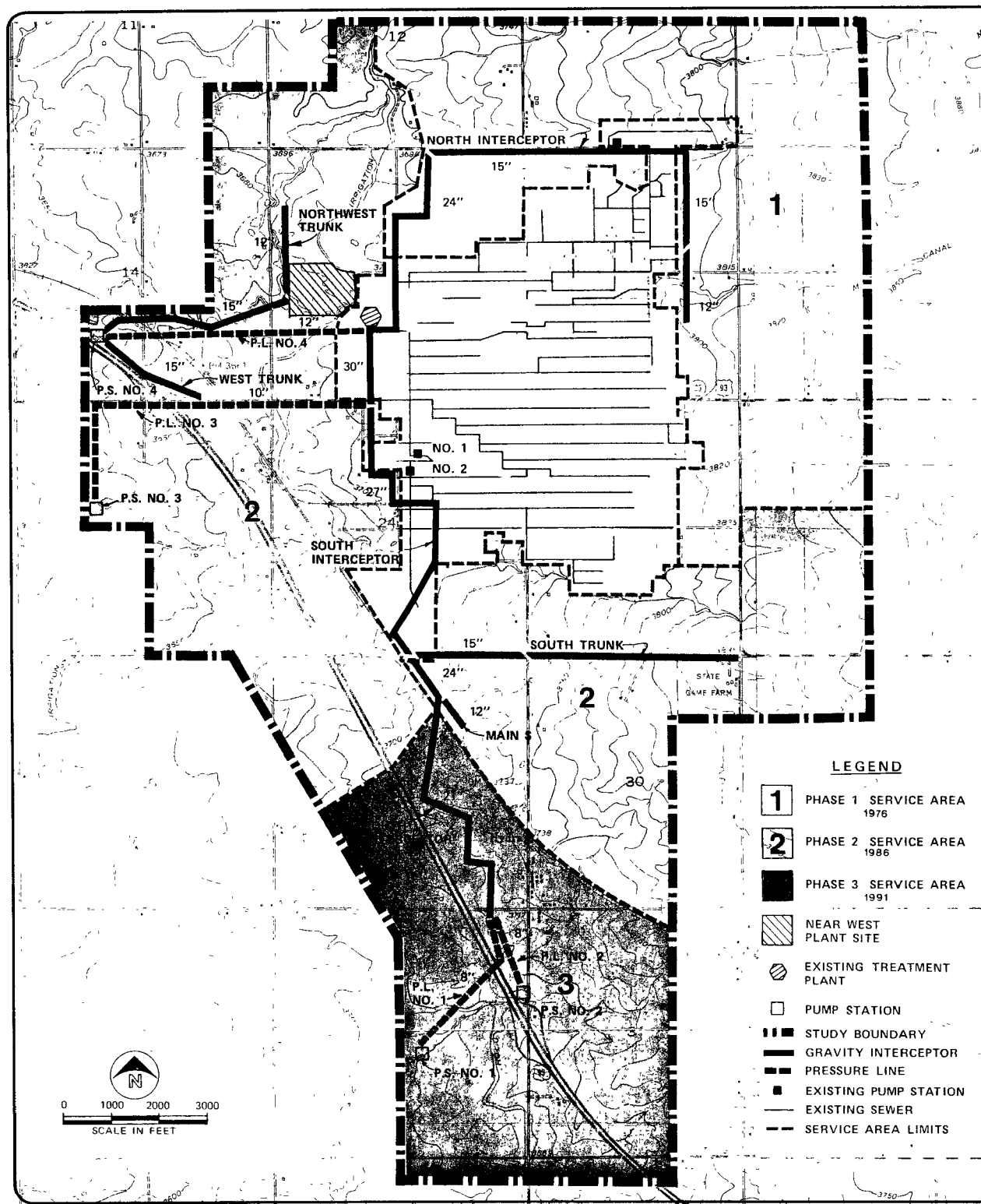


FIGURE II. 4  
INTERCEPTOR SYSTEM FOR  
NEAR-WEST PLANT SITE

SOURCE: REFERENCE 2



To provide sewer service to the western portion of the study area, two pump stations would be required. Pump Station No. 3 would pump flow collected by gravity flow from the portion of the service area west of the freeway, through Pressure Line No. 3, discharging into the South Interceptor. The estimated capacity of the pump station would be 935 gpm. Pump Station No. 4 would have an estimated capacity of 1,960 gpm. Wastewater collected by gravity flow from the portion of the Phase 4 area northeast of the freeway would be conducted by the Northwest Trunk and the West Trunk to the pump station. The wastewater flow would then be pumped through Pressure Line No. 4, discharging into the headworks at the treatment plant. These sewers would serve an area of 2,585 acres and are expected to be needed in 1986.

Phase 3 - The southern portion of the study area surrounding the south freeway interchange would be served under Phase 3. This service area is 1,000 acres.

Two pump stations would be required to provide service to the Phase 3 area. Pump Station No. 1 would pump a maximum estimated flow of 870 gpm from the area south of the freeway through Pressure Line No. 1, discharging into the South Interceptor. Pump Station No. 2 would have a capacity of approximately 590 gpm and would be located north of the freeway. Flow from this station would flow through Pressure Line No. 2 discharging into the South Interceptor. Flow would then travel by gravity through the South Interceptor to the treatment plant. Construction of Phase 3 facilities is planned after 1991.

Treatment Process - The treatment process and treatment plant design in Alternative 4 are identical to those proposed in Alternative 2. Alternative 4 would completely replace the existing facilities with a totally new facility at the Near-West Site. The discharge of treated effluent would be to the "J" Canal. As in Alternative 2, slight modifications in the chlorination facilities of the plant would be completed to prevent treated effluent concentrations of fecal coliforms exceeding 50 MPN per 100 milliliter sample, in compliance with State discharge standards, into irrigation canals.

The Site - The proposed 40-acre site is adjacent to the existing plant to the northwest across from the "J" Canal. This land is presently in alfalfa fields, and is basically level with a mild slope to the west. Immediately adjacent and to the east of the site is an old rock slaughterhouse. Three residents and the new Jerome radio station are to the west. To the southeast of this 40-acre parcel is a disturbed area used as a sand and gravel excavation site.

The soils of the area, as classified by the Soil Conservation Service<sup>(3)</sup>, are portino-type soils which are silty loam types of soils with a surface depth of 0 to 28 inches. The cultivability classification of these soils is Class 4.

The land use around the existing site is residential to the east and northeast and agricultural to the west, northwest and southwest. Industrial lands are to the south, and the County Fairgrounds are immediately adjacent to the treatment plant site to the southwest.

All other environmental baseline characteristics of the existing site are typical of the study area as described in the "Environmental Setting" portion of Section 1.

#### Alternative 5 - New Secondary Plant at Near-West Site with Discharge to Snake River

The service area is identical to Alternative 2. Construction phasing, treatment facilities, and site characteristics are as described in Alternative 4, with the exception of treated effluent. Under Alternative 5, a pump station and pressure line would be added. The 12-inch pressure line would be extended southwesterly from the existing treatment plant under the I-5 freeway and westerly to an outfall location on the Snake River (see Figure II.5). On the west side of the freeway and approximately two miles south of the existing treatment plant, it is anticipated that access for the pressure line into the Snake River Canyon could be provided along a road maintained by the Fish and Game Department. However, because this is not the recommended alternative, an application for right-of-way along this road has not been made to the Department of Fish and Game or any other agency.

#### Alternative 6 - Jerome-Twin Falls Regional Treatment Plant

The service area construction phasing and interceptor systems for Alternative 6 are identical to those proposed in Alternatives 2 and 3. This alternative involves construction of a pump station and pipeline to transport Jerome's untreated wastewater to the Twin Falls plant for treatment and subsequent discharge to the Snake River.

The pump station would be located in the area near the west boundary of the study area (in about the same area as the Far-West plant site proposed in Alternative 2), with the West Interceptor transporting the wastewater by gravity flow to the pump station (see Figure II.6). The wastewater would then be pumped through a 16-inch buried pressure pipeline to the Twin Falls Wastewater Treatment Plant. Approximately one acre of land would

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be needed for the pump station facility. The pipeline route would run from the pump station south along the Two-Mile Road (200 West) for about five miles, then east to Highway 93, then south and east along Highway 93 for about three miles, then south into the canyon, across the river, and into the treatment plant.

An expansion of the Twin Falls Wastewater Treatment Plant has recently been completed. Based on the design capacity of the plant, it appears that there would be adequate capacity to accept wastewater from Jerome. The addition of Jerome to the Twin Falls plant would reduce the reserve capacity and the design life of the expanded plant from the present 20 years to an estimated 10 years. As a result, further expansion of the Twin Falls Treatment Facilities would be necessary in about 10 years, when the treatment plant's design capacity would be reached.

#### Alternative 7 - Spray Irrigation

The service area, construction scheduling treatment process, and interceptor facilities for Alternative 7 are identical to those proposed in Alternative 2. A specific site for the spray-fields has not been selected at this time, and the descriptions and costs assume that one could be located within a three-mile radius from the Far-West Treatment Plant Site. The method of spray irrigation assumed to be used is a set spray irrigation system. A set spray irrigation system is a system with sprinkler irrigation heads and piping facilities permanently installed in a cropland or field. The effluents are then spray-irrigated on the field's crop cover.

A good crop cover is an essential part of any irrigation field. The crop cover protects the soil from compaction, can be a significant nutrient-removal system, and through crop harvesting serves to indefinitely prolong the life of a wastewater irrigation field. The crop cover increases the surface area available for rapid transpiration of the wastewater and provides additional storage capacity for the water. Finally, the root system controls erosion of the soil and aids in the prevention of excessive soil loss. Wastewater irrigation has the opposite objective usually obtained by agricultural irrigation. Wastewater irrigation attempts to use a maximum amount of water application without damaging the crop cover or reducing the capacity of the land to absorb water.

The total acreage needed for Alternative 7 is approximately 360 acres. This includes area for the treatment plant, spray site, 80 acres of storage pond, and buffer zones approximately 150 to 300 feet wide around the site to isolate the treatment and disposal facilities from the surrounding area.

The operation of the plant would be limited to the warmer spring, summer and fall months when maximum nutrient uptake by the cover crop occurs. There is approximately a five-month period when spray irrigation cannot occur, and the Idaho Department of Health and Welfare requires that the wastewater be stored. This requirement is what creates the need for 80 acres of storage ponds.

Alternative 8 - Upgrading of Existing Treatment Plant  
with Discharge to "J" Canal

The service area for Alternative 8 is identical to Alternative 2. Construction scheduling and interceptor facilities are as described in Alternative 4. Alternative 8 is an upgrade of the existing facilities on the existing site. The site description is the same as for the "No Action" Alternative, Alternative 1. Discharge would also be to the "J" Canal.

Three upgrade alternatives for the existing Jerome Wastewater Facilities Plant were considered as follows:

- 8a extended aeration
- 8b activated biological filter/activated sludge  
with anaerobic/aerobic digestion
- 8c activated biological filter/activated sludge with  
anaerobic digestion alternative

The existing site is identical to that site described in Alternative 1, the "No-Action" Alternative. The interceptor facilities serving the site and construction scheduling are the same as those described in Alternative 4 and all three alternatives would discharge to the "J" Canal. The first two alternatives would also require 28 acres of land at the Near-West Site (see Alternative 4 discussion). The extended aeration alternative was found to be cost-effective. Treatment process, unit layouts and costs were all included in the Jerome Wastewater Facilities Plan Addendum.<sup>(2)</sup>

These three alternatives vary slightly in their cost-effectiveness and environmental impacts. However, because the environmental differences are very small, the most cost-effective alternative is presented here. Thus, the costs and descriptions included in this Final EIS describe the most cost-effective of the three alternatives, Alternative 8a, the extended aeration alternative. If, as discussed in the Preface, wastewater contributions for the Ida-Gem plant are eliminated or reduced, the cost-effectiveness of these alternatives could also change. In fact, any of these three alternatives could potentially replace Alternative 4 as the most cost-effective alternative, depending on what flow is contributed to the plant.

The extended aeration alternative has the same service area as all the alternatives, has the same interceptor system as Alternative 4, is identical to that kind of treatment described in Alternatives 2, 3, 4, and 5, utilizes the existing site and an additional 28 acres of the Near-West Site and discharges to the "J" Canal.

#### COSTS AND RESOURCE COMMITMENTS

Detailed construction costs for the interceptors are listed in Tables II.1 and II.2. Treatment plant construction costs are shown in Tables II.3 through II.9. Table II.10 is a summary cost table, which includes interceptor, treatment plant outfall, operation and maintenance and total cost for each alternative. The alternatives ranked in order of least cost are as follows:

<u>Alternative</u>		<u>Present Worth Cost</u>	<u>Ranking</u>
#1	No Action	\$ 832,000	1
#4	Secondary, Near-West Site, Canal Discharge	5,539,000	2
#2	Secondary, Far-West Site, Canal Discharge	5,574,000	3
#8	Upgrading of Existing Plant	5,974,000	4
#6	Jerome-Twin Falls Regional	6,585,000	5
#3	Secondary, Far-West Site, Snake River Discharge	6,766,000	6
#5	Secondary, Near-West Site, Snake River Discharge	6,992,000	7
#7	Spray Irrigation	8,508,000	8

The recommended method of financing for 86% of the construction costs are through State and Federal grants.<sup>(2)</sup> User charges would finance the remaining construction, operation and maintenance costs. A typical present user fee for the City of Jerome is approximately \$2.50 per month. The user charges for Alternative 3 are estimated at \$5.60 per month.<sup>(1)</sup> This constitutes an annual rate, present worth cost ratio of 1:1,184,785. Applying this ratio to other alternatives, the approximate user costs would be as follows:

TABLE II.1  
INTERCEPTOR SYSTEM<sup>(a)</sup>  
CAPITAL COST ESTIMATE  
ALTERNATIVES 2, 3, 6 and 7  
(FAR-WEST SITE)

<u>Interceptors</u> <sup>(b)</sup>	<u>1976</u> <u>Phase 1</u>	<u>1986</u> <u>Phase 2</u>	<u>1991</u> <u>Phase 3</u>
West Interceptor .....	\$ 300,000		
North Interceptor .....	449,500		
West Trunk .....	91,000		
Southwest Interceptor .....		\$327,000	
South Trunk .....		146,500	
Main S .....		40,500	
South Interceptor .....			\$267,000
Pressure Line No. 1 .....			69,000
Pressure Line No. 2 .....			15,500
<u>Pump Stations</u>			
Pump Station No. 1 .....			75,000
Pump Station No. 2 .....			<u>55,000</u>
Subtotal .....	\$ 840,500	\$514,000	\$481,500
Contingencies, Legal, Administration and Engineering (35%) .....	<u>294,000</u>	<u>180,000</u>	<u>168,500</u>
Total Capital Cost .....	\$1,134,500	\$694,000	\$650,000
Total Interceptor Cost = \$2,478,500			
Present Worth <sup>(c)</sup> = \$1,723,000			

<sup>(a)</sup> ENR Construction Cost Index = 2400.

<sup>(b)</sup> Capital costs for interceptors include a 35 percent allowance for rock excavation.

<sup>(c)</sup> Assuming an interest rate of 7 percent, and implementation of Phase 1 in 1976, Phase 2 in 1986 and Phase 3 in 1991 (no inflation allowance is included).



TABLE II.2  
INTERCEPTOR SYSTEM<sup>(a)</sup>  
CAPITAL COST ESTIMATE  
ALTERNATIVES 4, 5 AND 8  
(NEAR-WEST AND EXISTING TREATMENT PLANT SITE)

	<u>1976</u> <u>Phase 1</u>	<u>1986</u> <u>Phase 2</u>	<u>1991</u> <u>Phase 3</u>
<u>Interceptors</u> <sup>(b)</sup>			
North Interceptor .....	\$449,500		
South Interceptor .....	180,000	\$ 233,000	
South Trunk .....		158,000	
Main S .....		19,500	
South Interceptor .....			\$245,000
Pressure Line No. 1 .....			82,000
Pressure Line No. 2 .....			31,500
Northwest Trunk .....			65,000
West Trunk .....		65,000	
Pressure Line No. 3 .....		213,000	
Pressure Line No. 4 .....		148,000	
<u>Pump Stations</u>			
Pump Station No. 1 .....			75,000
Pump Station No. 2 .....			65,000
Pump Station No. 3 .....		75,000	
Pump Station No. 4 .....		100,000	
Subtotal .....	\$658,500	\$1,011,000	\$563,500
Contingencies, Legal, Administration and Engineering (35%) .....	<u>220,500</u>	<u>354,000</u>	<u>197,500</u>
Total Capital Cost .....	\$889,000	\$1,365,500	\$761,000
Total Interceptor Cost = \$3,015,500			
Present Worth <sup>(c)</sup> = \$1,854,000			

(a) ENR Construction Cost Index = 2400.

(b) Capital costs for interceptors include a 35 percent allowance for rock excavation.

(c) Assuming an interest rate of 7 percent and implementation of Phase 1 in 1976, Phase 2 in 1986, and Phase 3 in 1991. (No inflation allowance included.)

TABLE II.3  
CAPITAL COST ESTIMATE <sup>(a)</sup>  
ALTERNATIVE NO. 2  
SECONDARY TREATMENT - FAR-WEST SITE, CANAL DISCHARGE

Item		
Bond and Insurance .....	\$	24,000
Move In and Temporary Facilities .....		30,000
Influent Pump Station .....		194,000
Screening and Shredding .....		44,500
Aeration Basins .....		320,000
Secondary Clarifiers .....		199,500
Flow Measurement .....		20,500
Chlorine Contact Channels .....		96,000
Sludge Pumping Building .....		137,500
Humus Ponds .....		132,500
Aerobic Digester .....		199,000
Chlorine Building .....		89,500
Administration Building .....		100,000
Access Road .....		15,500
Electrical .....		170,000
Yard Work .....		403,500
Miscellaneous .....		<u>250,500</u>
Subtotal .....		\$2,426,500
Plus 35 Percent(b) .....		<u>849,500</u>
Subtotal .....		\$3,276,000
Land (40 Acres) .....		80,000
Convert existing site to park .....		<u>46,000</u>
Treatment Subtotal .....		\$3,402,000
Outfall .....	\$	92,500
Plus 35 Percent(b) .....		<u>32,500</u>
Outfall Subtotal .....	\$	125,000
West Interceptor .....	\$	300,000
Plus 35 Percent(b) .....		<u>105,000</u>
West Interceptor Subtotal .....	\$	<u>405,000</u>
ESTIMATED TOTAL CAPITAL COST .....		\$3,932,000

<sup>(a)</sup> Estimated ENR Construction Cost Index = 2400.

<sup>(b)</sup> Contingencies, Legal, Administration and Engineering.

TABLE II.4  
CAPITAL COST ESTIMATE<sup>(a)</sup>  
ALTERNATIVE NO. 3  
SECONDARY TREATMENT - FAR-WEST SITE, SNAKE RIVER DISCHARGE

Item		
Bond and Insurance .....	\$ 24,000	
Move In and Temporary Facilities .....	30,000	
Influent Pump Station .....	194,000	
Screening and Shredding .....	44,500	
Aeration Basins .....	320,000	
Secondary Clarifiers .....	199,500	
Flow Measurement .....	20,500	
Chlorine Contact Channels .....	96,000	
Effluent Pump Station .....	162,000	
Sludge Pumping Building .....	137,500	
Humus Ponds .....	132,500	
Aerobic Digester .....	199,000	
Chlorine Building .....	89,500	
Administration Building .....	100,000	
Access Road .....	15,500	
Electrical .....	170,000	
Yard Work .....	403,500	
Miscellaneous .....	<u>249,000</u>	
Subtotal .....	\$2,587,000	
Plus 35 Percent(b) .....	<u>905,000</u>	
Subtotal .....	\$3,492,000	
Land (40 Acres) .....	<u>80,000</u>	
Treatment Subtotal .....		\$3,572,000
Outfall .....	\$ 874,000	
Plus 35 Percent(b) .....	<u>306,000</u>	
Outfall Subtotal .....		\$1,180,000
West Interceptor .....	\$ 300,000	
Plus 35 Percent(b) .....	<u>105,000</u>	
West Interceptor Subtotal .....		\$ 405,000
ESTIMATED TOTAL CAPITAL COST .....		\$5,157,000

(a) Estimated ENR Construction Cost Index = 2400.

(b) Contingencies, Legal, Administration and Engineering.

TABLE II.5  
CAPITAL COST ESTIMATE<sup>(a)</sup>  
ALTERNATIVE NO. 4  
SECONDARY TREATMENT - NEAR-WEST SITE, CANAL DISCHARGE

Item		
Bond and Insurance .....	\$	24,000
Move In and Temporary Facilities .....		30,000
Influent Pump Station .....		194,000
Screening and Shredding .....		44,500
Aeration Basins .....		320,000
Secondary Clarifiers .....		199,500
Flow Measurement .....		20,500
Chlorine Contact Channels .....		96,000
Sludge Pumping Building .....		137,500
Humus Ponds .....		132,500
Aerobic Digester .....		199,000
Chlorine Building .....		89,500
Administration Building .....		100,000
Access Road .....		15,500
Electrical .....		170,000
Yard Work .....		436,500
Miscellaneous .....		<u>250,500</u>
Subtotal .....	\$2,459,500	
Plus 35 Percent(b) .....	<u>860,500</u>	
Subtotal .....	\$3,320,000	
Land (40 Acres) .....	160,000	
Convert existing site to park .....	<u>46,000</u>	
Treatment Subtotal .....		\$3,320,000
Outfall .....	\$	20,000
Plus 35 Percent(b) .....	<u>7,000</u>	
Outfall Subtotal .....		\$ <u>27,000</u>
ESTIMATED TOTAL CAPITAL COST .....		\$3,553,000

(a) Estimated ENR Construction Cost Index = 2400.

(b) Contingencies, Legal, Administration and Engineering.

TABLE II.6  
CAPITAL COST ESTIMATE <sup>(a)</sup>  
ALTERNATIVE NO. 5  
SECONDARY TREATMENT - NEAR-WEST SITE SNAKE RIVER DISCHARGE

Item		
Bond and Insurance .....	\$	24,000
Move In and Temporary Facilities .....		30,000
Influent Pump Station .....		194,000
Screening and Shredding .....		44,500
Aeration Basins .....		320,000
Secondary Clarifiers .....		199,500
Flow Measurement .....		20,500
Chlorine Contact Channels .....		96,000
Sludge Pumping Building .....		137,500
Humus Ponds .....		132,500
Aerobic Digester .....		199,000
Chlorine Building .....		89,500
Administration Building .....		100,000
Access Road .....		15,500
Electrical .....		170,000
Yard Work .....		436,500
Miscellaneous .....		<u>250,000</u>
Subtotal .....	\$2,454,500	
Plus 35 Percent(b) .....	<u>860,500</u>	
Subtotal .....	\$3,320,000	
Land (40 Acres) .....	160,000	
Convert existing site to park .....	<u>46,000</u>	
Treatment Subtotal .....		\$3,320,000
Outfall .....	\$1,055,000	
Plus 35 Percent(b) .....	<u>369,000</u>	
Outfall Subtotal .....		<u>\$1,424,000</u>
ESTIMATED TOTAL CAPITAL COST .....		\$4,744,000

(a) Estimated ENR Construction Cost Index = 2400.

(b) Contingencies, Legal, Administration and Engineering.

TABLE II.7  
COST ESTIMATE  
ALTERNATIVE NO. 6  
TREATMENT AT TWIN FALLS

<u>Capital Costs</u>	<u>Total</u>
Treatment Cost	\$1,453,000
Pump Station	378,000
Pipeline to Twin Falls	3,190,000
West Interceptor	<u>405,000</u>
Total .....	\$5,426,000

TABLE II.8  
COST ESTIMATE  
ALTERNATIVE NO. 7  
TREATMENT - STORAGE - SPRAY IRRIGATION

<u>Capital Costs</u>	<u>Total</u>
Treatment Plant	\$3,618,000
Pipeline(a)	447,000
Storage Lagoons	1,390,000
Spray Irrigation	1,678,000
West Interceptor	<u>405,000</u>
Total .....	\$6,686,000

(a) Assumes 3 mile pipeline to storage  
and spray site.

TABLE II.9  
CAPITAL COST ESTIMATE  
ALTERNATIVE NO. <sup>8</sup><sub>(a)</sub>  
UPGRADE AT EXISTING PLANT SITE, CANAL DISCHARGE

Item	Cost	
Bond and Insurance .....	\$ 24,000	
Move In and Temporary Facilities .....	230,000	
Influent Pump Station .....	194,000	
Screening and Shredding Structure .....	44,500	
Aeration Basins .....	320,000	
Secondary Clarifiers .....	199,500	
Flow Measurement .....	20,500	
Chlorine Contact Channels .....	96,000	
Pump Station at Humus Ponds .....	30,000	
Sludge Pumping Building .....	137,500	
Humus Ponds .....	132,500	
Aerobic Digester .....	199,000	
Chlorine Building .....	89,500	
Administration Building .....	100,000	
Access Road .....	15,500	
Electrical .....	170,000	
Yard Work .....	513,500	
Miscellaneous .....	<u>275,000</u>	
Subtotal .....	\$2,791,000	
Plus 35 Percent <sup>(b)</sup> .....	<u>977,000</u>	
Treatment Subtotal .....		\$3,768,000
Land (28 Acres) .....		100,000
Outfall .....	\$ 20,000	
Plus 35 Percent <sup>(b)</sup> .....	<u>7,000</u>	
Outfall Subtotal .....		\$ <u>27,000</u>
ESTIMATED TOTAL PHASE 1 CAPITAL COST .....		\$3,895,000

<sup>(a)</sup> Estimated ENR Construction Cost Index = 2,400.

<sup>(b)</sup> Contingencies, Legal, Administration, and Engineering.

TABLE II.10  
COST SUMMARY<sup>(a)</sup>

Alternative	Interceptor(b)(h)	Treatment(c) Plant	Costs(\$) Outfall	Operation and Maintenance(b)(h) (O&M)	Total Cost	Cost-Effective Ranking
<u>Alternative No. 1</u>						
No Action .....	None	None	None	T=\$ 832,000	\$ 832,000	NA <sup>(g)</sup>
<u>Alternative No. 2</u>						
Secondary at Far-West Site Discharge to "N-3" Canal .	\$1,723,000	\$2,296,000	\$ 125,000	\$1,305,000	5,574,000	2
<u>Alternative No. 3</u>						
Secondary at Far-West Site Discharge to Snake River	1,723,000	2,437,000	1,180,000	1,294,000	6,634,000	5
<u>Alternative No. 4</u>						
Secondary at Near-West Site Discharge to "J" Canal ...	1,859,000	2,348,000	27,000	1,305,000	5,539,000	1
<u>Alternative No. 5</u>						
Secondary at Near-West Site Snake River Discharge ....	1,859,000	2,348,000	1,424,000	1,361,000	6,992,000	6
<u>Alternative No. 6</u>						
Jerome-Twin Falls Regional	1,723,000	229,000 <sup>(e)</sup>	3,568,000	1,066,000	6,585,000	4
<u>Alternative No. 7</u>						
Spray Irrigation .....	1,723,000	2,218,000 <sup>(f)</sup>	2,875,000	1,692,000	8,508,000	7
<u>Alternative No. 8</u>						
Upgrade at Existing Plant Site .....	1,859,000	2,691,000	27,000	1,305,000	5,974,000	3

(a) Source: Reference 1.

(b) In present worth value for 20-year planning period as 1976 dollars.

(c) I=includes credit for salvage value.

(d) Ed Evans, Public Works Director, Jerome, Idaho, June 9, 1976, reported as annual cost of \$73,257.

(e) Pump Station and pipeline to Twin Falls Treatment Plant.

(f) Outfall, spray irrigation equipment and storage lagoons.

(g) To be cost-effective the alternative must be legal. This Alternative violates the Federal and State Water Quality Laws.

(h) Costs conform to EPA's mandatory 6-1/8% discount rate for present worth costs.



<u>Alternative</u>		<u>Monthly Rate</u>	<u>Least Cost Ranking</u>
#1	No Action	\$ 2.50	1
#2	Secondary, Far-west site, Canal Discharge	4.70	2
#3	Secondary, Far-West, Snake River	5.60	6
#4	Secondary, Near-West Site, Canal Discharge	4.70	2
#5	Secondary, Near-West Site, Snake River Discharge	5.90	7
#6	Jerome-Twin Falls Regional	5.55	5
#7	Spray Irrigation	7.15	8
#8	Upgrading of Existing Plant	5.00	4

The resources that will be committed to the construction and operation of the alternatives include land, electric power, fuel, oil, construction materials and manpower. Utilizing current estimating techniques, available literature and data sources, only electric power, fuel oil and manpower resources for operation and maintenance and land resources can be estimated individually. Table II.11 shows these resource commitments.

TABLE II.11  
RESOURCE COMMITMENTS

<u>Alternative</u>	<u>Land (Acres)</u>	<u>Total Operation and Maintenance for Project Life</u>				<u>Ranking</u>
		<u>Labor (Man Yrs)</u>	<u>Electricity (MWh)</u>	<u>Fuel Oil (Gallons)</u>	<u>Natural Gas (100 Cubic Feet)</u>	
1	10	60	23,000	NA <sup>(a)</sup>	2,270	2
2	40	80	57,500	80,000	NA <sup>(a)</sup>	4
3	40	80	63,000	80,000	NA	6
4	40	80	57,500	80,000	NA	4
5	40	80	63,500	80,000	NA	7
6	1	30	37,500	NA	NA	1
7	360	120	73,000	107,000	NA	8
8	38	72	57,500	80,000	NA	3

<sup>(a)</sup> NA = Not Applicable.

## SECTION II

## FOOTNOTES

- (1) CH<sub>2</sub>M/Hill, Inc., Wastewater Facilities Plan for Jerome, Idaho, Boise, Idaho, 1975.
- (2) CH<sub>2</sub>M/Hill, Inc., Addendum to Wastewater Facilities Plan, City of Jerome, Idaho, Boise, Idaho, 1976.
- (3) U.S. Department of Agriculture, Soil Conservation Service, Jerome Area Interim Soil Survey Report, Jerome, Idaho, 1973.



### III. ENVIRONMENTAL IMPACTS OF ALTERNATIVES





## SECTION III

### ENVIRONMENTAL IMPACTS OF ALTERNATIVES

#### IMPACTS COMMON TO ALL ALTERNATIVES

As the following discussion will illustrate, neither primary nor secondary impacts of the proposed eight alternatives will vary significantly in some categories. This is true for aesthetics, air quality, population and economic growth, historic, architectural and archaeological resources, redevelopment and construction in built-up areas, taxes, personal incomes, and public utilities (other than sewage facilities). The major potential impacts of all the alternatives upon land uses are basically similar and are described in this section. There is, however, some variability among the impacts upon land use, especially in the area of mitigation. For this reason, land use will also be discussed under each alternative.

Primary and secondary impacts are discussed in this section. Impacts are changes, either beneficial or adverse, imposed upon a component of the physical or social environment. A primary impact is directly imposed, while a secondary impact is a change brought about or caused by one or more primary impacts.

#### PRIMARY IMPACTS

##### Air Quality

Impacts - Because no incineration of sludges is to occur under any of the alternatives, the major types of potential air pollutants are: particulates during the construction of the facilities; off gases; increases in pollutants caused by switching from natural gas to fuel oil consumption at the plant; and vehicle emissions from sludge transport and personnel commuting.

Construction activities pose the greatest potential threat of air quality impacts. In a study conducted by the Environmental Protection Agency<sup>(1)</sup> construction activities in the Twin Falls area were found to cause violations of the primary 24-hour standard for particulates of 260 micrograms per cubic meter. Types of construction most typically causing the standards to be violated were street and road construction, often involving earth moving, grading, and other activities which disturb the soil. Because it will be necessary to conduct similar activities during the construction of treatment facilities, ambient air standards for particulates may be violated intermittently over a period of weeks or months. However, since this is not a permanent condition,

no long-term or highly degradative effects are expected other than nuisances caused by dust. It should be noted that the "No Action" Alternative would not have any impacts associated with particulate generation caused by construction.

Potential gas emissions from wastewater treatment works include chlorine, methane, ammonia, hydrogen sulfide, carbon monoxide, and oxides of nitrogen sulfur and phosphorus<sup>(2)</sup>. However, such gases are usually a greater potential hazard within the structure than in areas outside of it. For this reason, the design criteria expected to be employed during the detailed specifications and design of any treatment plant alternative (Step II in the EPA grant process), are expected to make any potential degradation of air quality highly improbable. Additionally, operation of the existing plant has not been known to emit any significant concentrations of these compounds, except to produce odors. Thus it is expected that continuance of the existing plant has a very low probability of emitting significant concentrations of these gases. Odors are discussed in more detail under "Odor" impacts later in this section.

The utilization of fuel oil and discontinuance of natural gas will increase air pollution loadings as follows:

Particulates .....	0.5 lbs/day
Sulfur Oxides .....	2.3 lbs/day
Carbon Monoxide.....	1.2 lbs/day
Hydro Carbons .....	0.8 lbs/day
Nitrous Oxides .....	0.6 lbs/day

These figures are for Alternative 7, the alternative which utilizes more fuel than any other. Thus, this is equal to the maximum amount of pollution expected from any of the alternatives. When the large mixing area and good mixing conditions<sup>(1)(2)</sup> available in the basin are considered, these low-emission factors seem unlikely to cause significant air quality degradation. Therefore, no alternatives are expected to have significant impact upon the air quality because of use of fuel oils.

Because the emission loadings caused by the increase of vehicular traffic from additional sludge loadings and one to two man-trips to the plant for operation are even less than those caused by the consumption of fuel oils, no impact is expected from increased vehicular traffic.

Remedial Protective and Mitigative Measures - Particulate matter, mostly in the form of dust, generated during grading and earth moving is the major, primary adverse impact. The basic means of mitigation is efficient application of construction



methods to minimize the amount of land disturbed, and to utilize a mobile sprayer to spray water on excavation sites to control dust generation.

### Land Use

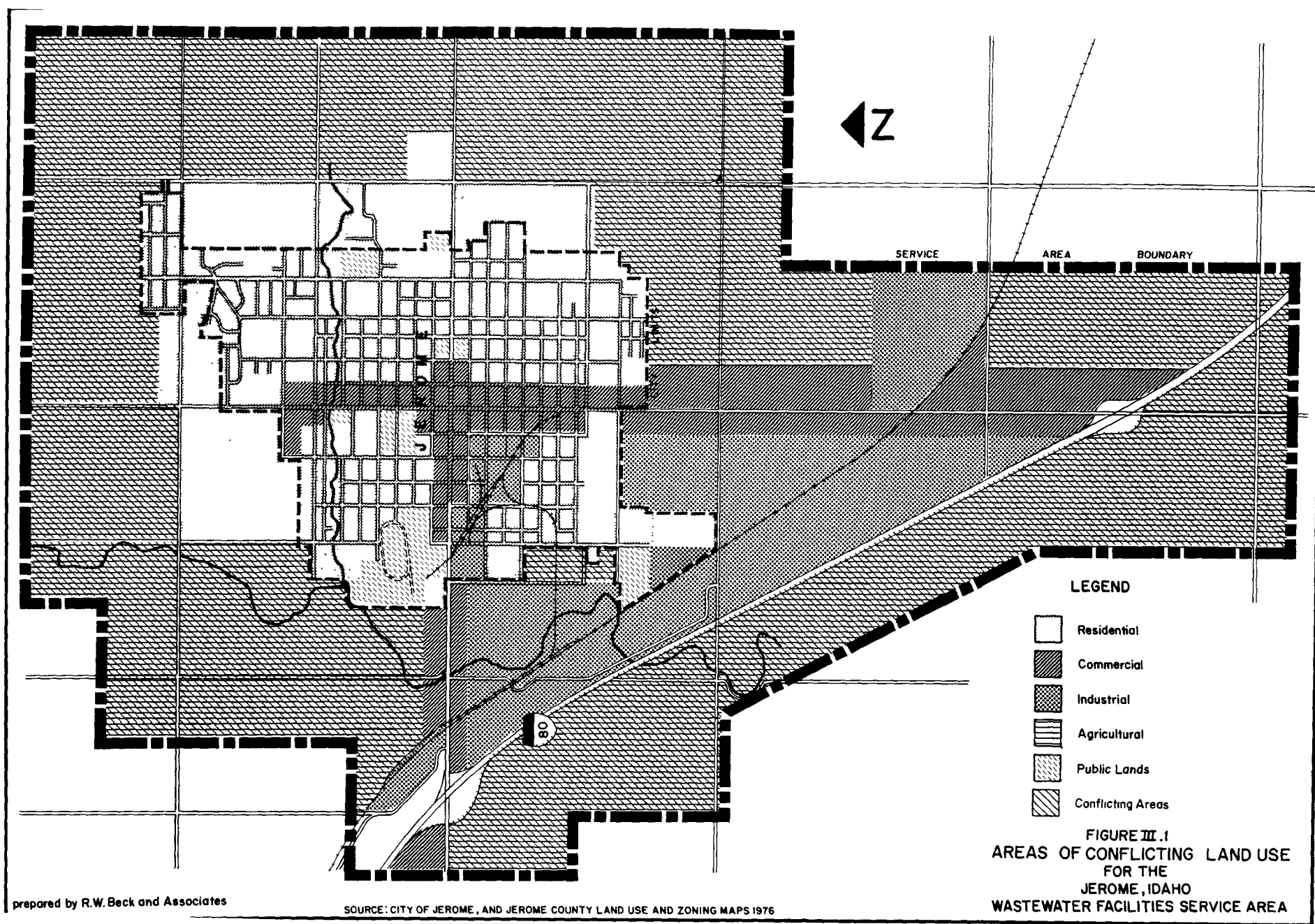
Impacts - The proposed service area conflicts (in the County areas) with the existing Jerome County Comprehensive Zoning Plan.<sup>(3)</sup> This conflict is caused by the extension of the service area boundary and proposed construction of interceptors to land presently zoned as agricultural. Agricultural lands do not create enough demand to cost-effectively sewer these areas. Additionally, the construction of sewer facilities in this area could create a land use change, resulting in more dense or more urban use. Figure III.1 illustrates those portions of the service area that are in conflict with the County's Comprehensive Zoning Plan and Regulations.

