

METRO REGIONAL PARKS AND GREENSPACES ADVISORY COMMITTEE MEETING NOTICE

Date: Tuesday, August 5, 1997
Time: 6:00PM - 8:00PM
Place: Metro Regional Center, 600 NE Grand Ave, Portland
Room 270

AGENDA

- I. Introductory comments and announcements (5 min)
- II. Oxbow Regional Park Master Plan (Jim Walsh, Jane Hart) (45 minutes)
 1. Overview presentation
 2. Public Comments and Testimony
 3. Committee Q&A
 4. **Committee Recommendation**
- III. Regional Framework Plan Park Policies (Charles Ciecko) (45 minutes)
 1. Presentation of GTAC recommendations to MPAC
 2. Next steps for **RPAGAC discussion/Q&A**
- IV. Nominations for Committee Vice-chair
- V. Consideration of September 9, 1997 as next RPAGAC meeting

The August meeting will hear the final presentation of the Oxbow Regional Park Master Plan before it moves on to Metro Council consideration. Citizens will have an opportunity to testify before the committee makes its recommendation.

The draft Regional Framework Plan policies related to the provision and management of parks, natural areas, trails, greenways and recreation services recently went through a refinement process with the Greenspaces Technical Advisory Committee. Charles Ciecko will present the GTAC recommendations to the Metro Policy Advisory Committee (MPAC). The committee will also discuss what role they can play in the framework plan process.

Bob Akers will be stepping down as Chairman of the RPAGAC with Mike Reid (current vice chair) taking the helm in September. The consider nominations for vice chair.

Because the first Tuesday of September (9/2) falls the day after Labor Day and on the first day of school, the committee will consider an alternative meeting date in September.



METRO
Regional Parks and Greenspaces
600 NE GRAND AVE. PORTLAND, OR 97232-2736 (503) 797-1850

OXBOW REGIONAL PARK PROJECT ADVISORY COMMITTEE

Byron Ball	Sandy High School
Jeff Beals	Boy Scouts of America
Paul Box	Neighbor (west side of park)
Glenyce Densem	Neighbor (east side of park)
Ernie Drapela	State Trails Advisory Council
Nick Galash	NW Steelheaders
Keith Jensen	Alder Creek Kayak
Bob Ratcliffe	Bureau of Land Management
Dimitri Stankevich	YMCA Camp Collins

Public Involvement Activities Conducted During Oxbow Regional Park Master Planning Process:

August 1995

- Conduct Oxbow Regional Park customer survey.

August 1996

- Commence master planning process.
- Create 350 person project mailing list.
- Form 10 person citizen/stakeholder advisory committee.
- Conduct first of two, 4-hour brainstorming sessions to finalize master plan goals and explore alternative master plan concepts. Sessions attended by Metro staff, Project Advisory Committee and natural resource Agency staff.
- Distribute meeting evaluation forms.

September 1996

- Conduct second brainstorming session.
- Conduct first stakeholder advisory committee meeting.
- Conduct first public workshop. Meeting evaluation forms distributed.

October 1996

- Conduct second stakeholder advisory committee meeting.
- Master plan display at Salmon Festival/ distribute user surveys.

November 1996

- Conduct second public workshop.

January - June/97

- Develop draft master plan.

April 1997

- Conduct third stakeholder advisory committee meeting and receive vote of approval on draft Master Plan.

May 1997

- Regional Parks and Greenspaces Advisory Committee toured Oxbow Regional Park and received informational briefing on proposed master plan components.

July 1997

- Print draft master plan and release for public review.
- Distribute press release and 350 person mailing to announce plan availability.

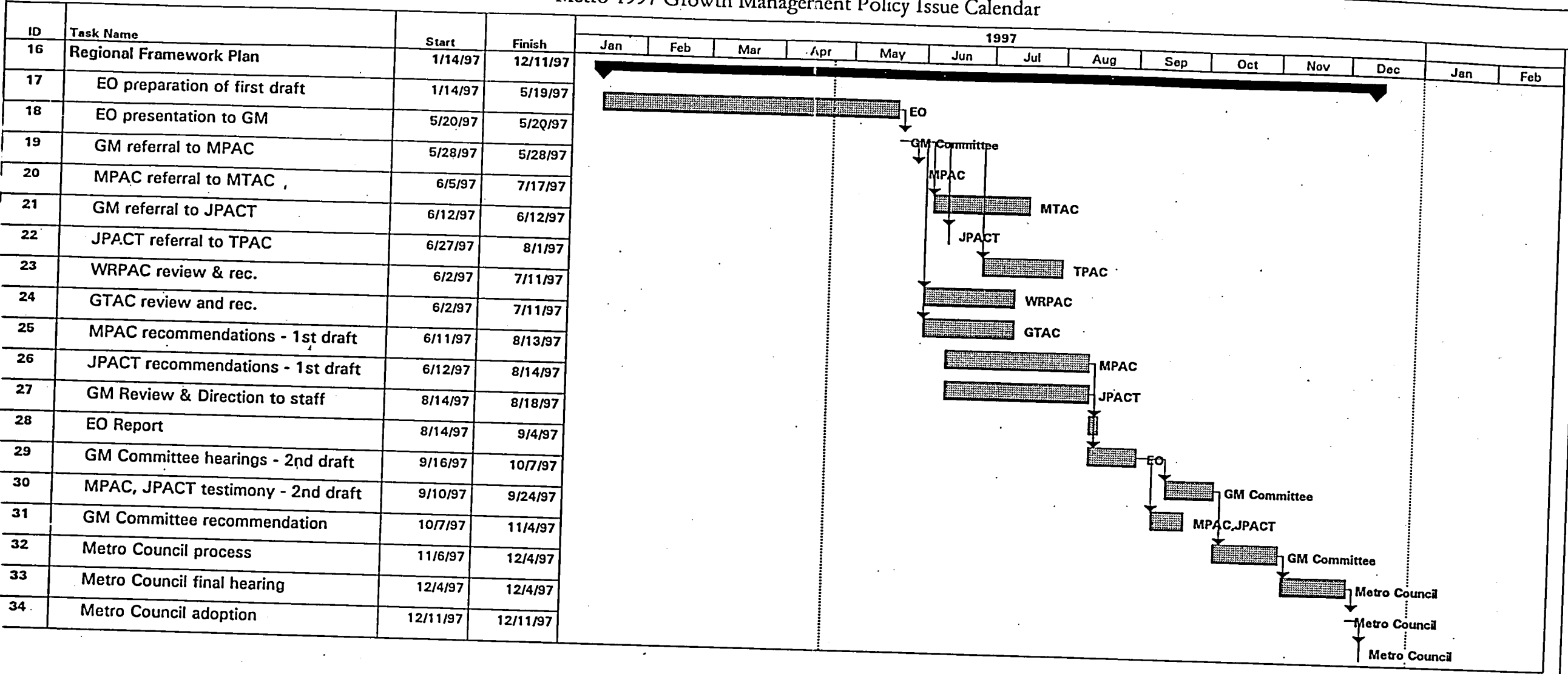
August 1997

- Aug. 5th, Regional Parks and Greenspaces Advisory Committee recommendation.

September 1997

- Metro Regional Facilities Committee consider draft master plan (unscheduled).
- Full Council considers and votes on draft master plan (unscheduled).

Metro 1997 Growth Management Policy Issue Calendar



oject:
ite: 4/22/97

Task

Progress

Milestone

Summary

Rolled Up Task

Rolled Up Milestone

Rolled Up Progress

OXBOW PARK \$8-1/2 MILLION DOLLAR MASTER PLAN

remarks to the Regional Greenspaces Advisory Committee
to be presented August 5, 1997
by Marian Drake, Southeast Portland resident, 236-1736

I. 3 CURRENT CRITICAL POLITICAL REASONS TO REJECT THIS MASTER PLAN

1. Bill Sizemore is threatening a ballot initiative for a constitutional amendment to abolish Metro. With this kind of costly Master Plan for a park that park constituents from Metro's own survey say is fine the way it is, and the unpublicized rush-process plan approval seems to be taking I'd be tempted to vote to eliminate Metro, too. (I won't vote to eliminate Metro -- but this kind of spurious request for \$8-1/2 million dollars to "develop" a rural park/natural area, could be fatal for Metro at this time. Bad timing, to say the least!)

This plan -- and are there others like it? -- seem to fly in the face of all the great ideas Metro's own surveys of a couple or years ago received from the public. **HOW MUCH DID IT COST TAXPAYERS TO DRAW UP THIS PLAN? HOW MUCH TO PAY THE CONSULTANTS FOR THEIR SERVICES? HOW MUCH FULL TIME SALARY FOR THE PLANNERS TO WRITE IT? HOW MUCH DID THE MEETINGS COST TO DISCUSS THE PLAN? HOW MUCH TO PRINT IT?**

The park is basically fine as it is. I suspect that for the cost of drawing up this plan, the needed repairs to Oxbow Park could have already been accomplished! The park has functioned fine since it was built in the 1960's. I know one of the 1960's park construction supervisors who helped build the park, who is now a city councilor in another Oregon community. The park has functioned fine for over 30 years -- why not just do the things that have worked successfully in the past for the park. If it works, why try to fix it?

