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ENVIRONMENTAL ASSESSMENT MANUAL

SPECIAL REPORT 465

**ENVIRONMENTAL
IMPACT
ASSESSMENT
PROJECT**

Oregon State University Extension Service

ENVIRONMENTAL ASSESSMENT MANUAL
(To Be Used With Environmental Assessment Form)

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ENVIRONMENTAL IMPACT ASSESSMENT PROJECT

September 1976

as part of

"ENVIRONMENTAL IMPACT ASSESSMENT:
A FRAMEWORK FOR LOCAL PARTICIPATION AND DECISION MAKING"

OREGON STATE UNIVERSITY EXTENSION SERVICE

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ACKNOWLEDGEMENTS

The Environmental Assessment Manual and Form has a long period of development beginning with work related to implementation of the Massachusetts mini-NEPA law (M.G.L. Ch. 30 61 & 62 as amended). The form and manual have arrived in their present form after testing in a number of environmental assessment projects, for which we owe thanks to all the participants.

Thanks go to those who gave valuable detailed criticism including: J. Herbert Huddleston, Extension Soils Specialist, O.S.U., Corvallis; Barbara C. Farhar, Human Ecology Research Services, Boulder, Colorado; Stephen B. Moore, Natural Resource Planning Specialist, Corps of Engineers, Portland, Oregon; and Hal Kibby, Environmental Protection Agency, Corvallis, Oregon. Owen J. Furusest, Graduate Research Assistant, provided valuable help in our final mark-up sessions.

Special appreciation should of course go to our typists who struggled through a multitude of revisions and changes. Janet Brown was our chief secretary who did most of the typing. She was aided at different times by Luanne Beller and Judy Niesslein.

Richard C. Smardon
Environmental Impact Assessment Specialist

This study was supported by a grant from the U.S. Department of Agriculture, Extension Service, Special Projects Program.

PREFACE

This manual is one of several reports prepared by the Environmental Impact Assessment Project, Oregon State University Extension Service.

This manual is part of a study entitled "Environmental Impact Assessment: A Framework for Local Decision Making" funded by the U.S. Department of Agriculture, Extension Service, Washington, D.C.

The objectives of the study are:

1. To improve the quality of environmental impact statement content;
2. To coordinate and streamline the environmental impact statement process;
3. To assist local communities, counties, and state agencies to comply with the letter and intent of environmental legislation; and
4. To contribute toward integrating impact assessment with land use planning goals.

The overall study is under the direction of Dr. James R. Pease, project director and Land Resource Management Specialist, OSU Extension Service.

This manual was written by Richard C. Smardon, the Environmental Impact Specialist for the project, James R. Pease, and Paul Donheffner, Graduate Research Assistant.

CONTENTS

ACKNOWLEDGEMENTS. ii

PREFACE iii

INTRODUCTION. 1

I. SUMMARY 2

 ACTIVITY IDENTIFICATION 2

 ACTIVITY DESCRIPTION SUMMARY. 2

II. ACTIVITY DESCRIPTION. 3

 MAPS. 3

 DESCRIPTION OF PRESENT LAND USE 3

 ACTIVITY DIMENSIONS 5

 DESCRIPTION OF PROPOSED ACTIVITY. 5

 DESCRIPTION OF AGENCY INVOLVEMENT 9

III. ASSESSMENT OF POTENTIAL ENVIRONMENTAL IMPACT. 9

 (INSTRUCTIONS FOR USING THE MANUAL)

 NATURAL BIOLOGICAL ENVIRONMENT. 16

 ENVIRONMENTAL HAZARDS 18

 RESOURCE CONSERVATION AND USE 20

 WATER QUALITY AND QUANTITY. 22

 AIR QUALITY/ATMOSPHERIC ENVIRONMENT 24

 NOISE/SONIC ENVIRONMENT 24

 COMMUNITY FACILITIES/SERVICES 26

 COMMUNITY STRUCTURE 28

 OPEN SPACE AND RECREATION 30

 HISTORIC RESOURCES. 32

 VISUAL RESOURCES. 34

 ECONOMIC ENVIRONMENT. 36

 PLANNING COORDINATION AND GROWTH. 38

IV. ALTERNATIVES 38

V. ADVERSE ENVIRONMENTAL EFFECTS 39

VI. SHORT TERM USES VS. LONG TERM PRODUCTIVITY. 39

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS 40

VIII. POLICIES AND STANDARDS. 40

IX. SUMMARY OF IMPACTS. 41

APPENDIX A - RESOURCE LISTS AND CODES A-1

APPENDIX B - ENVIRONMENTAL ASSESSMENT FORM. B-1

INTRODUCTION

This manual is designed to assist agency personnel, private citizens, Extension Service personnel, and others in properly filling out the Environmental Assessment Form (EAF). The organization of the manual follows the sections of the EAF, explaining section by section and question by question how to complete the form. Included for each section of the EAF are definitions of critical terms, and lists of sources and agencies for further information. Lists and code numbers for answering questions may be found in Appendix A. Some of the questions contained in the assessment form may be beyond the capabilities of local governmental agencies without outside input. If one does have a problem answering any of the questions contained in the Environmental Assessment Form, please utilize the information sources provided in the Manual for that particular topic or question.

ENVIRONMENTAL ASSESSMENT FORM

I. SUMMARY

The first page of the EAF summarizes the description of the project. It is important that this summary page be complete and accurate.

A. ACTIVITY IDENTIFICATION

1. Sponsoring agency - Put in the official name of the agency that is sponsoring the project
2. Title of proposed activity or program - Give the full descriptive title of the proposed action.
3. NEPA status - If YES, specify which Federal agency (ies) is/are involved and whether or not a Federal environmental impact statement (EIS) was or is required. Indicate present status of EIS or impact assessment procedures for this proposal.

B. ACTIVITY DESCRIPTION SUMMARY

1. City - Fill in the name of city, county or counties in which the project is located. If the project covers an area larger than several counties, use appropriate geographic locators, such as regions, etc.
2. Location within town - Fill in the street address of the project or the roads bordering the project area, if applicable.
3. Activity type(s) - Write in the activity type (s), referring to the lists in Section II-E, page 5, of this manual.
4. Agency involvement - Please indicate the nature of agency involvement. For example, if the project is receiving Federal or state funds, indicate the program(s); if the project requires a state permit(s), indicate which permit(s). Also list any other agencies involved.
5. Estimated commencement - Fill in the numerical equivalent for month, day and year that the project is scheduled to commence. For example, May 7, 1975 would appear as 05-07-75. If commencement date is unknown, give an approximate date.

6. Estimated completion - Indicate in the same way as 5 above the estimated completion date of the project.
7. Estimated construction cost - Fill in the estimated cost of construction, rounded off to the nearest thousand. This estimate may be obtained from the contractor, or, see 8 below.
8. Estimated operational cost per year - Fill in the estimated cost per year of operation, if more appropriate. Round off to the nearest thousand.

II. ACTIVITY DESCRIPTION

A. Maps

A map of the project area should accompany the EAF. Include a U.S.G.S. topographic map with the proposed project/activity area boundaries delineated. This map should be at the largest scale available for the project area (i.e.: a 1:24,000 map is most preferable, followed by 1:62,500; least preferable is 1:125,000.) Include multiple maps if the project/activity can't be adequately shown on one map sheet. Also include any additional maps, diagrams, and sketches as may be necessary to show the proposed project/activity in sufficient detail.

B. Description of Present Land Use

Indicate the number of acres in each land use category (see definitions below). Determination of the above can be obtained from either a site visit, U.S.G.S. map (1:24,000) and/or aerial photogrammetric land use and vegetative cover map, or the appropriate Federal, state, or local land use and management agency.

Note: See Appendix A, pages A-1 through A-12, for a full listing of land use codes.

CODE

- 610 1. Residential: areas characterized by and used for residences, including single and multiple unit dwellings.
- 620 2. Commercial: areas used predominately for the sale, storage and handling of goods and services.
- 630 3. Institutional: land used for educational, religious, health correctional, and military facilities.
- 640 4. Industrial: land characterized by industries, both heavy and light.
- 650 5. Transportation, Communications, and Utilities: land which is used for transportation including roads, bridges, railroads, seaports, airports and related facilities. Also land used for communication and utility facilities such as cables, pipelines, and related facilities and structures.
- 660 6. Resource Extraction: areas used for the extraction of raw materials, such as quarries, mines, etc.
- 700 7. Open Space/Recreation: public lands set aside as either open space or recreation areas, and those areas of historic or archaeological value.

CODE

- 100 8. Natural Features/Barren Land: Areas in an undeveloped or natural state or areas supporting little or no vegetation such as deserts, tundra, bare rock, etc. These areas are not publicly owned open space.
- 200 9. Water Resource: areas covered by natural or man-made water bodies, including streams, lakes, reservoirs and other bodies lacking surface vegetation.
- 250 10. Wetland: any area covered by water all or part of the year and supporting surface vegetation, such as marshes or swamps.
- 340 11. Woodland: lands which have trees and shrubs as the predominate
440 vegetation.
- 500 12. Agriculture: land areas managed for the production of crops and livestock, and specialty areas such as orchards and tree farms.

- C. Describe the present use and general character of the area affected by the proposed activity.
- D. Activity dimensions - Fill in as many of the following dimensions as apply to the activity:
1. Total activity area - number of acres
 2. Length in miles
 3. Number of housing units
 4. Ratio of total floor area to total site area - divide the floor area of buildings by the total site area.
 5. Number of stories
 6. Number of Parking Spaces
 7. Vehicular traffic generated per day - Vehicular traffic trips generated by the proposed project is defined as the number of trips to and from the site calculated on an average of 24 hours Monday through Friday. In the case of a weekend oriented activity, the average is calculated on a 24 hours basis, including Saturday and Sunday during its regular operating season.
 8. Percentage of site undeveloped - divide the square footage or acreage not paved over or covered by the square footage or acreage in the total site.
- E. Give a brief description of the proposed activity, including preconstruction activities, construction activities, project structures and facilities, operation and maintenance activities, goods and services provided, and non-structural measures, such as land acquisition, compensatory measures, etc. Include any construction or operational activity which may cause a change in existing soil, water, air, noise, vegetation or wildlife conditions.
1. Activity types - use the following lists as a guide in describing the activity. Examples of major activity/project types which may be constructed/operated:
 - a. Transportation, Communication, and Utility Projects
 - (1) Airports
 - (2) Highway facilities
 - (3) Railroads/Mass Transit Facilities
 - (4) Pipelines
 - (5) Overhead Transmission Lines

b. Land Management Activities

- (1) Forestry/Lumber
- (2) Rangeland
- (3) Recreation
- (4) Watershed
- (5) Fish and Wildlife

c. Water Resource Development Projects

- (1) Water Impoundments, Hydroelectric Generation
- (2) Channelization, Canalization
- (3) Wetland Fill and Alteration
- (4) Irrigation

d. Power Generation Activities

- (1) Nuclear Power Plants
- (2) Conventional Fossil Fuel Power Plants
- (3) Geothermal
- (4) Refineries

e. Pesticide/Herbicide Usagef. Marine and Coastal Activities

- (1) Dredge and Spoil
- (2) Coastal Construction, marinas
- (3) Offshore structures

g. Waste Treatment Facilities

- (1) Sewage Treatment Plants
- (2) Land Fills
- (3) Incinerators

h. Land Development Activities

- (1) Residential Construction
- (2) Commercial/Industrial Facilities
- (3) Agricultural Land Development
- (4) Institutional Construction and Operation
- (5) Extractive Industry Operation
- (6) Recreation Land Developments

2. Activity subtypes

These can be activities that are part of the previously listed major activity types or separate activities in themselves.

a. Examples of soil alteration activities include:

surfacing or paving	retorting
blasting and drilling	erosion control and terracing
cut and fill	landscaping
surface excavation	chemical stabilization of soil
subsurface excavation	other (specify)

b. Examples of groundwater and surface water alteration activities:

culverting, relocating and channeling streams	well-drilling and fluid removal
alterations of groundwater hydrology	groundwater recharge
alteration of drainage	dredging
river control and flow modification	wetland fill and drainage
canalization	channelization
irrigation	chemical deicing of highways
retention ponds	other (specify)

c. Examples of activities affecting fauna and flora:

exotic flora and fauna introduction	insect control or use of pesticides
biological controls	other (specify)

d. Examples of activities affecting vegetation:

alteration of groundwater	reforestation
lumbering	landscaping
weed control	use of fertilizers and herbicides
clear cutting	other (specify)

e. Examples of activities affecting the air:

burning	venting
weather modification	air cooling
stack and exhaust emission	heating
parking or vehicular usage	other (specify)
industrial processing	

f. Examples of activities which may cause a change in the existing transportation and utility load, including, but not limited to, change in traffic or load on:

railways	aircraft
automobiles	pleasure boating
shipping	cables and lifts
river and canal traffic	pipelines
trails	ocean shipping
communications systems	other (specify)
trucking	

g. Examples of activities involving waste emplacement and treatment:

waste recycling	municipal waste discharge
landfill	including spray irrigation
spoil and overburden	ocean dumping
junk disposal	emplacement of tailings
deep well emplacement	underground storage
liquid effluent discharge	cooling waste discharge
septic tanks: commercial	stabilization and oxidation
and domestic	ponds
	other (specify)

h. Examples of recreational activities:

vacation homes	camping
sport fishing	hiking
pleasure boating	bicycling
dune buggies	swimming, scuba, surfing
trail biking	board walks (beach and
snow-mobiling	wetland)
shellfishing	other (specify)

i. Indicate if there is any possibility of accidents such as the following:

explosions	operational failures
spills and leaks	other (specify)

F. Description of Agency Involvement

Explain how the sponsoring agency is involved in the activity.

Specify:

1. the Federal permit type, funding program, or building program.
2. the pertinent governing state statute or regulation which is the reason for the involvement.
3. whether any other state and/or Federal agencies are or will be involved with the project at some time.

