

**FINAL
ENVIRONMENTAL IMPACT STATEMENT
MAY 1977**

**WESTSIDE TRUNK DISTRICT
JACKSON COUNTRY, OREGON**



FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR

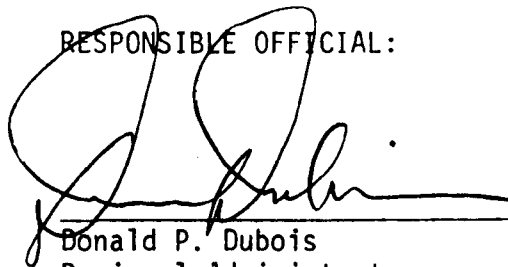
WESTSIDE TRUNK DISTRICT
BEAR CREEK VALLEY SANITARY AUTHORITY

EPA Project No. C-410527
EPA-10-OR-Jackson-BCVSA-INT-76

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May 6, 1977
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PREFACE

On November 26, 1976 the U.S. Environmental Protection Agency (EPA) released for public review a draft Environmental Impact Statement (EIS) which evaluates the environmental impacts associated with construction of a wastewater trunk line in an area designated as the Westside Trunk District, located in Jackson County, Oregon. The decision to prepare an EIS on the proposed project was based on an expected grant application from the Bear Creek Valley Sanitary Authority (BCVSA) for construction grant funding in which EPA would provide 75% of the funds required to plan, design and construct the wastewater trunk system. The EIS for this project was prepared utilizing the "piggyback" approach which allowed the draft EIS and BCVSA's draft Facilities Plan to be prepared concurrently. To complete the environmental impact evaluation, EPA, in joint agreement with BCVSA, has prepared this final EIS which is the result of comments received on the draft EIS, oral and written testimony received at the EIS public hearing, BCVSA's draft Facilities Plan and various other supporting documents. The following discussion summarizes salient points identified in these documents.

The draft Facilities Plan, prepared by BCVSA, indicates that water quality problems are generally scattered throughout the entire Westside Trunk District. Water samples collected from roadside ditches in April 1976, indicate fecal coliform contamination in the range of 11 to 11,000 MPN per 100 ml. It is not known, however, what specific contribution is made by residential septic tank failures. In the Westwood (Niedermeyer) subdivision 5% of the 59 homes have documented septic tank problems and in the El Reina Subdivision, of the houses surveyed by Jackson County in April 1976, 33% have continuing septic tank failures and 50% have seasonal or occasional failures. In addition, the Westside Elementary School has a history of septic tank failures. As many as 25 cases of septic tank "red tagging" have been reported by Jackson County. Problems associated with these failures include 7 water wells within the District which do not conform to State and Federal standards of purity. Many of these problems can largely be attributed to soil types and conditions within the District. Of the 5,400 acres, 75% cannot meet the soil conditions necessary for sub-surface disposal systems required by the Oregon Department of Environmental Quality.

Considering the need for wastewater facilities within the District, and the results of EPA's environmental evaluation of 3 alternative alignments, EPA recommends that Alternative 2A be constructed to solve the wastewater problems within the Westside Trunk District. Alternative 2A is the most cost effective of the Alternatives evaluated in the draft EIS and the environmental impacts associated with this alternative are of an acceptable nature. It should be noted, however, that while the impacts associated with Alternative 2A are considered unavoidable and judged as insignificant at this time, they will be given further consideration and will continue to be examined throughout the remainder of the EIS process. Major adverse impacts must be

studied in terms of mitigating techniques which can be incorporated into project construction and which may affect the degree of future secondary impacts. Comments received during the review process and testimony received at EPA's public hearing give evidence that two related secondary impact areas are of major concern to individuals residing in the District. These concerns center on the projected population growth for the Westside Trunk District, and the effect this growth will have on areas designated by Jackson County as agricultural lands.

The draft EIS states that a population projection developed for the Westside Trunk District indicates that 17,400 people could reside in the District by the year 2026. This projection was developed by BCVSA's Facilities Plan consultant and was utilized for calculating design flow in sizing the proposed wastewater trunk line. Comments received from Jackson County, however state that

"Based on current zoning of the area and the Plan map designation, the ultimate population is expected to be about 4,000 persons for the area lying outside of the proposed Central Point Growth Boundary. Another 9,000 persons can be accommodated within that portion of the proposed Central Point Growth Boundary lying within the trunk district."

Based on the foregoing, EPA considers itself bound to respect Jackson County's existing Zoning and Comprehensive Land Use Plan and therefore is requiring BCVSA to re-design Alternative 2A to accommodate a population of 13,000 people rather than the 17,400 population utilized by BCVSA's Facilities Plan consultant. In resizing the trunk line, the Facilities Plan use of 200 gallons per capita per day allowance for groundwater infiltration will be accepted by EPA. The District is in an area of high groundwater and the allowance is within the sewer design criteria used by the Oregon Department of Environmental Quality and manuals of practice of ASCE and WPCF.

As stated above, the protection of existing agricultural lands is a significant issue associated with the proposed project. The Oregon State Land Conservation and Development Commission (LCDC) stated in comments to the draft EIS that "all agricultural lands must be protected from urban development...it is critical that remaining agricultural lands not be threatened by further encroachment of urban sprawl." It should also be noted that protection of agricultural lands is a statewide planning goal and that Jackson County is bound by Oregon statutory authority to plan in accordance with these goals. In an effort to mitigate any secondary adverse impacts to agricultural lands EPA has decided that any subsequent grant award to BCVSA for this project will be conditional upon the following:

The grantee agrees that connections inconsistent with agricultural zoning will not be allowed for sewerage service to those areas traversed by the proposed trunk line through

lands designated as agricultural by the County's Comprehensive Plan. The proposed Forest Service facility will, however, be required to hook-up to the proposed trunk line as well as any existing residents which are located within 300 feet of the proposed wastewater system. If additional structures requiring sewerage service are allowed by Jackson County to be constructed, hook-up to the sewerage system is required.

In addition to the above requirements, EPA requires Jackson County certification that Alternative 2A complies with the County Comprehensive Plan and appropriate statewide planning goals as they effect the current plan.

A new addition to the text of this final EIS is the inclusion of a chapter entitled "Comments and Responses to the Draft EIS". In this chapter, EPA has reprinted letters commenting specifically on the draft statement and has attempted to respond to all questions and requests for explanation, correction, or revision where additional evaluation proved the draft statement to be in error.

The Environmental Protection Agency submits this final EIS for a public review period of 30 days. Following this review period EPA's Regional Administrator will make his final determination concerning a construction grant award as authorized by the Federal Water Pollution Control Act ammendments of 1972 (PL 92-500) to the Bear Creek Valley Sanitary Authority.

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SUMMARY

FINAL ENVIRONMENTAL IMPACT STATEMENT -- WESTSIDE TRUNK DISTRICT FACILITIES PLAN FOR THE BEAR CREEK VALLEY SANITARY AUTHORITY

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

The subject action for this environmental impact statement is the awarding of grant funds to Jackson County for the construction of a wastewater collection system in the Westside Trunk District, Jackson County, Oregon. The objective of this project is to provide wastewater collection to residents of the Westside Trunk District, which is located southwest of the City of Central Point. Wastewater from this area would be collected and transported to the Lower Bear Creek Interceptor and through the interceptor to treatment at the Medford Regional Sewage Treatment Plant located on Rogue River. This Draft Environmental Impact Statement identifies alternatives for providing the district with a wastewater collection facility designed to meet the needs of the residents of the district and to maintain and enhance the area's environmental quality. The district covers approximately 5,400 acres and has a population of about 2,000 residents.

Much of the Westside Trunk District is underlain by impermeable clay soils and is characterized by a high groundwater table. Such conditions have created periodic sewage waste disposal problems causing septic systems to fail and sewage to appear in surface drainage areas, irrigation ditches and local streams. Surveys conducted by the Jackson County Health Department located several areas of high fecal coliform levels, resulting in the posting of Jackson and Griffin Creeks as public health hazards.

4. Summary of Environmental Impacts and Adverse Environmental Effects:

The impacts and magnitude of those impacts will vary according to the alternatives proposed. Alternative 1 represents a no-action alternative, while Alternative 2 suggests the construction of a wastewater collection facility. Alternatives 2A, 2B and 2C propose alternative alignments for the proposed collection systems, short-term impacts such as temporary loss of vegetation, disruption of wildlife, traffic congestion, utility service disruption, aerial pollutant, visual impact, and noise would occur with Alternative 2.

Long-term impacts of Alternative 2 would include protection and enhancement of local ground water, protection of the local aquifer, and increased water quality in local surface waters and streams. By providing wastewater collection facilities, Alternative 2 would allow growth to occur within the project area, at least to the level indicated in the local comprehensive plans. This growth would result in conversion of vacant land to residential uses and would create some pressure for conversion of agricultural land. The extent of this pressure would vary depending upon whether Alternative 2A, 2B or 2C were chosen. Long-term impacts associated with growth would include increased traffic, and increasing pressure for provision of a public water supply.

Major impacts associated with Alternative 1 would be the continuation of periodic problems of groundwater and surface water contamination by sewage, the potential for a health hazard, a potential for contamination of the local aquifer, and effects on land use patterns.

5. Alternatives Considered

Alternative 1 - No Action Alternative. This alternative would involve the continuation of existing conditions of installing septic tanks and drain fields to handle individual home sewage. Associated with this alternative would be the continuation of periodic septic tank failures and surfacing of sewage wastes.

Alternative 2 - Construction of a sewage collection system connecting to the Lower Bear Creek Interceptor. The alternative would provide for construction of a sewage collection system to serve the Westside Trunk District. Alternatives 2A, 2B and 2C suggest three different alignments for the construction of that collection system.

6. Comments

The following State, Federal and local agencies and interested groups were invited to comment on the Draft Environmental Impact Statement:

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

DEPARTMENT OF THE ARMY, CORP OF ENGINEERS

FEDERAL ENERGY OFFICE

NATIONAL MARINE FISHERIES SERVICE

ADVISORY COUNCIL ON HISTORIC PRESERVATION

MEMBERS OF CONGRESS

MARK O. HATFIELD
U.S. SENATE

JAMES WEAVER
U.S. HOUSE OF REPRESENTATIVES

ROBERT W. PACKWOOD
U.S. SENATE

STATE

ROBERT W. STRAUB - GOVERNOR OF OREGON

CLEATIS G. MITCHELL - STATE REPRESENTATIVE DISTRICT 52

OREGON STATE CLEARINGHOUSE

DEPARTMENT OF ENVIRONMENTAL QUALITY

REGIONAL AND LOCAL

JACKSON COUNTY BOARD OF COMMISSIONERS

JACKSON COUNTY DEPARTMENT OF PLANNING AND DEVELOPMENT

JACKSON COUNTY HEALTH DEPARTMENT

JACKSON COUNTY LIBRARY

JACKSON SOIL AND WATER CONSERVATION DISTRICT

CITY OF MEDFORD

CITY OF CENTRAL POINT

CITY OF JACKSONVILLE

BEAR CREEK VALLEY SANITARY AUTHORITY

MEDFORD IRRIGATION DISTRICT

SCHOOL DISTRICT 549C

JACKSON COUNTY FIRE DISTRICT #3

ROGUE RIVER VALLEY IRRIGATION DISTRICT

NATIONAL WILDLIFE FEDERATION

INTERESTED GROUPS AND INDIVIDUALS

DALE CANNON CH2M - CORVALLIS

OREGON WILDLIFE FEDERATION

1000 FRIENDS OF OREGON

NORTHWEST ENVIRONMENTAL DEFENSE CENTER

OSPIRG

OREGON ENVIRONMENTAL COUNCIL

ROGUE VALLEY COUNCIL OF GOVERNMENTS

SOUTHERN OREGON HISTORICAL SOCIETY

HOMER A. CONGER

OTTO BOHNERT

JAMES MILLS

E.R. FROHREICH

C.L. ROBINSON

JOSEPH GROSQUTH

ROY HATCHER

ROGER VANDERBECK

MR. & MRS. M.E. HEISEL

EDWIN FROST

JOHN FLEEGER

ROBERT WILCOX

JOHN WITTEVEE

JOANNE WILCOX

F.R. BAUMAN

ANNE JOHNSON

BRYCE S. PHILLIPS

KEITH A. SMITH

MR. & MRS. J. LELAND WILSON

EDWARD L. WALTER

MR. & MRS. H. LAFEVER

MR. & MRS. J.L. BEYOFF

C.R. BARBHURST

EVELYN OUSTERHOUT

MR. & MRS. E.W. NITCHER

MR. & MRS. RAY NEWMANN

THIS FINAL ENVIRONMENTAL IMPACT STATEMENT WAS MADE AVAILABLE
TO THE COUNCIL ON ENVIRONMENTAL QUALITY (CEQ) AND THE PUBLIC
ON JUN 8 1977

SECTION I. INTRODUCTION

Project Location and Grant Applicant

The proposed project area is commonly known as the Westside Trunk District and is located southwest of Central Point in Jackson County, Oregon, as shown on Fig. 1. It is characterized by a mix of suburban and rural home sites and productive farming units. The north portion of the project area is adjacent to the city limits of Central Point and is often called West Central Point. None of the land within the Westside Trunk District is included within the boundaries of the incorporated city. The project area includes approximately 5,400 acres and has a population of approximately 2,000 residents.

The Westside Trunk District is within the Bear Creek Drainage Basin and drains north and east into Griffin and Jackson Creeks. Both of these tributary streams drain into Bear Creek north of the project area. The topographic and drainage features of this basin are further described in the subsequent chapter on the project area environment.

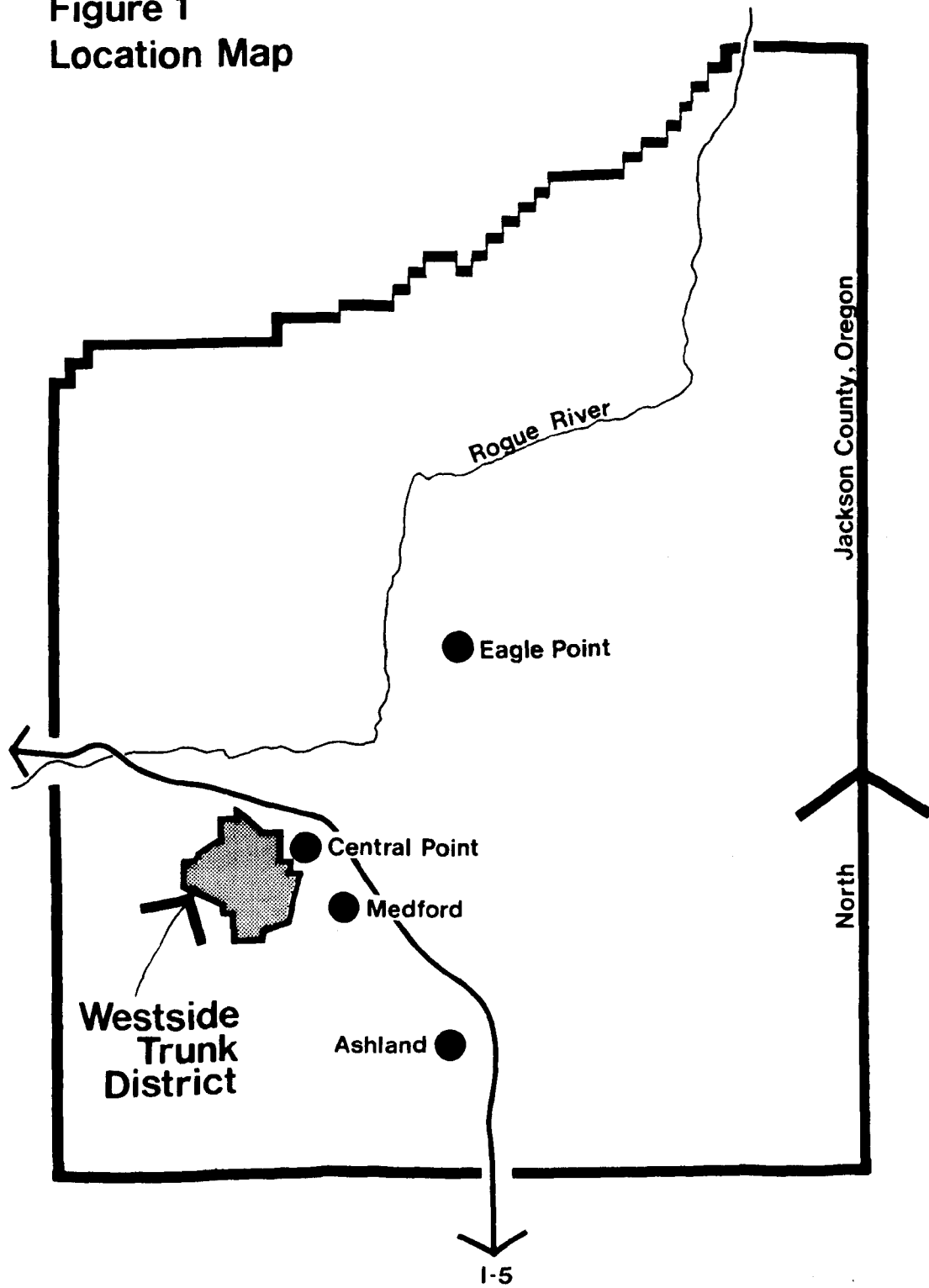
Bear Creek Valley Sanitary Authority (BCVSA) has requested a grant of Federal funds to solve the wastewater problems existing within the Westside Trunk District. BCVSA was formed under the authority of Oregon Revised Statutes Chapter 450 (ORS 450.705 through 450.990) by vote of the people in the BCVSA area on August 30, 1966. At that time it was granted authority to provide sanitary sewer service within the unincorporated areas of Jackson County, including the City of Talent, the South Bear Creek Sanitary District, and the White City Sanitary District. The incorporated cities of Phoenix, Medford, Jacksonville, and Central Point are within the geographic boundaries of BCVSA, but have elected to retain city control of sewer systems within their legal city limits. A large portion of the area within the BCVSA boundaries has been divided into trunk districts including West Medford and South Medford, in addition to the subject Westside Trunk District.

The Bear Creek Valley Sanitary Authority has been granted a Step 1 Facilities Planning Grant (as authorized under Public Law 92-500) for the project and anticipates following this with Steps 2 and 3 Design and Construction Grants. The grant application EPA project number is C-410527-01-1. No other local jurisdictions would receive grant funds for the construction of a wastewater collection system within the Westside Trunk District. EPA would provide 75 percent of the funds for the grant eligible portion of the project.

Project Objectives

The project objectives are best stated by the following adopted BCVSA policy: "Public sewers are constructed primarily to solve existing

Figure 1
Location Map



pollution and health hazard problems and secondly, to meet developmental needs upon proper conformance with land use planning." No public sewers currently exist within the Westside Trunk District and all wastewater is disposed of by septic tanks and drain fields. Poor soils suitability for septic tanks coupled with a high water table have led to current and potential health problems. A detailed explanation of these conditions may be found in Section II.

o Stream Contamination

Conditions existing within Jackson and Griffin Creeks exceed the water quality criteria established in ORS Chapter 340, Rogue River Basin Water Quality and Treatment Standards, which provide that: "No wastes shall be discharged and no activities shall be conducted ... which will cause ... average (fecal coliform) concentrations to exceed 1,000 per 100 milliliters." (1). (Footnote references are listed at the conclusion of the FEIS.)

o Surface Water Contamination

Drainage ditches, irrigation ditches and standing water not in natural water courses, are being contaminated with septic tank effluent in locations scattered throughout the project area. Again, fecal coliform counts have been recorded above the maximum acceptable level of 1,000 per 100 milliliters.

o Ground Water Contamination

Septic tanks, as well as a variety of non-point sources, appear to be contaminating the shallow ground waters within the Westside Trunk District. Reports on well tests indicate that septic tank effluent may be seeping into individual household water supplies in selected locations. Wells often must be drilled to greater depths in order to be free from contaminated conditions.

o Curtailment of Development

Although accurate records are not available, Jackson County Health Department officials estimate that approximately fifty percent of all requests for septic tank permits within the Westside Trunk District are denied due to the unsuitability of area soils to serve as an efficient drain field, and to a high water table.

Project History

In March 1969, an agreement was entered into between Jackson County, the cities of Medford, Central Point and Phoenix, and the Bear Creek Valley Sanitary Authority to construct the Bear Creek Interceptor system as well as a new sewage treatment plant at the site of the then existing Medford Sewage Treatment Plant. Bond issues were passed in June 1969 which provided the funds necessary to construct the interceptor system.

In mid-1971, subsequent to the construction of the interceptor system, CH2M Hill completed feasibility studies for three trunk districts within the BCVSA boundaries -- Westside, West Medford and South Medford. The BCVSA Board of Directors gave top priority to the West and South Medford projects both of which were underway by late 1974 when the Board voted to proceed with the Westside project. At that time, the project was presented to Jackson County for their review and comment. The Westside Trunk District project was placed on the Oregon Department of Environmental Quality priority list in May 1975, and in November of that year, the BCVSA Board of Directors filed a Notification of Intent to Apply for Federal Aid with the U. S. Environmental Protection Agency. In May 1976 a grant offer from EPA for Step 1 Facilities Planning was accepted by the BCVSA Board of Directors. The consulting engineering firm of CH2M Hill has recently prepared a Facilities Plan which explores alternate methods of solving the wastewater/water quality problems which now exist within the project area.

From late 1974 until the present, BCVSA has been negotiating with Jackson County in relationship to the preparation of population projections for the project area. Population projections will be discussed further in Section II. Jurisdictional questions arose between BCVSA and the City of Central Point due to the inclusion of the northern portion of the project area within the proposed Central Point urban growth boundary. It is the belief of Central Point officials that inclusion of that area within their urban growth boundary transferred the responsibility to provide public services to the city. BCVSA officials do not concur with that belief, and at the present time BCVSA remains the sole grant applicant.

EPA's Environmental Responsibilities

The National Environmental Policy Act of 1969 (NEPA), Public Law 91-190, requires all Federal agencies to "...utilize a systematic, interdisciplinary approach which will assure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision-making which may have an impact on man's environment..." Section 102 (2) (c) of that Act also requires the agency to prepare an environmental impact statement (EIS) on, "...major Federal action significantly affecting the quality of the human environment..." This is to be accomplished in consultation with the Council on Environmental Quality (CEQ), established by Title II of the Act.

One of the major EPA programs involving actions which are candidates for EIS's is the Construction Grants Program as authorized by Title II - Grants for Construction of Treatment Works, Section 208 (g) (1), of the Federal Water Pollution Control Act Amendments of 1972 (FWPCA), Public Law 92500. The Act authorizes the Administrator of EPA, "...to make grants to any state, municipality, or intermunicipal or interstate agency for the construction of publicly owned treatment works..." The regional EPA offices have, in turn, been delegated the authority to fund state-approved wastewater treatment projects.

Concurrent with all of these authorities is the responsibility to assure that Federal funds will produce a project which will have maximum beneficial effects on the environment and minimum adverse effects.

The public laws quoted above, along with the CEQ and EPA regulations, constitute the authority and responsibility for the preparation of environmental impact statements on wastewater treatment works, or facilities or 208 plans when deemed necessary by the regional offices of EPA.

If approved, a BCVSA proposed project for the Westside Trunk District would be financed by a combination of Federal funds and a local financing plan under procedures adopted as part of the local improvement district and BCVSA authorizing legislation. In order for Federal funds to be granted, the Environmental Protection Agency must independently review the information submitted by BCVSA and decide whether to prepare an environmental impact statement in compliance with the National Environmental Policy Act.

Due to the magnitude of controversy which surrounded BCVSA's recent South Medford Project, and the uncertainty of population projections and city and county planning policies for the project area, EPA determined that an environmental impact statement for the Westside Facilities Plan was necessary. It was determined that the EIS would be prepared using the "piggyback" technique, i.e., that it would be prepared concurrently with the Facilities Plan by a separately retained consulting firm.

Citizen Concerns and Issues

During the course of the preparation of this Draft Environmental Impact Statement (DEIS), two public involvement efforts were undertaken. The first was a workshop planned to discuss the major land use planning and growth policies which affect the project area. Participants in this August 17 workshop included county and city officials, planning agency staffs and other interested local and state agency personnel. The second public input session was a public information meeting held September 2 within the project area. The presentation at that meeting described the major alternatives to be evaluated in the DEIS, and presented preliminary material on the effects of those various alternatives.

The following is a summary of the issues and problems raised to date:

A. Comments received from agency staffs, public officials and local citizens have generally agreed that a water quality problem does exist within the Westside Trunk District. The major questions raised have related to the size of the project that is needed to solve that problem. Some residents are concerned that provision of sanitary sewer service will cause more growth than the area can adequately handle, or than they desire. Other residents are concerned that growth will occur regardless, and that without public sewers, the quality of life will be degraded.

B. Recognizing that some future growth would be allowed by construction of a sewer trunk line, residents have asked specific questions relating to impacts on local public services and tax rates:

- Many residents believe that a public water supply system is as important to the area as is a public sewerage system. All households within the Westside Trunk District are dependent upon individual residential wells which vary greatly in both water quantity and water quality. Numerous individuals raised questions as to when a public water supply system would be provided within the project area.
- Concern has been expressed that tax rates would increase as a result of increased valuation to houses on public sewer systems.
- While many residents feel that the elementary school should pay its fair share of the assessment, others are concerned that the additional cost of operation might be a hardship to the school district.

Some residents expressed concern regarding the effect that project construction would have upon conversion of agricultural land to residential uses. A portion of the project area is currently used for productive farm purposes, and these residents fear that project construction would increase pressures for residential uses, making it economically unfeasible to retain the agricultural land in its present use.

On January 4th, 1977 a formal public hearing was conducted to receive comments on the DEIS and the Facilities Plan. Most of the comments received at that meeting related to the issues of future population projections and the potential conversion of agricultural land to residential uses. The responses to those comments are included in Section IV of the FEIS.

SECTION II. EXISTING CONDITIONS AND PROJECTED TRENDS

Population Growth

The 1975 Jackson County population was estimated by the Portland State University Center for Population Research and Census to be 110,700, an increase of approximately 17 percent over the 1960 figure. As shown in Table 1, Jackson County has experienced rapid growth since the 1940's, and during the last 35 years has grown one and a half times faster than the State of Oregon and three times faster than the United States as a whole. As shown in Table 2, the largest growth has been occurring in the small towns and cities within the county.

It is estimated that approximately 70 percent of the population growth between 1960 and 1970 was a result of in-migration of residents from other parts of Oregon and the United States.

The Westside Trunk District is included within the Central Point and Jacksonville Census Divisions. The majority of the project area falls within the subdivision known as Central Point West, however this portion was not measured separately until 1970. Although population growth figures are not available for the specific project area, a feeling for past growth trends can be gained by an examination of the growth rates for those two divisions. As shown in Table 3, in the period from 1960-70 the Central Point Census Division registered a growth of 45.5 percent. At the same time the City of Central Point recorded a growth of almost 75 percent, a higher figure than any other incorporated area within Jackson County. The Jacksonville Census Division recorded a substantially lower growth, approximately 24 percent from 1960-70. These trends are reflected in county building records which indicate that the majority of the project area growth has occurred in the northern portion (Central Point Division) as opposed to the southern portion (Jacksonville Division).

TABLE 1

JACKSON COUNTY POPULATION 1940-1975

	Population	Growth Rate from Previous Count
1940	36,213	
1950	58,510	66.7%
1960	73,962	26.4%
1965	92,100	24.5%
1970	94,533	2.6%
1975	110,700 (estimated)	17.0%

Source: Bureau of the Census, 1972.

TABLE 2
COMPARATIVE POPULATION GROWTH
1950-1970

	1950	1960	% Change 50-60	1970	% Change 60-70
Jackson County	58,510	73,962	26.4%	94,533	27.8%
Unincorporated Areas	26,933	33,056	23.0%	42,403	28.0%
Incorporated Areas	31,577	40,906	30.0%	52,130	27.0%
Medford	17,305	24,425	41.1%	28,454	16.5%
Ashland	7,739	9,119	17.8%	12,342	35.8%
Central Point	1,667	2,289	37.3%	4,004	74.9%
Phoenix	746	769	0.03%	1,287	67.4%
Eagle Point	607	752	0.24%	1,241	65.0%
Talent	739	868	17.0%	1,389	60.5%

Source: Southern Oregon College, Regional Development Center.

TABLE 3
SELECTED JACKSON COUNTY CENSUS SUBDIVISIONS
POPULATION GROWTH 1960-1970

	1960	1970	% Change
Central Point Division	8,679	12,629	45.5
Central Point City	2,289	4,004	74.9
Central Point West (part)	-	1,261	-
Jacksonville Division	5,898	7,282	23.5
Central Point West (part)	-	727	-
Jacksonville City	1,172	1,611	37.5
Medford West	-	3,919	-
South Medford	-	272	-

Source: Southern Oregon College, Regional Development Center

On the basis of aerial photographic analysis, the Facilities Plan has calculated 575 homes and 1900 people (based on 3.3 people per household) within the project area in 1970. While the project area does not correspond exactly with any census units, a review of that data does confirm the general figures.

The Portland State University Center for Population Research and Census has recently completed 1975 population estimates for Jackson County cities. According to these figures, shown in Table 4, the cities of Eagle Point and Talent have both recorded growth in excess of 80 percent during that five year period. In fact, Eagle Point has almost doubled its 1970 population. The City of Central Point, on the other hand, recorded a growth of 38 percent for that period, which is comparable with the 75 percent growth that the city experienced during the ten years from 1960 to 1970.

TABLE 4
COMPARATIVE GROWTH 1970-1975

	1970	1975	Percent Increase
Jackson County	94,533	110,700	17%
Central Point	4,004	5,530	38%
Eagle Point	1,241	2,460	98%
Phoenix	1,287	1,620	26%
Talent	1,389	2,420	74%

Source: Portland State University,
Center for Population Research and Census

Population Characteristics

The passage of the Donation Land Claims Act in 1850 brought many settlers to the Westside area where both town and farming communities were established. The City of Central Point was founded in the late 1860's and was the focal point for the Westside rural farming community. Farming was the major activity within the project area until the Jackson County population boom which began in the 1940's. Since that time large farm parcels have been partitioned into subdivisions and five acre "hobby" farms to accommodate the growing number of Jackson County residents.

The Westside Trunk District still consists of two separate communities, however -- the suburban residential community adjacent to the Central Point city limits, and the rural residential-farming community to the south and west. The recently developed home sites along the lower foothills are representative of neither of these communities, but rather are large lot developments catering to Jackson County's higher income residents who wish secluded, forested, view lots in close proximity to the Medford urban area.

No census data exist for the specific geographic area of the Westside Trunk District. However, based on interviews with local residents and research of recent Jackson County census data, it is apparent that the northern suburban portions of the project area closely parallel Central Point and Jackson County population characteristics, while the southern, rural portions parallel Jackson County rural non-farm population characteristics. Therefore, Central Point, Jackson County and Jackson County rural non-farm census data are used to describe the basic population characteristics of the Westside Trunk District residents.

o Age

As shown in Table 5, Jackson County rural non-farm residents are slightly older than the Jackson County average. The rural non-farm areas, such as the southern portion of the project area, are characterized by a lower percentage of young families in the 20 to 39 year age group and a higher percentage of families in the 40 to 59 year group. This is evident within the project area, as the suburban residential areas close to Central Point appear to draw many young families as compared with the older family units found in the rural residential, farm and foothills developments.

TABLE 5

AGE DISTRIBUTION 1970

Age Group	Jackson Co.		Jackson Co.		State of Oregon	
	Rural Non-farm Number	%	Overall Number	%	Number	%
0-19	13,283	36.7%	34,400	36.5%	773,922	37%
20-39	7,888	21.8%	23,200	24.6%	522,400	25%
40-59	9,028	25.0%	21,600	22.9%	473,306	22.6%
60+	<u>5,974</u>	<u>16.5%</u>	<u>15,500</u>	<u>16.0%</u>	<u>321,757</u>	<u>15.4%</u>
Total	35,173	100%	94,300	100%	2,091,385	100%

Source: Bureau of the Census, 1972

o Income

The area adjacent to Central Point is characterized by a large percentage of middle income families, with corresponding lower percentages of both the very low and very high income families. This closely parallels the belief that Central Point and its adjacent suburbs are attracting families of skilled blue-collar workers, and entry level management and professional personnel. The rural non-farm areas of Jackson County, as evidenced in the rural portions of the Westside Trunk District, show a wider divergence between income levels, with more families at both the bottom and the top of the scale as shown in Table 6.