2. With the recent OSU distinguished scientist's telling us that we need to be "weaning ourselves away from hydrocarbon emissions", is it really wise to build more road surface and more paved parking at Oxbow Park, when a shuttle service from the end of the Max Line to the park on weekends would seriously cut back on traffic through the park? In fact, if Metro publicizes the new shuttle system, educates the public through the Metro GreenScene, signs to the park, and a year-long visitor information campaign, restricts vehicle entry into the park, and works out a practical-reasonable entry fee **AT THE CITE OF THE PARK SHUTTLE** this would work very well. It would also save on road maintenance costs, as well as protect the ozone layer and the esthetics of the park.

Tri-Met, quoted me a cost of \$500 per day (\$50/hour) Tri-Met quoted me for shuttle service with a regular, large bus, shuttle service. Tri-Met is not willing to provide this service at this time, but Metro could hire the shuttling done by contractor. At a run of one day per weekend -- that is, 4 days per month, 52 weeks a year -- the cost **BEFORE RIDE TICKETS WERE SOLD** would be \$26,000 per year. For \$7,000,000 of shuttle service **EVEN IF RIDERS WERE GIVEN A FREE RIDE** (which they probably wouldn't be given) Metro would receive 269 YEARS of bus rides to the park.

Of course, it wouldn't even cost that much, because riders would pay their "gas money" to Metro tickets to ride!

3. Recent report of salmon-spending extravagances, no results, shows more than ever: Leave nature to take care of herself.

II. OXBOW PARK ITSELF -- ESTHETIC, ECOLOGICAL & FISCAL REASONS TO REJECT THIS MASTER PLAN

1. Underground irrigation system is totally unrealistic, and very unneeded. The park has been just fine without it. Is some planner's prudishly taking-offense at the "non-uniform coverage" (p. 45) of the present watering system going to cost us the thousands of dollars to put in an irrigation system at Oxbow Park?
2. I see no evidence in the survey results that park visitors are dissatisfied with the pit toilets. That is the kind of primitive conditions that people who visit Oxbow Park enjoy, and have asked for in the survey. (p. 37 of Master Plan.) "Primitive" is the term used by the respondents to the survey.
3. Road costs: My estimate is "plus or minus" \$229,106 per mile. That is \$460,000 in 1997 dollars for 2 miles, which is about how far the road would run. (This estimate is based on figures I received from a local engineer, and my brother, who builds roads.) This DOES NOT INCLUDE THE PARKING LOTS. Parking lots would not be needed if there were a shuttle service from the end of the Max line.

What was originally considered before the final proposed master plan was presented, was to tear out the old road, and build a new road. That would have been bad enough -- but now, unfortunately, it is just build a new road and new parking lots!! MORE ASPHALT IN THE PARK -- PLEASE, NO!

4. Gateway/entryway construction costs. How much? Could the present booth be repaired? "Not aesthetically desirable" to whom? Everyone I talk to, including people in the parks and wildlife fields, agree that "rustic" is what the existing buildings now are, that that is what they need to be. The planners' esthetic sense is different from the that of the park users. (Judging from the drawing of the proposed new booth, I guess they are looking for what I'd call "neo-rustic", anyhow -- so what's the difference if we leave the older rustic buildings and just repair whatever needs repair?) Also -- is the \$16,000 estimate in 1997 to construct a brand-new booth realistic? I wonder, since I myself spent \$10,000 FOR MATERIALS ALONE, to remodel a structurally sound garage, with a slab floor, into a studio apartment in 1980. I did not pay any labor costs, as all the labor was done by me and friends. This was for an existing structure, not a new one.
5. Nature center -- use the schools as the classrooms. There is no good reason to construct a new building as a nature center. Here is a nearly 1-1/2 million savings right away! (p. 124, master plan) Any teacher knows that visiting teachers -- that can also be the naturalist -- customarily brings their teaching materials with them. Then bus kids to the park. The parks speaks for itself, and the naturalists can do what they do best -- take kids into the park.
6. The Eight-And-One-Half-Million-Dollar Master Plan calls the park visitors "consumers". I think this sums up what the planners think park visitors should do -- pay for decorating a park, then paying more money to be allowed to visually consume the decorations. The best things in life are free -- Nature gave us Oxbow Park. Eight-And One-Half-Million Dollars is guilting the lily.
7. The question of how to fund the park, with less vehicular traffic seems to me to be a less difficult question to solve than why not to spend \$8-1/2 million if this master plan were to be approved. Surely Metro planners and staff can come up with a cost-effective way to charge visitors.

8. The Master Plan mentions that there are places in the park that are "geologically unstable" and recommends that building things on these places be "avoided, insofar as possible". I say that the words "avoided insofar as possible" are not words that should be used in this case. Instead, any geological unstable areas should be declared 100% off-limits for any "improvements", construction, or anything else. No driving over them with vehicles, etc. No loud noises there, etc. I am not a lawyer, so I don't know how to list what to NOT do there -- but basically leave these areas alone.

III. IF MONEY IS APPROPRIATED, WHERE SHOULD IT BETTER BE SPENT?

1. On shuttle service from the end of the Max line to the park, on weekends year-round.
2. On producing maps and accessibility to the recently purchased new greenspaces.
3. On making newly purchased greenspaces such as Whittaker Ponds (which was a junk yard, and still is basically inaccessible and unuseable) into useable parks.

IV. MY MINIMAL REQUESTS:

1. If you are unable to reject this plan outright during the month of August, 1997, at least postpone decision on acceptance until the end of December, and:
2. More publicity is given, via the newspapers, the Metro GreenScene Fall edition, TV, and other Metro mail lists.
3. More public hearings are given, around the area.

MetroNews



METRO

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July 29, 1997

For immediate release

For more information, call Jane Hart, (503) 797-1585

Draft Oxbow Regional Park Master Plan available for review

Metro has released a draft of a master plan for Oxbow Regional Park for public review and comment. Visitors enjoy hiking, picnicking, camping, boating, swimming, fishing, wildlife viewing and more at the park, located eight miles east of Gresham on the Sandy River.

The draft plan describes the existing 1,040-acre park in the Sandy River Gorge and identifies future improvements and public uses including additional camp sites and picnic shelters, restrooms and showers, an environmental education center, upgraded infrastructure, improved recreational access to water, wildlife habitat enhancement and more.

The natural beauty of the park were formally recognized when the same section of the Sandy River was designated as a state Scenic Waterway and federal Wild and Scenic River. Master plan improvements are intended to enhance the existing park while maintaining its special character. Partial funding to begin master plan implementation is available from Metro's 1995 open spaces, parks and streams bond measure, passed by the region's voters in 1995.

A limited number of copies of the draft master plan are available. To make arrangements to pick up a copy or have one mailed, call Metro Regional Parks and Greenspaces at 797-1870. Review copies are also available at Oxbow Regional Park and the Central, St. Johns and Gresham branches of the Multnomah County Library.

Written comments about the plan can be sent to Jane Hart, Metro Regional Parks and Greenspaces, 600 NE Grand Ave., Portland, OR 97232. Comments will be accepted until 5 p.m. Aug. 13.

Citizens will also have opportunities to testify on the draft master plan at the following public meetings:

Metro Regional Parks and Greenspaces Advisory Committee
6 p.m. Wednesday, Aug. 5
Metro Regional Center, 600 NE Grand Ave., Portland

**METRO**

TO: Regional Parks and Greenspaces Advisory Committee (RPAGAC)
FROM: Jane Hart *JH*
CC: Ron Klein
SUBJECT: Draft Oxbow Regional Park Master Plan
DATE: July 17, 1997

Enclosed please find your copy of the draft Oxbow Regional Park Master Plan. An appendix to the draft master plan was also prepared and contains complete technical reports prepared by subconsultants. If you are interested in reviewing an appendix there are limited copies that we can loan you. The project consultant, Jim Walsh, will present an overview of the draft master plan at the August 5th RPAGAC committee meeting and staff will seek the committee's recommendation to forward to the Metro Council Regional Facilities Committee.

A 300 person mailing was sent out to announce the availability of the draft master plan and opportunities for public input. The public review and written comment period for the draft master plan will close at 5:00 pm on August 13, 1997. Copies of the draft master plan are also available for review in the following Multnomah County libraries: Central Library, St. Johns Branch, Gresham Branch.

Future opportunities for public involvement: Public testimony will be encouraged at the Metro Council meetings listed below. Written comments received by 5:00 pm on August 13 will be summarized and presented at the meetings. as well.

1. **Metro Council Regional Facilities Committee - August 19, 1997 at 9:00 am in Metro Council Chambers.** A resolution bearing the Executive Officer's recommendation for approval will be presented to the Committee for their consideration and action.
2. **Metro Council - August 28, 1997 (tentative date) in Metro Council Chambers.** Recommendation from the Regional Facilities Committee will be presented to the Council for their considered for final action.