EPA cannot participate in funding an alternative not in agreement with a duly-adopted plan. However, Jerome County is presently in the process of updating the existing Comprehensive Zoning Plan and Regulations. Thus, the land use conflicts described above are expected to be resolved prior to the estimated start-up date of February 1978 for construction of the treatment plant. A letter from the Jerome County Planning and Zoning Administrator describing the current land use planning status, as it affects the facilities plan, is presented in Appendix A.

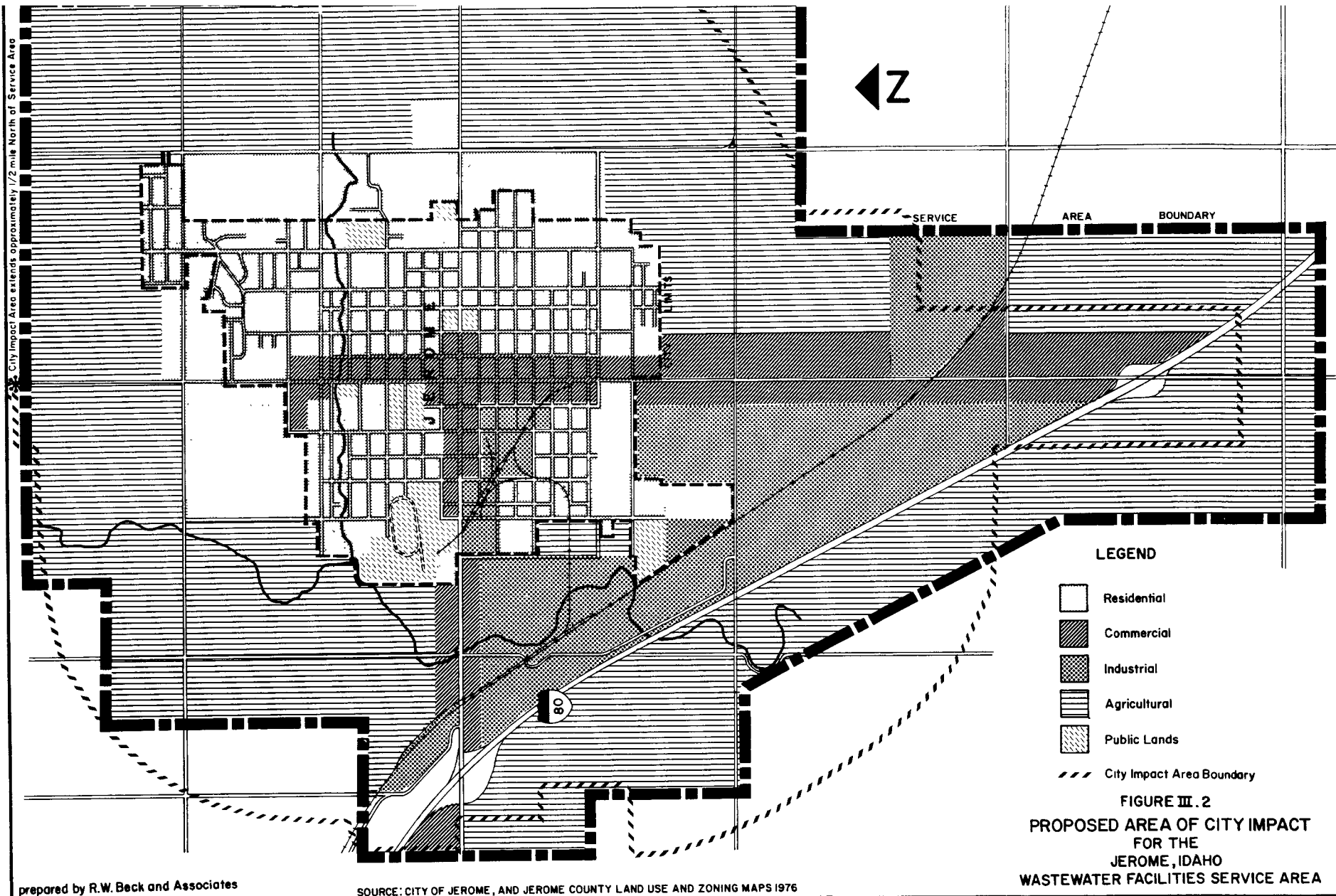
Both the Far-West and Near-West Sites are County land zoned agricultural. A review of the County's Comprehensive Zoning Plan and Regulations shows that a treatment plant does not fit any of the definitions of uses allowed in agricultural zones. However, the County updated Comprehensive Zoning Plan is expected to contain provisions for allowing wastewater treatment plants in the County by conditional use permit. The permit would require a public hearing before approval (see Appendix A).

The City has contacted the County to begin negotiating the establishment of a City Impact Zone. A City Impact Zone is authorized under the State Land Use Planning Bill (Chapter 65 of the Idaho Code Section 67-6526) and is basically an area outside of the City limits for which the City has control over land use planning and other development considerations. The proposed Impact Zone would increase the City's planning, zoning and building code enforcement power one mile outside the existing City limits, plus one-quarter mile on either side of Highway 79 from the City limits to one and one-half mile south of the I-90 interchange.<sup>(4)</sup>









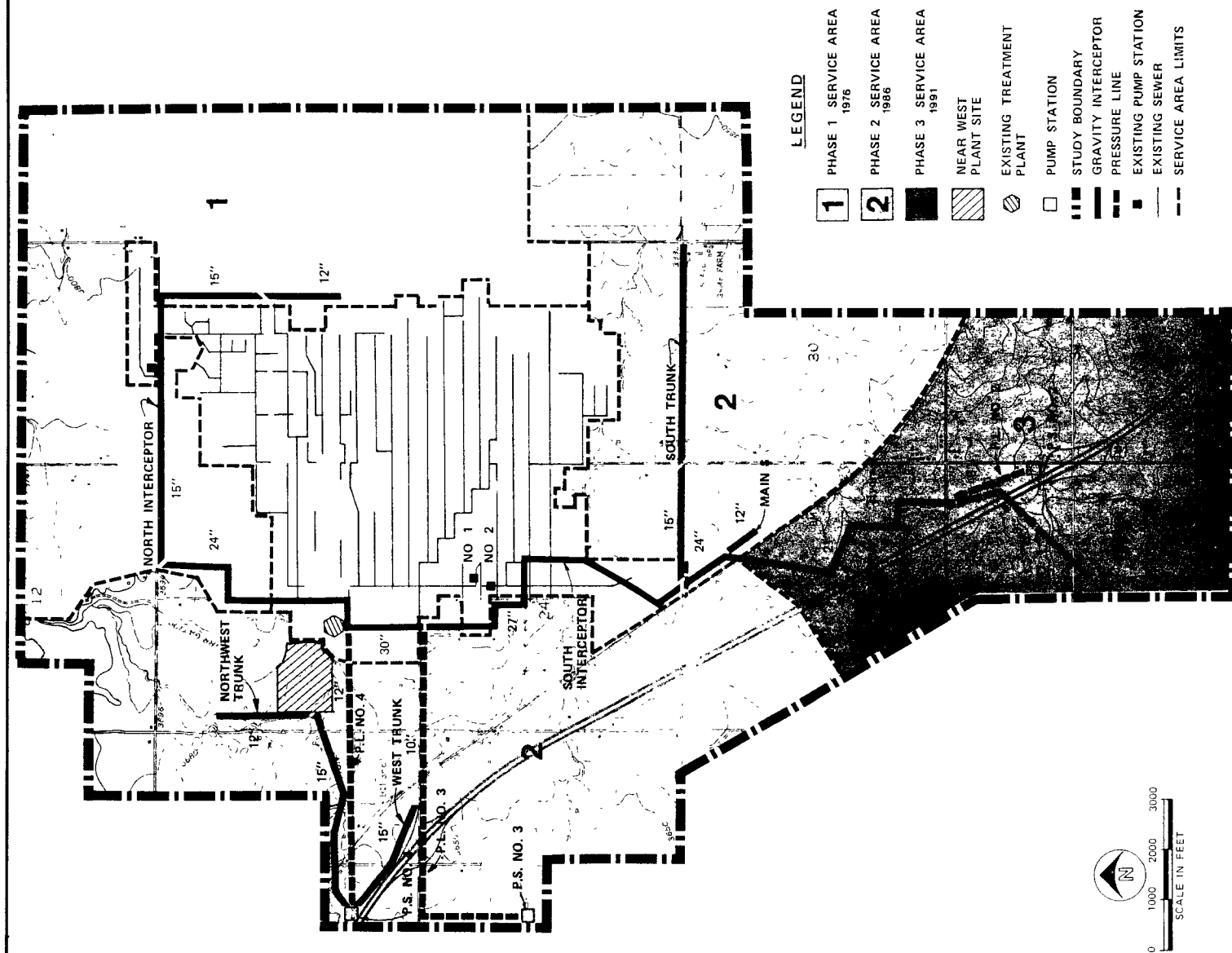


FIGURE IV.1  
PROPOSED  
WASTEWATER FACILITIES PLAN

SOURCE. REFERENCE 13

If the Impact Zone as proposed (see Figure III.2) is approved, the proposed facilities service area would be in conformance with the County's land use planning policies. The City would have all zoning, building permit and subdivision development authority, including the ability to make subdivision specifications meet the City's building ordinance. Since both sites would be located within this impact area, it is expected that either treatment plant location would then be acceptable.

It is important to note, however, that the proposed Impact Zone is, at this time, only a proposal and not an adopted part of the County's Comprehensive Zoning Plan. To date, the Facilities Plan is in conflict with current adopted local land use policies and acceptance of the proposal appears doubtful (see Appendix A).

There appear to be potential adverse land use impacts caused by changes in population densities. The existing service area of approximately 1,170 acres serves a population of approximately 5,625 persons and associated industry, commercial establishments and public services. The proposed service area would include nearly 5,030 acres, with a population of 12,000 persons by 1995, as well as associated industry, commercial and governmental services. Based upon this information, the existing population density per acre of the service area is 4.8 persons. The proposed service area would have an approximate density of only 2.4 persons per acre (approximately half of the existing density). It appears that a service area of only 2,500 acres would maintain population densities at their present levels.

It may be advantageous to maintain densities at present levels or above 4.8 persons per acre. It has been the experience of some study team members that some areas of the country have not required sewer service until densities exceeded 9 persons per acre. Low densities such as 2.4 persons per acre may not only cause diseconomies in the construction, operation and maintenance of facilities, but they may also inhibit the orderly and efficient implementation of land use planning goals and objectives.

Based on the agricultural land planning done by the Idaho Department of Water Resources in their State Water Plan<sup>(5)</sup>, there appear to be no significant adverse impacts caused by the loss of agricultural lands in the Jerome area. The report states that it will be necessary to develop approximately 1,200,000 acres of new agricultural land in the State of Idaho by 2020, allowing for loss of agricultural lands caused by expected increases in urbanization. The report states that there are approximately 7,400,000 acres of irrigable lands and recommends methods to develop the 1,200,000 acres of land necessary by the year 2020.

Based on the findings of this report, there appear to be no significant adverse impacts associated with the loss of agricultural land, assuming that more agricultural acres are developed and that land uses with greater economic productivity such as residential, commercial and industrial replace those acres lost to urbanization.

Because of the apparent conflicts with local planning and the threat of decreased population densities apparent in the existing Facility Plan, it must be concluded that serious potential impacts upon land use exist with all of the proposed alternatives except the "No Action" Alternative which would maintain the present service area at its present size. Other impacts and concerns such as mitigative measures through phasing of facilities construction, are discussed for each alternative later in this section.

Remedial Protective and Mitigative Measures - Current planning programs in the Greater Jerome Area provide an excellent forum for mitigating the potential adverse land use impacts of the proposed alternatives. It is suggested that during the planning process the present service area be reassessed in terms of population densities and mitigating sprawl as well as indiscriminate spotty development.

In addition, the proposed Impact Zone criteria and the policies concerned with land use controls in the area of the Impact Zone should be addressed by both the County and the City of Jerome. In so doing, one suggested alternative that may be reviewed is that the proposed service area be reduced within the proposed Impact Zone, to control densities and spotty development.

Once these policies and service area determinations have been made by the City and County planning and elected officials, the service area can be specifically defined in terms of existing policies, and then construction time-phasing can also be finalized. As discussed in the "Alternative Impact" sections, the major form of mitigation is time phasing of interceptor facilities, with distinct differences between the Far-West Site and the Near-West Site.

#### Historic, Architectural and Archaeological Resources

No historic, architectural or archaeological sites described in the "Environmental Setting" section are known to be located in any of the proposed rights-of-way or on any of the proposed sites. The Environmental Protection Agency (EPA) has consulted with the Idaho State Historic Preservation Officer to establish the need for archaeological surveys before constructing any of the proposed alternatives. A letter from the Idaho State Historical Preservation Officer is included in Appendix A of this EIS. The results of these consultations have concluded that an archeological survey would not be necessary for Alternatives 1, 2, 4, and 8.



While there has been some concern of potential impacts to rock houses and other unclassified structures in the general area by local citizens, none of these structures are close enough to either site to be impacted by the construction, operation or maintenance of a treatment plant. The closest rock structure to any of the sites is an abandoned slaughterhouse, which is presently about 250 yards from the existing treatment plant site. No data or observations could be located that substantiate any type of impact upon this structure caused by the existing treatment plant. For these reasons, there are no anticipated impacts upon known historic, architectural and archaeological sites.

### Taxes

The potential primary impacts to tax structures and tax bases are increased taxes needed to finance construction and operation of facilities. Because the proposed facilities are to be financed through user charges, there are no potential adverse impacts upon the taxes of the area.

Another means by which tax bases and taxes can be impacted by facilities plans is by conversion of taxable land to non-taxable land through public acquisition. Both of the proposed new sites are located outside of the City limits on County land. The potential losses of 28 to 50 acres of taxable land, when compared to 215,133 acres, does not appear to have a significant financial impact upon the overall tax base of the County. For the reasons stated above, none of the alternatives are expected to have a significant adverse financial impact upon the taxes and tax base of the local area.

### Unique Land Features

Unique land features are discussed under Alternatives 3, 5 and 6, because these are the only alternatives involving a unique feature that may be impacted by current proposals.

### Personal Incomes

Impacts - The range of annual user service charges for Jerome's proposed facilities fall within the range of typical residential sewer service charges (\$30 to \$84 a year) as shown in the City's Wastewater Facility Plan. Because these charges fall into the typical range, and because sewer service is now required in most urban areas by law and is an expected expense, a sewer service charge of \$2.50 to \$7.50 per month in the Jerome area is not expected to have significant adverse impacts upon personal incomes.

One exception to the above statement is for persons on fixed incomes, such as retired persons. There is a potential for these persons to be adversely impacted by increases in user charges. The degree of impact is directly related to the cost increase of the service. Alternative 1 which has no increased cost (in terms of present worth) would have the least impact; spray irrigation carries the highest expected increase in cost and would have the most adverse impact.

Remedial Protective and Mitigative Measures - The potential adverse impacts upon fixed incomes described above can be mitigated through special provisions incorporated into the fee schedules for retired citizens and other individuals on fixed incomes. To accomplish this, an analysis of their purchasing power, and the affect of rate increases on purchasing power would have to be completed in detail, so that effective rates for fixed income persons could be established. This task is outside of the scope of the EIS.

#### Public Utilities

The only existing public facilities to be impacted by any of the proposed alternatives are solid waste facilities. As described earlier in the "Environmental Setting" portion of this report, solid waste is collected and transported by a private contractor to a disposal site owned and operated by the private contractor. It is anticipated by the City and its contractor that there is sufficient capacity in the site to handle the projected sludge waste loads through the planning period. The Idaho Department of Health and Welfare reported no potential adverse impacts on the operation of the site.<sup>(6)</sup> The small amounts of water, electricity and fuel oil consumed by the alternatives (see Table II.11) are not expected to significantly impact the availability of these resources.

One private utility, the Northside Canal Company, which operates and maintains the irrigation supply system, may be impacted by some of the proposed alternatives. These impacts are described in the "Water Resources" section of the alternative impact descriptions.

### SECONDARY IMPACTS

#### Population and Economic Growth

Population and economic growth over the past four years in the Greater Jerome Area has been dramatic. New industries have located in the area, payrolls and production have increased, and the population has grown at an average annual rate of approximately 8.5%. During this period, the existing Jerome facility has failed to operate effectively to treat the City's waste. Some of

the equipment and major treatment units of the treatment plant are over 20 years old and are in fair to poor physical condition. It has been difficult for the plant to perform adequately, and there have been many operational problems.

The City as a whole has been aware of the malfunctioning of the plant, primarily due to odors and discharges to the canal of the area. Growth has continued despite sewerage inefficiencies because (1) industries interested in the area have been able to locate by providing their own facilities or are not the type of industry using large quantities of water; (2) there are no restrictions on septic tanks if a percolation test comes out positive, and (3) the capacity of the existing collectors has been able to accept hookups without causing overloads, except at the plant. It is anticipated that growth in the Greater Jerome Area will continue at its present rate whether or not it is served by a properly functioning sewage treatment plant. No other growth limiting factors, such as shortages of water supply, transportation, land availability, or solid waste disposal facilities, are foreseeable at this time.

#### Redevelopment and Construction in Built-Up Areas

Impacts - Because of the potential land use and density impacts described in the Land Use section above, there appears to be significant impact potential caused by the lack of redevelopment and construction in existing developmental areas. A large low-density service area, including approximately 4,000 acres of relatively flat agricultural lands, appears to provide adequate land area to allow indiscriminate satellite or spotty residential, industrial and commercial development.

What can occur in cities with low-use densities is that rehabilitation costs for older areas may be greater than replacement costs, due to low land costs created by adequate or more-than-adequate land availability. This can cause a destruction of aesthetics, efficient circulation and facilities utilization. It increases traffic and congestion, and a general breakdown of a unified, efficient community behavioral pattern may occur. In fact, this is why most governments including the State of Idaho, through passage of its Land Use Planning Act, require that Land Use Plans be developed to mitigate or prevent these types of occurrences. For these reasons, there appear to be significant potential impacts to redevelopment and construction in existing urban areas.

Remedial Protective and Mitigative Measures - Through adequate reassessment of the land use planning goals, objectives, policies, and service areas as proposed above, the potential adverse impacts upon redevelopment and construction in built-up and

urban areas in the City of Jerome can be mitigated. During the planning analysis, special considerations should be given to policies for directing service area growth, potential population densities, and existing areas of social or economic importance that are in need of rehabilitation or upgrading.

The following sections of the report examine the alternative specific impacts and present mitigation measures.

#### ALTERNATIVE 1 - "NO ACTION" ALTERNATIVE

The principal cause of adverse impacts to the environment by the "No Action" Alternative is the present operating condition of the plant. This facility is not currently capable of achieving Federal and State discharge standards, due to the general condition of most of the process units. At this study's public information meeting, Federal, State and local officials, and the City's consulting engineer all basically concluded that the City was doing a good job in maintaining the discharges at their present levels, despite the fact that they were not meeting standards. Thus, the "No Action" Alternative would permit the existing plant to continue to operate below standards. As sewage loads increased, caused by the population and economic development in the area, the discharge violations would also increase. The "No Action" Alternative, even though discussed, is not a practical alternative because it conflicts with Federal and State pollution control laws.

#### Odors

Impacts - As discussed earlier in the alternative descriptions, odors are given off at the existing plant during transfer of sludge from the digester to the drying beds and from the digester itself. A site inspection of the plant during the preparation of this Environmental Impact Statement confirmed these observations. According to the City staff and citizens living in the immediate area of the existing treatment plant, the occurrence of odors has increased as the demands upon the treatment plant have increased and the equipment has deteriorated. As shown by Table III.1, odors associated with sludges have the highest odor intensity, a measure of degree of detection by human smell sensors, and the highest concentration of odor units. Thus, the problem with the existing treatment plant's sludge digestion system is that odors are being emitted at maximum or at near-the-maximum intensity.

Utilizing odor-dispersion estimating procedures developed by the Environmental Protection Agency<sup>(2)</sup>, and assuming a worst-case condition of 4,100 odor units, it is estimated that odors

TABLE III.1  
ODOR CONCENTRATIONS AND INTENSITIES  
ASSOCIATED WITH SEWAGE TREATMENT PROCESSES

<u>Source of Odor</u>	<u>Intensity (Olfactories)</u>	<u>Odor Limits</u>	<u>Character of Odor</u>
Raw Sewage - Fresh .....	5 to 6	32 to 64	Dishwater
Raw Sewage - Stale .....	6 to 11	64 to 2,000	Putrid of H <sub>2</sub> S
Screenings - Fresh .....	5	32	Putrid
Affluent From Biological			
Treatment Works .....	3	8	Dishwater & Earthy
Plain Sedimentation			
Sludge .....	4	16	Putrid
Activated Sludge .....	1	2	Earthy
Sludge Gases 15 to 60°C ...	4 to 25	17	Putrid
Digested Sludge 15°C .....	5 to 12	32 to 4,100	Tary to Putrid

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Source: Reference (7).

\* Odor units are a relative measure of odor in terms of odor in 1 cubic meter of wastewater that are discharged into cubic meter of air.

during the day can be detected within 3,000 feet of the existing treatment plant, and that during the evening, odors can be detected within a radius of 1.5 miles of the treatment plant. The typical wind speeds of less than 7 miles per hour in the Greater Jerome Area and the high frequency of sunny days tend to decrease detectable odors during the day. At night, the effects of sunlight are reduced and odors can be detected at a greater distance.

At present, the plant may not be producing odors at the maximum level of 4,100 odor units; however, a field survey of the site detected strong odors within a quarter-mile and downwind from the plant. It is expected that increased loadings caused by area growth and further deterioration of the equipment will cause the plant to emit typical maximum odor concentrations within the 20-year planning period. For this reason, adverse odor impacts are expected to occur at least intermittently during the 20-year planning period within 3,000 feet of the plant during the day and 1.5 miles of the plant during the nighttime hours.

Based on the wind rose data illustrated in Figure III.3 and because of the residential areas immediately adjacent to the existing plant site to the east, it is anticipated that significant and major odor impacts would occur under the "No Action" Alternative. Because the wind blows to the east approximately 51% of the time, the residences to the east of the plant site will receive a majority of the odor impacts.

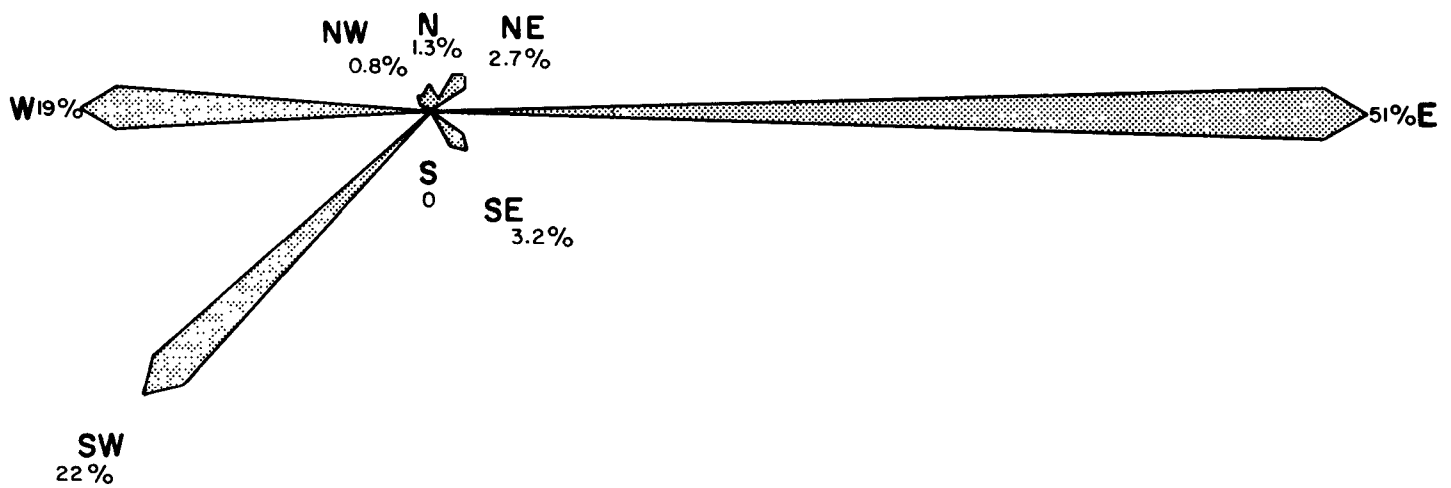
Because the areas to the north, northeast and east of the plant are zoned and used as residential areas, homes located there may continue to have their property values jeopardized by odor impacts.

Remedial Protective and Mitigative Measures - The only effective way to mitigate the odor problem at the existing City of Jerome sewage treatment plant is to upgrade it or to design and construct an effective, operable and maintainable sewage treatment plant as proposed in the other seven alternatives. A summary of possible odor control measures that have been proven effective through implementation and practice is included in Appendix B.

#### Noise

Noise at the existing treatment plant is principally caused by the 13 pumps used in plant operation. These 13 pumps typically operate at a noise level of approximately 7 decibels per unit.<sup>(2)</sup> If an individual were to stand within 50 feet of all the pumps during their simultaneous operation, the noise heard would be approximately 79 decibels. If that person were to move 150 feet from these pumps the decibel level would drop to approximately 43 decibels, which is less than the typical decibel level found

FIGURE III.3  
WIND ROSE FOR THE AREA OF JEROME, IDAHO



SOURCE: R. Rocenwall, One Year Wind Study for the Twin Falls - Southern Idaho Regional Airport. National Weather Service, 1973. (Data for wind speeds less than 12 MPH were extrapolated)

in low-density residential areas (see Table III.2). Because all residences adjacent to the plant are greater than 150 feet from these pumps, no anticipated noise impacts are expected to occur by implementing this alternative.

Additional noise impacts can be generated from traffic caused by hauling sludges and by operation personnel commuter trips. However, because the site is presently used by the City as an equipment and vehicle storage area, traffic generated by this use far exceeds traffic generated solely by the treatment plant. Because of this situation, it is anticipated that the increase of a maximum of four or five trips per day, caused by increased sludge loads, would not even be noticed by most of the people living in the proximity of the treatment plant. For these reasons, it is not anticipated that this alternative will have any significant noise impacts.

### Water Resources

The "No Action" Alternative has significant potential adverse impacts upon both surface and groundwaters.

### Surface Waters

Impacts - Table III.3 shows that the existing average discharge from the Jerome plant is greater in concentrations of suspended solids and biological oxygen demanding materials (BOD) than the "J" Canal receiving water. However, the canal water downstream from the plant appears to be generally unaffected by these loadings. Additionally, the water quality of the canal water is well within the standards for irrigation and stock watering use, as is evidenced in Table III.4, even though the present discharge violates State and Federal discharge requirements (see Table III.5).

Because of periodic problems and malfunctions of the existing plant, large slugs of pollutants greatly exceeding the values listed in Table III.3 can be discharged to the canal. This is because the present plant is in poor condition and subject to periodic malfunctioning. As the loading upon the plant increases, these types of mishaps resulting in discharge of slug or concentrated pollutants into the canal are expected to increase. Such periodic pollution could potentially impact the water of the canal to such an extent that some impact upon the water users could occur. For this reason, it is anticipated that there is some significant adverse impact potential to the surface water resources of the Jerome area with the "No Action" Alternative.

One additional concern is the possibility that some persons may potentially use canal water for domestic purposes. In a letter to Mr. S.N. Weeks, President of the Jerome City Council, dated October 22, 1974, from Mr. John A. Resholt, attorney for the



TABLE III.2  
TYPICAL NOISE LEVELS  
BY LAND USE TYPE

<u>Description</u>	<u>Typical Range <math>L_{dn}</math>, dB</u>	<u>Average <math>L_{dn}</math>, dB</u>
Quiet suburban residential .....	48-52	50
Normal suburban residential .....	53-57	55
Urban residential .....	58-62	60
Noisy urban residential .....	63-67	65
Very noisy urban residential .....	68-72	70

Source: Reference (2)

TABLE III.3

## EXISTING PLANT WATER QUALITY CONDITIONS

Parameter	Plant(a) Discharge	J Canal 30 yd(b) Above Plant	N Canal 10 yd(b) Below Plant	N Canal 1/2 mi(b) Below Plant	J Canal 1/2 mi(b) Below Plant
Flow (mgd)	0.58	290 (c)	245	245	45
Suspended Solids (ppm)	321	79	50	105	74
BOD (mg/l)	305	8.7(d)	NA(e)	NA(e)	NA(e)
COD (mg/l)	NA	15	36	22	28
DO (mg/l)		8	7.8	8.0	7.7
pH	7.3	8.2(d)	NA(e)	NA(e)	NA(e)
Fecal Coliform (MPN/100 ml)	17	24	NA(e)	16	11

(a) - U.S. Environmental Protection Agency, City of Jerome Compliance Monitoring Data File, Region X Office, Seattle, Washington 1976.

(b) - City of Jerome Grab Sample Data File, Jerome, Idaho 1975.

(c) - Northside Canal Company, Flow Record Files, Jerome, Idaho 1976.

(d) - From Table I-1

(e) - Not Available

TABLE III.4  
CONFORMANCE WITH RECOMMENDED WATER QUALITY STANDARDS  
FOR IRRIGATION AND STOCKWATERING

<u>Parameter</u>	<u>Canal Concentration</u>		<u>Standards(a)</u>	
	<u>N Canal 1/2 Mi. Below Plant</u>	<u>J Canal 1/2 Mi. Below Plant</u>	<u>Irrigation</u>	<u>Stockwater</u>
Fecal Coliform (MPN/100 ml)	16	11	1,000	1,000
Total Coliform (MPN/100 ml)	NA	NA	None	5,000
pH	8.2	8.2	4.5-9.0	None

(a) - Source: U.S. Environmental Protection Agency, Proposed Criteria for Water Quality, Volume I, Washington D. C., 1973.

(b) - From Table I.1.

TABLE III.5

CITY OF JEROME COMPLIANCE WITH  
FEDERAL AND STATE DISCHARGE STANDARDS

<u>Parameter</u>	<u>Existing Jerome Discharge (Average)</u>	<u>Proposed Jerome Discharge</u>	<u>Federal Standard (Average Monthly)</u>	<u>Idaho Standard (Average Monthly)</u>
Suspended Solids (ppm)	321	30	30	30
BOD (mg/l)	305	30	30	30
Fecal Coliform (Canal Discharge)	17	50	200	50
Fecal Coliform (River Discharge)	NA(a)	200	200	200
pH	7.3	7.3	6-9	6-9

(a) - Not Applicable

Northside Canal Company, Mr. Rosholt stated, "Although probably the situation does not persist with such prevalence as in the past, canal water is used for domestic purposes." As illustrated in Table III.6, neither "N" Canal, "J" Canal, the existing treatment plant discharge, the proposed discharge, nor Lake Milner (the source of the canal water) can meet the proposed Federal drinking water standards nor the existing State of Idaho Standards for turbidity and coliform bacteria. Thus, regardless of whether or not the treatment plant effluent is discharged to the canal, the canal will not meet the drinking water standards. Because these standards were developed based on public health information, any use of canal water for domestic purposes constitutes a health risk. The canal water should not be used for domestic purposes without being treated prior to use. The State Standards are identical to the Federal Standards of July, 1976.

Remedial Protective and Mitigative Measures - These potential impacts would be mitigated by the construction of an operational sewage treatment plant in conformance with State and Federal water quality standards. As illustrated in Tables III.4 and III.5, if State and Federal discharge levels are maintained, the canal water quality is more than adequate for irrigation and stock watering.

#### Groundwater

Impacts - Impacts are discussed in the "Soils and Hydrology" section. Indiscriminate and high-volume increases in the number of existing septic tanks in the Jerome area could potentially pollute the groundwater of the Snake River aquifer. This aquifer underlies the entire Jerome study area (see "Environmental Setting" Section I). The existence of perched or percolating contaminated groundwater flows could eventually contaminate well supplies and degrade the water quality of the wells. For these reasons, the "No Action" Alternative also has significant adverse impact potential upon the groundwater resources of the area.

Remedial Protective and Mitigative Measures - To mitigate adverse impacts upon groundwater, it will be necessary to reduce the demands for septic tanks generated by the "No Action" Alternative. The most effective method of doing this is construction of a sewer wastewater treatment plant in the Greater Jerome Area. By reducing septic tank densities, the possibility of soil saturation and, thus, the probability of polluted groundwaters seeping down through the basalt layer, would be significantly reduced. Alternatives 2 through 8 propose such a facility.

TABLE III.6  
DOMESTIC WATER USE WATER QUALITY INFORMATION

Parameter	Proposed <sup>(c)</sup> Federal Standards	Idaho <sup>(d)</sup> Standards	Existing <sup>(e)</sup> Treatment Plant Discharge	Proposed <sup>(e)</sup> Plant Discharge	Existing N Canal (e)	Existing J Canal (e)	Existing <sup>(f)</sup> Lake Milner
Turbidity (JTU's)	1	5	UK(b)	UK	UK	UK	11.4
Fecal Coliforms (MPN)	NE(a)	NE	17	L50	16	11	1,330
Total Coliform (MPN)	4	NE	UK	L50	UK	UK	14,607
<u>Pesticides (mg/l)</u>							
Chloradone	0.003	NE	UK	UK	UK	UK	0.0002
Endrin	0.0002	NE	UK	UK	UK	UK	0.000002
Heptachlor	0.0001	NE	UK	UK	UK	UK	0.000001
Lindone	0.004	NE	UK	UK	UK	UK	0.000001
Methoxychlor	0.1	NE	UK	UK	UK	UK	UK
Toxaphene	0.005	NE	UK	UK	UK	UK	0.00006
2,4-D	0.1	NE	UK	UK	UK	UK	UK
2,4,5-TP	0.1	NE	UK	UK	UK	UK	UK
<u>Chemicals (mg/l)</u>							
Arsenic	0.05	0.05	UK	UK	UK	UK	0.002
Barium	1.0	1.0	UK	UK	UK	UK	0.048
Cadmium	0.01	0.05	UK	UK	UK	UK	0.004
Chromium	0.05	0.05	UK	UK	UK	UK	
Cyanide	0.2	0.02	UK	UK	UK	UK	0.015
Lead	0.05	0.05	UK	UK	UK	UK	0.016
Mercury	0.002	NE	UK	UK	UK	UK	0.018
Nitrate (as N)	10	10	UK	UK	0.1	UK	0.2
Selenium	0.01	0.01	UK	UK	UK	UK	0.02
Silver	0.05	0.05	UK	UK	UK	UK	UK

(a) - None Established

(b) - Unknown

(c) - Federal Register, "Water Pollution, Safe Drinking Water, Interim Primary Standards", Vol. 40, No. 51, March 14, 1975.

(d) - Idaho Department of Health and Welfare, Standards for Individual Water Supply Systems, Boise, Idaho, 1967.

(e) - Table III.3.

(f) - U.S. Environmental Protection Agency, STORET Data Retrieval System, Region X, Seattle, Washington, 1976.

### Soils and Hydrology

Impacts - An adverse impact of an improperly-functioning treatment plant in the Jerome area may be increased septic tank use and septic tank densities in the area. As reported in the "Environmental Setting" portion of Section I, the soils of the Jerome area have been classified by the State of Idaho in its Environmental Overview Report and by the Soil Conservation Service to be sensitive soils, not generally suited for septic tank drain-fields. This results in outbreaks of sewage on the surface of the ground, posing potential health hazards. Additionally, soils can become saturated in certain areas, and wastes can percolate down through these shallow soils to the underlying bedrock of basalt. While basalt is generally impervious, it does contain fissures or openings, which transport groundwater in the area of the Snake River aquifer. If polluted effluents were to reach these openings in the basalt, they could very rapidly, in the case of cracks or fissures, or slowly over time, in the case of small interstices, pollute the groundwater resource.

Remedial Protective and Mitigative Measures - Potential adverse impacts on soils and hydrology of the Greater Jerome Area could be mitigated by the construction of a wastewater treatment plant.

### Fish and Wildlife

There are no potential impacts anticipated upon the fish and wildlife of the area by the proposed "No Action" Alternative.

### Historic, Architectural and Archaeological Resources

Alternative 1, "No Action" Alternative, was not considered in the analysis by the Idaho Historical Society.<sup>(8)</sup>

### Aesthetics

Impacts - The primary impact upon aesthetics of the area by the "No Action" Alternative is expected to be the continuation of unpleasant odors. Odors will make the residential areas immediately northeast and east of the existing site unpleasant, especially during the evening when odors may reach into the center of the City of Jerome. Because there are no landscaping or buffer areas, the residents to the west and near the plant to the north, northeast and southeast, have a direct view of the treatment plant that can be construed by some to be unaesthetic. Under the "No Action" Alternative, these impacts upon the aesthetics of the environment would be continued.

Remedial Protective and Mitigative Measures - The aesthetic impacts from the "No Action" Alternative can be eliminated by the construction of an adequate wastewater facilities plant.