III. ASSESSMENT OF POTENTIAL ENVIRONMENTAL IMPACT

This section is a preliminary assessment of potential environmental impact from the project in question. The question to be answered is whether or not the project has the potential for causing significant impacts, rather than whether it will cause a certain type of impact.

The assessment form is not intended to be used as an environmental impact statement. Its purpose is to aid in uncovering the key questions to be addressed in the impact statement or to help determine whether a statement is needed.

When completing this section, consider the area affected by the project; in other words, include the entire geographical area in which any direct or indirect environmental effects can occur, as a result of any phase of the project as described in Section II. In the case of construction activity, for example, the affected area would include that portion of the watershed or water table in which impacts on water from sewage, runoff, silting, erosion, etc. would take place.

The activity considered here should include everything described in Section II-E above. Projects should not be segmented into parts or phases when assessing the project's potential impacts. Segmentation of activities may create confusion and obscure impacts.

This section is divided into thirteen major impact categories. Potential impact may occur in each category. Answer YES or NO to each question about impacts by placing an X in the appropriate space. If the answer to a question is NO, explain in the space marked "Explanation" why significant environmental impact is unlikely to result. If the answer to a question is YES and the impacts are believed to be insignificant, explain why in the space for "Explanation." If the answer is YES, indicate the specific impacts in the blanks beside the number.

If you need help in identifying the types of resources which will be impacted look up the appropriate lists of resources in appendix A, as indicated by the directions in this manual.

Once you have filled in the resource affected e.g., (1) wetland area under A. NATURAL BIOLOGICAL ENVIRONMENT, cite the type of source that you used e.g., (1) individual opinion, preference or evaluation (2) group opinion, preference or evaluation, (3) expert judgement or estimate or (4) document such as a map. Underneath the type of source, cite what the information source actually was. (e.g., Joe Smoe, the Mile High Smoke Jumpers Association, Prof. Earbender, or East Westover 1:24,000 U.S.G.S. topographical map).

Next check off opposite the resource type, e.g., (1) wetland area, what the qualifying factors are that describe the impact: direct, indirect, synergistic, short term, long term, reversible, irreversible, moderate and/or severe. The following paragraphs define all of these terms.

Impact Type

Direct Impacts

Direct or primary impacts are those associated with straight forward

"cause and effect" relationships; e.g., land clearing for construction causes loss of vegetation.

Indirect Impacts

Indirect or secondary effects are less obvious and may be a second order "cause and effect" relationship, but not of a second order in terms of magnitude or importance. Certain agencies (e.g. EPA) differentiate indirect and secondary impacts. For example, an indirect impact would occur when construction of a dam causes reduction of stream flow, in turn causing elimination of riverine wetlands downstream. A secondary impact results when a wastewater treatment project induces urbanization which in turn has environmental impacts. The two are aggregated in the assessment form.

Synergistic Impacts

Impacts can have synergistic effects in that individually they may be relatively unimportant but together they form impacts which are "greater than the sum of their parts," e.g., timber harvesting practices may increase water temperatures, which make fish more susceptible to disease, while also decreasing the dissolved oxygen in the water, creating conditions of severe stress for fish.

Duration

Short term

Short term impacts usually refer to construction induced impacts which last only as long as construction, or may be characteristic non-construction activities, such as spraying, or may occur during the operation of the facility, such as brief air pollution episodes due to temperature inversions.

Long Term

Long term impacts usually refer to impacts which last the life time of the project or past the construction phase, past the initial activity or action phase, or for the duration of maintenance and operation of the project, e.g., visual impact due to the design and building materials of a structure. It should be noted that some long term impacts may be reversible.

Reversibility

Some impacts may result in irreversible changes. The commitment to use non-renewable resources may be irreversible. Secondary impacts, such as improved access for development by a new highway, may create irreversible impacts. Accidents may cause irreversible damage. Examples of other impacts which all relate to irreversibility¹ follow:

1. Ecological components such as species, sets of species, habitat types, etc. are eliminated (become extinct) before their importance is recognized and effective action is taken.
2. A harmful condition or set of conditions becomes so widespread, before detection, that effective action by society is impossible, e.g., industrial pollution results in increasing incidence of cancer which cannot be cured once individuals are affected.
3. Increasingly catastrophic ecological changes result from system modifications upon which society has become so dependent that removal of these modifications would be catastrophic itself, e.g., elimination of natural anadromous fisheries due to flood control dams.
4. Environmental and social damage is such that, by the time it is sufficiently recognized by society, its effect on society results in lost of capacity to take effective corrective action, e.g., the expanding use of drugs in society.

¹For a discussion of planning and irreversibility, see Bella, David A. and W. Scott Overton, "Environmental Planning and Ecological Possibilities," Journal of the Sanitary Engineering Division, Proceedings of the American Society of Civil Engineers, Vol. 98, No. SA3, June 1972, p. 587.

Severity

Moderate and Severe Impacts

Moderate and severe effects are gradations of adverse impacts. Moderate could be characterized as partial elimination, dislocation, impairment, or alteration of biota or use of resources and facilities. Severe could be characterized by total elimination, dislocation, impairment, or alteration of biota or use of resources and facilities.

In the case of our (1) wetland area example, the impact may be in filling a section of the wetland, which is a direct impact and relatively long term unless the fill is to be removed; the impact may be irreversible since that section of the wetland will be forever lost and it would be extremely difficult to recreate the wetland; the impact is of moderate severity since the whole wetland was not eliminated.

Note that many of these qualifying factors are somewhat judgemental, but they do help in gauging the seriousness and intensity of the impacts in question.

Information Sources

Before beginning actual assessment of the resources that may be impacted by the given activity or project, one of the first steps should be to become acquainted with the pertinent literature. This includes literature on the particular project type of concern as well as resource literature which describes the project area.

Sources which may shed light on the types of impacts expected to be generated by the project include:

1. People knowledgeable with the project or activity type in question, which includes state and Federal agency personnel, consulting firms and university faculty.

2. "State of the art" handbooks and guidelines oriented toward the particular project/activity type.
3. Programmatic EIS's which are sometimes done by Federal agencies to evaluate the potential impacts and alternatives for implementation or continuation of programs nationwide. (e.g., U.S. Forest Service's EIS on the Renewable Resources Planning Act and U.S.D.I. Bureau of Land Management's EIS on leasing of the Outer Continental Shelf for Oil and Natural Gas Exploration).
4. Technical papers and publications on certain aspects of impacts of a project type, written by agency personnel or academicians.
5. Individual EIS's or environmental assessments on similar projects or actions.

Sources of information for literature about the project are in question are contained in Section IV of the Environmental Assessment Resource Handbook, Oregon State University, Extension Service, 1976. Included in the handbook are Federal agencies and state agencies, regional and local agencies, museums and private foundations in Oregon.

Other information sources or data are too numerous to list but generally include: U.S.G.S. topographical maps, aerial photographs and maps, ERTS Imagery, resource surveys of all types done by Federal and state agencies and universities, U.S. Bureau of Census data, planning reports and documents, as well as other Environmental Impact Statements and Environmental Assessments for the same area but for other projects.

Directions for working through the thirteen topical areas of the ENVIRONMENTAL ASSESSMENT FORM (EAF) follow. Each question is given, along with the codes and items which should apply to that question. The codes are used in this manual only for referencing purposes. However, they could be utilized in a computer information system. Various information sources are also given, which may be useful in obtaining additional information related to the question and subject.

Information Sources: Explanations

National Office Only	N	
Regional Office	R	
District or State Office	D/S	
Local Office	L	
Information within jurisdiction area* only		I/J
Information or technical data only		I
Information and explanation of data		I/E

*Land or water areas administered or managed by the agency.

A. NATURAL BIOLOGICAL ENVIRONMENT

1. Might the proposed activity affect any natural features or water resources adjacent to or near the activity area?

If YES, specify natural features affected:

For a list of NATURAL and WATER FEATURES, see those items found in codes 100 and 200, page A-4 to A-6 of this manual.

2. Might the activity affect wildlife or fisheries?

If YES, specify wildlife or fisheries affected:

If YES, specify whether any rare or endangered wildlife or fisheries species might be affected:

For a list of WILDLIFE AND FISH RESOURCES, see those items found in codes 910-925, page A-14 of this manual. Specify the particular fish or wildlife resource if known.

3. Might the activity affect natural vegetation?

If YES, specify vegetation and acreage(s) affected:

If YES, specify whether any rare or endangered plant species might be affected:

For a list of NATURAL VEGETATION, see those items found in codes 300-400, pages A-6 and A-7 of this manual.

INFORMATION SOURCES

A. Natural Biological Environment

Question 1:	<u>Federal</u>	U.S. Forest Service	D/S, I/J	
		Soil Conservation Service		
		NOAA	R, I/E	
		U.S. Army Corps of Engineers	D/S, I/J	
		Bureau of Indian Affairs	D/S, I/J	
		Bureau of Land Management	D/S, I/J	
		Bureau of Reclamation		
	<u>State</u>	Columbia River Gorge Commission	D/S, I/J	
		Department of Environmental Quality	D/S, I/E	
		Forestry Department	D/S, I/E	
		Department of Geology and Mineral Industries	D/S, I/J	
		Division of State Lands	D/S, I/E	
		Department of Land Conservation and Development	D/S, I/E	
		Marine Board	D/S, I/E	
<u>Local</u>	Soil and Water Conservation Commission	D/S, I/E		
	Department of Water Resources	D/S, I/E, D/J		
Question 2:	<u>Federal</u>	Local Soil and Water Conservation District	L, I/E	
		Local Colleges and Universities	L, I/E	
		U.S. Fish and Wildlife Service	R, I/E	
		National Park Service	D/S, L, I/J	
	<u>State</u>	U.S. Forest Service	D/S, I/J	
		NOAA (National Marine Fisheries Service)	R, I/E	
		Department of Fish and Wildlife	D/S, I/E	
	<u>Local</u>	Local Chapter(s) of Audubon Society	L, I/E	
		Biology, Ecology, and Fish and Wildlife Departments at Local Colleges and Universities	L, I/E	
	Question 3:	<u>Federal</u>	U.S. Forest Service	D/S, I/J
			National Park Service	D/S, L, I/J
		<u>State</u>	Department of Environmental Quality	D/S, I/E
			Forestry Department	D/S, I/J
Soil and Water Conservation Commission			D/S, I/E	
<u>Local</u>		Botany, Forestry and Ecology Departments at Local Colleges and Universities	L, I/E	

B. ENVIRONMENTAL HAZARDS

1. Might the activity involve the use, storage, release of, or disposal of any potentially hazardous substances?

If YES, specify substance and potential effect:

For a list of TOXIC and HAZARDOUS SUBSTANCES, see those items found in codes 800-900, pages A-13 and A-14 of this manual.

2. Might the activity cause an increase or probability of increase of environmental hazards?

If YES, specify type:

For a list of Environmental Hazards, see those items found in codes 980-992, page A-16 of this manual

3. Might the activity be susceptible to environmental hazard due to its location?

If YES, specify type:

For a list of ENVIRONMENTAL HAZARDS, see those items found in codes 980 - 992 , page A-16 of this manual.

INFORMATION SOURCES

B. Environmental Hazards

Question 1:	<u>Federal</u>	U.S. Army Corps of Engineers	D/S, I/E	
		U.S. Fish and Wildlife Service	R, I/E	
		Geologic Survey	D/S, I/E	
		U.S. Coast Guard	D/S, I/J, I/E	
		Energy Research and Development Administration (Radioactive Material)	R, I/E	
		Nuclear Regulatory Commission	N, I/E	
		Environmental Protection Agency	R, I/E	
		Food and Drug Administration (Public Health Service, HEW)	D/S, I/E	
		Federal Highway Administration (Transportation of Hazardous Materials)	R, I/E	
		Federal Aviation Administration (Transportation of Hazardous Materials)	R, I/E	
		Federal Railroad Administration (Transportation of Hazardous Materials)	R, I/E	
		<u>State</u>	Department of Agriculture	D/S, I/E
			Department of Environmental Quality	D/S, I/E
			Department of Energy	D/S, I/E
			Health Division, Dept. of Human Resources	D/S, I/E
<u>Local</u>	City and County Health Departments	L, I/E		
Question 2:	<u>Federal</u>	U.S. Army Corps of Engineers	D/S, I/E	
		Geologic Survey	D/S, I/E	
		Soil Conservation Service	D/S, I/E	
		U.S. Fish and Wildlife Service		
	<u>State</u>	Department of Geology and Mineral Industries	D/S, I/E	
		Division of State Lands	D/S, D/J, I/E	
		Land Conservation and Development Commission	D/S, I/E	
		Soil and Water Conservation Commission	D/S, I/E	
		Department of Water Resources	D/S, I/J, I/E	
		Marine Board	D/S, I/E	
	<u>Local</u>	Local Soil and Water Conservation Districts	L, I/E	
		Local Colleges and Universities (Geology Depts.)	L, I/E	
	Question 3:	<u>Federal</u>	U.S. Geological Survey	D/S, I/E
			Soil Conservation Service	D/S, I/E
			Department of Housing and Urban Development (Flood Insurance Program)	R, I/E
<u>State</u>		Department of Geology and Mineral Industries	D/S, I/E	
		Soil and Water Conservation Commission	D/S, I/E	
		Department of Land Conservation and Development	D/S, I/E	
<u>Local</u>		Local Soil and Water Conservation District(s)	L, I/E	
		Local Departments of Public Works	L, I/E	
		Local Colleges and Universities (Geology Depts.)	L, I/E	

C. RESOURCE CONSERVATION AND USE

1. Might the activity affect or eliminate land suitable for agricultural or timber production?

If YES, specify acres and soil class if land which is Soil Conservation Service capability Class I-IV in Western Oregon or Class I-VI in Eastern Oregon, will be affected.