For Further Information: If you have questions please call Jane Hart, project manager at (503) 797-1585.



Oxbow Regional Park

Draft Master Plan

June 1997



Metro Regional Parks
and Greenspaces



ACKNOWLEDGMENTS

METRO

Mike Burton, Executive Officer

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Don Morisette, Lisa Naito, and Ed Washington

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Mike Spencer - Park Ranger
Phil Underwood - Park Ranger

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Jeff Beals - Boy Scouts of America
Paul Box - West Side Park Neighbor
Glenyce Demsem - East Side Park Neighbor
Ernie Drapela - Oregon Recreation Trails Advisory Council, Gresham
Nick Galash - Northwest Steelheaders
Keith Jensen - Alder Creek Kayak
Bob Ratcliffe - Bureau of Land Management
Dimitri Stankevich - YMCA Camp Collins



OXBOW REGIONAL PARK

DRAFT MASTER PLAN

Prepared for

Metro Regional Parks and Greenspaces Department

Prepared by

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June 1997

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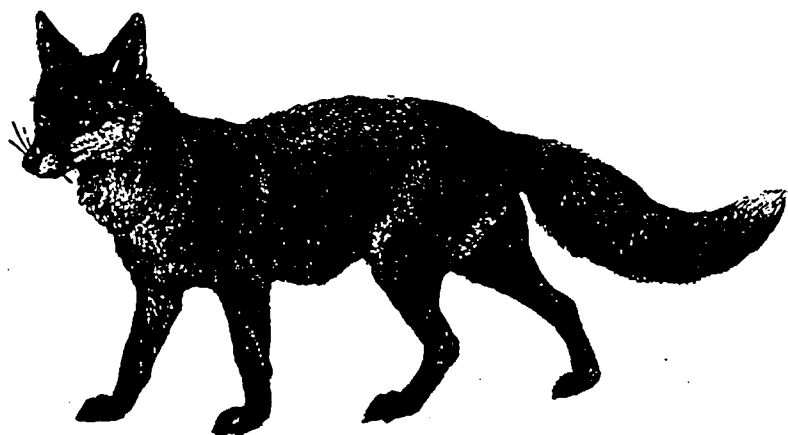
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EXECUTIVE SUMMARY





EXECUTIVE SUMMARY

■ Executive Summary

Oxbow Regional Park lies in the geographic heart of the Sandy River Gorge. The Sandy River's natural beauty and pristine values were formally recognized in 1973 when Governor Tom McCall issued a proclamation designating 12.5 miles of the Sandy River between Dodge Park and Dabney State Park as a State Scenic Waterway. In 1988, the same stretch of river received federal Wild and Scenic River Designation. In 1993, The Bureau of Land Management (BLM) published the "Sandy Wild and Scenic River and State Scenic Waterway Management Plan". BLM's Management Plan identifies three public access portals where recreational opportunities should be provided within the designated wild and scenic corridor. Oxbow Regional Park is the largest and most centrally located portal.

The steep forested canyon and the meandering Sandy River forms the unique natural setting of the park. The park, over 1040 acres in size, is made up of properties owned by Multnomah County, Bureau of Land Management, Oregon Department of Fish and Wildlife and Metro. Metro's management of the properties for park purposes is through lease agreements. YMCA Camp Collins, The Nature Conservancy and private parties own adjacent parcels.

Since 1963, the park has been providing recreation in a natural setting including camping, picnicking, water access for boating, fishing and swimming. There are also extensive trails for hiking, wildlife observation and environmental education. Over 219,046 recreation users visited the park in 1996.

Years of providing recreational opportunities to the public has caused 'wear and tear' on the park's infrastructure and facilities. In addition, there are no flush toilets in the park. Infrastructure upgrades and facility improvements are necessary to continue to provide safe, quality recreation experiences for the public.

Funding for some of the critical capital improvements has been made possible through the successful passage of the Open Spaces, Parks and Streams Bond Measure in 1995. The Oxbow Regional Park Master Plan is needed to ensure that improvements are located to protect natural resources, are provided in the most cost effective manner, blend with the natural character of the park, and are responsive to the desires of park visitors.

■ Master Plan Development and Implementation

The Master Plan is intended to guide future management and development of Oxbow Regional Park. Through an extensive public involvement process, a Master Plan has been prepared addressing the park and park user needs. The Master Plan addresses the park in regards to the natural Sandy River setting, the existing conditions, and the appropriate improvements and enhancement of Oxbow Regional Park. The following are key management objectives of the Master Plan:

- Metro, in coordination with other public and private agencies, should expand its role in recreational management in the Sandy River Gorge. Suggested areas of expanded involvement include providing management and operational services for Dabney State Park and Dodge Park and management of river recreation between those parks.
- As an important segment within the larger Wild and Scenic Sandy River Management Area, the natural habitat of the park is to be maintained and/or enhanced. Based on the quality of the habitat and terrain, the Master Plan identifies approximately 90% of the existing park to remain in its natural condition.
- The Master Plan is intended to maintain the “natural timeless” recreational experience. The existing area of intensive recreation use, which is only approximately 10% of the total park area, will not be enlarged, but will be utilized more efficiently.
- The existing park activities (picnicking, camping, hiking, river access, environmental education, etc.) are to be maintained. The Master Plan envisions a modest 1% increase in peak time capacity.
- The park properties on the north and east side of the river will be retained as an important part of the natural habitat corridor within the Sandy River Gorge. The Master Plan limits use and access to these areas to approximately current levels.
- The Ancient Forest area will be preserved and continue to be utilized for wildlife habitat, ecological studies and the opportunity for park visitors to experience an Ancient Forest.
- The Elk Meadow will continue to be managed to attract migratory elk.

The Master Plan implementation includes the following improvements:

- Expand overnight camping by providing 20 additional sites.
- Encourage greater seasonal use of the campground by providing overnight structures. Up to twelve structures are considered.
- Expand group picnic facilities by approximately 30%. A total of six shelters (4 replacement & 2 additional) plus four shelterless reservable areas are planned.

- Enhance group camping areas by redesigning sites for more efficient use.
- Upgrade the existing water and electric utilities.
- Construct flush toilets in primary park use areas, up-grade pit toilets to a vault design in secondary park use areas and provide showers in camping areas.
- Realign the road system and parking to provide a safer and more aesthetically pleasing park setting.
- Renovate front entrance arrival area including new ticket booth, new office building, public restroom facility and orientation kiosk.
- Develop an Environmental Education building.
- Provide irrigation system for major turf areas.
- Expand environmental education and interpretation programs.
- Upgrade existing boat ramp to provide universal access to fishing opportunities.

INTRODUCTION





INTRODUCTION

■ Study Purpose

The purpose of the study is to prepare a master plan that will guide the future management and development of Oxbow Regional Park.

■ Location

Oxbow Regional Park is located in Multnomah County, Oregon approximately eight miles east of the City of Gresham. The park is situated adjacent to the Sandy River approximately ten miles upstream from the confluence with the Columbia River (see Figure 1).

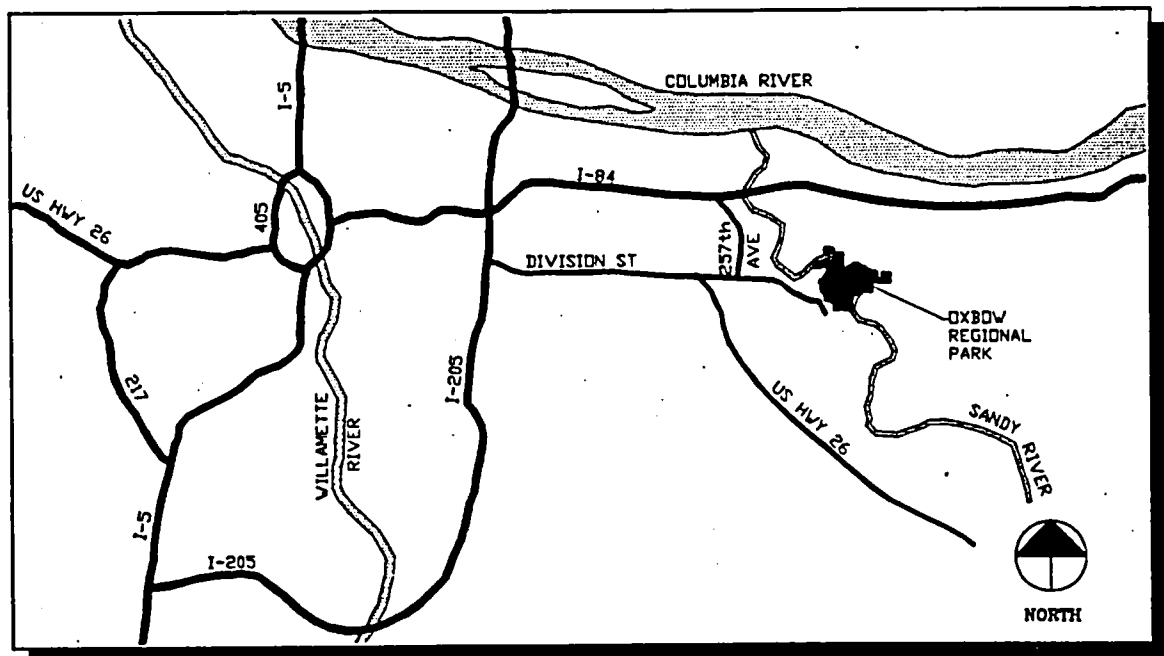


Figure 1 - Vicinity Map

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■ Planning

Sandy River Setting

To understand and properly plan for Oxbow Regional Park it is necessary to consider the park in the larger context of the Sandy River. Oxbow Regional Park lies in the geographic heart of the Sandy River Gorge. The Sandy River's natural beauty and pristine values were formally recognized in 1973 when Governor Tom McCall issued a proclamation designating the 12.5 miles of the Sandy River between Dodge