TABLE 6
COMPARATIVE INCOME DISTRIBUTION
1970

	Jackson Co. Rural Non-Farm		Central Point		Jackson Co. Overall	
	Number	%	Number	%	Number	%
Less than \$4,999	2,413	25.3%	160	15.0%	5,886	23.7%
5,000- 9,999	3,828	40.2%	513	48.3%	9,536	38.4%
10,000- 14,999	2,235	23.4%	312	29.4%	6,090	24.5%
Over 15,000	<u>1,056</u>	<u>11.1%</u>	<u>78</u>	<u>7.3%</u>	<u>3,347</u>	<u>13.4%</u>
Total	9,532	100%	1,063	100%	24,859	100%

Source: Bureau of the Census, 1972

o Occupation

Table 7 illustrates the major occupational groups for Central Point, Jackson County, and the rural non-farm portions of Jackson County. Although Central Point residents exhibit substantially higher numbers of professional, management, sales and clerical occupations than do the rural non-farm residents of the county, those occupational levels still fall below the over-all county figures. Again, it is apparent that Central Point is characterized by skilled blue collar workers (as evidenced by the lower level of laborers), as well as by management, sales and clerical personnel.

TABLE 7
COMPARATIVE OCCUPATIONAL DISTRIBUTION
(1970)

	Jackson Co. Rural Non-Farm		Central Point		Jackson County Overall	
	Number	%	Number	%	Number	%
Professional & Management	1,506	19.9%	313	23.3%	7,438	23.3%
Sales & Clerical	869	11.5%	254	18.9%	7,655	23.8%
Craftsmen & Operatives	3,369	44.6%	493	36.7%	8,940	27.8%
Farmers & Farm Managers	105	1.4%	-	-	508	1.5%
Laborers (including farm)	1,280	16.9%	135	10.0%	3,277	10.3%
Service Workers	<u>433</u>	<u>5.7%</u>	<u>148</u>	<u>11.1%</u>	<u>4,285</u>	<u>13.3%</u>
Total	7,562	100%	1,343	100%	32,103	100%

Source: United States Bureau of Census.

Economic Base

The Jackson County economy is strongly based on its natural resources, primarily timber and agriculture. The wood products industry asserts a strong influence on all areas of Jackson County employment and directly or indirectly supports 80 percent of the county's manufacturing jobs as measured in 1970. This emphasis on wood products makes the Jackson County employment base highly dependent upon national economic cycles; for example, in January 1975 when unemployment for the State of Oregon was climbing towards 7 percent, the comparable figure for Jackson County was 10 percent.

The county's economy has experienced a period of rapid growth in the last 20 to 25 years. Whereas the economic base of the 1950's was closely tied to the primary production and harvesting of resources such as timber and agricultural products, recent employment gains have been in the areas of secondary processing, such as wood fiber manufacturing, and tourism, trade and services. The most substantial changes have been the decrease of employment in timber and wood products manufacturing, and the increases in trade and service employment.

An area's economic base can be defined as those goods and services which are produced within a community, but are consumed by residents of other communities. The critical factor is that the basic industry generates, or brings, income into an area, rather than merely redistributing the existing local income. Within Jackson County, the historical economic base has been primarily dependent upon wood products and agriculture -- commodities which have been grown and harvested locally, and sold in national and international markets. Recent growth in the wood products industry has resulted from increased processing within the county; that is, an increasing amount of rough timber is now being converted into the final product in Jackson County manufacturing plants, rather than being transported to other manufacturing centers for final processing. Although this increase in local processing has caused a recent increase in employment in the lumber and wood products area, overall employment in that field has decreased from 15 percent of the 1960 labor force to less than 10 percent of the 1975 labor force. A comparable decline has also been recorded in the agriculture and food processing industries.

Agriculture is the major economic activity occurring within the Westside Trunk District. A variety of agricultural crops including pears, seed crops, wheat, grains, forage and irrigated pasture are produced. It is estimated that of the 5,400 acres within the project area, approximately 1,000 acres are managed for independent farm income. Throughout much of the project area, however, land has been parceled into small lots which precludes farming on a profitable scale. As has been the case throughout Jackson County, agricultural use within the project area has been declining rapidly over the past 20 years. This decline is expected to continue at a somewhat slower rate over the next 5 to 10 years until the marginally productive land is removed from farming use.

In contrast to the decline in the importance of basic manufacturing, Jackson County has rapidly become an exporter of retail trade services. The increase in tourism over the past 15 years has caused rapid growth in seasonal retail trade. In addition, the county has come to serve as a regional service center to most of southern Oregon and parts of northern California. Thus, the rapid growth in the areas of finance, insurance, real estate and services which was evidenced between 1960 and 1975.

Although Jackson County has experienced expansion in retail trade and services, primary manufacturing and employment has been declining as a proportion of the total civilian labor force. The importance of the county's basic resources -- timber and agriculture -- has been declining and as yet no significant industrial growth has occurred to offset this loss.

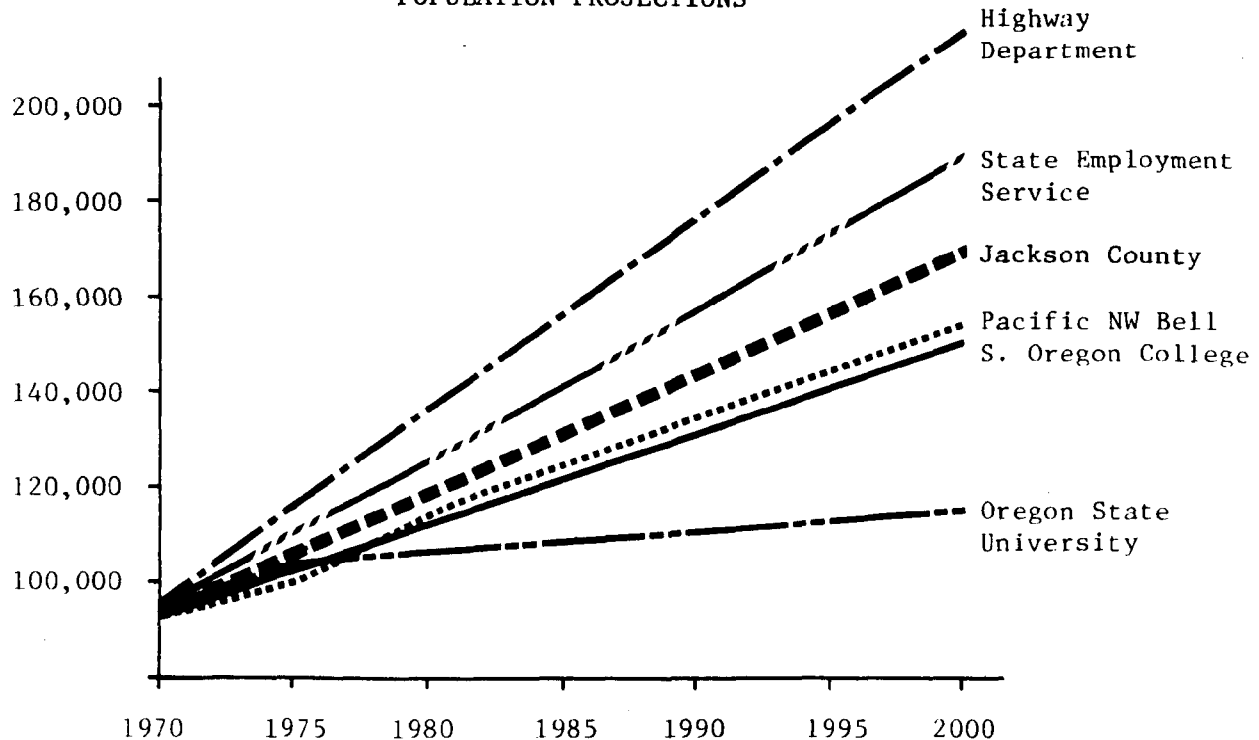
Population Projections

Numerous population projections have been prepared for Jackson County as shown on Figure 2. Each of these studies has projected population to a

different base year and has used different assumptions about the county's future growth. The following paragraphs review these projections:

FIGURE 2

POPULATION PROJECTIONS



o Jackson County (Bear Creek Area Transportation Study)

The Jackson County Planning Department recently prepared an update to the population projection which was prepared in the 1964 Bear Creek Area Transportation study. This projection is based on an analysis of spatial population distribution within the county as well as housing, population, employment and income characteristics. It is assumed that growth within the primary economic sectors will lag behind growth in population, and therefore that slow economic growth will be a downward constraint on population growth. The result of this study is a projection of approximately 170,000 residents in Jackson County by the year 2000.

o Oregon State Highway Department

The Oregon State Highway Department has prepared population projections for Jackson County which project a year 2000 population of 212,454, or approximately double the current population. This is the highest

level of growth indicated by any of the projections and assumes an annual growth rate of over 3 percent from 1975 to 1990, declining to 2 percent in the period from 1990 to 2000. Based on an actual estimated 1975 population of 110,700 (compared with the State Highway projection of 117,500 for that year), this set of projections appears to be too high.

o Oregon State Employment Service

The Oregon State Employment Service prepared population projections based on past growth and employment. As shown on Figure 2, these projections are slightly higher than those prepared by the Jackson County Planning Department, projecting a year 2000 population of approximately 190,000. Although this projection remains fairly close to county projections through 1980, the growth rates begin to diverge more rapidly at that point. This difference occurs due to the county's assumption that growth rates will decrease during the latter part of the century because of decreased job availability.

o Pacific Northwest Bell

In April 1976, Pacific Northwest Bell published Population & Household Trends, Washington, Oregon and Northern Idaho which contained population forecasts by county for the period from 1975 to 1990. Although this study assumed that growth would continue in Jackson County, it projected future growth at a somewhat lower rate than the previously mentioned studies. The Pacific Northwest Bell report assumed a 1975 population of 110,000, which is approximately 10,000 below the Population and Census Division estimated 1975 level. The study then projected a future annual growth rate of 2.51 percent from 1975 to 1980 tapering to 1.87 percent 1980 to 1990. If projected to 2000, these growth rates would yield a total county population of approximately 155,000.

TABLE 8
JACKSON COUNTY PROJECTED ANNUAL GROWTH RATES

Source	Growth Rate <u>1970-75</u>	Growth Rate <u>1975-80</u>	Growth Rate <u>1980-85</u>	1985 Projected <u>Population</u>
Oregon State Highway Depart.	4.48	3.28	2.50	156,314
Oregon State Employment Serv.	-	-	-	141,000
Bear Creek Area Transportation Study (update)	1.90 (actual)	-	-	132,000
Pacific Northwest Bell	1.34	2.51	1.86	125,500
Southern Oregon College	1.90	1.76	1.61	122,928

Table 8 compares the 1985 projection for each of the above sources and details the growth rates upon which each projection is based. The projected annual growth rates vary widely from a high of 4.48 percent to a low of 1.34 percent. Based on a calculation of annual growth rates in Jackson County from 1950 to 1970, growth rates have ranged from a high of 7.68 percent in 1955-1956 to a low of -4.31 percent (population loss) in 1957-1958. During this twenty year period the average annual growth rate was 2.46 percent. If this historic figure is used as a trend and projected to the future, population levels are attained as indicated in Table 9. Few people would support the notion that historic growth is an indicator of future growth, but it does provide a point of comparison.

TABLE 9

FUTURE POPULATION LEVELS FOR JACKSON
COUNTY BASED ON A PROJECTION OF HISTORIC
GROWTH RATES 2.46 %

<u>Year</u>	<u>Population</u>
1970*	94,533*
1975	106,750
1980	120,540
1990	153,700
2000	195,980

* Actual

In addition to the population projections prepared by planning agencies and private businesses, each community within Jackson County has prepared a population projection to the year 2000. These city projections combined with projections for the unincorporated areas in the county total 191,000 or approximately 20,000 more residents than were estimated by the Jackson County Department of Planning & Development. Census division projections prepared by Jackson County are compared with city projections in Table 10. It is important to note that census divisions include large areas adjacent to the cities, while city projections include only the land that would be within corporate city limits by 2000.

TABLE 10

COMMUNITY POPULATION PROJECTIONS

<u>County Census Division</u>	<u>Jackson County Census Division Projection Year 2000</u>	<u>City Projection Year 2000</u>
Central Point	26,000	13,200
Jacksonville	12,250	2,500

The projections listed in Table 10 indicate the following overall growth for the period 1975 to 2000:

Central Point Division	105%
City of Central Point	230%
Jacksonville Division	68%
City of Jacksonville	55%

If these growth projections were applied to the Westside Trunk District they could yield a year 2000 projection ranging from a high of 7,260 to a low of 3,410.

The Facilities Plan, based on a calculation of growth between 1954 and 1971 for the project area, has projected an average annual growth rate of 4.5 percent to the year 2026. Such a projection yields the population levels shown in Table 11. This projection does not reflect present or future land use plans, but merely projects past local growth rates into the future.

TABLE 11

FACILITIES PLAN PROJECTIONS
FOR THE PROJECT AREA

<u>Year</u>	<u>Population</u>
1970	1,900
1975	2,000
1980	2,500
1990	3,900
2000	6,300
2010	9,600
2026*	17,300

* The year 2026 is used as a target year in the Facilities Plan because of the assumed 50 year project life.

In response to a request from the Bear Creek Valley Sanitary Authority, the Jackson County Department of Planning and Development prepared a build-out capacity figure for the Westside Trunk District. By applying existing Jackson County zoning densities to the areas expected to remain under county jurisdiction and the Central Point Comprehensive Plan densities to the areas which are expected to be annexed to Central Point, county planners were able to establish the total capacity for the project area. Based on those assumptions, a future population of 8,959 was received. This figure does not attempt to project how many people will desire to live within the project area, how rapidly such growth might occur, nor does it attempt to establish the "carrying capacity" of the land; it merely takes existing zoning and comprehensive plans and records the population capacity allowable under those current policies. This figure is subject to change as the applicable comprehensive plans and zoning ordinances are reviewed and revised. On the basis of those calculations, the design population for the proposed project was established at 9,000.

Land Use Plans and Policies

The existing land use patterns within the Westside Trunk District are shown on Figure 3. Historically, the primary land use within the project area has been agricultural. As growth has occurred throughout Jackson County, many of the area's marginal farming units have been partitioned into housing subdivisions, one to five-acre rural residential home sites, and five to ten acre "hobby" farms.

The project area is characterized by two separate land use patterns. The northern portion adjacent to Central Point is suburban in nature, and generally consists of medium density suburban-type subdivisions, and roadside housing. As indicated on Figure 3, roadside housing is prevalent throughout the project area, and usually results in houses being constructed on the major roads, while the interior land either remains vacant, or is used for pasture. The southern portion of the project area is more rural in nature, and contains most of the project area's productive farm land. Small nodes of low-density subdivisions occur in the southern portion in the vicinity of the Westside Elementary School. The remainder of the southern portion is characterized by large lot housing in the foothills, and a mix of productive and "hobby" farm units along the valley floor.

The majority of the land within the project area has been divided into parcels of less than ten acres. Along the valley floor, most of the remaining large tracts (over 40 acres) are in productive agricultural use. It is generally believed that, for the most part, the marginal farming operations have already been converted to non-farm uses. On that basis, it appears that the remaining large farm units are economically stable.

One of the largest single portions of land within the project area, the 260-acre Elk Farm located along Ross and Hanley Roads, has recently been purchased by the United States Forest Service for use as a tree nursery. That purchase essentially commits the land to a long-term agricultural use which is not dependent upon farm economic conditions. The Forest Service expects to begin planting in 1979, and 25 million seedlings will be harvested annually beginning in 1981.

Property ownership within the project area is fairly diverse north of Ross Lane and is characterized by home sites and small farming units. Excluding the Forest Service land, the largest single ownership parcel on the valley floor north of Ross Lane is the dairy farm along Taylor Road west of Grant Road, and the large parcel at the southeast corner of Hanley Road and Beall Lane.

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On the valley floor south of Ross Lane, property ownership lies with two old-time families, the Hanleys and the Niedermeyers. The Hanley property is currently in grain crops and pasture, and the family has stated that they are committed to the continued farming of the land (2). The Niedermeyer land is individually owned by many members of that family, and at least one parcel has been converted to residential use.

Ownership patterns within the foothills are varied. A portion of the western foothills is owned by the U.S. Bureau of Land Management, while the remainder is in private ownership, with the exception of two quarry sites which are under Jackson County ownership. At one time large portions of the foothills were in single ownerships, but most of the land has since been sold in three to five-acre parcels for rural homesite development. A number of 40-acre parcels still remain in the western portions of the foothills, west of Military Road.

Land use within the Westside Trunk District is guided by plans and policies on the state, county and city level. The State of Oregon planning goals and guidelines, the Jackson County Comprehensive Plan, and the City of Central Point urban growth boundary each will affect future land use within the project area.

o State of Oregon Land Conservation and Development Commission

During 1973, the Oregon Legislature adopted Senate Bill 100 (ORS Chapter 197) which provided for the coordination of local comprehensive plans to state standards and review. The Act established the Land Conservation and Development Commission (LCDC) and directed that commission to adopt state wide planning goals and guidelines by January 1, 1975. Goals and guidelines were adopted at that time with the legislative directive that they be used by state agencies, cities, counties and special districts in preparing, adopting, revising and implementing their comprehensive plans. These plans and any ordinances or regulations implementing the plans were to have complied with the statewide planning goals by January 1, 1976. Time extensions have been granted to all jurisdictions within Jackson County, because they have shown that they are making satisfactory progress towards bringing their comprehensive plans into conformance with LCDC goals.

Four of the twelve planning goals have particular applicability to the project area and the analysis of the Westside Trunk District Facilities Plan. Each of these four is detailed below.

Goal #3, Agricultural Land

Goal #3 is "to preserve and maintain agricultural land." The goal states that agricultural land shall be preserved and maintained for farm use, and that conversion from rural and agricultural land to urbanizable land should be based upon social, economic, environmental and energy considerations. One of these considerations is that Class I, II, III and IV soils in western Oregon should be retained in farm use (3).

Goal #6, Air, Water and Land Resource Quality

This goal is to "maintain and improve the quality of the air, water and land resources of the state." The goal requires that "all waste discharges from future development, when combined with discharges from existing development, shall not threaten to violate applicable state or environmental quality statutes, rules and standards (4)."

Goal #11, Public Facilities and Services

The public facilities and services goal is "to plan and develop a timely, orderly, and efficient arrangement of public facilities and services to serve as a framework for urban and rural development." The goal requires that the provision of public services should be closely tied with local land use designations, and that comprehensive plans and public services should work together to reach the desired local goal. In addition, the goal states that "urban and rural development shall be guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable and rural areas to be served. (5)."

Goal #14, Urbanization

The urbanization goal requires local comprehensive plans "to provide for an orderly and efficient transition from rural to urban land use." In order to achieve this, the goal requires that "urban growth boundaries shall be established to identify and separate urbanizable land from rural land." Establishment of these boundaries is to be based upon such factors as population growth requirements, need for housing, provision of public services and retention of Class I through IV agricultural lands (6).

Revisions to both the Jackson County and Central Point comprehensive plans must comply with the above described goals.

o Jackson County County Comprehensive Plan

The Jackson County Comprehensive Plan was adopted in June 1972; while the implementing zoning ordinance was adopted in April 1973. These were the first such plan and ordinance to be prepared and adopted by the county. The Comprehensive Plan land use designations for the Westside Trunk District are illustrated in Figure 4 . The zoning ordinance described these designations as follows:

Open space development: Land in the open space development regions is available for use as improved residential rural development sites. This zone is limited to five-acre minimum parcel sizes.

Agriculture: The agricultural designation on the Comprehensive Plan map includes the zoning designations of "Exclusive Farm" and "Farm-5". Both of these zones require five-acre minimum lot sizes. Under the existing Comprehensive Plan, land is placed within an exclusive farm use zone at the request of the property owner. This designation provides specific tax advantages while the property continues in farm use. If the owner desires to convert the land into more intensive uses, a tax penalty is applied to the land.

Rural Residential: The rural residential areas occur along the lower portion of the foothills west of Old Stage Road. The purpose of this classification is to encourage homesite development in an agricultural or rural environment which minimizes potential conflicts between agricultural and residential uses. Parcel sizes are based primarily on the physical characteristics of the land, and may range from one to five-acre minimums. The rural residential area within the Westside Trunk District requires five-acre minimum lot sizes due to the inability of the soils to efficiently accept septic tank effluent. The designation assumes that community water and sewer systems will not be provided in the near future.

Suburban Residential: The suburban residential classification on the Comprehensive Plan coincides with the rural residential minimum 2½ acre lot size designation on the county zoning map. The purpose of this zone is similar to the rural residential zone, but the county recognizes that public services could be provided to these locations during the planning period, hence the 2½ acre minimum lot size. The areas of suburban residential classification occur around the residential nodes adjacent to Central Point and in the vicinity of the Westside Elementary School.

Jackson County is currently revising its Comprehensive Plan to bring it into compliance with LCDC goals. It is also the county's responsibility to coordinate the development of urban growth boundaries with each of the cities within the county. The City of Central Point's tentative urban growth boundary includes a portion of the project area, and Jackson County has recently proposed to the City a work process which would provide for joint review of that boundary and the adoption of the necessary implementing land use designations and ordinances. The city has not yet accepted that work process, and resolution of the urban growth boundary is awaiting their action.

In addition to revising county policy and potential land use designations as they apply to urban growth boundaries, Jackson County may also revise policies as they relate to rural areas of the county. The planning department expects that the urbanization and agricultural preservation goals of the comprehensive plan will be completed within the next year. Land use designations within the Westside Trunk District will not be finalized until that time. It is possible that land use designations within the project area could receive some minor revisions, since county officials have indicated that increased densities adjacent to Central Point and along Old Stage Road may be desirable.

As mentioned previously, the Jackson County Department of Planning and Development prepared a build-out capacity figure for the Westside Trunk District based on existing Central Point and Jackson County plan designations. According to that calculation, if the project area were developed to the maximum extent allowed by those plans, its population capacity would be 8,959.

o Central Point Comprehensive Plan

In December 1975, the City of Central Point adopted a revision to its 1973 Comprehensive Plan. This revised Comprehensive Plan was submitted to LCDC goals. The staff of LCDC recommended that compliance for the area outside the current city limits be denied on the basis that portions of the Comprehensive Plan required additional clarification, and that proper coordination between Jackson County, BCVSA and Central Point had not occurred relative to the city's urban growth boundary.

Since June of this year, Central Point has been revising its Comprehensive Plan in response to the LCDC staff comments. A revised urban growth boundary has been suggested which encompasses substantially less land to the north and east than did the original boundary. This boundary has received the tentative approval of both the Central Point and Jackson County Planning Commissions. The portion of the Westside Trunk District which is included within this revised urban growth boundary is shown on Figure 5.

The Central Point Comprehensive Plan establishes as its major goal "to seek improvement of the existing urban environment while planning for the logical expansion of urban uses which are consistent with the needs created by the growth and development of the city." The city recognizes that it is basically a bedroom community serving the north Medford and White City industrial areas, and hopes to maintain that role. As discussed previously, the city has projected a year 2000 population of 13,200 residents within the city limits, which are expected to expand to fill a larger portion of the lands within the urban growth boundary.

The Central Point Comprehensive Plan designations for the area within the Westside Trunk District are shown on Figure 5. The plan divides the area into two classifications: medium density and low density

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residential. The medium density classification occurs adjacent to and west of the existing Central Point City limits, while the low density areas are shown as occurring farther to the west and slightly south of the medium density portions. The Comprehensive Plan states that the desired density within medium density residential areas is four to eight dwelling units per acre, or approximately 12 to 24 people per acre, assuming 3.0 people per household. With the provision of public sewer and water service, the Comprehensive Plan allows 20,000 square foot lots within the low density residential areas. This density of approximately two dwelling units per acre yields approximately six people per acre. The City of Central Point has projected these land uses based on the assumption that both public sewer and water will be provided to both areas. They believe that sewerage service will be provided by either the Bear Creek Valley Sanitary Authority, or the City itself, and that public water will be provided as those areas annex to the city.

Public Facilities and Services

Streets, schools, sewer and water services within the project area are provided by a mix of general and special service governmental units as well as individual households. Sewer and water systems are provided on a lot by lot basis by the individual property owners. The remainder of the services, including streets and schools, are provided by local government units supported through property taxes. Within the project area 1975 tax rates ranged between \$21.03 and \$22.87 per thousand dollars of assessed valuation. Within the City of Central Point, 1975 tax rates varied between \$23.16 and \$24.53.

The Jackson County Assessor's Office has indicated that septic tank suitability can affect the tax rate applied to a parcel of vacant land. If the parcel is found to be unsuitable for a septic tank, and as a result cannot be used for residential, industrial or commercial purposes, the Assessor's office may grant a 25 percent reduction on the taxes for that vacant parcel.

The following paragraphs describe the existing level of public services within the Westside Trunk District.

o Sewer

No public sewer service exists within the project area, therefore all households are served by individual septic tank and drain field systems. The Jackson County Sanitarian's office estimates that approximately 50 percent of all requests for septic tank permits within the project area are denied on the basis of inadequate soils suitability. In addition, as described in following chapters, there have been numerous reports of failing septic tanks. The county has maintained a file on the Westside Elementary School due to potentially inefficient operation of the school's septic tank and drainfield which has reportedly resulted in the surfacing of effluent on adjacent property. The Sanitarian's office also reported that approximately 20 to 25 cases of failing or inefficiently operating

septic tanks have been investigated within the project area (7). This area is within the Westside Trunk District and could be served by this project.

Recent testing of the streams and irrigation canals within the project area has found that fecal coliform levels commonly exceed state and federal standards. Fecal coliform is a bacteria which is found in the intestinal tracts of both humans and animals. Although the source of the fecal coliform found in local surface waters has not been specifically identified, inefficient and failing septic tanks are believed to be contributors. Both Jackson and Griffin Creeks have been posted as public health hazards since late spring because of high fecal coliform counts. (A more detailed discussion of water quality within the project area can be found on page 44.)

Sanitary sewer service is provided by the City of Central Point to residents within the city limits. The Lower Bear Creek Interceptor runs through Central Point along Taylor Road, ending just east of the project area. Extension of that trunk is required in order for Central Point to service any property it would wish to annex along its western border. The recently annexed property shown on Figure 5 has not received city sewer service.

Two sewage collection trunk line systems have recently been constructed in the area west and south of Medford, and a Facilities Plan is currently being prepared to alleviate sewerage problems in the Jacksonville area. Construction of the first phase of the West Medford trunk line was completed in January, 1975 and included eight miles of sewer line. The West Medford Trunk District covers 21,000 acres of land to the east, south and southwest of the project area. Although the district boundaries extend west of Jacksonville, the initial phase serves only the areas immediately west of Medford. The West Medford trunk line has been sized with sufficient capacity to serve the City of Jacksonville if that city should decide to connect to the regional collection and treatment system. The City of Jacksonville is currently preparing a Facilities Plan to determine how its future wastewater collection and processing needs should be met. In addition to the West Medford project, construction of three miles of trunk line was recently completed in the South Medford Trunk District. This district covers approximately 2,500 acres southwest of Medford.

Wastewater collected throughout the Bear Creek Valley Sanitary Authority system is processed at the Medford Regional Treatment Plant. This secondary treatment facility has a current load of approximately 7-10 million gallons per day (mgd) and a design flow of 10-15 mgd. A three stage expansion plan is proposed which would double the capacity of the plant by 1982-83. Treated effluent is currently released into Rogue River although expansion plans will investigate land disposal alternatives (8).

o Water

No public water supply exists within the project area, therefore all households are served by individual well systems. Water availability is sporadic throughout the project area in relationship to both location and quantity. It is generally believed that a single family home requires a well discharge of approximately 10 gallons per minute (gpm) in order to supply unrestricted service. As discussed in a following chapter, many wells within the project area are able to maintain that level of productivity, while others cannot. Depth to water supply also varies widely, with households along the upper foothills often forced to drill over 200 feet in granite in order to receive an adequate water supply. Water officials within the Medford region have indicated that the lack of a public water supply is the major constraint to growth within the Westside Trunk District. This is based on a belief that greatly increased residential densities cannot be served by existing local ground water (9).

The Medford Water Commission controls the major public water supply within the Medford urbanizing areas. With the exception of the cities of Talent and Phoenix, all incorporated areas around Medford buy their water from the Medford Water Commission. The Commission also sells water to a small number of local water districts which fringe Medford. Rogue River and Butte Springs are the major water supplies for this system, and the Water Commission currently holds water rights sufficient to serve a population of 250,000 people.

The Medford City Council and Water Commission have elected to use their water service policy as a means to control urban growth. Current city policy prohibits extension of water service beyond the existing service area, which includes the adjacent incorporated cities and existing local water districts. City service areas are defined by corporate boundaries and additional water can be provided to areas that are annexed to a city within the water commission's service area. The city will not, however, extend service to presently unserved areas within the special service water districts, or to new water districts. On the basis of this policy, the only extension of water service that can occur is through the expansion of city boundaries through annexation.

Medford officials indicate that this policy was adopted in order to control the development that was occurring within the urban fringe areas during the 1960's and early 1970's. At that time the city did not believe that county planning policies were adequate to control this growth, and therefore determined to use water policy as a growth control mechanism (10). As the Jackson County Comprehensive Plan begins to identify specific areas for future growth, the Water Commission has indicated a willingness to work with the county to determine future water service areas.

Two irrigation districts provide irrigation water within the project area. The Rogue River Valley Irrigation District serves the northern portion of the Westside Trunk District, while the Medford Irrigation

District services the southern portion. District records were not able to indicate how much land is irrigated within the project area. The Medford Irrigation District is not able to increase water service to the Westside area for two reasons: 1) the major irrigation canal has reached capacity, and 2) increased water availability is unknown. Although the Rogue River Valley Irrigation District is able to provide increased water service to selected portions of the project area, its supplies are also limited. It is important to note that conversion of land from a farm use to a residential use does not alter the irrigation rights held by that land. Irrigation rights remain with the land regardless of the future use of the land, until such time as another land owner buys the rights and transfers them to a separate parcel of property.

o Transportation

The county road network is the only transportation system within the project area. Street design, existing traffic loads, and capacity estimates for the major roads are shown in Table 12. In general, average daily traffic counts have increased approximately 10% from 1972 to 1975.

The Jackson County Department of Public Works does not have a current capital improvements program. They have indicated that street repair occurs on an as-needed basis, and that new road construction is kept to a minimum. They were not aware of any existing or potential traffic pattern problems within the project area.

o Education

Two school districts -- Medford and Central Point -- operate schools within the Westside Trunk District. Central Point School District provides service to the portion of the project area that lies north of Beall Lane, while Medford School District generally serves the area to the south of that boundary.

Central Point students living within the project area attend Central Point and Richardson Elementary Schools, Scenic Junior High School, and Crater Senior High School. The 1976 fall enrollment and school building capacity figures for those schools are shown in Table 13.

The Central Point School District serves a 250-acre area north of Medford. Although the City of Central Point takes in only about one-third of that area, it provides over two-thirds of the district students. According to school district officials, there has been no coordination between the city and the school district regarding establishment of the city's urban growth boundary. School officials are concerned about the ability of their facilities to handle increased numbers of students, but recognize that some level of growth within the school district is inevitable. As the largest single taxing unit, they feel that coordination between the district and city growth policies is imperative.

TABLE 12
ROAD DESIGN, TRAFFIC LEVELS AND CAPACITY

Road Section	Design Characteristics	1972	Road Counts		1975	Average Daily Traffic Capacity (based on 12 hour day)
			1973	1974		
<u>Old Stage Road</u>						
- Taylor to Beall	20 feet paved 4 feet gravel shoulders	900	930	900	900	720
- Beall to Ross	24 feet paved 8 feet gravel shoulders	720	740	720	740	1,440
- Ross to Military	20 feet paved 10 feet gravel shoulders	870	890	890	1,000	720
- South of Military	20 feet paved 10 feet gravel shoulders	800	820	820	900	720
<u>Ross Lane</u>						
- East of Hillside	24 feet paved 8 feet paved shoulders	1,350	1,400	1,400	1,400	2,880
- Hillside to Hanley	24 feet paved 8 feet paved shoulders	1,650	1,700	1,700	1,700	2,880
<u>Hanley Road</u>						
- Jacksonville Highway to south of Hanley Hill	20 feet paved 12 feet gravel shoulders	1,600	1,600	1,600	1,700	1,440
- South of Hanley Hill to Rossanley	22 feet paved 8 feet gravel shoulders	2,200	2,250	2,250	2,700	1,440
- Rossanley to Ross	22 feet paved 8 feet gravel shoulders	3,350	3,400	3,400	3,400	1,440
- Ross to Beall	22 feet paved 16 feet gravel shoulders	2,300	2,350	2,350	2,350	2,880
- Beall to Central Point City Limits	22 feet paved 16 feet gravel shoulders	2,400	2,450	2,450	2,650	2,880

Source: Jackson County Department of Public Works

The Medford School District operates the Westside Elementary School at the intersection of Old Stage Road and Ross Lane. The current capacity and enrollment of the school is approximately 170 students ranging from grades kindergarten to sixth. Westside Elementary School is one of the smallest elementary schools within the Medford school system. Westside students attend McLoughlin Jr. High School and Medford High School. Enrollment and capacity figures for those three schools are shown in Table 13.