For a list of AGRICULTURAL LAND USE AND VEGETATION, refer to those items found in codes 300, 400, and 500 on pages A-6 to A-8 in this manual. Consult the local Soil Conservation Service office for soil survey maps and capability class designations. Local planning offices may also have this information.

2. Might the activity affect commercial fisheries or aquacultural resources or production?

If YES, specify type affected:

For a list of aquacultural resources see items found in codes 150-159, 210-270, and 580 in Appendix A.

3. Might the activity affect the potential use or extraction of an indispensable or scarce mineral or energy resource?

If YES, specify resource affected and approximate amount:

For a list of MINERAL and ENERGY RESOURCES, refer to those items found in codes 660-669, pages A-10 and A-11, and be sure to specify the mineral or energy resource to be affected.

4. Have energy resource conservation measures been incorporated into the design of the proposed project/activity?

_____ NO _____ YES

Explain what measures have been incorporated into the design. If no measures can be identified, explain why these are not important to the design.

INFORMATION SOURCES

C. Resource Conservation and Use

Question 1:	<u>Federal</u>	Agricultural Stabilization and Conservation Service	D/S, I	
		U.S. Forest Service	D/S, I/J, I/E	
		Soil Conservation Service	D/S, I/E	
		Statistical Reporting Service	D/S, I	
		Economic Research Service	D/S, I/E	
	<u>State</u>	Forestry Department	D/S, I/E	
		Department of Agriculture	D/S, I/E	
		Soil and Water Conservation Comm.	D/S, I/E	
	<u>Local</u>	Dept. of Land Conservation & Dev.	D/S, I/E	
		Local Soil and Water Conservation District(s)	L, I/E	
Agriculture and Forestry Departments at Local Colleges and Universities		L, I/E		
Question 2:	<u>Federal</u>	U.S. Geological Survey	D/S, I/E	
		Bureau of Mines	R, I/E	
		Office of Minerals Policy Development	N, I	
		Ocean Mining Administration		
		Energy Research and Development Administration	N, I	
		Federal Energy Administration	R, I/E	
	<u>State</u>	Department of Geology and Mineral Industries	D/S, I/E	
		Department of Energy	D/S, I/E	
	Question 3:	<u>Federal</u>	Federal Energy Administration	R, I/E
		<u>State</u>	Department of Energy	D/S, I/E
	<u>State</u>	Department of Land Conservation & Development	D/S, I/E	
	Question 4:	<u>Federal</u>	Federal Energy Administration	R, I/E
General Services Administration			R, I/E	
<u>State</u>		Department of Commerce		
	Building Codes Division	D/S, I/E		
	Department of Energy	D/S, I/E		

D. WATER QUALITY AND QUANTITY

1. Might the activity affect the quantity of water resources within, adjacent to, or near the activity area?

If YES, specify water source affected and respective amount (gallons/day):

For a list of WATER RESOURCES which might be affected, refer to codes 200-260, found on pages A-5 to A-6 of this manual. It may be necessary to make a rough estimate of the gallons/day affected, if no data is available.

2. Might the activity result in a deleterious effect on the quality of any water resource areas or watersheds?

If YES, specify water resource that might be affected:

If YES, specify possible substance causing effects:

Refer to codes 200-260, pages A-5 to A-6 for water resources. For a list of TOXIC SUBSTANCES which might create deleterious effects on water quality, see codes 800-855, page A-13 of this manual.

INFORMATION SOURCES

D. Water Quality and Quantity

Questions 1 and 2:

<u>Federal</u>	U.S. Geological Survey (Water Resources Division)	D/S, I/E
	Soil Conservation Service	D/S, I/E
	Bureau of Reclamation	D/S, I/E
	National Park Service	D/S, I/J, I/E
	U.S. Forest Service	D/S, I/J, I/E
	U.S. Army Corps of Engineers	D/S, I/E
	NOAA (Ocean Water Quality and Quantity)	R, I/E
	Office of Water Research and Technology	N, I/E
	Environmental Protection Agency	D/S, I/E
	U.S. Coast Guard	D/S, I/J, I/E
	<u>State</u>	Department of Environmental Quality
Marine Board		D/S, I/E
Soil and Water Conservation Commission		D/S, I/E
Department of Water Resources		D/S, I/J, I/E
Health Division, Department of Human Resources		D/S, I/E
Division of State Lands (Waterways Section)		D/S, I/J, I/E
<u>Local</u>	Local Soil and Water Conservation District(s)	L, I/E
	County and City Departments of Public Health	L, I/E
	Municipal Water Departments	L, I/E
	Water Resources Institute (Oregon State University)	L, I/E

E. AIR QUALITY/ATMOSPHERIC ENVIRONMENT

1. Might the activity affect the air quality in the project area, immediately adjacent areas, or the regional airshed?

If YES, specify possible substance affecting air quality:

For a list of SUBSTANCES which might affect air quality, see codes 800-900, particularly 880-890, found on pages A-13 and A-14 of this manual.

If YES, specify whether any key receptors may be in the affected area.

Key receptors which might be affected can be found in the AGRICULTURAL, URBAN AND EXTRACTIVE CLASSES, CODES 500 and 600, particularly 610-640. These are found on pages A-8 through A-10 of this manual. Key receptors are defined as those impact recipients that are particularly sensitive to certain types of impacts, e.g., recreational area adjacent to a freeway is a sensitive receptor to air pollution.

2. Might the activity result in weather modification, or have micro/macro climatic effects?

If YES, specify what potential changes may take place.

Micro-climatic effects are localized in nature, within or adjacent to the activity site. Macro-climatic effects are regional in nature.

F. NOISE/SONIC ENVIRONMENT

1. Might the activity result in the generation of noise? Noise is defined as a loud or sustained sound which is irritating to the affected individuals.

If YES, specify noise source; if YES, specify whether any key receptors may be in the affected area.

For a list of possible NOISE SOURCES see codes 930-937, pages A-14 and A-15. Receptors which might be affected can be found by referring to codes 500 (AGRICULTURAL) and 600 (URBAN AND EXTRACTIVE), particularly 610-640 on pages A-8 to A-10.

2. Might the activity result in the loss of pleasant sounds (e.g., gurgling streams, church bells)? The activity could displace, deaden, or drown out the source of pleasant sounds.

If YES, state pleasant sound which would be affected:

3. In the Explanation, if there are noise sources involved, discuss the intensity (loudness), frequency (pitch), intermittency (duration), inappropriateness, interference, unexpectedness, or masking effects of other sounds that contribute to noise impact.

INFORMATION SOURCES

- E. Air Quality
F. Noise

E. AIR QUALITY

Question 1:	<u>Federal</u>	NOAA (Environmental Data Service, National Climatic Center) Environmental Protection Agency	R, I/E D/S, I/E
	<u>State</u>	Department of Environmental Quality Department of Energy Department of Land Conservation and Development	D/S, I/E D/S, I/E D/S, I/E
	<u>Local</u>	County and City Departments of Public Health Meterology and Atmospheric Science Departments at Local Colleges and Universities	L, I/E L, I/E

F. NOISE

Question 1:	<u>Federal</u>	Environmental Protection Agency Department of Health, Education, and Welfare (Public Health Service) Department of Housing and Urban Development Federal Highway Administration Federal Aviation Administration	D/S, I/E R, I/E D/S, I/E R, I/E R, I/E
	<u>State</u>	Department of Environmental Quality	D/S, I/E
	<u>Local</u>	County and City Public Health Departments	L, I/E

G. COMMUNITY FACILITIES/SERVICES

1. Might the activity result in changes in community facilities, services, or institutions?

If YES, specify facilities/services/institutions affected:

For FACILITIES/SERVICES that might be affected see URBAN and EXTRACTIVE code, pages A-8 to A-11 paying particular attention to the following: 610-650 and 1001 through 1036 on pages A-16 and A-17.

2. Might the activity result in changes in the supply of or demand for infrastructural items?

If YES, specify infrastructural items affected. See 1050-1127, pages A-17 through A-19.

3. Will the activity generate revenues which will pay for any added infrastructure that is necessary for the activity/project?

Revenue-cost figures: Explain the projected revenue figures and the projected infrastructure costs.

H. COMMUNITY STRUCTURE

1. Might the activity destroy or relocate existing community facilities, business enterprises and housing?

If YES, specify potential community facilities, business enterprises, and housing areas affected. See 610-650, on pages A-8 to A-10.

If YES, is there an adequate plan for the relocation of any of the above (1)?

2. Might the activity substantially change the income, racial, ethnic, or age distribution of the neighborhood or community?

If YES, specify areas/changes: see codes 1040-1443, page A-17 and codes 1140-1147, page A-20.

3. Might activity result in changes in community population?

If YES, estimate what the population change might be as a percent increase/decrease of the existing population. Indicate increase or decrease, and percent change.

4. Will the activity result in potential conflicts or impact physical, demographic or attitude/value cohesion?

If YES, specify impact: see codes 1130-1134 on pages A-19 and A-20.

5. Will the activity result in impacts to lifestyle or value systems?

If YES, specify potential impacts: see codes 1150-1155 on page A-20.

6. Have any citizen groups been contacted, or have any groups expressed an interest in the proposed activity/project?

If YES, please indicate which groups. Give name, address, main area of interest.

INFORMATION SOURCES

- G. Community Facilities/Services
H. Community Structure

- G. Questions 1-3
H. Questions 1-6

<u>Federal</u>	Social and Economic Statistics Administration (Commerce Department)	R, I	
	Department of Health, Education and Welfare		
	Public Health Service	R, I/E	
	Office of Human Development	R, I/E	
	Education Division	R, I/E	
	Social and Rehabilitative Service	R, I/E	
	Department of Housing and Urban Development	R, I/E	
	Bureau of Indian Affairs	D/S, I/J, I/E	
	Department of Transportation	R, I/E	
	Environmental Protection Agency	D/S, I/E	
	<u>State</u>	Department of Land Conservation and Development	D/S, I/E
		Department of Human Resources	D/S, I/E
Department of Education		D/S, I/E	
Department of Transportation		D/S, I/E	
Department of Commerce		D/S, I/E	
Department of Economic Development		D/S, I/E	
Bureau of Labor		D/S, I/E	
Department of Police		D/S, I/E	
<u>Local</u>	Local City, Village, County Governments	L, I/E	
	County and City Planning Department(s)	L, I/E	
	Association of Oregon Cities	D/S, I/E	
	League of Oregon Cities	D/S, I/E	
	County and City Highway (Public Works) Departments	L, I/E	
	County and City Health Departments	L, I/E	
	Local Councils of Government (COG's)	D/S, I/E	
	Regional Economic Development Districts	R, I/E	
	County Extension Offices	L, I/E	
	Police and Fire Departments	L, I/E	
	Local Chambers of Commerce	L, I/E	
	Municipal Water, Sewer, Waste, Electric and Gas utilities	L, I/E	
	Bureau of Governmental Research and Service (University of Oregon)	L, I/E	
	Center for Population Research and Census (Portland State University)	D/S, I/E	
	Local School Districts	L, I/E	

I. OPEN SPACE AND RECREATION

1. Might the activity affect the condition, use or access to any open space and/or recreation area?

If YES, specify area(s) and acreage(s) affected:

For a list of OPEN SPACE AND RECREATION AREAS, refer to the codes 700-800, pages A-11 and A-12 of this manual.

2. Are any mitigation or enhancement measures foreseen to compensate for the above stated impacts?

Use Explanation to describe what mitigation (measures to minimize harm) or enhancement measures will or will not be used.

3. Will the activity create new opportunities for recreational experiences?

If YES, list potential opportunities for recreational experiences.

Utilize list of OPEN SPACE AND RECREATION AREAS, codes 700-800, pages A-11 and A-12 of this manual if appropriate.

4. Will the activity foreclose future planned recreational opportunities and facilities?

If YES, state recreational opportunities and facilities that may be affected:

Utilize list of OPEN SPACE AND RECREATION AREAS, codes 700-800, pages A-11 to A-12 of this manual if appropriate.

INFORMATION SOURCES

I. Open Space and Recreation

Question 1-4: <u>Federal</u>	U.S. Forest Service	D/S, I/J, I/E
	National Park Service	D/S, I/J, I/E
	Bureau of Outdoor Recreation	R, I/E
	Fish and Wildlife Service	D/S, I/E
	Bureau of Land Management	D/S, I/J, I/E
	Bureau of Reclamation	D/S, I/E
	U.S. Army Corps of Engineers	D/S, I/E
	Department of Transportation	R, I/E
	U.S. Coast Guard	D/S, I/J, I/E
	<u>State</u>	Columbia River Gorge Commission
Department of Fish and Wildlife		D/S, I/E
Division of State Lands		D/S, I/J, I/E
Marine Board		D/S, I/E
Natural Area Preserves Advisory Committee		D/S, I/E
Department of Transportation, Highway Division		D/S, I/E
Department of Water Resources		D/S, I/J, I/E
Department of Land Conservation and Development		D/S, I/E
<u>Local and Regional</u>	Local Parks and Recreation Departments	L, I/E
	County and City Planning Departments	L, I/E
	Local Recreation and Sportsmans Clubs	L, I
	Mazamas	D/S, I
	Sierra Club	R, I
	Wilderness Society	N, I
	National Parks and Conservation Association	N, I
	Federation of Fly Fishermen	R, I
	Northwest Steelheaders Council of Trout Unlimited	R, I
	Oregon Environmental Council	R, I
	Oregon Parks and Recreation Society	R, I
	Oregon Wildlife Federation	R, I

J. HISTORIC RESOURCES

1. Might any site or structure of historic significance be affected?

If YES, state area and level of historical significance (national, state, local). See codes 740-745, page A-12.

2. Might any known archaeological or paleontological site be affected by the activity?

If YES, state areas affected. See codes 740-745, page A-12.