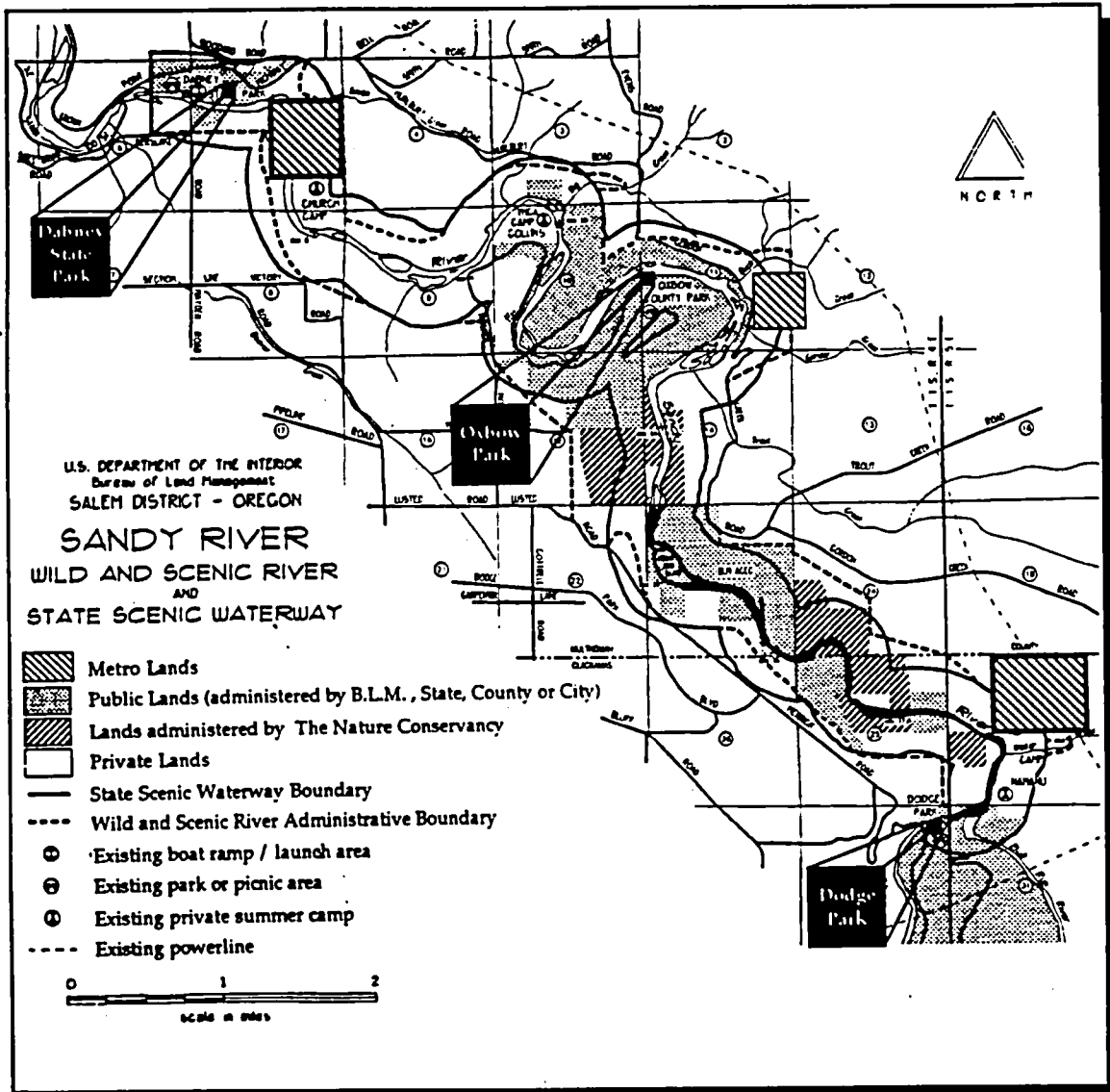


Figure 2 - Regional Ownership Map

© Metro

Map Compliments of Bob Ratcliffe, Bureau of Land Management - Salem District

and Dabney State Park as a State Scenic waterway. In 1988, the same stretch of river received federal Wild and Scenic River Designation. In 1993, The Bureau of Land Management (BLM) published the Sandy Wild and Scenic River and State Scenic Waterway Management Plan. Management of this area is a multi-agency cooperative effort. The objective of the adopted management plan and other supportive policies and regulations is to preserve and enhance the outstandingly remarkable values which led to the state and federal designations. These values include recreation, wildlife, scenic, water quality, geology, fisheries, cultural, and botanical and ecological. Oxbow Regional Park is located in the heart of the 12.5 mile Wild and Scenic River segment and subject to the applicable regulations. The Appendix contains excerpts from BLM's management plan including a summary of agencies and their role in management, management goals, standards and guidelines, and a scheduled planned activities and cost estimate.

Substantial areas within the Sandy River Wild and Scenic Area have historically been in public ownership. In support of the Sandy River Wild and Scenic concept, public agencies and The Nature Conservancy have been acquiring additional properties. As part of Metro's Open Spaces, Parks and Streams Bond Measure approved by voters in May 1995, funds were allocated to acquire approximately 1,000 additional acres within the Sandy River Gorge. Land purchases in the Sandy River Gorge are primarily for the purposes of protecting fish, wildlife and scenic resources, and water quality. The Master Plan deals only with the 1,040 acres which comprise Oxbow Regional Park. The current land ownerships, from Dabney State Park to Dodge Park, are illustrated on Figure 2.

Cultural Resources

Prior to the European settlement of the area, the Sandy River area was inhabited by early Native American people. Evidence suggests that Chinook people utilized the areas near the river for seasonal camps related to hunting and gathering food.

In the late 1800's, homesteaders settled on properties adjacent to the Sandy River Gorge for farming and grazing. Other settlers bought land from the O & C Railroad Company. Timber harvest and gravel extraction also were important economic activities in the area.

The Sandy River Rail Line was built in 1909 to service the Bull Run Water system construction project. Recreationalists utilized the transportation to enjoy Dodge Park and the Sandy River until 1931, the year the rail line closed.

The State of Oregon Cultural Resource Inventory has been examined to locate any known archaeological or historic sites within the Oxbow Regional Park property. To date, no cultural resources have been recorded for Oxbow Regional Park or the adjacent properties.

■ Public Involvement

Oxbow Regional Park has been a popular park facility since the early 1960's. Local residents, longtime users, and agencies committed to managing the Sandy River Wild and Scenic River Area are deeply concerned about the future of the park. Meeting the needs and the concerns of these stakeholders as well as those of the general citizenry of the region was the purpose of the following public involvement activities:

- Distribution of an on-site customer survey.
- Creation of a mailing list of local property owners and interested citizens.
- Establishment of an independent Project Advisory Committee; (4) review meetings held, including a site tour to receive appropriate comments and planning input.
- Design Charettes (2) held with stakeholders to determine opportunities, constraints, appropriate uses, level of use and preferred major design approach.
- Citizen outreach with meeting notices and press releases about planning process and meeting times.
- Community meetings (2) to receive input on project direction and concept design. Public testimony and handout questionnaire forms were utilized for public input.
- Meetings with citizens as requested.
- Distribution of draft Master Plan for public review and comment.
- Presentation of the draft Master Plan to Metro Regional Parks and Greenspaces Advisory Committee (citizen testimony invited).
- Presentation of the final draft Master Plan to Metro's Regional Facility Committee (citizen testimony invited).
- Presentation of the final Master Plan to the Metro Council (citizen testimony invited).
- Distribution of the adopted Master Plan to agencies and interested citizens.

Public involvement information, Project Advisory Committee and public meeting summaries are provided in Appendix A.

■ Mission Statement / Project Goals

The following mission statement and project goals were identified by staff, Project Advisory Committee and Charette participants to guide the development of this plan and management of Oxbow Regional Park.