TABLE 13

SCHOOL ENROLLMENT

	<u>1976 Enrollment</u>	<u>Operating Capacity</u>
<u>Central Point School District</u>		
Richardson Elementary	397	450
Central Point Elementary	555	490
Scenic Junior High	893	750
Crater Senior High	1,050	800
<u>Medford School District</u>		
Westside Elementary	170	172
McLoughlin Jr. High	856	960
Medford Senior High	1,529	1,845

o Recreation

With the exception of the Westside Elementary School playground, there are no developed recreation sites within the Westside Trunk District boundaries. Hiking and hunting are known to occur within the upper reaches of the foothills, but no facilities have been developed to accommodate those uses.

Archaeological Resources

The archaeological resources of the Bear Creek Valley south of Rogue River are not well known since no systematic attempt has been made to inventory this resource. Generally, surveys and subsequent excavations in southwest Oregon have been conducted within small areas on specific projects, so that it is difficult to evaluate the pattern or aboriginal habitation, or to know the extent of the archaeological resources which have survived the effects of white settlement.

Ethnographically, as well as archaeologically, little is known about the area. It is disputed whether the territory in Bear Creek Valley belonged to the Shasta or to the Takelma Indians at the time of the earliest white contact. Because so little archaeological research has been done, there is also not much known about the prehistoric inhabitants. Hopefully these data gaps may be filled as more information becomes available.

In August 1976, an archaeological survey was prepared for the Westside Trunk District alternative sewer alignments. The methods used in this reconnaissance are outlined in Appendix A. The on-site survey of the proposed project area revealed no archaeological resources. The areas under investigation, however, have been severely altered by both agriculture and residential development. If any archaeological resources existed within the project area, they are no longer readily visible due to these alterations. However, Bear Creek Valley and much of the project area is an area of soil deposition, and there is a possibility that buried archaeological sites may exist. Within three miles of this project, buried sites have been discovered which contained clay-lined pits, yielding valuable information about the lifeway of the native inhabitants (11). There are no archaeological sites within the project area on file with the State Historic Preservation Office. The Oregon State Historic Preservation Office has reviewed the archaeological inventory prepared for this report and has determined that no adverse effects would result from project construction. A copy of their letter to that effect is also found in Appendix A.

Historical Resources

During August 1976 an historical survey of the project area was performed. Specific attention was given to architectural features, since a number of 19th century residences still exist within the area. The methods which were used in this historical survey are outlined in Appendix A. No sites within the project area are listed in the National Register of Historic Places or the State of Oregon Historical Inventory. Suggestions of sites to be placed within those listings can be found later in this report.

Jackson County was organized in January 1852, largely in response to the tremendous influx of mining and farming interests resulting from the discovery of gold. Additionally, southern Oregon became an important cross roads for travelers between the Willamette Valley and the gold fields of northern California due to the opening of the Southern Route (Applegate Trail) in 1846.

As originally created, Jackson County also encompassed the present day areas of Josephine and Klamath Counties. Although the Rogue River Valley was generally considered remote by pioneers prior to 1846, it is believed that trappers from the Hudson's Bay Company traversed the area as early as the 1820's. It is certain that they did so after that company established Fort Umpqua in 1836. It is known that in 1841 Lt. Emmons led a detachment of the Pacific Exploring Squadron over a trail known as the "Company Trail" which led southward towards the Sacramento Valley.

o Roads and Transportation

In 1846 the South Road Company was formed to establish a southern route from the Willamette Valley to Ft. Hall, Idaho. Lindsay and Jesse Applegate, along with 13 other riders, established this route through the Rogue River Valley, along Bear Creek and eastward along Emigrant Creek to a crossing at the Green Springs summit. The South Road, possibly more than any other, was responsible for opening the valley to settlement and commerce.

In 1852 the United States government appropriated funds for the survey and establishment of a Military Road to connect Camp Stuart south of Jacksonville to Myrtle Creek located to the north along the South Umpqua River. The road was constructed and used in stages, but by 1854 it was sufficiently complete that the Territorial Government declared Military Road a "Territorial Road." By 1874 one account has the Military Road being used by passenger and freight stage lines, notably the Wells, Fargo and Company Stage. In 1914 the Jackson County Board of Commissioners declared the road the responsibility of the county road system. When a 1939 name change threatened to do away with the designation, Military Road, citizens circulated a successful petition to preserve the historic name.

Old Stage Road was also known as the "Valley Road" and "Old Foothills Road." It runs parallel to much of Military Road north of Jacksonville, but takes a route farther out into the valley. The relatively exposed location of Old Stage Road gives an indication of the time period in which it was built, that is, after the Indian War of 1856-57.

Ross Lane is named after John E. Ross, a well-known native of Ohio, who relocated to the Oregon Territory as a packer, freighter, and Indian fighter. Ross distinguished himself in the hostilities of the Rogue Indian War and the Modoc War (1872). In 1866, he was elected to the Oregon State Legislature.

Hanley Road, also sometimes referred to as the Jacksonville - Central Point Highway, is named after the Hanley family, who are long time residents of the area. Michael Hanley secured a Donation Land Claim in the area after the Act of 1850. The Hanley farm still exists at the southern end of the project area, and has been designated a "Century Farm" by the Oregon Historical Society.

Beall Lane is named for R. V. Beall, a native of Maryland who emigrated to the Oregon Territory. He became a locally well-known farmer and pack train operator.

o Community History

In December 1851, or January 1852, two packers -- Cluggage and Poole -- discovered placer gold in Jacksonville. Overnight the site became a boom town camp, creating the first community within the Rogue River Valley. Within two months over 1,000 men were working the nearby streams. It was this impetus which promoted the creation of wagon train traffic into and out of the valley.

Jackson County was established in 1852 and Jacksonville was named as the county seat. In 1927, county government was moved to Medford, five miles to the east, for as Jacksonville's fortunes waned, Medford's increased. In 1855 the Oregon and California Railroad Company laid tracks through the valley near Stewart Creek (Bear Creek) instead of running through Jacksonville, as was expected. Two years later the line connected in Ashland and formed a link-up with the California and Oregon Railroad, forerunner of the Southern Pacific Railroad. This local version of Promontory Point marked an historic beginning for the valley's economic growth and rang the death knell for Jacksonville as a trade center and political power.

The first commercial pear orchards were started in 1883, and by 1906 were doing exceptionally well. Because of this agricultural importance, Medford became the trade center of the valley. In the first decade of the century the city boasted 15 miles of sewer lines, and led the nation in the number of automobiles per capita.

Central Point began as the crossroads between Jacksonville on the south, and Fort Lane near Table Rock on the north. One account places the community's beginning at 1868, although the town did not warrant a post office of its own until 1872. Enterprising merchants found an opportunity to set up businesses at the crossroads to serve buyers traveling from the upper Rogue River Valley and Eagle Point to Jacksonville. For such travelers, the ability to purchase goods at Central Point represented a savings of six miles of travel. The town of Central Point was incorporated in 1889.

The Donation Land Claims Act of 1850 did much to promote the settling of Bear Creek Valley. By this enactment Congress permitted each eligible male a grant of 320 acres (640 if filing with a spouse), provided that the claimant lived on the property and farmed it regularly. Within the Westside Trunk District a number of Donation Land Claims were filed. The Donation Land Claims Act encouraged farmers to settle in the valley where their crops found a ready market with the mining population. Mining continued to be an important economic part of the valley's development

well into the 1880's, and between 1856 and 1880, Jackson County recorded over 5000 mining claims. The Jacksonville District alone had 1,463 claims during that period.

Within the proposed Westside Trunk District, agriculture was and, to an extent, is the chief economic activity. Therefore the area's architecture and history reflect more than a century of farming activity. The area has been cultivated since the days of the Donation Land Claims Act of 1850.

o Sites of Historical Interest

The following sites of historical interest are located on Figure 6.

1. Grant Road Barn

This large wooden barn is sheathed in board and batten, and bears a gabled, hipped roof with lesser center gables located front and back. A handsomely proportioned structure, this building figures in local lore as having been part of a grandstand structure for a race track which once existed in the adjacent fields. Local residents identified the area as a place where fairs and races were held at the turn of the century. Nothing physical remains of the track except the curving property lines visible on Figure 6.

2. Sears Site, Southwest corner of Beall and Freeland

Local lore reports that Granville Sears built his original Donation Land Claim cabin on this site. The lot is now occupied by a structure built in the 1940's.

3. Aaron Chambers House

The farm house located at 2602 Hanley Road was built by Aaron Chambers in 1855. It appears to be the oldest extant structure within the project area, and one of the oldest in Jackson County. Aaron Chambers occupied the land in 1853 and built the present house in 1855. He applied for a Donation Land Claim in 1857 using a survey plat prepared in 1853. The house itself is a story and a half frame structure with a gable roof, lap siding and has a covered porch on the west side. The porch columns utilize sawn wooden brackets.

The succession of owners of the house and property reads like a "Who's Who" of early Jacksonville. The partnership of Beltman and Reames once owned the property, having acquired it from the sheriff for back taxes. Among others, the prominent Jacksonville families of both the Love's and the Burcell's owned the property. Victor Burcell was elected Jackson

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County Commissioner in 1920, and served for a total of eight years. Local historians claim that the county's first paved asphalt road was located in Hanley Road, in front of the commissioner's property.

The structure's antiquity and its historical associations make the Chambers House an outstanding historical feature within the project area. It is recommended that the Aaron Chambers House be considered as appropriate for listing on the National Register of Historic Places.

4. Newhall House

According to the present owner, this house is the third built by A. S. Newhall and was constructed in 1907. The other two residences were constructed immediately south of this house. The house itself is a large, two story structure with a full basement. It has a complex roof system which utilizes shed dormer roofs and gables. The lower half of the house is sheathed in alternating narrow and wide lap siding, while the upper floor is wood shingle. The house reflects the eccentricity of its owner as well as his talents. Newhall used ten-inch steel beams in the framing of the second level and a form of reinforced concrete is employed in the outside decks. The windows open outward, while the window screens roll up out of sight into the exterior walls. Although the house includes approximately 5,000 square feet of floor space, in its original form it did not have a kitchen. The house has been ransacked of its original lamps and mouldings, but the interior still retains such features as terra cotta tile fireplaces, curved stairs, and a massive exterior door with wrought iron hinges.

5. Newhall Kitchen

This residence, located south of the Newhall House, served as the kitchen for the main house and the residence of the hired hands. The building is almost totally hidden from view due to a heavy growth of trees and shrubbery.

6. McCredie House

This house was built in 1908 on the site of an earlier house which had burned. The earlier structure was reportedly built in 1866, probably by Newhall, who constructed the two residences immediately north of this house. The house is a large, two story wood frame structure which employs several classical revival motifs. This property represents the northern boundary of the land being purchased by the U. S. Forest Service for future use as a tree nursery.

7. Old Stage Road Residence (1890)

This two story frame structure employs some of the same classical revival elements as the house to the north, but was built 18 years earlier in 1890. Although it was originally a handsome structure, it is now badly deteriorated.

8. Old Stage Road Residence (1903)

This residence is similar in attributes to the preceding houses, but is in much better condition. The story and a half wood frame house has strong classical revival elements.

The houses listed along Old Stage Road offer strong architectural similarities and reinforcements to each other, and should be considered for state inventory listing for this reason. In addition to the above reviewed structures, the project area includes two historically important roads -- Military Road and Old Stage Road.

Climate

The project area experiences a moderate climate, with annual rainfall averaging about 21 inches and a temperature mean of 53° F. The growing season is typically 170 days in length, from April 30 to October 16 inclusive. Summer months are dry, sunny, and warm with precipitation stemming primarily from thunderstorms. Temperatures during the summer reach highs of 90° F, with occasional highs of 100° F. These summer highs are characteristically associated with a low humidity condition which draws cool air down to the valley floor at night. This action encourages a favorable shifting and "cleansing" of the airshed. Summer thunderstorms can develop gusts up to 40-50 miles per hour, coming from any direction.

The fall through spring months are damp, cloudy, and cool, accounting for 90 percent of the annual precipitation. Snowfall is generally light, rarely collecting for more than 24 hours at the lower elevations. The average daily minimum temperature during December and January is slightly below freezing, although the minimum will rarely be less than 0° F. High velocity winter winds occur when storms off the northern California coast produce Chinook winds that often reach levels of 50 mph and occasionally 70 mph. During the winter months a cold layer of air will often sit on the valley floor, with temperature increases coinciding with altitudinal increases. This type of air stratification is known as an inversion, and can literally stop all air movement within the Medford area. This phenomenon causes thick fog blankets to cover the project area for 2-3 days at a time during the winter season, and greatly inhibits the dispersal of suspended air pollution particulates.

Air Quality

Although the airshed of the Medford area has historically experienced little chemical pollution, suspended particulate matter periodically exceeds federal and state air quality standards. These Federal and State Air Pollution Control Standards are violated when particulate matter exceeds 150 micrograms per cubic meter (μgm^3) of air over a 24 hour time period. Concentrations in excess of 150 micrograms per cubic meter have been recorded each year since the Medford Airport monitoring program was adopted in 1969. The number of violations has not shown a definite trend, however, as 1975 recorded seven days of violation, whereas 1969 recorded 11 days of violation. Table 14 shows results of the monitoring program for 1969 - 1975.

A recent air quality test program, which was started in August 1976, has indicated that levels of photochemical oxidants and carbon monoxide both occasionally exceed acceptable state standards. Motor vehicles are the primary source of photochemical oxidants while chemical processing and the wood products industry are listed as the second largest source.

TABLE 14

AMBIENT AIR SAMPLING 1969-1975 FOR PARTICULATES

	Annual Mean ugm ³	Minimum Recorded	Maximum Recorded	Days in Excess of 150 ugm ³
1969	NA	32	301	11
1970	76.6	16	209	13
1971	78.9	21	226	5
1972	83.4	23	207	7
1973	69.9	33	183	3
1974	95.9	23	303	5
1975	71.7	22	228	7

Source: Oregon Department of Environmental Quality

Because of the peculiar topography of the valley, strong inversions develop during the winter months. The same cold air mass and subsequent inversions that encourage fog in December and January, also trap suspended particulates in the static air. The air quality standards violations for particulate matter typically occur between November and January, with the month of January experiencing the highest annual particulate counts. During the spring through fall months, air movements provide sufficient ventilation to prevent the build-up of particulates that commonly occurs during the winter months.

The potential for further air quality degradation in this area is, considered "serious". An analysis of the particulate matter, conducted by the Oregon Department of Environmental Quality, revealed that the wood products industry is the largest single contributor to suspended particulate matter. If the wood products industry, or industries of similar air effluent nature, continue to expand in the area, proper safeguards will have to be applied to prevent increases in local air pollution. Likewise, significant increases in vehicular traffic through the valley will noticeably increase the air quality problems. Because the potential for serious air quality problems does exist within the Medford airshed, the Oregon Department of Environmental Quality is currently preparing an Air Quality Management Plan to outline the necessary precautionary measures to be taken.

Topography

The project area is located on the west side of the mountain valley formed by the Rogue River drainage system. The valley is surrounded by mountains on all sides, and has a width of approximately 5.5 miles. To the east are the Cascade Mountains ranging from 4,000 to 9,500 feet; to the south the Siskiyou's, ranging from 3,000 to 7,600 feet; to the west the Klamath Mountains, 3,500 to 5,500 feet; and to the north the Umpqua Divide.

As shown on Figure 1, the specific project area lies on the valley floor and along the primary foothills of the Klamath Mountains to the west. Elevation spans from 1,260 feet just south of Central Point to 2,800 feet at John's Peak, the western boundary. At approximately 1,800 feet the slope of the foothills increases in gradient to about 20 percent, with certain areas sloping to 75 percent grades near the crest of the western boundary.

Geology

The Cascade Mountain Range to the east of the project area began its formation approximately 25 million years ago. The Klamath Mountains, of which the Siskiyou's are considered a part, are made up of strata that have been folded, faulted, and intruded by granite-type rocks. Since the formation of these mountains (Cascades to the east, Siskiyou's and Klamaths to the south and west), the Bear Creek Valley has acted as a large drainage basin. The hydrologic movement of soils and rock from adjoining mountain and hills down to the valley floor is a typical example of sedimentary deposition. This hydrologic transport of the soil and rock types to the valley floor has formed the broad alluvium (sedimentary deposit) that now covers the lower elevations of the project area. The deposits have built up over the ages, attaining various thicknesses and compositions according to their specific sources. The slow processes of mountain erosion and valley deposition can be expected to continue to slowly alter the topography of the region.

Granodiorite is the predominant rock in the west hills. Rock within the area generally appears as granite, gray boulders, and blue or gray sandstone. There exists one small intrusive outcropping of rock in the southeast part of the project area on Hanley Road (3,000 feet south of Ross Lane). It is composed of diorite and gabbro sills, and exists as a small rise, adjacent to Hanley Hill. The steeply sloping hillsides in the upper foothills are the only geologically sensitive or hazardous sites within the project area. Shallow soils with depths of about 20 inches, coupled with slope gradients attaining 75 percent in some areas and a bedrock of hard granodiorite, combine to form a potential for slides and erosion if the stabilizing factors (vegetation and soil stratum) are disturbed.

Soils

The process of soil formation is the result of physical, chemical and biological actions upon bedrock material. The characteristics of soils are a product of the integration of several factors including the parent bedrock material, climate, topography, time and biotic communities. In an area with a single topographic pattern where the factors of soil formation are similar, the repetitive topography results in the development of soils with similar profile characteristics. These soils are often treated as a single unit for purposes of classification and form what is commonly termed a soil series. Although the members of a soil series are formed from the same parent material and may vary slightly in color, horizon thickness and pH, they will generally be very uniform in texture and properties. Several series occurring together within a region are referred to as an association. The soils occurring in the project area can be divided into six associations and are shown on Figure 7. Their general characteristics may be summarized as follows:

o Medford-Cove Association A

The Medford and Cove Soils Series represent this association within the project area. They are generally excessively to poorly drained soils on nearly level to slightly sloping stream terraces and alluvial fans (stream deposits). The surface layer is usually dark brown to gray brown silty clay loam 8 - 12 inches thick. A clay to silty clay loam lies underneath this topsoil and has a slow water permeability rating and poor percolation capabilities. These characteristics give the soils a slow water run-off potential and slow water infiltration rates. Problems arise with seasonal high water tables resulting in limitations for septic tank absorption fields. Where cultivated, the soils are used for orchards, grass seed, small grains, forage crops, pasture, and irrigated truck crops. Where not cultivated, the natural vegetation is ash, willow, sedges, cattails, and grasses.

o Central Point-Kubli Association - B

The Barron, Central Point and Kubli Soils Series represent this association within the project area. They are found primarily in the flat areas located in the central portion of the project area. The association consists of excessively drained sandy loam soils, and very deep poorly drained soils with a loam surface layer and a clay subsoil. The surface layer is dark-brown, grey-brown, to black in color and a sandy loam texture. The subsoil is clay to loam type, with a moderate permeability rating. The soils experience seasonally high water tables, typically 4 to 6 feet in depth but sometimes reaching 0.5 - 1.5 feet depths below ground surface. The rating for septic tank absorption fields is slight to moderate, with the 1 foot water table depth areas receiving a severe

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rating. The cultivated areas support irrigated pasture, hay, timber production, pears, and some grass seed production. Native vegetation includes black oak, ponderosa pine, sedges, Douglas fir and madrone.

o Carney-Witzel-Brader Association - C

The Brader Soils Series is the only soil unit representative of this association found within the project area. It appears in the flat and slightly sloping areas of the southwest portion of the project area. The soil is well-drained loam over clay loam formed in alluvium. The surface layer is dark brown loam about 4 inches thick. The subsoil is dark brown clay loam about 9 inches thick. Weathered sedimentary rock is 12 to 20 inches below the surface. Permeability is moderate, but due to the shallow depth of the bedrock the association has a severe rating for septic tank absorption fields. The land is used primarily for irrigated pasture. Native vegetation is characterized by white oak, manzanita, and Idaho fescue.

o Manzanita-Ruch-Holland Association D

The Selmac and Ruch Soils Series represent this association within the project area. They consist of well-drained silty clay loam over clay soils formed in alluvium and drainage basins. The surface layer is dark brown silty clay loam from 7 to 18 inches thick. The subsoil is yellowish-red to yellowish-brown clay between 41 inches and 63 inches thick. Permeability and percolation are slow. Cultivated areas are used for irrigated pasture, hay, grazing, and timber production. Native vegetation is Douglas fir, black oak, ponderosa pine, madrone and grasses.

o Vannoy-Voorheis-Beekman Association E

The Vannoy Soils Series is the only soil unit representative of this association found within the project area. It is found in the low foothills, particularly in the northwest portion of the project area, and consists of well-drained loam over clay loam soils. The surface layer is usually dark brown silt loam about 4 inches thick, and the subsoil is yellowish-red clay loam and gravelly clay loam about 36 inches thick. The permeability is moderately slow, as is the percolation ability. Septic tank systems have severe limitations as the slope and the depth to bedrock (20-40 inches) are restrictive. The association is suited for timber production, wildlife and water supply. Native vegetation consists of Douglas fir, black oak, white oak, ponderosa pine, madrone, snowbrush and poison oak.

o Siskiyou Association - F

The Siskiyou Soils Series comprises most of the foothills and all of the upper elevations of the project area. It consists of excessively drained soils that are coarse and were derived from granitic rock sources. The surface layer is very dark grayish brown gravelly sandy loam about 4

inches thick, with the subsoil a dark yellowish-brown coarse sandy loam about 15 inches thick. The granodiorite bedrock is 20-40 inches from the surface. Although permeability is moderately rapid, septic tank absorption fields have severe limitations because of their shallow bedrock and considerable slopes. The land is used for timber production, water supply, grazing and wildlife habitat. Native vegetation is primarily Douglas fir, sugar pine, manzanita, deerbrush and madrone.

The most significant soils characteristics are those which relate to suitability for agricultural use, and septic tank limitations.

o Agricultural Suitability

Soils associations and series are rated for agricultural capability on a scale from Class I to Class VIII. Class I soils have few limitations which would restrict their use for agricultural purposes and are considered to be the most productive soils for crop growing purposes. Class VIII soils and land forms have limitations that preclude their use for the growing of any cultivated plants and restrict their use to recreation, wildlife, water supply or aesthetic purposes. Classes II through VII are gradations between those two extremes. Within the project area the majority of the soils along the valley floor are Class I, II and III. Soils within the foothills generally range from Class III to Class VII. Table 15 lists the percentage of each soil capability class found within the six soils associations.

TABLE 15
AGRICULTURAL CAPABILITY

<u>Soil Association</u>	<u>Percent of Class</u>							
	I	II	III	IV	V	VI	VII	VIII
A Medford-Cove	55%	5%	5%	35%	-	-	-	-
B Central Point Kubli	40%	5%	55%	-	-	-	-	-
C - Manzanita-Ruch Holland	-	40%	55%	5%	-	-	-	-
D - Carney-Witzel	-	-	5%	55%	-	20%	20%	-
E - Vannoy-Voorheis Beekman	-	-	5%	-	-	10%	85%	-
F - Siskiyou	-	-	10%	-	-	10%	80%	-

Source: Soil Conservation Service

Although Class II and III soils have moderate to severe limitations for agricultural use, these limitations can be overcome by use of the correct cropping patterns and conservation methods. As discussed previously, the Oregon Land Conservation and Development Commission's Statewide Planning Goals consider soils Classes I, II, III and IV to be prime agricultural land and have adopted goals which provide for their protection.

o Septic Tank Suitability

When septic tanks are utilized for disposal of wastewater, the primary concern is the ability of the soils to absorb the septic tank effluent. This is indicated by the percolation rate or permeability of the soils which is determined by site specific field tests. In general, granular soils such as sands and gravels have an average to fast percolation rate and are considered "suitable" for absorbing effluent. Cohesive soils, such as clays and silts or mixtures of such, have slow to very slow percolation rates and will not readily absorb effluent. Also, the soils used for the drainfield must not be in close proximity to an impermeable subsurface strata (as with the Siskiyou Association F), or in close proximity to local high water tables (as is seasonally true with the Medford-Cove Association A). In many areas increasing the size of the drainfield can overcome permeability and percolation problems.

Based on this information, Figure 8 delineates the ability of the project area soils to absorb septic tank effluent. The map is divided into areas in which: 1) septic systems should function properly, 2) septic systems should not function properly, and 3) proper functioning of a septic system is questionable. The following is a discussion of each type of area.

Suitable for Septic Tanks

Those places where septic tanks and drainfields should function properly have soils with high percolation rates and no near-surface impermeable layers or groundwater. In the project area such places occur in the Barron Series of the Central Point-Kubli Association as indicated on Figure 8. This series has the most favorable septic tank suitability within the project area. The sandy loam soil allows up to 20 inches/hour permeability, which is considered rapid. Minimal restrictions for septic tank use apply to this series.

Unsuitable for Septic Tank Use

Those places where septic tanks and drainfields should not function properly have soils of low to negligible permeabilities or soil profiles with near-surface impervious soils or groundwater. As stated previously, requiring increased lot sizes may allow for septic tank use on soils which would normally be considered unsuitable. In areas of low permeability,

drainfields cannot function properly since the effluent cannot infiltrate at an acceptable rate through the compact material. In addition, septic tank failures would cause the effluent to pond and saturate the near-surface soils. Septic systems sited in permeable soils which are underlain by near-surface impermeable soils like clay, also should not function properly. Although the effluent may infiltrate quickly at first, an eventual build up of effluent will occur above the impermeable soil, saturating the material and causing septic failures. The presence of near-surface groundwater can impede the operation of septic systems. With high water table levels, the soil section between the drainfield and the water table is not sufficient for infiltration of the septic effluent. An eventual build-up and saturation will occur around the drainfield causing failure. More importantly, the effluent will enter the water table directly, without the benefit of a filtering process through unsaturated soil which is needed to purify the effluent. For this reason, septic tank systems should not be permitted in areas of near-surface groundwater.

A seasonally high water table puts severe limitations on soils in the Medford-Cove Association, the Manzanita-Ruch-Holland Association, and the Kubli Series of the Central Point-Kubli Association. Insufficient permeability places severe septic tank limitations on the Medford-Cove Association and the Kubli Series of the Central Point-Kubli Association. Shallow bedrock, with depths to bedrock typically between 20 and 40 inches, warrants severe septic tank ratings in three soil associations -- the Carney-Witzel-Brader Association, the Vannoy-Voorhies-Beekman Association, and the Siskiyou Association. Excessive slope grades add further limitations to septic tank feasibility within the Vannoy-Voorhies-Beekman Association and the Siskiyou Association.

Questionable for Septic Tank Use

Those areas where the function of septic systems is questionable have soil and groundwater characteristics ranging between the two categories described above. Variations in the thickness of permeable soils, in the elevations of impermeable soils and/or groundwaters, and surface gradients can cause septic systems to function inefficiently.

The Central Point Soils Series of the Central Point-Kubli Association is considered questionable for septic tank suitability. Though it has moderately rapid permeability ratings, the soil experiences a seasonally somewhat high water table. The water table does not restrict the suitability for septic tanks to the extent that it restricts other soils in the project area, but it is significant enough to require site-specific qualifications.

For effective septic tank functioning, the receiving ground formations must be capable of purifying effluent as well as be permeable. It

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appears that little is known about the filtering and purification properties of aquifers on polluted groundwaters. In a recent report for the Oregon Department of Environmental Quality, several field studies are discussed relating expected distance traveled by bacteria to the grain size and the moisture conditions of the filtering soil. It is indicated that fine grained soils remove suspended particles much quicker than do course grained soils. In addition, bacterial travel is substantially greater in saturated soils than unsaturated soils. The report concludes that the survival and travel of organisms in soil varies as a function of soil moisture, soil temperature, and type of organisms (12).

Hydrology

o Surface Water

The surface water of the project area includes three creeks and an extensive irrigation system. Although the creeks are natural water networks, their courses have been altered due to the historical use of the land for agricultural purposes. Horn Creek is the smallest of the three creeks and is seasonal in nature. It originates in the foothills south of John's Peak and flows eight miles before joining Jackson Creek. Jackson Creek originates in the Klamath Range west of Jacksonville and flows north through the project area. Flows in Jackson Creek range from an approximate low of 7 cfs (cubic feet per second) to a high of 32 cfs. As shown in Table 16 low flows generally occur during the fall months, while high flows are recorded during the winter months and summer irrigation months. Griffin Creek drains the Siskiyou Mountains to the south and travels north through the project area, parallel to and east of Jackson Creek. Flows in Griffin Creek range from a low of 9.5 cfs to a high of 21 cfs. Both Jackson and Griffin Creeks flow into Bear Creek north of the project area.

TABLE 16

STREAM FLOW RATES (cfs)

	1975				1976					
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
Jackson Creek	8	9	10	11	7	7	7.9	11	32	32
Griffin Creek	9.5	9.5	10	14	11	9.5	15	13	19	21

Source: Jackson County Department of Planning & Development

The irrigation system includes the Phoenix and Hopkins Canals as well as several laterals and holding ponds. These systems are managed by the Medford and Rogue River Valley Irrigation Districts.

- o Ground Water

The underground water system, or aquifer, in the project area is subject to significant fluctuations in both depth and potential surface yield. The alluvium, which is the principal surface strata at the lower elevations, is considered the most productive water source in the Bear Creek Valley. In the project area, the nonmarine sedimentary rocks underlying the alluvium also produce substantial quantities of water.

The alluvium is usually 30 - 100 feet deep, and is typically saturated from 10 to 15 feet with water. The nonmarine sedimentary rocks underlying the alluvium can produce good well yields of 10 - 15 gpm (gallons per minute) in certain areas, but may contain excessive concentrations of boron or fluoride. The Hornbrook Formation is tapped at the base of the foothills, where seepage water is carried along bedding planes and in the weathered granitic rock. The Hornbrook can yield 5 - 10 gpm, but required well depth is variable and some attempts have been abandoned. The wells that have been drilled in the granodiorite along Military Road near Ross Lane have had good yields (5 - 11 gpm) but have required greater depths (180 feet average). Again, some drilling attempts have been abandoned because of excessive depths.

The best groundwater yields have come from the central and eastern parts of the project area, with the northeast corner of the area having a median discharge rate of 14 gpm with a median depth of 80 feet. However, the Old Stage Road/Erline Way area has a median well depth of 200 feet with a well yield of 5 gpm and several abandoned drilling attempts. Roughly estimated, the overall median well depth within the project area is from 100-200 feet, with a median yield of between 5 to 15 gpm. In certain areas, the yield has shown a slight decrease over the years, and this trend is expected to continue. This depletion is due to increasing numbers of wells drawing on the local aquifer. Thus, the water reserves have shown a measurable decline over the years. At this time, these decreases are not considered alarming, although a significant increase in demand on the aquifer could show long-term depletions in the water resource.

Water Quality

- o Surface Water

Although no industrial effluents contaminate Jackson and Griffin Creeks, farmland and residential wastes have caused significant water quality

problems in both waterways. Fecal coliform, a bacteric derived from the intestinal tracts of humans and animals, is the most consistent water quality problem that has been identified within the project area. High levels of fecal coliform are present in the project area as a result of a combination of factors including unusually high local water tables, the associated problems of soils suitability and septic tank failures, and agricultural runoff. The specific contribution of residential or agricultural uses to these high fecal coliform counts cannot be calculated. All that is currently known is that surfacing of septic tank effluent combined with runoff from agricultural land creates high fecal coliform counts within the surface waters of the project area. State of Oregon standards have established maximum levels of fecal coliform at 1000/100 ml, except during periods of high surface runoff. As shown in Table 17, these concentrations are frequently exceeded in both creeks. Since late spring 1976, both Jackson and Griffin Creeks have been posted as unsafe to public health because of fecal coliform contamination. The Jackson County Health Department expects that this posting will continue throughout the length of both streams (13).

TABLE 17

FECAL COLIFORM CONCENTRATION
(milliliters)

	1975				1976				
	Oct.	Nov.	Dec.	Jan.	Feb.	March	Apr.	May	June July
Jackson Creek	7900	4600	1700	490	3300	2200	3300	1300	2300 4900
Griffin Creek	1300	3300	130	170	79	49	330	7000	1300 1100

Source: Jackson County Sanitation Department

Excessive levels of fecal coliform have also been recorded in roadside ditches within the project area. April 1976 water samples that were taken from the New Ray Road area near Beall Lane showed substantial levels of fecal coliform, though these were very localized. One sample taken from the east side of New Ray Road, 35 feet north of Beall Lane, recorded coliform levels eleven times in excess of state standards (e.g. 11,000/100 ml). Such site specific instances of pollution indicate direct source contamination derived from nearby septic tank failures. Within two blocks of this site, samples taken the same day showed minimal levels of fecal coliform, well below the recommended state limits.