#### Land Use

There are no significant impacts expected on land use for the reasons previously discussed. The long-term degradation of some environmental resources of the area could cause the Jerome area to increase in its attractiveness to immigrating persons and businesses, while mitigative actions could maintain Jerome's attractiveness, population and economic growth.

#### Recreation

No impacts upon recreation are anticipated from this Alternative.

### ALTERNATIVE 2 - SECONDARY PLANT AT FAR-WEST SITE WITH DISCHARGE TO "N-3" CANAL

As described in the Section II "Alternatives," Alternative 2 would construct a new total mix activated sludge process on a new site located southwest of the City. In this alternative the present treatment facilities at the existing site would be abandoned, and no treatment of waste would be done at the current site. Treated effluents would be discharged to the "N-3" Canal.

#### Odors

Impacts - Because a new facility would be designed and constructed, odor problems at the existing site are expected to be eliminated. Well-designed and operated activated sludge plants normally do not discharge significant amounts of odors or gases into the environment, so that they can be detected outside the boundaries of the treatment plant site. Assuming, for purposes of analysis only, that due to operation and maintenance problems, the plant intermittently emitted odors at concentrations of 100 odor units, it would then utilize the odor dispersion techniques developed by the Environmental Protection Agency.<sup>(2)</sup> It is estimated that these odors would be non-detectable during the daytime hours and non-detectable during the nighttime hours at distances greater than 600 feet from the plant. However, it should be emphasized that there are no odor emissions expected with a properly functioning plant. For these reasons, no odor impacts are expected by the proposed Alternative 2.



Remedial Protective and Mitigative Measures - During the engineering and design phase of the project construction process (Step II), odor-reduction design and facility measures, as described in Appendix B, can be evaluated and applied where appropriate.

### Noise

Impacts - The greatest amount of noise is expected to occur during the construction of the treatment plant facilities. Table III.7 shows the degree of noise, in decibels, associated with various types of construction equipment. Utilizing the data in Table III.7, it is estimated that the noise level at the construction site will be less than 105 decibels. Using a worst-case value of 105 decibels, it is estimated that 150 feet away from the construction site, the noise level will be 67 decibels, corresponding to noise levels typically found in noisy urban residential areas. At a distance of 250 feet from the construction site, the noise caused by construction activities is expected to be approximately 30 decibels, a noise level corresponding to a typical bedroom at night.<sup>(2)</sup>

Another source of noise will be the pumps and aerators needed to run the plant. Nine more pumps are required to operate this plant than are required to operate Alternative 1, for a total of 22 pumps and aerators. It is estimated that a person standing within 50 feet of all pumps and aerators operating simultaneously would hear a noise level of approximately 81 decibels. If that person were to move to a distance of 150 feet from all of the pumps and aerators, the noise level would be reduced to 50 decibels, a noise level typical of low-density residential neighborhoods (see Table III.2).

Because of the low noise levels at distances greater than 300 feet from the plant and the location of the nearest residences, approximately one-quarter mile away, no noise impacts upon the residents of these areas are anticipated either during construction or operation of the plant.

One additional potential source of noise impact is traffic using rural roads for access to the treatment plant site. It is assumed that the access to the treatment plant would be by the access road just west of the main street overpass over I-5. This road is a dirt road and passes in front of three residences. The increased traffic on this road will create increases in noise in the area and may impact these residences. The major noise impact is expected to occur during construction and be greatly diminished during operation of the plant.

TABLE III.7  
NOISE LEVEL (dba) AT 50 FEET

		60	70	80	90	100	110
Equipment Powered by Internal Combustion Engines	Earth Moving	Compactors		—			
		Front Loaders		—			
		Backhoes		—			
		Tractors		—			
		Scrapers, Graders		—			
		Pavers			—		
		Trucks			—		
	Materials Handling	Concrete Mixers		—			
		Concrete Pumps			—		
		Cranes (Movable)		—			
		Cranes (Derrick)			—		
	Stationary	Pumps		—			
		Generators		—			
		Compressors		—			
	Impact Equipment	Pneumatic Wrenches			—		
		Jack Hammers & Drills			—		
		Pile Drivers (Peaks)				—	
	Other	Vibrator		—			
		Saws		—			

NOTE: Based on limited available data samples.

Source: U.S. Environmental Protection Agency, Office of Water Program Operations, Technical Report, Direct Environmental Factors at Municipal Wastewater Treatment Works - Evaluation and Control of Site Aesthetics, Air Pollutants, Noise and Other Operations and Construction Factors, Washington, D.C., 1976.

Remedial Protective and Mitigative Measures - Noise impacts can be reduced by properly maintaining the number of passes necessary, through efficient construction management techniques. Paving of the access road would be ideal, and it would also help to mitigate other aesthetic impacts such as dust during both construction and operation of the treatment plant.

### Water Resources

Surface Water - The construction of an adequately-designed, maintained and operated treatment plant for the City of Jerome will solve the problems with the existing treatment plant which currently cause intermittent, but frequent, discharge violations of effluents into the irrigation canal system. Once this proposed treatment plant is constructed, it is believed that the Jerome sewage treatment facility can be and will be operated properly so as to maintain effluent concentrations within State and Federal discharge standards. This assumption is based on three criteria: (1) the sincere interest of the City to operate and maintain the plant properly to allow economic and population growth and development; (2) the high success records of recently-constructed sewage treatment facilities; and (3) the fairly intense amount of surveillance, testing, regulation, and enforcement of operating treatment plants done by the State of Idaho Department of Health and Welfare and the Environmental Protection Agency (see Appendix C).

Table III.5 illustrates the proposed Jerome wastewater discharge from the new plant proposed in Alternative 2 and the existing Federal and State standards. This table illustrates that the proposed standards are in conformance with State and Federal regulations.

Table III.3 shows the existing concentrations of various water quality parameters found in the "N" Canal. This table illustrates that the concentrations of suspended solids from the new plant (30 mg/l) will be less than currently found in the "N" Canal, but fecal coliform (50 MPN/100 ml) concentrations will be somewhat higher. However, Table III.4 illustrates that both the concentration of the treatment plant effluent discharge and of the canal are within the suggested or recommended Federal standards for irrigation and stock water use. It is further anticipated that the flow of the "N" Canal being over 400 times that of the existing discharge and 150 times that of the proposed 1995 treatment plant discharge of 1.6 mgd, will adequately assimilate, mix, and dilute the waste flow, so that added concentrations of suspended solids, BOD, and fecal coliform will be insignificant.

Based on the above information, it is expected that the treatment plant discharge will have no detrimental effect upon the irrigation and stock water contained in the canal system. The construction of a new plant will mitigate existing slug or high-concentration discharges intermittently discharged into the canal system by the existing plant. This mitigative action will significantly reduce the chance of these slug discharges impacting the water use of the canal system. Thus, it is anticipated that this alternative will have beneficial impacts upon the surface water resources of the area, by reducing the chance of water quality degradation from existing sewage treatment plant failures.

Groundwater - As previously suggested in the Alternative 1 discussion, one means to mitigate potential groundwater contamination caused by the high level usage of septic tanks, is to build a wastewater facilities plant. This alternative does precisely that, and by reducing the potential for septic tank use in moderate and high-density areas of the City and County, it is anticipated that the corresponding pollution potential to groundwater resources will also be diminished. Thus, the potential impacts of Alternative 2 upon the groundwater are beneficial since this alternative reduces the threat of groundwater pollution. Adequately designed and constructed plants sufficiently contain sewage so that potential discharge to, and associated impacts upon, groundwater are negligible.

#### Fish and Wildlife

The establishment of buffer zones of trees and other bushy types of foliage, if planned properly, can increase available cover for wildlife in the area and even provide additional breeding and hatching areas for game species of birds such as pheasant and quail. If buffer zones are established, it is anticipated that the potential impacts upon the wildlife of the area could be beneficial, since the number of species may increase. If buffer zones are not established, it is anticipated that there will be no significant impacts upon fish and wildlife resources of the area. However, the conversion of agricultural land (50 acres) would necessitate some migration or displacement of small animals and rodents such as field mice and shrews. The elimination of small sections of fence rows would reduce cover for racoon, skunk, mice, gopher, and some rabbits.

#### Historic, Architectural and Archaeological Resources

Archaeological survey work would not be necessary (see Appendix A). The new treatment plant is adjacent to I-80N. This ground was surveyed by the State Highway Archaeologist.<sup>(8)</sup>

### Aesthetics

Impacts - The major adverse impact of aesthetics would be upon the four farming residents within visual proximity of the treatment plant. While the treatment plant may be aesthetically non-pleasing, this can be mitigated by planning buffer zones and buffer strips with tall, dense foliage to obscure the identity of the treatment plant. If this is done, it will not be obvious that the facility is a sewage treatment plant. One other impact upon aesthetics may be caused by traffic on the access road. During the commuting hours, 8 a.m., 12 p.m., 1 p.m. and 5 p.m., three or four vehicles traveling in succession could create significant amounts of dust. Because of the rural location of the area which contains similar structures and equipment, such as large buildings, irrigation pumps, and other power equipment associated with farming, and because of the small number of residents in the area, it is anticipated that the adverse aesthetic impacts upon the area will be negligible.

Remedial Protective and Mitigative Measures - The primary methods of mitigating impacts are buffer zones to mitigate visual impacts and paving of the access road to mitigate dust and noise problems caused by traffic.

### Land Use

Impacts - Because the phasing for construction is more immediate than for any other alternative, the potential impacts upon land use are the greatest. Phase 1 in this alternative will serve 2,755 acres which is equal to 45% of the proposed service area and 250 acres more than may be needed, based on the land use analysis completed at the beginning of this section. Also, this growth would be to the west, north and east of the areas presently zoned agricultural and in the opposite direction of the planned growth to the south. For these reasons, this alternative is considered to have the most potential for significant adverse impacts upon land use.

Remedial Protective and Mitigative Measures - The methods for Alternative 2 were previously discussed with the impacts common to all alternatives.

### Recreation

In this alternative the existing treatment plant site would be converted into a park. Because of the site's proximity to residential areas in the City of Jerome, the park is expected to create beneficial impacts upon recreation.

### ALTERNATIVE 3 - SECONDARY PLANT AT FAR-WEST SITE WITH DISCHARGE TO SNAKE RIVER

Alternative 3 is the same as Alternative 2 except that the treated wastewater is discharged through a pipeline to the Snake River. For this reason, all of the impacts of this alternative and proposed mitigative measures are the same except for those dealing or caused specifically by the pipeline and discharge of effluents into the Snake River. These impacts are discussed in the following sections. Also mitigative measures for the treatment plant are the same as those measures described in Alternative 2. The following discusses mitigative measures specific to the pipeline to the Snake River.

#### Surface Water Resources

Impacts - Alternative 3 would effectively reduce any potential water quality problems associated with discharge of effluents to the canal system, by eliminating the existing treatment plant's discharge to the "J" Canal. If wastewater is treated in conformance with secondary discharge standards, as required by Federal and State governments (see Table III.5), the Snake River is expected to have adequate assimilative analysis to accept these wastes without significant changes in water quality. When the proposed discharges from the treatment plant are compared to reported instream concentrations of some water quality parameters found on the Snake River at Milner Dam, it appears that the water quality of the effluent may be of higher quality than the Snake River (see Table III.6). For these reasons, no significant water quality impacts are anticipated from the discharge to the Snake River.

As described in the "Environmental Setting" section, the State of Idaho has identified a portion of the Snake River south of Jerome as an area of water quality problems caused by sediments and turbidity. Thus, any additional discharge of sediment-producing materials into the river could degrade the water quality further. Unless sufficient care is given to soil and rock stability during the construction of the outfall, water quality impacts could occur.

Remedial Protective and Mitigative Measures - The potential adverse impacts to surface water resources could be mitigated through the selection of an outfall site in an area of the most stable soil and geologic conditions. Sediment catchments and temporary retaining walls could be constructed beneath areas of the Snake River Canyon where excavation and construction activities are to occur. These catchments could be designed so as to stop falling soil, rock and other debris before it entered the river. Care, deliberation and the application of impact minimizing construction methods can be implemented when working within the Snake River Canyon.

### Fish and Wildlife

Impacts - Potential adverse impacts upon fish and wildlife related to effluent discharges to the Snake River are associated with fish and bald eagles. Adverse impacts upon fish could be caused by increased sediments through improper construction techniques. Increased sediment loads, combined with the existing high sediment loads in the river, would potentially degrade fish habitat further by degrading respiration, food chain organism populations, habitat and spawning areas. Placement of the outfall pipe near the river and Snake River Canyon Wall would also require special treatment, to reduce vegetation loss, minimize erosion, and bypass small fishing areas and ponds.

The most significant adverse impacts upon wildlife would be improper location of the outfall so as to destroy bald eagle rookeries. As described in the "Environmental Setting" portion of Section I, the Snake River Canyon has been identified by the State of Idaho as potential bald eagle habitat. While there are no known rookeries in the immediate area of the proposed outfall site, potential rookeries may exist. If the outfall site were to be located upon a potential rookery, or near enough to one so as to frighten the birds from using it, significant impacts upon bald eagle populations of the area could occur. Bald eagles are a rare and endangered species and, thus, any adverse impact upon their population caused by decreased reproduction levels would be a significant impact.

The extended outfall pipeline to reach the Snake River would require some disruption of biota adjoining existing roadways. Roadside vegetation, short grass, and scrub growth would be temporarily displaced, causing a reduction in habitat for some small animals. Game animals and unique species are not expected to be affected.

Remedial Protective and Mitigative Measures - If the mitigation measures proposed for surface water resources are implemented for soil and geologic debris, and the water quality is protected, fish and wildlife resources will also be protected.

### Historic, Architectural and Archaeological Resources

Immediately east of the Twin Falls treatment plant, near the Snake River, there are a number of archaeological sites. It is likely that prehistoric habitation exists on any section of the Snake River. For these reasons, it is necessary that an archaeological survey with a pipeline be made near the Snake River. This is necessary even though most of the pipeline follows existing right-of-way.<sup>(8)</sup>

### Unique Land Features

Impacts - Because the Snake River Canyon is a unique land feature, any degradation caused by construction activity such as increased erosion or fracturing of the canyon walls, would be an adverse impact upon a unique land feature. The degree of impact would depend upon the permanency of the impact and the extent of degradation caused by improper construction safeguards during construction of the outfall. Because the canyon structure is primarily basalt, a very sturdy and rugged material, significant long-term adverse impacts are not anticipated. In the short-term, the presence of construction equipment and excavations may mar the scenic quality of the canyon.

Remedial Protective and Mitigative Measures - During the site selection, geology of the canyon must be considered so as to locate areas where the geologic function and structure of the canyon are capable of supporting the pipe and outfall to avoid long-term degradation to the canyon. Excavations should be as small as possible and refilled before construction is completed.

#### ALTERNATIVE 4 - SECONDARY PLANT AT NEAR-WEST SITE WITH DISCHARGE TO "J" CANAL

As described in Section II "Alternatives", Alternative 4 would construct a new total mix activated sludge process on the existing site, totally replacing the existing treatment plant. Treated effluent would be discharged into the "J" Canal.

### Odors

Impacts - A new treatment plant is expected to abate all of the existing odor problems associated with the malfunctioning, deteriorated equipment at the existing site. Assuming a worst-case condition during the nighttime hours, it would be possible for odors to be detected within 600 feet of the plant. Because of the proximity of the site to the fairgrounds and to several residences, during nighttime hours some very infrequent odor problems may be detected. Because of any odor causes an adverse impact on the use or desirability for use of residences and the fairgrounds, very infrequent and minimally-significant adverse impacts may exist during a worst-case condition, such as a plant breakdown.

Remedial Protective and Mitigative Measures - If proper consideration is given to odor containment in the construction of this facility, odors should not be a problem, as the new plant is proposed to have backup power facilities, alternative routing schemes, and other fail-safe equipment, so that major plant failures are highly unlikely.



## Noise

Impacts - Even though the fairgrounds are within 250 feet of the plant boundary, adverse noise impacts upon them are considered to be negligible. This is because noise levels at typical fair or recreational-type activities usually exist at levels of 67 decibels or greater. The residences located within 200 feet of the plant construction area may experience noise impacts during the construction of the plant. During its operation no potential noise impacts are expected outside the boundaries of the treatment plant because of the low noise level, approximately 50 decibels, generated beyond 150 feet of the plant.

Remedial Protective and Mitigative Measures - The mitigative and control measures described below have been analyzed by EPA and found to be effective in controlling noise during construction. (2)

Construction equipment, with built-in noise controls as well as operational management, may sufficiently control noise output to meet environmental noise requirements in most cases.

Noise may be measured at the borders of the construction site, to determine limits of maximum flexibility of operation on-site, while meeting noise standards off-site.

Design considerations to reduce equipment noise include: exhaust mufflers, intake silencers, engine enclosures, proper cooling system, and fan design. Other techniques to be considered include: replacing individual operations and techniques by less noisy ones (e.g., using welding instead of riveting, mixing concrete off-site instead of on-site; and employing prefabricated structures instead of building them on-site) and selecting the quietest alternative items of equipment (e.g., electric instead of diesel-powered equipment, hydraulic tools instead of pneumatic impact tools).

Earth-moving equipment noises are associated predominantly with exhaust and inlet noise. Other sources include mechanical and hydraulic transmission and actuation systems and cooling fans. Mufflers offer the greatest potential for noise abatement. Also, when possible, locating haul roads behind natural earth berms or embankments has been found to be effective.

Most of the noise from material handling equipment, such as cranes, concrete mixers, and concrete pumps, is generated by the engine. The greatest potential abatement is via engine quieting. Where necessary, stationary equipment, such as pumps, generators, and compressors, can be quieted by mufflers and enclosures.

The Occupation Safety and Health Administration (OSHA) has several publications and other information on reducing noise during construction activities.

### Water Resources

Surface Water - There are no anticipated significant adverse impacts upon the water quality of surface waters. Because the flow of "J" Canal is approximately 28 times greater than that of the proposed 1990 discharge, dilution is expected to be sufficient; thus, the adverse impact potential is lessened. Additionally, as previously discussed, the water quality of the proposed plant will be of higher quality for suspended solids than the canal. This alternative will also effectively eliminate the periodic discharge of highly concentrated wastes into the canal system.

Groundwater - The anticipated impacts upon groundwater are beneficial in that potential sources of contamination from septic tanks are eliminated.

### Fish and Wildlife

Despite the loss of some small rodents, the potential impacts upon fish and wildlife are also beneficial in that buffer zones provide habitat for game birds and other small animal browsers, such as rabbits.

### Historic, Architectural and Archaeological Resources

No archaeological survey work is required.

### Aesthetics

Impacts - The potential adverse aesthetic impacts of increased traffic volumes caused by additional noise from commuter trips of operating personnel and sludge transport are considered to be negligible, if they occur at all, as discussed in the "No Action" Alternative, Alternative 1.

Remedial Protective and Mitigative Measures - As previously discussed in Alternative 2, proposed buffer areas for the treatment plant are anticipated to mitigate or reduce the adverse visual impacts of this alternative.

### Land Use

Impacts - Alternative 4 appears to have little adverse impact because of the potential for mitigation of the interceptor construction phasing. Phase one is a smaller area in this alternative; however, it does not conform to present land use policies

(see Figures II.3 and III.2). Phases 2, 3 and 4 remain in major contradiction to the County's zoning ordinance.

Remedial Protective and Mitigative Measures - The methods of mitigating adverse land use impacts include building Phase 1 of the proposed interceptor construction only after review of the service area by the Jerome County Planning Department and elected officials. The western portion of Phase 2 is not in conformance with current land use plans and, thus, may impact land use adversely. However, because the Phase 2 facilities area originally proposed in the Facilities Plan<sup>(9)</sup> was basically in conformance with the County's Land Use Plan, facilities in the conforming portion of the Phase 2 service area could be moved up and constructed earlier. Phases 3 and 4, both proposed for construction after 1985, are far enough into the future that time allows for analysis and modification of these areas through regular planning activities, so as to conform to land use policies.

#### Recreation

Because this alternative will replace the existing treatment plant with a park, it is expected to have beneficial impacts upon recreation as previously outlined in the discussion for Alternative 2.

#### ALTERNATIVE 5 - SECONDARY PLANT AT NEAR-WEST SITE WITH DISCHARGE TO SNAKE RIVER

##### Impacts

Alternative 5 is identical to Alternative 4 except that the discharge of treated effluents will be to the Snake River rather than to the "J" Canal. To discharge to the Snake River, as described in the "Alternatives" section (Section II), it is necessary to construct a pump station and a 12-inch pressure line westerly and southerly to the Snake River. Because the treatment plant is the same as Alternative 4, except for the construction of the pump station and pressure line outfall, the impacts will be the same, except for those that specifically relate to the outfall. The proposed outfall pipeline is the same as the one proposed in Alternative 3, except for approximately 1-1/4 mile of line heading west from the existing plant site to just west of I-80 and just south of Main Street. However, because an interceptor will be constructed in Alternative 5, the potential impacts of the two alternatives are the same. For the reasons discussed in Alternative 3, archaeological survey work is required for the pipeline near the Snake River.

### Remedial Protective and Mitigative Measures

Because the adverse impacts of the plant are identical in this alternative to those of Alternative 4, the adverse impacts associated with the outfall of this alternative are identical to those discussed previously in Alternative 3. Also, the mitigative measures for the outfall are identical to those previously described under Alternative 3.

#### ALTERNATIVE 6 - JEROME-TWIN FALLS REGIONAL TREATMENT PLANT

The adverse impacts common to all alternatives and land use impacts of Alternatives 2 and 3 are also true for Alternative 6. This is because the service area construction scheduling and interceptor system are the same for both alternatives. There are no additional impacts anticipated with the operation of the plant.

The only adverse impacts to be discussed below will be concerned with the construction of the regional interceptor connecting the City of Jerome sewer system and the Twin Falls treatment plant. All the potential adverse impacts of the other alternatives concerning noise and odor would be effectively transferred to the Twin Falls plant. The new Twin Falls treatment plant is discharging effluent into the Snake River in conformance with State and Federal standards, and no significant water quality degradation has occurred to this time. Thus, it is anticipated that modifications to the existing Twin Falls treatment plant, as proposed in this alternative, would be sufficient to continue the effective operation of the plant to protect water quality.

#### Noise

Impacts - Because most of the construction would occur outside of densely populated areas and at distances greater than 200 feet from most residences, it is anticipated that the noise impacts of this alternative would be very minimal and insignificant. Only intermittent noise impacts would occur when it was necessary for some reason, such as for construction equipment to pass very near to existing residences, which is expected to be infrequently.

Remedial Protective and Mitigative Measures - The potential adverse noise impacts anticipated with Alternative 6 are expected to occur during construction and can be mitigated by avoiding operation of heavy equipment within 300 feet of occupied buildings and residences.

### Recreation

This alternative will also have beneficial impacts upon recreation since the existing treatment plant will be replaced with a park, as discussed for Alternative 2.

### Fish and Wildlife

Impacts - Because the regional interceptor would have to go through the Snake River Canyon and over, or under, the Snake River to reach the Twin Falls treatment plant, potential adverse impacts during the construction phase upon fish and wildlife are considered to be significant. Potential impacts on fish and wildlife originate from possible sediment loadings into the Snake River caused by construction activities. There will be temporary displacement of vegetation, especially short grasses and shrub growth supplying habitat and cover for small animals along the entire length of the proposed pipeline (approximately 13 miles). Also, the Snake River Canyon is a potential bald eagle habitat, and adverse impact potentials exist for the bald eagle populations if rookeries or potential rookery areas should be disturbed during construction of the outfall pipeline.

Remedial Protective and Mitigative Measures - Minimizing the destruction of existing vegetation cover during the construction phase would reduce the impacts upon wildlife. Care and efficiency in operation should be exercised during construction to avoid disturbing as little land as possible.

### Historic, Architectural and Archaeological Resources

For the reasons discussed in Alternative 3, archaeological survey work is required.<sup>(8)</sup>

### Unique Land Features and Aesthetics

Impacts - As discussed in Alternative 3, the Snake River Canyon is a unique land feature. There are significant potential adverse impacts associated with construction equipment marring the scenic quality of the canyon in the short-term. However, long-term adverse impacts are not expected, if proper care is used during construction. A bridge or pipeline suspension would add a structure crossing the river in an area where two bridges currently exist. The cluttering of structures will degrade the aesthetic quality of the canyon. However, this area of the canyon is within a developing urban area, with developments such as the treatment plant already existing on the canyon floor. Therefore, the adverse aesthetic impact upon the Snake River Canyon is expected to be low.

Remedial Protective and Mitigative Measures - Facilities should be designed and constructed in balance with the soil and geologic conditions prevailing in the Snake River Canyon. Aesthetic impacts could be mitigated by an underground and underwater pipeline. However, the problems associated with underwater construction in the river may potentially cause adverse impacts greater than those from building an over-water structure.

#### ALTERNATIVE 7 - SPRAY IRRIGATION

As described in the "Alternatives" Section, Alternative 7 would construct interceptor facilities and a treatment plant, similar to those constructed in Alternative 2, at the Far-West Site. The sprayfields would be located somewhere within a three-mile radius of the City and would utilize 360 acres of land to spray irrigate effluents during the late spring, summer, and early fall months. During the remaining months (approximately seven) of the year the effluents would be stored. Because no site has been specified for the sprayfield, nor the storage area, it is impossible to totally assess the potential impacts of this alternative. However, a general impact assessment can be made. The impacts caused by the service area, construction scheduling, interceptors and treatment plant will be identical to those of Alternatives 2 and 3. Thus, the only impacts discussed below are associated with the spray irrigation.

##### Odors

Odors are not expected to create significant adverse impacts if the storage area and associated irrigation fields are located at distances greater than 600 feet from existing residences.

##### Noise

Impacts - Because the site is expected to be located at distances greater than 300 feet from occupied structures, it is not anticipated that noise would have significant adverse impacts, even during construction.

Remedial Protective and Mitigative Measures - To effectively abate noise from the area, sprayfield facilities should be located at distances greater than 300 feet from any occupied structure or residence.

##### Water Resources

Impacts - Since there is no discharge to surface water, the impact potential for degradation of surface water quality is practically non-existent. However, the adverse impact potential to the quality of groundwater is significant. Large quantities

of treated wastewater will be discharged to a relatively small area of land, approximately 360 acres. If during site selection, attention is not given to the fissures or other water-conducting pores or holes in the underlying basalt, water could percolate through these openings and into the groundwater. Because this plant will discharge disinfected wastes once contaminated with pathogenic organisms, there is some potential for biological contamination of groundwater. However, it should be noted that usually groundwater movement is very slow, and for these reasons, organisms would probably die off before reaching water supply sources for wells. However, if large cracks or fissures do exist in the underlying basalt, the transport of percolating water to groundwater could be fairly rapid and under some conditions potentially contaminate the groundwater.

Remedial Protective and Mitigative Measures - To avoid contamination of groundwater resources, an intensive geologic and bedrock permeability analysis should be conducted before the location of the 360-acre sprayfield is finalized. During this analysis, efforts should be directed toward finding a location where the underlying bedrock of basalt is impermeable or where groundwater penetration and movement is very slow.

#### Soils and Hydrology

Impacts - Land disposal technology is very new. Because of this, some problems associated with implementation of land disposal exist; they include supersaturation and clogging of soils, salt buildup, and water penetration. These problems typically occur in shallow soils and in areas with an unusually-large proportion of cloudy days. While the cloud cover of the Greater Jerome Area is no problem, the soils are shallow and unsuitable for septic tanks in large densities. For the same reasons that the soils cause septic tank limitations, they also could create potential problems of supersaturating the soil, causing clogging, salinity problems, compaction, and, over a longer period of time, degradation of the spray irrigation land. While these problems are highly unlikely, there is a slight potential for significant adverse impacts caused by spray irrigation.

Remedial Protective and Mitigative Measures - To abate any potential adverse impacts upon soils and hydrology, a site with soils as deep as possible should be selected. However, because the average soil depth is 40 inches, it may be impossible to find soils that are much deeper than that. A crop cover should be established that maximizes evapotranspiration (the ability to take water from the soil and disperse it to the air). These actions combined with adequate monitoring and surveillance to detect super-saturation of the soils and to allow the system to be shut-down when saturated soil exists, should provide adequate mitigative measures to protect the soils and hydrology of the area.

### Fish and Wildlife

Impacts - The extended three-mile pipeline to the spray irrigation site would require some disruption of biota adjoining existing roadways and fields. Vegetation, short grass, and scrub growth would be temporarily displaced, causing a reduction in habitat for some small animals. Game animals and unique species are not expected to be affected.

Remedial Protective and Mitigative Measures - During the construction of the three-mile pipeline from the proposed treatment plant to the spray irrigation facility, efficient construction techniques should be applied to minimize the destruction of land and vegetation that provide cover for wildlife.

### Historic, Architectural and Archaeological Resources

Before a preliminary determination can be made for the need of an archaeological survey, it is necessary to specify the specific location of the sprayfield site and the storage ponds.<sup>(8)</sup>

### Aesthetics

Impacts - The spray irrigation site will be agricultural in nature, and the storage reservoir and accompanying structures may have a visual impact on the area.

Remedial Protective and Mitigative Measures - The structures can be buffered by trees and plants to obscure the view of the structures, so that all of the facilities, including the spray irrigation systems, could take on a rural character. Also, the land area to be utilized will be in some type of crop and, thus, is expected to blend well into the agricultural community.

### Land Use

The impacts and mitigative potential upon land use are the same for this alternative as they are for Alternatives 2 and 3, the alternatives proposing a secondary plant at a new site southwest of the City.

### Recreation

The impacts of this alternative upon recreation will be beneficial for the reasons previously described in the impact discussion for Alternative 2.



ALTERNATIVE 8 - UPGRADING OF EXISTING TREATMENT PLANT WITH  
DISCHARGE TO "J" CANAL

This alternative would upgrade the existing treatment plant, with discharge of treated wastewater into the "J" Canal.

Odors

Impacts - The upgrading of this plant is specifically designed to mitigate odors; however, because of its proximity to the fairgrounds and to residential areas adjacent to the existing site, there is a small potential of intermittent adverse odor impacts during unexpected operational problems. The potential impacts are identical to those previously discussed in Alternative 4.

Remedial Protective and Mitigative Measures - Because this alternative is specifically planned to mitigate odors and other existing problems with the plant, it is believed that all mitigative measures previously described in other alternatives and in Appendix B should be investigated during design of this proposed plant.

Noise

Because this alternative occupies 28 acres of the Near-West Site, noise impacts of this alternative are expected to be essentially the same as previously described for Alternative 4.

Water Resources

Surface Water - The quality of the effluent of this alternative is the same as for Alternatives 2 through 7, and the discharge location is the "J" Canal. The potential negative impacts to water quality are considered insignificant because of dilution of the effluent in the flow of the "J" Canal. In fact, the net impact of this alternative on water quality is beneficial, because it eliminates the intermittent slug discharges of the existing plant.

Groundwater - The potential for reduction of septic tank usage in the Greater Jerome Area is also a factor in this alternative. For this reason, beneficial impacts through the protection of potential soil and groundwater impacts, as previously discussed, are also expected to be a result of the implementation of this alternative.

### Fish and Wildlife

Because of the buffering areas planned in this alternative, it is anticipated that potential impacts upon fish and wildlife will be beneficial, by providing additional cover, breeding and hatching areas for small game birds.

### Historic, Architectural and Archaeological Resources

No archaeological survey work is required<sup>(8)</sup> (see Appendix A).

### Aesthetics

Impacts - Upgrading the existing treatment plant by eliminating odors, providing buffer areas of tree plantings and landscaping will have beneficial impacts upon the site. Although there may be additional traffic due to increased commuter trips by operating personnel and trips for sludge transport, it is not anticipated that these will create significant adverse impacts.

Remedial Protective and Mitigative Measures - The proposed buffer areas for the plant are believed to be sufficient to mitigate problems of visual aesthetics at the plant site.

### Land Use

Impacts - Alternative 8 is similar to Alternatives 4 and 5 in that the same interceptor network is used to transport sewage to the plant. Thus, the interceptor system for Alternative 8 has the least land use impact and no additional land for the treatment plant is necessary for Alternative 8 as proposed.

Remedial Protective and Mitigative Measures - Mitigative measures for Alternative 8 are the same as for Alternative 4.

### Recreation

Implementation of this alternative will not produce significant impacts upon recreation.

## ENVIRONMENTAL RISK SUMMARY

To assist in summarizing the environmental impact potential of the eight proposed wastewater alternatives, and to determine an environmental acceptability ranking for the alternatives, a matrix was used. In a matrix the alternatives are listed at the top of the matrix and the environmental resources to the side. Lines are drawn to make small boxes to illustrate where alternatives will impact resources. Then, based on the preceding discussion of environmental impacts, each alternative is ranked from

the most beneficial, or best, environmentally-suitable alternative to the worst. This value is entered into each box. The process was completed for each alternative and each environmental resource, as illustrated in Figure III.4. Based on this analysis, the final environmental suitability ranking is as follows:

<u>Ranking</u>	<u>Alternative</u>
1	Alternative 4 - New Secondary Plant at Near-West Site with Discharge to "J" Canal
2	Alternative 8 - Upgrading of Existing Treatment Plant with Discharge to "J" Canal
3	Alternative 2 - Secondary Plant at Far-West Site with Discharge to "N-3" Canal
4	Alternative 6 - Jerome-Twin Falls Regional Treatment
5	Alternative 5 - Secondary Plant at Near-West Site with Discharge to Snake River
6	Alternative 3 - Secondary Plant at Far-West with Discharge to the Snake River
7	Alternative 1 - "No Action" Alternative
8	Alternative 7 - Spray Irrigation

As illustrated in the matrix, the alternative with the least environmental risk is Alternative 4, having the largest number of best scores. Alternative 8 is ranked a very close second. However, if Alternative 8 is modified, because of the elimination or significant reduction of Ida-Gem wastewater flows, these modifications could cause a shift in the environmental rankings of Alternatives 4 and 8.

To finally assess the environmental and cost-effectiveness rating for the alternatives, the cost, legality, and environmental impact potential of each alternative were evaluated. The final, legal, cost-effective and environmental impact potential rankings for each alternative are listed as follows:

<u>Alternative</u>	<u>Final Ranking</u>	<u>Cost Ranking</u>	<u>Environmental Ranking</u>	<u>Legal Ranking</u>
4	1st	2	1	1
8	2nd(a)	4	2	1
2	3rd	3	3	1
6	4th	4	4	1
5	5th	5	5	1
3	6th	6	6	1
7	7th	7	8	1
1	8th	1	7	8

- (a) Because the cost differences between Alternatives 8 and 2 were less than 10% and the environmental ranking differences were greater than 10%, Alternative 8 was selected as the number 2 alternative.

FIGURE III.4

ENVIRONMENTAL IMPACT POTENTIAL OF ALTERNATIVES

ENVIRONMENTAL RESOURCES	Alternatives							
	1	2	3	4	5	6	7	8
Air Quality	B	2	2	2	2	2	2	2
Noise	B	2	2	2	2	2	2	2
Odor	W	2	2	4	4	B	7	4
Surface Water	W	B	6	B	6	4	4	B
Groundwater	W	B	B	B	B	B	7	B
Hydrology	W	B	B	B	B	B	7	B
Soils	W	B	4	B	4	4	7	B
Fish	B	B	W	B	W	W	B	B
Wildlife	4	B	5	B	5	W	W	B
Aesthetics	W	2	4	2	4	B	6	2
Unique Land Features	B	B	6	B	6	W	B	B
Population and Economic Growth	S	S	S	S	S	S	S	S
Land Use	2	W	W	2	2	5	6	B
Recreation	7	B	B	B	B	B	B	7
Redevelopment	S	S	S	S	S	S	S	S
Taxes	B	6	6	4	4	2	W	3
Personal Incomes	B	2	6	2	7	5	W	4
Public Utilities	S	S	S	S	S	S	S	S
Secondary Impacts	S	S	S	S	S	S	S	S
Resource Utilitization*	2	5	7	4	6	1	8	3
FINAL RANKING	7	3	6	B	5	4	W	2

ALTERNATIVES:

1. "No Action" Alternative
2. New Treatment Plant at Far-West Site with Discharge to "N-3" Canal.
3. New Treatment Plant at Far-West Site with Discharge to Snake River.
4. New Treatment Plant at Near-West Site Discharged to "J" Canal.
5. New Treatment Plant at Near-West Site with Discharge to Snake River.
6. Twin Falls Regional Treatment.
7. Spray Irrigation Alternative.
8. Upgrade of Existing Treatment Plant Discharge to "J" Canal.

KEY:

- W = Worst  
 B = Best  
 2 = Second Best  
 3 = Third Best  
 4 = Fourth Best  
 5 = Fifth Best  
 6 = Sixth Best  
 7 = Seventh Best  
 S = All Alternatives are Equal

\*See Section II, Alternatives

## SECTION III

## FOOTNOTES

- (1) Findley, Charles E. and Bray, David C., Attainment of Ambient Particulate Matter Standards in Idaho, U.S. Environmental Protection Agency, 1973.
- (2) U.S. Environmental Protection Agency, Office of Water Operations, Direct Environmental Factors at Municipal Wastewater Treatment Works, Washington D.C., 1976.
- (3) Jerome County, Idaho, Ordinance Establishing a Comprehensive Zoning Plan and Regulations, amended, Jerome, Idaho, 1973.
- (4) Hancock, Charles, Mayor, City of Jerome, Letter to the Jerome County, Idaho Board of Commissioners and the Jerome County Planning and Zoning Commission, Jerome, Idaho, 1976.
- (5) Idaho Department of Water Resources, State Water Plan - Part II, Boise, Idaho, 1976.
- (6) Idaho Department of Water Resources, et., al., Idaho Environmental Overview, Boise, Idaho, 1975.
- (7) Hux, Ronald, "Odor Control and Wastewater Treatment Systems", Proceedings of the Second International Clean Air Congress, Academic Press, New York, 1971.
- (8) Green, Thomas J., Acting State Archaeologist, Idaho Historical Society, Letters to Ms. Divola Nettles, U.S. Environmental Protection Agency, Idaho Operations Office, Boise, Idaho, July 15, 1976.
- (9) CH<sub>2</sub>M/Hill, Inc., Wastewater Facilities Plan for Jerome, Idaho, Boise, Idaho, 1975.