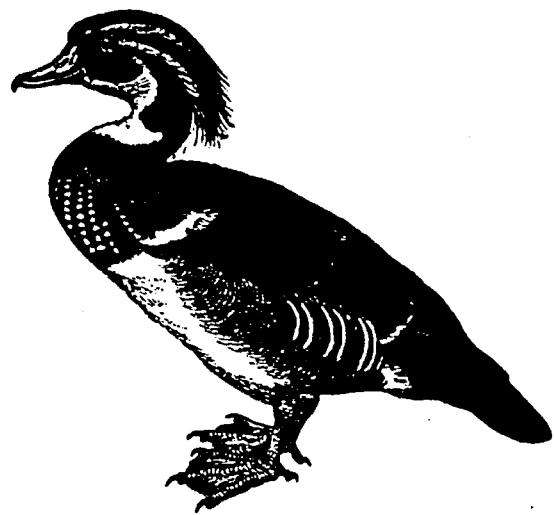
Mission Statement

Oxbow Regional Park is an important component within the larger Scenic Sandy River Management Area and, in this context, the role of the park is to maintain and enhance the natural qualities of the Sandy River Gorge while offering public access for appropriate natural resource dependent recreation and educational opportunities.

Project Goals

- A. Preserve and enhance the park's natural resources to promote:
 - Healthy ecological communities.
 - Diverse wildlife populations.
 - Fish spawning and rearing habitat.
 - Quality settings for educational and recreational opportunities such as picnicking, camping, non-motorized boating, angling, swimming, biking, wildlife observation, equestrian, etc.
- B. Provide appropriate recreational and educational opportunities to promote:
 - High quality recreational experience that is safe, aesthetically pleasing, sustainable and compatible with the natural setting.
 - Revenue generation to help support maintenance and operation of the park's facilities, programs and natural resources.
 - Access to the Sandy River for fishing, water contact (wading, swimming, sunbathing), outdoor education, and to the Sandy River Gorge for non-motorized boating.
 - Visitor awareness, understanding and appreciation of the park's natural system.
- C. Provide infrastructure to achieve:
 - Quality recreational and educational experiences.
 - Efficient operation and maintenance of the facility.
 - Compliance with code requirements.
 - Balanced use throughout the year.
 - Protection of natural resources.

EXISTING CONDITIONS

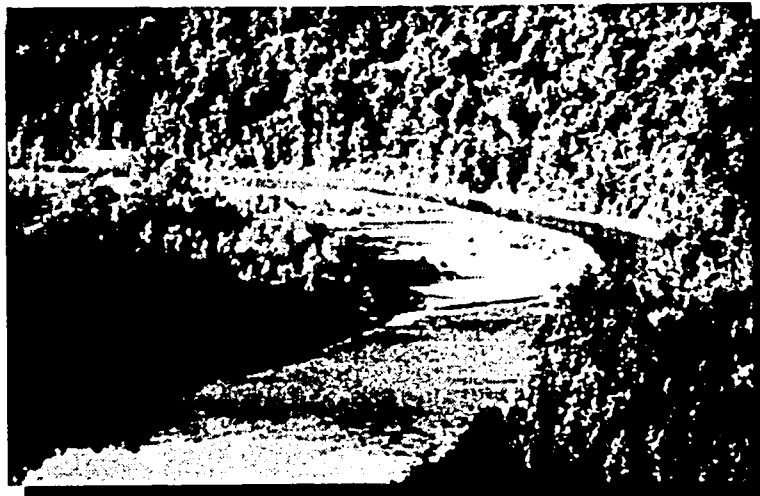




EXISTING CONDITIONS

■ Existing Park

Oxbow Regional Park is located within the Sandy River Gorge in Multnomah County, Oregon. It is approximately 1,040 acres in size and has been identified in the Metropolitan Greenspaces Master Plan as a regionally significant natural area. The Metropolitan Greenspaces Program Data Analysis, concluded that the Sandy River is notable for its numerous oxbows, forested slopes, and native salmon and steelhead populations. Oxbow Regional Park was identified as one of the most natural urban parks in the state; it includes 3.6 miles of designated State Scenic and Federal Wild and Scenic River. The steep forested canyon and the meandering Sandy River forms the unique natural setting of the park. The park itself is made up of properties owned by Multnomah County, Bureau of Land Management, Oregon Department of Fish and Wildlife (ODFW) and Metro. Management of the properties for park purposes by Metro is through lease agreements. In addition, YMCA Camp Collins, The Nature Conservancy and private parties own adjacent parcels (see Figure 3).



■ Land Use

Land uses adjacent to Oxbow Regional Park include residential, agricultural and forest uses. In addition, YMCA Camp Collins operates a youth camp on adjacent property (see Figure 3).

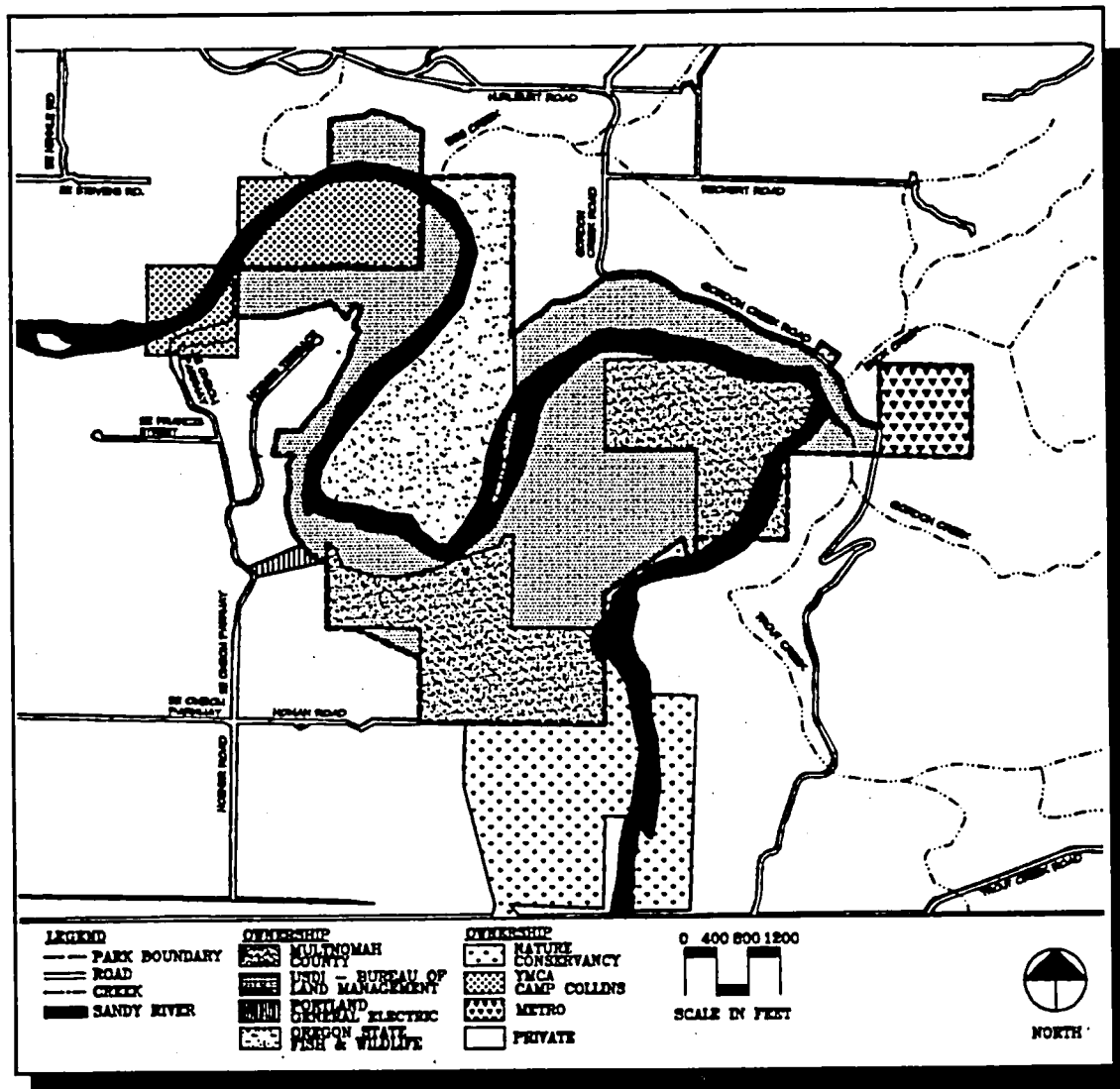


Figure 3 - Local Ownership For Oxbow Regional Park and Vicinity

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■ Zoning

Oxbow Regional Park and the surrounding land areas are controlled by the land use regulations of Multnomah County. The City of Gresham Building Department provides support services to administer code compliance and the issuance of building

permits. The current zoning districts are listed below and are shown in Figure 4.