Excessive amounts of fecal coliform bacteria are presumably associated with seasonal rains which run off the land areas, carrying farmland and residential wastes into the surface water systems. Instances of irrigation water contamination by septic tank systems have been reported, as well as septic tank failures that have brought raw sewage directly to the surface. Within the Westside Trunk District there have been as many as 25 cases of septic tank "red-tagging" (recognized failures to comply with local codes) reported by the Jackson County Sanitarian's' Office (14). Most of these cases involved failures during the high water table months, which would suggest that the effluents were being dispersed into the natural water systems.

Organic and inorganic nitrogen concentrations periodically become excessive in both Jackson and Griffin Creeks. Inorganic nitrates are a major nutrient to plant life and can cause algae blooms when concentrations become high. This most common form of inorganic nitrogen is readily soluble in water, suggesting that its appearance in the creeks is derived from surface run-off. The nitrogen sources have not been specifically identified, but agricultural practices including the use of fertilizer are believed to contribute to their concentrations.

Rogue River is the ultimate receiving stream for treated wastewater effluent from the Medford Treatment Plant. According to Oregon Department of Environmental Quality monitoring records, effluent discharged from the plant has consistently been within the standards detailed in the treatment plant's waste discharge permit. No violations of those standards have been recorded (15).

Problems with water quality within the project area can be expected to continue. Future residential development dependent upon individual septic tank systems will lead to continued contamination of the existing creeks and drainage ditches.

o Groundwater

Contamination of the aquifer in the project area has been suspected, but not adequately investigated. In the early 1960's, the Jackson County Health Department prepared a contamination study within the Niedermeyer (Westwood) Subdivision area, and found that approximately 50 percent of the wells were contaminated. Much of the problem was attributed to types of well casings, particularly the cement-tile wells. These well casings allowed seepage from the upper groundwater into the wells. The wells which reported contamination were changed to steel casings and the problem was eliminated. Local residents recite stories of neighbors being forced to import drinking water due to current well contamination. However, these stories cannot be verified by county or state records.

Septic tank failures have been numerous in certain sections of the project area, raising concerns over potential contamination of the aquifer. At this time the quality of septic tank seepage which reaches the aquifer is unknown. The possibility does exist that excessive septic tank failures in a concentrated area could, in fact, contaminate the aquifer.

Vegetation/Wildlife

The project area is comprised of four different biologic systems, as shown on Figure 9. These zones are easily distinguishable but somewhat overlapping. Agricultural uses are limited to the valley floor and low hillsides, while the residential areas are spread throughout the

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project area, with the exception of the upper elevation near the west boundary. Both these divisions nurture a simplified ecological system, and do not represent a large number of plant and animal species. The other two biologic systems are the riparian, or "waters edge" system, and the woodland system. The riparian system is limited to the undisturbed water courses, most notably Griffin Creek and Jackson Creek. The woodland system is extensive and well diversified, spread throughout the west hills above the agricultural lands. Animal species lists for the project area can be found in Appendix B .

o Agricultural

The agricultural lands are primarily used for pear orchards, row crops, grain fields, irrigated and non-irrigated pasture and hay production. Wildlife and natural vegetation is limited in these areas, as the controls imposed upon them has restricted the natural influences and processes. Insectivores (moles and shrews), rodents (field mice, voles and squirrels), porcupine, and small carnivores inhabit these areas in varying concentrations. Field birds, raptors, and game birds use the farmland for feeding. The field perimeters also provide breeding habitat. Selected areas just north of Ross Lane are considered important breeding grounds for ring-necked pheasant. California quail are also known to breed throughout the agricultural areas. Since the general area has had a long history of agricultural use, the systems are well established and can be expected to continue in a consistent manner.

o Riparian

The riparian biotic zone is a narrow strip of dense foliage and well diversified wildlife restricted to the immediate area of the unhampered water courses. Both Jackson Creek and Griffin Creek support healthy riparian systems, as the stream banks have not been altered for some time. Thick stands of cottonwood, red alder, willow, black locust and woody shrubs provide good diversification for smaller plant life and excellent protection for wildlife. Many species of birds, both game (mourning dove, band-tailed pigeon) and non-game (warblers, vireos, blackbirds), as well as reptiles and amphibians inhabit such areas. Mammals are well represented by the smaller groups which utilize the protected access it affords to the feeding fields. The riparian ecosystem is broken where roads, irrigation systems, or agricultural practices have denuded the stream banks. The extensive irrigation canals that spread across the project area do not, for the most part, support a riparian eco-system as complete as the creeks because of continual clearing and dredging.

o Woodland

The woodland system begins on the lower foothills and continues west to the western boundary of the project area, at an elevation of approximately 2800 feet. The lower reaches of this system are comprised of

Oregon white oak, California black oak, ponderosa pine, Pacific madrone, and white manzanita. Well established populations of perching birds, raptors and woodpeckers can be found in these woods, as well as bats, coyotes and black-tailed deer. As this zone advances up the western slopes, vegetal changes coincide with changes in altitude. Douglas fir, Jeffrey pine, lodgepole pine, mountain ash and ceanothus become more common. Larger mammals may appear, such as weasels and bobcats, as well as greater numbers of black-tailed deer. Jays, owls, nutcrackers and shrike inhabit these higher elevations, and the golden eagle is suspected of using such areas for feeding.

o Residential

The vegetation of the residential areas is under the control of the local human populations and is typically introduced. The wildlife is limited to the more daring mammals, and yard birds such as house sparrows and finches. Deer often frequent the gardens of residences in the foothills.

o Endangered Species

There are no known plant or animal species of endangered classification within the project area, as determined by the Department of Interior listings. Some species are classified as "undetermined status" which means there is not enough information at this time to adequately classify them, but that they could be endangered or threatened. Species of this status are marked with an asterisk in the species lists found in Appendix B.

Long-term changes in the agricultural, riparian and woodland systems found within the project area would occur as the result of continued urbanization, and would result in a decrease in the size and diversity of the vegetation and wildlife communities. If agricultural and woodland areas continue to be transformed to residential use, wildlife habitat and movement would be further restricted.

Environmentally Sensitive Areas

o Surface Water and Ground Water

The water systems of the project area have suffered adverse effects as a result of farm uses and residential development. Though pollution levels have been regularly recorded in various bodies of water throughout the area, detailed data will not be available regarding direct and non-direct sources until the completion of the 208 Study. A discussion of the current situation has previously been presented in this chapter.

o Steeply Sloping Lands

The steeply sloping lands within the project area are found in the western hills, typically at the higher elevations. These areas are

sensitive due to the slope gradients that can reach 75 percent in some places, and a depth to granodiorite bedrock of 20 to 40 inches. Erosion and slide potentials must be defined if residential development spreads into these areas.

- o Forest and Woodland

The forest and woodland areas are located in the west hills, extending from just above the valley floor to the highest elevations within the district boundary. Residential development in these areas has not yet caused significant alteration of the woodland systems.

- o Significant Habitats

As outlined previously, the significant habitats are the riparian and woodland systems. Both of these systems have been described. No rare or endangered species have been identified in the project area, but species worthy of consideration (undetermined classifications) are present. Their existence in the project area is not considered threatened.

- o Prime Agricultural Land

As detailed previously in Table 15, more than one-half of the 5,400 acres within the project area includes soils within Agricultural Capability Classes I, II, III and IV. Approximately 1,000 acres remain in productive farm use, while the remainder of the productive and marginally productive farmland has been converted to residential and "hobby" farm uses. As residential uses have spread into the project area, marginal farming operations have been abandoned, and the land has been converted to residential uses. Local farmers have reported that the profitable farming operations have continued to operate, although their farming practices have been altered in some instances to conform to adjacent residential norms.

- o Public Outdoor Recreation Areas

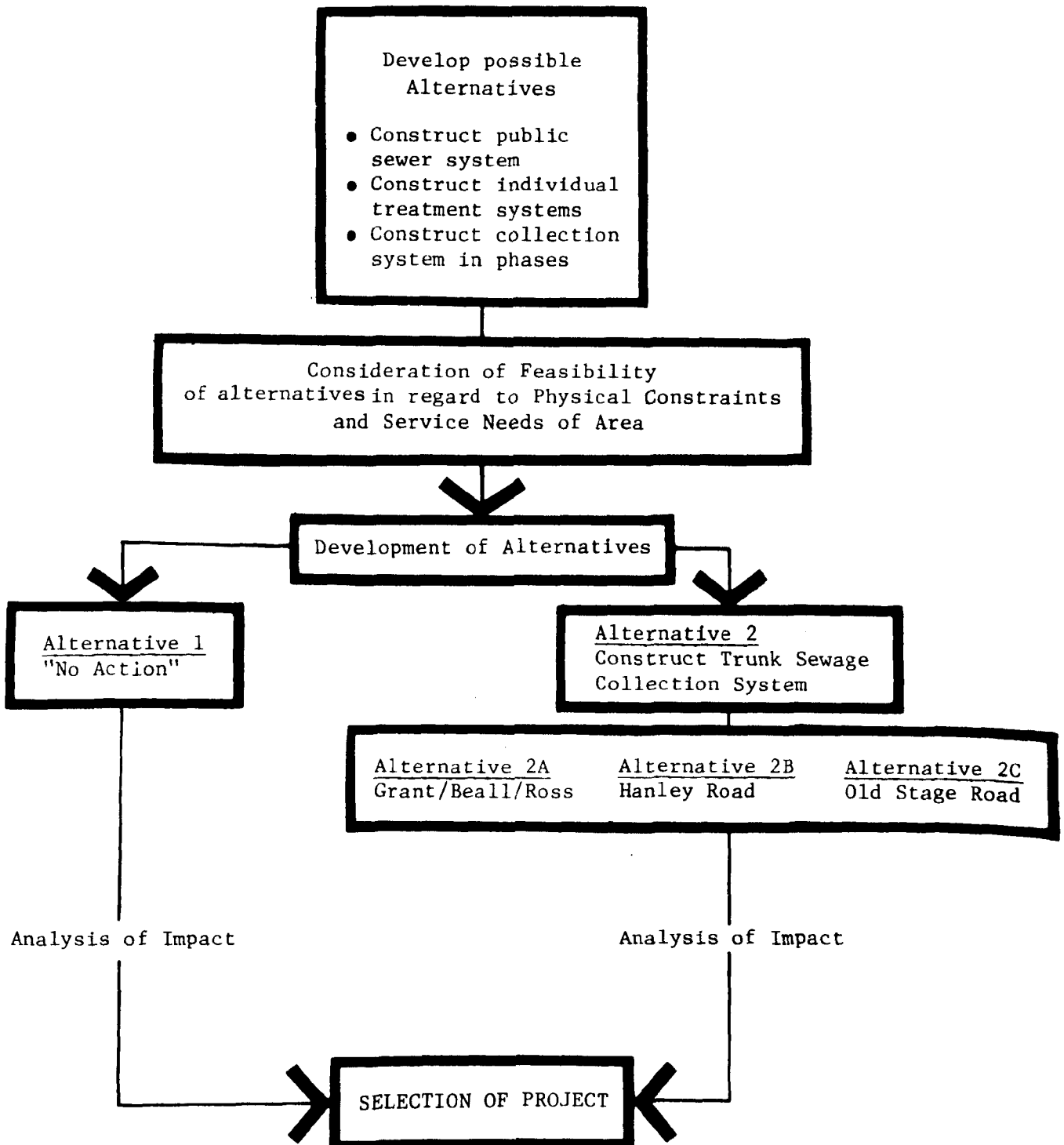
With the exception of the playground area adjacent to the Westside Elementary School, no developed outdoor recreation areas exist within the Westside Trunk District. Hunting and hiking are known to occur within the upper portions of the foothills, but no developed recreational facilities are provided to serve those uses.

- o Archaeological and Historical Sites

No archaeological sites were discovered within the project area. The location of historical sites and buildings has been discussed earlier in this chapter.

Figure 10

SIMPLIFIED FLOW-CHART
OF SELECTION PROCESS FOR ALTERNATIVES
FOR THE WESTSIDE TRUNK DISTRICT FACILITIES PLAN



SECTION III. ALTERNATIVES AND THEIR IMPACTS

Alternative Screening Process

Prior to a discussion of alternatives and their impacts, the process of selection of feasible alternatives should be outlined. Each major alternative is developed from a number of possible alternatives, as illustrated in Figure 10. Based on the service needs and physical environment of the project area, two major alternatives were considered for analysis within the Facilities Plan: 1) no action, and 2) construction of a wastewater collection system to connect with the Lower Bear Creek Interceptor. The construction alternative offers three different alignments which differ in terms of available service areas.

Impact Evaluation

In this section, possible environmental impacts associated with each alternative are discussed following a brief description of the alternative. Environmental impact may be categorized as adverse or beneficial, primary or secondary, and short-term or long-term. Any number of combinations of these categories are possible depending on the type of project involved. For each alternative, impacts on the social and natural environments are discussed in terms of these categories, where the categories can be applied. Elements of the natural and social environments are discussed in an order corresponding to Section II, Project Area Existing Conditions and Projected Trends.

Most of the terms used to describe environmental impact are self-explanatory. However, for the purpose of this discussion, several need further clarification.

Primary impacts include short-term impacts occurring during construction, and long-term impacts related to construction and operation of the facilities. Examples of primary impacts include traffic disruption, disruption to vegetation, water quality changes, etc.

Secondary impacts are essentially those associated with growth and development. These impacts will be discussed in the context that a lack of sewerage facilities, either public or private, is one of the limiting constraints to growth. Other constraints to be discussed include local planning policies, availability of public services, and the desirability of the area to potential residents. The extent to which any of the alternatives can remove these constraints will be considered. Examples of secondary impacts include potential increases in air contaminants, traffic, need for increased public services, and other effects of growth in general. Cumulative impacts will be discussed where applicable.

In addition to environmental impact, short-term uses and long-term productivity must be discussed, as well as any irreversible and/or irretrievable resource commitments. The proposed alternatives must be analyzed in relationship to their effect on future options, and the availability of future resources. Resource commitment is primarily a discussion of the environmental and monetary resources which would be committed to the project, and thus would not be available for future use.

Mitigating measures for each individual alternative must also be considered. Mitigating measures may be technological means to avoid adverse environmental impact, or policy methods to mitigate the impact of growth. In the final analysis, it should be remembered that the key factor in avoiding severe environmental degradation as a result of potential land development is local governmental planning and control, and policy decisions as to commitments of resources.

ALTERNATIVE 1 - NO ACTION

Alternative 1 is the "no project" or do nothing alternative and assumes that wastewater would continue to be disposed of by individual septic tank and drain field systems.

Population Growth & Projections

o Primary Impacts

Adoption of a "no action" alternative would result in the short-term continuation of current growth rates within the project area. From 1954 to 1970 growth has occurred at a rate of approximately 4.8 percent per year. This level of growth could be expected to continue until constrained by the availability of land suitable for septic tank systems. Efficient septic tank operation within the project area requires minimum lot sizes ranging from 2.5 to 5 acres. These larger lot sizes will serve as a constraint to growth in terms of both cost and availability of land and improvements. It is expected that pressure would grow for decreasing the minimum lot size needed for septic tank operation.

o Secondary Impacts

Long-term growth within the project area may be appreciably lower than the recent 4.8 percent rate, as land suitable for septic tanks becomes committed to use. The 9,000 build out population anticipated by the Jackson County Department of Planning and Development assumes that public sewer service would be provided to the northern portion of the project area. If that service were not available, it is unlikely that that population level could be reached.

The restriction of growth within the project area that could result from selection of a "no action" alternative would transfer growth pressures to other areas within the urbanizing region adjacent to Medford, and to the remaining agricultural lands to the east and south of the Westside Trunk District.

Area Economy

o Beneficial Impacts

Primary. There would be no assessment, connection, or service charges to individuals with respect to this alternative. Present costs of maintenance of septic tank systems would continue, plus costs for deepening wells if the groundwater becomes increasingly contaminated.

o Adverse Impacts

Secondary. Selection of a "no action" alternative would be certain to raise the long-term cost of housing within the project area. Larger lot sizes, increased cost of more efficient septic tanks, and deeper well

depths in order to avoid well contamination, would all add to increasing housing costs. Increased costs would also accrue to existing property owners who would be required to reconstruct their septic tanks due to inefficient operation. It should also be noted that construction of a public sewer system could also result in increased housing costs within the project area; however, this would be offset by smaller lot sizes which could decrease new housing costs.

Land Use Plans and Policies

o Beneficial Impacts

Secondary. Selection of the "no action" alternative would not initially place any additional pressure upon the Jackson County Planning Commission to consider alternative futures for the Westside Trunk District. Unless both water and sewer service were provided to the project area, it is questionable whether growth could occur up to or beyond the level currently established in the comprehensive plan. Therefore, with selection of a "no action" alternative, the current plan designations could remain in effect in the foreseeable future. The plan designations currently being worked out between the Jackson County Planning Commission and the City of Central Point indicate that in order for the 9,000 population to be reached both sewer and water must be provided to the northern portions of the project area -- the areas included within the proposed Central Point urban growth boundary. If sewer service were not provided to the Westside Trunk District using the proposed program, another method for provision of public sewers would be necessary.

o Adverse Impacts

Secondary. It is unlikely that the proposed Jackson County Comprehensive Plan densities could be achieved without provision of sanitary sewer service within the Westside Trunk District. Although local officials believe that there may be sufficient groundwater to allow the level of growth suggested in the plan, they argue that the quality of that water might be in question if increasing numbers of septic tanks are constructed.

Public Facilities and Services

o Beneficial Impacts

Primary. A "no action" alternative would involve no construction, therefore, there would be no disruption of roads or traffic. Roads and rights-of-ways would retain their present form. Flow of irrigation water would also not be affected.

Secondary. Pressure for future extension of road and school services would not be increased beyond the level called for within the proposed Jackson County Comprehensive Plan, or a 9,000 population level.

o Adverse Impacts

Primary. Selection of a "no action" alternative would result in continued problems in terms of the quality of sewer and water service. Some existing septic tanks would continue to operate inefficiently, causing water quality problems in drainage and irrigation ditches, and local streams. Well contamination would become more prevalent and could result in isolated cases of importation of drinking water.

Secondary. If cases of well contamination become more prevalent due to inefficient septic tanks, there will be increasing pressure for provision of a public water supply. This pressure could take two forms: 1) requests to the Medford Water Commission to serve the project area, or 2) attempts to establish a special service water district to serve the area.

Archaeological/Historical Resources

Since no archaeological resources were discovered within the Westside Trunk District, no primary effects would accrue as a result of the selection of the "no action" alternative. Selection of a "no action" alternative would have no affect upon the historical resources identified within the project area.

Air Quality

o Beneficial Impacts

The "no action" alternative would have no significant effect on local air quality. No primary effects due to construction noise and dust would occur. Increased air pollution emissions associated with population growth would presumably be depressed to the level currently identified in the Jackson County Comprehensive Plan.

o Adverse Impacts

Air pollution in the form of odors associated with septic tank failures and surfacing of septic tank effluent would occur as a result of selection of the "no action" alternative.

Surface Water Quality

o Adverse Impacts

Secondary. Continued discharge of septic tank effluent into the high water table and local water systems would occur as a direct result of selection of a "no action" alternative. This continued discharge would

increase the pollution concentrations in those areas, and would encourage further spreading of such contaminants into adjacent systems. The probability of pathogenic contamination due to the continued input of wastes would increase. High fecal coliform levels have already caused Jackson and Griffin Creeks to be posted as public health hazards, and increased discharges into these creeks due to the anticipated level of future growth would cause that posting to be continued. Such effects would be reversible if alternate methods of dealing with inefficient septic tank operations were initiated.

Groundwater Quality

o Adverse Impacts

Secondary. The impact on local groundwater due to the continuation of existing septic tank practices, or their increased use, is difficult to assess. Although surface soils and waters have been saturated by septic tank effluent, aquifer contamination has not been adequately detected. If contamination of the aquifer did occur because of prolonged saturation, the impact could be irreversible.

Vegetation/Wildlife

o Beneficial Impacts

Primary. Selection of a "no action" alternative would prohibit the short-term destruction of vegetation along the proposed alignment corridors.

Secondary. Restraint of growth within the upper foothills and along the creek beds would protect the woodland and riparian vegetation and wildlife habitat areas.

o Adverse Effects

Secondary. Selection of a "no action" alternative would prolong the unfavorable effects that septic tank failures have on the biology of the local water systems. If more residences with questionable septic tank drainfields are added to those already in existence, the quality of life within the local water bodies, and those lives directly dependent upon them, would suffer from the continued degradation.

Short-Term Resource Use Versus Long-Term Productivity

All alternative wastewater treatment and disposal systems including "no action" involve the acceptance of trade-offs among beneficial and adverse project impacts. Selection of the most cost effective alternative is promulgated to result in the greatest beneficial effects obtainable at the least possible environmental, social and monetary costs. Selection of a "no action" alternative would allow for the continuation of existing water quality problems. Throughout much of the Westside Trunk District, the present means of sewage disposal can be considered a short-term use of the environment which has periodic adverse effects on the water resources and aesthetic quality of the area. If continued use of faulty

septic tank systems were to effect the quality of the aquifer, this use could have long-term negative effects on local groundwater supplies. The long-term ability of the project area soils to efficiently accept and purify increasing amounts of wastewater is unknown.

Irreversible and Irretrievable Commitments of Resources

Commitment of resources in a "no action" alternative would be limited primarily to the costs to individual homeowners necessary to upgrade existing septic tank systems. Long-term costs would include higher housing costs due to the need for larger lot sizes to allow efficient purification of residential wastewater. If ground water and aquifer were to be contaminated by septic tank effluent, it may not be possible to restore the natural environment to its original condition, resulting in an irreversible commitment of that resource.

Mitigating Measures

There are no mitigating measures for the "no action" alternative which could be implemented or affected by either the Bear Creek Valley Sanitary Authority or the U.S. Environmental Protection Agency. More stringent enforcement of Department of Environmental Quality standards by the Jackson County Health Department could potentially result in decreased septic tank contamination of local drainage ditches and streams. However, the Health Department has limited resources to undertake the testing that would be required to adequately monitor and locate existing offenders. Continued application of stringent permit requirements would ensure that future septic tanks did not add to existing water quality problems. It is possible that some sites would require larger drainfields than could occur within the existing minimum lot sizes, and therefore, that minimum lot sizes in some areas would be increased.

ALTERNATIVE 2 - CONSTRUCTION OF A
SEWAGE COLLECTION SYSTEM CONNECTING
TO THE LOWER BEAR CREEK INTERCEPTOR

Alternative 2 proposes the construction of a wastewater collection system to carry wastewater from the project area to the 36-inch Lower Bear Creek Interceptor located in Taylor Road west of Central Point. The Lower Bear Creek Interceptor would then carry the wastewater to the Kirtland Pump Station from where it would be pumped to the Medford Regional Sewage Treatment Plant on Rogue River.

Three alternative alignments have been proposed to provide sanitary sewer service to the project area. These alignments are illustrated on Figures 11, 12, and 13.

Alignment 2A	Grant/Beall/Ross
Alignment 2B	Hanley Road
Alignment 2C	Old Stage Road

On the basis of communications with the Jackson County Planning Department, the project area design population is established at 13,000. In order to provide sewer service to the design capacities shown on the current Jackson County and City of Central Point Comprehensive Plans, the Facilities Plan proposes to construct approximately 3 miles of trunk sewer line. Each alignment alternative begins at Taylor Road and ends at the intersection of Ross Lane and Old Stage Road, west of the Westside Elementary School. Figures 11, 12 and 13 show the maximum proposed pipe size as a 27-inch line along Taylor Road dropping to an 18-inch line at the intersection of Grant and Taylor Roads. As the pipe proceeds southerly through the project area, pipe sizes continue to decrease, terminating with an 8-inch pipe for the section along Ross Lane. The pipe sizes shown on Figures 11, 12 and 13 were developed using a design population of 17,400. Since the design population has now been decreased to 13,000 it is probable that the pipe along Taylor Road could be decreased to 21 or 24 inches. Design studies are currently being completed to determine the final pipe sizes throughout the project area.

The initial project would include only the construction of the trunk line. Individuals living directly along the proposed alignment would receive sewer service through participation in the trunk local improvement district. In that way the trunk line would be constructed by a combination of federal and local funds.

The majority of the sewerage service would be accomplished by the construction of laterals which would connect from specific service areas to the main trunk line. The major difference between the three alternatives

alignments is the local service areas which could be served by the laterals. Preliminary lateral alignments are illustrated in the Facilities Plan. It is important to note that individual laterals are financed solely by local funds. The primary funding method is the Local Improvement District (LID), in which local residents petition to the Bear Creek Valley Sanitary Authority for information concerning sewerage service. Generally speaking, if over 50 percent of the affected property owners are in agreement, the LID is formed, the lateral is constructed, and the individual owners are assessed for the cost of that construction. It is expected that lateral systems would first be constructed in the developed portions of the project area, and that later construction would coincide with future needs.

A large share of the impacts resulting from the construction of a wastewater collection facility would occur regardless of the specific alignment of the proposed trunk line. Therefore, the following discussion will describe impacts common to all of the alternative alignments. Site specific impacts resulting from the differences in individual alignments will be discussed separately.

Population Growth and Projections

Based on current Jackson County population projections, the county-wide growth rate to the year 2000 is expected to range between 2.7 and 3.4 percent. This growth rate is projected over the entire county, many areas of which will receive little or no growth. Therefore the urban and urbanizing areas of the county can be expected to register higher rates than the average 3.4 percent. The 4.5 percent growth rate applied to the Westside Trunk District within the proposed Facilities Plan suggests that with construction of a sewerage system, growth within the project area would be higher than in the county as a whole. Since no growth rates for the urban and urbanizing areas of the county have been prepared, it is not possible to compare the projected 4.5 percent rate with a comparable county projection.

Table 18 includes the entire Westside Trunk District within the general Central Point area and compares the Facilities Plan projected growth rate with the county's projections for the Central Point area. (The Central Point area is defined as the current Central Point city limits, the Westside Trunk District, and Census Enumeration Districts 1319, 1320 and 1323 B which occur to the north and east of Central Point and generally correspond to Central Point's proposed urban growth boundary.) Based on Jackson County's projected growth rate and the percentage of the county's population that occurs in Central Point (e.g. 9 percent of the county's population lives in the Central Point area), the table allocates future anticipated growth using a variety of assumptions. For example, if in the year 2000 Central Point maintains 9.0 percent of the total Jackson County population, the Central Point area would have a total population

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of 15,300 compared with the current 9,980. If this growth were distributed evenly between the Westside Trunk District and the remainder of the Central Point area, the project area would have a population of 4,300 compared with the Facilities Plan projection of 6,550. If the Westside Trunk District were to experience 75 percent of the Central Point area's total growth, it would have a year 2000 population of 5,450.

TABLE 18

CENTRAL POINT AREA GROWTH DISTRIBUTION
(Assumes 9.0 percent of Jackson County)

	<u>Central Point</u>	<u>Westside Trunk</u>	<u>Remainder of Central Point Area</u>	<u>Total Population</u>
<u>1975</u>	5,530	2,000	2,450	9,980
<u>2000</u>				
Assumes equal distribution of growth	6,250 ¹	4,300	4,750	15,300
Assumes 75% of growth occurs in Westside Trunk District	6,250	5,450	3,600	15,300
Assumes Facilities Plan projections are met	6,250	6,550	2,500	15,300

¹ For purposes of this analysis the 1975 Central Point City limits are assumed to remain fixed. Assuming a density of 12 people per acre on the 60 acres of vacant city land, the total possible city population would be 6,250.

Table 19 assumes that by the year 2000, the Central Point area registers 11.0 percent of the total county population, or a population of 18,700. This predicted increase in relative size is based on the belief of county and city officials that the Central Point area is one of the more

desirable growth centers for the intermediate future. If this increase were to occur, and growth was equally distributed between the Westside Trunk District and the remainder of the Central Point area, the year 2000 project area population would be 6,000, or slightly less than the Facilities Plan projection of 6,550. Thus, this slight increase in the percentage of total county population residing in the Central Point area, has a significant effect on the population recorded within the project area.

TABLE 19

CENTRAL POINT AREA GROWTH DISTRIBUTION
(Assumes 11.0 percent of Jackson County)

	<u>Central Point</u>	<u>Westside Trunk</u>	<u>Remainder of Central Point Area</u>	<u>Total Population</u>
<u>1975</u>	5,530	2,000	2,450	9,980
<u>2000</u>				
Assumes equal distribution of growth	6,250	6,000	6,450	18,700
Assumes 75% of growth occurs in Westside Trunk District	6,250	8,000	4,450	18,700
Assumes Facilities Plan projections are met	5,250	6,550	5,900	18,700

The concept of growth inducement suggests that through the installation of a basic utility service such as sewers, it is possible for growth to occur within an area where it had formerly been precluded. Therefore, instead of growth occurring in areas where people might naturally wish to live, growth is induced in specific areas because of the availability of services. The question that must be raised regarding the proposed trunk line construction is how much growth inducement, if any, will be caused by the construction of that proposed project. It is important to remember that while the installation of such facilities makes it possible for growth to occur within the area to be served, two major constraints to growth could potentially still remain in the Westside Trunk District: 1) lack of public water supply, coupled with questionable long-term availability of groundwater, and 2) Jackson County and Central Point land use and growth policies.

Growth within any one segment of the Medford urbanizing area is primarily dependent upon the overall economic and population growth of Jackson County. In addition, in a regional center like Medford, many cities, communities and residential areas compete for portions of that overall growth. Perhaps it is easiest to describe the phenomenon in terms of competitive advantage -- i.e., what characteristics make one area more attractive to residents than another. In other words, why do people choose to live where they do in terms of the entire urban area. Table 20 outlines the comparative growth potentials of each of the major communities and residential sub-areas in the Medford vicinity. Each area, including the Westside Trunk District, is compared on the basis of four criteria: 1) availability of public services, 2) availability of developable land, 3) attitudes of local agencies towards growth, and 4) the natural and social amenities of this specific area. The material presented for the Westside Trunk District assumes that the proposed project is constructed.

o Public Services

As shown in Table 20, availability of a public water supply is a major constraint to growth throughout the Medford region. On the basis of public water availability, Eagle Point, White City, Central Point, and East and Northeast Medford have the greatest potential for future growth. According to local planners, South and West Medford could easily be served by the local water system, but service in the near future is unlikely since it is controlled by the Medford Water Commission.

o Land Availability

On the basis of land availability, the areas around Medford can be easily broken into two categories -- those areas which have large parcels of undeveloped land available for subdivision, and those areas in which most of the land has been parcelled into 1 to 5 acre pieces. Eagle Point, White City, Gibbon Acres area, East and Northeast Medford, and Central Point (within its proposed urban growth boundary) generally fall within the first category, while South and West Medford fall within the second. The Westside Trunk District has a mix of both conditions. Large parcels remain in the lower foothills, and a few exist within the suburban residential areas shown on the county's comprehensive plan. However, much of the land on the valley floor has been partitioned into 1 to 5 acre, long, narrow lots. The largest undeveloped parcels on the valley floor are zoned for farm use.

o Attitudes Towards Growth

The cities of Central Point and Eagle Point have taken the most aggressive positions towards future growth, and both have proposed major expansion of city boundaries in their proposed urban growth boundary decisions. The City of Medford through its comprehensive plan and public services policies is actively promoting growth in the east and northeast portions of the city. Jackson County has taken a slow growth position in West and South Medford, as well as the Westside Trunk District. Their position

TABLE 20

COMPARATIVE GROWTH POTENTIAL

City or Sub-Area	Public Services	Land Availability	Attitudes Toward Growth	Amenities
<u>West Medford</u>	Street patterns and design are not adequate. Local water districts have questionable ability to increase service. Sewer service is available.	Few large parcels remain undeveloped. Area has been cut into 1-5 acre, long narrow lots.	City of Medford would like county to limit growth in this area.	Not as close to industrial employment as some other areas. Suburban setting.
<u>South Medford</u>	Public local water district but pipe sizes are too small. Uncertain ability to increase water supply. Sewer is available.	Few large parcels remain undeveloped. Area has been cut into 1-5 acre long, narrow lots.	City of Medford would like county to limit growth in this area.	Not as close to major industrial employment as some other areas. Suburban setting.
<u>Eagle Point</u>	Public water and sewer service is available. City is currently planning to solve long-term sewer capacity constraints. School system has capacity.	Large parcels are available within and outside city limits. City will annex adjacent property and provide services.	Strong local pro-growth posture. Seek to cooperate with developers.	Close to new industrial areas. Outskirts of urban area close to recreational facilities. Good retirement area. School availability.
<u>White City</u>	Public sewer & water provided through former army base system. BCVSA planning to rehabilitate sewer. Water through Medford. Further availability dependent on Medford policy.	Large land tracts are available. Industrial use is top priority. No incorporated city, so cannot offer increased services through annexation.	Residential areas have been well-planned. County seeking moderate level of growth. Residential caters to moderately priced homes and mobile homes.	Close to industrial area, but maybe too close. Good market for low to moderate priced housing. Well planned and executed environment.
<u>Talent</u>	Public sewer available through BCVSA. Water is constraining service. Purchase water from Talent Irrigation District. Water system currently being expanded through a HUD grant.	Land available on outskirts. City not particularly favorable towards annexation.	In past was pro-growth. Recent change of direction towards no-growth posture.	Not as close to employment as northern area. No commercial services. No change in downtown over past few years. Small-town atmosphere.