INFORMATION SOURCES

J. Historic Resources

Questions 1, 2,

<u>Federal</u>	National Park Service (Historic Register)	D/S, I/J, I/E
	General Services Administration	R, I
	Smithsonian Institution	N, I/E
	Advisory Council on National Historic Preservation	N, I
<u>State</u>	Columbia River Gorge Commission	D/S, I/J, I/E
	Land Conservation and Development Commission	D/S, I/E
	Natural Area Preserves Advisory Committee	D/S, I/E
	Department of Transportation, State Highway Division, Parks and Recreation Branch, State Advisory Committee on Historic Preservation	D/S, I/E
	Oregon Historical Society	D/S, I/E
	Department of Geology and Mineral Industries (Paleontology)	D/S, I/E
<u>Local</u>	Local Museums and Libraries	L, I
	Local Historical Societies	L, I
	Local Colleges and Universities	
	Anthropology Departments	L, I
	Archaeology Departments	L, I
	Geology Departments	L, I
	History Departments	L, I
	Natural History Departments	L, I

K. VISUAL RESOURCES

1. Might the activity cause a change in the visual character in or near the activity area through alteration of natural or cultural features?

If YES, specify natural and cultural features that may be changed:

For a list of the above, refer to codes 100-490 on page A-4 through A-7 910-925 on page A-14; and 941-944 on page A-15 of this manual.

2. Might the activity affect views or access to views of natural or cultural landscape features?

If YES, specify views or viewsheds containing cultural or natural landscape features which may be affected:

3. Might the activity introduce new material, colors, and forms to the immediate landscape?

If YES, specify what new materials, colors and forms will be introduced to the landscape.

4. Might the activity cause changes in immediate and adjacent land use resulting in a change in visual landscape character?

If YES, specify land use change and potential effects.

Utilize code list, in appendix A especially 500-730 on page A-7 to A-12 if appropriate.

INFORMATION SOURCES

K. Visual Resources

Questions 1-4:

<u>Federal</u>	U.S.D.A.; Forest Service	N,R,L	I/J
	U.S.D.I.; Bureau of Land Management	N,R,L	I/J
	Department of Housing and Development (urban only)	N,R	I.
	Corps of Engineers	N,R	I/J
	U.S.D.I.; National Park Service	N,R	I/J
<u>State</u>	Department of Land Conservation and Development	D/S,	I
	Department of Geology and Mineral Industries (geologic scenery)	D/S,	I/E
	Department of Transportation, State Parks Branch	D/S,	I/J
	Columbia River Gorge Commission	D/S,	I/J, I/E
<u>Local</u>	Local Colleges and Universities		
	Departments of Art		L, I
	Architecture		L, I
	Landscape Architecture		L, I

Question 1: Refer to Sources listed under Section A.1 NATURAL AND WATER FEATURES, A.2 WILDLIFE AND FISH RESOURCES and A.3 NATURAL VEGETATION.

L. ECONOMIC ENVIRONMENT

1. Might the activity cause elimination or relocation of existing commercial and industrial enterprises?

If YES, state enterprises affected:

See code list 620-669, pp. A-9 to A-11.

2. Might the activity cause generation of or reduction in employment?

If YES, specify occupations and groups which are likely to be affected.

Utilize code list 950-959 for examples on page A-15.

3. Might the activity affect property values and local tax revenues?

If YES, specify potential effects in terms of added or reduced taxable property and dollars of tax revenue or loss.

4. Might the activity affect local expenditures for infrastructural services (water, sewer, etc.)?

If YES, specify magnitude and type of services needed: See codes 1030-1031, 1050-1127 on pages A-17 through A-19.

5. Might activity affect the local and regional economies?

If YES, to what extent, how and at what scale(s)?

See codes 960-966 for examples of scales on pages A-15 and A-16.

6. Might the activity cause increase or decrease in seasonality of employment?

If YES, indicate which and state occupation and groups affected. Utilize code list 950-959 for examples on page A-15.

INFORMATION SOURCES

L. Economic Environment

Questions 1-6

<u>Federal</u>	U.S.D.A. Economic Research Service	R, I/E	
	U.S.D.A. Extension Service	D/S, I/E	
	U.S.D.A. Statistical Reporting Service	D/S, I	
	Domestic and International Business Administration	D/S, I/E	
	Economic Development Administration	D/S, I/E	
	Social and Economic Statistics Administration	R, I	
	Bureau of Labor Statistics	R, I	
	<u>State</u>	Department of Commerce	D/S, I/E
	Department of Economic Development	D/S, I/E	
Department of Human Resources	D/S, I/E		
Bureau of Labor	D/S, I/E		
Land Conservation and Development Commission	D/S, I/E		
<u>Local</u>	Local City, County, and Village Governments	L, I/E	
Association of Oregon Cities	D/S, I/E		
League of Oregon Cities	D/S, I/E		
Regional Economic Development Districts	R, I		
County Extension Offices	L, I/E		
Local Colleges and Universities			
Departments of Economics and Agricultural Economics	L, I/E		
		L, I/E	

M. PLANNING COORDINATION AND GROWTH

1. Will the activity require a variance from or result in a potential violation of any statute, ordinance, bylaw, regulation, or standard, the major purpose of which is to prevent or minimize damage to the environment? Variance is used in the sense of any exception or change from existing laws or requirements.

If YES, specify variances and/or statutes:

2. Will the activity require certification, authorization, review of plans, or issuance of a permit by any local, state, or Federal agency?

If YES, specify agency and action required.

3. Will the activity comply with all Federal, state, and local comprehensive land use, transportation, open space, recreation, and conservation plans as well as Oregon statewide goals and guidelines?

If NO, specify plan type and specific agency concerned.

For codes on PLAN TYPES, see codes 970-977, page A-16 of this manual for plan examples.

4. Might the activity stimulate additional local or regional land use development (secondary impacts)?

If YES, specify extent and scale(s):

5. Are there any other developments planned which are or will be impacted by the activity, including those beyond the control of the submitting agency?

If YES, specify other developments/projects affected:

6. Are there any pre-existing legal rights (mineral, water, easements, etc.) affecting the proposed activity?

If YES, specify potential activity impacts on these rights and vice-versa.

NOTE: In answering questions 4 and 5, particular attention should be paid to cumulative and secondary impacts. Cumulative impacts are those impacts incurred from two or more projects or activities, or one project/activity segmented into multiple stages which are executed at different time intervals. Secondary impacts are mainly local or regional growth impacts occurring over different time intervals, i.e., they may be immediate or may occur some time after the given project or activity occurs.

INFORMATION SOURCES

M. Planning Coordination and Growth

Questions 1-6:

<u>Federal</u>	U.S. Forest Service	D/S, I/J, I/E	
	Soil Conservation Service	D/S, I/E	
	U.S. Army Corps of Engineers	D/S, I/E	
	Department of Housing and Urban Development	D/S, I/E	
	Community Planning and Development	D/S, I/E	
	Flood Insurance Administration	D/S, I/E	
	Department of the Interior		
	Bureau of Indian Affairs	D/S, I/J, I/E	
	Bureau of Land Management	D/S, I/J, I/E	
	Bureau of Reclamation	D/S, I/E	
	Bureau of Outdoor Recreation	R, I/E	
	National Park Service	D/S, I/J, I/E	
	Department of Transportation		
	Federal Highway Administration	R, I/E	
	Federal Aviation Administration	R, I/E	
	Urban Mass Transit Administration	R, I/E	
	Federal Energy Administration	R, I/E	
	Environmental Protection Agency	D/S, I/E	
	Pacific Northwest River Basins Commission	R, I/E	
	Pacific Northwest Regional Commission	R, I/E	
	<u>State</u>	Department of Environmental Quality	D/S, I/E
		Department of Land Conservation and Development	D/S, I/E
		Department of Economic Development	D/S, I/E
Division of State Lands		D/S, I/J, I/E	
Soil and Water Conservation Commission		D/S, I/E	
Department of Transportation		D/S, I/J, I/E	
Highway Division		D/S, I/E	
Parks and Recreation Branch		D/S, I/E	
Department of Water Resources	D/S, I/J, I/E		
<u>Local</u>	County and City Planning Departments	L, I/E	
	Association of Oregon Cities	R, I/E	
	League of Oregon Cities	R, I/E	
	Local Councils of Government (COG's)	R, I/E	

IV. ALTERNATIVES

Section IV of the EAF leaves space for general discussion of alternatives to the proposed action or project including, where relevant, those not within the existing authority of the responsible agency. This is specifically called for in the CEQ guidelines (August 1973) as well as a recent court decision (Natural Resources Defense Council vs. Morton, Washington D.C. District Court of Appeals, 1971). An example would be an alternative such as mass transit construction which may be an alternative to a proposed highway project but is not within the jurisdiction of the highway agency to build or maintain. Another example might be a non-structural alternative such as acquisition of natural wetland areas for flood control as opposed to building a dam to control floods. Acquisition of the wetlands may not be within the agency's jurisdiction but it may be a public alternative. The "no project" alternative should also be discussed, along with its impact.

Different EAF's can be used for different alternatives and after the respective sections have all been filled out the EAF's can be torn apart and tacked up on a bulletin board or wall to compare alternatives in a preliminary way. Since the EAF should be used as only a preliminary look at assessing impacts for a proposed project or activity, alternatives may not be worked out to a level of detail to facilitate comparison. In this case, one might want to treat all alternatives using one EAF.

However, of particular importance is the possibility that this preliminary environmental analysis may lead to other alternatives or partial alternatives due to the impacts identified and the need to ameliorate, avoid or reduce these impacts. Describe in this section any new alternatives identified.

V. ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Adverse environmental effects are those negative impacts which may be checked as moderate or severe in Section III; they would certainly include those checked as irreversible, long term and synergistic. They may also include those impacts which cannot be minimized, ameliorated or avoided, such as pre-construction activities, construction activities, project structures and facilities, operation and maintenance activities, goods and services provided, non-structural measures, or whatever the action or activity entails.

When these adverse environmental effects are discussed, an indication should be given as to what other interest and considerations of Federal policy may be used to offset the adverse environmental effects of the proposed action. For example, in the case of elimination of wildlife habitat for a given project there could be compensatory replacement of habitat lost through acquisition of additional habitat area under the Fish and Wildlife Coordination Act as enforced by the U.S. Fish and Wildlife Service. Another example would be the case of disturbance of known archeologic sites where provision was made for salvage of the sites before construction in accordance with the Historic and Archeological Preservation Act.

VI. LOCAL SHORT TERM USES OF MAN'S ENVIRONMENT vs. THE MAINTENANCE AND ENHANCEMENT OF LONG TERM PRODUCTIVITY

There should be some discussion of the relationship between local short term uses of man's environment and the maintenance and enhancement of long term productivity. "Short term" is a relative concept, but, by example, short term uses may be structures or parking lots which may affect the maintenance and enhancement of long term productivity of renewable

resource areas such as productive farmland, high yield timber stands, or aquacultural tidal flat areas. Consider impacts which narrow the range of beneficial uses of the environment and which induce other changes that cumulatively preclude long-term productivity.

In addressing this question special attention should be paid to Section III. A. NATURAL BIOLOGICAL ENVIRONMENT and C. RESOURCE CONSERVATION AND USE.

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

There should be a discussion of any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented. An impact is considered irreversible and a commitment of resources irretrievable if the effects cannot reasonably be corrected by available counter measures or if society cannot make corrections because of negative impacts caused by the corrections. Examples appear on page 12 of this manual. The reversible and irreversible check columns throughout section III can be utilized and any significant irreversible and irretrievable commitments of resources summarized in this section.

VIII. POLICIES AND STANDARDS

One measure of whether an impact is "significant" or not is whether there is recognition of that particular impact or resource being impacted in the form of officially adopted policies and standards. These may be Federal, state or local policies, criteria, goals, objectives, standards, specifications, etc. that have been adopted in the form of laws, regulations, ordinances, etc. The presumption is that impacts are significant when they have been recognized and some form of policy has been made or adopted.

Therefore, the next step in the process is to go back through Section III and jot down any Federal, state or local policies and standards in the left hand margin next to the respective impact or resource affected. Examples include Oregon's Statewide Goal on retention of agricultural lands if any agricultural lands are affected under C. RESOURCE CONSERVATION AND USE, or the Federal Rare and Endangered Species Act can be marked next to any potential impacts to wildlife or vegetation on the rare and endangered species list under A. NATURAL BIOLOGICAL ENVIRONMENT.

Note that many existing Federal and Oregon state policies and standards have been compiled as part of the Environmental Assessment Resource Handbook, produced by the O.S.U. Extension Service as part of the same project as this assessment form and manual. What is of particular importance in citing policies and standards in the EAF is to make sure local policies and standards are covered as well as appropriate Federal and state policies and standards.

- IX. Finally, potential resource impacts discussed in Sections III, V, VI, and VII should be ranked in order of significance within this section. This summary list should include items which are significant from a local, state or Federal perspective, as determined by the existence of policies, standards, or other regulations, public concern, or other criteria for determining significance. Only the most significant should be listed and the list should provide a brief summary of potential impacts for the completed environmental assessment.

For group discussion purposes, it is helpful to display the alternatives with the respective potential impacts in a matrix format on a blackboard or large display easel. The matrix can also be used to illustrate the major impacts in a written report.

appendix **A**

resource lists

Appendix A

RESOURCE LISTS

The coded lists included in this appendix are simply a collection of resource factors and variables which can be easily referred to when using the manual. In most cases the lists are illustrative or are examples and are not necessarily comprehensive. They are coded to facilitate location; thus one can utilize the codes or page numbers to locate items. It should be noted that the codes are organized so that they could be used for computer storage and manipulation.