RR-Rural Residential
MUA 20 - Multiple Use Agricultural (20 acre)
EFU - Exclusive Farm Use
CFU - Commercial Farm Use

The park lies within the Wild and Scenic Sandy River boundary. The areas within these boundaries are designated as lands of Significant Environmental Concern (SEC). This designation applies additional protective measures for this natural resource area. Additional information regarding the land use regulations is included in Appendix B.

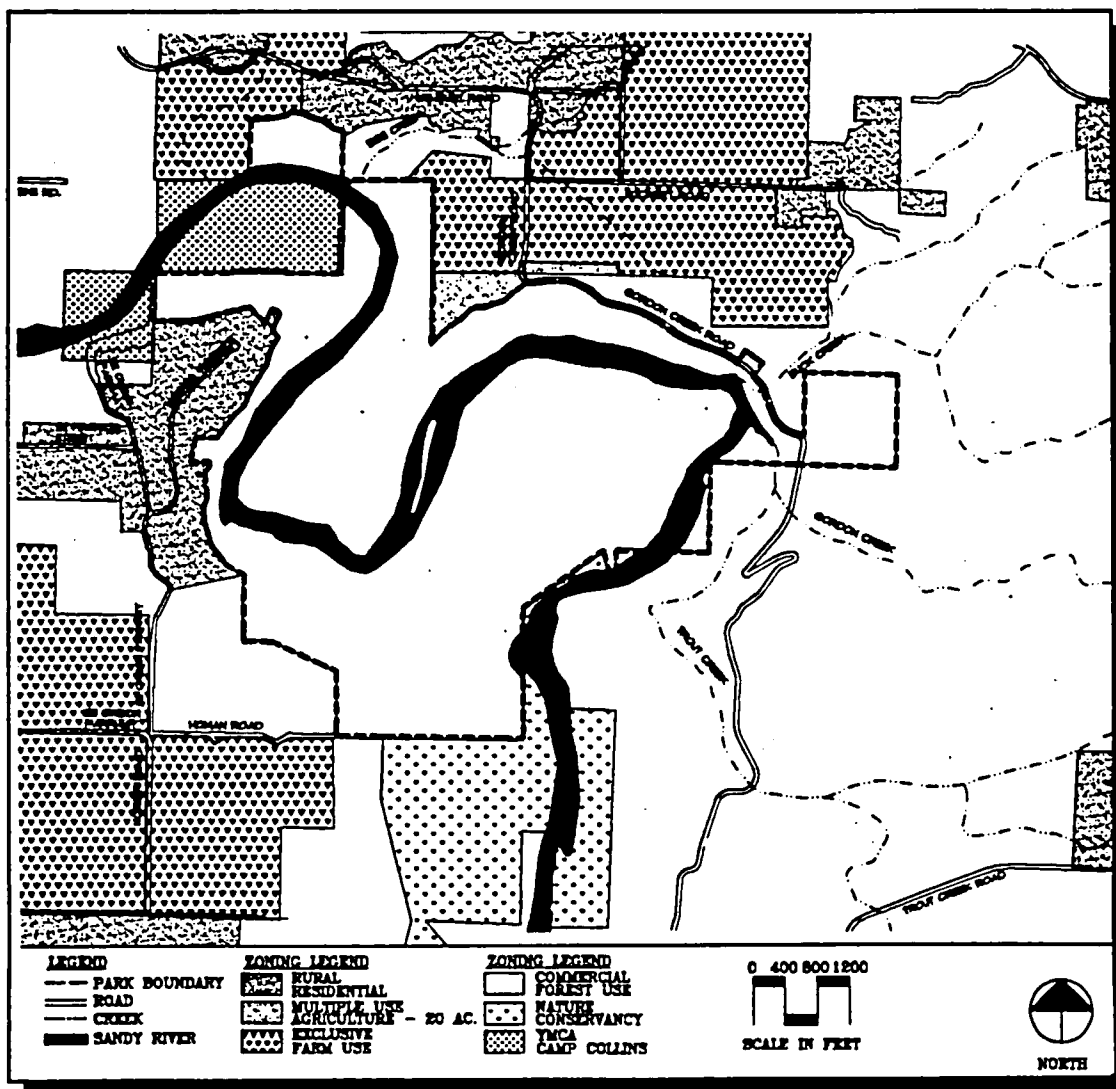


Figure 4 - Zoning For Oxbow Regional Park and Vicinity

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■ Sandy River Hydrology

The Sandy River is located on the west side of the Cascade mountain range. The Sandy River and its tributaries drain an area of 508 square miles. The headwaters originate from the Reid and Sandy Glaciers on the west face of Mt. Hood and flows approximately 55 miles west and north to the confluence with the Columbia River. Oxbow Regional Park is located in the downstream quarter of the watershed between 10 and 13 miles from the Sandy River's confluence with the Columbia River. Annual precipitation ranges from 40-inches at the river mouth to 110-inches in the headwaters of the basin. Major tributaries include the Bull Run, Zigzag, and Salmon Rivers (see Figure 5).

Three significant instream water developments are located within a 15-mile stretch upstream of Oxbow Regional Park: Marmot Dam, owned and operated by Portland General Electric (PGE), a fish hatchery run by ODFW and the City of Portland's municipal water supply facilities. Marmot Dam is a diversion facility, its upstream effects are apparently only a few hundred yards. Up to 600 cubic feet per second (cfs) of water can be diverted from the dam through a series of flumes and tunnels to Roslyn Lake, where it serves a 22,000 kilowatt power plant. The diverted water returns to the Bull Run River and ultimately the Sandy River at Dodge Park, where the Bull Run and Sandy Rivers merge. The fish hatchery located near Cedar Creek, just north of the City of Sandy and downstream from Marmot Dam, has a negligible effect on Sandy River flows. The Bull Run watershed provides the vast majority of water for the municipal needs of the City of Portland and many surrounding communities. Major storage reservoirs and transmission and hydroelectric facilities are located along the Bull Run River.

The upper reaches of the Sandy River and its tributaries flow through rolling mountainous terrain falling 1,600 feet in the first 13 miles. The upper river is characterized by narrow chutes and boulder-choked channels. The middle portion of the river from the confluence of the Zigzag River (River Mile (RM) 42) to Marmot Dam (RM 30), flows through a wider river valley with a moderate gradient. Below Marmot Dam the river descends into narrow and incised bedrock gorges with a moderate to steep gradient of over 40 feet per mile to an elevation of 200 feet at the mouth of the Bull Run River near Dodge Park (RM 18.5).

The lower 12.5 mile designated segment lies 6 miles upstream from the river's mouth and includes the Sandy River Gorge. This 800-foot deep gorge is heavily forested and, although considerably shorter in length, exhibits characteristics similar to the much larger Columbia River Gorge. Within the gorge, the river flows past low elevation old growth forests, riparian woodlands and fern and moss-laden cliffs. At the gorge's lower end, the Sandy meanders through two large "oxbows" and begins to widen, having large gravel bars, shallow riffles and few rapids.