TABLE 20 (Continued)

COMPARATIVE GROWTH POTENTIAL

City or Sub-Area	Public Services	Land Availability	Attitudes Toward Growth	Amenities
<u>Phoenix</u>	Public sewage treated at regional plan. Public water through municipal wells. Water availability will be future constraint.	Large tracts available outside city limits. City will generally annex if requested.	Non-committal attitude towards growth. Not seeking growth, but will not turn it down.	Amenable area. Farther from northern industrial areas. Much new activity in down-town commercial area.
<u>Gibbons Acres</u>	Along BCVSA Interceptor. No public water supply. Water one of major growth constraints.	Large tracts of available land.	County not anxious to promote growth so far away. Much pressure for mobile home parks and lower income housing. Most is outside of Central Point urban growth boundary.	Not highly amenable area. No schools close by. No commercial services.
<u>Central Point</u>	Public sewer and water service available to meet long-term needs; however, both systems require upgrading.	Very little land available within existing city limits. Urban growth boundary includes extensive areas to the east and southwest of the city. Willing to annex.	Fairly strong growth position. Willing to annex and provide services to adjacent areas.	Close to industrial job locations. Site of new county fairgrounds. Adjacent to freeway access.
<u>East/Northeast Medford</u>	Public sewer and water. Available through City of Medford.	Large parcels of land available within city limits or adjacent and available for annexation. Good site for suburban subdivisions.	City of Medford plans for this to be their future major growth area.	Amenable area with good services. Close to industrial sites. Good area for suburban development.
<u>Westside Trunk District</u>	Public sewer available through BCVSA. No public water. Public water may be available to north area if annexed to Central Point.	With exception of agricultural land, most of valley floor cut into small (1-5) acre parcels. Large parcels remaining in steeper part of foothills and fringes of existing development.	North area within Central Point urban growth boundary and city will encourage growth there. County wants to maintain rural/suburban atmosphere in south portion.	Close to industrial job locations. Amenable sites due to proximity of foothills. Mixed rural uses.

on the Westside Trunk District has been somewhat modified by the inclusion of the northern portion of the district within the proposed Central Point urban growth boundary.

o Amenities

The major advantage appears to accrue to those areas which are close to the North Medford-White City industrial employment centers, but have retained a scenic or rural character. Both Central Point and Eagle Point share those characteristics, and much of their growth has been attributed to those factors. The Westside Trunk District is considered to be high in amenities due to its proximity to both job locations (North Medford, White City or central Medford) and the natural beauty of the western foothills. However, it is not as close to the major recreational areas as are those communities farther to the east.

In relationship to the other residential areas adjacent to Medford, the Westside Trunk District ranks high in amenities and low in the provision of public services. The availability of developable land and current attitudes toward growth both indicate the continuation of a moderate potential for growth. Construction of the proposed public sewerage system would increase the growth potential of the project area unless growth were constrained by either local planning policies or the availability of water. If a public sewerage system were constructed within the project area, it is probable that the area's competitive advantage over other areas would increase over the short-term.

The major factors in the Westside Trunk District's long-term potential for growth are the availability of an expanded water supply and future planning policies of Central Point and Jackson County. If the supply of public water in the project area increases relative to other unserved areas, growth could increase at a rapid rate. However, as long as other urbanizing areas within the county have adequate public services, the Westside Trunk District would not be expected to experience higher rates of growth.

Area Economy

The year 2026 design capacities supplied in the Westside Trunk District Facilities Plan assume that the existing major parcels of agricultural land would remain in farm use. The highest population densities would occur, for the most part, in areas presently designated for suburban or rural residential use. As the project area continues to grow, with or without sewer, growth can be expected to increase the pressure for the conversion of agricultural land. As long as county taxing policies recognize the lower tax paying ability of farm land, and farmers continue to raise economically viable crops, farming should continue on the remaining large parcels within the Westside Trunk District.

o Adverse

Construction of the proposed project would result in increased costs to local homeowners due to construction assessments and hook-up fees. The

Bear Creek Valley Sanitary Authority financial plan differentiates between typical residential lots, large undeveloped acreage, commercial and institutional uses, and exclusive farm or F-5 farm land. The approximate assessment rates applied to each of those uses is detailed in Appendix C. Assessment costs for a typical 1/2 acre residential lot could range between \$2,000 to \$2,500. This cost does not include the construction of the individual sewer line from the residence to the lateral, which cost must also be borne by the property owner.

It can be assumed that local property valuations would increase slightly due to connection to a public sewerage system. Those parcels which are currently receiving a 25 percent discount due to unsuitability for septic tanks would lose that discount when sewer service became available to the site. This would be offset, however, by the increase in usability of the site.

Land Use Plans and Policies

The Jackson County Comprehensive Plan was prepared in 1972 and proposed to direct County land use policy to the year 2000. The County is currently revising the plan to comply with LCDC goals, and to reflect recent changes in county growth patterns and policies.

The County Comprehensive Plan currently shows the Westside Trunk District as a future mix of rural and suburban residential uses and agriculture. The plan densities assume that sewer service would not be available during the planning period. In recent discussions, County officials have indicated that increased densities might be desirable to provide for growth beyond the year 2000. A straight line projection of past growth rates indicates that the County build-out capacity of 9,000 could be reached by the year 2007, approximately 30 years from now. It is expected that provision of sanitary sewer service would cause long-term increased pressure to decrease the minimum lot sizes presently allowed within the suburban and rural residential areas.

Continued urbanization of the Medford region will undoubtedly result in the conversion of lands with Class I-IV soils. A previous county extension agent and numerous pear growers have indicated that almost 3,000 acres in Jackson County are currently in pear orchards which are not suited for agricultural use, even though the soils may be Class I-IV. Medford's location in the center of the valley means that any expansion into adjacent areas will, in most cases, promote the conversion of agricultural land to urban/suburban uses. Although planners agree that development in the foothills would be preferable, in many instances the cost of providing public services to those areas maybe prohibitive.

Although much of the land on the valley floor within the Westside Trunk District falls within Class II-IV soils categories, large portions of it have been partitioned into 1 to 5 acre parcels, and are no longer viable farming units. The Jackson County Comprehensive Plan and the design densities presented in the Facilities Plan, both assume that the areas which have already been partitioned will remain in residential uses. Although the design densities generally do not project future growth within the agricultural areas, it is possible that construction of the proposed

sewer system could cause pressure for the conversion of that land. County planning policies could withstand that pressure. The specific areas in which pressure for agricultural conversion could occur depend upon the service areas delineated by the separate alignments. Potential service areas will be discussed in the following section.

The relationship of the proposed project to the four applicable Statewide Planning Goals is described as follows:

Goal #3, Agricultural Land

The construction of the proposed project would allow parcels of Class I-IV soils within county rural and suburban residential zones to be converted to residential uses. In almost all instances this land has been previously committed to urban or urbanizing uses as a result of being parcelled into lots of less than 10 acres in size. The effects of the individual alignments are discussed in the following sections.

Goal #6, Air, Water and Land Resource Quality

By lessening the amount of wastewater which contaminates local drainage ditches and waterways, the proposed project would improve the quality of water resources as mandated by Goal #6. By providing sewerage service, future development would not "threaten to violate state or federal environmental quality statutes, rules or standards. (16)"

Goal #11, Public Facilities and Services

Local planning officials have not indicated that construction of the proposed project would violate the intent of Goal #11. In fact, the urban development currently planned for the northern portion of the project area could not occur without the provision of a public sewerage system.

Goal #14, Urbanization

The proposed urban growth boundary for Central Point indicates that sewer service would be provided to the northern portion of the project area. If county planning officials maintain the current zoning within the southern portion of the project area, construction of the proposed project should not cause urbanization beyond that indicated in the county comprehensive plan.

o Adverse

Secondary. It is expected that county planning officials would experience long-term pressure to convert agricultural land to residential land where the two uses abutt. This pressure may be especially severe in the areas south and west of the existing Westwood (Neidermeyer) Subdivision. However, the 8" pipe which would serve this area would constrain any future development, since wastewater collection capacity would be severely limited.

The extension of sewer service into the Westside Trunk District completes the Bear Creek Valley Sanitary Authority's plans to provide service to the area west and south of Medford. In addition to these three projects, the

City of Jacksonville is currently preparing a Facilities Plan to initiate expansion of their sewerage facilities. Combined, these four projects would provide public sewerage service to much of the area south of Central Point and north of Phoenix, bounded on the west by the foothills and on the east by the City of Medford. The phasing of the West Medford project would curtail service to the areas west of Jacksonville until the need for those services is established. At one time, much of the land within those sewer districts was productive farm land. As Jackson County and the Medford area grew, many of the large farms were partitioned into smaller parcels and sold for rural and suburban residential use. Much of this area is characterized by small tracts of land interspersed with larger farming operations. The cumulative impact of these projects would undoubtedly be to create pressure for conversion of some of the smaller, less productive tracts to residential uses. This would be particularly true where previous parcelization resulted in farms too small to be economically viable. The remaining large farm units should withstand this pressure if county and state policy continues to discourage conversion of those large tracts. The major constraint to growth in those areas, is, without question, strong local planning policies and implementation.

Public Facilities and Services

Water

If future growth is to occur within the Westside Trunk District as projected within the Facilities Plan, a solution must be found to the area's water supply limitations. Construction of the proposed wastewater collection system would, in the short-term, alleviate portions of the water availability problem by enhancing the quality of the existing ground water supply. In the long run, however, it is doubtful whether this action would totally solve the water quantity problems.

It is assumed that public water will be supplied to the northern portion of the project area that falls within the proposed Central Point urban growth boundary. The purpose of urban growth boundaries is to indicate those areas which will in the future have a full range of urban services. Central Point has indicated that they are willing to provide water service to those areas within their proposed urban growth boundaries, as those areas annex to the city. Annexation must be accomplished before water service can be provided due to current Medford Water Commission policy. The Commission, in an attempt to control development, will not extend water service beyond its current service boundaries, as defined by the city limits of the jurisdictions it presently provides with water. If the Central Point proposed urban growth boundaries prove to be realistic, and residents of the northern portion of the Westside Trunk District request annexation to the city, public water should be supplied to them. The Medford Water Commission currently controls adequate water to supply the needs of that area.

Adequate water supply in the southern portion of the project area is, however, questionable. The Facilities Plan projects that approximately 4,000 people would live in this area by the year 2026. It is estimated

that approximately 1,000 people presently reside in the area, all of whom receive water from the existing ground water supply. Although there is no current information on the quantity of available ground water, local agency personnel do not believe that the supply is sufficient to provide the additional pumping capacity that would be necessary to supply the additional 3,000 residents. This is particularly true for the densities projected for the lower foothills. Ground water in the foothills is currently limited in supply, and expensive to locate since deep wells must be drilled through the existing granite.

It would then appear that in order for the projected growth to occur, a public water supply would be necessary. Currently two options exist for supplying this water: 1) receipt of water from the Medford Water Commission, or 2) formation of a local water district. Each of these options is discussed below:

1) Medford Water Commission: Under current Medford Water Commission policy, this area could not be annexed into the Water Commission service district. If Jackson County were to indicate that they wanted a public water supply in the area, it is possible that the county could convince the Commission to make available the necessary water. It is generally believed that this would not occur within at least the next 10-15 years, perhaps longer.

2) Formation of a local water district: Formation of a local water district has been discussed frequently within the Westside Trunk District. The major area of concern is acquisition of a water supply source. Neither of the local irrigation districts are believed to have sufficient available water to meet the supply needs, and therefore are not considered to be likely sources. This condition could change, however, if the demand for irrigation water were to show a substantial decline. The availability of local water rights in sufficient quantity to allow construction of a reservoir higher in the foothills is not known, but could provide a potential source. In addition, local community wells could also provide a potential source of limited amounts of water. It is apparent that no one source (with the exception of the Medford Water Commission) would be sufficient to provide a public water supply for the southern portion of the Westside Trunk District. It is possible that further exploration of potential water sources, or a program to utilize water from a variety of sources, would provide sufficient water to meet the needs of the projected residents. At the present the feasibility of the formation of a local water district is unknown.

In the long run, it is certain that construction of the proposed project would increase the pressure for public water service within the Westside Trunk District. Whether this need will be met, or whether lack of a public water supply system will constrain future growth, must be decided by local residents and government officials.

Sewer

If all households within the Westside Trunk District were to connect immediately to the proposed trunk line, an additional 200,000 gallons per

day of untreated wastewater would be delivered to the Medford Treatment Plant for treatment. The plant contains sufficient excess capacity to accept and efficiently treat that amount of additional wastewater. The quality of the effluent discharged into Rogue River would not be affected by the proposed project.

Schools

The Medford schools within the project area currently have sufficient excess capacity to accommodate limited future growth in the project area. The Westside Elementary School is currently the smallest school in the Medford district, and district officials realize that it may require expansion at some time in the future. Although the cost of sewer construction would increase the operating costs of the school, it would not be an excessive burden on district finances.

o Adverse

Primary. Construction of the proposed sewerage system would cause short-term disruption to traffic within the project area.

Secondary. The existing project area roads are probably not adequate to meet the needs of the population identified within the Jackson County Comprehensive Plan. If future growth would occur to either meet or exceed that level, road improvements would be required. It is assumed that since Jackson County has adopted zoning to allow for future growth, that they have accepted some future responsibility for provision of streets to serve at least 9,000 residents. If water service became available to the project area so that an increased population could be served, the road system could be adversely effected. Sufficient growth to cause such effects could only occur as a result of the joint provision of sewer and water services.

If growth occurs within the Central Point urban growth boundary as now projected by the city, the Central Point School District could be severely affected. The schools that would serve the project area are currently at capacity. Future growth within the northern portion of the project area would require the school district to make extensive capital improvements in order to accommodate additional students.

Archaeological/Historical

o Primary

During the construction of the proposed sewer project, buried archaeological materials could be discovered. If this should occur, an archaeologist should be notified immediately to provide an assessment of the value of the materials. The Oregon State Historic Preservation office has determined that no adverse effects would occur as a result of the project. (Appendix A).

Site specific, secondary effects of the proposed project upon historical resources of the project area will be discussed in the following section. The Oregon State Historic Preservation Office has determined that no adverse effects would occur as a result of the project. (Appendix A).

Air Quality

o Adverse

Primary. The construction of the proposed wastewater collection system would cause temporary, localized air pollution. Construction machinery, earth movement and traffic detours and stops would increase suspended particulate concentrations, vehicular exhausts and noise pollution in the area. Such increases in air quality degradation would only occur during working days, allowing for favorable dispersal of concentrations during off hours. Adequate wind conditions could minimize all effects of the construction on the airshed. These construction effects would be very short-term in nature.

Secondary. The potential for high levels of air pollution in the Medford airshed is considered serious. As the area continues to grow, air pollution is expected to increase in magnitude. The Oregon Department of Environmental Quality estimates an increase in total suspended particulates from 23 tons per year in 1976 to 32 tons per year in 1985 and 38 tons per year in 1995. The Medford region, including the Westside Trunk District is currently undergoing a detailed Air Quality Maintenance Analysis conducted by the Department of Environmental Quality. When completed, this study will provide a more precise picture of projected trends in air contamination and possible mitigative measures.

The increased growth that may occur within the project area, due in part to the construction of the proposed project, would cause an increase in traffic related air pollutants. These pollutants, primarily carbon monoxide and nitrogen oxides, would be residential, mobile sources. They would not add to the existing particulate problem.

Surface Water Quality

o Beneficial

Secondary. The construction of the proposed project would eliminate the discharge of significant amounts of sewage effluent into the surface waters within the Westside Trunk District. The creeks, irrigation channels, and drainage ditches would experience less pollution, and potential pathogenic contamination via these waterways would be reduced. Because high fecal coliform counts result from both residential and agricultural uses, it is not possible to determine the individual effect of halting the drainage of septic tank effluent into the surface waters. It does not appear that conversion to a public wastewater collection system would be sufficient to clean up area surface waters. The extent to which residential and agricultural uses are contaminating the surface waters is currently being investigated in the Rogue Valley Council of Governments 208 planning study. Hopefully this report will provide

guidelines for limiting agricultural pollution sources, so that both causes of surface water contamination can be halted.

Construction of the proposed project would make higher standards of surface water quality possible. In addition, any effect the project would have on lowering fecal coliform counts would assist in removing a potential public health hazard from the area.

o Adverse

Primary. Surface water directly adjacent to the trench route would experience increased turbidity and bank disturbance during construction of the trunk line. This would be a temporary impact, and repair work to the water banks would reverse the impact. Such impacts would presumably be minimal. Long-term impacts could occur where the trunk line crossed a canal or water ditch. If the sewer pipe were to be in direct contact with moving water, any ruptures and subsequent leaking of the sewage line would adversely affect the water quality of that water system until the failure was amended.

Secondary. Increased development in the Westside Trunk District could have secondary effects on surface water quality. The conversion of land from natural or cultivated vegetation to impermeable surfaces would affect runoff patterns and rates. Human activity in the area would change the quality characteristics of the receiving waters and thus affect stream biota.

Groundwater Quality

o Beneficial

The potential for future pollution of the aquifer due to septic tank effluent would be eliminated by construction of the proposed project. The removal of all septic tank effluent from the area would eliminate a substantial amount of the contamination of the sub-soils, and thus would negate the possibility of such contaminants ever reaching the aquifer.

Vegetation/Wildlife

o Beneficial

Secondary. Construction of a wastewater collection system within the Westside Trunk District could eliminate a portion of the contaminants which are now reaching Jackson and Griffin Creeks. Measurable improvements in the water quality of those streams could increase their value as wildlife habitats.

o Adverse

Primary. Short-term disturbance of vegetation along construction routes would be anticipated. Site specific effects due to the construction of specific alignments will be described in the following section.

Secondary. The conversion of vacant land to residential uses, as allowed by construction of the proposed project, would eliminate specific habitat for some wildlife species, particularly in the lower foothills/woodland area. The simplification of a woodland or riparian environment, as caused by future residential development, could have long range adverse effects on a local environment. Diversification in plant and animal species associations is the key to a strong and stable eco-system. If the woodland and riparian areas were to experience considerable alteration of their natural constitution, a general degradation of the local natural environment could be anticipated. This degradation would appear not only in specific areas as native species were eliminated, but also in general areas where the ecological balance was upset and the aesthetic quality was lost.

Energy

All alternatives would, in varying degrees, have an impact upon energy consumption. The construction alternatives would require the greatest energy requirements, while the "no action" alternative would have no energy requirements, unless mitigation measures such as septic tank repair were enacted. A comparison of energy requirements for the specific alternative alignments can be found in the following section.

Short-term Resource Use vs. Long-term Productivity

Economic, social and environmental systems are seldom static, but can usually be viewed as a continuum moving from what they were in the past, to what they will be in the future. A significant concept in the evaluation of effects is: what effect does a potential project have upon those trends? Does the project slow down, or speed up the trend, or does it move the trend in another and different direction? In this particular case, the construction of the proposed project would continue the local and regional trend of conversion from agricultural to residential uses. This trend has been visible in the project area since the 1940's and has accelerated, especially in the northern portion, over the last 15 years. The trend would be further accelerated by the construction of this proposed public wastewater collection system.

The construction of the proposed project would allow future commitment of land to residential uses, thus potentially foreclosing future use of land for agricultural uses. However, because much of the project area has already been committed to residential uses, it is possible that that future option has previously been foreclosed.

The long-term water quality within the project area would be improved as a result of the proposed project. Although construction of a sewerage

system would not alleviate all local water quality problems, it would be the first major step towards the long term goal to provide an environment free from public health hazards.

Irreversible and Irretrievable Resource Commitments

Construction of the proposed project could potentially result in a slight lowering of the local ground water table. This would likely be noticeable only in the existing more densely developed subdivision tracts and would not be expected to result in changed well water conditions. Since the existing domestic water is supplied by local wells, the present situation constitutes water "recycling" whereby much of the water now being withdrawn from the water table is returned by the subsurface drainage of septic tank effluent. Some of this recycled water has been found to be of poor quality and to present a public health hazard as it reaches the surface waters. This proposed sewerage project would reduce and/or eliminate the groundwater quality problem by diverting the water to a discharge point in Rogue River following treatment. It would significantly reduce the potential for groundwater and surface water related public health problems which now exist in the Westside Trunk District.

The commitment of money, labor, energy and materials into the construction of the proposed project would allow future commitment of land to residential uses. (Local mineral resources including sand and gravel would be utilized during construction. The quantities needed for this project would not significantly deplete the total area resource.) The cost of provision of the proposed wastewater collection system would range between \$800,000 and \$1,000,000 depending upon the specific alignment. The commitment of those monetary resources must be weighed against the costs of the existing and future public health hazards, as well as the cost of maintaining vacant land that is not presently suitable for agricultural uses, or usable for residential purposes.

Mitigating Measures

Most short-term impacts of the proposed project could be mitigated by the methods described in Table 21. Mitigation of long-term effects is discussed below.

o Biological Systems

Since the trunk line would be constructed primarily under the existing road system, long-term effects to the biological systems would be minimal. All crossings of the irrigation canals would be specifically designed and constructed to alleviate any possibility of breakage and subsequent direct flow of raw sewage into those ditches.

o Socio-Economic Systems

The financing and assessment program currently in use by the Bear Creek Valley Sanitary Authority is a mitigating measure of major importance,

since it does not burden existing farm land. The financing method assesses farmland (land zoned for Exclusive Farm or F-5) on the basis of the residence located on the parcel. Assessments on the remainder of the property are deferred until such time, if ever, that the use of the property changes. The assessment policy also allows for deferments on the basis of "financial hardship". These deferments are generally granted to residents on a low, fixed income, if requested. The assessment method is described in further detail in Appendix C.

TABLE 21
SHORT-TERM IMPACTS AND MITIGATING MEASURES

<u>Short-term Impact</u>	<u>Mitigating Measures</u>
Temporary loss of vegetation	<ul style="list-style-type: none"> - Replant after construction or allow for natural regrowth of shrubs and trees. - Vegetation adjacent to pipelines should be flagged or fenced to keep vegetative damage to a minimum.
Traffic or utility service disruption	<ul style="list-style-type: none"> - Advance notice of anticipated disruption should occur. - Barricades and flagmen should be posted as necessary to guide traffic through construction zones; residents in areas should be notified as to location, nature and duration of construction.
Dust	<ul style="list-style-type: none"> - Keep soil wetted down in construction area.
Soil Erosion	<ul style="list-style-type: none"> - If possible, construction should be done during drier months of the year. - After construction, any exposed soil areas should be reseeded using grasses native to the area.
Safety hazards	<ul style="list-style-type: none"> - All open trenches should be covered or fenced at the end of each work day. - All construction equipment should be secured against unauthorized use.
Aerial Pollutants	<ul style="list-style-type: none"> - All vehicles and equipment should be fitted with appropriate pollution control devices that are properly maintained.
Visual impact of construction equipment	<ul style="list-style-type: none"> - Equipment should be stored in a designated area. All litter should be picked up.
Increased Noise	<ul style="list-style-type: none"> - All equipment should have mufflers, properly installed and maintained. - Construction activities should be limited to daylight hours.
Water Quality (Streams & Irrigation Canals)	<ul style="list-style-type: none"> - Construction activities in any streams or irrigation canals should be limited to low flow periods. - Care should be taken not to discharge petroleum or other pollutants into surface waters.
Archaeological Impacts	<ul style="list-style-type: none"> - If any archaeological sites are uncovered, work should be stopped until an archaeologist has been notified.

ALTERNATIVE ALIGNMENTS

As shown in Figures 11, 12, and 13, three alternative alignments have been proposed for providing wastewater collection within the Westside Trunk District. Although each of these alignments would generally serve most of the project area, there is a significant difference in the relative ease of service to specific areas. Therefore, although each alternative could provide service to most of the district, specific service areas would be determined by the placement of laterals. Lateral placement would be primarily dependent upon ease of service, cost, and demand for service. Alternative alignments can then be evaluated on the basis of cost of construction and operation, as well as potential lateral location.

Another evaluation criteria relates specifically to the potential conversion of agricultural land to residential uses. The Jackson County Comprehensive Plan indicates that the area east of Hanley Road and the area south of Ross Lane should remain in agricultural use. (The Elk Farm parcel is not included in this analysis since its purchase by the Forest Service commits it to a long-term agricultural use which is not totally dependent upon market conditions.) If pressure to convert that land to residential uses is to be avoided, then priority may be given to alternative alignments which would either prohibit service to those areas, or would decrease the feasibility of such service.

Each of the three alignments will be evaluated individually on the basis of the land use, historic preservation, energy consumption and biological impacts that are specific to that alignment.

ALTERNATIVE 2A GRANT/BEALL/ROSS ALIGNMENT

Alternative 2A would follow the alignment shown on Figure 11. The construction, operation and maintenance cost of this alignment, as measured for the life of the project, would be approximately \$830,000. Because the project area generally slopes to the northeast, lateral service could be provided most inexpensively to those areas west of the proposed alignment or adjacent to the southern portion of the alignment. Therefore, this alignment would provide easy service to the existing development, the foothills area, and the proposed Forest Service tree nursery. In order to provide service to the area substantially south of Ross Lane, or east of Alignment 2A, a relatively large lateral would be required to run the length of Hanley Road. Construction of such a lateral is not expected due to substantial LID costs, and non-conformance with local planning policies.

Land Use Impacts

Alignment 2A would provide cost effective service to the land generally west of the alignment. This route would serve the presently developed

areas, and allow for future growth west of the Forest Service property, including the foothills. All of the areas shown within the Central Point proposed urban growth boundary could be served by this alignment. Construction of this alignment would encourage lateral development in the presently developed areas and the foothills.

Selection of this alternative would discourage construction in the area substantially south of Ross Lane and east of Hanley Road, due to significantly increased construction costs. The 8" pipe which would be located at the terminus of the project along Ross Lane provides sufficient capacity to serve the existing households, but does not provide capacity for future development in the parcels to the south. In order to serve the area to the east of Hanley Road, an extensive lateral system would be required. These increased construction costs should serve to protect that area from urban encroachment. By not providing service to these two areas, this alternative would not create conversion pressures on the agricultural lands that Jackson County wishes to preserve.

Historic Preservation Impacts

Construction of this alignment would not create urbanizing pressures in the area of the Aaron Chamber's house. However, if lateral service were provided adjacent to the Old Stage Road homes, it is possible they could be subject to development pressures.

Energy Consumption Impacts

Utilization of energy would be required in the construction of the pipe materials, consumption of fuel oil, and placement of the trunk line. No long term energy commitments would be required since the system would function on the basis of gravity flow.

Biological Impacts

Alternative 2A routes through the proposed U. S. Forest Service tree nursery south of Sylvia Street to Ross Lane. This area is currently an important breeding ground for the ring-necked pheasant. Construction activities could cause a temporary disruption to that wildlife habitat. Because the alignment would be restricted to a narrow strip, no significant impact is expected. If construction occurs after the construction of the Forest Service facilities, the habitat may have already been disrupted.

A large California black oak is located at the point where the alignment leaves the Forest Service property to meet Ross Lane. This oak is an important habitat for local perching birds, as well as being aesthetically pleasing. Proper alignment of the proposed trunk line could prevent any disruption to this tree.

Mitigating Measures

Recognition of the historic character of the sites identified along Old Stage Road by both Jackson County and the Oregon Register of Historic Places could alleviate pressure for conversion of those homes. In addition the 1 to 5 acre lot sizes specified for the area in which they occur are sufficient to protect those homes from future residential expansion.

Construction specifications would require that the California black oak located along Ross Lane be protected from disruption during construction of the proposed project.

ALTERNATIVE 2B

HANLEY ROAD ALIGNMENT

Alternative 2B is outlined on Figure 12. The construction, maintenance and operation cost of this alternative for the life of the project is expected to be approximately \$960,000. Construction of this project would allow gravity flow sewers to be constructed in all areas west of the alignment. It would decrease the costs of providing laterals south of Ross Lane, as well as east of Hanley Road.

Land Use Impacts

Construction of Alignment 2B would provide feasible gravity flow service capability to most of the land within the project area since it is located close to the eastern boundary of the district. Pressure to convert presently zoned agricultural land to residential uses would be most intense with the construction of this alignment. In addition, this alternative provides efficient service to the major parcels of Class I-IV soils, which are expected to be placed in an EFU zone at the completion of the county's comprehensive planning program.

Historic Preservation Impacts

Construction of this alignment could result in pressure to increase the housing density along Hanley Road. Any movement in that direction could potentially effect the maintenance of the Aaron Chamber's house.

Energy Consumption Impacts

Utilization of energy would be required in the construction of the pipe materials, consumption of fuel oil, and placement of the trunk line. No long-term energy commitments would be required since the system would function on the basis of gravity flow.

Biological Impacts

The construction of Alignment 2B would occur entirely within the existing roadway and would cause no significant biological effects.

Mitigating Measures

Recognition of the Aaron Chamber's house by Jackson County and the National Register of Historic Sites could potentially protect the home from degradation.

ALTERNATIVE 2C

OLD STAGE ROAD ALIGNMENT

Alignment 2C is outlined in Figure 13. The construction, operation and maintenance cost of this alignment is estimated to be approximately \$1,050,000. The increased cost of this alignment is due to the construction of the three pump stations that are necessary to carry wastewater up hill from the existing developments to the trunk line in Old Stage Road. These pump stations would require operation and maintenance throughout the life of the sewer.

Alignment 2C provides low cost, gravity flow service to a smaller portion of the project area than do the other two alignments. In order to provide wastewater collection service to those areas east of the alignment, pump stations or extremely long laterals would be required. This would have the effect of decreasing the demand for such service because of high costs.

Land Use Impacts

Alignment 2C would provide the most feasible sewer service to the area west of Old Stage Road and the portion of the project area which falls within Central Point's proposed urban growth boundary. Gravity service would not be available to the agricultural lands east of the alignment or south of Ross Lane. In addition gravity sewer service would not be available to many of the existing households which are located in the current rural residential zones east of Old Stage Road. Selection of Alternative 2C would severely restrict service to most of the agricultural land within the project area; however, it would also restrict service to many of the rural residential homesites as well.

Historic Preservation Impacts

Construction of Alignment 2C would occur in Old Stage Road adjacent to the three identified Old Stage Road homes. Pressure to convert those could potentially occur.

Energy Consumption Impacts

In addition to the energy consumption that would occur during construction, a long-term commitment of energy resources would be required for the operation and maintenance of the proposed pump stations.

Biological Impacts

Large specimens of California black oak, Oregon white oak, Pacific madrone, ponderosa pine and incense cedar line the western portion of Beall Lane, Old Stage Road and the upper portion of Ross Lane, often forming partial canopies over the streets. The construction of the trunk line could potentially damage the root systems of some of those trees.

Mitigating Measures

Construction of Alignment 2C would be routed to protect the root systems of the large trees identified along Beall Lane, Old Stage Road and Ross Lane.

SUMMARY MATRIX

The following matrix summarizes the effects of the "no action" and construction alternatives. These impacts are measured as either major, moderate, minor, or no impact.

TABLE 22

SUMMARY OF ADVERSE IMPACTS OF PROJECT ALTERNATIVES

Impacts	No action	Grant/Beall	Hanley Rd.	Old Stage Rd.
		Alignment 2A	Alignment 2B	Alignment 2C
- Continued degradation of ground water quality	+	N	N	N
- Continued degradation of surface water quality	+	N	N	N
- Potential problems with operational reliability	NA	N	N	-
- Impact on air quality	N	N	N	N
- Impact on archaeological resources	N	N	N	N
- Impact on historical resources	N	N	-	N
- Vegetation and terrestrial wildlife loss	N	-	-	-
- Consumptive use of energy	-	-	-	0
- Pressure for conversion of agricultural lands	-	-	+	-
- Financial impact on local property owners	-	0	0	+
+ Major Adverse 0 Moderate Adverse - Minor Adverse N No Adverse Impact				

The most significant difference between the three alternative alignments - Alternatives 2A, 2B and 2C - relates to the areas which could easily be served by each alignment. Ease of service is closely tied to cost, and those alignments which increase the cost of serving certain geographic areas may restrict service to those areas. Alignment 2B, which places the major trunk line along Hanley Road, would provide gravity service to most of the project area. The majority of the agricultural lands within the project area could be easily served by this alternative, increasing the pressure for conversion of that land to residential uses.