REINVENTIVE

## SECTION IV

### PROPOSED PROJECT

#### INTRODUCTION

The alternative selected as the proposed project is Alternative No. 4. The proposed project is to build a new extended aeration activated sludge treatment plant upon the Near-West Site, a new 40-acre site immediately northwest of the existing treatment plant site. The treated effluents from the plant will be discharged into the "J" Canal. During the facilities planning process this alternative was determined to be the most cost-effective. Additionally, the Environmental Impact Statement found this alternative to have the highest environmental ranking of any of the eight alternatives considered. As part of the proposed action, the existing treatment plant site will be converted into a park.

#### PROJECT DESCRIPTION

Service Area - During the preparation of the Facilities Plan, a new sewer service area was proposed for the City. This new service area extends the perimeter of land serviced by sewers outside of the City limits by approximately 1-1/2 miles to the northwest and east. The perimeter will be extended approximately 3 miles to the south of the City and will vary from 1 to 2 miles west of I-5 (Figure IV-1).

The service area was developed by CH<sub>2</sub>M/Hill, Inc., the engineering consultants for the City of Jerome, with the cooperation of the Jerome City Planning Commission and the Jerome City Council. Selection of the service area was based upon historic trends, as well as community objectives, which are to meet the present and future needs of the projected population growth of 12,000 people by 1995 in the Greater Jerome Area.

The estimated future population growth for the City of Jerome of 4 percent per year by the Idaho Water Resource Board is higher than the statewide average of 1 percent. The population density throughout the service area is estimated to average only about 2 people per acre in 20 years. The interceptor sewer costs have been based on 9 people per acre in each particular service area at saturation density.

The flow through the treatment plant would begin with the incoming wastewater as it enters the pump station, where pumps would lift the wastewater up to pass through solids grinders or a bypass bar screen in the headworks. From there, the wastewater would flow by gravity to two aeration basins, where the incoming flow would be mixed throughout the basins. The aeration basin contents would flow by gravity to secondary clarifiers where the biological solids would settle. Most of the settled solids would be pumped back to the aeration basins to sustain the aeration basin solids concentration and to maintain the process efficiency. The remaining settled solids would be pumped to the aerobic digester for stabilization. Digested solids would be pumped to humus ponds, where they would be dried. After drying, the solids would be deposited in the privately-operated sanitary landfill serving the City of Jerome.

This plant will completely replace the existing plant with a totally new facility. Because the treated effluent will be discharged into the "J" Canal, adjacent and to the west of the existing site, slight improvements in the chlorination facilities of the plant would be designed to prevent treated effluent concentrations of fecal coliforms exceeding 50 MPN per 100 milliliter sample, in compliance with State discharge standards, into irrigation canals.

The Site - The proposed 40-acre site is adjacent to the existing plant to the northwest across the "J" Canal. This land is presently in alfalfa fields and is basically level with a mild slope to the west. Immediately adjacent and to the east of the site is an old rock slaughterhouse. Three residents and the new Jerome radio station are to the west. To the southeast of this 40-acre parcel is a disturbed area used as a sand and gravel excavation site.

The soils of the area, as classified by the Soil Conservation Service<sup>(3)</sup>, are portino-type soils which are silty loam types of soils with a surface depth of 0 to 28 inches. The cultivability classification of these soils is Class 4.

The land use around the existing site is residential to the east and northeast and agricultural to the west, northwest and southwest. Industrial lands are to the south, and the County Fairgrounds are immediately adjacent to the treatment plant site to the southwest.

All other environmental baseline characteristics of the existing site are typical of the study area as described in the "Environmental Setting" portion of Section I.



## INTERACTION WITH OTHER PLANS

The Wastewater Facilities Plan for Jerome, Idaho<sup>(1)</sup> was one of several planning projects undertaken by the City of Jerome within the past two years. In addition to the Wastewater Facilities Plan, the City of Jerome has prepared a plan for, and is now constructing, a Water System Improvement Program. Additionally, the City of Jerome is in the process of completing a Comprehensive Land Use Plan for the City. The City's Land Use Plan is proceeding concurrently with the re-evaluation of the Jerome County Comprehensive Land Use Plan.

A review of the City of Jerome Water System Improvement Program Study<sup>(2)</sup> and the Proposed Comprehensive Plan for the City of Jerome<sup>(3)</sup>, in comparison with the Wastewater Facilities Plan, showed that sufficient service area was allowed to more than accommodate the service area proposed in the Water System Improvement Program and the planning area proposed in the City of Jerome Proposed Comprehensive Land Use Plan. Potential impacts and inconsistencies are discussed in the "Land Use" portion of Section III, "Environmental Impacts of Alternatives."

Two planning studies prepared by the State of Idaho address concerns associated with the Jerome Wastewater Facilities Project, the State of Idaho 303(e) Water Quality Management Plan<sup>(4)</sup> and the State of Idaho Water Plan for the Snake River Basin.<sup>(5)</sup> A review of the 303(e) Water Quality Management Plan showed that a wastewater facilities project in Jerome is necessary and called for in the Plan. However, the implementation of such a wastewater facilities project for the City of Jerome is behind schedule according to the State's Plan. The State Water Plan includes discussion of groundwater and agricultural land development. The proposed Wastewater Facilities Project is in conformance with the State Water Plan.

Jerome County has two existing studies that relate to the Wastewater Facilities Project, the existing Comprehensive Zoning Plan<sup>(6)</sup> and the Jerome County Comprehensive Rural Water and Sewerage Planning Study.<sup>(7)</sup> The Zoning Plan has been adopted by the Jerome County Board of Commissioners. Additionally, the County is presently engaged in a Comprehensive Land Use Planning Study which will update the existing Zoning Plan to conform to the new Land Use Planning Act, Chapter 65, Title 67 of the Idaho Code. At present the proposed action is not in conformance with the County's Comprehensive Zoning Plan. However, these discrepancies are expected to be resolved in the updated Plan (see Appendix A). No construction of the proposed facilities will commence until the land use impacts are resolved.

## PROJECT COSTS AND RESOURCE COMMITMENTS

Table IV.1 summarizes the costs of the proposed project. The recommended method of financing for 86% of the construction costs is through State and Federal grants. User charges would finance the remaining construction, operation and maintenance costs. User fees for the new system after Phase 1 is constructed are estimated at approximately \$5.00 per month (as 1975 dollars).

The resources that will be committed to the construction and operation of the proposed action include land, electric power, fuel, oil, construction materials and manpower. Utilizing current estimating techniques, available literature and data sources, only electric power, fuel oil and manpower resources for operation and maintenance and land resources can be estimated individually. These resource commitments for the project's life are estimated as follows:

Land .....	40 acres
Labor .....	80 man years
Electricity .....	57,500 MWh
Fuel Oil .....	80,000 gallons

## ENVIRONMENTAL IMPACTS

Primary ImpactsAir Quality

Impacts - Because no incineration of sludges is to occur under the proposed action, the major types of potential air pollutants are: particulates during the construction of the facilities; off gases; increases in pollutants caused by switching from natural gas to fuel oil consumption at the plant; and vehicle emissions from sludge transport and personnel commuting.

Construction activities pose the greatest potential threat of air quality impacts. In a study conducted by the Environmental Protection Agency<sup>(1)</sup> construction activities in the Twin Falls area were found to cause violations of the primary 24-hour standard for particulates of 260 micrograms per cubic meter. Types of construction most typically causing the standards to be violated were street and road construction, often involving earth moving, grading, and other activities which disturb the soil. Because it will be necessary to conduct similar activities during the construction of treatment facilities, ambient air standards for particulates may be violated intermittently over a period of weeks or months. However, since this is not a permanent condition, no long-term or highly degradative effects are expected other than nuisances caused by dust.

TABLE IV.1  
NET PRESENT WORTH OF THE PROPOSED PROJECT  
ALTERNATIVE 4  
TREATMENT AT NEAR-WEST SITE  
CANAL DISCHARGE(1)

<u>Capital Cost Items</u>	<u>Total Present Worth</u>	<u>Salvage Value Present Worth</u>	<u>Net Cost Present Worth</u>
Treatment Plant	\$3,320,000	\$ 411,000	\$2,909,000
Park	46,000	6,000	40,000
Outfall to Canal	27,000	4,000	23,000
Interceptors	1,859,000	597,000	1,262,000
Land	<u>160,000</u>	<u>160,000</u>	<u>-</u>
Total	\$5,412,000	\$1,178,000	\$4,234,000
<u>Operation &amp; Maintenance Cost Items</u>		<u>Annual Cost</u>	
Labor(a)		\$ 47,000	
Electrical Power		21,000	
Chlorine		1,200	
Water and Fuel		3,000	
Equipment Maintenance(b)		10,000	
Miscellaneous(c)		<u>6,000</u>	
Subtotal		\$ 88,200	
Equipment Replacement Sinking Fund(d)		<u>35,000</u>	
Total Annual O&M		\$ 123,200	
Present Worth (O&M)			<u>\$1,305,000</u>
USPWF 7%-20 yrs. = 10.594)			
TOTAL NET PRESENT WORTH			\$5,539,000

- (a) Includes payroll overhead and insurance at 25 percent of payroll.
- (b) Based on 2 percent of major equipment cost per year.
- (c) Includes other salaries, small tools, meeting, communications, and miscellaneous supplies.
- (d) Equipment replacement at 7 percent of major equipment cost per year.

Potential gas emissions from wastewater treatment works include chlorine, methane, ammonia, hydrogen sulfide, carbon monoxide, and oxides of nitrogen sulfur and phosphorus.<sup>(2)</sup> However, such gases are usually a greater potential hazard within the structure than in areas outside of it. For this reason, the design criteria expected to be employed during the detailed specifications and design of the proposed action's treatment plant (Step II in the EPA grant process), are expected to make any potential degradation of air quality highly improbable. Additionally, operation of the existing plant has not been known to emit any significant concentrations of these gases. Odors are discussed in more detail under "Odor" impacts later in this section. When the large mixing area and good mixing conditions<sup>(8)(9)</sup> available in the basin are considered, the small pollutant emissions from the burning of fuel oil are not expected to cause significant air quality degradation.

Because the emission loadings caused by the increase of vehicular traffic from additional sludge loadings and one to two man-trips to the plant for operation are even less than those caused by the consumption of fuel oils, no impact is expected from increased vehicular traffic.

Remedial Protective and Mitigative Measures - Particulate matter, mostly in the form of dust, generated during grading and earth moving is the major, primary adverse impact. The basic means of mitigation is efficient application of construction methods to minimize the amount of land disturbed, and to utilize a mobile sprayer to spray water on excavation sites to control dust generation.

#### Odors

Impacts - Because a new facility would be designed and constructed, odor problems from the existing plant are expected to be eliminated. Well-designed and operated activated sludge plants normally do not discharge significant amounts of odors or gases into the environment, so that they can be detected outside the boundaries of the treatment plant site. Assuming, for purposes of analysis only, that due to operation and maintenance problems, the plant intermittently emitted odors at concentrations of 100 odor units, it would then utilize the odor dispersion techniques developed by the Environmental Protection Agency.<sup>(9)</sup> It is estimated that these odors would be non-detectable during the daytime hours and non-detectable during the nighttime hours at distances greater than 600 feet from the plant. However, it should be emphasized that there are no odor emissions expected with a properly functioning plant. For these reasons, no odor impacts are expected by the proposed action.

Remedial Protective and Mitigative Measures - During the engineering and design phase of the project construction process (Step II), odor-reducing design and facility measures, as described in Appendix B, can be evaluated and applied where appropriate.

### Noise

Impacts - The greatest amount of noise is expected to occur during the construction of the treatment plant facilities. Using a worst-case value of 105 decibels, it is estimated that 150 feet away from the construction site, the noise level will be 67 decibels, corresponding to noise levels typically found in noisy urban residential areas. At a distance of 250 feet from the construction site, the noise caused by construction activities is expected to be approximately 30 decibels, a noise level corresponding to a typical bedroom at night.<sup>(2)</sup>

Another source of noise will be the pumps and aerators needed to run the plant. Nine more pumps are required to operate this plant than are required to operate the existing plant, for a total of 22 pumps and aerators. It is estimated that a person standing within 50 feet of all pumps and aerators operating simultaneously would hear a noise level of approximately 81 decibels. If that person were to move to a distance of 150 feet from all of the pumps and aerators, the noise level would be reduced to 50 decibels, a noise level typical of low-density residential neighborhoods (see Table III.2).

Even though the fairgrounds are within 250 feet of the plant boundary, adverse noise impacts upon them are considered to be negligible. This is because noise levels at typical fair or recreational-type activities usually exist at levels of 67 decibels or greater. The residences located within 200 feet of the plant construction area may experience noise impacts during the construction of the plant. During its operation no potential noise impacts are expected outside the boundaries of the treatment plant because of the low noise level, approximately 50 decibels, generated beyond 150 feet of the plant.

Remedial Protective and Mitigative Measures - The mitigative and control measures described below have been analyzed by EPA and found to be effective in controlling noise during construction.<sup>(9)</sup>

Construction equipment, with built-in noise controls as well as operational management, may sufficiently control noise output to meet environmental noise requirements in most cases.

Noise may be measured at the borders of the construction site, to determine limits of maximum flexibility of operation on-site, while meeting noise standards off-site.

Design considerations to reduce equipment noise include: exhaust mufflers, intake silencers, engine enclosures, proper cooling system, and fan design. Other techniques to be considered include: replacing individual operations and techniques by less noisy ones (e.g., using welding instead of riveting, mixing concrete off-site instead of on-site, and employing prefabricated structures instead of building them on-site) and selecting the quietest alternative items of equipment (e.g., electric instead of diesel-powered equipment, hydraulic tools instead of pneumatic impact tools).

Earth-moving equipment noises are associated predominantly with exhaust and inlet noise. Other sources include mechanical and hydraulic transmission and actuation systems and cooling fans. Mufflers offer the greatest potential for noise abatement. Also, when possible, locating haul roads behind natural earth berms or embankments has been found to be effective.

Most of the noise from material handling equipment, such as cranes, concrete mixers, and concrete pumps, is generated by the engine. The greatest potential abatement is via engine quieting. Where necessary, stationary equipment, such as pumps, generators, and compressors can be quieted by mufflers and enclosures.

The Occupation Safety and Health Administration (OSHA) has several publications and other information on reducing noise during construction activities.

#### Water Resources

Surface Water - The construction of an adequately designed, maintained and operated treatment plant for the City of Jerome will solve the problems of the existing treatment plant which currently cause intermittent, but frequent, discharge violations of effluents into the irrigation canal system. Once this proposed treatment plant is constructed, it is believed that the Jerome Sewage Treatment Facility can be and will be operated properly so as to maintain effluent concentrations within State and Federal discharge standards. This assumption is based on three criteria: (8) the sincere interest of the City to operate and maintain the plant properly to allow economic and population growth and development; (9) the high success records of recently-constructed sewage treatment facilities; and (10) the fairly intense amount

of surveillance, testing, regulation, and enforcement of operating treatment plants done by the State of Idaho Department of Health and Welfare and the Environmental Protection Agency (see Appendix C).

Based on the above information, the proposed treatment plant discharge is expected to have a beneficial impact upon the irrigation and stock water contained in the canal system. The construction of a new plant will mitigate existing slug or high-concentration discharges intermittently discharged into the canal system by the existing plant. Thus, the probability of the water quality violating State and Federal water quality standards for irrigation and stock water will be significantly reduced.

Groundwater - The anticipated impacts upon groundwater are beneficial in that potential sources of contamination from septic tanks are eliminated.

#### Soils and Hydrology

The proposed project is expected to have insignificant impacts upon soils and hydrology. During construction, excavations and land clearing will make the soil susceptible to erosion from wind and rain. However, because of the small amounts of acres involved and the short time they are expected to be unprotected, these impacts are also expected to be insignificant.

#### Fish and Wildlife

Despite the loss of some small rodents, the potential impacts upon fish and wildlife from the proposed action are beneficial in that the proposed buffer zones will provide habitat for game birds and other small animal browsers, such as rabbits. However, these beneficial effects are expected to be insignificant because of the small numbers of animals affected.

#### Historic, Architectural and Archaeological Resources

No archaeological survey work is required and no impacts are expected (see Appendix A).

#### Aesthetics

Impacts - The potential adverse aesthetic impacts of increased traffic volumes caused by additional noise from commuter trips of operating personnel and sludge transport, are considered to be insignificant if they are noticed at all.

Remedial Protective and Mitigative Measures - As previously discussed in Alternative 2, proposed buffer areas for the treatment plant are anticipated to mitigate or reduce the adverse visual impacts of this proposed action.

### Land Use

Impacts - The proposed service area conflicts (in the County areas) with the existing Jerome County Comprehensive Zoning Plan.<sup>(3)</sup> This conflict is caused by the extension of the service area boundary and proposed construction of interceptors to land presently zoned as agricultural. Agricultural lands do not create enough demand to cost-effectively sewer these areas. Additionally, the construction of sewer facilities in this area could create a land use change, resulting in more dense or more urban use. Figure III.1 illustrates those portions of the service area that are in conflict with the County's Comprehensive Zoning Plan and Regulations.

EPA cannot participate in funding a proposed action not in agreement with a duly-adopted plan. However, Jerome County is presently in the process of updating the existing Comprehensive Zoning Plan and Regulations. Thus, the land use conflicts described above are expected to be resolved prior to the estimated start-up date of February 1978 for construction of the treatment plant. A letter from Jerome County Planning and Zoning Administrator describing the current land use planning status, as it affects the Facilities Plan, is presented in Appendix A.

A review of the County's Comprehensive Zoning Plan and Regulations shows that a treatment plant does not fit any of the definitions of uses allowed in agricultural zones. However, the County updated Comprehensive Zoning Plan is expected to contain provisions for allowing wastewater treatment plants in the County by conditional use permit. The permit would require a public hearing before approval (see Appendix A).

The City has contacted the County to begin negotiating the establishment of a City Impact Zone. A City Impact Zone is authorized under the State Land Use Planning Bill (Chapter 65 of the Idaho Code Section 67-6526) and is basically an area outside of the City limits for which the City has control over land use planning and other development considerations. The proposed Impact Zone would increase the City's planning, zoning and building code enforcement powers one mile outside the existing City limits to one and one-half mile south of the I-90 interchange.<sup>(11)</sup> If the Impact Zone as proposed (see Figure III.2) is approved, the



proposed facilities service area would be in conformance with the County's land use planning policies. The City would have all zoning, building permit, and subdivision development authority, including the ability to make subdivision specifications meet the City's building ordinance. Since both sites would be located within this impact area, it is expected that either treatment plant location would then be acceptable.

It is important to note, however, that the proposed Impact Zone is, at this time, only a proposal and not an adopted part of the County's Comprehensive Zoning Plan. To date, the Facilities Plan is in conflict with current adopted local land use policies and acceptance of the proposal appears doubtful (see Appendix A).

There appear to be potential adverse land use impacts caused by changes in population densities. The existing service area of approximately 1,170 acres serves a population of approximately 5,625 persons and associated industry, commercial establishments and public services. The proposed service area would include nearly 5,030 acres, with a population of 12,000 persons by 1995, as well as associated industry, commercial and governmental services. Based upon this information, the existing population density per acre of the service area is 4.8 persons. The proposed service area would have an approximate density of only 2.4 persons per acre (approximately half of the existing density). It appears that a service area of only 2,500 acres would maintain population densities at their present levels.

It may be advantageous to maintain densities at present levels or above 4.8 persons per acre. It has been the experience of some study team members that some areas of the country have not required sewer service until densities exceeded 9 persons per acre. Low densities such as 2.4 persons per acre may not only cause dis-economies in the construction, operation and maintenance of facilities, but they may also inhibit the orderly and efficient implementation of land use planning goals and objectives.

Based on the agricultural land planning done by the Idaho Department of Water Resources in their State Water Plan<sup>(5)</sup>, there appear to be no significant adverse impacts caused by the loss of agricultural lands in the Jerome area. The report states that it will be necessary to develop approximately 1,200,000 acres of new agricultural land in the State of Idaho by 2020, allowing for loss of agricultural lands caused by expected increases in urbanization. The report states that there are approximately 7,400,000 acres of irrigable lands and recommends methods to develop the 1,200,000 acres of land necessary by the year 2020.

Based on the findings of this report, there appear to be no significant adverse impacts associated with the loss of agricultural land, assuming that more agricultural acres are developed and that land uses with greater economic productivity such as residential, commercial and industrial replace those acres lost to urbanization.

Remedial Protective and Mitigative Measures - Current planning programs in the Greater Jerome Area provide an excellent forum for mitigating the potential adverse land use impacts of the proposed action. It is suggested that during the planning process the present service area be reassessed in terms of population densities and mitigating sprawl as well as indiscriminate spotty development.

In addition, the proposed Impact Zone criteria and the policies concerned with land use controls in the area of the Impact Zone should be addressed by both the County and the City of Jerome. In so doing, one suggested alternative that may be reviewed is that the proposed service area be reduced within the proposed Impact Zone, to control densities and spotty development.

Once these policies and service area determinations have been made by the City and County planning and elected officials, the service area can be specifically defined in terms of the existing policies, and then construction time-phasing can also be finalized.

#### Unique Land Features

No unique land features are expected to be impacted by the proposed action.

#### Taxes

The potential primary impacts to tax structures and tax bases may occur through increased taxes to finance construction and operation of facilities. Because the proposed facilities are to be financed through user charges, there are no potential adverse impacts upon the taxes of the area.

Another means by which tax bases and taxes can be impacted by facilities plans is by conversion of taxable land to non-taxable land through public acquisition. Because the proposed site is located outside of the City limits, the potential loss of 28 to 50 acres of taxable land, when compared to 215,133 acres, does not appear to have significant financial impact upon the overall tax base of the County. For the reasons stated above, the proposed action is not expected to have a significant adverse financial impact upon the taxes and tax base of the local area.

### Personal Incomes

Impacts - The estimated annual user service charges of \$68.00 for Jerome's proposed facilities fall within the range of typical residential sewer service charges (\$30 to \$84 a year) as shown in the City's Wastewater Facility Plan.<sup>(1)</sup> Because these charges fall into the typical range, and because sewer service is not required in most urban areas by law and is an expected expense, a sewer service charge of \$5.00 per month in the Jerome area is not expected to have significant adverse impacts upon personal incomes.

One exception to the above statement is for persons on fixed incomes, such as retired persons. There is a potential for these persons to be adversely impacted by increases in user charges. The degree of impact is directly related to the cost increase of the service.

Remedial Protective and Mitigative Measures - The potential adverse impacts upon fixed incomes described above, can be mitigated through special provisions incorporated into the fee schedules for retired citizens and other individuals on fixed incomes. To accomplish this, an analysis of their purchasing power, and the effect of rate increases on purchasing power would have to be completed in detail, so that effective rates for fixed income persons could be established. This task is properly outside of the EIS.

### Public Utilities

The only existing public facilities to be impacted by the proposed project are solid waste facilities. As described earlier in the "Environmental Setting" portion of this report, solid waste is collected and transported by a private contractor to a disposal site owned and operated by the private contractor. It is anticipated by the City and its contractor that there is sufficient capacity in the site to handle the projected sludge waste loads through the planning period. The Idaho Department of Health and Welfare reported no potential adverse impacts on the operation of the site.<sup>(12)</sup> The small amounts of water, electricity and fuel oil consumed by the alternatives are not expected to significantly impact the availability of these resources.

One private utility, the Northside Canal Company, which operates and maintains the irrigation supply system, is expected to be impacted beneficially by the proposed action. These impacts are described in the "Water Resources" section of the alternative impact descriptions.

### Recreation

In this proposed action the existing treatment plant site would be converted into a park. Because of the site's proximity to residential areas in the City of Jerome, the park is expected to create beneficial impacts upon recreation.

### Secondary Impacts

#### Population and Economic Growth

Population and economic growth over the past four years in the Greater Jerome Area has been dramatic. New industries have located, payrolls and production have increased, and the population has grown at an average annual rate of approximately 8.5%. During this period, the existing Jerome facility has failed to operate effectively to treat the City's waste. Some of the equipment and major treatment units of the treatment plant are over 20 years old and are in fair to poor physical condition. It has been difficult for the plant to perform adequately, and there have been many operational problems.

The City as a whole has been aware of the malfunctioning of the plant, primarily due to odors and discharges to the canal system; however, this has not affected the population economic growth of the area. Growth has continued despite sewerage inefficiencies because (1) industries interested in the area have been able to locate by providing their own facilities or are not the type of industry using large quantities of water; (2) there are no restrictions on septic tanks if a percolation test comes out positive, and (3) the capacity of the existing collectors has been able to accept hookups without causing overloads, except at the plant. It is anticipated that growth in the Greater Jerome Area will continue at its present rate whether or not it is served by a properly functioning sewage treatment plant. No other growth limiting factors, such as shortages of water supply, transportation, land availability, or solid waste disposal facilities, are foreseeable at this time.

#### Redevelopment and Construction in Built-Up Areas

Impacts - Because of the potential land use and density impacts described in the "Land Use" section above, there appears to be significant impact potential caused by the lack of redevelopment and construction in existing developmental areas. A large low-density service area, including approximately 4,000 acres of relatively flat agricultural lands, appears to provide adequate land area to allow indiscriminate satellite or spotty residential, industrial and commercial development.

What can occur in cities with low-use densities is that rehabilitation costs for older areas may be greater than replacement costs, due to low land costs created by adequate or more-than-adequate land availability. This can cause a destruction of aesthetics, efficient circulation and facilities utilization. It increases traffic and congestion, and a general breakdown of a unified, efficient community behavioral pattern may occur. In fact, this is why most governments including the State of Idaho, through passage of its Land Use Planning Act, require that land use plans be developed to mitigate or prevent exactly these types of occurrences. For these reasons, there appear to be significant potential impacts to the redevelopment and construction in existing urban areas.

Remedial Protective and Mitigative Measures - Through adequate reassessment of the land use planning goals, objectives, policies, and service areas as proposed above, the potential adverse impacts upon redevelopment and construction in built-up and urban areas in the City of Jerome can be mitigated. During the planning analysis, special consideration should be given to policies for directing service area growth, the potential population densities, and existing areas of social or economic importance that are in need of rehabilitation or upgrading.

## SECTION IV

## FOOTNOTES

- (1) CH<sub>2</sub>M/Hill, Inc. Wastewater Facilities Plan for Jerome, Idaho, Boise, Idaho, 1975.
- (2) CH<sub>2</sub>M/Hill, Inc. City of Jerome Water System Improvement Program, Boise, Idaho, 1974.
- (3) City of Jerome, Idaho, Planning Department, Proposed Comprehensive Land Use Plan, 1975.
- (4) Idaho Department of Health and Welfare, Draft 303e Water Quality Management Plan for the State of Idaho, Boise, Idaho, 1976.
- (5) Idaho Water Resources Board, State of Idaho Water Plan - Volume II, Boise, Idaho, 1975.
- (6) Jerome County, Idaho, Ordinance Establishing a Comprehensive Zoning Plan and Regulations, as amended, Jerome, Idaho, 1973.
- (7) Idaho Water Resources Board, Comprehensive Rural Water and Sewerage Planning Study for Jerome County, Boise, Idaho, 1973.
- (8) Findley, Charles E. and Bray, David C., Attainment of Ambient Particulate Matter Standards in Idaho, U.S. Environmental Protection Agency, 1973.
- (9) U.S. Environmental Protection Agency, Office of Water Operations, Direct Environmental Factors at Municipal Wastewater Treatment Works, Washington D.C., 1976.
- (10) Jerome County, Idaho, Ordinance Establishing a Comprehensive Zoning Plan and Regulations, amended, Jerome, Idaho, 1973.
- (11) Hancock, Charles, Mayor, City of Jerome, Letter to the Jerome County, Idaho Board of Commissioners and the Jerome County Planning and Zoning Commission, Jerome, Idaho, 1976.
- (12) Idaho Department of Water Resources, et., al., Idaho Environmental Overview, Boise, Idaho, 1975.
- (13) CH<sub>2</sub>M/Hill, Inc. Addendum to Wastewater Facilities Plan, City of Jerome, Idaho, Boise, Idaho, 1976.

## V. UNAVOIDABLE ADVERSE IMPACTS



## SECTION V

### UNAVOIDABLE ADVERSE IMPACTS

The unavoidable adverse impacts associated with the proposed Action, Alternative 4, are primarily concerned with construction. During construction, temporary impacts will be associated with excavation of ground, clearing of cover and vegetation, dust and noise. During construction and during operation maintenance of the facilities, energy resources, building materials and replacement materials, manpower and energy resources will have to be consumed. While buffering vegetation and other techniques to reduce the visual impacts upon the area are expected to occur, there will be some aesthetic impacts associated with construction. These aesthetic impacts will be most significant to the people living nearest the Near-West Site.

The unavoidable beneficial impacts of the proposed alternative will reduce the risk of surface water contamination, odors and septic tanks causing problems for soils, hydrology, and groundwater. In addition, the aesthetics of the existing plant site will be improved after its conversion to a park. The creation of a new park within the City limits of Jerome is considered a beneficial impact upon recreation.

The socio-economic and cultural considerations and justifications for the above unavoidable adverse impacts are discussed in more detail in Section VI.



**VI. THE RELATIONSHIP BETWEEN SHORT-TERM  
USES OF THE HUMAN ENVIRONMENT AND  
THE MAINTENANCE AND ENHANCEMENT  
OF LONG-TERM PRODUCTIVITY**



## SECTION VI

### THE RELATIONSHIP BETWEEN SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

#### PHYSICAL IMPACTS

The negative short-term physical impacts of the proposed project will be more than offset by the future benefits. Negative impacts can be reduced to temporary disruption (one to ten years) of present types and quantities of vegetation along pipeline routes and to minor decreases in the aesthetic appeal adjacent to the Near-West Site. The aesthetic impacts would be primarily confined to the four residences west of the plant. There will also be construction impacts which will include some traffic impacts from construction workers and material hauling and noise. Construction along the interceptor routes may temporarily impact the flow of traffic where pipelines are in the right-of-ways of highways and streets.

Benefits to the physical environment would occur in varying degrees. Major physical impacts would reduce odor and surface water impacts caused by the existing treatment plant. Other moderate beneficial impacts would include the reduction of potential contamination to groundwater and degradation to soils caused by moderate concentrations of septic tanks. Other positive impacts of lesser degree would include aesthetic improvements and increased cover for game birds. The plant would also be operating legally, in conformance with Federal and State water pollution discharge standards.

#### RESOURCE IMPACTS

The proposed action will require fuel, electricity, and manpower to operate and maintain the plant as follows:

<u>Land</u> <u>(Acres)</u>	<u>Labor</u> <u>(Man Yrs.)</u>	<u>Electricity</u> <u>(MWh)</u>	<u>Fuel Oil</u> <u>(Gallons)</u>
40	80	57,500	80,000

#### SOCIO-ECONOMIC AND CULTURAL IMPACTS

The principal impact of the proposed action is the effect upon land use. As previously discussed, the proposed action is not in compliance with existing land use and zoning policies. However, as has been previously pointed out, both the City and the County are currently updating their land use plans and policies and it is anticipated that policies will be developed which will allow this plant to conform to existing land use policies and goals (see Appendix A).

Economic impacts include increased user costs which are expected to create insignificant impacts, except potentially to persons with fixed incomes. Loss of tax generating land is also considered to be an insignificant impact.

#### SECONDARY AND GROWTH-INDUCING IMPACTS

The proposed action is not anticipated to have any significant impacts on the growth and development of the Greater Jerome Area, except for impacts associated with reduced population densities. In fact, it is anticipated that this proposed action will constitute a mitigative action to help stem the potential impacts upon ground and surface waters and odors currently existing in the area.

Impacts associated with reduced population densities, caused by the large service area, are expected to be adverse, affecting redevelopment and cost-effectiveness of public utilities as described in Section III of this EIS.

## **VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES**

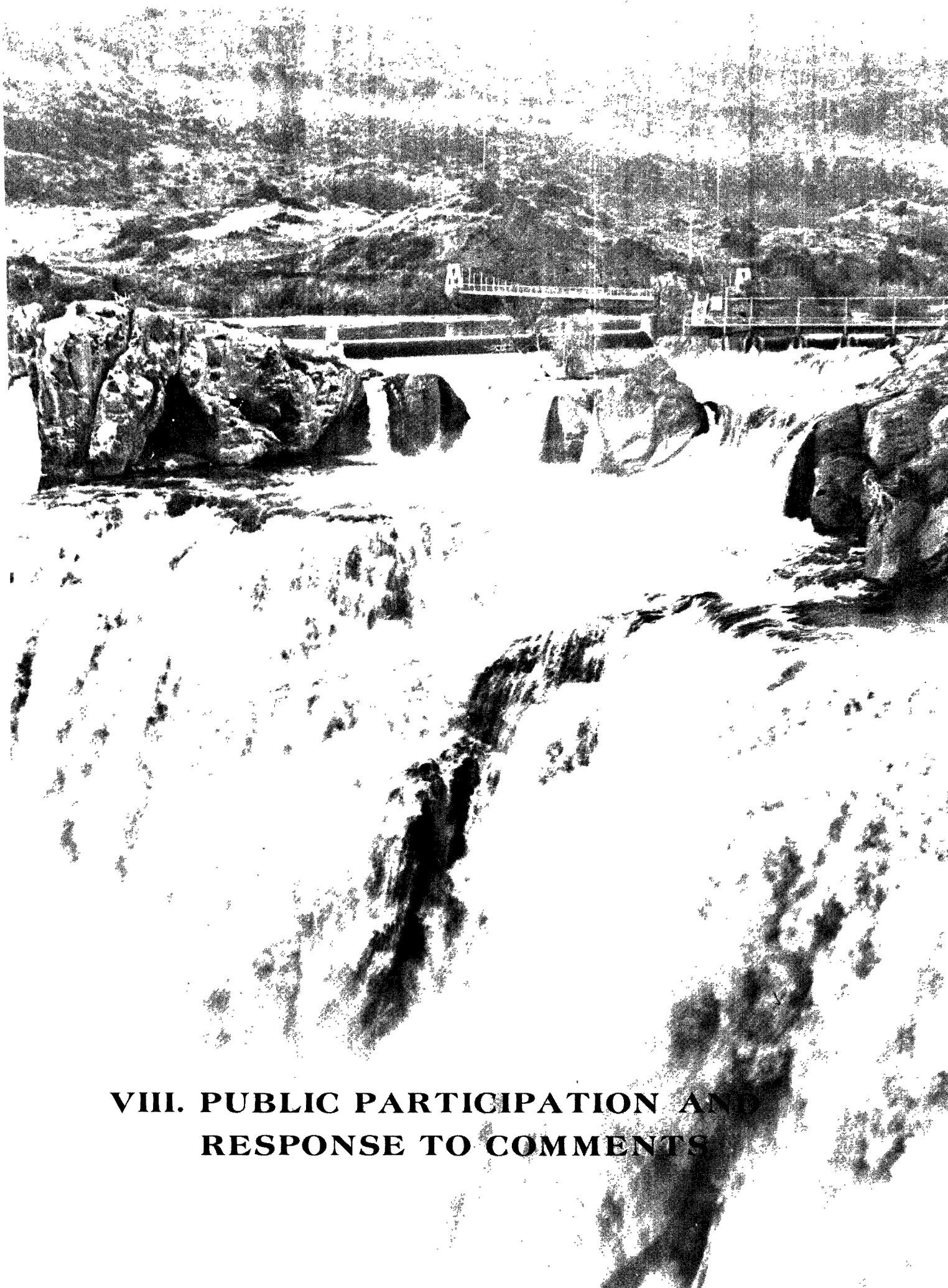


## SECTION VII

### IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

There will be minor and major irreversible and irretrievable commitments of renewable and non-renewable resources. Significant commitments of general irrecoverable resources, i.e., time, building materials and energy, will be required during construction of the proposed treatment action. After construction, operation of the treatment plant will require irrecoverable resources such as time, chemicals, energy and maintenance materials. The identifiable resource commitments were listed in Section VI.

The secondary effects of population growth will result in the conversion of open, natural land to urban development; reduction in air quality; increased use of water, electricity, petroleum products, timber and food; and increased demand for social services. If growth occurs in a reasonably well conceived manner, none of these effects are forecast to be significantly adverse. However, much of the area is not planned to obtain the best foreseeable growth uses, and unless this situation is altered, adverse impacts are more likely to occur. However, it should be remembered that the secondary impacts are expected to remain the same regardless of which alternative is chosen, including Alternative 1 - "No Action".



## **VIII. PUBLIC PARTICIPATION AND RESPONSE TO COMMENTS**

## SECTION VIII

### PUBLIC PARTICIPATION AND RESPONSE TO COMMENTS

#### PUBLIC MEETING RESULTS

On Tuesday, May 25, 1976, the Environmental Protection Agency (EPA), in cooperation with the City of Jerome, conducted a public information meeting concerning the preparation of the Draft Environmental Impact Statement for the City of Jerome Wastewater Facilities Project. The meeting was held at the Jerome Jr. High School at approximately 8:15 p.m. The purpose of the meeting was to provide information about the Environmental Impact Statement Process for the project to concerned and interested citizens in the Greater Jerome Area. The specific objectives of the meeting were as follows:

1. Notify the public that an Environmental Impact Statement is being prepared for the Jerome Wastewater Facilities Project.
2. Explain the process for preparing the Environmental Impact Statement.
3. Answer questions from interested citizens.
4. Provide a forum for discussion of the issues concerning the development of the Environmental Impact Statement.
5. Distribute to the public a Public Information Questionnaire to obtain their written views and opinions (see Appendix D).