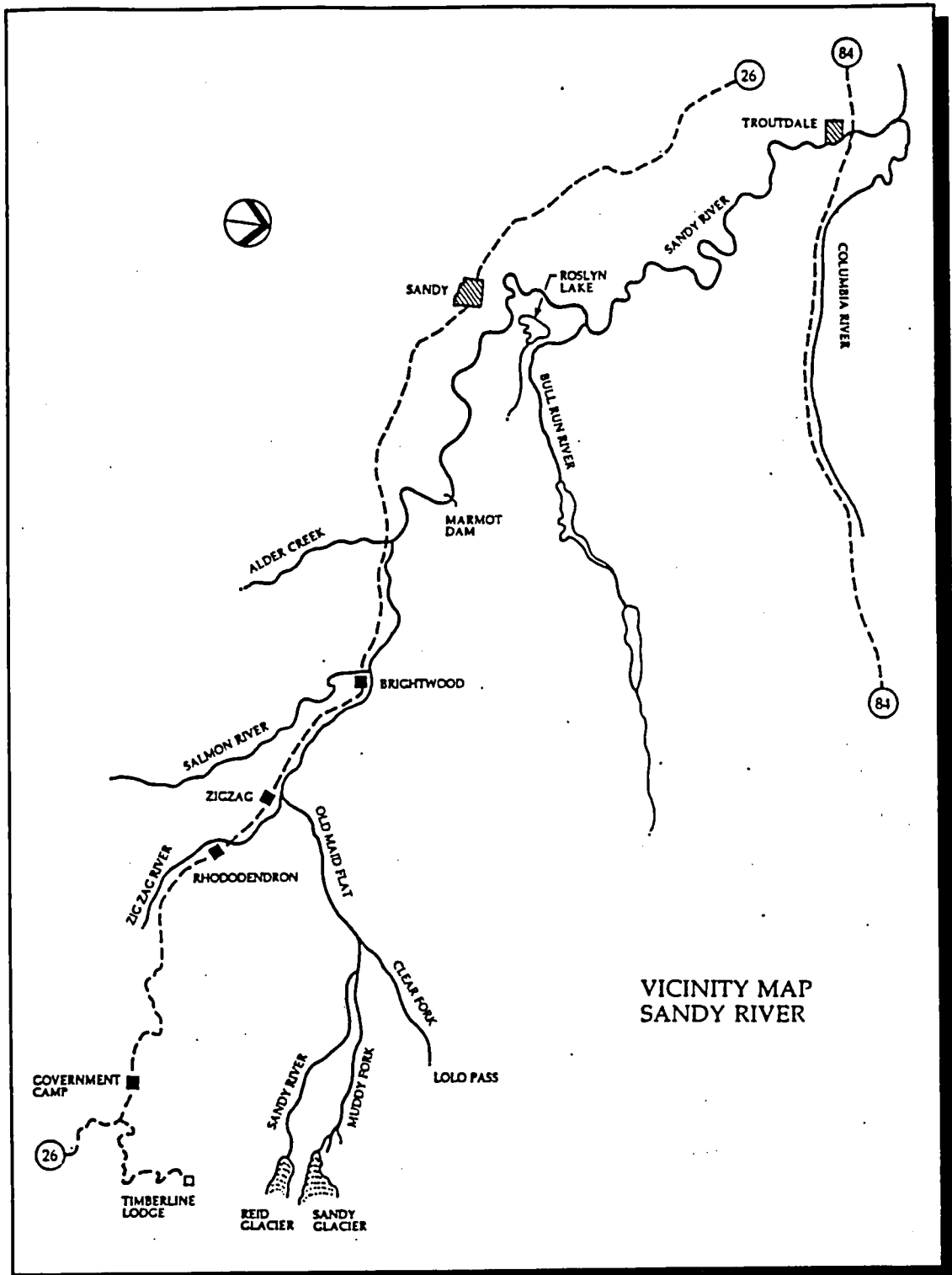


Figure 5 - Sandy River Vicinity Map

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Compliments of Oregon State Highway Division, Parks & Recreation Section
Scenic Waterway Study, 1972

A large supply of sediment is discharged to the river from the steep upper reaches in the watershed and from bank erosion along the river itself. The sediments slowly move down the river and through the river meanders in Oxbow Regional Park during seasonal floods. The slope of the river gradually flattens in a downstream direction and one of the first relatively low gradient river sections occurs along the Oxbow Regional Park river reach. River flows are less capable of moving sediments through these lower gradient stretches of river than through the steeper river reaches. Sediment deposition and bank erosion can become more pronounced in these low gradient areas (see Figure 6).

Lewis and Clark passed by the Sandy River in 1805 during their trip along the Columbia River and noted in their journals the large quantities of sand at the mouth of the river. The river was named Quicksand River and is believed to have been shortened to Sandy River sometime in the 1840's. The river has a rich history of commer-

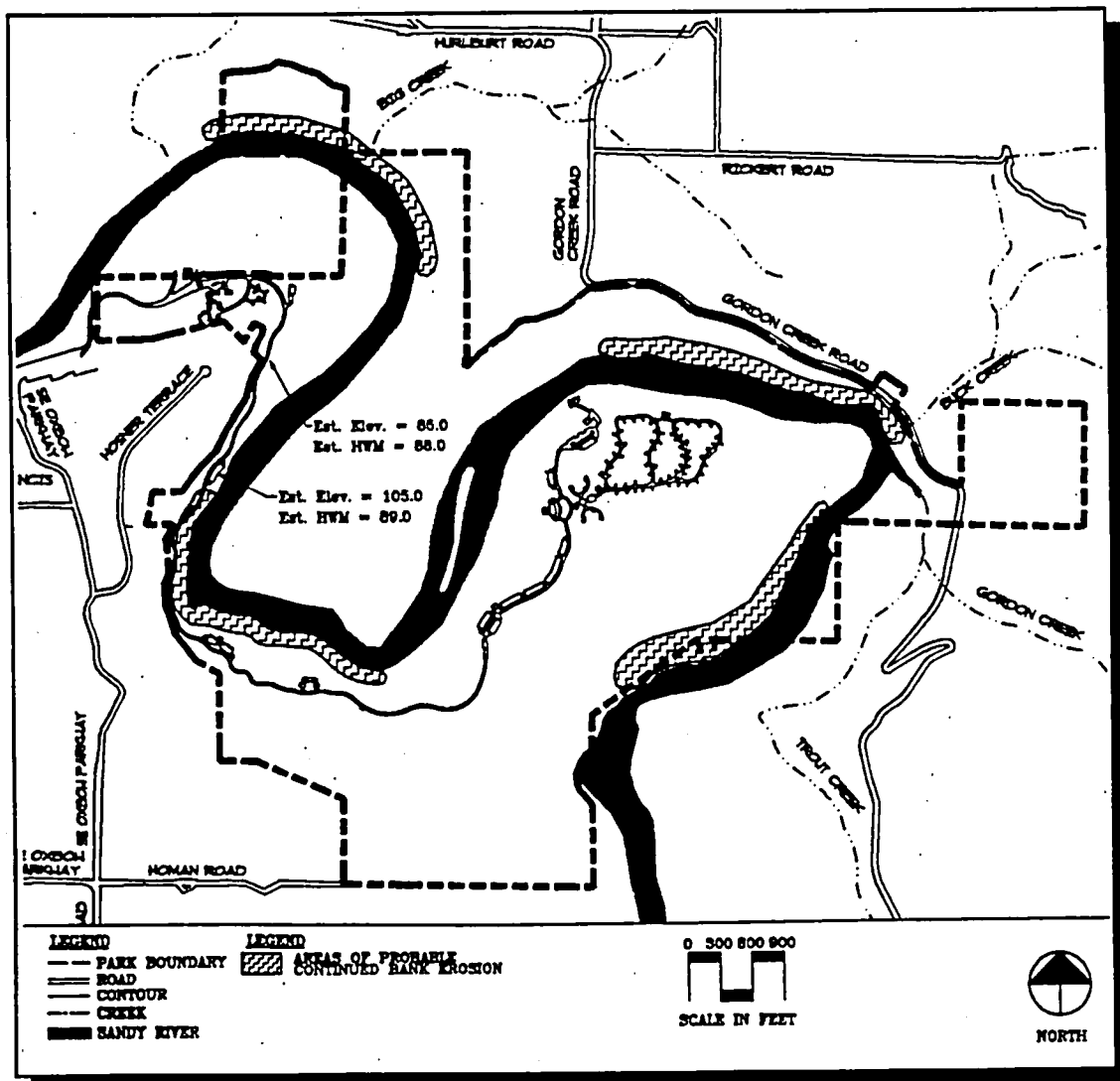


Figure 6 - Areas of Erosion & Flooding In Oxbow Regional Park

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cial smelt fishing from the turn of the century to the 1970's. The torturous meanders, fluctuating flows and swift currents of the river presented continuous challenges to the use of the river for floating logs between the 1890's and the 1920's.

Historic maps, prepared from field surveys (as early as 1855) and aerial photographs (taken in the early 1900's, 1950's and 1970's), show a dynamic river constantly changing course. The February 1996 flood was one of several large floods in this century that have changed the river alignment by eroding and reshaping riverbanks, and moving river sediments downstream. The debris that is deposited on river banks and lowlands after a flood underscores the river's connection to its floodplain.

The dynamic nature of the Sandy River brings special considerations to resource management and enhancement of natural features within the park. Change resulting from erosion and deposition is a natural condition along a large river like the Sandy. Human interventions to protect or enhance natural features must be done in a manner that acknowledges these processes and respects the historic extent of flooding and river channel changes within the park. The river serves as the primary attraction for public recreation in the park. Therefore, park facilities built for river access and in floodplain areas should be implemented in a way that respect and take into consideration the inevitable changes and natural power of the river.

■ Geology

The geologic conditions of Oxbow Regional Park and the lower Sandy River typify glacial and volcanic deposition and activity found west of the Cascade Range (BLM, 1992 & Peck, 1960). At least two million years ago, as the Cascade Range steadily uplifted, the Sandy River carved through alluvial deposits to expose layers of sediment, volcanic ash and lava belonging to the four major formations found from Dodge Park to Dabney State Park (see Figure 7) (BLM, 1992). Oxbow Regional Park and the Sandy River Gorge contain significant geological formations including volcanic deposits from the Old Maid Eruptive Period which occurred from 1760 A.D. to 1810 A.D.. (BLM, 1992 & Cameron and Pringle, 1991) From the last glacial period (about 12,000 years ago) to present there have been three major eruptive periods: the Timberline Eruptive Period (1800 to 1400 years before present), the Zigzag Eruptive Period (600 to 400 years before present) and the Old Maid Eruptive Period (1760 A.D. to 1810 A.D.). Deposits from all three periods are found along the Sandy River, but the Sandy River Gorge contains very thick deposits from the most recent period, the Old Maid. (BLM, 1992) During the eruptions of the Old Maid Period, lava fell onto the slopes of Mount Hood and mixed with snow and ice and produced lahars (mudflows) which entered the headwaters of the White, Salmon, Zigzag and Sandy Rivers. These lahars deposited large amounts of debris which immediately began to be eroded and transported downstream as sediment. This sediment filled the Sandy River Gorge to a depth of 45 feet. There are remnants of this valley fill in the upper terraces of Oxbow Regional Park.