Alternative Alignment 2A would allow service to the developed lands within the project area, as well as those lands slated for future development within the local comprehensive plans. Cost of service to the areas planned for continued agricultural uses would be increased, since the trunk line would generally be placed west and north of those areas. Alternative Alignment 2C would result in the most restrictive service, since gravity flow would not be available to the existing developments adjacent to the Westside Elementary School. Construction of this alignment would increase the cost of service to some areas planned for development in the local comprehensive plans, in addition to areas planned for agricultural preservation.

None of these three alignments would result in significant adverse impacts to air quality, vegetation, wildlife or historical and archaeological resources.

As shown in Table 22, selection of a no action alternative would continue the current degradation of water quality in both the ground water and surface waters of the project area. Short-term impacts due to construction would be alleviated, however, long-term water quality impacts would continue.

SECTION IV. RESPONSE TO COMMENTS

The Draft Environmental Impact Statement on the proposed project was made available to a wide range of federal, state and local agencies, as well as local individuals, for review and comment. This section includes copies of the letters received from all reviewers, and responses to the comments or questions that they raised. Table 23 lists the written comments that were received by the Environmental Protection Agency and indicates whether a response to the letter was necessary; and if so, whether a change in the text was made, or if the comment was answered elsewhere. Copies of each of the letters received are also included, with responses to the letters comments appended to each letter. Table 24 lists the issues addressed in each of the response letters that were received.

In addition to written comments, oral comments were heard at a formal public hearing on both the Facilities Plan and the Draft Environmental Impact Statement. This hearing was conducted by the Environmental Protection Agency on January 4, 1977 at the Westside Elementary School which is located within the project area. Comments from local agency staff members and citizens were responded to at that time. An official transcript of the public hearing is on file at Region X Environmental Protection Agency offices in Seattle, Washington.

TABLE 23

RESPONSE TO COMMENTS

Agency/Individual	Comments Noted No Response Necessary	Response Indicated in FEIS Text	Response Indicated on Comment Letter in this Section
Portland District, Corps of Engineers	X		
Rogue River Valley Irrigation District	X		
USDA, Soil Conser- vation Service	X		
Mr. & Mrs. Harry LaFever	X		
U.S. Dept. of Housing & Urban Development		X	
U. S. Dept. of the Interior		X	X
Mrs. Charlotte Peterson	X		
Jackson Co. Health Department		X	
State of Oregon-Soil & Water Conservation Comm. (JCSWCD)			X
State of Oregon Dept. of Fish & Wildlife	X		
Division of State Lands	X		
LCDC		X	X
Advisory Council on Historic Preservation			X
Jackson County Planning Commission		X	X

TABLE 24

Comments Received on Draft
Environmental Impact Statement

TABLE 24		Comments Received on Draft Environmental Impact Statement																									
Date Recd	From	EIS Page No.	Costs	Alternatives	Water Quality	Land Use Planning	Population	Wildlife	Growth	Transportation	Soils	Septic Systems	Aesthetics	Federal Policy	Energy	Sludge Disposal	Health & Sanitation	Air Quality	Recreation	Construction Impacts	Agriculture	Drinking Water	Historic Preservation	Fisheries	Geology	Groundwater	Vegetation
1/11	U.S. Department of Agriculture																										
1/12	Department of Housing and Urban Development					X																					
1/20	U.S. Department of Interior			X				X				X							X					X	X	X	
1/28	Corp of Engineers Portland District		X		X	X			X																	X	
1/24	Intergovernmental Relations Division																										
	Soil & Water Conservation Commission										X																
	Fish & Wildlife			X	X			X												X				X			X
	Division of Lands				X															X							
	Land Conservation and Development Commission			X		X	X		X					X				X			X						
12/29	Advisory Council On Historic Preservation								X														X				
1/11	Rogue River Valley Irrigation District				X							X															

Comments Received on Draft
Environmental Impact

Date Recd	From	EIS Page No.	Costs	Alternatives	Water Quality	Land Use Planning	Population	Wildlife	Growth	Transportation	Soils	Septic Systems	Aesthetics	Federal Policy	Energy	Sludge Disposal	Health & Sanitation	Air Quality	Recreation	Construction Impacts	Agriculture	Drinking Water	Historic Preservation	Fisheries	Geology	Groundwater	Vegetation
1/11	Jackson County - Board of County Commissioners			X		X	X		X												X					X	
1/13	Bear Creek Valley Sanitary Authority		X	X	X	X	X				X	X					X				X						
1/24	Jackson County Health Dept.										X	X						X						X	X		
1/10	Edwin C. Frost		X	X					X		X											X	X				
1/11	Mr. & Mrs. Harry LaFever			X					X								X										
1/13	Charlotte Peterson		X						X				X					X									

Response to Written Comments

1. Mr. & Mrs. Harry LaFever

Response: Comments noted.

2. Department of the Army, Portland District, Corps of Engineers

Response: Comments noted.

3. U. S. Department of the Interior

Comment: Demand on local resources of stone or sand and gravel should be recognized and considered under "Irreversible and Irretrievable Resource Commitments."

Response: This comment has been noted and the text has been changed to reflect the use of gravel resources in the construction of the proposed project. The quantity of gravel needed would not significantly deplete local mineral resources.

Comment: "The statement would be strengthened by including more specific data on flow characteristics and water quality of streams draining the project area, especially on those reaches containing high fecal coliform levels."

Response: The statement includes all available information on the streams that flow through the project area. Unfortunately no additional data exist.

Comment: "The statement should indicate the potential in terms of the population dependent upon septic tanks and wells, and the total number of such facilities in operation. These data in turn could be used to estimate the magnitude of impacts on the water table through the complete cessation of the "recycling" through septic tanks."

Response: Local and state agency water resource personnel were reluctant to include any estimate of such a decrease in the "recycling of wastewater" or its effects on the local watertable. They felt that any such estimate would be so broad as to be unuseable for analytical purposes. For that reason, such an estimate is not included in the statement.

Comment: "Local recreation agencies should be notified of the recreation enhancement features."

Response: Comment noted and referred to Bear Creek Valley Sanitary Authority, the local project sponsor.

Comment: Mailing list corrections are needed.

Response: The Environmental Protection Agency has made the necessary corrections to the mailing list.

Comment: "The geology section would benefit from careful revision."

Response: Revisions to the geology section have been made based on Department of Interior comments.

Comment: "Clarity and brevity of the geologic description could be maintained by including a generalized geologic map and cross section. Areas of potential geologic hazards could also be indicated on the geologic map."

Response: Since no geologic hazard areas have been specifically mapped within the project area, inclusion of a geological map does not appear to be warranted.

Comment: "There appear to be numerous misspellings of scientific names in Appendix B."

Response: Appendix B has been reviewed and misspellings corrected.

4. Rogue River Valley Irrigation District

Response: Comments noted.

5. Department of Housing & Urban Development

Response: Comments noted. See pages 67-68 of FEIS text.

6. Charlotte Peterson

Response: The reviewer is referred to Appendix C of the FEIS for the discussion on BCVSA assessment procedures applicable to large lot homesites and agricultural land.

7. Jackson County Health Department

Response: All comments have been noted in the text.

8. State of Oregon Soil & Water Conservation Commission - (Jackson County Soil & Water Conservation District)

Response: Although the textual discussion in the DEIS is referenced to soils associations, soils are mapped and analyzed by individual soils series based on information provided in the applicable OR-1 and Soil Interpretation for Oregon forms. The most pertinent soils data relates to agricultural capability and septic tank suitability. The mapping and analysis of these issues have been prepared based on individual soils series data which is the most detailed data available. We believe the level of detail provided in the current discussion is sufficient to address the questions raised in the DEIS.

9. State of Oregon Department of Fish & Wildlife

Response: Comments noted.

10. Division of State Lands, State of Oregon

Response: Comments noted.

11. Land Conservation & Development Commission, State of Oregon

Comment: "It is critical that remaining agricultural lands not be threatened by further encroachment of urban sprawl."

Response: EPA has added a grant condition (outlined in the FEIS preface) which addresses the preservation of agricultural land. The grant condition reads as follows: "the grantee agrees that connections inconsistent with agricultural zoning will not be allowed for sewerage service to those areas traversed by the proposed trunk line through lands designated as agricultural by the county's comprehensive plan. Any existing residences which are located within 300 feet of the proposed wastewater system (will be required to hook-up to the proposed trunk line.) If additional structures requiring sewerage service are allowed by Jackson County to be constructed, hook-up to the sewerage system is required."

Comment: "Population projections for the project area are based upon existing comprehensive plan and zone designations and densities. Revisions to city and county plans and ordinances in response to the statewide planning goals could substantially alter or invalidate these estimates."

Response In response to calculations prepared by Jackson County Planning Department the design population has been reduced from 17,400 to 13,000. As indicated in the preface to the FEIS, the design of selected alternative 2A is being modified to reflect that lower future population figure.

Comment: "Statements made in the DEIS that remaining large farm units in the area will remain economically stable should their owners choose to continue farming are inconsistent with the intent of this goal (Goal 3 - Agriculture)."

Response: The text has been modified to reflect this comment. However, it should be pointed out that some of those parcels are not now zoned for exclusive farm use. Therefore, until Jackson County takes such action, those parcels could be divided into 2½ - 5 acre parcels in conformance with the current zoning designations.

Comment: "The DEIS does not presently include any specific discussion of adverse or beneficial impacts of alternatives on agricultural lands."

Response: The reviewer is referred to the discussion of land use impacts for each alternative alignment.

Comment: "Four of the twelve statewide planning goals are identified and listed as being applicable. It is also stated that these goals will be utilized in analyzing the alternatives. Unfortunately, this is never done."

Response: Compliance with the four statewide planning goals identified as applicable to this project is not discussed individually for each alternative. However, it is a factor in the analysis of impacts under the following headings: land use, air quality, water quality, and public facilities and services. Portions of these sections have been revised to more clearly reflect that analysis.

Comment: "Neither the section on alternatives nor the subsections on mitigating measures even mention the possibility of alternatives to septic tanks and sewers."

Response: The alternatives reviewed in the DEIS reflect the final alternatives as they are outlined in the Facilities Plan. The reviewer is referred to that document for a discussion of the alternative selection process.

12. Edwin G. Frost

Comment: The decomposed granite soil in this area percolates very rapidly. In my estimation it is an ideal soil for septic tank operation.

Response: As referenced in the preface to this Final EIS, numerous wastewater problems have been reported within the project area, including the specific area in the vicinity of the Westside School. In many portions of the project area, the Department of Environmental Quality and the Jackson County Sanitation Department consider the soils to be generally unsuitable for septic tank operation.

Comment: Item 2 - For the future, sewers would encourage further development and increased population in the subdivision and surrounding area. Current county zoning and local popular opinion definitely stand against such a trend. The surrounding agricultural lands and our current way of life should be protected against further encroachment.

Response: The 8" pipe capacity to the Niedermeyer subdivision areas has been chosen deliberately to limit the amount of growth which can be accommodated south of Ross Lane. The mechanism for protecting agricultural land is the Jackson County comprehensive plan which is currently being updated. Before the proposed project receives federal funding, Jackson County must certify

that the project is in compliance with the county comprehensive plan including county and state mandates to preserve prime agricultural land.

Comment: Item 5 - Westside School appears to be the only plausible reason for extending a sewer trunk south from Beall Lane.

Response: The writer is referred to the preface of this FEIS for a discussion of septic tank failures in the area south of Beall Lane.

Comment: Item 8 - The public meeting at Westside School on January 4 showed evidence of strong sentiment among individuals against the construction of a sewer in this area.

Response: A review of the legal transcript of the referenced meeting indicated that the general public response was mixed, and indeed was stronger in support of the project. Many individuals were present at the meeting to ask questions and receive information, and did not go on record either supporting or opposing the project.

Comment: Item 9 - It is my understanding that assessment cost for sewerage for my lot on Niedermeyer Drive (approximately 150 x 150) would be approximately \$3,000.

Response: The individual household cost of sewer provision have not yet been established. The BCVSA assessment process outlined in Appendix C would be used to determine individual service costs.

13. Advisory Council on Historic Preservation

Comment: "The council has expressed concern about the effect that the construction of public wastewater facilities in the vicinity of Jacksonville, Oregon would have on the rural setting of the Jacksonville Historic District. However, we are unable to find in the DEIS any evidence that such consideration has been given in the planning for the Westside Trunk District. Therefore, the council requests additional information which will explain any effects the proposed undertaking might have on that National Register property."

Response: Correspondence from the State of Oregon Historic Preservation office is included within the DEIS which indicates that no adverse impacts are expected to occur as a result of the construction of the proposed alternative. The project has been designed to provide the greatest capacity to the northern section of the district. An 8" line will be constructed to serve the Niedermeyer subdivision, which is the most southerly extension of the proposed project. This 8" line would not provide sufficient capacity to serve the agricultural land to the south and west, therefore it is not expected to result in any further conversion of agricultural land in proximity to the Jacksonville Historic District.

14. Jackson County

Comment: "The projected infiltration rate of 200 g.p.d.p.c. could be used as a growth contingency factor, allowing for population growth to greatly exceed the intended plan densities. This oversizing has not been substantiated within the Facilities Plan or Environmental Impact Statement."

Response: As indicated in the preface to the FEIS, EPA has accepted the 200 g.p.d. standard due to the high groundwater conditions that exist within the project area. This allowance is within the sewer design criteria used by the Oregon Department of Environmental Quality and manuals of practice of ASCE and WPCF.

Comment: Alternative 2B does, in fact, conflict with the agricultural concepts of the Comprehensive Plan, and therefore cannot be construed to comply with the plan if it were the selected alternative.

Response: For the reason stated in the above comment, Alternative 2B was not considered to be a viable alternative.

Comment: The design population of 17,400 exceeds the plan buildout population estimate of 13,000. This assumes that plan densities will be increased sometime after the 1985 planned date of the comprehensive plan. While this would appear logical, it is also possible that density reductions could occur, thus the project would be over-designed. There is no evidence now to suggest that a reduction is likely, however."

Response: As indicated in the FEIS preface, the design capacity for the selected alternative 2A has been revised to 13,000.

Comment: Urban growth boundaries have not been approved, as yet, for Central Point. Changes in these boundaries could affect the ultimate sizing of the trunkline.

Response: Throughout the FEIS the urban growth boundaries under discussion are consistently referred to as "proposed urban growth boundaries." In addition, BCVSA continues to be involved in the local process of identifying specific urban growth boundaries.

15. U. S. Department of Agriculture, Soil Conservation Service.

Comments noted. No response necessary.

January 8, 1977

Roger MacKinnon

RECEIVED
JAN 11 1977
EPA/CIO

Dear Sir,

We attended the meeting of the Westside Trunk District, at the Westside Elementary School, Tuesday night, January 4, 1977.

Homer Conger, a farmer who owns property next to the Westside school, told how the school's septic tank system, was flooding his fields with effluent. We went outside after the meeting, we could smell the sewer odor real bad. We think it is un-healthful to make children breath and smell that kind of air, when a good sewer system would prevent this problem.

We have a half acre on Robin Lane in Central Point, we pay \$130.00 a year taxes. We had this property since 1961, we would like to build a home, there, but can not do so, because of the sewer.

We would like to support the 2 A. Alignment. The ditch on Robin Lane and New Ray Road runs green with sewer in the winter. We took water from both ditches and had it tested. It tested 400% sewer in one and 60% sewer in the other ditch. It comes from the people who live on the higher ground, who say their septic tanks are alright.

Mrs. Walen's neighbor ran their sewer along her fence and she can not get help to get it cleaned up.

The need for a sewer trunk line does exist. The longer it is put off the more it will cost and the more possibility of sickness.

The population growth to the County will probably come anyway, because they will build within the city.

Sincerely,

Mr. & Mrs. Harry L. Jones



DEPARTMENT OF THE ARMY
PORTLAND DISTRICT CORPS OF ENGINEERS
P. O. BOX 2746
PORTLAND, OREGON 97208

REPLY TO
ATTENTION OF:

NPPEN-KR

19 January 1977

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

RECEIVED
JAN 28 1977
EPA-EIS

Dear Mr. Thiel:

The draft environmental impact statement (EIS) for the Westside Trunk District, Bear Creek Valley Sanitary Authority, which you furnished our North Pacific Division Office, has been referred to this District Office. We have reviewed the statement and offer the following comments for your consideration.

The Corps of Engineers supports the proposal to construct a wastewater collection system in the Westside Trunk District. Water quality enhancement is one of the purposes for the Corps' Rogue River Basin Project, consisting of Lost Creek, Elk Creek, and Applegate Dams. Cooperation between the Federal government and local governments in the Rogue Valley is necessary if this enhancement purpose is not to be jeopardized.

As stated in the draft EIS for the Westside Trunk District, unless corrective action is taken, further degradation of domestic ground water supplies and the surface waters of Griffin and Jackson Creeks can be expected as residential use of the area grows. Because these two streams flow into Bear Creek, a primary tributary to the Rogue River, increased effluent discharge would be detrimental to Rogue River water quality. The Corps believes that a responsible stance must be taken by local government to accommodate anticipated residential growth without sacrificing water quality and potentially jeopardizing Federal water resource development efforts in the basin.

NPPEN-ER
Richard R. Thiel

19 January 1977

Alignment configuration for the wastewater collection system should be determined through an analysis of cost, growth-inducing impacts (especially conversion of agricultural lands to residential use), compliance with local comprehensive land use plans, State-wide goals, and water quality effects.

We appreciate this opportunity to review and comment on the draft statement.

Sincerely yours,


L. J. STEIN
Chief, Engineering Division





United States Department of the Interior

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

RECEIVED
JAN 18 1977

FICE

FFA

RECEIVED
JAN 20 1977
EPA-FIS

January 13, 1977

ER-76/1137

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

Dear Mr. Dubois:

We have reviewed the draft environmental statement for the Westside Trunk District, Jackson County, Oregon, and provide the following comments for your consideration when preparing the final document.

GENERAL COMMENTS

Although fish resources are not specifically addressed in the statement, it appears that adverse impacts to fish and wildlife will be minimal. Of the four alternatives discussed, Alternative 2B would be the least detrimental to riparian and woodland vegetation and to the species dependent upon such habitat.

The project may require only modest quantities of construction materials; however, they should be considered under "Irreversible and Irrecoverable Resource Commitments." Demands on local resources of stone or sand and gravel should be recognized, with the assurance that implementation of the proposed action will not significantly deplete these resources.

In view of the limited area which would be affected and the lack of known mineral deposits within or immediately adjacent to the project lands, implementation of the proposed action or the alternatives considered should cause no significant impact on mineral resources. A brief statement to this effect should be included to demonstrate that mineral resources have not been omitted through oversight.

The statement would be strengthened by including more specific data on flow characteristics and water quality of streams draining the project area, especially on those reaches of streams containing high fecal coliform levels. Also, measures should be included concerning treatment of abandoned septic tank systems in order to minimize any adverse effects on water resources.

Even though the total amount of pollution caused by septic tanks may not be quantified, the statement should indicate the potential in terms of the population dependent upon septic tanks and wells and the total number of such facilities in operation. These data in turn could be used to estimate the magnitude of impacts on the water table through the complete cessation of the "recycling" through septic tanks. Presumably data of this sort have been used in arriving at the figure of 200,000 gallons per day as the increased load for the Medford treatment plant, if all use of septic tanks should cease (p. 70-71). This figure could be used in conjunction with the typical effective porosity of the aquifer to estimate the maximum decline in water levels to be anticipated as a result of the export of the potential recharge. The statement could thus more adequately evaluate the magnitude of this impact. The statement should also evaluate the impacts of infiltration into the proposed sewer system, or of exfiltration from the system — at least in terms of typical specifications or maximum allowable.

We suggest that the local recreation agencies be notified of the recreation enhancement features which may be available through multiple use of the land over the sewage collection systems. A possible pedestrian and/or bicycle trail above the sewer line leading from the City of West Point to the Westside Elementary School may be feasible and desirable and would be consistent with Section 201(f) of the 1972 Water Pollution Control Act which directs incorporation of open space and recreational provisions in facilities for wastewater management.

SPECIFIC COMMENTS

Page ix, Mailing List — The National Wildlife Federation is not a federal agency.

Page x, Mailing List — The proposed project is within both the Medford Irrigation District and the Rogue River Valley Irrigation District. The Rogue River Valley District should be added to the mailing list.



ROGUE RIVER VALLEY IRRIGATION DISTRICT

3139 MERRIMAN ROAD

MEDFORD, OREGON 97501

AREA CODE 503-684-1690

January 5, 1977

RECEIVED

JAN 11 1977

EPA REC

Mr. Richard R. Thiel
Chief of Environmental Impact Section M-5443
U.S. - E.P.A. - Region 10
1200 6th Avenue
Seattle, Washington 98101

RE: Comments on proposed West Side
trunk sewer - Bear Creek Valley
Sanitary Authority

Dear Mr. Thiel;

For many years, the Irrigation districts have been accused, by the City of Medford and others, of transporting polluted waters within their facilities and distributing said waters through out the valley.

As you are also aware, the area has been designated as a 208 Planning area. Recent results of the monitoring of waters in our area also confirm that the waters of Jackson Creek, Griffin Creek and other tributaries, are in fact, being polluted by septic effluents, entering these tributaries.

The District, in past years, has made every attempt to have the failing septic tanks removed or remedied, by working with the Jackson County Health Department and the D.E.Q. in our area. The results have been less than satisfactory to the District. In many cases the exact cause of effluents entering the District facilities could not be pin-pointed as to the point of origin, and in others, due to lot size or other reasons, could not be corrected.

In some cases, persons living adjacent to the District facilities have piped the over-flow from their septic tanks directly into the District facilities or streams. In other cases, persons with water rights for irrigation, irrigate directly over their systems, forcing the effluents out into their run-off water that may be recaptured by the District and used again for irrigation by others.

For these reasons, the Rogue River Valley Irrigation District is in favor of the proposed sewer truck line proposed by the Bear Creek Valley Sanitary Authority. We do feel that when said trunk line is completed, it would have a marked effect on the reduction of septic effluents now entering the waters of the Rogue River Valley Irrigation District, and would also enhance the environment of the area.

Sincerely yours,



Otto Bohnert, Chairman
Board of Directors
Rogue River Valley Irrigation District

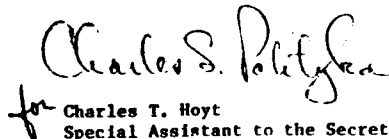
cc: Bear Creek Valley Sanitary Authority

Page 37, Geology -- This section, though brief, does include recognition of geological hazards. The balance of the section, however, would benefit from careful revision. The reference to radical alteration of the landscape through the continuing processes of erosion and deposition is scarcely relevant within the time span of the proposed action. The paragraph following seems to imply that the predominant rock-type of the area, granodiorite, changes to granite in some areas, and sandstone in others. Clarity and brevity of the geologic description could be maintained by including a generalized geologic map and cross section. Areas of potential geologic hazards could also be indicated on the geologic map.

Page A-7, Appendix B -- There appears to be numerous misspellings of scientific names in this section.

Thank you for the opportunity to review and comment on this document.

Sincerely yours,



for Charles T. Hoyt
Special Assistant to the Secretary



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

January 10, 1977

3188 Ross Lane
Central Point, Oregon
Jan 10, 1977

REGION X

Office of Community
Planning & Development

IN REPLY REFER TO:

100 M/S 317

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

RECEIVED
JAN 12 1977

Dear Mr. Thiel:

Subject: Draft Environmental Impact Statement
Westside Trunk District
Jackson County, Oregon

EPA/EC

We have reviewed the Statement submitted with your November 12, 1976 letter.

The proposed action is the construction of a wastewater collection system for the residents of the Westside Trunk District, which is located southwest of the City of Central Point, Jackson County, Oregon.

The Impact Statement makes an analysis of the project to the State planning goals; however, we cannot tell from the Statement if the proposed facility will be consistent with the present comprehensive plan, as adopted by the County, or if the project would be compatible with comprehensive plans being developed to meet State goals. We suggest that the final statement clarify this relationship.

With exception of the above concern, we see no objection to the proposed project.

Thanks for the opportunity to comment.

Sincerely,

Robert C. Scalia
Assistant Regional Administrator

AREA OFFICES
PORTLAND, OREGON - SEATTLE, WASHINGTON
Hearing Offices
Anchorage, Alaska - Boise, Idaho - Spokane, Washington

U.S. Environmental Protection Agency
1200 6th Ave.
M/S 443
Attention: Roger Mochnich
Seattle Washington 98101

RECEIVED
JAN 13 1977
EPA/EC

Dear Sir:

On January 4th, I attended the public hearing on the West Side Trunk District prepared by the Environmental protection Agency. As a resident who lives directly west of the West Side School, I am concerned with the development of anything that will take away our rural atmosphere. We have 12 acres of land that we have cattle on year around. Our children are active in beef, horse, and rabbit 4-H clubs and we would like to have it remain this way. With the development of the truck line up to West Side school or along the eastern border of our property, it has been inferred that the exscecement would be prohibitive without forcing us to sell off that section. It appears the trunk line would solve the problem of the sewerage of the Westside School and a few select houses but on the other hand would create more problems with respect to water supply, air pollution, and housing developments on the agricultural land.

It would be appreciated if I would recieve the final copy of the report as it will come out in March.

Sincerely,

Charlotte Peterson
Mrs. Charlotte Peterson

LESTER N. WRIGHT, M.D., M.P.H.
HEALTH OFFICER, DIRECTOR



1313 MAPLE GROVE DRIVE, MEDFORD, OREGON, 97501

PHONE 779-7330

January 19, 1977

Mr. Roger Mochnick
Environmental Protection Agency
1200 6th Avenue
Seattle, WA 98101

RECEIVED
JAN 24 1977

EPA/EC

Dear Mr. Mochnick:

On January 10, we received a copy of the Draft Environmental Impact Statement for the Westside Trunk District in Jackson County, Oregon. We have had a chance to review the document and would like to make the following comments:

Page 3. Jackson County Health Department does not have records on septic tank permit applications and cannot be listed as a source of information for "approximately 50% of all requests for septic tank permits within the Westside Trunk District are denied".

Page 35, "Air quality". The State Department of Environmental Quality has indicated that the Medford area does have a photochemical oxydant pollution problem. Historically, suspended particulate matter has been an air quality problem in the Rogue Valley, however, recent test results have prompted the Department of Environmental Quality to include photochemical oxydants in their air quality management plan.

Page 46, "Ground water". We have reason to believe that some of the cement tile wells, in the Neidermeyer (westwood) subdivision area have been changed to steel casings. We do not believe that this was universally done, or that the problem has been eliminated.

If you have any questions concerning our comments, feel free to contact our office.

Sincerely,

Steven F. Boedigheimer, R.S.
Supervising Sanitarian
Jackson County Health Dept.

SFB:jdf

98

Westside Trunk Dist. Water and Sewerage Plan
and Draft Environmental Impact Statement
January 3, 1977 Staff Report Page - 3

PRIORITY SHALL BE GIVEN TO CONSTRUCTION OF WATER AND SEWAGE FACILITIES WHICH ARE REQUIRED BY EXISTING CONDITIONS, OR FOR WHICH THERE IS A FUTURE NEED AS IDENTIFIED BY THE JACKSON COUNTY COMPREHENSIVE PLAN.

Existing densities of development on soils which are largely unsuitable for on-site septic systems appear to satisfy the criteria of this policy.

WITHIN THE CONSTRAINTS OF REASONABLE ENGINEERING PRACTICES AND COSTS, NEW WATER AND SEWAGE LINES SHALL NOT PASS THROUGH PRIME AGRICULTURAL LAND.

Design alternatives 2A and 2C satisfy this policy. Alternative 2B would be in conflict with this policy.

PROPOSED WATER AND SEWER PROJECTS SHALL UNDERGO ECONOMIC AND ENVIRONMENTAL IMPACT ASSESSMENTS WHICH INCLUDE INDIRECT EFFECTS ON LAND USE AND RESOURCE CAPABILITIES.

An assessment was prepared which identifies possible impacts of each of the three alternative routes and a "no action" alternative. Indirect effects are outlined. Increased growth pressures are expected until zoning densities are reached. Depending on line location, there will be some additional growth pressure placed on agricultural lands.

Compliance and Position Statement: At face value, the project appears to comply with the stated Plan policies, and thus complies with the Comprehensive Plan. There are, however, a few areas where future caution should be exercised. These are:

A) The projected infiltration rate of 200 g.p.d.p.c., could be used as a growth contingency factor, allowing for population growth to greatly exceed the intended Plan densities. This oversizing has not been substantiated within the Facilities Plan or Environmental Impact Statement.

B) Alternative 2B does, in fact, conflict with the agricultural concepts of the Comprehensive Plan, and therefore cannot be construed to comply with the Plan if it were the selected alternative.

C) The design population of 17,400 exceeds the Plan buildout population estimate of 13,000. This assumes that Plan densities will be increased sometime after the 1985 planned date of the Comprehensive Plan. While this would appear logical, it is also possible that density reductions could occur, thus the project would be over-designed. There is no evidence now to suggest that a reduction is likely, however.

D) Urban growth boundaries have not been approved, as yet, for Central Point. Changes in these boundaries could affect the ultimate sizing of the trunk line.



Executive Department
INTERGOVERNMENTAL RELATIONS DIVISION
 240 COTTAGE STREET S.E., SALEM, OREGON 97310

January 20, 1977

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

Dear Mr. Thiel:

Re: Westside Trunk District
 PNRs #7612 4 370

Thank you for submitting your draft Environmental Impact Statement for State of Oregon review and comment.

Your draft was referred to the appropriate state agencies. State Soil and Water Conservation Commission, State Department of Fish and Wildlife, Division of State Lands, and Department of Land Conservation and Development offered the enclosed concerns which should be addressed in preparation of your final Environmental Impact Statement.

We will expect to receive copies of the final statement as required by Council of Environmental Quality Guidelines.

Sincerely,

Donald L. Jones
 Administrator

DLJ:lm
 enclosures

RECEIVED

JAN 24 1977

FPA:EG

AN EQUAL OPPORTUNITY EMPLOYER



OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
 240 Cottage Street S.E., Salem, Oregon
 Ph: 378-3732

DEC - 9 1976
 STATE SOIL AND WATER
 CONSERVATION COMMISSION

PNRS STATE REVIEW

Project #: 7612 4 370

Return Date: 1-14-77

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

**ENVIRONMENTAL IMPACT REVIEW
 DRAFT STATEMENT**

Westside Trunk District

- () This project does not have significant environmental impact.
- () The environmental impact is adequately described.
- ☒ We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.
- () No comment.

REMARKS

The Jackson SWCD comments:

The soils section is so poorly done that it should be rewritten. Soil associations should not be used for a detailed report of this type, rather each soil should be described and Soil Interpretations for Oregon forms used. These forms are readily available in Medford. The report is being returned with notations and misstatements crossed out.

Agency Soil & Water By Charles H. Lee



OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

JAN 6 1977

PNRS STATE REVIEW

Project #: 7612 4 370 Return Date: 1-14-77

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW DRAFT STATEMENT

- () This project does not have significant environmental impact.
- (X) The environmental impact is adequately described.
- () We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.
- () No comment.

REMARKS

The Department of Fish and Wildlife has completed review of the Westside Trunk District, Draft Environmental Statement, and offers the following comments.

The construction of Alternative 2B: Hanley Road Alignment would have the least impacts to fish and wildlife.

The following areas of concern need to be made a part of the project during construction.

1. Preventive measures must be taken to stop turbid waters from entering any waterway. We recommend a settling pond or collecting basin be constructed if any problem develops.
2. Fill-removal permit be obtained when crossing streams in the area. We recommend that in-water work be made June 15 to September 15 to protect the fish and wildlife resource.
3. Removal of vegetation along construction route be kept at a minimum.

Agency Fish & Wildlife By Norma Behrens
ENVIRONMENTAL MANAGEMENT SECTION 1/3/77

100



OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

DEC 28 1976

PNRS STATE REVIEW

RECEIVED
DEC 9 1976
DIVISION OF STATE LANDS

Project #: 7612 4 370 Return Date: 1-14-77

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW DRAFT STATEMENT

- () This project does not have significant environmental impact.
- (X) The environmental impact is adequately described.
- () We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.
- () No comment.

REMARKS

If the project would require the removal, fill or alteration of 50 cubic yards or more of material within the banks of the waterway(s), we urge the applicant to apply for state fill or removal permits well in advance of construction deadlines to prevent unnecessary project delays. Specific information on the need for permits may be obtained from the Division of State Lands' office at 1445 State Street, Salem, OR 97310. Phone 378-3805.

Thank you for the opportunity to comment on this project.