The EPA project staff attending the meeting included the following:

Dick Thiel  
Chief, Environmental Impact Section  
Environmental Protection Agency  
Region X Office  
Seattle, Washington

Warren T. McFall  
Project Engineer  
Jerome, Idaho Wastewater Facilities Project  
EPA, Idaho Operations Office  
Boise, Idaho

Norma Young  
EPA Project Manager  
Jerome, EIS  
Region X Office  
Seattle, Washington

Hayden L. Street  
Project Manager  
R. W. Beck and Associates

The meeting lasted approximately 2-1/2 hours with much exchange between members of the audience and the project staff. The meeting began with a brief presentation by the EPA project staff describing the purpose of the meeting and the Environmental Impact Process. After these brief introductory remarks, much discussion occurred with the members of the audience raising many issues and asking a broad spectrum of questions ranging from the legality of the proposed project, to operation and maintenance of new plants, to specific questions about the Environmental Impact Process. The specific questions, topics and issues brought up at the meeting are summarized in the "Issues" portion of Section I of this Final EIS and specifically addressed in the text. Additionally, technical questions were evaluated in Section II of this report under the descriptions of the "Alternatives" and changes made where necessary.

EPA in Seattle received approximately 25 completed questionnaires, letters, or letters and questionnaires addressing specific issues and concerns of the proposed Wastewater Facilities Project for the City of Jerome. These concerns are also addressed in this Final Impact Statement Report.

The meeting was considered by the EPA project staff to be very successful because of the comments and issues raised by the citizens of the Greater Jerome Area and because of the public notification of the Impact Statement through the newspaper, radio, and word-of-mouth. Also, the project staff was very pleased with the turnout for the meeting, numbering over 100 at one point.

#### PUBLIC HEARING

The Environmental Protection Agency held a public hearing of the Draft Environmental Impact Statement for the City of Jerome Wastewater Facilities Project on September 16, 1976. The hearing was held at the auditorium of the Central Elementary School in Jerome, Idaho and attended by over 100 people. Because of the length of the official hearing record and the cost involved, we have not reproduced the document here. It is available for public review at the Jerome Public Library and at EPA's Region X Office in Seattle, Washington.



The major concerns expressed at the public hearing included the following:

1. The most cost-effective alternative would be selected.
2. The facility would be capable of handling future growth and development of the area.
3. Impacts upon the agricultural lands would be minimized.
4. Odors would be controlled.
5. Discharge of effluents into the irrigation canals would not harm crops or livestock.
6. That the new plant would be operated and maintained properly.

Following the formal Public Hearing a question and answer period was conducted to enable the attendees to clarify issues of interest or concern. The issues and concerns addressed during this period were the same as those addressed during the hearing, as listed above.

The Environmental Protection Agency, Region X wishes to express its appreciation to all commenting agencies, groups and individuals for the time and effort spent in reviewing the Draft EIS. All comments were presented to the Regional Administrator and were considered by him in EPA's preparation of the Rural EIS.

#### COMMENTS TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

The following includes copies of all written comments to the Draft EIS received by the Environmental Protection Agency. Where appropriate, comments in need of a response have been identified by line and number immediately adjacent to the comment. Immediately following the last page of each comment submittal will be the written response of EPA. A log of the written comments received and the topics addressed by each is included.

[illegible]



**UNITED STATES DEPARTMENT OF AGRICULTURE**  
**SOIL CONSERVATION SERVICE**

Room 345, 304 North 8th Street, Boise, Idaho 83702

September 13, 1976

Richard R. Thiel, Chief  
Environmental Impact Section, M/S 443  
U.S. Environmental Protection Agency  
Region X  
1200 Sixth Avenue  
Seattle, Washington 98101

RECEIVED

SEP 15 1976

Dear Mr. Thiel:

We have reviewed the draft environmental statement for the Wastewater Treatment Plant, City of Jerome. The document appears to have identified all the viable alternatives and assessed their potential impacts. We would offer the following comments for your consideration.

On page I-13, we would recommend substituting, "Farm population has been diminishing in the County with conversion of many existing farms from cropland to pasture and grazing." The farm population has decreased but not because of the conversion to livestock operations. Note that this is borne out in the table on the same page by the significant decline in cash receipts from livestock since 1972.

None of the alternatives proposed will withdraw a large enough area of agricultural land to be significant nor is the proposed land of a unique nature.

In Alternatives 1, 2, 4 and 8, discharge will be made into the North Side Canal System in either the N or J Canals. With the exception of Alternative 1 (the no action alternative), the newly built, properly functioning plant will discharge effluent that will have no detrimental effects on agriculture. If, however, the plant malfunctions or breaks down, effluent could be discharged into the canal system that could be detrimental to livestock and agricultural land.

Not mentioned in the Environmental Impact Statement is the fact that from the City of Jerome, the N Canal travels south and a little west. It traverses through the area that is rapidly converting to rural homes and ranchettes. This trend will probably continue and with it will be increasing numbers of small animals, livestock and children.

Also, except for a small amount of runoff, the N Canal has almost no flow from December through April. Thus discharged effluents could possibly build up and become more concentrated during these months. It would be advisable to discharge effluent into the J Canal which has a higher flow during these months.



Richard R. Thiel  
9/13/76 - Page 2

Alternatives 3, 5 and 6 appear to have no detrimental effects to agricultural land except for the possibility of contamination caused by leakage or a puncture in the high pressure pipeline. | 6

Alternative 7 offers some definite advantages in that no effluent would be discharged into any water courses. The key to this alternative would be locating a site suitable for an eighty acre storage pond or a combination of ponds that would provide the required storage. Because of the varying soil depth and rolling topography, a feasible site may be difficult to locate within the three mile radius. | 7

Regardless of the alternative chosen, proper construction methods and conservation practices need to be followed to prevent wind and water erosion and to prevent siltation of canals and water courses. Following construction, all disturbed areas need to be shaped and then seeded with adapted grasses and/or shrubs. | 8

We wish to thank you for the opportunity to review and comment on this draft environmental impact statement.

Sincerely,

 (Acting)

Amos U. Garrison, Jr.  
State Conservationist

Response to Comments from United States Department of Agriculture

1. Your comments have been incorporated into the text of Section I.

2. Assuming that your comments address the land requirements for treatment plants only, we concur.

3. We concur.

4. Your comments have been incorporated into the text of Section I.

5. We concur.

6. We concur.

7. Comment noted.

8. We concur.

# CH<sub>2</sub>M HILL

engineers  
planners  
economists  
scientists

VIII-9

16 September 1976

B8039.60

Richard R. Thiel, Chief  
Environmental Impact Section, M/S 443  
U. S. Environmental Protection Agency  
Region X  
1200 Sixth Avenue  
Seattle, Washington 98101

Dear Dick:

Subject: Draft Environmental Impact Statement for the City  
of Jerome Wastewater Facilities Project

This letter summarizes our review of your draft EIS report  
for the City of Jerome wastewater facilities project on  
behalf of the City of Jerome.

Comments are presented below along with references to your  
draft EIS report.

1. Page 2, Alternative 4. The new activated sludge  
plant would be located "adjacent to" the existing  
plant, not "at" the existing treatment plant site.  
The new plant would be on the opposite side of the  
"N" Canal from the existing plant. | 1
2. Page 2, Alternative 8. The total present worth  
cost estimate for this alternative was not pre-  
pared on the same basis as the other alternatives,  
and therefore, should not be used for comparison  
with other alternatives. This present worth cost  
estimate includes a treatment plant modification  
construction cost estimate (prepared by the EPA),  
which does not include a sufficient quantity of  
treatment units to satisfy EPA's own requirements. | 2

<sup>1</sup> "Design Criteria for Mechanical, Electric, and Flood System  
and Component Reliability," U. S. Environmental Protection  
Agency, Office of Water Program Operations, Washington, D.C.,  
EPA-430-99-74-001 (1974).

RECEIVED

SEP 13 1976

EPA-510

Richard R. Thiel, Chief  
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The State of Idaho Department of Health and Welfare (H&W) has confirmed<sup>2</sup> that Reliability Class II (discharge to recreational waters) is required for the City of Jerome Wastewater Treatment Plant discharge. Reliability Class I requires the highest degree of treatment. Reliability Class II was used in preparing cost estimates for Alternatives 2 through 7. Alternative 8 was reportedly<sup>3</sup> prepared for Reliability Class II; however, it appears that it was prepared for a reliability class less than Reliability Class III. This is evidenced by the fact that the alternative only includes one primary clarifier, one aeration basin, and one chlorine contact basin, while Reliability Class III requires two primary clarifiers, one aeration basin, and two chlorine contact channels. Reliability Class II requires two units for each of these treatment components. 2

A construction cost estimate for Alternative 8 in accordance with Reliability Class II is provided in attached Table 1. The design factors upon which this cost estimate is based are shown in attached Table 2.

The corrected present worth cost estimate for Alternative 8 should be \$7,597,000, based on attached Table 1 and draft EIS Table II.10 values for interceptor, operation and maintenance costs.

3. Page 3, Organizations Invited to Comment. It would be interesting to know how the list of interested individual was developed. Many other individuals have indicated their interest in the project by signing one of four petitions against constructing a new plant at a new site west of the City, constructing a new plant adjacent to the existing plant, or modifying the existing plant. Only a small number of the petitioners are included on the EPA's selected list. 3

<sup>2</sup>Personal communication with David Sanders on 15 September 1976.

<sup>3</sup>Personal communication with Tom Johnson on 7 September 1976.



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4. Page I-2, Background of Past Events, Paragraph 2. Two public hearings and two public meetings were held, not four public hearings. 4
5. Page II-3, Paragraph 1. An additional sentence should advise that new plant site interceptors require two pump stations and the existing site area interceptors require four pump stations. 5
6. Figure II.2, After Page II-4. This flow diagram is confusing. 6
7. Pages II-17 and II-18, Alternative 8. The existing influent pump station is not properly located on the treatment plant site to allow effective plant expansion and renovation. This is shown on attached Figure 1. A new pump station is required.

The existing grit removal facility only has a capacity of about 0.5 mgd compared to a design flow of 1.6 mgd. The facility should be replaced with a new aerated grit chamber to reduce the quantity of grit which is currently carried over to the primary clarifier. The grit is pumped from the primary clarifier to the anaerobic digester, from which it is expensive to remove. 7

The existing primary clarifier is not properly located to allow effective plant expansion and renovation (attached Figure 1). The existing primary clarifier is 30 years old and in poor physical condition. Two new primary clarifiers must be added.

The existing filter tower is not large enough, nor located properly to be used in plant expansion and renovation (attached Figure 1). A slightly larger new filter tower should be added.

Two new aeration basins must be provided. The existing trickling filter is not large enough, deep enough, or properly located to be converted to an aeration basin, as recommended by the EPA.

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The existing secondary clarifier is not properly located to allow effective plant expansion and renovation (attached Figure 1). Two new secondary clarifiers are required.

7

Two new primary anaerobic digesters with a digester control building must be added. The existing digester can be converted to a secondary digester with a new floating cover.

8. Page II-18, Costs and Resource Development. The Alternative 8 present worth cost should be \$7,597,000, as discussed in Comment 2, thereby dropping this alternative from a ranking of 2 to a ranking of 4. 8
9. Page II-19, Paragraph 1. The monthly rate charge for Alternative 8 should be increased to reflect revised construction costs. The corrected value would be about \$5 per month. 9
10. Page II-25, Table II.6. The title for this table should indicate river discharge. 10
11. Page II-27, Table II-9. This table should be replaced with attached Table 1, as discussed in Comment 2. 11
12. Table II.10, After Page II-27. The Alternative 8 treatment plant cost should be \$4,305,000, not \$1,929,000. The outfall cost should be \$32,000, not \$125,000. The total cost should be \$7,597,000, not \$5,314,000. These changes are explained in Comment 2. 12
13. Page II-29, Table II.11. Alternative 8 land requirements should be 25 acres, not 10 acres. Labor should be at least 80 (equal to Alternatives 2 through 5), because it would be a much more complex plant to operate than Alternatives 2 through 5. Alternative 8 would require 70,600 MWh, including pump station power usage, not 20,424. 13
14. Page III-2, Land Use, Impacts. Any development within the agricultural zone around Jerome will 14

Richard R. Thiel, Chief  
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- require some rezoning action by the County.  
Location of a new wastewater treatment plant in  
the agricultural zone will also require rezoning  
by the County. 14
15. Page III-4, Last Paragraph. Preliminary inter-  
ceptor sizing has assumed nine people per acre;  
although by 1995, the average density is expected  
to only be 2.4 people per acre. Interceptor  
construction has been assumed to be constructed in  
phases (3 or 4). New interceptors would not be  
expected to be constructed until the population in  
the area served by the interceptor justifies  
construction. 15
16. Page III-16, Table III.3. Plant discharge values  
for BOD and suspended solids are obviously in  
error. 16
17. Page III-18, Table III.5. Existing Jerome discharge  
values for BOD and suspended solids are obviously  
in error. 17
18. Page III-26, Land Use, Impacts. Although immediate  
interceptor construction has been assumed to be  
accelerated for new plant site alternatives (which  
may or may not materialize), the ultimate land use  
impact of the alternative is tied to the service  
area boundary and should be about the same for all  
of the alternatives. 17
19. Page III-36, Alternative 8, Odors, Impacts. The  
potential for odors from the upgraded plant  
alternative (ARF/activated sludge process with  
anaerobic digestion) is equal to the other  
alternatives because of its complexity and the  
fact that it utilizes anaerobic sludge digestion,  
as opposed to aerobic sludge digestion. 18
20. Page III-36, Alternative 8, Fish and Wildlife.  
This alternative has much less buffer zone than  
any of the other alternatives (2 through 7). 19

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21. Page III-37, Land Use Impacts. Land use impacts for this alternative are nearly the same as for Alternatives 4 and 5. Twenty-five acres of new land will be required for new sludge drying beds. 20
22. Page III-38, Table III.4. While the natural noise level may appear to be lower for an expanded and upgraded plant at the existing site, the new plant alternatives (2 through 5) can be designed to provide about 45 dB-A at the property line. This level can be compared to about 74 dB-A 300 feet from the freeway (Alternatives 2 and 3) during normal traffic hours. The freeway noise would mask out the new treatment plant noise during normal daytime traffic. Nighttime noise is expected to be about 5 dB-A above present levels at the property line. 21
- Odor potential for Alternatives 4 and 5 should be the same as Alternatives 2 and 3 at a level of second best. 22
- Land use for Alternatives 1, 4, 5, and 8 should be about the same as discussed in Comment 21. 23
- Aesthetics of Alternative 8 should be about fourth best, not second best. The upgraded existing plant site would be crowded and not nearly as attractive as Alternatives 2 through 5. 24
- Taxes' and personal incomes' values should be adjusted to compensate for the revised costs of Alternative 8. 25
- The final ranking should show that Alternatives 2 and 4 are equally better than all other alternatives.
23. Page III-39, Paragraph 1. The alternatives with the least environmental risk are Alternatives 2 and 4, not Alternative 8, as discussed in Comment 22. 26
24. Page III-40, Final Ranking Table. The cost ranking should be revised to show Alternative 2 and 4 as tied for first and Alternative 8 as third.

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The environmental ranking should be revised to show Alternatives 2 and 4 as tied for first and Alternative 8 as third.

26

The legal ranking should be explained further to allow better identification of ranking criteria and its importance compared to the cost and environmental rankings.

27

The final ranking should be revised to reflect the changes in the other three rankings.

25. Page V-1, Resource Impacts. The labor and electricity values for Alternative 8 should be revised in accordance with Comment 13.

28

In summary, we believe that the information provided in this letter supports Alternatives 2 and 4 as the most environmentally sound alternative for the City of Jerome to pursue.

Alternative 2 will allow almost total gravity flow to the proposed plant site from the entire service area, compared to Alternative 4, which will require that about 20 percent of the service area wastewater be pumped. The two additional pump stations required for existing plant site alternatives would require an annual operation and maintenance cost equivalent to sewer service charges for over 400 houses.

29

The possibility of Ida-Gem Dairy permanently discontinuing operation and dropping out of the municipal sewerage system has recently developed. At this time, we believe the resulting reduction in load will reduce the size of a new or expanded treatment facility, but that there will be no significant change in the relative cost and environmental rankings as identified in this letter.

30

VIII-16

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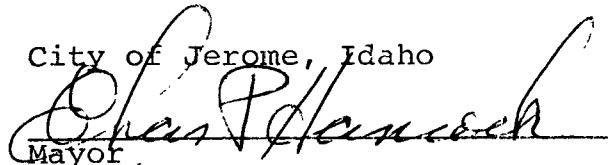
We recommend that Alternative 2 be selected as the final EIS recommendation.

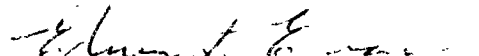
Very truly yours,

  
Glenn A. Richter

The City officials have read the contents of this letter and are in agreement with it.

City of Jerome, Idaho

  
Mayor

  
Director of Public Works

dx/2

Attachments

TABLE 1  
CAPITAL COST ESTIMATE (a)  
ABF/ACTIVATED SLUDGE TREATMENT  
MODIFICATION OF EXISTING PLANT

<u>Item</u>	
Bond and Insurance	\$ 24,000
Move-In and Temporary Facilities	230,000
Influent Pump Station	194,000
Screening and Shredding Structure	44,500
Aerated Grit Chamber	63,000
Aeration Basins	196,000
Secondary Clarifiers	160,000
Flow Measurement	22,500
Chlorine Contact Chambers	40,000
Filter Pump Station	40,000
Solids Handling Building	495,000
Sludge Drying Beds	61,000
Primary Anaerobic Digestion	263,000
Chlorine Building	89,500
Administration Building	100,000
Filter Tower	145,000
Electrical	235,100
Yard Work	370,000
Miscellaneous Structures	123,000
Primary Clarifiers	196,000
Upgrade Secondary Digester	<u>60,000</u>
Subtotal	\$3,151,600
Plus 35 Percent (b)	<u>1,103,100</u>
Treatment Subtotal	\$4,254,700
Outfall	\$ 24,000
35% contingency	<u>\$ 8,000</u>
Outfall Subtotal	\$ 32,000
Land (25 acres)	<u>\$ 50,000</u>
TOTAL CAPITAL COST	\$4,336,700

(a) Estimated ENR Construction Cost Index = 2,400

(b) Contingencies, Legal, Administration, and Engineering

TABLE 2  
ABF/ACTIVATED SLUDGE  
EXISTING PLANT MODIFICATIONS  
DESIGN FACTORS

<u>Item</u>	<u>Equipment Required</u>	<u>Existing Equipment Available</u>	<u>New Equipment Needed</u>
<u>INFLUENT PUMP STATION</u>			
No. of Pumps	3	1	2
Type	Centr.		
Capacity, Each	2 @ 1.75 1 @ 0.75	0.72 mgd	1.75 mgd
<u>SCREENING &amp; SHREDDING</u>			
No. of Comminutors	1		1
Type	Worthington		Worthington
Size	15"		15"
<u>GRIT CHAMBERS</u>			
No. of Units	2		2
Type	Aerated		Aerated
Capacity, Each	1.2		1.2
Grit Pumps	2		2
Classifier	1		1
<u>PRIMARY CLARIFIERS</u>			
No. of Units	2	1	2
Size	45' Ø	45' Ø	45' Ø
SWD	10	8	10
Mechanism Type	Plow	Plow	Plow
Design Detention Time, Hr.	1.78	1.42	1.78
Design, Overflow Rate with 1 Unit Down	1,010	-----	1,010
Peak Overflow Rate	800	1,000	800



TABLE 2 (cont.)

<u>Item</u>	<u>Equipment Required</u>	<u>Existing Equipment Available</u>	<u>New Equipment Needed</u>
<u>ABF TOWER PUMP STATION</u>			
No. of Pumps	3		3
Type	Centr.		Centr.
Capacity of Each	2 @ 3.4 mgd 1 @ 1.7 mgd		2 @ 3.4 mgd 1 @ 1.7 mgd
<u>ABF TOWER</u>			
No. of Units	1	1	
Size	40' Ø	32' Ø	40' Ø
Depth of Media	21		21
Media Type	Redwood	Plastic	Redwood
Media Volume	24,100	17,300	24,100
BOD Loading			
lb/1,000 cf/d	150	210	150
<u>AERATION BASINS</u>			
No. of Units	2		2
Volume - Cu. Ft.	40,000		40,000
- Gallon	300,000		300,000
Dike Inside Slope	2:1		2:1
Lining	Conc.		Conc.
Detention Time	9 Hrs.		9 Hrs.
BOD Loading			
(lb/1,000 cf/d)	68		68
Basin Dim. @ Wall	88 x 53		88 x 53
SWD	12		12
Basin Depth	16		16
No. of Aerators	4		4
Size	25 hp		25 hp
Type	2 sp. slow		2 sp. slow
Total	100		100
Power Level			
(hp/mg)	167		167
Freeboard	4'		4'

TABLE 2 (cont.)

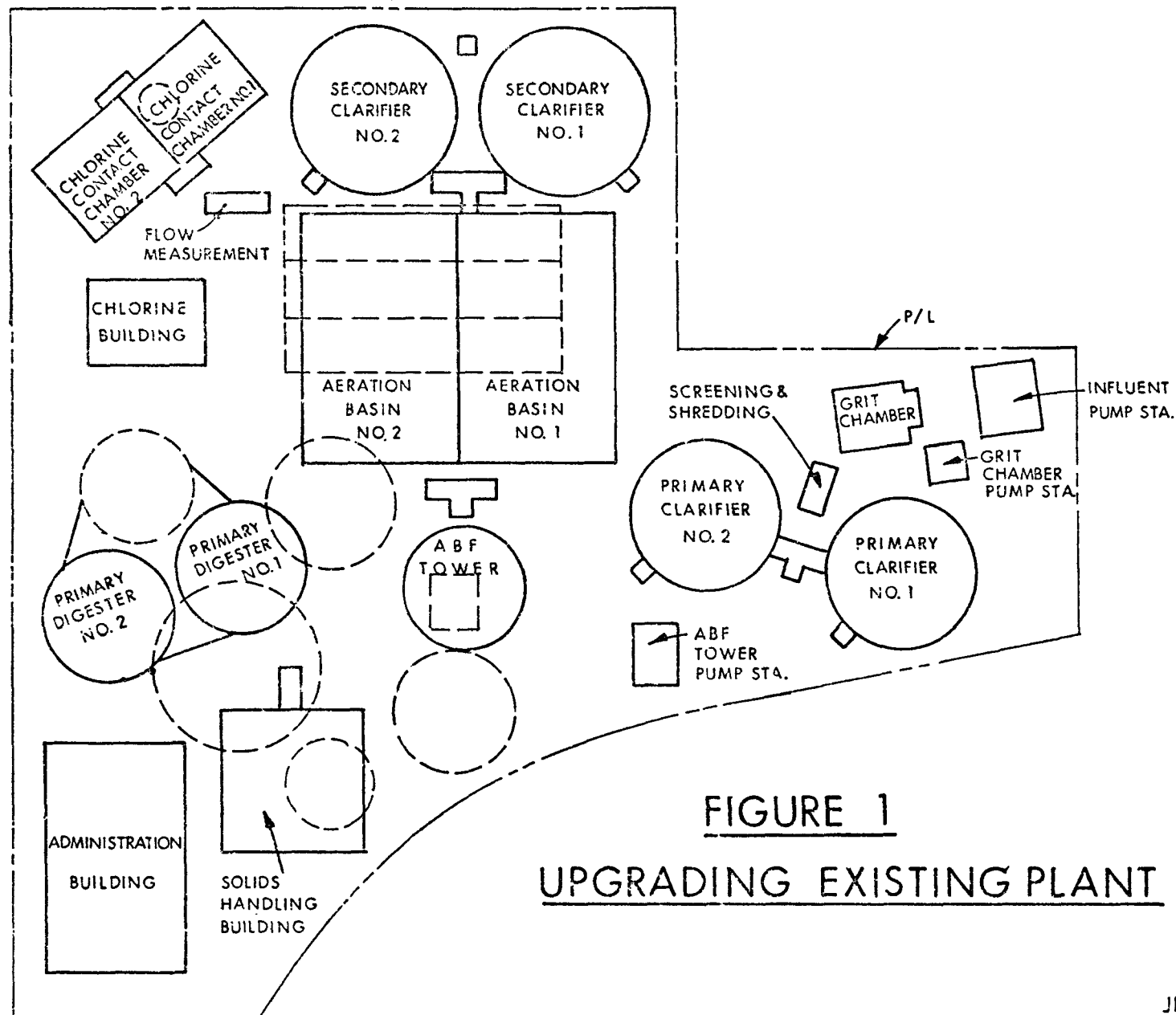
<u>Item</u>	<u>Equipment Required</u>	<u>Existing Equipment Available</u>	<u>New Equipment Needed</u>
<u>SECONDARY CLARIFIERS</u>			
No. of Units	2		2
Size	40' Ø		40' Ø
SWD	11		11
Design Overflow Rate	640		640
(gal/sf/d)			
Design Solids Loading Rate			
(lb/sf/d)	25		25
<u>FLOW MEASUREMENT STRUCTURE</u>			
No. of Units	1		1
Type	Parshall Flume		Parshall Flume
Size	0'-9"		9"
Method of Meas.	Ultrasonic Probe		Ultrasonic Probe
<u>CHLORINE CONTACT CHANNELS</u>			
No. of Units	2		2
Size	24 x 24 x 8		24 x 24 x 8
Side Slopes			
Volume - Cu. Ft.	4,600		4,600
- Gallons	34,400		34,400
Design Detention Time	1 Hr.		1 Hr.
<u>SLUDGE PUMP STATION</u>			
No. RSS Pumps	3		3
Capacity Each	555 gpm		555 gpm
Total	1,665 gpm		1,665 gpm
Type	Centr.		Centr.
No. WSS Pumps	2		2
Capacity Each	135 gpm		135 gpm
Total	270 gpm		270 gpm
Type	Centr.		Centr.

TABLE 2 (cont.)

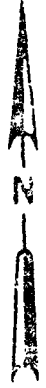
<u>Item</u>	<u>Equipment Required</u>	<u>Existing Equipment Available</u>	<u>New Equipment Needed</u>
No. PS Pumps	2		2
Capacity Each	55 gpm		55 gpm
Total	110 gpm		110 gpm
Type	Pos. Displ.		Pos. Displ.
No. Centrifuges	2		2
Capacity Each	50 gpm		50 gpm
Total	100 gpm		100 gpm
Type	Basket		Basket
RSS Flow Measure- ment	Parshall Flume		Parshall Flume
Size	9"		9"
WASS Flow Measure- ment	Mag Flow Meter		Mag Flow Meter
Size	6"Ø		6"Ø
No.	4		4
<u>PRIMARY DIGESTERS</u>			
No. of Units	2		2
Size	45' Ø		45' Ø
SWD	25		25 SWD
Volume - Cu. Ft.	71,500		71,500
- Gallons	534,800		534,800
Design Detention Time	20 days		20 days
No. of Mixers	2		2
Type	Gas		Gas
Size	10,835 cu. ft./d.		10,835 cu. ft./d.
Head Exch.	3		3
Recycle Pumps	3		3
No. Sludge Transfer Pumps	2		2
Capacity Each	30 gpm		30 gpm
Total	60 gpm		60 gpm
Type	Pos. Displ.		Pos. Displ.

TABLE 2 (cont.)

<u>Item</u>	<u>Equipment Required</u>	<u>Existing Equipment Available</u>	<u>New Equipment Needed</u>
No. Sludge Recirc. Pumps	2		2
Capacity Each	60 gpm		60 gpm
Total	120 gpm		120 gpm
Type	Centr.		Centr.
<u>SECONDARY DIGESTER</u>			
No. of Units	1	1	
Size	40' Ø	40' Ø	
SWD	20'	20'	
Volume - cu. ft.	25,120	25,120	
- gallons	188,000	188,000	
Design Detention Time	11 days	11 days	
No. Digested Sludge Pumps	2		2
Capacity Each	60 gpm		60 gpm
Total	120 gpm		120 gpm
Type	Pos. Displ.		Pos. Displ.
Scum Pump No.	1		1
<u>SLUDGE DRYING BEDS</u>			
No.	35	3	35
Size Each	100 x 18	100 x 18	100 x 18
Total	63,000 SF	5,400	57,600
Loading Rate	20 lb/SF/yr	20 lb/SF/yr	20 lb/SF/yr



**FIGURE 1**  
**UPGRADING EXISTING PLANT**



VIII-23



JEROME, IDAHO

Response to Comments from CH 2 M/Hill

1. The following correction has been incorporated into the Final EIS: A new activated sludge plant would be located on the Near-West Site immediately to the northwest of the existing plant site and across from the "J" Canal.

2. The Alternative 8 included in this Final EIS is the most cost-effective alternative of the three existing plant upgrade alternatives evaluated in the Addendum to the Wastewater Facilities Plan, City of Jerome, Idaho, as prepared by CH<sub>2</sub>M/Hill, December, 1976. All alternatives discussed in this Final EIS were engineered and costed, based upon the State of Idaho Reliability Class II Treatment Requirements. The present worth cost of Alternative 8 is estimated by CH<sub>2</sub>M/Hill in the Facilities Plan Addendum at \$5,539,000.

3. The names that are listed in the Summary of the EIS are those of interested individuals who returned the questionnaires distributed at the public information meeting held in Jerome on May 26, 1976 or who contacted EPA directly regarding the proposed project. These persons were the nucleus of the local citizen mailing list for distribution of the Draft EIS. In addition, the Draft was placed in the Jerome Civic Club Memorial Library and was available for review. Copies were mailed to all who requested them, and those who requested the Draft will receive copies of the Final EIS.

4. We concur with your comment and we have made the correction in this Final EIS.

5. We concur with your comment and we have made the correction in this Final EIS.

6. Comment noted.

7. The Alternative 8 originally included in the draft has been replaced (see response to comment #2 above).

8. The rankings in this Final EIS have been adjusted to reflect the engineering changes made in the Addendum to the Facilities Plan. The cost-effect ranking of Alternative 8 included in the Final EIS is third most cost-effective (see response to comment #2 above).

9. The approximate monthly service charge rate for Alternative 8 is \$5.00 (see response to comment #2 above).

10. We concur and the correction has been made.
11. This table and the cost within have been replaced with a table from the Addendum to the Facilities Plan (see response to comment #2 above).
12. See response to comment #11 above.
13. These values have been corrected using information from the Addendum to the Facilities Plan (see response to comment #2 above).
14. We concur. See Appendix A.
15. Comment noted.
16. We can find no error.
17. The construction time phasing of interceptors affects the potential for mitigation of land use impacts, as described in the "Land Use" discussion in Section III, "Environmental Impacts".
18. We concur with your statement.
19. Comment noted.
20. This section of the report has been updated using information from the Addendum to the Facilities Plan.
21. Comment noted.
22. We concur with your statement.
23. See response to comment #21.
24. Aesthetics were evaluated from views outside the plant site, such as from residences, automobiles and from other public use areas.
25. These adjustments have been made in accordance with the Addendum to the Facilities Plan (see response to comment #2).

26. The final rankings are as follows:

<u>Alternative</u>	<u>Final Ranking</u>	<u>Cost Ranking</u>	<u>Environmental Ranking</u>	<u>Legal Ranking</u>
4	1st	2	1	1
8	2nd(a)	4	2	1
2	3rd	3	3	1
6	4th	4	4	1
5	5th	5	5	1
3	6th	6	6	1
7	7th	7	8	1
1	8th	1	7	8

(a) Because the cost differences between Alternatives 2, 4 and 8 were less than 10% and the difference in environmental ranking score was greater than 10%, emphasis was placed on the environmental ranking.

27. The only difference in legal rankings on the Final EIS is that Alternative 1 does not meet the Federal Regulations for Public Law 92-500, the Federal Water Pollution Control Act Amendments, or State laws regulating the discharges from municipal wastewater treatment plants.

28. These adjustments have been made in accordance with the Addendum to the Facilities Plan (see response to comment #2 above).

29. Comment noted.

30. The possibility of Ida-Gem Dairy closure and subsequent reduced wastewater load to the treatment plant is discussed in the Preface of this EIS.



Advisory Council on  
Historic Preservation  
1522 K Street N.W.  
Washington, D.C. 20005

September 9, 1976

RECEIVED  
SEP 17 1976  
EPA-117

Mr. Donald P. Dubois  
Regional Administrator  
Region X  
U.S. Environmental Protection  
Agency  
1200 Sixth Avenue  
Seattle, Washington 98101

RECEIVED  
SEP 16 1976  
OFFICE OF FEDERAL AFFAIRS

Dear Mr. Dubois:

This is in response to your request of August 9, 1976 for comments on the draft environmental statement (DES) for the Wastewater Facilities Project, Jerome, Idaho.

We note from our review of the DES that the Environmental Protection Agency (EPA), in consultation with the Idaho State Historical Society, has determined that should alternatives 1, 2, 4, or 8 be selected, the proposed undertaking would not affect properties included in or eligible for inclusion in the National Register of Historic Places.

We note that additional cultural resource studies would be necessary should alternatives 3, 5, 6, or 7 be selected. Accordingly, we wish to remind EPA that should alternatives 3, 5, 6, or 7 be selected and it is subsequently determined the undertaking will affect cultural resources included in or eligible for inclusion in the National Register, it must afford the Advisory Council an opportunity to comment pursuant to the "Procedures for the Protection of Historic and Cultural Properties" (36 C.F.R. Part 800).

In addition, the final environmental statement for this project should contain the comments of the Idaho State Historic Preservation Officer who is Dr. Merle W. Wells, Idaho Historical Society, 610 North Julia Davis Drive, Boise, Idaho 83706. | 1

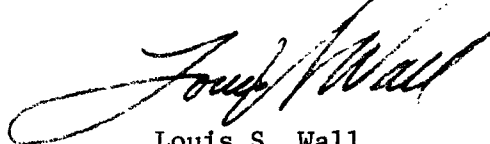
Should you have questions or require assistance, please contact Brit Allan Storey of the Advisory Council staff at P. O. Box 25085, Denver,

VIII-28

Page 2  
September 9, 1976  
Mr. Donald P. Dubois  
Wastewater Facilities Project

Colorado 80225, or (FTS) 234-4946.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Louis S. Wall". The signature is written in dark ink and is positioned above the printed name and title.

Louis S. Wall  
Assistant Director, Office  
of Review and Compliance

Response to Comments from Advisory Council on Historic Preservation

1. We concur (see Appendix A).

September 16, 1976

Environmental Impact  
Section, U.S. EPA, 1200  
Sixth Avenue  
Seattle, Washington 98101

RECEIVED  
SEP 22 1976  
EPA-510

Gentlemen:

I am deeply concerned over the fact that a handfull of people can defer or affect the entire decision of EPA or any other group of Federal or State officials. Especially, for so long a period of time and to the point that it is costing the tax payers of this city or any other area considerable sums of money and loss of valuble time, when time is of an essence, as is in the case of rebuilding a new sewer plant here in the city of Jerome.

It seems there is no doubt that the best place for the new sewer site is southwest of the City. Not only for the present time but more so in the future, if Jerome keeps growing and expanding the way it has the past five years and if we want industry to continue to come into our community.

One of the most important factors, seemingly, overlooked by EPA officials, especially, at a time when great emphasis is being placed upon the country's energy shortage is the great amount of energy which will be unnecessarily used to operate these expensive lift stations to carry the city's efflueient to the present site compared to the amount of energy required where gravity flow is present.

What is wrong with our democracy when the minority wins over the majority? I seem to recall not too many years back when it was the other way around. (How things does change).

It seems according to EPA reports there will be no visible odors, noise or unsightness. So what is really the complaint of this handfull of people about or against this purposed plant site? What are they trying to prove? When the livelihood of so many people is at stake. Lets say there will be some of the not so pleasent undesireables mentioned above in this paragraph. It would certainly affect far less residents at the proposed new site than at the present location. (Not to Mention the heart of the city).

Possibly some of my views are a little selfish, since I live Norhtwest of town not to far from the present site. But I say, regardless of me, you or any other individual, the most important factor or thing is the City itself.

What is best for the City, not just for the present but for many years to come. After all this plant is going to cost city tax payers a lot of hard earned tax dollars, so why build or upgrade something that will not take care of the City's needs for a long time.

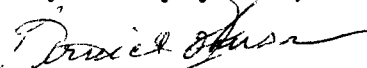
It seems the following factors should rule over someones desires or whims:

1. What is best for the City as a whole.
2. Which location would better serve the city and surrounding community.
3. Which location will better serve the present industries as well as invite and attract new industry and developments.
4. Which location will cost tax payers less money to maintain and operate after its initial construction cost.
5. Which location will take less of our precious energy.
6. How far do we project into the future.
7. Do we want this same problem to face us or our children within the next 15 or 20 years.

These are just a few of the facts which should be considered before any decision is made as to which avenue to take and it seems the answer is quite clear and has been proven, by the city's private engineering firm, CH<sub>2</sub>M of Boise.

EPA, Friend or Foe, is any-bodys guess. What started out intentionally to be a good thing and a guide line for rules and regulations has turned out to be a monster. If we, the people don't fight it while there still is a chance we will all be devoured by it's regulations, unfair demands and pressures. They tell us what to do. How to do it. Where and when and if that's not enough, they even pull our purse strings. I call that digging hard and deep into our rights as a citizen as well as into our pockets. That hurts most of us, don't you think.