The coding classification which follows is organized under these major areas:

- 000 Geographical Area
- 100 Natural Features
- 200 Water Resources
- 300 Natural Vegetation
- 400 Cultural Vegetation
- 500 Agricultural Production
- 600 Urban and Industrial Land Use
- 700 Open Space/Recreation/Historic
- 800 Toxic Substances
- 900 Other - Wildlife Resources (910, 920)
 - Noise Sources (930)
 - Visual and Cultural Features (940)
 - Occupational Types (950)
 - Scale of Economic Impact (960)
 - Planning (Plan types) (970)
- 1000 Political Institutions
- 1010 Family Institutions
- 1020 Religious Institutions
- 1030 Educational Institutions
- 1040 Economic Institutions
- 1050 Transportation Infrastructure
- 1060 Communications and Media Infrastructure
- 1070 Utility Infrastructure
- 1080 Food Infrastructure
- 1090 Housing Infrastructure

- 1100 Emergency Preparedness and Law Enforcement
- 1120 Social Services and Welfare
- 1130 Cohesion and Conflict
- 1140 Population and Dynamics
- 1150 Ways of Life
- 1160 Special Concerns

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Department of Commerce, Bureau of the Census. Geographic Area Coding Manual. 1968.

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Gale, Richard P., "Social Impact Assessment Notebook," U.S. Forest Service, Washington, D.C. unpublished preliminary version.

Geographical Area Codes for Oregon

<u>County</u>	<u>Code</u>	<u>County</u>	<u>Code</u>
Baker	001	Marion	024
Benton	002	Morrow	025
Clackamas	003	Multnomah	026
Clatsop	004	Polk	027
Columbia	005	Sherman	028
Coos	006	Tillamook	029
Crook	007	Umatilla	030
Curry	008	Union	031
Deschutes	009	Wallowa	032
Douglas	010	Wasco	033
Gilliam	011	Washington	034
Grant	012	Wheeler	035
Harney	013	Yamhill	036
Hood River	014		
Jackson	015		
Jefferson	016		
Josephine	017		
Klamath	018		
Lake	019		
Lane	020		
Lincoln	021		
Linn	022		
Malheur	023		

100 - NATURAL FEATURES

- 110 - PLAYAS, DRY OR INTERMITTENT LAKE BASINS - Dry or intermittently moist lake basins regardless of whether the basin is volcanic or sedimentary; or whether a basement rock is variously covered by clastic sediments.
- 120 - AEOLIAN LANDFORMS (OTHER THAN BEACHES) - Extensive areas of unvegetated wind-blown sand, silt, and clay particles of any mineralogical composition.
 - 121 - DUNES
 - 122 - SANDPLAINS
 - 123 - BLOWOUTS
- 130 - EXPOSED ROCK - Any bare bedrock outcrops usually having elevated relief patterns and lichen and moss vegetation with generally scattered vascular plant development.
 - 131 - VOLCANIC (LAVA, PUMICE, ASH, CINDER)
 - 132 - IGNEOUS INTRUSIVE (GRANITE, BASALT, ETC.)
 - 133 - SEDIMENTARY AND METAMORPHIC (SANDSTONE, MARBLE, SHALE, ETC.)
 - 134 - GRAVELS, STONES, COBBLES, AND BOULDERS (USUALLY TRANSPORTED)
- 140 - LANDFORMS
 - 141 - SCARPS
 - 142 - TALUS
 - 143 - ALLUVIAL FANS
 - 144 - OTHER (SPECIFY)
- 150 - SHORELINES, BEACHES, TIDE FLATS - Land surface features with little vegetative growth and generally unstable due to wave and water current action.
 - 151 - NATURAL ROCKY SHORELINE
 - 152 - SANDY BEACH
 - 153 - SAND SPIT
 - 154 - BARRIER BAR
 - 155 - HEADLAND

- 156 - INTERTIDAL POOLS/MUDFLATS
- 157 - DELTAS
- 158 - ISLANDS (COASTAL)
- 159 - OTHER (SPECIFY)
- 160 - BADLANDS - Highly dissected landscape with very fine drainage networks and short steep slopes with narrow interfluves. These areas are generally mostly barren of conspicuous vegetation for most of the year.
- 170 - SNOW AND ICE
 - 171 - SEASONAL SNOW COVER - Snow lasting only on a seasonal basis.
 - 172 - PERMANENT SNOWFIELDS AND GLACIERS - Snow and ice lasting at least two years in sequence.
- 180 - UNIQUE GEOLOGIC FORMATIONS - Rare and unusual features such as caves, natural bridges, sea arches, blowholes, balancing rocks, etc.
- 200 - WATER RESOURCES
 - 210 - PONDS, LAKES AND RESERVOIRS - Man-made and naturally impounded freshwater bodies without a readily observable current.
 - 211 - NATURAL LAKES AND PONDS - naturally occurring bodies of freshwater.
 - 212 - MAN-MADE RESERVOIRS AND PONDS - Reservoirs and ponds are artificial impoundments of water.
 - 220 - WATER COURSES - Natural and man-made flowing water including rivers, creeks, canals, ditches, and aqueducts. The boundary between flowing water courses and standing water is arbitrarily defined as a straight line across the mouth of the stream.
 - 211 - NATURAL WATER COURSES - Rivers, creeks, and other flowing water courses.
 - 222 - MAN-MADE WATER COURSES - Canals, ditches, aqueducts and other artificial water courses.
 - 230 - WATER FEATURES - Special features associated with rivers and lakes.
 - 231 - WATERFALLS
 - 232 - CASCADES

- 233 - WHITE WATER RAPIDS
- 234 - RIVER ISLANDS
- 235 - LAKE ISLANDS
- 236 - OTHER (SPECIFY)
- 240 - SPRINGS, SEEPS, AND WELLS - Natural and artificial freshwater source areas. These are generally mapped as point data.
- 241 - SEEPS AND SPRINGS
- 242 - WELLS
- 250 - WETLANDS - Areas of land partially or totally covered by water every year (except floodplains).
- 251 - SALTWATER MARSH
- 252 - FRESHWATER MARSH
- 253 - SWAMP
- 254 - ESTUARIES - Inlets or arms of the sea extending into the land with significant numbers of, or large sized, freshwater course intermixing with the salt water.
- 255 - RIVER BANKS
- 256 - FLOOD PLAINS - Low lying areas adjacent to water bodies which may or may not be covered by water each year, but which periodically become inundated.
- 260 - BAYS AND COVES - Inlets or arms of the sea extending into the land without significant freshwater courses entering into the sea at these points.
- 270 - OCEANS, SEAS, AND GULFS - Large expanses of salt water that are affected by significant current circulation (excluding bays, coves, and estuaries).
- 300 - NATURAL VEGETATION - Vegetation consisting mainly of native species. These areas may be in varying seccessional stages due to historical or current use and treatment.
- 310 - HERBACEOUS TYPES - That vegetation (annual, biennial, or perennial) which has a dominantly herbaceous layer including any or all grasses, grass-like plants, forbs, and non-vascular or vascular cryptograms. Other growth forms of vegetation may be present but they are subordinate in terms of aspect.

- 320 - SHRUB-SCRUB TYPES - All types of shrubs or scrubby plants are the prominent vegetation. These usually form a closed layer so that the herbaceous layer is completely subordinate. The herbaceous vegetation is highly variable but can be important.
- 330 - SAVANNA-LIKE TYPES - Areas covered by grass and tree vegetation with the species in the subordinate layer being prominent in aspect.
- 340 - FOREST AND WOODLAND TYPES - The tree layer forms the dominant vegetational feature. This layer often forms a closed canopy over a variety of subordinate vegetation types.
- 390 - UNDIFFERENTIATED NATURAL VEGETATION
- 400 - CULTURAL VEGETATION - Land areas managed by agronomic principles for intensive human use but not cropped on an annual basis. Tree plantations, range seedings and other intensively managed areas are examples.
- 410 - CULTURAL HERBACEOUS TYPES - Grassland, marshes, swamps, and any other herbaceous vegetation that has influenced by human activity. Natural range seedings are an example of this type of vegetation.
- 420 - CULTURAL SHRUB-SCRUB TYPES - Shrub/scrub vegetation that has been affected by human activity directly aimed at the vegetation itself. Examples would be spraying and cabling of shrub/scrub vegetation and rehabilitation endeavors on land areas disturbed or partly destroyed by human activity.
- 430 - CULTURAL SAVANNA-LIKE TYPES - Any savanna or savanna-like vegetation that has been affected by and is managed by man.
- 440 - CULTURAL FOREST AND WOODLAND TYPES - Forest and woodland types that are utilized by man and managed by him on ecological principles. Plantations or other management practices utilizing exotic species are included in this category.
- 490 - UNDIFFERENTIATED CULTURAL VEGETATION TYPES
- 500 - AGRICULTURAL PRODUCTION - Land areas managed by agronomic principles. Any land areas or structures and facilities that are directly related to intensive agricultural practices. Agricultural lands are those which are characterized by the relatively constant manipulation by man of the vegetation and microenvironment and the general control of placement and growth of vegetation. Vegetation growth is essentially on an annual or short rotation basis.

- 510 - FIELD CROPS - Cereals, grains, forage, drugs, spices, fiber crops, and other field crops which are the dominant land use.
 - 520 - VEGETABLE AND TRUCK CROPS - Legumes, leafy vegetables, roots, tubers, bulbs, cucurbit, solanaceous, and perennial vegetable crops (including other herbaceous crops such as fruit crops) are in this category.
 - 530 - TREE, SHRUB, AND VINE CROPS - Fruit, nut, and beverage crops with tree, shrub, or vine growth forms.
 - 540 - PASTURE - Any land area seeded and harvested exclusively by grazing as an annual crop, short term hay, or a permanent pasture. Any evidence of harvesting for hay puts the area in the field crop category.
 - 550 - HORTICULTURAL SPECIALTIES - Artificially planted and maintained flower, shrub, or tree stock. This includes nursery stock, flowers (whether grown for seed, rootstocks, corms, bulbs, tubers, or blooms), and other herbaceous horticultural plants occurring in various sized production lots.
 - 560 - NON-PRODUCING FALLOW, TRANSITION, OR IDLE LAND - Fallow plowed (or variously worked), and leached cropland including harvested fields; included here are abandoned or idle croplands, fields, and pastures as well as entrapped lands.
 - 570 - AGRICULTURAL PRODUCTION FACILITIES - Structures and facilities utilized for animal or plant production (except fisheries). Barns, sheds, holding pens, and greenhouses are examples.
 - 580 - AQUACULTURE - Fish and shellfish hatcheries or other structures, rearing areas and production ponds are included in this category.
- 600 - URBAN AND EXTRACTIVE INDUSTRY LAND USES
- 610 - RESIDENTIAL LAND USE
 - 611 - TRACT HOMES - Single and multiple-family dwellings and planned - unit - developments. These residential units are generally one story structures, but may be two or three at the most.
 - 612 - TENEMENT AND APARTMENT HOMES - High-rise and other multi-story residential structures with their attendant parking areas.
 - 613 - MOBILE HOMES - Trailer and mobile housing units.

620 - COMMERCIAL AND SERVICES

- 621 - WHOLESALE TRADE FACILITIES - Storage and sales facilities for wholesale distribution of foodstuffs, dry goods, and related products that generally require indoor storage.
- 622 - WHOLESALE TRADE FACILITIES - Storage and sales facilities for wholesale distribution of hardware, machinery, and related products that generally require outdoor storage areas.
- 623 - RETAIL TRADE FACILITIES - Storage and sales facilities for retail distribution of foodstuffs, dry goods, and related products that generally require indoor storage.
- 624 - RETAIL TRADE FACILITIES - Storage and sales facilities for retail distribution of hardware, machinery, and related products that generally require outdoor storage areas.
- 625 - PERSONAL, PROFESSIONAL, REPAIR, AND RECREATIONAL SERVICE FACILITIES - Structures housing medical, legal, repair, and indoor recreational services.
- 626 - CULTURAL SERVICES - Museums, civic centers, art galleries, and other structures utilized for cultural activities.
- 629 - OTHER (SPECIFY)

630 - INSTITUTIONAL LAND USE

- 631 - PUBLIC AND PRIVATE EDUCATIONAL FACILITIES - Schools and other education facilities with their attendant playground areas, parking facilities, and other open areas. This includes religious schools with no connection to a major worship facility.
- 632 - RELIGIOUS FACILITIES - All churches, mosques, synagogues, temples, and other religious facilities including schools that are connected to a major worship facility.
- 633 - HEALTH FACILITY - Mental, dental, hospital, clinical, and any other medical facility with their parking lots and/or landscaped areas.
- 634 - GOVERNMENTAL INSTITUTIONS - Local, county, borough, state, province, national governmental facilities involved in all phases of government.
- 635 - MILITARY FACILITIES AND RESERVATIONS - Airstrips, dockyards, ground munitions, storage, housing, operational, open areas and all other facilities or areas owned and/or managed by a military establishment.

- 636 - CONVENTIONAL CEMETERIES - Cemetery land areas and structures not generally open to or constructed to accommodate public recreational uses.
- 639 - OTHER INSTITUTIONAL FACILITIES (SPECIFY)
- 640 - INDUSTRIAL
 - 641 - LIGHT INDUSTRIES AND ASSEMBLY INDUSTRIES - Assembly, finishing, engineering, and packaging plants that require few basic raw materials or large power supplies.
 - 642 - HEAVY INDUSTRIES - Those industries involved in production of parts, smelting ores or otherwise refining raw materials into a usable state. Associated with these industries are major transportation facilities, raw material stockpiles, waste piles, and/or large open storage areas.
- 650 - TRANSPORTATION, COMMUNICATIONS, AND UTILITIES
 - 651 - RAIL TRANSIT FACILITIES - Railroad, rail transit, monorail, and any other rail transit facilities or systems.
 - 652 - MOTOR VEHICLE TRANSPORT FACILITIES - Automobile, bus, and truck facilities, routes and their rights of way.
 - 653 - WATER TRANSPORT FACILITIES - Shipyards and docking facilities; both freshwater and marine.
 - 654 - AIR TRANSPORT FACILITIES - Airports, hangars, runways, and associated areas and structures.
 - 655 - COMMUNICATIONS FACILITIES - Radio, television, airwave structures, lines and cables.
 - 656 - POWER PRODUCTION FACILITIES - Hydroelectric dams, coal power facilities, flume hydroelectric facilities, nuclear power plants, geothermal power facilities, diesel-gas and petroleum powered facilities.
 - 657 - UTILITIES - Structures and facilities concerned with the distribution and transmission of all forms of power.
 - 658 - SEWER AND SOLID WASTE FACILITIES - Sewage lines, treatment plants and all facilities related to sewage collection, treatment or elimination.
 - 659 - OTHER TRANSPORTATION, COMMUNICATIONS, AND UTILITIES (SPECIFY)
- 660 - RESOURCE EXTRACTION
 - 661 - SAND AND GRAVEL - Pits, processing and crushing sites as well as those sites identified for use as gravel or sand extraction sites.