Agency Lands By M. J. Stone



OREGON PROJECT NOTIFICATION AND REVIEW SYSTEM

STATE CLEARINGHOUSE

Intergovernmental Relations Division
240 Cottage Street S.E., Salem, Oregon 97310
Ph: 378-3732

PNRS STATE REVIEW

Project #: 7612 4 370

Return Date: 1-14-77

ENVIRONMENTAL IMPACT REVIEW PROCEDURES

1. A response is required to all notices requesting environmental review.
2. OMB A-95 (Revised) provides for a 30-day extension of time, if necessary. If you cannot respond by the above return date, please call the State Clearinghouse to arrange for an extension.

ENVIRONMENTAL IMPACT REVIEW DRAFT STATEMENT

- () This project does not have significant environmental impact.
- () The environmental impact is adequately described.
- ☒ We suggest that the following points be considered in the preparation of a Final Environmental Impact Statement regarding this project.
- () No comment.

REMARKS

See attached comments.

Agency

LCDC 1-12-77

By

John R. Gustafson

PROJECT # 7612 4 370

The Oregon Department of Land Conservation and Development has several comments and concerns relative to the Westside Trunk District DEIS. We remain very concerned that this proposed project be developed and implemented in accordance with the statewide planning goals. The Bear Creek Valley Sanitary Authority (BCVSA), as the sole grant applicant and lead agency, is bound by Oregon statutory authority (ORS 197.185) to plan in accordance with these goals. We are also concerned that this project be closely coordinated with the mutual establishment and adoption of an urban growth boundary for Central Point by both that city and Jackson County. As mentioned in the DEIS, both Jackson County and Central Point are currently revising their planning programs in order to comply with the statewide planning goals (ORS 197.175). In addition to the adoption of an urban growth boundary, all agricultural lands outside the adopted urban growth boundary must be protected from urban development. Therefore, it is critical that remaining agricultural lands not be threatened by further encroachment of urban sprawl. BCVSA will need to work closely with both the city and county to insure that project plans do not conflict with the revised comprehensive plans and ordinances which will incorporate the statewide planning goals. Essentially, we do not feel the DEIS goes far enough in addressing the statewide planning goals as a basis for project development and alternative consideration. The following points are of particular concern:

1. Page 17 - Population projections for the project area are based upon existing comprehensive plan and zone designations and densities. Revisions to city and county plans and ordinances in response to the statewide

planning goals could substantially alter or invalidate these estimates.

2. Page 18 - The statewide planning goal (No. 3 - Agriculture) should make it abundantly clear that all agricultural lands shall be preserved and maintained consistent with ORS Chapter 215 (EFU zone). Statements made in the DEIS that remaining large farm units in the area will remain economically stable, should their owners choose to continue farming, are inconsistent with the intent of this goal. Jackson County will soon be implementing EFU zoning protection to those remaining parcels in the project area that warrant it (i.e. all Class I-IV soils outside adopted urban growth boundaries). The LCDC goal exceptions procedure must be utilized by the county if identified agricultural lands cannot be protected by EFU zoning provisions.
3. Paragraph 101 (6) (4) of the National Environmental Policy Act (NEPA) establishes a federal policy to preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible an environment which supports diversity and variety of individual choice.

A recent memorandum from the Council on Environmental Quality (August 30, 1976) regarding analysis of impacts on prime and unique farmland in Environmental Impact Statements, states that the above policy should be understood to include highly productive farmlands. It further states that efforts should be made to assure

that such farmlands are not irreversibly converted to other uses. Accordingly, EDA has drafted a special condition for prime and unique agricultural lands. It will ensure that the grantee must provide evidence that the project will not have significant primary or secondary adverse impact on, not directly or indirectly cause any irretrievable conversion of prime or unique agricultural lands, as defined by SCS. This condition will soon be attached to any LPW project grant.

We feel that this project certainly may have potential for significant secondary adverse impacts which may directly or indirectly contribute to irretrievable conversion of prime agricultural lands. Therefore, this condition should be considered applicable and be applied in the final EIS. The DEIS does not presently include any specific discussion of adverse or beneficial impacts of alternatives on agricultural lands.

4. Pages 19-20 - Four of the twelve statewide planning goals are identified and listed as being applicable. It is also stated that these goals will be utilized in analyzing the alternatives. Unfortunately, this is never done.
5. Pages 35-36 - The section dealing with air quality is already based upon outdated information. Such statements as a) The existing air quality in the Medford area is not considered serious; and b) The most serious problems result from high levels of particulate matter, not

necessitating constraints on vehicular useage, are no longer valid given recent findings that gaseous emissions also exceed standards.

6. Page 57 - Neither the section on alternatives nor the subsections on mitigating measures even mention the possibility of alternatives to septic tanks and sewers. This is a very serious oversight because alternative sewerage disposal systems may eventually offer a viable solution to existing and future problems.

We look forward to consideration of our comments in the final EIS. It is essential that all affected agencies and citizens work together to meet pollution standards while retaining agricultural lands and overall liveability.

GG:cg
1/13/77

1804 Biederweyer Dr
Bedford, Ore 97502
Jan 6, 1977

Dr Roger Boehnick, EPA
1200 Sixth Ave
Seattle, Wash 98101

Sir:

Herewith is my statement which I request be made a matter of record and considered in connection with the Environmental Impact Statement concerning the Westside Trunk District, Jackson County, Ore.

I do not feel that the cost of construction of a trunk line south of Heall Road can be justified adequately to warrant the expenditure of Federal Funds.

I do not feel that the Bear Creek Valley Sanitation Authority should obligate themselves with bonds to cover this same portion of the proposed trunk line: that it will impose a hardship on the BCVSA economically, and to all their patrons.

I do not feel that this sewer should be rammed down the throats of those who do not need it or want it, and force them to take it to justify the Westside School situation. The School should take care of their own problems the same as any other school construction program. They could very easily buy a few acres of the farmland belonging to Homer Conger and relieve his problem, enlarge their drainfield and relieve their own problems.

The decomposed granite soil in this area percolates very rapidly. In my estimation it is an ideal soil for septic tank operation. We have a good slope to the northeast and wide open farm land in that direction.

The residents of this area are happy with the situation as it is and we are not contributing to anyones problems around us. If you can give me any evidence to the contrary I will be pleased to apologize for my error in statement.

I personally campaigned for establishment of BCVSA before it came up for vote. I still support it as an overall valley concept wherever sewerage is needed. I believe it is needed in the Heall Lane area. I would support its construction there, but I will exert effort to defeat the project if it is extended to this area where it is not justifiable.

An additional alternative must be included before it is brought to a vote if you expect the project to be accepted.

Respectfully,

Edwin C. Frost

Enc: Statement

RECEIVED

JAN 10 1977

EPA/RC

STATEMENT

TO WHOM IT MAY CONCERN:

I have lived for more than 11 years just one block from the center of the Niedermeyer Sub-division. I have heard many rumors concerning polluted wells in the subdivision prior to the time that I moved in to the area in 1965. I have never been able to substantiate any of those rumors on a first person basis. I had my own well tested on an annual basis for several years. Since it has never shown any evidence of pollution I have discontinued the tests. I have never had any problems concerning water, wells or septic tank during the 11 years.

My house well, which is 30+ feet deep, was adequate for watering the lawn until 1967. At that time, in order to expand my landscaping and to initiate a family vegetable garden, I dug a shallow irrigation well (14 ft deep) to the top of the dry hard-pan layer. This well has been adequate to water my entire yard and vegetable garden since that time. The two wells are approximately 60 feet apart.

It is my understanding that the dry hardpan layer underlies the entire subdivision and effectively seals surface water from the ground below. The soil above the hardpan is basically decomposed granite through which water percolates rapidly, while the ground below is relatively dry. The early water problems in the subdivision appear to have been caused by lack of understanding of the soil structure, by puncturing the hardpan strata, and by improper sealing off of well casings, etc. These problems appear to have been solved and I am not aware of any such problems existing in the area during the past 11 years. If any potential water problem exists I would expect it to be a lack of adequate water for household use. I believe that this possibility has been the limiting factor in population growth and development in the area, and that it would be aggravated by the construction of sewers. There are a considerable number of shallow irrigation wells in the subdivision. If all waste water were diverted to sewers these shallow wells would probably run dry by mid summer, creating an increased load on house wells. The water table in my shallow well drops to about one foot above the hardpan through August and September of each year.

I believe my situation and circumstances to be fairly representative and average for all residents of the subdivision. I personally believe that construction of a sewer to serve the subdivision to be entirely unnecessary and undesirable for the following reasons:

1. The current status of the subdivision does not require or indicate a need for sewers.
2. For the future, sewers would encourage further development and increased population in the subdivision and surrounding area. Current County Zoning and local popular opinion definitely stand against such a trend. The surrounding agricultural lands and our current way of life should be protected against further encroachment.
3. Sewers would eliminate the recycling of our waste water through shallow wells for irrigation purposes, thus eliminating vegetable gardens and reducing shrubbery and lawns.
4. Current population in the subdivision does not justify the cost of a sewer trunk from Beall Lane across open agricultural and forest service land. Very few other homes in the surrounding area and the hillside above Old Stage Road are close enough to the proposed trunk

line or to each other to warrant the construction of laterals or lines for individual service.

5. Westside School appears to be the only plausible reason for extending a sewer trunk south from Beall Lane. The Niedermeyer Sub-division would provide the only significant support insofar as additional connections are concerned. This small subdivision should not be expected to support the whole cause for Westside School.

6. The Beall Lane area, and northward, appears to be in real need of sewer service. There is adequate population to support it and Central Point desires to annex the area. That area should not be expected to support the costs for construction of the trunk to Westside School, which is outside their own school district.

7. Adequate sewage disposal for Westside School is of course to be desired. However, it can surely be provided more economically by some other means than constructing a trunk line from Beall Lane. Other sewage disposal systems are available and should be financed by the school district at large, not by a small subdivision or by the Beall Lane area.

8. The public meeting at Westside School on January 4 showed evidence of strong sentiment among individuals against the construction of a sewer in this area. When I asked the audience if anyone knew of any existing problems or requirements in the Niedermeyer Area, or if anyone desired sewerage in the area, there were no replies.

9. It is my understanding that assessment cost for sewerage for my lot on Niedermeyer Drive (app 150 x 150) would be approximately \$3000. Cost of installation from property line to house could cost another \$500. Monthly service charge is currently \$3.80 per family. This total direct cost prorated on monthly payments over 20 years at 7% interest on the descending balance due figures out at approximately \$27.00 per month. Increased assessed value of improvements on my home (the \$3500 above) would result in increased taxes of more than \$3.00 per month, bringing the total to more than \$30.00 per month. That means I would be paying a dollar a day for the next twenty years for something I don't need and don't want. All other residents of the subdivision would be subject to approximately the same costs since all lots are approximately the same size.

In view of the above I feel that I must exert all possible effort toward preventing the construction of the sewer trunk. At the same time I believe that the Beall Lane area should not be deprived of the sewer, if they so desire.

I consider that the planning at this point has been inadequate. It has not provided sufficient alternatives. An additional alternative should be provided and given adequate consideration before a decision is made. That alternative should be a trunk line which would terminate somewhere on Beall Lane.

Signed this 5th day of January, 1977

Edwin C. Frost
1804 Niedermeyer Dr
Bedford, Ore 97502

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

December 27, 1976

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

Dear Mr. Thiel:

This is in response to the Environmental Protection Agency's (EPA) request of November 12, 1976, for comments on the draft environmental statement (DES) for the Westside Trunk District wastewater system, Jackson County, Oregon. Pursuant to its responsibilities under Section 102(2)(C) of the National Environmental Policy Act of 1969, the Advisory Council has reviewed this DES and is unable to determine whether this document adequately demonstrates compliance with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f, as amended, 90 Stat. 1320), as implemented by the "Procedures for the Protection of Historic and Cultural Properties" (36 C.F.R. Part 800).

As the EPA's environmental staff is no doubt aware from previous correspondence on West Medford Trunk Project, the Council has expressed concern about the effect that the construction of public wastewater facilities in the vicinity of Jacksonville, Oregon would have on the rural setting of the Jacksonville Historic District, a National Historic Landmark and a property included in the National Register of Historic Places. The Historic District was designated a Landmark on the basis of its early history as a gold-mining and later an agricultural center which has retained much of its nineteenth century character. The implementation of such wastewater disposal service could result in the urbanization of the rural agricultural lands adjacent to the Jacksonville Historic District, causing a dramatic change in the historic setting. By letter of October 30, 1974, John Vlastelicia, Director, Oregon Operations Office, EPA, forwarded to the Council environmental documentation for the nearby West Medford Trunk Project in which the EPA clearly recognized this problem and proposed a conditioned grant to the Bear Creek Valley Sanitary Authority.

"By limiting the size of the interceptor, induced growth in the rural areas between Jacksonville and suburban Medford can be prevented. Frequently, interceptors that are constructed into

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DEC 29 1976
EPA-FIS

Page 2
December 27, 1976
Mr. Richard R. Thiel
Westside Trunk District

or through rural areas will induce land use changes (usually residential development) that are inconsistent with comprehensive plans as well as the present rural character of an area. By reducing the size of the interceptor, as in this case, such growth can be limited or prevented entirely."

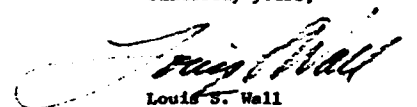
However, we were unable to find in the DES any evidence that such consideration has been given in the planning for the Westside Trunk District. Although not identified on the maps included in the DES, it would appear that the Jacksonville Historic District abuts the Westside Trunk District. Therefore, the Council requests additional information which will explain any effects the proposed undertaking might have on that National Register property.

It is noted on page 29 and again on page A-4 of the DES that EPA has determined that there will be no adverse effects on historic or archeological properties. Pursuant to Section 800.4 of the "Procedures for the Protection of Historic and Cultural Properties" such determinations are made in consultation with the State Historic Preservation Officer and appropriate supporting documentation forwarded to the Council for review.

Until the Council has received clarification as to the proposed undertaking's effect on the Jacksonville Historic District and adequate documentation supporting EPA's determination of no adverse effect, or been afforded an opportunity to comment pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, the Council considers the DES to be incomplete.

Should you have any questions or require any additional assistance, please contact Brit Allan Storey of the Council staff at P. O. Box 25085, Denver, Colorado 80225, telephone number (303) 234-4946.

Sincerely yours,


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

cc: Sheldon Meyers, Environmental Protection Agency

The Council is an independent unit of the Executive Branch of the Federal Government charged by the Act of October 15, 1966 to advise the President and Congress in the field of Historic Preservation.



Jackson County Oregon

COUNTY COURTHOUSE / MEDFORD, OREGON 97501

BOARD OF
COUNTY COMMISSIONERS
Commissioners Office 776-7231

RECEIVED
JAN 10 1977

January 6, 1976

OFFICE OF FEDERAL AFFAIRS

Donald P. Dubois,
Regional Administrator
U. S. Environmental Protection Agency
Seattle, Washington 98101

Re: Draft EIS Westside Trunk District
(EPA-10-OR-Jackson-BCVSA-INT-76)

Dear Mr. Dubois:

In response to your invitation for comment on this draft Environmental Impact statement we forward two statements. Principal study responsibility was given to the Department of Planning and Development, which presented a report brought to us on recommendation of the County Planning Commission. That statement is attached as Exhibit "A".

As a result of hearing testimony at your January 4 local meeting and deliberations of the Planning Commission, County Commissioner Carol Doty makes an additional statement which is summarized as Exhibit "B". The Board of Commissioners forwards both for response by the project applicant and your agency.

Until the project route is ultimately decided upon, we cannot give direct certification on compliance with the existing comprehensive plan. Please advise us as soon as you are prepared to announce an actual project route.

Yours sincerely,

JACKSON COUNTY BOARD OF COMMISSIONERS

Isabel H. Sickels
Isabel H. Sickels, Chairman

IHS:mj
Attachments

cc: Dick Miller, Manager
Bear Creek Valley Sanitary Authority

Dorothy Simpson, Chairman
Planning Commission

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Exhibit "A" to comment on Westside Trunk District

At face value, the project appears to comply with the stated Plan policies, and thus complies with the Comprehensive Plan with the exceptions noted below.

These are:

A) The projected infiltration rate of 200 g.p.d.p.c., could be used as a growth contingency factor, allowing for population growth to greatly exceed the intended Plan densities. This oversizing has not been substantiated within the Facilities Plan or Environmental Impact Statement.

B) Alternative 2B does, in fact, conflict with the agricultural concepts of the Comprehensive Plan, and therefore cannot be construed to comply with the Plan if it were the selected alternative. The other alternates may still have some lessor effect on agricultural lands.

C) The design population of 17,400 exceeds the Plan buildout population estimate of 4,000. The Central Point Growth Boundardy, if approved as proposed, would include an additional population of 9,000. Combined, the 13,000 population is still somewhat short of the design population. This assumes that Plan densities will be increased sometime after the 1985 planned date of the County Comprehensive Plan. While this would appear logical, it is also possible that density reductions could occur, thus the project would be over-designed. There is no evidence now to suggest that a reduction is likely, however.

D) Urban growth boundaries have not been approved, as yet, for Central Point. Changes in these boundaries and related densities could affect the ultimate sizing of the trunk line.

JACKSON COUNTY PLANNING COMMISSION

STAFF REPORT

Meeting Date: January 3, 1977

Subject: Review of Westside Trunk District Wastewater Facilities Plan and Draft Environmental Impact Statement

Proposed By: Bear Creek Valley Sanitary Authority

Review Intent: Recently accepted review policies identify procedure for evaluation of sewer projects. These procedures are being followed in this instance and require that the Planning Commission establish a position statement on the subject. This statement should focus on the proposed project's compliance or non-compliance with the Comprehensive Plan. This statement is then the basis for presentation to the E.P.A. sponsored public hearing scheduled January 4, 1977 at 7:30 p.m. at the Westside School. The Planning Commission, to satisfy E.P.A. requirements, must make a finding of compliance with the Comprehensive Plan.

Project Description: The proposed trunk sewer project is located west of Medford, and west and south of Central Point. The project lies within the Westside Trunk District which contains approximately 5,400 acres and approximately 2,000 residents. It lies entirely outside of any incorporated area. There is no public sewer in the area at the current time.

The proposed plan and environmental assessment reviewed four basic alternatives. These included 1) no action, 2) construction of a trunk sewer system, 3) phased construction, and 4) individual collection systems. Numbers 1, 3 and 4 were basically ruled out after consideration of effectiveness, cost, reliability and environmental soundness. The staff concurs that these alternatives are not practical and they will not be discussed in any greater detail herein. Two copies of the facilities plan are available in the Department office for Commission use, should further review be desired.

The proposed trunk line varies in size from 8" to 24" and connects to the existing Lower Bear Creek Interceptor (Exhibit I-1). Main and lateral sewer lines will eventually be constructed to provide service to residents after construction of the trunk line. Trunk line capacities are designed at 160 gallon per day per capita, plus 200 gallons per day per capita for infiltration. The design life of the system is 50 years.

Exhibits V-1, V-2, and V-3 define three alternate means of sewerage the district with a trunk sewer line.

Project No. 4: The Wastewater Plan and Environmental Assessment identifies the following conditions which support the need for the project:

- Approximately 2,000 people reside in the area.
- No public sewers exist. All wastewater is disposed of by septic tanks and drainfields.
- Soil suitability for septic tanks is poor in many sections of the district (see Exhibit III-2).
- High water table occurs in some areas.
- Jackson and Griffin Creeks have exceeded water quality criteria.
- Drainage ditches, irrigation ditches and standing water are being contaminated with septic tank effluent in some locations.

Westside Trunk Dist. Wastewater Facilities Plan
and Draft Environmental Impact Statement
January 3, 1977 Staff Report Page - 2

G) Tests of wells have shown evidence of groundwater contamination, especially in shallow wells.

H) Records indicate approximately 50% of all requests for septic tanks are denied due to unsuitability of soils and existence of a high water table.

Area Characteristics: The trunk district area is nearly equally divided into residential, agricultural and undeveloped land. Exhibit III-4 shows the concentration of residences. The easterly one-third area is primarily pasture, grain and grass seed production.

An estimated 604 dwellings exist within the district with an estimated 2,000 population. Based on current zoning of the area and the Plan map designations, the ultimate population is expected to be about 4,000 persons for the area lying outside of the Central Point Growth Boundary. Another 9,000 persons can be accommodated within that portion of the Central Point Growth Boundary lying within the trunk district. The 2026 design year population for the combined area is 14,400. This assumes the Comprehensive Plan projection period is shorter than the 50 year trunk district planning period. Comprehensive Plan designations are shown in Exhibits IV-2A and IV-2B.

Comprehensive Plan Compliance: The following Comprehensive Plan policies apply to the subject project:

EXTENSION OF PUBLIC SERVICES AND FACILITIES SHOULD BE COORDINATED WITH PLANNED URBAN EXPANSION.

A portion of the project area lies within the proposed Central Point Growth Boundary. Said area would be served by this project.

WASTE MANAGEMENT SERVICES AND FACILITIES ... INCLUDING SEWAGE, DRAINAGE AND REFUSE DISPOSAL SHOULD BE IMPROVED AND EXPANDED AS NECESSARY TO ACCOMMODATE THE NEEDS OF COUNTY INHABITANTS.

This project has been initiated in response to a petition from 1-0 property owners in the area.

SEWAGE SYSTEMS AND SOLID WASTE DISPOSAL SITES SHOULD BE LOCATED, DESIGNED, AND MAINTAINED IN A MANNER THAT WILL NOT DEGRADE ENVIRONMENTAL QUALITY.

The environmental assessment addresses issues and provides alternatives and mitigating measures to make the project compatible with the environment.

PROPOSED WATER AND SEWAGE FACILITIES SHALL BE IN CONFORMANCE WITH POLICIES SET FORTH IN THE LAND USE ELEMENT OF THE COMPREHENSIVE PLAN FOR JACKSON COUNTY.

The project is designed to mainly serve "suburban" and "rural residential" classifications. To this extent, and the extent that any properties are smaller than stated Plan densities, it is reasonable to conclude that the project is serving the intent of the land use element. Agriculture will generally not be affected by the project, especially if alternative 2A or 2C is followed. Alternative 2B, traversing through extensive agricultural land, would appear to be in conflict with stated agricultural policies of the Plan.

UNITED STATES DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

16th Floor, 1220 S. W. Third, Portland, Oregon 97204

January 7, 1977

Mr. Richard R. Thiel, P.E. Chief
Environmental Impact Section, M/S 443
U. S. Environmental Protection Agency
Region 10, 1200 6th Avenue
Seattle, Washington 98101

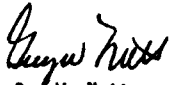
Draft Environmental Impact Statement, Westside Trunk District -
Jackson County, Oregon (EPA 910/9-76-032)

Dear Mr. Thiel:

We have reviewed your draft environmental impact statement for the
Westside Trunk District, Jackson County, Oregon and have no comments.

We appreciate the opportunity to review this draft.

Sincerely yours,



Guy W. Nutt
State Conservationist

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JAN 11 1977

EPA-510

cc:
Office of the Coordinator of
Environmental Activities, Washington, D.C.
Administrator, SCS, Washington, D.C.
Chairman, Council on Environmental Quality
Washington, D.C.



FOOTNOTES

- 1.) Oregon Department of Environmental Quality, Water Quality Management Plan for Rogue River Basin, February, 1976.
- 2.) Personal Communication, Local Agricultural Specialists, August, 1976.
- 3.) Oregon State Land Conservation & Development Commission, Statewide Planning Goals & Guidelines, January, 1975.
- 4.) Oregon State Land Conservation & Development Commission, Statewide Planning Goals & Guidelines, January, 1975.
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- 6.) Oregon State Land Conservation & Development Commission, Statewide Planning Goals & Guidelines, January, 1975.
- 7.) Personal Communication, Jackson County Sanitarions Office, August, 1976.
- 8.) Personal Communication, Jackson County Department of Public Works, August, 1976.
- 9.) Personal Communication, Bob Lee, Medford Water Commission, July, 1976.
- 10.) Personal Communication, Bob Lee, Medford Water Commission, July, 1976.
- 11.) Personal Communication, Dr. John Fagan, Archaeologist, U.S. Army Corps of Engineers, Portland District, July, 1976.
- 12.) Personal Communication, Oregon Department of Environmental Quality, July, 1976.
- 13.) Personal Communication, Steve Boedighiemer, Jackson County Health Department, August, 1976.
- 14.) Personal Communication, Jackson County Sanitarian's Office, Dave Maurer, July-August, 1976.
- 15.) Personal Communication, Oregon Department of Environmental Quality, September, 1976.
- 16.) Oregon State Land Conservation & Development Commision, Statewide Planning Goals & Guidelines, January, 1975.

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APPENDIX MATERIALS

APPENDIX A
ARCHAEOLOGICAL/HISTORICAL RESOURCES

ARCHAEOLOGICAL/HISTORICAL RESOURCES METHODOLOGY

Archaeological Resources

The archaeological resource inventory was conducted by Julia A. Follansbee, Archaeologist. Prior to conducting the archaeological survey of the proposed project, ethnographic and archaeological literature from the area was examined to determine which kinds of archaeological resources could be expected. The site survey files of the museum of Natural History at the University of Oregon were inspected to determine where previously located resources were in relation to the project area. Archaeologists who had done previous work in this area were contacted in order to determine where sites would most likely be encountered. In addition, local collectors and personnel in the Jacksonville Museum were interviewed for similar information during the field study.

The field work for the survey consisted of a walkover reconnaissance of each alternative of the proposed project in accordance with the specifications of Program Guidance Memo No. 52 of the Environmental Protection Agency. Since the area has been severely altered by residential and agricultural development, which may have destroyed existing surface sites, a particular effort was made to inspect areas which could provide clues as to the whereabouts of buried sites. These included areas along road cuts, ditch fills from canals and areas along deeply eroded creek banks (although the banks have also been altered for agricultural purposes).

Historical Resources

The historical resources survey was prepared by Robert Fink, Historian. Specific attention was given to an architectural survey of the project area, since a number of nineteenth century residences exist within the described area. A given structure's history was researched by contacting the county assessor's office and conducting interviews with local old times in the project area. A title search was prepared for the Aaron Chamber's house because of the structure's relative antiquity (1865) and its associated history.

Generally the method employed in this historical survey was to study the historical record of the area as provided by accepted texts and dissertations. Next, county records were researched along with older property maps. Local persons were interviewed, either in person or via the telephone, for their recollections of the area's historical development. Finally, several visits to the project area were made.

10000

OCT 6 1976

Mr. Edward Long
State Historic Preservation Office
Oregon State Highway Division
Highway Building
Salem, Oregon 97310

Re: BCVSA (Westside Trunk)
C-410527

Dear Mr. Long:

As part of the EPA's preparation of the draft environmental impact statement for the Bear Creek Valley Sanitary Authority (Westside Trunk District), an historical/archaeological survey of the area was conducted. The reports were prepared by Mr. Robert Fink and Ms. Julia Follansbee, respectively. Review of these reports indicates that the criteria of no adverse effect (36 CFR 600.9) applies to the historical features of the area if portions of the sewerage system are not constructed near the Aaron Chambers House and Peterson House. You may want to consider the Mr. Fink's recommendation of including the Aaron Chambers House on the National Register of Historic Places.

The criteria of no effect appears to apply to the archaeological features of the area. Ms. Follansbee's recommendation of notifying an archaeologist during construction can be handled by listing a professional archaeologist 'on call' in the contract specifications in the event the contractor encounters buried sites. Your comments on the report and above recommendations would be appreciated.

If you have any specific questions, please call me at 221-3250.

Sincerely yours,

William J. Sobolewski
Project Officer

cc: DEO
CHM-Hill, Corvallis
BCVSA

WJS:JH/VIK 11/5/76

A-4



Department of Transportation

PARKS AND RECREATION BRANCH

525 TRADE STREET S.E., SALEM, OREGON 97310

October 7, 1976

William J. Sobolewski
Project Officer
Environmental Protection Agency
1234 SW Morrison St.
Portland, OR 97205

Dear Mr. Sobolewski:

Our office has reviewed the historical survey and draft archeological survey prepared for the Westside Trunk District Facility Plan Environmental Impact Statement. In our opinion, the surveys were conducted in a highly professional manner and the areas of history, archeology and architecture were adequately addressed.

To protect the cultural features of the area, we suggest that the recommendations of the surveyors be followed. If the recommendations are followed, it is our opinion that the guidelines under the federal statutes dealing with cultural resources will be followed.

Thank you for the opportunity to comment.

Sincerely,

Paul B. Hartwig
Historical Programs Coordinator
State Historic Preservation Office

RS:ko

APPENDIX B
BIRD AND MAMMAL SPECIES

BIRD SPECIES

<u>Common Name</u>	<u>Scientific Name</u>	<u>Agricultural</u>	<u>Residential</u>	<u>Riparian</u>	<u>Woodland</u>
Turkey vulture	Cathartes aura	x		x	x
Cooper's hawk	Accipiter cooperi	x	x	x	x
Goshawk	Accipiter gentilis				x
Sharp-shinned hawk	Accipiter striatus	x		x	x
Marsh hawk	Circus cyaneus	x		x	
Rough-legged hawk	Buteo lagopus	x			
Red-tailed hawk	Buteo jamaicensis	x		x	
Swainson's hawk	Buteo swainsoni	x			
Ferruginous hawk	Buteo regalis	x			
Golden eagle	Aquila chrysaetos				x
American kestrel	Falco sparverius	x	x	x	
Blue grouse	Dendragapus obscurus			x	x
Ruffed grouse	Bonasa umbellus			x	x
California quail	Lophortyx californicus	x	x	x	x
Mountain quail	Oreortyx picta			x	x
Ring-necked pheasant	Phasianus colchicus	x	x		
Band-tailed pigeon	Columba fasciata			x	x
Rock dove (Dom. pigeon)	Columba livia	x	x	x	
Mourning dove	Zenaidura macroura	x	x		
Screech owl	Otus asio	x	x	x	x
Great horned owl	Bubo virginianus	x	x	x	x
Short-eared owl	Asio flammeus	x			
Barn owl	Tyto alba	x			
Saw-whet owl	Aegolius acadicus			x	x
Pygmy owl	Glaucidium gnoma			x	x
Common nighthawk	Chordeiles minor	x	x	x	x
Vaux's swift	Chaetura vauxi			x	x
Anna's hummingbird	Calypte anna		x	x	
Rufous hummingbird	Selasphorus rufus		x	x	
Allen's hummingbird	Selasphorus sasin		x	x	
Common flicker	Colaptes auratus	x	x	x	x
Acorn woodpecker	Melanerpes formicivorus	x	x	x	x
Lewis woodpecker	Asyndesmus lewis	x	x	x	x
Yellow bellied sapsucker	Shyrapicus varius	x	x	x	x
Williamson's sapsucker	Shyrapicus thyroideus				x
Hairy woodpecker	Dendrocopos villosus	x	x	x	x
Downy woodpecker	Dendrocopos pubescens	x	x	x	x
Pileated woodpecker	Dryocopus pileatus				x
Black phoebe	Sayornis nigricans			x	
Willow flycatcher	Empidonax traillii			x	
Western flycatcher	Empidonax difficilis			x	
Dusky flycatcher	Empidonax oberholseri			x	
Western wood pewee	Contopus sordidulus			x	
Flammulated owl	Otus flammeolus				x

Bird Species (Cont.)

<u>Common Name</u>	<u>Scientific Name</u>	<u>Agricultural</u>	<u>Residential</u>	<u>Riparian</u>	<u>Woodland</u>
Burrowing owl	Speotyto cunicularia	x			
Long-eared owl	Asio otus			x	x
Black-chinned hummingbird	Archilochus alexandri		x	x	
Calliope hummingbird	Stellula calliope				x
Black-backed three-toed woodpecker	Picoides arcticus				x
Northern three-toed woodpecker	Picoides tridactylus				x
Eastern kingbird	Tyrannus tyrannus	x	x	x	
Hammond's flycatcher	Empidonax hammondi				x
Olive-sided flycatcher	Nuttallornis borealis				x
Barn swallow	Hirundo rustica	x	x	x	
Cliff swallow	Petrochelidon pyrrhonota	x	x	x	
Violet-green swallow	Tachycineta thalassina	x	x	x	
Tree swallow	Iridoprocne bicolor			x	
Rough-winged swallow	Stelgidopteryx ruficollis			x	
Purple martin	Progne subis	x	x	x	
Steller's jay	Cynocitta stelleri	x	x	x	x
Scrub jay	Aphelocoma coerulescens	x	x	x	x
Black-billed magpie	Pica pica	x		x	
Common raven	Corvus corax				x
Common crow	Corvus branchyrhynchus	x	x	x	x
Black-capped chickadee	Parus atricapillus			x	x
Mountain chickadee	Parus gambeli			x	x
Chestnut-backed chickadee	Parus rufescens			x	x
Plain titmouse	Parus inornatus			x	x
Common bushtit	Psaltiriparus minimus			x	x
Clark's nutcracker	Nucifraga columbiana				x
White-breasted nuthatch	Sitta carolinensis			x	x
Red-breasted nuthatch	Sitta canadensis			x	x
Pygmy nuthatch	Sitta pyamaea			x	x
Brown creeper	Certhia familiaris			x	x
House wren	Troglodytes aedon	x	x	x	x
Winter wren	Troglodytes troglodytes	x	x	x	x
Bewick's wren	Thryomanes bewickii	x	x	x	x
Long-billed marsh wren	Telmatodytes palustris			x	
American robin	Turdus migratorius	x	x	x	x
Varied thrush	Ixoreus naevius	x	x	x	x
Wrentit	Chamaea fasciata	x	x	x	x
Canyon wren	Catherpes mexicanus				x
Rock wren	Salpinctes obsoletus				x
Mockingbird	Mimus polyglottos	x	x		x
Townsend's solitaire	Myadestes townsendi				x
Hermit thrush	Hylocichla guttata		x	x	x
Swainson's thrush	Hylocichla ustulata		x	x	x
Western bluebird	Sialia mexicana				x

Bird Species (Cont.)