Very truly yours,

  
Bernice Johnson

cc. Jerome City Council  
Mayor Hancock

Response to Comments from Bernice Johnson

We understand your concern with delay in improving Jerome's Sewage Treatment System; however, certain procedures are required to satisfy environmental laws. The City of Jerome has applied for grant assistance for construction of Jerome's Sewage Treatment Plant, as authorized by the Federal Water Pollution Control Act Amendments of 1972. This grant would provide 75% of funds needed for eligible costs of planning, design and construction of Jerome's sewage treatment plant. However, EPA regulations and the National Environmental Policy Act of 1969 (NEPA) require preparation of an Environmental Impact Statement (EIS) where projects may significantly affect the quality of the human environment. Upon review of Jerome's proposed Wastewater Facilities Plan, EPA determined that an EIS was needed to satisfy NEPA and EPA regulations because of the expected growth in the area, the subsequent effect of this growth on agricultural or undeveloped land, and the concern of potential conversion of agricultural land to use as a site for the treatment facility.

Regarding energy consumption, the alternatives at the Far-West Site will ultimately require two pump stations and the alternatives at the Near-West Site four pump stations. All the alternatives, except the "No Action" Alternative, will do away with the two existing pump stations in the proximity of Elm Street.

Appendix C presents a discussion of good operation and maintenance of sewage treatment plants, which is the key to prevention of odor problems. The new sewage treatment plant for Jerome must receive good operation and maintenance to avoid odor nuisance. Buffering and landscaping will reduce noise and improve aesthetics of the site area.



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
REGIONAL OFFICE  
ARCADE PLAZA BUILDING, 1321 SECOND AVENUE  
SEATTLE, WASHINGTON 98101

September 22, 1976

VIII-33

REGION X

Office of Community  
Planning & Development

IN REPLY REFER TO:

RECEIVED

SEP 24 1976

EPA-FIS

Richard R. Thiel, Chief  
Environmental Impact Section, M/S 443  
U. S. Environmental Protection Agency  
1200 Sixth Avenue  
Seattle, Washington 98101

Dear Mr. Thiel:

Subject: Draft Environmental Impact Statement  
Wastewater Facilities  
Jerome, Idaho

We have reviewed the statement submitted with your August 9, 1976 letter.

The proposed action is to provide an adequate wastewater treatment and disposal program for the city of Jerome, Idaho.

We do not believe the proposed program would adversely affect areas of our concern. Any program selected should be in conformance with the city's comprehensive plan so that other facilities are also planned for to meet the growth potential. Perhaps the re-evaluation of the Jerome County comprehensive plan should be completed prior to final selection of a program. We defer to the agencies to comment on areas not within our expertise.

Thank you for the opportunity to comment.

Sincerely,

Robert C. Scalia  
Assistant Regional Administrator

*Actg*

Response to Comments from U.S. Department of Housing and Urban  
Development

---

1. We concur that the Facilities Plan should be in conformance with both the City's and County's Comprehensive Land Use Plans.





VIII-35

# United States Department of the Interior

OFFICE OF THE SECRETARY  
PACIFIC NORTHWEST REGION  
P.O. Box 3621, Portland, Oregon 97208

September 27, 1976

ER-76/785

Mr. Richard R. Thiel, Chief  
Environmental Impact Section, M/S 443  
U. S. Environmental Protection Agency, Region X  
1200 Sixth Avenue  
Seattle, WA 98101

RECEIVED  
SEP 30 1976  
EPA-EIS

Dear Mr. Thiel:

This is in response to your request that the Department of the Interior review and comment on the Draft Environmental Impact Statement for City of Jerome Wastewater Facilities Project, Jerome County, Idaho.

## GENERAL COMMENTS

The statement expresses considerable concern over impacts of the various alternatives on ground water. However, there is no analysis of exfiltration in the existing or proposed systems. Possibly the depth to water is sufficiently great (p. I-3) that infiltration is no problem, unless perched water is encountered. Because of the nature of the basaltic aquifer--except in areas of very deep organic soil--there is potential for quick access of pollutants to the ground water reservoir. Since much of the area has only thin soils--too thin for proper functioning of septic tanks--analysis of exfiltration seems especially appropriate (p. III-34).

The statement does not indicate compliance with section 106 of the National Historic Preservation Act or Executive Order 11593, "Protection and Enhancement of the Cultural Environment." To comply, it is necessary to consult the "National Register of Historic Places" and the Idaho State Historic Preservation Officer for information on historic properties within the project zone. This information should be included in the statement.

If possible, the Final Environmental Statement should contain an explanation of any new developments regarding conflicts between alternatives and the County Zoning Plan. Perhaps it should be pointed out what the advantages are, if any, of Alternative #2, since it currently is recommended by the city of Jerome.



SPECIFIC COMMENTS

Page I-18 and I-19 -- The historical properties listed should be evaluated for eligibility for inclusion in the National Register. If they are eligible, they should be nominated. | 4

Page II-9, Alternative 3 -- This alternative may be undesirable if it could diminish the esthetic values of the Snake River Canyon. | 5

Page II-13, next-to-last paragraph -- A sand and gravel excavation site occurs southeast of the 35-acre parcel recommended under this alternative for expanding the existing plant site. The sand and gravel pit and other mineral operations will not be adversely affected by this project. | 6

Page III-34, last paragraph -- More specific criteria as to the depth and type of soil that would be required should be included in the statement. | 7

Page III-38, Figure III-4 -- Considering its "worst" rating for "land use", perhaps the time-phasing of construction, or the service area for each phase, should be reassessed for Alternative #2, if it is selected. | 8

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

Sincerely yours,



Charles T. Hoyt  
Special Assistant to the Secretary

Response to Comments from U.S. Department of Interior

1. All new construction of grant eligible sewer lines will be tested to make sure that infiltration (measured as exfiltration) will not exceed the Federal and State standards of 200 gallons per inch of diameter and mile of length in one day. While the Facilities Plan and Inflow and Infiltration (I and I) Analysis was completed on all existing sewers, no I and I problems were identified.

2. See Appendix A.

3. See Appendix A.

4. We concur. However, nomination of such properties is properly outside of the scope of an EIS.

5. We concur.

6. Comment noted.

7. Alternative 7 has been eliminated as a cost-effective alternative. Thus, further analysis of this alternative would not be cost-effective.

8. Comment noted.

VIII-38

CECIL D. ANDRUS, Governor  
COMMISSION

ROBERT G. THOMAS, Coeur d'Alene  
PAUL C. KEETON, Lewiston  
JOHN EATON, Cascade  
JACK HEMINGWAY, Sun Valley  
H. JACK ALVORD, Pocatello

## IDAHO FISH AND GAME DEPARTMENT

Region 4  
868 East Main Street  
P.O. Box 428  
Jerome, Idaho 83338  
324-4350

October 1, 1976

RECEIVED

OCT 4 1976

EPA-EIS

U. S. Environmental Protection Agency  
Region X  
1200 Sixth Avenue  
Seattle, Washington 98101

Re: Draft EIS for the proposed City of Jerome Waste Water Treatment Plant

Gentlemen:

The Department of Fish and Game has reviewed the draft EIS for the City of Jerome Wastewater Facilities project and offers the following comments:

1. Page I-10, Fish and Wildlife, Paragraph 1, Line 5. We suggest changing "partridge" to Hungarian partridge and "mallard ducks" to several species of ducks.
2. Page I-10, Fish and Wildlife, Paragraph 1. Considerable numbers of waterfowl species nest and raise their broods in and adjacent to the many canal systems in the area. These include mallards, teal, pintails, widgeons, shovelers, scaup, coots, sora rails, common snipe and others. A variety of shore birds also use the canals for nesting and feeding.
3. Page I-10, Fish and Wildlife, Paragraph 2, Line 7. "Chuckers" should be chukars.
4. Page I-10, Fish and Wildlife, Paragraph 3, Line 1-2. The first two sentences in the third paragraph read as follows: "Due to the lack of surface flow or streams, the only nearby fishery is in the Snake River. Rainbow trout are taken in addition to bottom fish such as channel catfish, carp, chiselmouth and bridge-lip sucker." We recommend these sentences be changed to read as follows: "Due to the shortage of streams in the area, the most important nearby fishery is

JOSEPH C. GREENLEY  
Director

POST OFFICE BOX 25  
600 SOUTH WALNUT STREET  
BOISE, IDAHO 83707

OCT 4 1976  
REC'D

U.S. Environmental Protection Agency  
October 1, 1976  
Page 2

in the main Snake River. Game fish found in this section of the Snake River include rainbow trout, cutthroat trout, brown trout, whitefish, largemouth and smallmouth bass, channel catfish, bullhead catfish, bluegill, yellow perch and white sturgeon."

5. We anticipate no significant detrimental impact on wildlife values associated with either of the eight alternatives. Alternative 8, given a Final Ranking, Cost Ranking, Environmental Ranking and Legal Ranking of "one" would have very little, if any, adverse impact on wildlife.

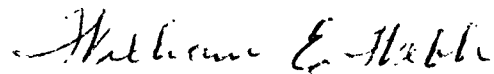
2

6. For whichever Alternative is finally selected, it is recommended the project area or areas be landscaped with buffer zones to provide a diversity of vegetative types and ecologic niches for wildlife species.

3

Sincerely,

IDAHO DEPARTMENT OF FISH AND GAME  
Joseph C. Greenley, Director



William E. Webb  
Region 4 Supervisor

WEW:pkg

cc: Environmental Services

Response to Comments from Idaho Department of Fish and Game

1. The suggested corrections in comments 1-4 were incorporated into the text of Section I.
2. We concur.
3. We concur.

Jerome, Idaho  
September 29, 1976

Mrs. Norma Young,  
Environmental Impact Section  
EPA,  
Seattle, Washington

Dear Mrs. Young,

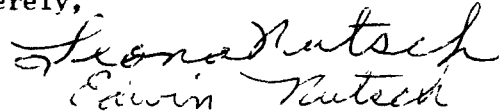
Our farm property is located West of Jerome, North and West of the Ploss farm where the initial draft by CH2M engineers proposed a sewer system to serve the city of Jerome, the discharge to be sprinkled on farm land in that area.

We have opposed, and still oppose, any plan to move the sewer from its present location to the agricultural area, for divers reasons, many of them expressed through petitions over the months past.

We are particularly distressed by the manner in which the City of Jerome has used the canal system. More than once sewage has been dumped into the system during the summer months to cause much concern and even hamper irrigation operations; also, down through the years youngsters have swam in the canals, or floated in them with the aid of innertubes. Last winter our children came home after "skating" on the canal, displaying evidence of the content of the frozen material on which they had been skating. The health hazard aspect of using the canal system for sewage discharge is one which should be given consideration.

We believe the city would avoid future controversy with the rural segment if the plant is built in the area of its present location, with discharge piped to the canyon, or other untenable area as a protection to both city and country dwellers.

Sincerely,



Edwin Nutsch

Mr. and Mrs. Edwin Nutsch

RECEIVED

OCT 1 1976

Jerome, Idaho  
Sept. 29, 1976

STATEMENT CONCERNING JEROME SEWER PROJECT

We wish to express our sincere thanks for the EIS, and for the consideration shown us at the hearing held September 16th. We appreciate the time and effort you have spent on this.

Since we have heretofore expressed to you our concerns, we wish to reaffirm the positions taken in opposition to any plan which would necessitate moving the Jerome sewer system into the agricultural area.

We feel the freeway should be kept as the dividing line between urban growth and the agricultural community, thus making a more attractive approach to Jerome for those using the freeway.

Respectfully submitted,

*Laurel O. Ploss*  
*Mrs. Laurel O. Ploss*  
Mr. and Mrs. Laurel Ploss

RECEIVED

OCT 4 1976

EPA-510



Jerome, Idaho  
Route 2,  
September 28, 1976

Environmental Protection Agency  
Seattle, Washington

Attention: Mrs. Norma Young

Dear Mrs. Young,

Since the controversy over the Jerome sewer developed almost two years ago, we have signed numerous petitions and letters in an effort to express disapproval of any plans on the part of the City of Jerome to locate its proposed new sewer in the agricultural area Southwest of Jerome. We reassert our position in such opposition, believing a site at the present location or immediately adjacent thereto, will adequately serve the city.

The EIS you recently released was in most instances a vindication of the position taken by the rural community. Once last summer, and again this summer, sewage has been dumped into the canals serving our area, and we believe the health of livestock and youngsters using the canals for swimming and floating, etc., may be endangered. The city has shown no inclination to protect the rural community in this respect, and we therefore believe, since the city is reluctant to give us or the North Side Canal Company, any guarantees of any kind, that future plans should be to build a system East of the freeway, and pump the discharge to the canyon as it is done in some places.

Yours truly,

*Mr. and Mrs. Bill Morgan*

Mr. and Mrs. Bill Morgan

RECEIVED

OCT 4 1976

EPA-711

Route 3,  
Jerome, Idaho  
September 29, 1976

Environmental Protection Agency  
Impact Section,  
1200 Sixth Avenue  
Seattle, Washington

Gentlement

Since the September 16th hearing on the EIS came at a time it was impossible for us to attend, we submit this statement. Like most of our neighbors, the harvest season is upon us. We live in the area 5 miles South and 1 1/2 miles West of Jerome, and operate a 200 acre farm there. There are two sets of good improvements on our property. Some of the land is irrigated with surface irrigation, some of it by sprinkler.

We wish to express opposition to any plan to move the Jerome city sewage system to the agricultural area, Southwest of town, as has been proposed. Let those who use the sewer system take any chances as to its future operation.

Since the City has taken a rank advantage in recent months, through dumping of sewage into the canals serving the area Southwest of town, we believe any future difficulties may be avoided if the city builds whatever is needed at or near the present plant, and pipes its sewage to the canyon, or some desert area, as it is done in many areas.

Respectfully,

DALTON FARMS

By

*Joe M. Dalton*

RECEIVED

OCT 1 1976

FOIA b 7

Jerome, Idaho  
Route 2  
September 29, 1976

To the Environmental Protection Agency  
Seattle, Washington

STATEMENT INTENDED FOR EIS HEARING

We are owners of an eighty acre farm almost directly South of the Overman property on which the City of Jerome holds an option to build its proposed sewer system in the rural area Southwest of the City. There is a fine old home, built of native rock, one of the first so constructed at the time the tract was opened, located on our property.

We believe any plan being submitted to the EPA by the City of Jerome should respect the wishes of the agricultural community in opposing any type of installation in the rural area West of the freeway.

The canal system serving the farming community has long been used by the city as a means of disposing of sewage, supposedly adequately treated. However, in recent months there has been much complaint by canal company stockholders, both during the irrigation season and during winter months when stock might be adversely affected because of the type of discharge being put into the canals; certainly it is hazardous.

May we go on record in opposition to any plan to locate the sewer in the agricultural sector. Anything the city could build in the area Southwest of town in the agricultural community could be built in the area of the present plant. It would be in the best interests of those using the system, as well as those whose who make no use of the system and whose rights might be jeopardized.

Respectfully submitted,

*Mr & Mrs Gorman Miracle*

Mr. and Mrs. Gorman Miracle

RECEIVED

OCT 4 1976

FBI

R. 2, Box 116,  
Jerome, Idaho 83338  
Sept. 28, 1976

To Environmental Protection Agency,  
Seattle, Washington

STATEMENT

Except for a period of 25 years spent in Boise and Emmett, Idaho, we have been native to the Jerome area since the late 1920's. In 1965 we resettled in Jerome to "retire," after purchasing an 80 acre farm Southwest of town, on which is situate one of the first homes built on the tract (1917), which we renovated, and have owned with pride.

Before purchasing, we had the well tested, since both of us were suffering from arthritis, brought on by a whiplash injury, and doctors recommended a source of pure drinking water. We have a fine deep well, periodically tested, and maintain a good septic tank system for disposal of our sewage. It operates efficiently, necessitating only one call for a septic tank pump during an 11 year period. We pay for our own maintenance of pump and sewer disposal system. We paid a premium price for our farm; rural property in the proximity of the existing sewer system could have been purchased at a much lower figure.

Since late November, 1974, when we first became aware of plans to move the city sewer system to the rural area, in our vicinity, we have consistently expressed opposition, believing whatever plan of sewer was devised for the city should be located in the area of the existing plant, or immediately adjacent thereto, on property East of the freeway. We still maintain that position.

Initially, since the canals of the North Side Canal Company in the southwest area had accommodated the effluent from the city sewer, we were not averse to a continuance of this procedure, providing both the Canal Company and rural residents through whose properties the canals run, be given adequate guarantees by the city of Jerome as to contamination of wells or groundwater, odors, aesthetics, property devaluation, etc. We have been repeatedly told by city officials that such guarantees could not be given us by said City. Since we feel there has been considerable abuse of the canal system since this controversy began in 1974, we now believe that to avert any further difficulties, the interests of both city and country dwellers would best be served by building whatever is necessary to serve the City of Jerome in the area of the existing plant, with the effluent to be piped to the canyon through a route running as nearly directly South of the plant as possible.

We strongly oppose any type of installation which would place the sewer in the rural area West of the freeway; or any other location infringing on the rights of the agricultural community which is not served by such system.

Sincerely,

*David L. Hendry*  
*Teressa D. Hendry*  
Mr. and Mrs. David L. Hendry

RECEIVED

OCT 4 1976

EPA-617

September 28, 1976

ENVIRONMENTAL IMPACT SECTION M/S 443  
Environmental Protection Agency  
1200 Sixth Avenue  
Seattle, Washington 98101

Attn: Ms. Norma Young, Project Manager

Re: City of Jerome Wastewater Facilities Project,  
Jerome County, Idaho

Dear Ms. Young:

With reference to the above matter, we wish to state that we are of the opinion that the City of Jerome's new wastewater facility should either be constructed at the existing site or else the present facility upgraded.

Will you please mail us a copy of your final  
EIS?

Thank you,

*Claude R. Norman*  
*Leona Norman*

Claude R. and Leona Norman  
Route # 2  
Jerome, Idaho 83338

RECEIVED

OCT 4 1976

EP-110

September 29, 1976

RECEIVED

COT 4187

1976

ENVIRONMENTAL IMPACT SECTION M/S 443  
Environmental Protection Agency  
1200 Sixth Avenue  
Seattle, Washington 98101

ATTN: Ms. Norma Young, Project Manager

Re: City of Jerome Wastewater  
Facilities Project,  
Jerome County, Idaho

Dear Ms. Young:

With reference to the above-entitled matter, we wish to once again state our views.

We feel that the City of Jerome should either re-build the sewer facility at the present site, and, in the event additional land is needed, this land is available immediately adjacent to the present site. This site can not be so far out of place as the City Council seems to feel, as it wasn't many years ago that the sewer facility was built at the present location, and, several years ago, it was "upgraded" (this upgrading, incidentally, is still being paid for, as I know you are aware of, and will not be paid off till the year 1989). At any rate, this site was felt at that time to be adequate by the City's engineers and, if was an adequate site at that time, why isn't it considered adequate now?

The City of Jerome has not grown rapidly since the upgrading of the present system, and with Ida-Gem Dairymen creamery closing down, its needs will not be considered with respect to the amount of effluent being discharged into the system, not to mention the fact that there will probably be many families moving from Jerome to gain employment at other creameries.

With respect to the comments at the last meeting concerning this project here in Jerome, we feel sympathy for the people who have homes in the Northwest section of town, as it certainly is undesirable to live so close to a sewer facility, and we are certain that their property values have been adversely affected, in fact, I know this to be true, as I am a licensed realtor and can speak from experience. HOWEVER, when these people purchased their homes they surely must have realized that they were purchasing near the sewer facility, or perhaps the fact that they paid a depressed price for their property for that very reason was motive enough for them to "overlook" the sewer and its undesirable qualities. Now, they seem to think it should be moved so their property values will increase.

We realize that this letter does not sound businesslike, and coldly factual, which is what you probably expected, but, forgive us, as we don't feel "coldly factual and businesslike" on this matter. We purchased

ENVIRONMENTAL IMPACT SECTION M/S 443  
ATTN: Ms. Norma Young  
Page Two

September 29, 1976

our little farm nineteen years ago, after looking at various farms and locations for quite a few years. At the time we purchased our farm, we did not purchase near a sewer, and would not have purchased near a sewer had there been a sewer facility One-half mile from our farm. Consequently, we paid a substantial price for our farm, as it was a nice little place and the location (which means a great deal in the event of re-sale), was desirable. We have worked hard all these years to improve and make our payments and now, due to the increase in property values, we feel that we really have made a good investment and all the years of work and worry have begun to pay off, and we have planned on having a good, desirable piece of property as security for our old age. However, if the sewer is one-half mile from our farm, we know the property will decrease considerably in value.

We speak not only for ourselves, but for our neighbors, who will likewise suffer decreases in their property values. We do not feel this is fair for the farmers southwest of Jerome to have to pay a price like this for the townspeople when it is possible for them to have a facility at the present location.

When the figures were discussed concerning the various locations and types of facilities, not too much was said about the addition of the \$102,000.00 which it will take to exercise the City's Option with Lloyd Overmon for his 51 acres, in the event the sewer is located southwest of town. This additional figure would boost the cost of the new facility considerably, and, contrary to how so many people think, the government grant for the sewer facility is merely the people paying this, and I do mean all us taxpayers.

So far, our wells have been tested and proven pure; however, we are very concerned about the consequences of perhaps finding in the future that our water supply has been contaminated. I realize, at this last meeting, that it was mentioned that the farmers would have recourse along this line by bringing suit against the City if our wells should become contaminated. However, having been employed as a legal secretary for the past few years, I also realize that you have to obtain definite proof of the source of contamination, and this is sometimes impossible to prove beyond a doubt as far as the Court is concerned.

The matter of maintenance and operation of the facility is also of concern. We feel that, since it has only been since early 1970 that the City upgraded the present facility and now, in their words, it is "completely shot", and everything needs to be replaced, how can it be that this facility is in such a terrible condition now? Was it not properly operated and maintained? We believe that if the City has not

ENVIRONMENTAL IMPACT SECTION M/S 443  
ATTN: Ms. Norma Young  
Page Three

September 29, 1976

property operated and maintained this facility when it is located inside City limits that they will care even less if the sewer is relocated outside of town.

As stated at the last meeting, there are times that the water in our canal runs black, as a result of improper, or lack of, treatment at the sewer facility. We realize this need of proper treatment only too well, since it is we, the users of the canal water, who irrigate our crops and water our livestock with the effluent.

Yes, a sewer facility is needed and since there is adequate space at the present site or perhaps by purchasing some of the land immediately adjacent to the present site, this is where the new facility should be constructed.

As far as the possibility of a subdivision being located at some time in the future out West of town, and concerning the necessity at that time of extra lift, or pumping, stations, cannot the land developer install these stations and charge a fee to the people purchasing in his subdivision to cover the cost of purchasing and maintaining these stations? I understand that this is the way other developers handle the situation. Let the persons making the money and the persons using the stations do the paying.

Thank you so much for reading this lengthy letter. We hope and pray you will give us your earnest consideration before making your final decision.

Thank you also for all the help you have been and for conducting your meeting in a purely impartial manner. This is the first meeting that the landowners southwest of town have not been somewhat ostracized, and we do appreciate it.

Will you please mail us your final EIS? Also, if we can be of any help to you please let us know.

Yours very truly,

James R. Prunty and  
Carmen G. Prunty  
Route # 2 Box 318  
Jerome, Idaho 83338



Response to Comments from Interested Citizens:

Mr. & Mrs. Edwin Nutsch; Mr. & Mrs. Laurel Ploss; Mr. & Mrs. Bill Morgan;  
Albert M. Dalton; Mr. & Mrs. Gorman Miracle; Mr. & Mrs. David L. Hendry;  
Claude R. & Leona Norman; and James R. and Carmen G. Prunty:

We believe your concerns have been satisfied; the Far West site is not  
the recommended alternative.

*Plankey, Johnson, Kvanvig & Stoker*  
ATTORNEYS AT LAW  
1292 ADDISON AVENUE EAST  
P. O. BOX K  
TWIN FALLS, IDAHO 83301

RECEIVED

OCT 4 1976

EPA-EIS

FREDERICK F. PLANKEY  
TERRY LEE JOHNSON  
RUSSELL G. KVANVIG  
RANDY J. STOKER

PHONE 734-5600

October 1, 1976

Mr. Dick Thiel, Chief Environmental Impact Section  
Ms. Norma Young, Project Manager  
Jerome, Idaho Environmental Impact Statement  
U. S. Environmental Protection Agency  
MS/443-Region 4 Office  
1200 6th Avenue  
Seattle, Washington 98101

Dear Mr. Thiel and Ms. Young:

This letter is to be considered a written comment on behalf of my clients to be considered in the final draft of the Environmental Impact Statement for the Jerome, Idaho Wastewater Facility Plant, with comment deadline of October 4, 1976. My clients wholeheartedly agree with the recommendation set forth in the draft of the Environmental Impact Statement of August, 1976. They also commend the work done in the technical areas by R. W. Beck and Associates of Seattle.

It would appear from the EIS and the public meeting of September 16, 1976 at Jerome, Idaho that there are basically three alternatives which will have preference in the final EIS draft. Those alternatives are: Alternative 8 - Upgrading of Existing Treatment Plant with discharge to the "J" canal, and Alternative 4 - Secondary Plant at Existing site with discharge to the "J" canal, and Alternative 2 - Secondary Plant at New Site with discharge to the "J" canal. These alternatives are presently ranked, 1, 2, and 3 respectively as to their desirability.

Obviously, Jerome needs to have something done with the existing wastewater plant. No one is disputing this. It would appear, however, that the city officials would like to have the new facility placed as far outside the city limits as practicable.

It appears from the EIS that with the state of technology being what it is, there is no reason for a properly maintained waste water treatment plant to have an odor problem. While Appendix 7 addresses proper maintenance and operation of a waste water facility, there is no question but that the responsibility for proper maintenance of a new plant or the existing facility rests with the city. Obviously, there might be legal ramifications due to negligence and creation of a nuisance if the city were to allow maintenance to slide (as we suspect they have done in the past), but as history

Mr. Dick Thiel  
Ms. Norma Young

2

October 1, 1976

has taught us, it is a very long, expensive and frustrating alternative to correct by lawsuit, that which should have not occurred in the first place.

If the facility remains at the existing site, the city is going to be more likely to make sure that such a new and updated facility would be maintained properly as compared to a facility such as alternative 2 which would allow the city to in effect turn up their nose to any problem that might occur from lack of proper maintenance.

The primary difficulty from a legal standpoint with the adoption of alternative 2 is of course, the zoning issue. The land proposed for the new site is zoned agricultural and there is no city impact zone yet accepted by the county nor is there a comprehensive plan by the county which would rezone or propose to rezone that area to include a waste water system such as that proposed.

There was some speculation at the September 16, 1976 public hearing by the CH2M representative that the county would go along with the city in seeing that rezoning would be easily accomplished. It is my understanding from talking to several people that this is not the case at this time and there is no indication that the county is going to recommend it in the future. Therefore, I do not think that the EPA should put much weight on the fact that rezoning might be changed and that therefore, alternative 2 might become more advantageous than before. Even if the zoning problem was removed as an issue, alternative 8 still ranks number 1 over all of the other alternative from an environmental standpoint.

Perhaps the factor which most strongly supports adoption of alternative 8 as opposed to alternative 2 is the absence of economic land waste if the presently located facilities are utilized. Alternative 8 requires no additional or new land for the primary facilities. Alternative 2, on the other hand, requires not only disruption of a new environment but also diseconomics of land use by abandonment of the existing site. While the area of land to be used under alternative 2 is minimal in comparison to the total usable land in Jerome County, there is no good reason for simple exchange of land use of alternative 2 in the absence of substantial and adverse environmental impacts. Since the EIS draft in analyzing the major environmental factors places alternative 2 in no better than second position under any circumstances, there is no valid reason to further disrupt the above described land economics with the adoption of alternative 2.

Mr. Dick Thiel  
Ms. Norma Young

3

October 1, 1976

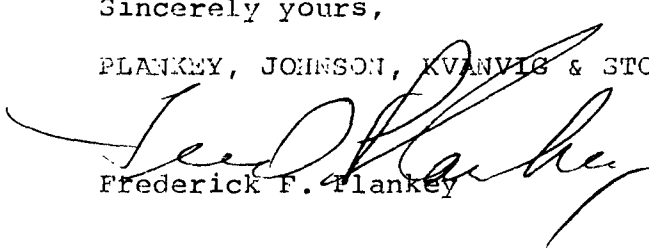
It appears that the R. W. Beck company has taken into consideration all factors related to this situation. Their findings seem to be in the best interests of the residents of the city of Jerome by providing them with a facility that will take care of their waste problem.

The statements made at the September 16 public hearing by the CH2M representative who was hired by the city and who is not an independent consultant show the obvious bias of his presentation. He tried to make the new site alternative the only choice without coming forth with any substantial reasons why alternative 8 should not be the final decision. The conclusion reached by the CH2M representative that the EPA has not taken sufficient time to prepare their EIS and that alternative 8 does not meet water treatment standards required by the Idaho Department of Health and Welfare puzzles us since on page III - 40 of the EIS it states, "Legal consideration included Federal and State water quality laws and regulations and local land use ordinances. EPA's construction grant regulations require that projects comply with all pertinent requirements of applicable Federal, State and local environmental laws and regulations." It is from such example that it would appear the CH2M is merely grasping at straws to try and push the project outside the city limits as I am sure they were hired to do.

We appreciate the unbiased approach taken by the EPA in this controversy and hope that the final Environmental Impact Statement will recommend a solution which is both environmentally sound and economically practicable.

Sincerely yours,

PLANKEY, JOHNSON, KVANVIG & STOKER



Frederick F. Plankey

FFP.cm

Response to Comments from Plankey, Johnson, Kuanig & Stoker

1. We concur. See Appendix A for County position.
2. For the County's position regarding land use see Appendix A.

Based on additional information provided in the Addendum to the Facilities Plan, prepared by CH<sub>2</sub>M/Hill, December, 1976, Alternative 4 is ranked first environmentally and Alternative 8 second.



# STATE OF IDAHO

DEPARTMENT OF HEALTH  
AND WELFARE

DIVISION OF ENVIRONMENT  
Statehouse  
Boise, Idaho 83720

September 30, 1976

Richard R. Thiel, Chief  
Environmental Impact Section M/S 443  
U.S. Environmental Protection Agency, Region X  
1200 Sixth Avenue  
Seattle, Washington 98101

RECEIVED  
OCT 12 1976

RE: Draft Environmental Impact Statement  
City of Jerome C-16 0179

FF-1010

Dear Mr. Thiel:

We have reviewed the draft EIS concerning the proposed Jerome waste-water treatment plant and have the following comments:

1. Our department will require the proposed Jerome sewage treatment plant to meet Reliability Class II requirements. The costs for all alternatives should be based on a sewage treatment plant which meets these requirements. 1
2. On page 1 of Section II it is stated that Idaho's requirement for winter storage of treated effluent has been eliminated. We feel that this statement needs further clarification. If the City of Jerome discharged to the Snake River via a canal during the winter months, the discharge would have to meet water quality standards. If the discharge met water quality standards, winter storage would not be required. However, if the discharge would not meet water quality standards, winter storage would have to be provided. 2
3. The fourth paragraph on page III-24 appears to indicate that the fecal coliform standard for discharging to the "J" canal is 200 MPN/100 ml. However, as indicated in Table III.5, the standard should be 50 MPN/100 ml. 3
4. On page III-34, it is indicated that sewage effluent spray irrigated on land could contain 200 fecal coliform per 100 ml. This is not correct. While our regulations do not specifically state the number of fecal coliform bacteria which could be allowed, our department uses the California spray irrigation regulations as guidelines. 4

EQUAL OPPORTUNITY EMPLOYER

Richard R. Thiel  
September 30, 1976  
Page Two

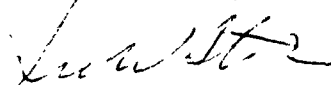
VIII-57

The fecal coliform limit in these regulations varies depending upon the type of cover crop and the use of the land. However, in most instances, the fecal coliform limit is more stringent than 200 MPN/100 ml.

Thank you for the opportunity to comment on this EIS.

Sincerely,

DEPARTMENT OF HEALTH AND  
WELFARE



Lee W. Stokes, Ph.D., Administrator  
Division of Environment

LWS/WHR/br

cc: Walt Jaspers, EPA-Seattle  
EPA, Idaho Operations Office  
David Sanders, IDHW  
Wayne Heiskari, IDHW

Response to Comments from State of Idaho Department of Health  
and Welfare

1. This information has been taken into consideration in the Addendum to the Facilities prepared by CH<sub>2</sub>M/Hill, December, 1976. The results of this additional engineering analysis were analyzed in this Final EIS.
2. Your comments have been incorporated into Section II.
3. We concur that the Standard is 50 MPN/100ml and have made the appropriate corrections in the text.
4. We have made corrections so as not to make this inference.



# PUBLIC COMMENT FORM

E.I.S. TITLE: City of Jones Watermain Installation Project  
(Refer to front cover)

What is your opinion of this E.I.S.?

- ☒ OUTSTANDING  
☐ ABOVE AVERAGE  
☐ AVERAGE  
☐ BELOW AVERAGE  
☐ UNACCEPTABLE

COMMENT: I hope that Alternative #2 goes.  
We have to prepare for the future of  
our town Jones.

What is your opinion of the value of this project?

- ☒ WORTHWHILE  
☐ ACCEPTABLE  
☐ MARGINAL  
☐ UNACCEPTABLE

RECEIVED  
AUG 16 1978  
EPA-510

What (if any) reservations do you have about the impacts of this project?  
(Please check where appropriate)

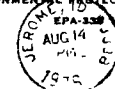
- |   |  |
|---|--|
| <input type="checkbox"/> ALTERNATIVES       | <input type="checkbox"/> RARE & ENDANGERED SPECIES               |
| <input type="checkbox"/> LAND USE           | <input type="checkbox"/> WILD & SCENIC AREA                      |
| <input type="checkbox"/> GROWTH/DEVELOPMENT | <input type="checkbox"/> WETLANDS/ESTUARIES                      |
| <input type="checkbox"/> ECONOMICS/COSTS    | <input type="checkbox"/> FLOODPLAINS                             |
| <input type="checkbox"/> ENERGY CONSUMPTION | <input type="checkbox"/> AGRICULTURAL LAND                       |
| <input type="checkbox"/> WATER QUALITY      | <input type="checkbox"/> CULTURAL OR HISTORIC RESOURCES          |
| <input type="checkbox"/> AIR QUALITY        | <input type="checkbox"/> PARKS/RECREATION                        |
| <input type="checkbox"/> NOISE              | <input type="checkbox"/> SLUDGE DISPOSAL                         |
| <input type="checkbox"/> FISH & WILDLIFE    | <input checked="" type="checkbox"/> OTHER <u>Jones must grow</u> |
| <input type="checkbox"/> GEOLOGY/SOILS      |  |

(This format has been developed to facilitate the submission and evaluation of comments by interested citizens. Anonymous comments cannot be accepted. Use/enclose additional pages if necessary.)

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ENVIRONMENTAL PROTECTION AGENCY  
1200 SIXTH AVENUE  
SEATTLE, WASHINGTON 98101  
OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300  
AN EQUAL OPPORTUNITY EMPLOYER

POSTAGE AND FEES PAID  
ENVIRONMENTAL PROTECTION AGENCY



ENVIRONMENTAL IMPACT SECTION M/S 443  
ENVIRONMENTAL PROTECTION AGENCY  
1200 SIXTH AVENUE  
SEATTLE, WASHINGTON 98101



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1st FOLD

IF YOU WOULD LIKE A COPY OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT ON THIS PROJECT, PLEASE PRINT YOUR NAME AND ADDRESS BELOW

Mrs. Brenda Overman  
Route #2  
Jerome, Idaho 83238

SIGNATURE Mrs. Brenda Overman  
(ANONYMOUS COMMENTS CANNOT BE ACCEPTED)

# PUBLIC COMMENT FORM

09-1111A

E.I.S. TITLE: City of Jerome Wastewater Facilities Project, Jerome County, Idaho

(Refer to front cover)

What is your opinion of this E.I.S.?

- |   |             |
|---|-------------|
| <input checked="" type="checkbox"/> OUTSTANDING | RECEIVED    |
| <input type="checkbox"/> ABOVE AVERAGE          | AUG 30 1976 |
| <input type="checkbox"/> AVERAGE                | EPA-FIC     |
| <input type="checkbox"/> BELOW AVERAGE          |             |
| <input type="checkbox"/> UNACCEPTABLE           | 8/25/76     |

COMMENT We believe your accompanying letter, signed by Donald P. Dubois, should be sent to both the North Side News, Jerome, Idaho, and the Times-News, Twin Falls, Idaho, with the request that it be published in its entirety, so that citizens will

know where they can go to study the EIS in its entirety. To date no reference has been made in the news media as to Jerome Civic Club Memorial Library having a copy. Unless there is publicity as to the Sept. 16th public hearing, the rural community, particularly, will not hear of it; also you might send

What is your opinion of the value of this project?

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> WORTHWHILE | official notices to Radio KART, Jerome; KTFI Green-tree Broadcasting Co., 341 Main Ave. W., Twin Falls; and to KLIX, Elizabeth Blvd. & Eastland Dr., Twin Falls. |
| <input type="checkbox"/> ACCEPTABLE            |  |
| <input type="checkbox"/> MARGINAL              |  |
| <input type="checkbox"/> UNACCEPTABLE          |  |

What (if any) reservations do you have about the impacts of this project?