- 662 - ROCK QUARRIES - Quarry sites for granite, limestone, sandstones, and other rock types.
 - 663 - PETROLEUM, GAS, AND RELATED - Sites of drilling for petroleum and natural gas usually mapped as point data or extensive fields.
 - 664 - COAL, PEAT, AND RELATED - Sites of mining for carbonaceous materials including coal shaft mining, strip mining, plat mining, diamond mines and related facilities.
 - 665 - CHEMICAL, FERTILIZER, AND NON-METALLIC MINERALS - Sulfur, phosphates, borates, salts, and other non-metallic mineral mining facilities.
 - 666 - METALS - Metal ore mining facilities such as for platinum, uranium, copper, silver, gold and other metallic minerals.
 - 669 - OTHER EXTRACTIVE RESOURCES (SPECIFY)
- 700 - OPEN SPACE / RECREATION / HISTORIC
- 710 - GREENWAYS AND OPEN SPACE
 - 711 - NON-DESIGNATED GREENWAYS AND OPEN SPACE - Natural areas not yet set aside for public open space.
 - 712 - DESIGNATED PUBLIC GREENWAYS AND OPEN SPACE - Natural areas set aside as public open space for educational, research or scenic purposes with very few improvements for recreation use.
 - 713 - CEMETERIES
 - 714 - BUFFER OPEN SPACE - Landscaped areas used to separate land uses from each other.
 - 720 - PARKS AND WILDLIFE REFUGES
 - 721 - FEDERAL
 - 722 - STATE
 - 723 - LOCAL
 - 724 - PRIVATE
 - 730 - FORESTS
 - 731 - FEDERAL

732 - STATE

733 - LOCAL

734 - PRIVATE

740 - HISTORIC / ARCHEOLOGIC / PALEONTOLOGIC

741 - HISTORIC SITE (NATIONAL SIGNIFICANCE)

742 - HISTORIC SITE (STATE SIGNIFICANCE)

743 - HISTORIC SITE (LOCAL SIGNIFICANCE)

744 - ARCHEOLOGIC SITE

745 - PALEONTOLOGIC SITE

750 - TRAILS

751 - HIKING

752 - BICYCLE

753 - BRIDAL

754 - CROSS COUNTRY SKI TRAIL

755 - SNOWMOBILE

756 - MOTORIZED BIKE

757 - MULTIPLE-USE TRAIL (SPECIFY)

758 - OTHER (SPECIFY)

760 - RECREATION FACILITIES/STRUCTURES - Recreation facilities/ structures include, but are not limited to the following examples: ski lifts, marinas, launching ramps, bathhouses, interpretative centers, etc.

770 - FEDERAL WILDERNESS AREAS

771 - DESIGNATED WILDERNESS AREA

772 - STUDY AREA

780 - WILD AND SCENIC RIVERS SYSTEMS

781 - DESIGNATED FEDERAL RIVER

782 - DESIGNATED STATE RIVER

783 - PROPOSED STUDY RIVER (FEDERAL OR STATE)

800 - TOXIC SUBSTANCES

810 - RADIOACTIVE SUBSTANCES

820 - PESTICIDES / HERBICIDES

830 - SOLID WASTE / GARBAGE / SEWAGE

840 - TOXIC METALS

841 - ANTIMONY

842 - BARIUM

843 - COPPER

844 - LEAD

845 - MERCURY

846 - ARSENIC

847 - CADMIUM

848 - ZINC

849 - OTHER (SPECIFY)

850 - TOXIC NON-METALS

851 - CHLORIDES

852 - PHENOLS

853 - CYANIDES

854 - SULFIDES

855 - OTHER (SPECIFY)

860 - FLAMMABLE GASES

870 - EXPLOSIVES

880 - AIR POLLUTANTS

881 - SULFUR DIOXIDE (SO₂)

882 - NITROGEN OXIDES (NO_x)

883 - CARBON MONOXIDE (CO)

884 - HYDROCARBONS (HC)

885 - OXIDANTS (O₃)

886 - PARTICULATES

887 - OTHER HAZARDOUS AIR POLLUTANTS (SPECIFY)

890 - OTHER

891 - PETROCHEMICALS

892 - OIL

893 - SILT/SEDIMENT

894 - HEAT

895 - ACIDS/ALKALINES

896 - DYES

897 - FERTILIZERS

900 - OTHER CODES

910 - WILDLIFE RESOURCES - VERTEBRATES

911 - MAMMALS

912 - BIRDS

913 - FISH

914 - REPTILES

915 - AMPHIBIANS

920 - WILDLIFE RESOURCES - INVERTEBRATES

921 - MOLLUSKS

922 - ANTHROPODS

923 - ANNELIDS

924 - NEMATODES

925 - OTHER

930 - NOISE SOURCES

931 - CONSTRUCTION

- 932 - TRAFFIC - CARS, TRUCKS
- 933 - TRAFFIC - BUS, RAIL
- 934 - TRAFFIC - AIR
- 935 - BOATS
- 936 - INDUSTRIAL
- 937 - OTHER (SPECIFY)
- 940 - VISUAL-CULTURAL FEATURES
 - 941 - OLD MAN-MADE STRUCTURES (i.e. old houses, farmsteads, mills, forts, churches, etc.)
 - 942 - WATER RELATED CULTURAL FEATURES (i.e. lighthouses, dams, bridges, canals, locks, hatcheries, etc.)
 - 943 - SCENIC VIEWS (i.e. mountain view points, scenic highway, lookout tower, etc.)
 - 944 - CULTURAL LANDSCAPE FEATURES - (i.e. arboretums, formal gardens, large exotic trees, village green, etc.)
- 950 - OCCUPATION TYPES
 - 951 - PROFESSIONAL, TECHNICAL, KINDRED WORKERS
 - 952 - MANAGERS, ADMINISTRATORS, EXCEPT FARM
 - 953 - SALES WORKERS
 - 954 - CLERICAL AND KINDRED WORKERS
 - 955 - CRAFTSMAN AND KINDRED WORKERS
 - 956 - OPERATIVES, INCLUDING TRANSPORT
 - 957 - LABORERS, EXCEPT FARMWORKERS
 - 958 - FARMWORKERS
 - 959 - SERVICE WORKERS, INCLUDING PRIVATE HOUSEHOLDS
- 960 - MALE FEMALE
- 961 - SCALE OF ECONOMIC IMPACT
 - 962 - LOCAL
 - 963 - REGIONAL
 - 964 - STATE

- 964 - INTERSTATE
- 965 - NATIONAL
- 966 - INTERNATIONAL
- 970 - PLANNING (PLAN TYPES)
 - 971 - LAND USE
 - 972 - OPEN SPACE
 - 973 - RECREATION
 - 974 - CONSERVATION
 - 975 - TRANSPORTATION
 - 976 - URBAN RENEWAL
 - 977 - OTHER (SPECIFY)
- 980 - ENVIRONMENTAL HAZARDS
 - 981 - MASS MOVEMENT(including LANDSLIDES, SLUMPS, LAND SUBSIDENCE
QUICK CLAYS)
 - 982 - EROSION, SEDIMENTATION AND FLOODS
 - 983 - SHORELINE DEPOSITION/EROSION
 - 984 - HIGH WINDS, COASTAL STORMS, TSUMAIS
 - 985 - POORLY DRAINED OR EXCESSIVELY DRAINED SOILS FOR SEPTIC TANKS
 - 986 - HIGH WATER TABLE, WETLANDS
 - 987 - STEEP SLOPES (25%)
 - 988 - DUNE AREAS
 - 989 - VOLCANISM
 - 990 - EARTHQUAKE ACTIVITY
 - 991 - TECTONIC MOVEMENTS
 - 992 - SEA LEVEL CHANGES
- 1000 - POLITICAL INSTITUTIONS
 - 1001 - LEGISLATIVE AND PARTISAN POLITICAL ACTIVITY
 - 1002 - GOVERNMENT SIZE AND "DENSITY"

- 1003 - GOVERNMENT FINANCING
- 1004 - CITIZEN - GOVERNMENT LINKAGES
- 1005 - VOLUNTARY ASSOCIATION ACTIVITY
- 1010 - FAMILY INSTITUTIONS
 - 1011 - FAMILY CHARACTERISTICS
 - 1012 - FAMILY HEALTH INDICATORS
 - 1013 - FAMILY ECONOMIC INDICATORS
 - 1014 - FAMILY RESOURCES
- 1020 - RELIGIOUS INSTITUTIONS
 - 1021 - RELIGIOUS VALUES
 - 1022 - RELIGIOUS BASE OF ETHICAL NORMS/VALUES
 - 1023 - RELIGIOUS SYSTEM RESOURCES
- 1030 - EDUCATIONAL INSTITUTIONS
 - 1031 - EDUCATIONAL RESOURCES (FUNDING, PROGRAMS, PERSONNEL, FACILITIES AND EQUIPMENT)
 - 1032 - EDUCATIONAL "USERS" (STUDENTS AND EMPLOYERS)
 - 1033 - EDUCATIONAL CHARACTERISTICS OF POPULATION
 - 1034 - RANGE OF EDUCATIONAL AND SCIENTIFIC OPPORTUNITIES
 - 1035 - ACCESSIBILITY BY EDUCATIONAL AND SCIENTIFIC "USERS"
 - 1036 - EFFECTS THE NUMBER OF PROFESSIONAL EDUCATORS REQUIRED TO SERVE A STATIC STUDENT POPULATION
- 1040 - ECONOMIC INSTITUTION
 - 1041 - EMPLOYMENT AND UNEMPLOYMENT
 - 1042 - INCOME LEVEL
 - 1043 - POVERTY
- 1050 - TRANSPORTATION INFRASTRUCTURE
 - 1051 - LEGAL ACCESS LIMITS (EASEMENTS, USE PERMITS, TRESPASS)
 - 1052 - TIME (TRAVEL TIME AND SEASONALITY OF ACCESS)

- 1053 - TRANSPORTATION EQUIPMENT TYPE (FOOT, HORSE, BOAT, PLANE, AUTO, CRV, RAIL)
- 1054 - TRANSPORTATION FACILITIES (ROADS, TRAILS, WATER, AIRSTRIPS, RAILROADS)
- 1055 - EXPERIENCE TYPE (TRAVEL THROUGH vs. DESTINATION)
- 1056 - TRAVEL ROUTE "DIFFICULTY"
- 1060 - COMMUNICATONS AND MEDIA INFRASTRUCTURE
 - 1061 - POPULATION SIZE/STRUCTURE (MEDIA MARKET)
 - 1062 - IMPACTS ON MEDIA ADVERTISERS
 - 1063 - EFFECTS ON TELEPHONE, TELEGRAPH, RADIO AND MAIL SERVICES
- 1070 - UTILITY INFRASTRUCTURE
 - 1071 - WATER SUPPLY
 - 1072 - SEWAGE SYSTEMS
 - 1073 - SOLID WASTE COLLECTION AND TREATMENT SYSTEMS
 - 1074 - ELECTRICAL POWER DELIVERY SYSTEMS
 - 1075 - FUEL DELIVERY SYSTEMS (NATURAL GAS, OIL, COAL, ETC.)
 - 1076 - ACCESS TO AND LIMITS ON UTILITY
 - 1077 - "CONSUMPTION" IMPACTS (POPULATION AND ECONOMIC LINK)
 - 1078 - "THRESHOLD" OF BIRTH/DEATH OR SIZE CHANGE OF SPECIAL DISTRICT
 - 1079 - DEMAND FOR SPECIAL DISTRICT SERVICES/ SPECIAL DISTRICTS AS VOULUNTARY ASSOCIATIONS AND SOCIAL SUPPORT SYSTEMS
- 1080 - FOOD INFRASTRUCTURE
 - 1081 - FOOD DELIVERY SYSTEMS
- 1090 - HOUSING INFRASTRUCTURE
 - 1091 - HOUSING SUPPLY SYSTEM
 - 1092 - HOUSING QUALITY
 - 1093 - HOUSING - RELATED ECONOMIC VARIABLES
 - 1094 - HOUSING MATERIALS
- 1100 - EMERGENCY PREPAREDNESS AND LAW ENFORCEMENT
 - 1101 - NATURAL DISASTER POTENTIAL