<u>Common Name</u>	<u>Scientific Name</u>	<u>Agricultural</u>	<u>Residential</u>	<u>Riparian</u>	<u>Woodland</u>
Blue-gray gnatcatcher	Polioptila caerulea				x
Golden-crowned kinglet	Regulus satrapa			x	x
Ruby-crowned kinglet	Regulus calendula			x	x
White-headed woodpecker	Dendrocopos albolarvatus*				x
Cedar waxwing	Bombycilla cedrorum	x	x	x	
Northern shrike	Lanius excubitor			x	
Loggerhead shrike	Lanius ludovicianus			x	
Starling	Sturnus vulgaris	x	x	x	x
Solitary vireo	Vireo solitarius			x	
Warbling vireo	Vireo gilvus			x	
Orange-crowned warbler	Vermivora celata			x	x
Nashville warbler	Vermivora ruficapilla			x	x
Yellow warbler	Dendroica petechia		x	x	
Yellow-rumped warbler	Dendroica auduboni		x	x	x
Townsend's warbler	Dendroica townsendi			x	x
Black-throated gray warbler	Dendroica nigrescens			x	x
Common yellow throat	Geothlypis trichas		x	x	x
Yellow-breasted chat	Icteria virens		x	x	
MacGillivray's warbler	Oporornis tolmiei			x	x
Hutton's vireo	Vireo huttoni				x
Wilson's warbler	Wilsonia pusilla		x	x	
House sparrow	Passer domesticus	x	x	x	x
Western meadowlark	Sturnella neglecta	x	x	x	
Redwinged blackbird	Agelaius phoeniceus	x	x	x	
Tri-colored blackbird	Agelaius tricolor	x	x	x	
Brewer's blackbird	Euphagus cyanocephalus	x	x	x	
Brown-headed cowbird	Molothrus ater	x	x	x	x
Northern oriole	Icterus bullockii	x		x	x
Western tanager	Piranga ludoviciana	x	x	x	x
Black-headed grosbeak	Pheucticus melanocephalus	x	x	x	x
Luzuli bunting	Passerina amoena			x	
Purple finch	Carpodacus purpureus	x	x	x	
Cassin's finch	Carpodacus cassinii			x	
House finch	Carpodacus mexicanus	x	x	x	
Pine siskin	Spinus pinus			x	x
American goldfinch	Spinus tristis	x	x	x	
Lesser goldfinch	Spinus psaltria	x	x	x	
Rufous-sided towhee	Pipilo erythrophthalmus	x	x	x	x
Savannah sparrow	Passerculus sandwichensis	x		x	
Lark sparrow	Chondestes grammacus			x	
Dark-eyed junco	Junco oreganus	x	x	x	x
Chipping sparrow	Spizella passerina	x	x	x	
Harris sparrow	Zonotrichia querula			x	
White-crowned sparrow	Zonotrichia leucophrys	x	x	x	
Golden-crowned sparrow	Zonotrichia atricapilla			x	
Yellow-headed blackbird	Xanthocephalus xanthocephalus	x		x	

Bird Species (Cont.)

<u>Common Name</u>	<u>Scientific Name</u>	Agricultural	Residential	Riparian	Woodland
Evening grosbeak	Hesperiphona vespertina				x
White-throated sparrow	Zonotrichia albicollis	x	x	x	
Fox sparrow	Passerella iliaca	x		x	x
Lincoln's sparrow	Melospiza lincolnii	x		x	x
Song sparrow	Melospiza melodia	x	x	x	x

MAMMAL SPECIES

<u>Common Name</u>	<u>Scientific Name</u>	<u>Agricultural</u>	<u>Residential</u>	<u>Riparian</u>	<u>Woodland</u>
Opposom	Didelphis marsupialis	x	x	x	x
Trowbridge's shrew	Sorex trowbridgii				x
Ashland shrew	S. triginirostris*				x
Pacific shrew	S. pacificus			x	x
Wandering shrew	S. vagrans			x	
Dusky shrew	S. obscurus			x	x
Shrew mole	Neurotrichus gibbsii			x	x
Broad-footed mole	Scapanus latimanus	x			x
Townsend's mole	S. townsendii	x			x
Coast mole	S. orarius	x			x
Pallid bat	Antrozous pallidus	x	x	x	x
Townsend's big-eared bat	Plecotus townsendi	x	x	x	x
Silver haired bat	Lasionyctris noctiuagans	x	x		x
Hairy bat	Laziurus cinereus				x
Big brown bat	Eptesicus fuscus	x	x	x	x
Fringed myotis	Myotis thysanodes	x	x	x	x
Long-eared myotis	M. evotus	x	x	x	x
Long-legged myotis	M. volans	x	x	x	x
California myotis	M. californicus	x	x	x	x
Small-footed myotis	M. leibii	x	x	x	x
Red bat	Laziurus borealis	x	x	x	x
Yuma myotis	Myotis yumanensis	x	x		
Little brown myotis	M. lucifugus	x	x	x	x
Mexican free-tailed bat	Tadarida brasiliensis*	x	x	x	x
Brush rabbit	Sylvilagus bachmani	x	x	x	x
Snowshoe hare	Lepus americanus				x
Blacktail hare	Lepus californicus	x			
Mountain beaver	Aplodontia rufa			x	x
Yellow-pine chipmunk	Eutamias amconus			x	x
Townsend's chipmunk	E. townsendii			x	x
Yellow-bellied marmot	Marmota flaviventris	x		x	
Calif. Beechy Ground squirrel	Spermophilus beecheyi	x	x	x	x
Golden-mantled ground squirrel	Spermophilus buteralis			x	x
Western gray squirrel	Sciurus griseus	x	x	x	x
Douglas' squirrel	Tamiasciurus douglasii			x	x
Northern flying squirrel	Glaucomys salerinus			x	x
Botta pocket gopher	Thomomys bottae	x	x	x	x

<u>Common Name</u>	<u>Scientific Name</u>	<u>Agricultural</u>	<u>Residential</u>	<u>Riparian</u>	<u>Woodland</u>
Mazama western pocket gopher	Thomomys mazama	x	x	x	x
Harvest mouse	Reithrodontomys megalotis	x			
Deer mouse	Peromyscus maniculatus	x	x	x	x
Dusky-footed woodrat	Neotoma fucipes			x	x
Bushy-tailed woodrat	Neotoma cinerea		x	x	x
California red-backed vole	Clethrionomys californicus				x
Montana vole	Microtus montanus	x			
California meadow vole	Microtus californicus		x	x	
Townsend's vole	Microtus townsendii		x	x	
Long-tailed vole	Microtus longicaudus		x	x	
Richardson's vole	Microtus richardsoni		x	x	
Oregon vole	Microtus oregon			x	x
Northern pocket gopher	Thomomys talpoides				x
Norway rat	Rattus norvegicus	x	x	x	
Black rat	Rattus rattus	x	x	x	
House mouse	Mus musculus		x		
Western jumping mouse	Zapus princeps				x
Pacific jumping mouse	Zapus trinotatus				x
Porcupine	Erethizon dorsatum				x
Red fox	Vulpes fulva*	x			
Gray fox	Urocyon cinereoargenteus				x
Coyote	Canis latrans	x		x	x
Black bear	Ursus americanus			x	x
Raccoon	Procyon lotor	x	x	x	x
Ringtail	Bassariscus astutus*			x	x
Marten	Martes americana*				x
Fisher	Martes pennanti*				x
Long-tailed weasel	Mustela frenata	x		x	x
Short-tailed weasel	Mustela erminea	x		x	x
Badger	Taxidea taxus	x			
Striped skunk	Mephitis mephitis	x	x	x	x
Spotted skunk	Spilogale putoris			x	x
Mountain lion	Felis concolor				x
Bobcat	Lynx rufus			x	x
Black-tailed deer	Odocoileus hemionus columbianus			x	x
<u>REPTILES</u>					
Western fence lizard	Sceloporus occidentalis	x	x		x
Sagebrush lizard	Sceloporus graciosus				
Southern alligator lizard	Gerrhonotus multicarinatus	x	x	x	x
Northern alligator lizard	Gerrhonotus coeruleus	x	x	x	x
Western skink	Eumeces skiltonianus	x	x	x	x
Rubber snake	Charina bottae			x	x
Common garter snake	Thamnophis sirtalis	x	x	x	x
Ring-necked snake	Diadophis punctatus			x	x
Sharp-tailed snake	Contia tennis*			x	
Racer	Coluber constrictor	x	x	x	x
Gopher snake	Pituophis melanoleucus	x	x	x	x
Western rattlesnake	Crotalus biridus			x	x

Reptiles (Cont.)

<u>Common Name</u>	<u>Scientific Name</u>	Agricultural	Residential	Riparian	Woodland
Western pond turtle	Clemmings marmorata	x			

AMPHIBIANS

Western toad	Bufo boreas	x	x	x	x
Pacific tree frog	Hyla resilla	x	x	x	x
Foothill yellow-legged frog	Rana boylei			x	
Red-legged frog	Rana aurora			x	
Bullfrog	Rana catesbeiana			x	
Long-toed salamander	Ambystoma macrodactylum	x	x	x	x
Northwestern salamander	Ambystoma gracile			x	x
Pacific giant salamander	Dicamptodon ensatus			x	x
Rough-skinned newt	Taricha granulosa	x	x	x	x
Del Norte salamander	Plethodon elongatus			x	x
Black salamander	Aneides flavipunctatus*	x	x	x	x
Siskiyou mountain salamander	Plethodon stormi*			x	x
Clouded salamander	Anneides ferreus			x	x
Tailed frog	Ascaphus truei*			x	
Cascades frog	Rana cascadae		x		
Spotted frog	Rana pretiosa (threatened)		x		

APPENDIX C

BEAR CREEK VALLEY SANITARY AUTHORITY

FINANCING & ASSESSMENT METHODS

BEAR CREEK VALLEY SANITARY AUTHORITY

EXAMPLE - SANITARY SEWER PROJECT ASSESSMENTS

COST BASIS: PROJECTED AVERAGE COST OF PROJECTS TO JUNE 1977

Assessment Rates:

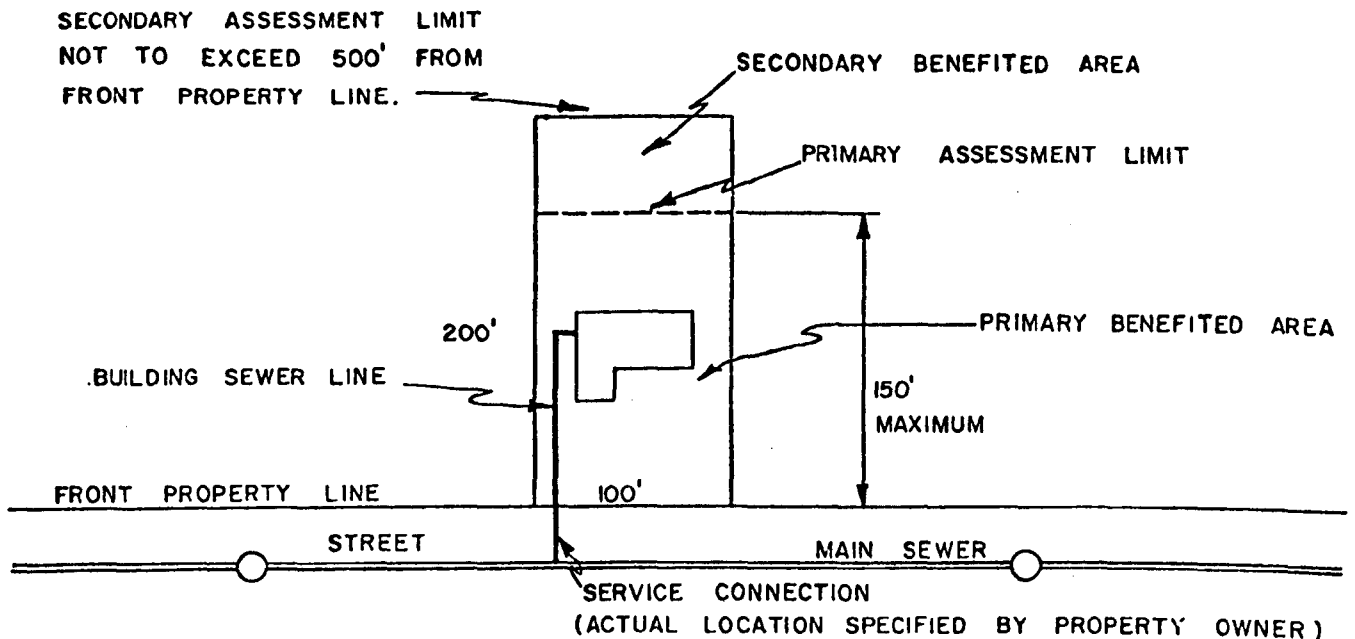
1. Primary Benefited Area = 10.0¢ per square foot
2. Secondary Benefited Area = 0.1¢ per square foot
3. Trunk Development Area = 1.5¢ per square foot
4. Service Connection = \$375 per service connection

Service Connections will be installed from the main sewer in the right-of-way to the approximate easement or front property line of the property served.

Building sewer lines are not included as part of the sewer assessment and are to be installed by the property owner.

A Sewer Connection Permit is required before installation of the building sewer line. The permit fee is \$20 which includes processing of the permit and on-site inspection of the line by BCVSA personnel.

The sewer service charge for residential use is \$3.80 per month.

Case I - Typical Residential Lot (Approximately 1/2 Acre)

SEWER ASSESSMENT

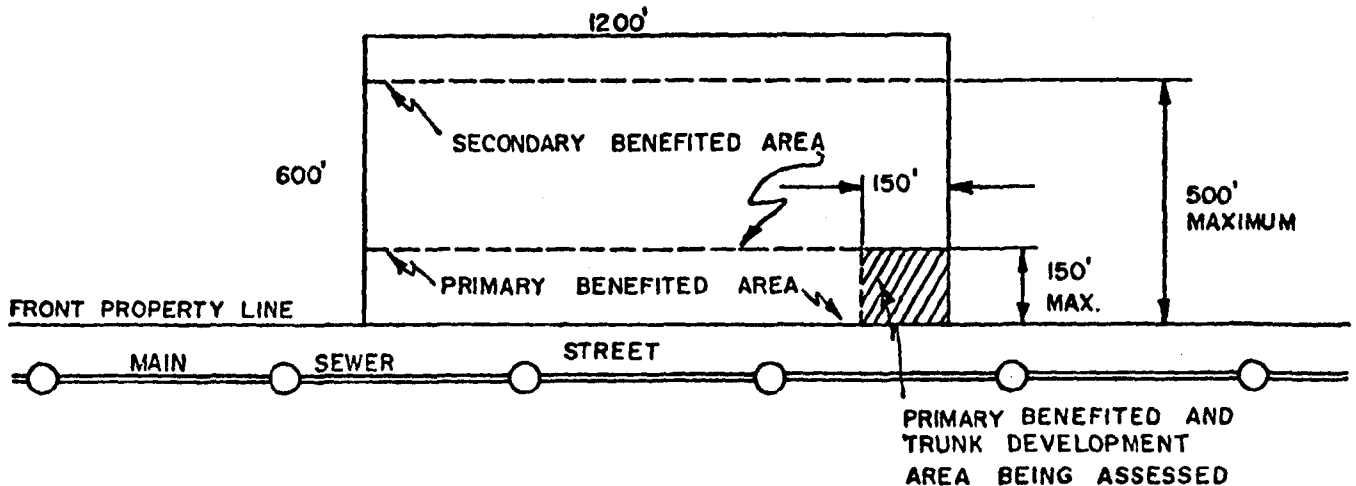
		-----ASSESSMENT-----		
		QUANTITY	RATE	AMOUNT
1. Primary Benefited Area	150 x 100 = 15,000 Sq.Ft.		\$0.10	\$1,500.00
2. Secondary Benefited Area	50 x 100 = 5,000 Sq.Ft.		0.001	5.00
3. Trunk Development Area	150 x 100 = 15,000 Sq.Ft.		0.015	225.00
4. Service Connection	1 Connect		\$375	375.00
TOTAL SEWER ASSESSMENT				<u>\$2,105.00</u>

Installment Payment Options:

- 240 equal monthly installments of \$16.32.
Interest at 7% on the unpaid balance.
Total interest charges in 20 years \$1,811.80.
- 40 semi-annual decreasing installments at 7% on unpaid balance.
First payment \$126.31. Last Payment \$54.27.
Total interest charges in 20 years \$1,510.48.

Case II - Large Undeveloped Acreage (Approximately 16½ Acres)

Property does not meet the zoning criteria for exclusive farm or F-5 zones as defined by Jackson County Zoning Ordinances and Oregon State Law.



In this case, all of the primary area with the exception of 22,500 square feet will be deferred of primary benefit assessment until the property is more fully developed. The area deferred is assessed for secondary benefit.

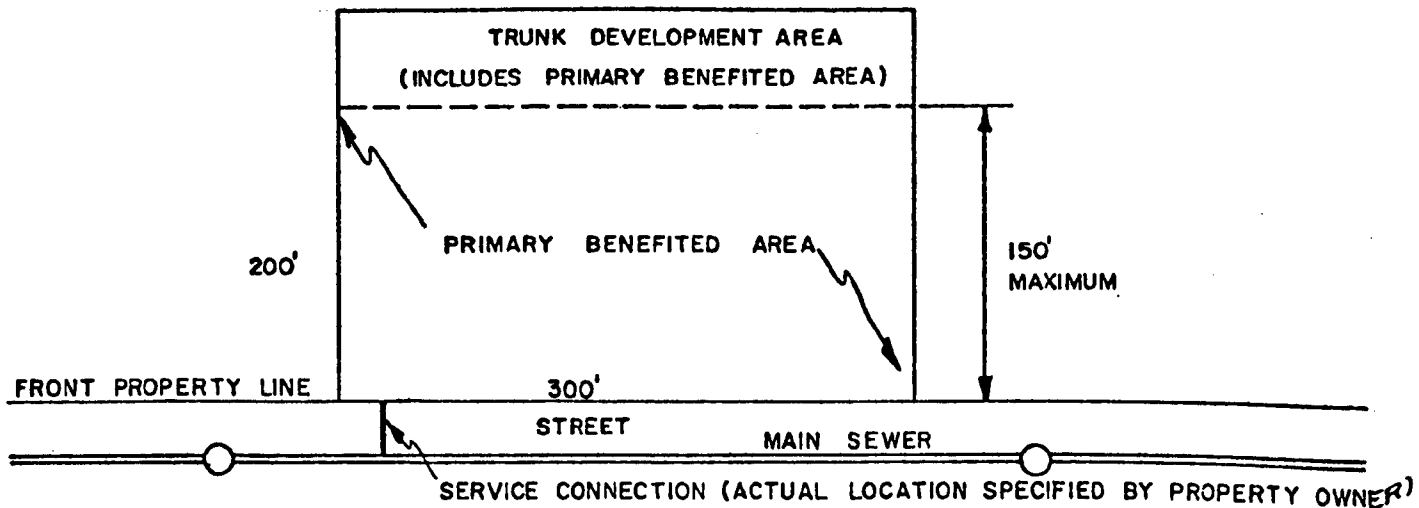
SEWER ASSESSMENT

		-----ASSESSMENT-----		
		QUANTITY	RATE	AMOUNT
1. Primary Benefited Area	150 x 150 =	22,500 Sq.Ft.	\$0.10	\$2,250.00
2. Secondary Benefited Area	350 x 1200 = 420,000			
	150 x 1050 = 157,500			
	577,500	Sq.Ft.	0.001	577.50
3. Trunk Development Area	150 x 150 =	22,500 Sq.Ft.	0.015	337.50
4. Service Connection		-	-	-
				<u>\$3,165.00</u>

Installment Payment Options:

- 240 equal monthly installments of \$24.54.
Interest at 7% on the unpaid balance.
Total interest charges in 20 years \$2,724.60.
- 40 semi-annual decreasing installments at 7% on unpaid balance.
First payment \$189.91. Last payment \$81.69.
Total interest charges in 20 years \$2,270.75.

Case III - Commercial; Industrial; Planned Unit Residential;
 Multiple Dwellings, Schools, Churches, and Hospitals (Approximately 1 1/3 Acres)



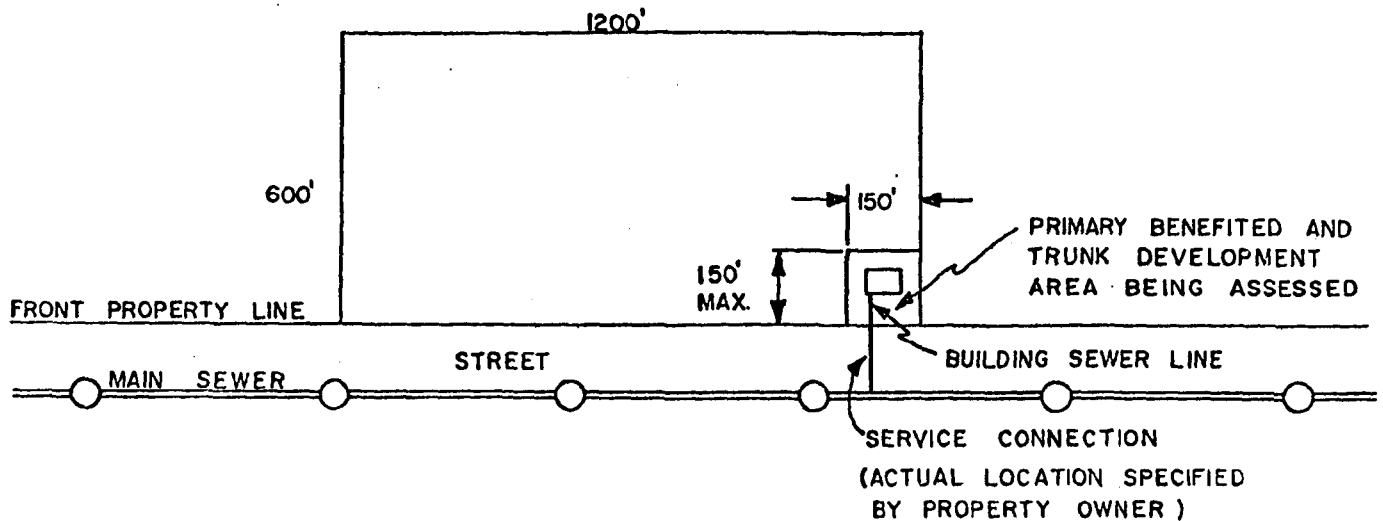
SEWER ASSESSMENT

		-----ASSESSMENT-----		
		QUANTITY	RATE	AMOUNT
1. Primary Benefited Area	150 x 300 =	45,000 Sq.Ft.	\$0.10	\$4,500.00
2. Trunk Development Area	200 x 300 =	60,000 Sq.Ft.	0.015	900.00
3. Service Connection		1 Connect	\$375	375.00
TOTAL SEWER ASSESSMENT				<u>\$5,775.00</u>

Installment Payment Options:

- 240 equal monthly installments of \$44.77.
 Interest at 7% on the unpaid balance.
 Total interest charges in 20 years \$4,969.80.
- 40 semi-annual decreasing installments at 7% on the unpaid balance.
 First payment \$346.51. Last payment \$149.23.
 Total interest charges in 20 years \$4,143.56.

Case IV - Property meets zoning criteria for exclusive farm or F-5 zones as defined by Jackson County Zoning Ordinances and Oregon State Law.



In this case, if a dwelling does not exist on the property the Authority shall defer assessing any portion of the property.

SEWER ASSESSMENT

		-----ASSESSMENT-----		
		QUANTITY	RATE	AMOUNT
1. Primary Benefited Area	150 x 150 =	22,500 Sq.Ft.	\$0.10	\$2,250.00
2. Secondary Benefited Area		-	-	-
3. Trunk Development Area	150 x 150 =	22,500 Sq.Ft.	0.015	337.50
4. Service Connection		1 Connect	\$375	375.00
TOTAL SEWER ASSESSMENT				<u>\$2,962.50</u>

Installment Payment Options:

- 240 equal monthly installments of \$22.97.
Interest at 7% on the unpaid balance.
Total interest charges in 20 years \$2,550.30.
- 40 semi-annual decreasing installments at 7% on the unpaid balance.
First payment \$177.75. Last payment \$76.76.
Total interest charges in 20 years \$2,125.66.

BEAR CREEK VALLEY SANITARY AUTHORITY
JACKSON COUNTY, OREGON

ORDINANCE NO. 73-8 AS AMENDED

AN ORDINANCE ESTABLISHING SERVICE CLASSIFICATIONS SCHEDULES, RATE SCHEDULES, PROVIDING FOR PROCEDURES TO DETERMINE SEWER SERVICE CHARGES, PROVIDING FOR TEMPORARY SERVICE AND ESTABLISHING PROCEDURES AND PENALTIES FOR DELINQUENT ACCOUNTS.

SECTION 1. MONTHLY SEWER SERVICE CHARGES. All sewer users within the Bear Creek Valley Sanitary Authority shall pay a monthly sewer service charge to the Authority in accordance with the service classifications and rate schedules determined by the Regional Rate Committee and Board of Directors of the Bear Creek Valley Sanitary Authority as in this Ordinance established.

SECTION 2. SERVICE CLASSIFICATIONS.

- A. Residential: Rate Schedule A shall apply to each dwelling having one or two dwelling units, two single family dwellings with one ownership on one building site and all dwelling units regardless of their grouping or number which receive separate billing for sewer service charges.
- B. Mobile Home Parks and Planned Unit Residential: Rate Schedule B shall apply to dwelling units situated within any area or tract of land having a sewer connection and where sewerage collection pipes are extended to two or more planned dwelling units; or spaces occupied or designated, offered or made available for occupancy by mobile homes, travel trailers or motor homes. Mobile homes, travel trailers and motor homes are defined as vehicles with or without motive power which are designed, used or intended for use as a place of human habitation, or as eating, sleeping or living quarters or any combination thereof.

A space is defined as the individual location having a sewer hook up for each such vehicle. Monthly sewer service charges for the development will be incorporated in one billing directed to the manager or other person, partnership or corporation responsible for the management and operation of the entire development.

- C. Multiple Dwellings: Rate Schedule C shall apply to apartment houses, multiple family dwellings, motels providing permanent and semi-permanent housing, and all other multiple dwellings not included under other residential classifications.
- D. Commercial, Hospitals, Churches and Schools: Rate Schedule D shall apply to all sewer users not included in the "residential" classification, the "mobile home parks and planned unit residential" classification, the "multiple dwelling" classification, "industrial" classification or "recreational vehicle waste-dumping station" classification.
- E. Industrial: Rate Schedule E shall apply to all establishments classified as industrial users in accordance with Ordinance No. 4 of the Bear Creek Valley Sanitary Authority.
- F. Recreational Vehicle Waste-Dumping Station: Rate Schedule F shall apply to all establishments which are connected with the sewage collection system and accept liquid waste dumped from holding tanks of recreational vehicles such as travel trailers, motor homes and campers, where such wastes pass into the collection system of the Sanitary Authority, regardless of whether the wastes are accepted by the operator of the waste-dumping station with or without charge.

Section 3. RATE SCHEDULES.

A. Schedule A:

- (1) Monthly Rate: \$3.80 per dwelling unit.

B. Schedule B: A total of the following per month:

- (1) A base charge of \$2.50 per dwelling unit or occupied mobile home space.
- (2) A base charge of \$0.72 per developed and unoccupied mobile home space.
- (3) Gallonage: \$0.20 per 1,000 gallons of water delivered to the premises as determined in Section 5 of this Ordinance.

C. Schedule C: A total of the following per month:

- (1) A base charge of \$2.50 per dwelling unit.
- (2) Gallonage: \$0.20 per 1,000 gallons of water delivered to the premises as determined in Section 5 of this Ordinance.

D. Schedule D: A total of the following per month:

- (1) A base charge of \$2.50.
- (2) Gallonage: \$0.20 per 1,000 gallons of water delivered to the premises as determined in Section 5 of this Ordinance.

E. Schedule E: A total of the following per month:

- (1) A base charge of \$2.50.
- (2) Gallonage: \$0.20 per 1,000 gallons of water delivered to the premises as determined in Section 5 of this Ordinance.
- (3) Extra strength charge: \$0.10 per 300 ppm of Biological Oxygen Demand as defined in Ordinance No. 4 of the Bear Creek Valley Sanitary Authority, or fraction thereof, in excess of the first 300 ppm of Biological Oxygen Demand, per 1,000 gallons of water delivered to the premises.

For the purpose of this schedule, determination of the amount of Biological Oxygen Demand shall be made by the Regional Rate Committee for such purpose; but if no such agency is designated or if it fails or refuses to make a determination, then the said determination shall be made by the Manager of the Bear Creek Valley Sanitary. Determination of the amount of Biological Oxygen Demand shall be determined for the month during which industrial processes occur at a maximum level. Said determination shall be made on an annual basis unless otherwise directed by the Regional Rate Committee or the Manager of the Bear Creek Valley Sanitary Authority.

- F. Schedule F: A total of \$9.00 per month per each dumping facility in addition to other sewer charges as may be applicable in the above schedules for commercial or industrial sewer service to the location.

SECTION 4. MINIMUM MONTHLY CHARGE: The minimum monthly charge for each user classified under Schedules B, C, D, and E shall be not less than the Schedule A monthly rate.

SECTION 5. DETERMINATION OF QUANTITIES FOR ESTABLISHING GALLONAGE RATES:

- A. Schedules B, C and D Accounts: The quantity of water delivered to premises is defined as the average monthly water consumption as metered during the months of December, January and February, which immediately precede the 12-month period being billed; provided, however, that in the case of schools, churches and hospitals, water delivered is defined for the purpose of Schedule B accounts as that water consumption averaged for the months of January and February immediately preceding the 12-month period being billed. The average water consumption as in this section established shall be revised during the following 12-

month period if the type or scope of development changes during said period. Such revision shall be determined by the Manager in proportion to the degree of property development change.

- B. Schedule E Accounts: The quantity of water delivered to the premises is defined as the actual monthly water consumption as metered monthly. In the event that water consumption metering is not feasible, the quantity of water delivered shall be estimated by the Manager of the Bear Creek Valley Sanitary Authority.

SECTION 6. TEMPORARY SERVICE. If application for service is made with an expected duration of said service of less than 90 days, standard connection permit procedures and fees will apply together with the rate schedules in this Ordinance provided. In addition, a temporary service fee in the amount of \$9.00 shall be charged for each 90-day period or part thereof of such temporary service.

SECTION 7. UNCOLLECTIBLE AND DELINQUENT ACCOUNTS. The owner of property served by the public sewer of the Bear Creek Valley Sanitary Authority shall be responsible for all sewer service charges incurred therefor. Sewer service charges together with unpaid fees and charges levied in accordance with this Ordinance and Ordinance No. 4 of the Bear Creek Valley Sanitary Authority may be collected in accordance with Section 16-04 of said Ordinance No. 4. In addition, the Manager of the Bear Creek Valley Sanitary Authority is authorized to make such collections in accordance with Oregon Revised Statutes 450.880 by certifying said unpaid amounts to the Jackson County Assessor for collection on the tax rolls. Certification shall be made for all unpaid accounts when any portion of the amount becomes 90 days or more in arrears. A penalty of \$10.00 or 10 percent of the unpaid account may be added to the unpaid sewer service charge when any portion thereof becomes delinquent 90 or more days and shall be added to the account and included to the amount

certified to the Jackson County Assessor pursuant to
Oregon Revised Statutes 450.880.

DATED: July 21, 1976.

BEAR CREEK VALLEY SANITARY AUTHORITY


Robert Dunn, Chairman
Board of Directors

ATTEST:


Richard O. Miller, Manager

Ordinance No. 73-8, November 21, 1973
First Revision, Ordinance No. 74-1, January 16, 1974
Second Revision, Ordinance No. 76-4, July 21, 1976