(Please check where appropriate)

- |   |   |
|---|---|
| <input type="checkbox"/> ALTERNATIVES       | <input type="checkbox"/> RARE & ENDANGERED SPECIES      |
| <input type="checkbox"/> LAND USE           | <input type="checkbox"/> WILD & SCENIC AREA             |
| <input type="checkbox"/> GROWTH/DEVELOPMENT | <input type="checkbox"/> WETLANDS/ESTUARIES             |
| <input type="checkbox"/> ECONOMICS/COSTS    | <input type="checkbox"/> FLOODPLAINS                    |
| <input type="checkbox"/> ENERGY CONSUMPTION | <input type="checkbox"/> AGRICULTURAL LAND              |
| <input type="checkbox"/> WATER QUALITY      | <input type="checkbox"/> CULTURAL OR HISTORIC RESOURCES |
| <input type="checkbox"/> AIR QUALITY        | <input type="checkbox"/> PARKS/RECREATION               |
| <input type="checkbox"/> NOISE              | <input type="checkbox"/> SLUDGE DISPOSAL                |
| <input type="checkbox"/> FISH & WILDLIFE    | <input type="checkbox"/> OTHER _____                    |
| <input type="checkbox"/> GEOLOGY/SOILS      |   |

(This format has been developed to facilitate the submission and evaluation of comments by interested citizens. Anonymous comments cannot be accepted. Use/enclose additional pages if necessary.)

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ENVIRONMENTAL PROTECTION AGENCY

1200 SIXTH AVENUE  
SEATTLE, WASHINGTON 98101

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EQUAL OPPORTUNITY EMPLOYER

ENVIRONMENTAL IMPACT SECTION M/S 443

ENVIRONMENTAL PROTECTION AGENCY

1200 SIXTH AVENUE

SEATTLE, WASHINGTON 98101



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IF YOU WOULD LIKE A COPY OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT ON THIS PROJECT, PLEASE PRINT YOUR NAME AND ADDRESS BELOW

Mr. and Mrs. David L. Hendry

R. 2, Box 116,

Jerome, Idaho 83338

SIGNATURE

(ANONYMOUS COMMENTS CANNOT BE ACCEPTED)

*Mr & Mrs David L Hendry*

# PUBLIC COMMENT FORM

E.I.S. TITLE: Draft City of Jerome Wastewater Facility  
Project Jerome (Refer to front cover) County, Idaho

What is your opinion of this E.I.S.?

- ☒ OUTSTANDING  
☐ ABOVE AVERAGE  
☐ AVERAGE  
☐ BELOW AVERAGE  
☐ UNACCEPTABLE

RECEIVED

SEP 7 1976

EP-1510

COMMENT \_\_\_\_\_

What is your opinion of the value of this project?

- ☒ WORTHWHILE  
☐ ACCEPTABLE  
☐ MARGINAL  
☐ UNACCEPTABLE

What (if any) reservations do you have about the impacts of this project?  
(Please check where appropriate)

- |   |   |
|---|---|
| <input type="checkbox"/> ALTERNATIVES       | <input type="checkbox"/> RARE & ENDANGERED SPECIES      |
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| <input type="checkbox"/> AIR QUALITY        | <input type="checkbox"/> PARKS/RECREATION               |
| <input type="checkbox"/> NOISE              | <input type="checkbox"/> SLUDGE DISPOSAL                |
| <input type="checkbox"/> FISH & WILDLIFE    | <input type="checkbox"/> OTHER _____                    |
| <input type="checkbox"/> GEOLOGY/SOILS      |   |

(This format has been developed to facilitate the submission and evaluation of comments by interested citizens. Anonymous comments cannot be accepted. Use/enclose additional pages if necessary.)

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ENVIRONMENTAL PROTECTION AGENCY

1200 SIXTH AVENUE  
SEATTLE, WASHINGTON 98101

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, \$300

AN EQUAL OPPORTUNITY EMPLOYER

ENVIRONMENTAL IMPACT SECTION M/S 443

ENVIRONMENTAL PROTECTION AGENCY

1200 SIXTH AVENUE

SEATTLE, WASHINGTON 98101



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1st FOLD

IF YOU WOULD LIKE A COPY OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT ON THIS PROJECT, PLEASE PRINT YOUR NAME AND ADDRESS BELOW

Mr + Mrs Keith W Lierman  
Box 63  
Jerome, Idaho 83338

SIGNATURE Veronica Lierman  
(ANONYMOUS COMMENTS CANNOT BE ACCEPTED)

VIII-67

# PUBLIC COMMENT FORM

VIII-62

E.I.S. TITLE: City of Jerome - Western Electric Location Project

(Refer to front cover)

What is your opinion of this E.I.S.?

- ☐ OUTSTANDING
- ☐ ABOVE AVERAGE
- ☒ AVERAGE
- ☐ BELOW AVERAGE
- ☐ UNACCEPTABLE

COMMENT: Since Jerome will be affected if plant remains at present location. I believe that future actions will remain depressed in area of present plant. If plant remains in present location - traffic to and from plant will be increased. People who pay more combined roads than the city is prepared to reimburse. I believe that the city limits of Jerome is scarce - therefore expansion is not the perimeter of the city. So why place a future facility so close to residential areas that are already established and will probably expand.

What is your opinion of the value of this project?

- ☒ WORTHWHILE
- ☐ ACCEPTABLE
- ☐ MARGINAL
- ☐ UNACCEPTABLE

RECEIVED  
SEP 13 1976  
EPA/CIR

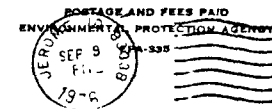
What (if any) reservations do you have about the impacts of this project?  
(Please check where appropriate)

- |  |   |
|--|---|
| <input type="checkbox"/> ALTERNATIVES                  | <input type="checkbox"/> RARE & ENDANGERED SPECIES      |
| <input checked="" type="checkbox"/> LAND USE           | <input type="checkbox"/> WILD & SCENIC AREA             |
| <input checked="" type="checkbox"/> GROWTH/DEVELOPMENT | <input type="checkbox"/> WETLANDS/ESTUARIES             |
| <input checked="" type="checkbox"/> ECONOMICS/COSTS    | <input type="checkbox"/> FLOODPLAINS                    |
| <input type="checkbox"/> ENERGY CONSUMPTION            | <input type="checkbox"/> AGRICULTURAL LAND              |
| <input type="checkbox"/> WATER QUALITY                 | <input type="checkbox"/> CULTURAL OR HISTORIC RESOURCES |
| <input type="checkbox"/> AIR QUALITY                   | <input type="checkbox"/> PARKS/RECREATION               |
| <input type="checkbox"/> NOISE                         | <input type="checkbox"/> SLUDGE DISPOSAL                |
| <input type="checkbox"/> FISH & WILDLIFE               | <input type="checkbox"/> OTHER _____                    |
| <input type="checkbox"/> GEOLOGY/SOILS                 |   |

(This format has been developed to facilitate the submission and evaluation of comments by interested citizens. Anonymous comments cannot be accepted. Use/enclose additional pages if necessary.)

2nd FOLD

ENVIRONMENTAL PROTECTION AGENCY  
1200 SIXTH AVENUE  
SEATTLE, WASHINGTON 98101  
OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300  
AN EQUAL OPPORTUNITY EMPLOYER



ENVIRONMENTAL IMPACT SECTION M/S 443  
ENVIRONMENTAL PROTECTION AGENCY  
1200 SIXTH AVENUE  
SEATTLE, WASHINGTON 98101



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1st FOLD

IF YOU WOULD LIKE A COPY OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT ON THIS PROJECT, PLEASE PRINT YOUR NAME AND ADDRESS BELOW

Charles E. Henley  
% Canyonside Realty  
402 S. Lincoln - Jerome ID-83338

SIGNATURE Charles E. Henley  
(ANONYMOUS COMMENTS CANNOT BE ACCEPTED)

# PUBLIC COMMENT FORM

E.I.S. TITLE: City of Jencine Waste Water Facilities  
 (Refer to front cover) Project

What is your opinion of this E.I.S.?  
 RECEIVED  
 SEP 27 1976  
 EPC-100

- ☐ OUTSTANDING
- ☐ ABOVE AVERAGE
- ☐ AVERAGE
- ☐ BELOW AVERAGE
- ☒ UNACCEPTABLE

COMMENT We don't feel that building at or west of  
the present site is wise as it doesn't  
allow for the growth and updating in  
the future. The plant should be built in the  
southwest location for the good of everyone.

What is your opinion of the value  
 of this project?

- ☐ WORTHWHILE
- ☒ ACCEPTABLE
- ☐ MARGINAL
- ☐ UNACCEPTABLE

What (if any) reservations do you have about the impacts of this project?  
 (Please check where appropriate)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> ALTERNATIVES       | <input type="checkbox"/> RARE & ENDANGERED SPECIES                       |
| <input type="checkbox"/> LAND USE                      | <input type="checkbox"/> WILD & SCENIC AREA                              |
| <input checked="" type="checkbox"/> GROWTH/DEVELOPMENT | <input type="checkbox"/> WETLANDS/ESTUARIES                              |
| <input type="checkbox"/> ECONOMICS/COSTS               | <input type="checkbox"/> FLOODPLAINS                                     |
| <input type="checkbox"/> ENERGY CONSUMPTION            | <input type="checkbox"/> AGRICULTURAL LAND                               |
| <input checked="" type="checkbox"/> WATER QUALITY      | <input type="checkbox"/> CULTURAL OR HISTORIC RESOURCES                  |
| <input checked="" type="checkbox"/> AIR QUALITY        | <input checked="" type="checkbox"/> PARKS/RECREATION <u>land grounds</u> |
| <input type="checkbox"/> NOISE                         | <input type="checkbox"/> SLUDGE DISPOSAL                                 |
| <input type="checkbox"/> FISH & WILDLIFE               | <input type="checkbox"/> OTHER _____                                     |
| <input type="checkbox"/> GEOLOGY/SOILS                 |  |

(This format has been developed to facilitate the submission and evaluation of  
 comments by interested citizens. Anonymous comments cannot be accepted.  
 Use/enclose additional pages if necessary.)

2nd FOLD

ENVIRONMENTAL PROTECTION AGENCY  
 1200 SIXTH AVENUE  
 SEATTLE, WASHINGTON 98101  
 OFFICIAL BUSINESS  
 PENALTY FOR PRIVATE USE, \$300  
 AN EQUAL OPPORTUNITY EMPLOYER

POSTAGE AND FEES PAID  
 ENVIRONMENTAL PROTECTION AGENCY



ENVIRONMENTAL IMPACT SECTION M/S 443  
 ENVIRONMENTAL PROTECTION AGENCY  
 1200 SIXTH AVENUE  
 SEATTLE, WASHINGTON 98101



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IF YOU WOULD LIKE A COPY OF THE FINAL ENVIRONMENTAL IMPACT  
 STATEMENT ON THIS PROJECT, PLEASE PRINT YOUR NAME AND ADDRESS BELOW

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SIGNATURE Mrs. Mrs. Leonard Scher  
 (ANONYMOUS COMMENTS CANNOT BE ACCEPTED)

# PUBLIC COMMENT FORM

E.I.S. TITLE: CITY OF JEROME WASTEWATER FACILITIES PROJECT, JEROME COUNTY,  
IDAHO

(Refer to front cover)

What is your opinion of this E.I.S.?

- ☐ OUTSTANDING  
☒ ABOVE AVERAGE  
☐ AVERAGE  
☐ BELOW AVERAGE  
☐ UNACCEPTABLE

RECEIVED  
OCT 1988  
EPA

COMMENT Our letter is enclosed.

What is your opinion of the value  
of this project?

- ☐ WORTHWHILE  
☒ ACCEPTABLE  
☐ MARGINAL  
☐ UNACCEPTABLE

What (if any) reservations do you have about the impacts of this project?  
(Please check where appropriate)

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> ALTERNATIVES       | <input type="checkbox"/> RARE & ENDANGERED SPECIES      |
| <input checked="" type="checkbox"/> LAND USE           | <input type="checkbox"/> WILD & SCENIC AREA             |
| <input checked="" type="checkbox"/> GROWTH/DEVELOPMENT | <input type="checkbox"/> WETLANDS/ESTUARIES             |
| <input checked="" type="checkbox"/> ECONOMICS/COSTS    | <input type="checkbox"/> FLOODPLAINS                    |
| <input type="checkbox"/> ENERGY CONSUMPTION            | <input checked="" type="checkbox"/> AGRICULTURAL LAND   |
| <input checked="" type="checkbox"/> WATER QUALITY      | <input type="checkbox"/> CULTURAL OR HISTORIC RESOURCES |
| <input checked="" type="checkbox"/> AIR QUALITY        | <input type="checkbox"/> PARKS/RECREATION               |
| <input type="checkbox"/> NOISE                         | <input type="checkbox"/> SLUDGE DISPOSAL                |
| <input type="checkbox"/> FISH & WILDLIFE               | <input type="checkbox"/> OTHER _____                    |
| <input type="checkbox"/> GEOLOGY/SOILS                 |   |

(This format has been developed to facilitate the submission and evaluation of comments by interested citizens. Anonymous comments cannot be accepted. Use/enclose additional pages if necessary.)

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ENVIRONMENTAL PROTECTION AGENCY

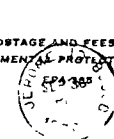
1200 SIXTH AVENUE  
SEATTLE, WASHINGTON 98101

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, \$300

AN EQUAL OPPORTUNITY EMPLOYER

POSTAGE AND FEES PAID  
ENVIRONMENTAL PROTECTION AGENCY



ENVIRONMENTAL IMPACT SECTION M/S 443  
ENVIRONMENTAL PROTECTION AGENCY RECEIVED  
1200 SIXTH AVENUE  
SEATTLE, WASHINGTON 98101



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IF YOU WOULD LIKE A COPY OF THE FINAL ENVIRONMENTAL IMPACT  
STATEMENT ON THIS PROJECT, PLEASE PRINT YOUR NAME AND ADDRESS BELOW

Mr. and Mrs. James R. Prunty

Route # 2 Box 318

Jerome, Idaho 83338

SIGNATURE \_\_\_\_\_

(ANONYMOUS COMMENTS CANNOT BE ACCEPTED)

VIII-64

## Public Hearing Testimony

[illegible]





## BIBLIOGRAPHY

- Bethea, R. M., Murphy, B. N., and Carey, D. R., "Odor Controls for Rendering Plants", Environmental Science and Technology, June, 1973.
- Boise State University, Center for Business and Economic Research, Summary Output for Population and Employment Model, Boise, Idaho, 1975.
- Brown, M. J., Carter, D. L., and Bonderant, J.A., "Sediment in Irrigation and Drainage Waters and Sediment Inputs and Outputs for Two Large Tracts in Southern Idaho", Journal of Environmental Quality, Vol. 3, No. 4, Oct.-Dec., 1974.
- Carlson, D. A. and Leiser, C. P., "Soil Beds for Control of Sewage Odors", Journal WPCF, Vol. 38, No. 5, pp. 829-840, May, 1966.
- CH<sub>2</sub>M/Hill, Inc., City of Jerome Water System Improvement Program, Boise, Idaho, 1974.
- CH<sub>2</sub>M/Hill, Inc., Wastewater Facilities Plan for Jerome, Idaho, Boise, Idaho, 1974.
- CH<sub>2</sub>M/Hill, Inc., Addendum to Wastewater Facilities Plan, City of Jerome, Idaho, Boise, Idaho, 1976.
- City of Jerome, Grab Sample Data File, Jerome, Idaho, 1975.
- Cross, F. L., Air Pollution Odor Control Primer, Technomic Publishing Co., Inc., Westport, Connecticut, 1973.
- Dague, R. R., "Fundamental of Odor Control" Journal WPCF, Vol. 44, No. 4, pp. 583-594, April, 1972.
- Danielson, J. A., Air Pollution Engineering Manual, National Center for Air Pollution Control, Cincinnati, Ohio, 1967.
- "Electrical World", Directory of Electric Utilities, McGraw-Hill, Inc., New York, 1975.
- Federal Register, "Standards of Performance for New Stationary Sources", Vol. 39, No. 47, Part II, Subchapter C - Air Programs, March 8, 1974.

## Bibliography

Page 2

Federal Register, "Water Pollution, Safe Drinking Water, Interim Primary Standards", Vol. 40, No. 51, March 14, 1975.

Findley, Charles E. and Bray, D. C., Attainment of Ambient Particulate Matter Standards in Idaho, U.S. Environmental Protection Agency, 1973.

Green, Thomas J., Acting State Archaeologist, Idaho Historical Society, Letters to Ms. Divola Nettles, U.S. Environmental Protection Agency, Idaho Operations Office, Boise, Idaho, July 16, 1976.

Hancock, Charles, Mayor, City of Jerome, Idaho, Letter to the Jerome County Board of Commissioners and the Jerome County Planning and Zoning Commission, Jerome, Idaho, 1976.

Herr, E. and Poltorak, R. K., "Program Goal - No Plant Odors", Water and Sewage Works, October, 1974.

Hux, Ronald, "Odor Control and Wastewater Treatment Systems", Proceedings of the Second International Clean Air Congress, Academic Press, New York, New York, 1971.

Idaho Department of Employment, Bureau of Research Analysis, Annual Manpower Planning Report - Fiscal Year 1976 (Twin Falls), Boise, Idaho, 1975.

Idaho Department of Health and Welfare, Draft 303e Water Quality Management Plan for the State of Idaho, Boise, Idaho, 1976.

Idaho Department of Health and Welfare, Standards for Individual Water Supply Systems, Boise, Idaho, 1967.

Idaho Housing Agency, Idaho's Housing Needs Analysis, Boise, Idaho, 1975.

Idaho Department of Water Resources et. al., Idaho Environmental Overview, Boise, Idaho, 1975.

Idaho Department of Water Resources, State Water Plan - Part II, Boise, Idaho, 1976.

Idaho Department of Water Resources, State Water Plan - Part III, Boise, Idaho, 1976.

Idaho Parks and Recreation Department, Park Model Assessment, Jerome, Idaho, Boise, Idaho, 1974.

- Idaho, University Cooperative Extension Service, General handouts and tables, Jerome, Idaho, 1976.
- Idaho Water Resources Board, Comprehensive Rural Water and Sewerage Planning Study for Jerome County, Boise, Idaho, 1973.
- Idaho Water Resources Board, Potentially Irrigable Lands in Idaho, Boise, Idaho, 1970.
- Idaho Water Resources Board, State of Idaho Water Plan - Vol. II, Boise, Idaho, 1975.
- Jerome, Idaho, Planning Department, Proposed Comprehensive Land Use Plan, Jerome, Idaho, 1975.
- Jerome County, Idaho, Ordinance Establishing a Comprehensive Zoning Plan and Regulations, as amended, Jerome, Idaho, 1973.
- Jerome County, Idaho, Planning Council, Comprehensive Recreation Plan, Jerome, Idaho, 1975.
- Keller, P.J. and Cole, C.A., "H<sub>2</sub>O<sub>2</sub> Controls Bulking", Water and Wastes Engineering, September, 1973.
- Newfeld, R. N., "Wastewater Treatment Plant Odors: A Continuing Enigma", Public Works, March, 1975.
- Northside Canal Company, Flow Record Files, Jerome, Idaho, 1976.
- Norvitch, R. F., Thomas, C. A. and Madison, R. J. Artificial Recharge to the Snake Plain Aquifer in Idaho; An Evaluation of Potential Effect. U.S. Geological Survey and Idaho Department of Reclamation, Boise, Idaho, 1969.
- Osag, T. R. and Crane, G. B., Control of Odors from Inedibles - Rendering Plants, U.S. Environmental Protection Agency, Office of Air and Wastes Management, July, 1974.
- Rocenwall, R., One Year Wind Study for the Twin Falls - Southern Idaho Regional Airport, U.S. Department of Commerce, National Weather Service, 1973.
- Santry, I. W. Jr., "Hydrogen Sulfide Odor Control Measures", Journal WPCF, Vol. 38, No. 3, pp. 459-463, March, 1966.
- Sax, I. L., Dangerous Properties of Industrial Materials, Reinhold, New York, 1963.

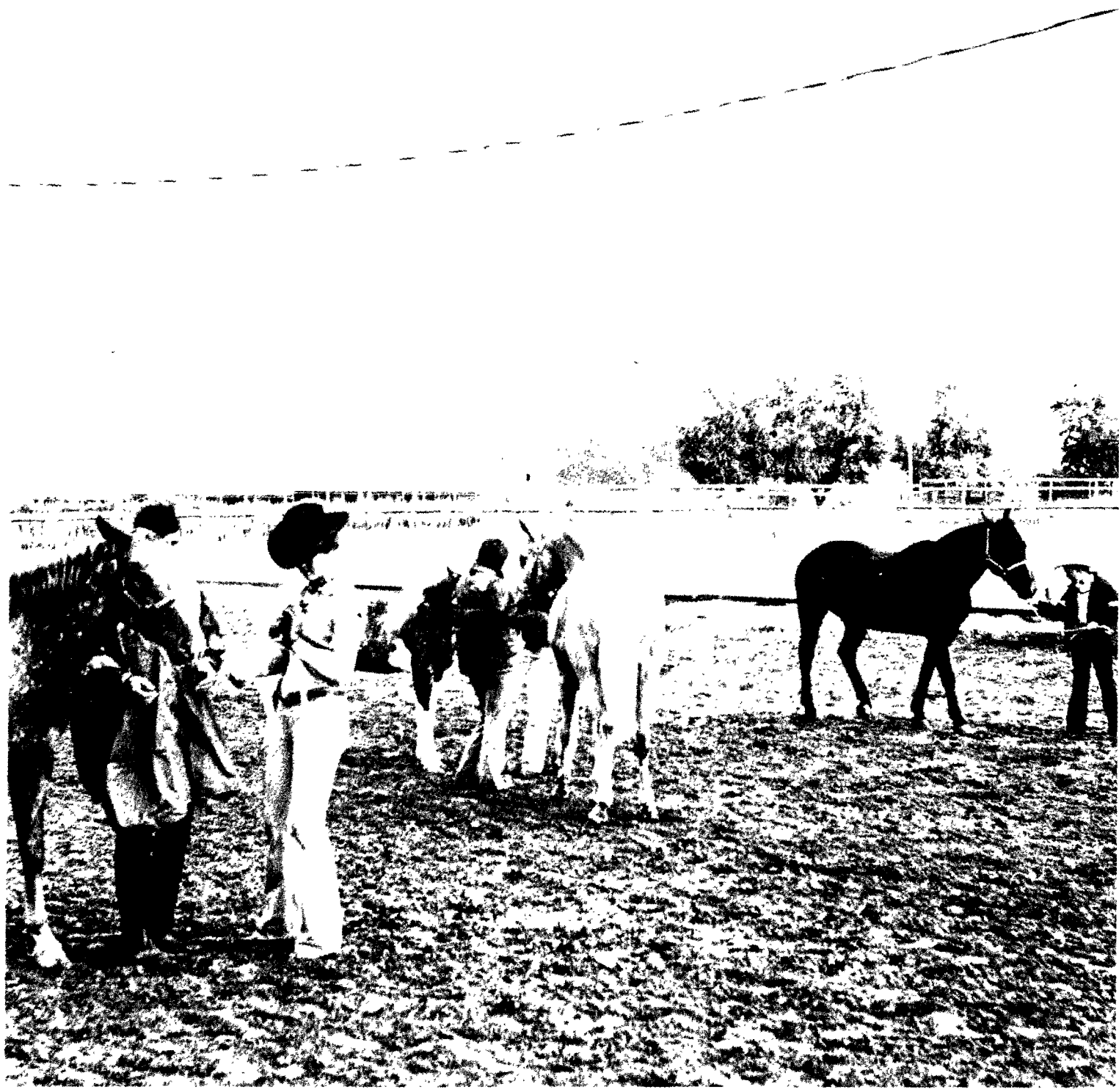
## Bibliography

Page 4

- Shepard, J.A. and Hobbs, M.F., "Control of Hydrogen Sulfide with Hydrogen Peroxide", Water and Sewage Works, August, 1973.
- Shepherd, J. A. and Shreve, E. C. Jr., "Odor Control with Hydrogen Peroxide", WPCF Deeds and Data, April, 1973.
- Silvey, J. K. G., Abshire, R. L., and Nunez, W. J. III, "Bacteriology of Chlorinated and Unchlorinated Wastewater Effluents", Journal WPCF, Vol. 46, No. 9, September, 1974.
- Stone, R., Newton, L. C. and Rowlands J., "Wastewater Pumping Station Designed to Avoid Odor Problems", Public Works, January, 1975.
- T. A. P. Inc., Idaho Airport System Plan, Airports Supplement, Bozeman, Montana, 1973.
- Unangst, P. C. and Nebel, C. A., "Ozone Treatment of Sewage Plant Odors", Water and Sewage Works, Reference No. 1971, Vol. 118, pp. R-42, 43, August, 1971.
- U.S. Department of Agriculture, Soil Conservation Service, Jerome Area Interim Soil Survey Report, detailed information and criteria used in its development, Jerome, Idaho, 1973.
- U.S. Department of Agriculture, Soil Conservation Service, Jerome Area Interim Soil Survey Report, Jerome, Idaho, 1973.
- U.S. Department of Agriculture, Soil Conservation Service, Septic Tank Soil Suitability (map) Jerome, Idaho, June, 1976.
- U.S. Environmental Protection Agency, City of Jerome Compliance Monitoring Data File, Region X Office, Seattle, Washington, 1976.
- U.S. Environmental Protection Agency, Proposed Criteria for Water Quality, Volume I, Washington D. C., 1973.
- U.S. Environmental Protection Agency, STORET Data Retrieval System, Region X, Seattle, Washington, 1976.
- U.S. Environmental Protection Agency, Office of Water Program Operations, Direct Environmental Factors at Municipal Wastewater Treatment Works, Washington, D.C., 1976.

- U.S. Environmental Protection Agency, Office of Water Program Operations, Technical Report, Direct Environmental Factors at Municipal Wastewater Treatment Works - Evaluation and Control of Site Aesthetics, Air Pollutants, Noise and Other Operations and Construction Factors, Washington, D.C., 1976.
- U.S. Environmental Protection Agency, Office of Technology Transfer, Design Manual for Small Wastewater Treatment Plants, (At Press).
- U.S. Environmental Protection Agency, Office of Technology Transfer, Process Design Manual for Sulfide Control in Sanitary Sewerage Systems, October, 1974.

# APPENDICES



APPENDIX A

# Jerome County

## Planning and Zoning Administration

JEROME COUNTY COURTHOUSE  
JEROME IDAHO 83338

November 1, 1976

Richard R. Thiel  
Chief, Environmental Impact Section U.S.E.P.A.  
1200 6th Avenue  
Seattle, Washington 98101

RECEIVED

NOV 5 1976

Re: M- S443

FRANCIS

Dear Mr. Thiel:

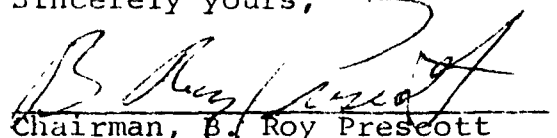
In response to your inquiries concerning planning and zoning procedures affecting the proposed Jerome waste water treatment facility, please be advised that:

- (1) There is very little chance that the city of Jerome will be given planning and zoning responsibilities in the quote " Impact Area", surrounding the city of Jerome, other than the processing of residential subdivision plats in accordance with existing state law. This appears to be, at present, the mutual agreement of city and county officials.
- (2) Under present county ordinances, no procedure what so ever is prescribed for granting permits for constructing a waste water treatment facility. However, we are presently engaged in preparing a new County Comprehensive Land Use Plan and revision of the zoning ordinance which will be completed in the near future. As presently contemplated, the revised ordinance would provide by conditional use permit, for a waste water treatment "sewage" facility to be located of ground zoned Agricultural. This permit granting process would require public hearing before the Board of County Commissioners, after due notice had been given and the recommendation of Planning Zoning Commission concerning the permit received. Of course, the possibility of applying for such a permit does not mean that it would be automatically granted.
- (3) The proposed Comprehensive Plan in its current draft, seeks to encourage development around areas where public services are available.

A-2

I cannot, at this time give any better answer to your first question concerning service, impact and planning areas other than to reiterate the previous sentences. I hope these answers are beneficial to you.

Sincerely yours,



Chairman, B. Roy Prescott  
Jerome County Planning and  
Zoning Commission

BRP/jl



IDAHO STATE HISTORICAL SOCIETY

610 NORTH JULIA DAVIS DRIVE BOISE, IDAHO 83706



A-3

STATE MUSEUM

January 10, 1977

RECEIVED

JAN 12 1977

FPA-510

Mr. Richard R. Thiel  
Chief, Environmental Impact Section  
U.S. Environmental Protection Agency  
1200 Sixth Avenue  
Seattle, Washington, 98101

Dear Mr. Thiel:

Re: M/S 443

Assuming that your Jerome Wastewater facilities project uses only alternatives 1, 2, 4, or 8, the proposal will not affect the possible eligibility of any property that may be considered for inclusion in the National Register of Historic Places. Under 36 CFR 800.8 you will not need to request comment from the Advisory Council for Historic Preservation concerning this project.

Sincerely yours,

A handwritten signature in cursive script, which appears to read "Merle W. Wells".

Merle W. Wells  
State Historic Preservation Officer

dm

## APPENDIX B

### ODOR CONTROL MEASURES

A Summary by the U.S. Environmental Protection Agency<sup>(1)</sup>

Odor control measures should take into account the following: (a) completely aerobic oxidation of organic matter prevents the formation of odorous compounds of sulfur and nitrogen; (b) slime buildup on conduit and tank walls, and sludge or organic waste deposits, will almost always produce some  $H_2S$  and other odorants; and (c)  $H_2S$  and other odorants will be released from wastewater at points of turbulence, particularly where freefall occurs.

Dague<sup>(2)</sup> listed the various factors which should be considered in the control of wastewater odors: (a) all normal people can smell; (b) some substances are odorous, others are not; (c) we can smell at a distance; (d) substances of different chemical constitution may have similar odors; (e) substances of similar constitution usually have similar odors (however, isomers or even stereoisomers may have different odors); (f) substances of high molecular weight are usually not odorous and often nonvolatile or insoluble; (g) the quality as well as the strength of an odor may change on dilution; (h) the sense of smell is rapidly fatigued; (i) fatigue for one odor will not affect the perception of other dissimilar odors but may interfere with the perception of similar odors; (j) two or more odorous substances may cancel each other out (on the other hand, two or more mildly odorous substances may add together to form a very odorous substance); and (k) odors travel downwind.

Measures which have been successful in the prevention or control of odors generated at wastewater facilities are described in the following paragraphs.

#### OXIDATION/DISINFECTION

This is usually accomplished with such chemicals as chlorine, ozone, hydrogen peroxide, and sodium permanganate.

### Chlorination

Chlorine gas and hypochlorite solutions have been successfully used to stop the action of odorant producing bacteria and to oxidize odorants such as  $H_2S$  and mercaptans<sup>(3)(4)(5)</sup>, by injection chlorine or hypochlorite into wastewater or by passing collected odorous air through a chlorine solution in a tank. It takes about 5g (2.1 to 8.87g) of chlorine to 1g of  $H_2S$  to inhibit odor production<sup>(6)</sup> and often as much as 10 to 15g to convert all the sulfur to sulfates, because of the other more easily oxidizable compounds present<sup>(4)</sup>. If  $Cl_2$  dosages are down to about 2.1g/g of  $H_2S$  hydrochloric acid is formed; if  $Cl_2$  dosages are up to about 8.4g/g of  $H_2S$ , both hydrochloric and sulfuric acids are formed. Each of these is very corrosive. In many locations, to prevent damage to downstream ecological systems, it may be necessary to dechlorinate and remove those chlorinated compounds which are toxic before the treated wastewater is discharged. Some odors are not removed by chlorination. If the odorous compound concentration is above the design concentration, other odorous compounds may be formed. Chlorine suppresses bacterial activity even in a combined form, but most bacterial populations, including the coliform population, will often be regenerated shortly after the chlorine residual disappears<sup>(7)</sup>. For more information on odor control with chlorine, see Reference (4). Chlorine application is discussed in Reference (8).

### Ozonation

Ozone is used to oxidize odorants in air, collected from above wastewater processes, before discharge to the atmosphere<sup>(5)(9)</sup>. Ozonation of wastewater has not been practiced to a great extent in the past; however, recent developments, including the possible dangers of chlorine compounds and the reduced costs of newer ozonators, make the use of ozone in place of chlorine feasible for both odor control and disinfection, particularly if the wastewater must also be dechlorinated. Active research is being sponsored by the EPA, to develop better design criteria for the safe use of ozone. Oxidation of airborne odorants with ozone may present a hazard if ozone remains in the treated air in concentrations above  $0.2 \text{ mg/m}^3$  of air at the time of discharge<sup>(10)</sup>. Further information on odor control with ozone is contained in reference (11). Ozone application is discussed in reference (8).

### Hydrogen Peroxide

Hydrogen peroxide is another oxidant used to destroy sulfate-reducing bacteria in sewers and to oxidize any sulfides present<sup>(12)(13)</sup>. In recent years, hydrogen peroxide has been used in place of prechlorination, to prevent hydrogen sulfide buildup in transmission lines and pumping stations, and to prevent hydrogen sulfide problems in wet wells<sup>(4)</sup>. It is usually necessary to first condition (oxidize slimes and organic deposits on walls) the pipes and tanks in which the wastewater is to be treated by one or more dosages of 50 mg/l for 4 to 8 hours. Following one or more of these massive treatments, dosages can be lowered to 5 to 10 mg/l to prevent  $H_2S$  formation. Between 1 and 2 pounds of  $H_2O_2$  are needed per pound of  $H_2S$  after the slug dosages<sup>(6)</sup>.  $H_2O_2$ , like ozone, raises the dissolved oxygen content of the wastewater in addition to killing sulfate-reducers and reducing odors.  $H_2O_2$  is competitive in price with chlorine for control of  $H_2S$ <sup>(6)</sup>.

### Sodium Permanganate

Sodium permanganate, like ozone and  $H_2O_2$ , is a significantly more active oxidizing agent than chlorine. However, it is generally not competitive with respect to cost with other oxidizing agents<sup>(3)(15)(5)</sup>. In some cases, the manganese content of the water may be increased to a troublesome level.

### RAISING THE ORP

To prevent the production of odorants by sulfate reducers and other anaerobes, air, nitrates, and pure oxygen have also been added to wastewater to raise the ORP.

### Air

Wastewater is commonly aerated by mechanical aerators, diffusers, a freefall which causes turbulence, and U-tube aeration. The addition of air to prevent anaerobic conditions in wastewaters will prevent the production of odorants. The addition of air to anaerobic wastewater may strip out odorants and

thus cause odor problems if not adequately controlled, particularly at drops or falls in septic wastewater streams. Sufficient air must be dissolved and confined sufficiently long for oxidation of sulfides to be accomplished. U-tubes with air addition by aspirators have proved to be an effective and odor-free method of adding air to wastewater lines. A detailed description of aeration methods is presented in Reference (4).

#### Oxygen

If a main has little rise, making air injection relatively feasible, pure oxygen may be used as an alternative for sulfide control in force mains and siphons, if the oxygen can be kept in solution<sup>(4)</sup>.

#### Nitrate

This chemical has been satisfactorily added to wastewater to reduce and temporarily control odors. Nitrate may serve to prevent sulfide buildup by preventing sulfate reduction, because nitrate-reducing bacteria can use nitrate to oxidize sulfide, if oxygen is not available<sup>(4)</sup>.

#### PH CONTROL

If sulfide odors predominate, it is possible to reduce or eliminate hydrogen sulfide by raising the pH. At pH above 9,  $H_2S$  is not present, but biological treatment processes will be substantially impeded<sup>(16)</sup>. Caustic soda or quicklime used to raise the pH of wastewater in sewers to 13 will inactivate the slime on sewer walls for about 1 week<sup>(4)</sup>. Because sulfide producers can adjust to pH over 10.5, the pH should not be held above 9 for more than 30 minutes.

#### ABSORPTION/SCRUBBING

Odor removal by reactive scrubbing can be an effective method of odor control, particularly if followed by activated carbon or ozonation, depending on the odorous components of the gas. Potential scrubbing reagents

are  $\text{KMnO}_4$ ,  $\text{NaClO}$ ,  $\text{Cl}_2$ ,  $\text{ClO}_2$ , and  $\text{NaHSO}_3$ . However, a single scrubbing agent can seldom remove all odorous compounds effectively<sup>(3)</sup>. The efficiency of odor removal can often be improved by increasing the pH of the scrubbing solution<sup>(3)</sup>. The resulting solution, however, must be amenable to treatment in a wastewater treatment plant or pretreated to make it so. Scrubbers are best suited for treating large volumes of air containing relatively low concentrations of odorous contaminants. Possible advantages of scrubbers include: capability of installation in a low building, because conventional scrubbing towers are not needed; gravity flow of solution; quiet operation; and reasonable cost, because this equipment is mass-produced. Possible disadvantages include: necessity for auxiliary processes such as adsorption or filtration, corrosion of equipment, and maintenance of minimum concentration of reagent. See reference (11) for further information on scrubbing. Low concentrations of odorants may be removed by bubbling the polluted air through activated sludge or water with a high dissolved oxygen content.

#### ADSORPTION

Adsorption with activated carbon can be an effective and economical odor control method for emissions from wastewater treatment facilities containing a low concentration of odorous compounds<sup>(3)</sup>. The odorous gases and vapors must be collected, as for ozonation, and then passed through the adsorbent beds of activated carbon. Adsorbent beds should be continuously monitored, because the activated carbon may have a low capacity for some odorants and, without regeneration, a short adsorbent life with respect to those odorants<sup>(3)(17)</sup>. In Sacramento, where a large treatment plant became closely surrounded by a better-than-average residential area, it was found that sodium hypochlorite scrubbers followed by carbon adsorption units successfully removed all odors<sup>(18)</sup>. Further information on odor control using activated carbon is contained in Reference (11).