- 1102 - EMERGENCY INFRASTRUCTURE
- 1103 - NORMATIVE QUESTIONS (WHAT IS "LEGAL"?)
- 1104 - ILLEGAL OR DEVIANT BEHAVIOR (INCIDENCE, LOCATION, VICTIMS)
- 1105 - LAW ENFORCEMENT AND JUSTICE SYSTEM (PERSONNEL, EQUIPMENT)
- 1106 - "RESULTS" OF ENFORCEMENT (ARRESTS, CONVICTIONS, LITIGATION,
PROPERTY IMPACT)
- 1107 - "NATURAL" - CAUSED ACCIDENTS
- 1108 - MAN-CAUSED ACCIDENTS
- 1109 - INSECURITY, ANXIETY, UNPREDICTABILITY, ANOMIE,
UNKNOWN OR "STRANGE"
- 1010 - HEALTH SERVICES
 - 1111 - PHYSICAL HEALTH (MORBIDITY AND MORTALITY)
 - 1112 - MENTAL HEALTH
 - 1113 - MONEY TO COUNTIES (PUBLIC HEALTH SERVICES)
 - 1114 - POPULATION BASE AND "DEMAND" FOR HEALTH SERVICES
 - 1115 - "HEALTH" NEEDS DUE TO ACCIDENTS
 - 1116 - EFFECTS ON THE NUMBER OF HEALTH PROFESSIONAL
REQUIRED TO SERVE A STATIC POPULATION
- 1120 - SOCIAL SERVICES AND WELFARE
 - 1121 - MONEY TO COUNTIES
 - 1122 - CONTRIBUTION TO GENERAL ECONOMIC BASE
 - 1123 - "STARTS" AND "STOPS" OF WELFARE RECIPIENTS
 - 1124 - CARE FOR THE AGED
 - 1125 - CARE FOR THE MENTALLY RETARDED
 - 1126 - DAY CARE
 - 1127 - GOVERNMENT ASSISTANCE PROGRAMS (SOCIAL SECURITY, WELFARE,
UNEMPLOYMENT COMPENSATION, ETC.)
- 1130 - COHESION AND CONFLICT
 - 1131 - PHYSICAL COHESION (BARRIERS)
 - 1132 - DEMOGRAPHIC COHESION (CLASS CHARACTERISTICS)
 - 1133- ATTITUDE/VALUE COHESION

- 1134 - PROPOSED ACTION - LINKED COHESION AND CONFLICT
- 1140 - POPULATION DYNAMICS
 - 1141 - POPULATION SIZE (GROWTH, STABILITY, DECLINE)
 - 1142 - ATTITUDES TOWARD POPULATION SIZE CHANGE
 - 1143 - POPULATION DENSITY
 - 1144 - DISPLACEMENT OF PEOPLE
 - 1145 - POPULATION DISTRIBUTION
 - 1146 - POPULATION MOBILITY
 - 1147 - POPULATION STRUCTURE (AGE AND SEX)
- 1150 - WAYS OF LIFE
 - 1151 - SUBCULTURE EMERGENCE OR DISAPPEARANCE
 - 1152 - MAJOR CULTURE TRAIT CHANGE
 - 1153 - CULTURAL THEME OR ETHOS CHANGE
 - 1154 - AVAILABLE LEISURE TIME AND LEISURE OPPORTUNITIES
 - 1155 - SPECIAL GROUP (ELDERLY, HANDICAPPED, POOR, TRANSIT
DEPENDENT, RECREATIONAL ACCESS)
- 1160 - SPECIAL CONCERNS
 - 1161 - MINORITY GROUP IMPACT
 - 1162 - CIVIL RIGHTS
 - 1163 - FREEDOM OF INFORMATION ACT

appendix **B**

environmental assessment form

Additional copies of the Environmental Assessment Form are available from Extension Service Stockroom, Extension Hall, Oregon State University, Corvallis, Oregon 97331, Tel. 503-754-2755. Cost is 75¢ per copy.

ENVIRONMENTAL ASSESSMENT FORM

NOTE:

PLEASE USE ENVIRONMENTAL ASSESSMENT MANUAL IN FILLING OUT THIS FORM.
THIS FORM IS INTENDED TO BE USED AS A PRELIMINARY ASSESSMENT GUIDE FOR
UNCOVERING THE KEY QUESTIONS RELATED TO THE POTENTIAL IMPACT OF A PROPOSED
ACTIVITY OR PROGRAM.

DATE _____ / _____ / _____

I. SUMMARY

A. ACTIVITY IDENTIFICATION

- 1. Sponsoring Agency: _____
Department: _____ Bureau: _____
- 2. Title of Proposed Activity or Program: _____
- 3. Does this action fall under jurisdiction of NEPA? YES NO
If so, under which Federal agency? _____
Present status? _____

B. ACTIVITY DESCRIPTION SUMMARY

- 1. City, County, Region, etc.: _____
- 2. Location within town or street address (if applicable):

- 3. Activity Type(s): _____
- 4. Agency Involvement:

- 5. Estimated Commencement: _____ / _____ / _____
Month Day Year
- 6. Completion: _____ / _____ / _____
Month Day Year
- 7. Estimated Construction Cost: _____
- 8. Estimated Operational Cost Per Year: _____

II. ACTIVITY DESCRIPTION

A. Include an original 8 1/2" X 11" section of a U.S.G.S. 7 1/2 minute, 1:24,000 scale map with the activity or project area boundaries delineated. Include multiple maps if activity or project is larger than the area delineated on a U.S.G.S. 1:24,000 scale map. Include maps, diagrams or sketches at a larger scale if the features of the activity or project cannot be clearly shown at the 1:24,000 scale.

B. Present land use. Indicate the number of acres affected that are:

1. Residential	_____	8. Natural Features	_____
2. Commercial	_____	Barren Land	_____
3. Institutional	_____	9. Water Resource	_____
4. Industrial	_____	10. Wetland	_____
5. Transportation	_____	11. Woodland	_____
Communications	_____	12. Agriculture	_____
Utilities	_____		
6. Resource Extraction	_____		
7. Open Space	_____		
Recreation	_____		

C. Give a brief description of the present use and character of the area or areas.

D. Activity Dimensions

Fill in the following dimensions, if applicable:

- | | |
|--|--|
| 1. Total Activity Area (Acres): | 5. Number of Stories |
| 2. Length in Miles: | 6. Number of Parking Spaces: |
| 3. Number of Housing Units: | 7. Vehicular Traffic Generated Per Day: (per average 24 hour period) |
| 4. Ratio of total floor area to total site area: | 8. Percentage of site undeveloped: (non paved or permeable) |

E. Give a brief description of the proposed activity, including all phases and characteristics. (Use additional pages if necessary)

F. How the agency is involved in the activity. Specify:

1. Federal Permit or Program Type:
2. State Permit or Program Type:
3. Other Agencies Involved:

III. ASSESSMENT OF POTENTIAL ENVIRONMENTAL IMPACT

Answer the following questions by placing an "X" in the appropriate YES/NO space; consider activity, construction, operational, as well as indirect impacts.

Use the "Explanation" section to clarify points or add information.

A. NATURAL BIOLOGICAL ENVIRONMENT

- Might the proposed activity affect any natural feature or water resource adjacent to or near the activity area?

_____ NO _____ YES

If YES, specify natural features affected.

(1) _____
 Source type _____
 Source _____

	DIRECT	INDIRECT	SYNERGISTIC	SHORT TERM	LONG TERM	REVERSIBLE	IRREVERSIBLE	MODERATE	SEVERE
()	()	()	()	()	()	()	()	()	()

(2) _____
 Source type _____
 Source _____

() () () () () () () () () ()

(3) _____
 Source type _____
 Source _____

() () () () () () () () () ()

(4) _____
 Source type _____
 Source _____

() () () () () () () () () ()

(5) _____
 Source type _____
 Source _____

() () () () () () () () () ()

(6) _____
 Source type _____
 Source _____

() () () () () () () () () ()

- Might the activity affect wildlife or fisheries?

_____ NO _____ YES

If YES, specify wildlife or fisheries affected:

(1) _____
 Source type _____
 Source _____

() () () () () () () () () ()

(2) _____
 Source type _____
 Source _____

() () () () () () () () () ()

(3) _____
 Source type _____
 Source _____

() () () () () () () () () ()

(4) _____
 Source type _____
 Source _____

() () () () () () () () () ()

(5) _____
 Source type _____
 Source _____

() () () () () () () () () ()

(6) _____
 Source type _____
 Source _____

() () () () () () () () () ()

Impact type Duration Reversibility Severity

If YES, specify whether any rare or endangered wildlife or fisheries species might be affected

DIRECT
INDIRECT
SYNERGISTIC
SHORT TERM
LONG TERM
REVERSIBLE
IRREVERSIBLE
MODERATE
SEVERE

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

3. Might the activity affect natural vegetation? _____ NO _____ YES

If YES, specify vegetation and acreage(s) affected:

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

(3) _____ () () () () () () () ()
 Source type _____
 Source _____

(4) _____ () () () () () () () ()
 Source type _____
 Source _____

(5) _____ () () () () () () () ()
 Source type _____
 Source _____

(6) _____ () () () () () () () ()
 Source type _____
 Source _____

If YES, specify whether any rare or endangered plant species might be affected:

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

Impact type Duration Reversibility Severity

4. Explanation:

B. ENVIRONMENTAL HAZARDS

1. Might the activity involve the use, storage, release of, or disposal of any potentially hazardous substances?

___ NO ___ YES

If YES, specify substance and potential effect:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____
Source type _____
Source _____

() () () () () () () ()

(2) _____
Source type _____
Source _____

() () () () () () () ()

(3) _____
Source type _____
Source _____

() () () () () () () ()

2. Might the activity cause an increase or probability of increase of environmental hazards?

___ NO ___ YES

If YES, specify type:

(1) _____
Source type _____
Source _____

() () () () () () () ()

(2) _____
Source type _____
Source _____

() () () () () () () ()

3. Might the activity be susceptible to environmental hazard due to its location?

___ NO ___ YES

If YES, specify type:

(1) _____
Source type _____
Source _____

() () () () () () () ()

(2) _____
Source type _____
Source _____

() () () () () () () ()

Impact type Duration Reversibility Severity

4. Explanation:

C. RESOURCE CONSERVATION AND USE

1. Might the activity affect or eliminate land suitable for agricultural or timber production? ___ NO ___ YES

If YES, specify acres and soil class if land which is Class I through IV in Western Oregon or Class I through VI in Eastern Oregon, will be affected.

DIRECT
 INDIRECT
 SYNERGISTIC
 SHORT TERM
 LONG TERM
 REVERSIBLE
 IRREVERSIBLE
 MODERATE
 SEVERE

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

2. Might the activity affect commercial fisheries or aquacultural resources or production? ___ NO ___ YES

If YES, specify type affected:

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

3. Might the activity affect the potential use or extraction of an indispensable or scarce mineral or energy resource? ___ NO ___ YES

If YES, specify resource affected and approximate amount:

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

Impact type Duration Reversi- Severity
 bility

4. Have energy resource conservation measures been incorporated into the design of the proposed project/activity? Please explain. ___ NO ___ YES

5. Explanation:

D. WATER QUALITY AND QUANTITY.

1. Might the activity affect the quantity of water resources, within, adjacent to, or near the activity area

_____ NO _____ YES

If YES, specify water source affected and amount in gallons/day:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____ Source type _____ Source _____	() () () () () () () ()
(2) _____ Source type _____ Source _____	() () () () () () () ()
(3) _____ Source type _____ Source _____	() () () () () () () ()
(4) _____ Source type _____ Source _____	() () () () () () () ()

2. Might the activity result in a deleterious effect on the quality of any water resource areas or watersheds?

_____ NO _____ YES

If YES, specify water resource that might be affected:

(1) _____ Source type _____ Source _____	() () () () () () () ()
(2) _____ Source type _____ Source _____	() () () () () () () ()
(3) _____ Source type _____ Source _____	() () () () () () () ()
(4) _____ Source type _____ Source _____	() () () () () () () ()

If YES, specify possible substance causing effects:

(1) _____ Source type _____ Source _____	() () () () () () () ()
(2) _____ Source type _____ Source _____	() () () () () () () ()
(3) _____ Source type _____ Source _____	() () () () () () () ()
(4) _____ Source type _____ Source _____	() () () () () () () ()

Impact type Duration Reversibility Severity

3. Explanation:

E. AIR QUALITY/ATMOSPHERIC ENVIRONMENT

1. Might the activity affect the air quality in the project area, immediately adjacent areas, or the regional airshed?

_____ NO _____ YES

If YES, specify possible substance affecting air quality:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____
 Source type _____
 Source _____

() () () () () () () ()

(2) _____
 Source type _____
 Source _____

() () () () () () () ()

(3) _____
 Source type _____
 Source _____

() () () () () () () ()

(4) _____
 Source type _____
 Source _____

() () () () () () () ()

If YES, specify whether any key receptors may be in the affected area: (see manual)

(1) _____
 Source type _____
 Source _____

() () () () () () () ()

(2) _____
 Source type _____
 Source _____

() () () () () () () ()

(3) _____
 Source type _____
 Source _____

() () () () () () () ()

(4) _____
 Source type _____
 Source _____

() () () () () () () ()

2. Might the proposed activity result in weather modification, or have micro/macro climatic effects?

_____ NO _____ YES

If YES, what potential changes might take place?

(1) _____
 Source type _____
 Source _____

() () () () () () () ()

(2) _____
 Source type _____
 Source _____

() () () () () () () ()

Impact type Duration Reversibility Severity

3. Explanation:

F. NOISE/SONIC ENVIRONMENT

1. Might the activity result in the generation of noise?

_____ NO _____ YES

If YES, specify noise source:

DIRECT
INDIRECT
SYNERGISTIC
SHORT TERM
LONG TERM
REVERSIBLE
IRREVERSIBLE
MODERATE
SEVERE

(1) _____
Source type _____
Source _____

() () () () () () () ()

(2) _____
Source type _____
Source _____

() () () () () () () ()

(3) _____
Source type _____
Source _____

() () () () () () () ()

(4) _____
Source type _____
Source _____

() () () () () () () ()

If YES, specify whether any key receptors may be in the area:

(1) _____
Source type _____
Source _____

() () () () () () () ()

(2) _____
Source type _____
Source _____

() () () () () () () ()

(3) _____
Source type _____
Source _____

() () () () () () () ()

(4) _____
Source type _____
Source _____

() () () () () () () ()

2. Might the activity result in the loss of pleasant sounds (e.g., gurgling streams, church bells)?

_____ NO _____ YES

If YES, state pleasant sound which would be affected:

(1) _____
Source type _____
Source _____

() () () () () () () ()

(2) _____
Source type _____
Source _____

() () () () () () () ()

Impact type Duration Reversibility Severity

3. Further Discussion:

G. COMMUNITY FACILITIES/SERVICES

1. Might the proposed activity result in changes in community facilities, services or institutions?

___ NO ___ YES

If YES, specify facilities/services/institutions affected:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____ Source type _____ Source _____

() () () () () () () () () ()

(2) _____ Source type _____ Source _____

() () () () () () () () () ()

(3) _____ Source type _____ Source _____

() () () () () () () () () ()

(4) _____ Source type _____ Source _____

() () () () () () () () () ()

(5) _____ Source type _____ Source _____

() () () () () () () () () ()

(6) _____ Source type _____ Source _____

() () () () () () () () () ()

2. Might the proposed activity result in changes in the supply of, or demand for, infrastructural items?

___ NO ___ YES

If YES, specify the expected changes in infrastructure supply/demand:

(1) _____ Source type _____ Source _____

() () () () () () () () () ()

(2) _____ Source type _____ Source _____

() () () () () () () () () ()

(3) _____ Source type _____ Source _____

() () () () () () () () () ()

(4) _____ Source type _____ Source _____

() () () () () () () () () ()

(5) _____ Source type _____ Source _____

() () () () () () () () () ()

(6) _____ Source type _____ Source _____

() () () () () () () () () ()

Impact type Duration Reversibility Severity

3. Will the proposed activity generate revenues which will pay for any added infrastructure that is necessary for the activity? Revenue-Cost Figures:

___ NO ___ YES

4. Explanation:

H. COMMUNITY STRUCTURE

1. Might the proposed activity destroy or relocate existing community facilities, business enterprises and housing? _____ NO _____ YES

If YES, specify potential community facilities, business enterprises, and housing areas affected:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____ () () () () () () () () () ()
Source type _____
Source _____

(2) _____ () () () () () () () () () ()
Source type _____
Source _____

(3) _____ () () () () () () () () () ()
Source type _____
Source _____

(4) _____ () () () () () () () () () ()
Source type _____
Source _____

(5) _____ () () () () () () () () () ()
Source type _____
Source _____

(6) _____ () () () () () () () () () ()
Source type _____
Source _____

If YES, is there an adequate plan for the relocation of any of the above? (1) _____ NO _____ YES

2. Might the proposed activity substantially change the income, racial, ethnic or age distribution of the neighborhood or community? _____ NO _____ YES

If YES, specify areas/changes:

(1) _____ () () () () () () () () () ()
Source type _____
Source _____

(2) _____ () () () () () () () () () ()
Source type _____
Source _____

(3) _____ () () () () () () () () () ()
Source type _____
Source _____

3. Might the proposed activity result in changes in community population? _____ NO _____ YES

If YES, estimate what the population change might be as a percent increase/decrease of the existing population. Indicate increase or decrease, and percent change.

(1) _____ () () () () () () () () () ()
Source type _____
Source _____

(2) _____ () () () () () () () () () ()
Source type _____
Source _____

(3) _____ () () () () () () () () () ()
Source type _____
Source _____

Impact type Duration Reversibility Severity

4. Will the activity result in potential conflicts or impact physical, demographic or attitude/value cohesion?

___ NO ___ YES

If YES, specify impact:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____
 Source type _____
 Source _____

() () () () () () () () ()

(2) _____
 Source type _____
 Source _____

() () () () () () () () ()

(3) _____
 Source type _____
 Source _____

() () () () () () () () ()

5. Will the activity result in impacts to lifestyle or value systems?

___ NO ___ YES

If YES, specify potential impacts:

(1) _____
 Source type _____
 Source _____

() () () () () () () () ()

(2) _____
 Source type _____
 Source _____

() () () () () () () () ()

(3) _____
 Source type _____
 Source _____

() () () () () () () () ()

Impact type Duration Reversibility Severity

6. Have any citizen groups been contacted, or have any groups expressed an interest in the proposed activity?

___ NO ___ YES

If YES, please indicate which groups:

(1) _____

(2) _____

(3) _____

7. Explanation:

I. OPEN SPACE AND RECREATION

1. Might the activity affect the condition, use or access to any open space and/or recreation area?

_____ NO _____ YES

If YES, specify area(s) and acreage(s) affected:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

(3) _____ () () () () () () () ()
 Source type _____
 Source _____

(4) _____ () () () () () () () ()
 Source type _____
 Source _____

2. Are any mitigation or enhancement measures foreseen to compensate for the above stated impacts? Explain below.

_____ NO _____ YES

3. Will the activity create new opportunities for recreational experiences?

_____ NO _____ YES

If YES, specify:

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

(3) _____ () () () () () () () ()
 Source type _____
 Source _____

(4) _____ () () () () () () () ()
 Source type _____
 Source _____

4. Will the activity foreclose future planned recreational opportunities and facilities?

_____ NO _____ YES

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

(3) _____ () () () () () () () ()
 Source type _____
 Source _____

(4) _____ () () () () () () () ()
 Source type _____
 Source _____

Impact type Duration Reversibility Severity

5. Explanation:

J. HISTORIC RESOURCES

1. Might any site or structure of historic significance be affected?

____ NO ____ YES

If YES, state area and level of historic significance (national, state, local):

INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____
Source type _____
Source _____

() () () () () () () ()

(2) _____
Source type _____
Source _____

() () () () () () () ()

(3) _____
Source type _____
Source _____

() () () () () () () ()

(4) _____
Source type _____
Source _____

() () () () () () () ()

2. Might any known archaeological or paleontological site be affected by the activity?

____ NO ____ YES

If YES, state areas affected:

(1) _____
Source type _____
Source _____

() () () () () () () ()

(2) _____
Source type _____
Source _____

() () () () () () () ()

(3) _____
Source type _____
Source _____

() () () () () () () ()

(4) _____
Source type _____
Source _____

() () () () () () () ()

(5) _____
Source type _____
Source _____

() () () () () () () ()

(6) _____
Source type _____
Source _____

() () () () () () () ()

Impact type Duration Reversibility Severity

3. Explanation:

K. VISUAL RESOURCES

1. Might the activity cause a change in the visual character in or near the activity area through alteration of natural or cultural features?

___ NO ___ YES

If YES, specify natural and cultural features that may be changed:

DIRECT
INDIRECT
SYNERGISTIC
SHORT TERM
LONG TERM
REVERSIBLE
IRREVERSIBLE
MODERATE
SEVERE

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

(3) _____ () () () () () () () ()
 Source type _____
 Source _____

(4) _____ () () () () () () () ()
 Source type _____
 Source _____

(5) _____ () () () () () () () ()
 Source type _____
 Source _____

(6) _____ () () () () () () () ()
 Source type _____
 Source _____

2. Might the activity affect views or access to views of natural or cultural landscape features?

___ NO ___ YES

If YES, specify viewshed affected:

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

(3) _____ () () () () () () () ()
 Source type _____
 Source _____

(4) _____ () () () () () () () ()
 Source type _____
 Source _____

3. Might the activity introduce new materials, colors, and forms to the immediate landscape?

___ NO ___ YES

If YES, specify:

(1) _____ () () () () () () () ()
 Source type _____
 Source _____

(2) _____ () () () () () () () ()
 Source type _____
 Source _____

(3) _____ () () () () () () () ()
 Source type _____
 Source _____

(4) _____ () () () () () () () ()
 Source type _____
 Source _____

Impact type Duration Reversibility Severity

4. Might the activity cause changes in immediate and adjacent land use resulting in a change in visual landscape character?

_____ NO _____ YES

If YES, specify effects:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____
 Source type _____
 Source _____

() () () () () () () () ()

(2) _____
 Source type _____
 Source _____

() () () () () () () () ()

(3) _____
 Source type _____
 Source _____

() () () () () () () () ()

(4) _____
 Source type _____
 Source _____

() () () () () () () () ()

Impact type Duration Reversibility Severity

5. Explanation:

L. ECONOMIC ENVIRONMENT

1. Might the proposed activity cause elimination or relocation of existing commercial and industrial enterprises?

_____ NO _____ YES

If YES, state enterprises affected:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____ Source type _____ Source _____	() () () () () () () ()
(2) _____ Source type _____ Source _____	() () () () () () () ()
(3) _____ Source type _____ Source _____	() () () () () () () ()
(4) _____ Source type _____ Source _____	() () () () () () () ()

2. Might the activity cause generation of or reduction in employment?

_____ NO _____ YES

If YES, specify occupations and groups affected:

(1) _____ Source type _____ Source _____	() () () () () () () ()
(2) _____ Source type _____ Source _____	() () () () () () () ()
(3) _____ Source type _____ Source _____	() () () () () () () ()
(4) _____ Source type _____ Source _____	() () () () () () () ()

3. Might the proposed activity affect property values and local tax revenues?

_____ NO _____ YES

If YES, specify potential effects:

(1) _____ Source type _____ Source _____	() () () () () () () ()
(2) _____ Source type _____ Source _____	() () () () () () () ()
(3) _____ Source type _____ Source _____	() () () () () () () ()

Impact type Duration Reversibility Severity

4. Might the proposed activity affect local expenditures for infrastructural services (sewer, water, etc.)?

NO YES

If YES, specify magnitude and type of services needed:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) Source type Source

() () () () () () () () () ()

(2) Source type Source

() () () () () () () () () ()

(3) Source type Source

() () () () () () () () () ()

(4) Source type Source

() () () () () () () () () ()

(5) Source type Source

() () () () () () () () () ()

(6) Source type Source

() () () () () () () () () ()

5. Might the proposed activity affect the local and regional economies ?

NO YES

If YES, to what extent, how and at what scale(s)?

(1) Source type Source

() () () () () () () () () ()

(2) Source type Source

() () () () () () () () () ()

6. Might the activity cause increase or decrease in seasonality of employment?

NO YES

If YES, indicate which and state occupation and groups affected.

(1) Source type Source

() () () () () () () () () ()

(2) Source type Source

() () () () () () () () () ()

Impact type Duration Reversibility Severity

7. Explanation:

M. PLANNING COORDINATION AND GROWTH

1. Will the activity require a variance from or result in a potential violation of any statute, ordinance, bylaw, regulation, or standard, the major purpose of which is to prevent or minimize damage to the environment? ___ NO ___ YES

If YES, specify variances and/or statutes:

- (1) _____
- (2) _____
- (3) _____
- (4) _____

2. Will the activity require certification, authorization, review of plans, or issuance of a permit by any local, state or Federal agency? ___ NO ___ YES

If YES, specify agency and action required:

- (1) _____
- (2) _____
- (3) _____
- (4) _____

3. Will the activity comply with all Federal, state and local comprehensive land use, transportation, open space, recreation and conservation plans as well as Oregon Statewide goals and guidelines? ___ NO ___ YES

If NO, state plan type and specific agency concerned:

- (1) _____
- (2) _____
- (3) _____
- (4) _____

4. Might the activity stimulate additional local or regional land use development? ___ NO ___ YES

If YES, specify extent and scale(s):

- (1) _____
Source type _____
Source _____
- (2) _____
Source type _____
Source _____
- (3) _____
Source type _____
Source _____

	___ NO ___ YES
DIRECT	() () ()
INDIRECT	() () ()
SYNERGISTIC	() () ()
SHORT TERM	() () ()
LONG TERM	() () ()
REVERSIBLE	() () ()
IRREVERSIBLE	() () ()
MODERATE	() () ()
SEVERE	() () ()
Impact type	Duration
Reversibility	Severity

5. Are there any other developments planned which are or will be impacted by the proposed activity including those beyond the control of the submitting agency?

_____ NO _____ YES

If YES, specify other developments affected:

DIRECT INDIRECT SYNERGISTIC SHORT TERM LONG TERM REVERSIBLE IRREVERSIBLE MODERATE SEVERE

(1) _____
Source type _____
Source _____

() () () () () () () () ()

(2) _____
Source type _____
Source _____

() () () () () () () () ()

(3) _____
Source type _____
Source _____

() () () () () () () () ()

6. Are there any pre-existing legal rights (mineral, water, easements, etc.) affecting the proposed activity?

_____ NO _____ YES

If YES, specify potential activity impacts on these rights or vice-versa:

(1) _____
Source type _____
Source _____

() () () () () () () () ()

(2) _____
Source type _____
Source _____

() () () () () () () () ()

(3) _____
Source type _____
Source _____

() () () () () () () () ()

Impact type Duration Reversibility Severity

7. Explanation:

IV. Use different EAF's for different alternatives or combine them on one form. Alternatives should include the no-project alternative. Also discuss other alternatives to the proposed action or project including, where relevant, those not within the existing authority of the responsible agency.

V. Discuss any probable adverse environmental effects which cannot be avoided along with an indication of what other interests and considerations of Federal policy are thought to offset the adverse environmental effects of the proposed action. Try to rank in order of relative significance.

VI. Discuss the relationship between local short term uses of man's environment and the maintenance and enhancement of long-term productivity. Utilize sections A. NATURAL BIOLOGICAL ENVIRONMENT and section C. RESOURCE CONSERVATION AND USE with particular attention to differentiation of long and short term impacts. Try to rank in order of relative significance.

VII. Discuss any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented. Utilize the reversible and irreversible check columns throughout section III and summarize. Try to rank in order of relative significance.

- VIII. Go back through the form and mark down appropriate Federal, state and local policies and standards in left hand margin next to the kind of impact. Refer to Environmental Assessment Resource Handbook. Oregon State University, Extension Service, Corvallis, Or.
- IX. Aggregate impacts discussed in Sections III, V, VI, and VII in a master list in order of relative significance.