Adsorption-absorption using soil beds has proved to be an effective way of treating odorous gases collected at pumping stations<sup>(2)(19)(20)</sup>

A carbon filter was included in one installation for backup but was not needed during the first year of operation<sup>(19)</sup>. Warm, moist, loamy soils are necessary for effective odor removal in soil beds.

#### INCINERATION-CATALYTIC AND DIRECT FLAME

Fumes from wastewater treatment works can be deodorized using direct flame. Incineration at an adequate temperature for a sufficient time oxidizes organic compounds to odorless water and carbon dioxide and relatively odorless oxides of nitrogen and sulfur. At temperatures below 1,400°F, partial oxidation may result, with the production of highly odorous gases. To accomplish complete oxidation, 3 seconds at 1,400°F is sufficient detention time<sup>(2)</sup>. To ensure that all parts of the burning chamber have temperatures above 1,400°F, it is well to have the control thermostat set to operate between 1,550° and 1,600°F. Above 1,750°F dangerous oxides of nitrogen may be formed and cause air pollution. Incineration can be effective in controlling highly concentrated odors in low volumes of air<sup>(3)(15)</sup>. In some cases, if particulate matter is present, incineration should be preceded by condensers or dust collectors<sup>(3)(15)</sup>. Catalytic oxidation operates at temperatures from 1,000° to 1,300°F. The lower cost for fuel is offset by the catalyst replacement cost, particularly if the odorous gas is corrosive to the catalyst. Advantages of direct flame incineration with respect to catalytic oxidation are lower maintenance costs, less downtime, and better odor destruction. Advantages of catalytic oxidation are lower temperatures, lower operating cost, lighter construction, and better removal of particulates and aerosols. Steam plumes from incinerators can be controlled using condensers or afterburners. Emission standards for wastewater treatment incinerators are contained in Reference (21).

#### DESIGN MEASURES

Prevention of odor nuisance conditions should be considered in the design of any conduit or basin which will contain wastewater or sludge. Some important design elements and operational practices to consider include:

1. Locate the facility on a well-ventilated site to prevent odor accumulation, not in a hollow or where it will be surrounded by trees.
2. Provide for sufficient mixing, to ensure scouring velocities over the entire floor of aeration basins and to prevent sludge accumulation in corners where velocities are too low.
3. Enclose locations of turbulent flow, where odorants or aerosols might escape from anaerobic wastewater or sludge, to prevent escape of odorants and to collect them for oxidation before discharge to the atmosphere. Such locations may include headworks, primary clarifiers, trickling filters, sludge thickeners, sludge dewatering tanks, and sludge holding tanks.
4. Provide high pressure connections for hoses, for use in the daily flushing of walls and corners to prevent any accumulation of slime or sludge.
5. Provide adequate slopes in all conduits, whether open or closed, to ensure scouring velocities once a day.
6. Provide for mechanical cleaning of all closed conduits, if slopes are not sufficient to ensure daily scouring velocities.
7. Provide for U-tube aeration of anaerobic wastewater in manholes upstream of pumping stations or treatment facilities, or a means of adding hydrogen peroxide, chlorine, or hypochlorite, if the sulfide problem is too much for simple aeration, to prevent escape of odors at the pumping station or treatment facility headworks.
8. Provide aeration in distribution channels, to maintain aerobic conditions as well as to ensure homogeneity of the organic material in the wastewater.
9. Provide for returning a portion of the waste activated sludge to the headworks, to assist in reducing odors.



10. Provide for pneumatic or other enclosed transfer of screenings or other odorous compounds to the disposal point.

11. Provide a vacuum cleaner truck for cleaning grease traps, screening boxes, scum boxes, and catch basins and carrying their odorous contents in an enclosed tank to the disposal point.

12. Provide an adequate section in the facility operation and maintenance manual on odor control. This should include procedures: for daily flushing to remove slime and sludge accumulations, for checking for sufficient conditioning of sludge before its discharge to open drying beds or use as fertilizer on lawns, for cleaning all sludge discharge pipes and areas immediately after use, for preventing overuse of treated wastewater for irrigation, and for using sulfuric acid or caustic soda for removing slime or lime encrustations.

13. Provide requirements in the sewer ordinance for removal, or for reduction to a treatable level, of all industrial waste compounds which might cause odor problems at a properly operated wastewater facility.

Suggested measures to be considered during design, to prevent odor and control or reduce the possibility of odor nuisances, are presented in Table 3.2.

APPENDIX B  
FOOTNOTES

1. U.S. Environmental Protection Agency, Office of Water Program Operations, Direct Environmental Factors of Municipal Wastewater Treatment Works, Washington D. C., 1976.
2. Dague, R. R., "Fundamentals of Odor Control", Journal WPCF, Vol. 44, No. 4, pp. 583-594, April, 1972.
3. Bethea, R. M., Murphy, B. N., and Carey, D. R., "Odor Controls for Rendering Plants", Environmental Science and Technology, June, 1973.
4. U.S. Environmental Protection Agency, Office of Technology Transfer, Process Design Manual for Sulfide Control in Sanitary Sewerage Systems, October, 1974.
5. Santry, I. W. Jr., "Hydrogen Sulfide Odor Control Measures," Journal WPCF, Vol. 38, No. 3, pp. 459-463, March, 1966.
6. Shepherd, J. A. and Hobbs, M. F., "Control of Hydrogen Sulfide With Hydrogen Peroxide", Water and Sewage Works, August, 1973.
7. Silvey, J. K. G., Abshire, R. L., and Nunez, W. J. III, "Bacteriology of Chlorinated and Unchlorinated Wastewater Effluents", Journal WPCF, Vol. 46, No. 9, September, 1974.
8. U.S. Environmental Protection Agency, Office of Technology Transfer, Design Manual for Small Wastewater Treatment Plants (at press).
9. Unangst, P. C. and Nebel, C. A., "Ozone Treatment of Sewage Plant Odors", Water and Sewage Works, Reference No. 1971, Vol. 118, pp. R-42,43, August, 1971.
10. Sax, I. L., Dangerous Properties of Industrial Materials, Reinhold, New York, 1963.
11. Cross, F. L., Air Pollution Odor Control Primer, Technomic Publishing Co., Inc., Westport Connecticut, 1973.
12. Shepherd, J. A. and Shreve, E. C. Jr., "Odor Control With Hydrogen Peroxide", WPCF Deeds and Data, April, 1973.
13. Keller, P. J. and Cole, C. A., " $H_2O_2$  Controls Bulking", Water and Wastes Engineering, September, 1973.
14. Stone, R., Newton, L. C. and Rowlands, J., "Wastewater Pumping Station Designed to Avoid Odor Problems", Public Works, January, 1975.
15. Osag, T. R. and Crane, G. B., Control of Odors From Inedibles-Rendering Plants, U.S. Environmental Protection Agency, Office of Air and Wastes Management, July, 1974.
16. Danielson, J. A., Air Pollution Engineering Manual, National Center for Air Pollution Control, Cincinnati, Ohio, 1967.

17. Newfeld, R. N., "Wastewater Treatment Plant Odors: A Continuing Enigma", Public Works, March, 1975.
18. Herr, E. and Poltorak, R. L., "Program Goal - No Plant Odors", Water and Sewage Works, October, 1974.
19. Stone, R., Newton, L. C. and Rowlands, J., "Wastewater Pumping Station Designed to Avoid Odor Problems" Public Works, January, 1975.
20. Carlson, D. A. and Leiser, C. P., "Soil Beds for Control of Sewage Odors", Journal WPCF, Vol. 38, No. 5, pp. 829-840, May, 1966.
21. Standards of Performance for New Stationary Sources, Federal Register, Vol. 39, No. 47, Part II, Subchapter C - Air Programs, March 8, 1974.

## APPENDIX C

### OPERATIONS AND MAINTENANCE

#### Introduction

Operations and maintenance (O&M) of the Jerome sewage treatment plant, be it at its existing site or at a new site, was clearly identified as a major concern during EPA's May 25, 1976 public information meeting in Jerome. Citizens are keenly aware of the operational problems of the past which have resulted in significant odor problems in the vicinity of the existing plant, and in the undesirable appearance of plant effluent, at times, as it was discharged into the canal.

These problems, as expressed at the meeting, have caused many people to lose faith in the City's ability to properly operate a sewage treatment plant, and the State and Federal government's interest in or ability to take the necessary action to require satisfactory O&M. It is hoped that the following discussion of EPA's O&M program will help in answering many of the Jerome citizens' concerns over future operation and maintenance of the City's waste treatment facilities.

#### Inspection During Construction

Assuming EPA and the State will be participatory in grants that will result in a construction project, operators of the present Jerome plant have an excellent opportunity to become intimately familiar with the construction details of the new or upgraded facilities. For this reason, EPA encourages the plant superintendent or principal operators to serve as construction inspectors during the final phases of the construction project. By serving in this capacity, they not only protect the owner's (The City of Jerome) interest in getting good quality work for the money, they also learn how to read and interpret the detailed construction plans and specifications the contractor is following. They find out exactly how components of the plant are put together and where they are located. In overcoming construction problems as they occur they are gaining invaluable experience, and confidence, that will help them overcome operational and maintenance problems later.

#### Startup Training

Following completion of construction, the consulting engineer who designed the plant and supervised its construction calls in representatives of the manufacturers who supplied the plant equipment. The equipment reps, as they are called, instruct the plant operators in the proper operation of the equipment. This is termed "startup training". It may last from a few days to several weeks depending on the piece of equipment and the treatment process involved. The "bugs" are taken out of the system, and the various components are made to operate properly.

Procedures for lubricating, servicing, overhauling and repairing the components are also covered. This start-up training, then, gets the operators initiated in the proper O&M of their new facilities.

#### O & M Manual

Prior to making the final grant payment for construction, EPA requires the grantee to submit for approval a complete and detailed O&M manual. This manual is the operators "Bible" covering all aspects of the plant's proper operation and maintenance. Among other things it contains:

1. schematic diagrams of pipelines, valves and controls.
2. manufacturers' recommended maintenance schedules and lubrication charts.
3. detailed description of treatment processes and operator control techniques.
4. emergency procedures for plant upsets.
5. laboratory testing and reporting procedures.
6. listing of detailed tasks to be performed, together with their frequency and duration, for complete plant operations for all personnel.

This manual is given a careful review by State and EPA personnel prior to its approval. It is available to all personnel at the treatment plant for their daily reference.

#### Operator Training

It is the responsibility of the City of Jerome, with the support of the Citizenry, to insure that operators' salaries are adequate to attract qualified personnel. Care must be taken to insure that training is provided both to upgrade the knowledge and proficiency of operators and to maintain their proficiency. Regular training has several benefits: it improves morale and job interest; it reduces manpower and other budget expenses by improving efficiency; and it results in a better run treatment plant with a cleaner effluent.

#### Jerome's Waste Discharge Permit

Section 402 of the 1972 Federal Water Pollution Control Act Amendments provided EPA and State governments a new authority to fully develop a national waste discharge permit system. Attached to this Appendix is a copy of the present permit under which Jerome is operating its sewage treatment plant. Although a new permit will be issued as a new plant nears completion, the general structure and provisions will be the same.

The National Pollutant Discharge Elimination System permit for the proposed sewage treatment plant will require the City of Jerome to operate and maintain the plant as efficiently as possible. The permit specifically addresses operation and maintenance in Part II A.3. titled, Facilities Operation, as follows:

"The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit."

Non-compliance with this section would place Jerome in violation of their NPDES permit and subject to any penalties assessed therein. The Federal Water Pollution Control Act allows for maximum civil penalties of fines up to \$10,000 per day of violation.

EPA's program for assuring compliance with the permit includes a permittee self monitoring program to determine effluent quality and also an EPA/State of Idaho inspection program to determine compliance with other provisions of the permit. There are four types of inspections which can be conducted on the proposed Jerome facility. Annual Compliance Evaluation, Reconnaissance Inspection, Discrepancy Inspection and a Case Preparation Survey. An Annual Compliance Evaluation is a detailed, on-site, scheduled inspection to review self monitoring reports, effluent sampling and testing procedures and the operation and maintenance program. Any inadequacies not in conformance with permit requirements would be identified and the City would be required to begin appropriate actions to make the necessary corrections. Annual Compliance Evaluations which are conducted on the existing Jerome plant, would also be conducted on the proposed treatment plant. Reconnaissance inspections are unscheduled on-site inspections designed to confirm that a source is continuing to remain in compliance with its permit conditions. The third listed inspection, the discrepancy inspection, is initiated by an alleged violation of effluent or other requirements. If, for example, the City of Jerome were not properly operating or maintaining the plant, then it is quite likely that the discharge would exceed the effluent limitations. When EPA or the State of Idaho reviews the self monitoring reports, the agency may decide that a discrepancy inspection is in order. During the inspection, all inadequacies would be identified and the City would be given a specific amount of time to correct the deficiencies. To ensure proper and timely correction of the deficiencies, EPA may, after a Discrepancy Inspection, respond to the City with a Section 309 order, which identified what actions the city must take and the time allowed for completing these actions. If the City does not properly complete the necessary actions, then EPA can recommend to the U. S. Attorney that civil penalties be issued to the City for failure to comply with the provisions of the NPDES permit. The fourth type of inspection, Case Preparation Survey, is conducted specifically to gather evidence in support of an enforcement action. Civil penalties of up to \$10,000 per

day can result. This is the final type action used to ensure the permittee complies with the NPDES permit requirements.

The inspection program is a joint EPA/State activity. All except the case preparation survey are conducted by the Idaho Department of Health and Welfare. EPA will assist in those inspections if requested by the State. EPA believes that this joint EPA/IDHW compliance program is adequate to assure that the proposed sewage treatment facilities will meet all permit conditions.

#### Citizen Responsibility

Efficient plant O&M depends on people - well trained operators and maintenance men, wise managers and competent supervisors, skilled laboratory technicians and chemists. Without them the plant would be useless. Plant efficiency relies on people efficiency.

What makes people work well? Plant personnel need training, tools and equipment, decent pay and pleasant working conditions. Giving them these things may cost money, but not giving them would cost more. Much more, really, considering the immense cost to the environment. The point is that we can't get our money's worth out of the treatment plant unless we're willing to make investments in people and provide them with the things they need to do their jobs. A community may spend \$5 million to build a plant, then give it a yearly budget so skimpy that adequate O&M is impossible. Look at it this way: Low budget=poorly paid employees=less trained, fewer qualified employees=poor O&M=foul, unsafe waters. Thus, if your water is still polluted, your investment in a plant has been wasted. Millions of dollars are wasted this way.

Something else that helps people to do a good job is morale. Enthusiasm comes from knowing your job is important and your work is appreciated. Employees in a treatment plant know their job is important, but they may wonder if their work is appreciated. Strange as it seems, it's possible to perform a vital public service and yet get little or no recognition for it. This is the way it is for many treatment plant workers. They're invisible.

When we look at our community, we can easily see the policemen who fight crime and the firemen who fight fires, but the men and women who fight pollution aren't nearly as noticeable. They wear no uniform. Their plant is usually on the outskirts of town, and many people don't even know they're there.

But things are looking up! Citizens like you are learning that the fight against pollution, like the fight against crime or fire, is one we've got to win. This country could lose its war on pollution if front line troops like the staff at your treatment plant don't receive the support of the people they protect.

Don't overlook the very best source of O&M information - the local plant superintendent or members of his staff. They know - better than anybody - what it will take to improve O&M at their plants. And what it takes is your help. You are the voter and citizen; superintendents' bosses are your employees. The people who make the budgets and arrange the priorities for water pollution control in your community are responsible to you for their actions. And they know it.

When citizens begin to pay attention to what's going on (O&M) at their wastewater treatment plants, local officials will respond accordingly. An informed public is the most effective anti-pollution device of all.



Permit No. ID-002016-8

AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. §1251 et seq.; the "Act"),

City of Jerome, Idaho

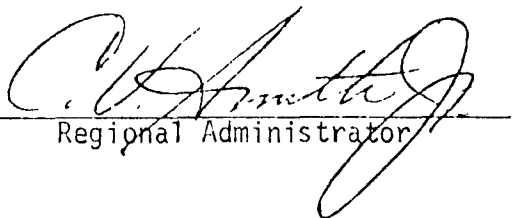
is authorized to discharge from Sewage Treatment Plant into the North Side Canal "N" and then into the Snake River

to receiving waters named Snake River, River Kilometer 959.4 (River Mile 599.6) via North Side Canal "N" at Cedar Draw

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof.

This permit shall become effective on December 30, 1974 and shall expire at midnight, June 30, 1977.

Signed this 29th day of November, 1974.

  
Regional Administrator

## PART I

Permit No: ID-002016-8

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Initial Effluent Limitations

During the period beginning on the effective date of this permit and lasting until December 31, 1976, discharges from outfalls shall be limited and monitored by the permittee as specified below:

a. The monthly average quantity of effluent discharged from the wastewater treatment facility shall not exceed 2,650 cmd (0.7 mgd).

b. The pH shall not be less than 6.0 nor greater than 9.0.

c. There shall be no discharge of floating solids or visible foam other than in trace amounts.

d. The following limitations and monitoring requirements shall apply:

<u>Effluent Characteristic</u>	<u>Unit of Measurements</u>	<u>Monthly Average</u>	<u>Weekly Average</u>
<u>Effluent Concentrations</u>			
Biochemical Oxygen Demand (5-day)	mg/l	40	60
Suspended Solids	mg/l	45	68
Fecal Coliform Bacteria	number/100 ml	700	1.500
<u>Effluent Loadings</u>			
Biochemical Oxygen Demand (5-day)	kg/day(lb/day)	91(200)	136(300)
Suspended Solids	kg/day(lb/day)	102(225)	153(338)
	<u>Unit of Measurement</u>	<u>Sampling Frequency</u>	<u>Type of Sample</u>
<u>Monitoring Requirements</u>			
Total Flow	cmd (mgd)	continuous	--
Biochemical Oxygen Demand	mg/l	weekly	composite
Suspended Solids	mg/l	weekly	composite
pH	pH units	daily	grab
Residual Chlorine	mg/l	daily	grab

## PART I

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Permit No. ID-002016-8

e. Within 180 days from the effective date of this permit, the permittee shall develop and institute an ongoing program of monitoring effluent as follows:

<u>Effluent Characteristic</u>	<u>Unit of Measurement</u>	<u>Sampling Frequency</u>	<u>Type of Sample</u>
<u>Monitoring Requirements</u>			
Fecal Coliform Bacteria	number/100 ml	monthly	grab

2. Final Effluent Limitations

Discharges from the sewage treatment plant after December 31, 1976, will not be allowed.

## PART I

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Permit No. ID-002016-8

## B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Completion of Facilities Plan	December 31, 1974
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Completion of Plans and Specifications	May 31, 1975
--	--------------

Begin Construction	July 31, 1975
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Progress Report	December 31, 1975
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End Construction	September 30, 1976
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2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of non-compliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

## C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. The permittee shall take samples and measurements to meet the monitoring requirements specified herein in the effluent stream before its discharge to the receiving waters.

2. Reporting

Monitoring results shall be summarized each month on a Discharge Monitoring Report Form (EPA No. 3320-1); summary reports for the previous three months shall be submitted quarterly and postmarked no later than the 28th day of the month following the completed quarterly reporting period. Quarterly reporting periods shall end on the last day of March, June, September and December. The first quarterly report is due on April 28, 1975. Duplicate signed copies of these, and all other reports herein, shall be submitted to the Regional Administrator and the State agency at the following addresses.

United States Environmental Protection Agency  
Region X  
1200 Sixth Avenue  
Seattle, Washington 98101

Attn: Enforcement Branch M/S 513

Idaho Department of Health and Welfare  
Environmental Services Division  
Statehouse  
Boise, Idaho 83720

3. Additional Monitoring by Permittee

If the permittee monitors any effluent characteristic identified in this permit more frequently than required, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form (EPA No. 3320-1). Such increased frequency shall also be indicated.

## PART I

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Permit No.: ID-002016-8

4. Definitions

- a. The monthly average, other than for fecal coliform bacteria, is the arithmetic mean of samples collected during a calendar month. The monthly average for fecal coliform bacteria is the geometric mean of samples collected during a calendar month.
- b. The weekly average, other than for fecal coliform bacteria is the arithmetic mean of samples collected during a calendar week. The weekly average for fecal coliform bacteria is the geometric mean of samples collected in a calendar week.
- c. Other methods of measuring oxygen demand can be substituted for Biochemical Oxygen Demand (5-day) if the permittee can demonstrate long-term correlation of these measurements with BOD<sub>5</sub> values. The substituted methods must receive at least 30 days prior approval from the Regional Administrator.

5. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(g) of the Act, under which such procedures may be required. The permittee shall submit a description of the sampling and analyses methods it proposes to use to the Regional Administrator within 30 days of the effective date of this permit.

6. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;
- d. The analytical techniques or methods used; and
- e. The results of all required analyses.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the State water pollution control agency.

8. Analytical Quality Control

The permittee shall submit to the Regional Administrator a summary of the analytical quality control program it proposes to use within 30 days of the effective date of this permit. Such summary shall:

- a. Specify the appropriate analytical methods and quality control techniques the permittee proposes to use. The latter are to be taken from EPA publication "Handbook for Analytical Quality Control in Water and Waste Water Laboratories", June 1972;
- b. Describe the sample station locations, method and frequency of collection along with the flow measuring techniques and their level of accuracy;
- c. Outline the procedures to be employed in preparing analytical results for reporting purposes and subsequent storage.

## A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Regional Administrator and the State with the following information, in writing, within five (5) days of becoming aware of such condition:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.



4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to navigable waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Regional Administrator and the State in writing of each such diversion or bypass in accordance with the procedure specified above for reporting noncompliance.

6. Removed Substances

Collected screenings, grit, sludges, and other solids removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent entry of those wastes or run off from such materials into navigable waters.

7. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities; or, if such alternative power source is not in existence, and no date for its implementation appears in Part I,
- b. Halt, reduce or otherwise control all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

## PART II

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Permit No. ID-002016-8

## B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the head of the State water pollution control agency, the Regional Administrator, and/or their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

2. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Regional Administrator and the State water pollution control agency. The new owner or successor shall submit a letter to the State water pollution control agency and the Regional Administrator stating that he will comply with the requirements of this permit.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Act, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making a false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Act.

4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

PART II

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Permit No. ID-002016-8

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

5. Toxic Pollutants

Notwithstanding Part II, B-4 above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

6. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part II, A-5) and "Power Failures" (Part II, A-7), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the Act.

8. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by section 510 of the Act.

## PART II

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Permit No. ID-002016-8

9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

11. Notice of New Introduction of Pollutants

The permittee shall provide advance notice to the Regional Administrator and head of the State water pollution control agency of:

- a. Any new introduction of pollutants into the treatment works from a source which would be a new source as defined in Section 306 of the Act if such source were discharging pollutants.
- b. Any new introduction of pollutants which exceeds 10,000 gallons on any one day into such treatment works from a source which would be subject to Section 301 of the Act if such source were discharging pollutants, and
- c. Any substantial change in volume or character of pollutants being introduced into such treatment works by a source introducing pollutants into such works at the time of issuance of the permit.

Such notice shall include information on:

- a. The quality and quantity of effluent to be introduced into such treatment works; and,
- b. Any anticipated impact of such change in the quantity or quality of effluent to be discharged from such publicly owned treatment works.

12. Control of Undesirable Pollutants

Under no circumstances shall the permittee allow introduction of the following wastes into the waste treatment system;

- a. Wastes which create a fire or explosion hazard in the treatment works.
- b. Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0, unless the works is designed to accommodate such wastes.
- c. Solid or viscous substances in amounts which cause obstructions to the flow in sewers, or other interference with the proper operation of the treatment works.
- d. Wastewaters at a flow rate and/or pollutant discharge rate which is excessive over relatively short time periods so that there is a treatment process upset and subsequent loss of treatment efficiency.

13. Requirements for Industrial Users of Storm Sewers

The permittee shall require any industrial user of storm sewers to comply with the requirements of Section 308 of the Act.

14. Requirements for Industrial Users of Treatment Works

The permittee shall require any industrial user of these treatment works to comply with any applicable requirements of Sections 204(b), 307, and 308 of the Act. The permittee shall require any industrial user subject to the requirements of Section 307 of the Act to prepare and transmit to the Regional Administrator and the State agency periodic notice (over intervals not to exceed 9 months) of progress toward full compliance with Section 307 requirements.

**ENVIRONMENTAL  
IMPACT STATEMENT  
FOR  
THE JEROME, IDAHO  
WASTEWATER FACILITIES PROJECT**



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**PUBLIC MEETING MAY 25, 1976**

**1. The Meeting**

On Tuesday, May 25, 1976 the Environmental Protection Agency (EPA), in cooperation with the City of Jerome, will conduct a public information meeting concerning the preparation of an Environmental Impact Statement (EIS) for the Jerome, Idaho Wastewater Facilities Project. The meeting is to be held at the Jerome Jr. High School in the City of Jerome at approximately 8:15 p.m. The purpose of the meeting is to provide information about the environmental impact statement process for the Jerome, Idaho Wastewater Facilities Project to concerned and interested citizens in the Greater Jerome Area. The specific objectives of the meeting are as follows:

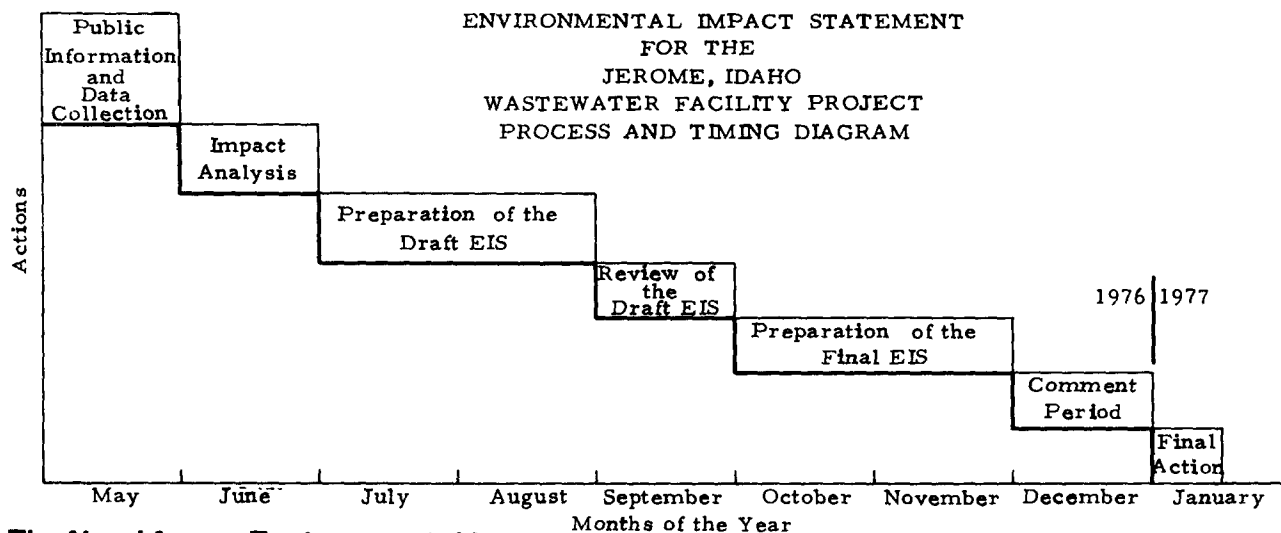
1. Notify the public that an Environmental Impact Statement is being prepared for the Jerome Wastewater Facilities Project.
2. Explain the process for preparing the Environmental Impact Statement.
3. Answer questions concerning the preparation of the Environmental Impact Statement from interested citizens.
4. Provide a form for discussion of the issues concerning the development of the Environmental Impact Statement.

The meeting is sponsored by the City of Jerome. Other agencies attending the meeting to provide information to the public include the Environmental Protection Agency, who is responsible for completing the Environmental Impact Statement; R. W. Beck and Associates, consultant assisting the Environmental Protection Agency with the preparation of the Environmental Impact Statement; the Idaho Department of Health and Welfare, and CH2M/Hill, consultant to the City of Jerome, who prepared the Wastewater Facilities Plan.

**2. The Project**

In May 1973 the City of Jerome authorized the Firm of CH2M/Hill, Inc. of Boise, Idaho to develop a Wastewater Facilities and Treatment Plan for the City of Jerome. The Plan was prepared and submitted to the Environmental Protection Agency dated May 1975. The Plan investigated and addressed three wastewater management techniques as well as the location of a new treatment plant in comparison with other alternative sites. In conformance with Environmental Protection Agency guidelines these alternative comparisons stressed the cost-effectiveness of the systems and their reliability.

The City of Jerome is presently served by a wastewater collection system which includes both gravity flow and pumped elements. Approximately 1,170 acres require two lift stations in order to provide service. In addition to sewage produced by public use, Ida Gem Dairymen, Inc. also discharges significant amounts of waste into the system. The existing treatment plant was constructed in 1950 and includes a grit chamber and comminutor, a conventional trickling filter system, an activated biological filter tower, one filter pump station, and one aerated lagoon. The majority of the existing major treatment units are over 20 years old and are generally in poor physical condition. The facility is unable to treat existing wastewater at a level of efficiency that meets discharge requirements, and hydraulic and organic overloads have caused concern about aesthetics and other problems associated with non-compliance discharges. Because of the poor condition and needed repairs of the treatment plant causing a general need for an adequately-functioning sewerage system in the City of Jerome, the Facilities Plan was undertaken.



#### 4. The Need for an Environmental Impact Statement

On January 19, 1976 the Environmental Protection Agency issued a Notice of Intent to prepare an Environmental Impact Statement for the Jerome, Idaho Wastewater Facilities Project. This action was prompted by significant local concerns surrounding the project and its potential impacts upon the environment. EPA's decision to prepare an Environmental Impact Statement on the proposed action is based on criteria for determining whether actions will have a significant impact on the environment as set forth in Federal Regulations appearing in the Federal Register of April 14, 1975 (40 CFR Part 6). Additionally, EPA's regulations under 40 CFR 6.510(a) directs the Environmental Protection Agency to evaluate impacts due to changes in land use concentration, including vacant land subject to increased development pressures as a result of treatment works, the increases of population and changes in population density, and the nature of land use regulations in the affected area and their potential effects on development. Federal Regulations 40 CFR 6.510(d)(3) directs the Environmental Protection Agency to include in its Environmental Impact Statement proposed effects upon agricultural lands. Because the concerns of the Jerome area citizens did specifically address these specific issues and others, the Environmental Protection Agency is developing an Environmental Impact Statement which will address these and other concerns.

#### 5. The Process

The above graphic illustration attempts to illustrate the systematic process by which the Environmental Protection Agency hopes to define the issues, alternatives, and social and environmental conditions that will be important in the assessment of the impacts of the proposed wastewater facilities upon the Greater Jerome Area. The proposed process is intended to provide a straight-forward, understandable, yet scientific approach to the analysis of environmental and social impacts. The basic steps in completing the Environmental Impact Statement are as follows:

Step 1 will be to collect information through a public meeting, review of existing literature and information and discussions with agencies and public officials to determine the issues and impact vulnerability of the Greater Jerome Area.

Step 2 will be to define wastewater facilities alternatives and to assess the environmental and social-economic impact risks of these alternatives.

Step 3 will be based on the analysis performed in Step 2, to identify the alternative which will achieve the most cost-effective level of treatment with the minimum amount of environmental and socio-economic impact risk.

Step 4 will be to describe the potential environmental and socio-economic impacts of this proposed alternative.

Step 5 will be to write up and document these analyses in the form of a Draft Environmental Impact Statement which will be distributed to the public for their review and comment.

Step 6 will be to conduct a public hearing seeking the comments from the public on the proposed Draft Environmental Impact Statement.

Step 7 will be to produce a Final Environmental Impact Statement.

#### 6. Project Timing

The following listing of actions and dates is a tentative time schedule that the Environmental Protection Agency will attempt to meet in the preparation of its Environmental Impact Statement. However, because of the complex nature of environmental impact statements, often it is necessary for the Environmental Protection Agency to modify its proposed schedules. In this regard, the following schedule can be used only as a guide to inform people of the approximate timing of study results and products.

Action	Date
Begin preparation of the Environmental Impact Analysis . . .	May 10, 1976
Public information meeting . . .	May 25, 1976
Distribution of the Draft Environmental Impact Statement . . .	August 20, 1976
Public hearing on the Draft Environmental Impact Statement . . .	September 21, 1976
End of comment period by the public on the Draft Environmental Impact Statement . . . . .	October 4, 1976
Distribution of the Final Environmental Impact Statement . . .	December 1, 1976
Administrative action by the Environmental Protection Agency on the Jerome, Idaho Wastewater Facilities Project . . . . .	January 14, 1977

**Thank You for your attendance at our  
Public Information Meeting.**



**ENVIRONMENTAL  
PROTECTION  
AGENCY**

**REGION X and  
BOISE  
OPERATIONS OFFICES**

7. Questionnaire

**PUBLIC INFORMATION QUESTIONNAIRE  
ENVIRONMENTAL IMPACT STATEMENT  
FOR THE  
JEROME, IDAHO  
WASTEWATER FACILITIES PROJECT**

The completed Facilities Plan prepared by the City and its consultants includes a cost-effective analysis of collection and discharge alternatives for the City of Jerome and describes a recommended alternative. The final recommendation described in the published Plan dated May 1975 recommends that a new wastewater treatment plant be constructed at a new site west of the City near the freeway and that this treatment plant employ an extended aeration activated sludge system with discharge of the treated effluent through a pressure line to the Snake River. Additionally, anaerobic sludge digestion with disposal in a sanitary landfill would be the process to treat and dispose of the sludge residuals produced in the treatment process.

However, since the publication of that report a change in the State of Idaho's requirements for discharge of treated effluent into irrigation canals has resulted in a change in the reported recommendation. Because of the elimination of the storage requirement during the winter months for treated effluent from the treatment plant the current recommended alternative is to discharge into the irrigation canal system. Thus, the original recommended alternative of CH<sub>2</sub>M/Hill in the City of Jerome in their facilities planning process has been modified to construct the new plant at the site west of the City with a discharge into the irrigation canal system. This alternative and others will be evaluated in the preparation of the Environmental Impact Statement.

**3. Public Participation**

The Environmental Protection Agency welcomes the input of the public into the preparation of this Environmental Impact Statement for the Jerome, Idaho Wastewater Facilities Project. This entire brochure and the public information meeting is designed to assist the public in understanding how they can input their comments into the process. The time schedule shows the project timing and deadlines which can serve as a guide in making information available. In the general sense the time schedule illustrates that all data information and suggested issues or topics should be submitted to the Environmental Protection Agency before July 1, 1976. These comments will be considered in the preparation of the Environmental Impact Statement if received before that date. After that date the review procedure will begin, at which time the general public will have access to the Draft Environmental Impact Statement by approximately August 20, 1976, at which time they may read, review, and submit comments regarding the Draft EIS.

Comments must be written and may be addressed to any of the staff participants listed within the Staff section of this brochure. However, for the purposes of coordination and cost-effectiveness, it is requested that all comments, suggestions, or criticisms be addressed to Norma Young of the Environmental Protection Agency. In addition to these mechanisms, in the panel adjacent to this discussion is included a questionnaire which is designed to help the Environmental Protection Agency in defining goals, objectives, concerns and issues that should be included in the Environmental Impact Statement. It would be greatly appreciated by the staff if you would please take a few minutes to complete this questionnaire and include any comments that you think may be of help to us in preparing the Environmental Impact Statement. If you need more room to respond to the questionnaire, or if you would like to supply us with further information, please enclose this information in an envelope and address it to the Environmental Protection Agency - MS/443. Otherwise, if you can include all of your information on the questionnaire, simply detach the questionnaire from this brochure and drop in a mailbox. You will notice that on the other side of the questionnaire is a prepaid, self-addressed label that will allow all comments to be received by the Environmental Protection Agency in Seattle. All comments must be signed to be considered.

The Environmental Protection Agency and R. W. Beck and Associates greatly appreciate your attendance at this meeting and any comments and suggestions that you may have offered during the meeting. Additionally, if you have specific questions and want to meet with members of the staff, we would be pleased to meet with you after the meeting or during the morning of Wednesday, May 26, the day immediately following the meeting. If you wish such a meeting, please make an appointment immediately after the meeting with one or more of the study staff. Thank you once again for your concern and cooperation.

1. In your opinion, what is the value of the proposed Wastewater Facilities Project for Jerome, Idaho?  
Worthwhile ☐ Acceptable ☐ Marginal ☐ Unacceptable ☐
2. What are the issues that you believe should be considered during the preparation of this Environmental Impact Statement?  
\_\_\_\_\_

3. What sources of information do you believe should be utilized during the preparation of this Environmental Impact Statement?  
\_\_\_\_\_

4. What potential impacts do you believe may be associated with the implementation of the proposed Wastewater Facilities Project?  
\_\_\_\_\_

5. What other comments or suggestions do you believe may be beneficial to the study staff during the preparation of this Environmental Impact Statement?  
\_\_\_\_\_

6. If you would like a copy of the Draft Environmental Impact Statement for the Jerome Wastewater Facilities Project, please print your name and address below.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. Please sign below; anonymous comments cannot be accepted. Thank you.

Signature \_\_\_\_\_

The Environmental Protection Agency appreciates your time and concern in completing this questionnaire.