Three bedrock formations are exposed within the park boundaries; these are, from oldest to youngest: The Sandy River Mudstone formation (SRM); the Troutdale formation (TF) and the Estacada formation (EF). Below an elevation of approximately +140 feet above mean sea level (MSL), the park area is covered with recent alluvial deposits, slope colluvium and landslide debris. In the following paragraphs, each of the geologic units is described sequentially by age, beginning with the oldest unit.

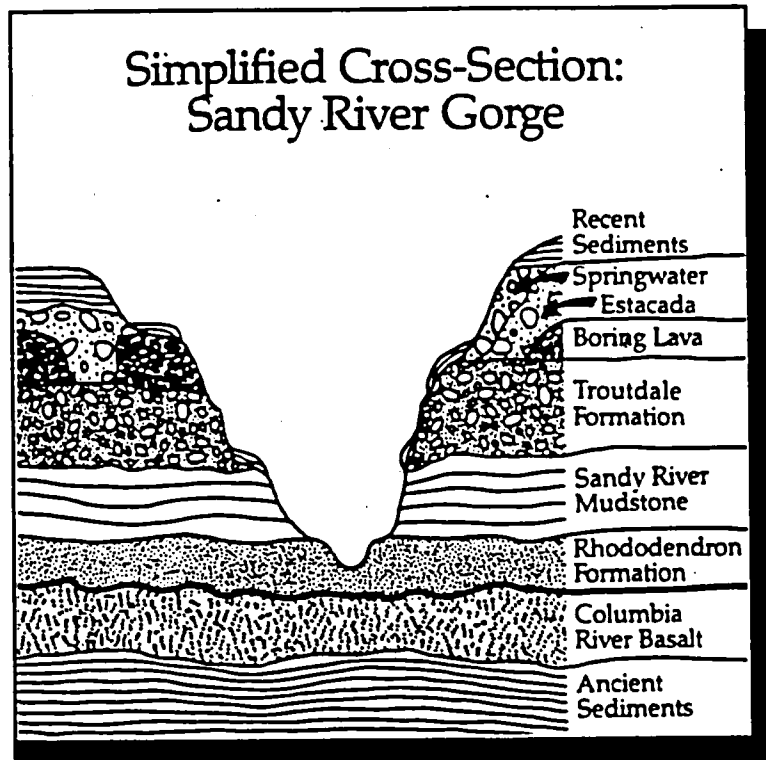


Figure 7 - Geologic Cross-Section of the Sandy River Gorge

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Map Compliments of Bob Ratcliffe,
Bureau of Land Management - Salem District

Sandy River Mudstone (SRM)

The Sandy River Mudstone (SRM) is exposed at the site below the following approximate elevations: +200 feet MSL in Sections 10 (SE corner) and 15; slightly higher (elevation +250 feet MSL) in Section 14; and slightly lower (elevation +150 to +175 feet MSL) in the eastern portion of Section 10. The variation in elevation is due in large part to the 2% westerly dip of the formation; erosion of the original surface and covering by colluvium and slide debris may also obscure the top of the SRM. The thickness of the SRM is estimated at 400 feet in the Oxbow Regional Park area based on a water well log at YMCA Camp Collins. The greatest exposed thickness

of the SRM is between +200 and +300 feet MSL at a location 2 to 3 miles southeast of the park in the valley of Bear Creek.

The Sandy River Mudstone consists mainly of lake-deposited beds of silt or very fine sand. Hence, the units comprising the formation are classified as mudstone, siltstone, claystone and very fine sandstone. A thin lapilli tuff (a consolidated pyroclastic rock with particles in the 2 to 64 millimeter diameter range) exists about 100 feet below the top of the formation. Because the SRM is relatively impermeable, it forms a barrier to downward percolating groundwater; and the faces of most bluff exposures are wet throughout the year.

Relatively rapid weathering of the SRM causes the unit to be susceptible to slumping (rock falls and slope movement or landsliding). That condition resulted in several landslides in the park last winter. The weathering and slumping causes undermining and periodic slumping of the overlying Troutdale formation. Hence, considerable slide debris with numerous cobble and boulder sized rocks is present along the toe of the slopes in the park.

Troutdale Formation (TF)

The Troutdale formation (TF) overlies the SRM and the top of the formation extends to as high as approximately elevation +600 feet MSL in the Oxbow Regional Park vicinity. Its maximum thickness within the park is approximately 450 feet; the minimum occurs below the Estacada formation on the top of Alder Ridge. The TF is comprised of sandstone and conglomerate formed from deposits made by a great piedmont fan from the Pleistocene age (approximately 2 million years before present).

The Troutdale formation, particularly the sandstone and conglomerate units, is well cemented; the cementing agent consists mainly of clay minerals. Some of the sandstone layers, because of their composition, decompose and weather relatively rapidly. Hence, the TF is subject to localized slumping and rock falls.

Estacada Formation (EF)

The Estacada formation (EF) is present in the park below a 2,000 foot long by 700 to 800 foot wide portion of Alder Ridge; it is also present at the top of the park ridge on the north side of the Sandy River. This formation is approximately 100 feet thick and generally consists of sand in the lower half and cobble gravel and bouldery cobble gravel in the upper portion. The formation is estimated to be late Pleistocene in age (i.e. more than 8,000 years old). Due to the granular nature of the formation, and its relatively young age, slumping or landsliding in the formation is rare except as the result of slumping in the underlying Troutdale and Sandy River Mudstone formations.

Recent Deposits

Below approximately elevation 100 feet, the park area is covered by deposits of recent (Holocene) age. These recent deposits consist mainly of silt and granular soils deposited by the Sandy River, i.e., alluvial deposits. Near the toe of slopes that extend above elevation 100 feet are deposits resulting from deterioration of the bed-rock formations above. These include colluvium and landslide debris deposits consisting of silt through boulder size material.

■ Soil Conditions

Based on Soil Conservation Service (SCS) maps for the site area, near-surface soils (i.e., the upper 5 to 6 feet) in Oxbow Regional Park are predominately silty sand and sand. The upper 12 to 15 inches is typically very dark brown and very dark grayish brown silty fine to medium sand; below 15 inches is dark gray coarse and medium sand to a depth of 60 inches or more. Rapid permeability and slight erosion hazard further characterize the soil. Adjacent to the Sandy River are deposits of well rounded sand, gravel, cobbles, stones and boulders derived from basalt or andesite. Deposits of slope colluvium and landslide debris are present on the steep slopes along the river. These are well drained soils consisting of, in general, approximately 12 inches of very dark brown to dark grayish brown sandy silt or clayey sandy silt overlying dark yellowish brown to brown mixture of sand, gravel, cobbles and boulders (SCS reports indicate that 65 percent of this layer is gravel and cobbles). The SCS also indicates that permeability in the colluvium and landslide debris materials is moderate to slow, that runoff is slow to rapid, and erosion hazard is slight to high. Another comment by the SCS report is that these deposits are subject to slope movement during high rainfall periods.

Site Reconnaissance Observations

Following the February 1996 flood, park staff observed 22 landslides in the park; 3 of major proportions. The major landslides occurred in the Troutdale and Sandy River Mudstone formations (see Figure 7 & 8). Slide #1 is located on the maintenance access road to Alder Ridge and appears to be associated with a natural process. Slides #2 and #3 are located 0.75 road miles in from the park entrance station. Slide #2 involves the park road and extends toward the river. Slide #3 is adjacent to #2 on the north and extends considerable distance upslope.

Slide #3 occurred in both the Troutdale and Sandy River Mudstone formations and may have been partly the result of concentrated stormwater drainage from uphill sources. The slide area has experienced some erosion and sloughing since the remedial measures were taken but does not appear to threaten the park road at this time. Surface drainage improvements completed to date at this location will reduce or eliminate the kind of erosion damage that has occurred in this area below the road.

Slide area #2 adjacent to Slide #3 is nearly 250 feet wide and extends 10 to 15 feet (at maximum) above the road. It appears that the road movement (i.e., the slide) is related to poor surface water drainage from the area uphill of the slide and the fact that this section of the road is on a man-made fill up to 12 or 14 feet thick constructed on what appears to have been a relatively steep sloping original ground surface. Park staff confirmed that several breaks in the park's main water line have occurred in this area over a period of 10 years.

There were no signs of other unstable slope conditions (landslides) on or immediately adjacent to the park road. In addition, the erosion of slopes above and below the road has not been a significant problem except near Slide #3. Although erosion by the Sandy River is an on-going geologic process, there do not appear to be any

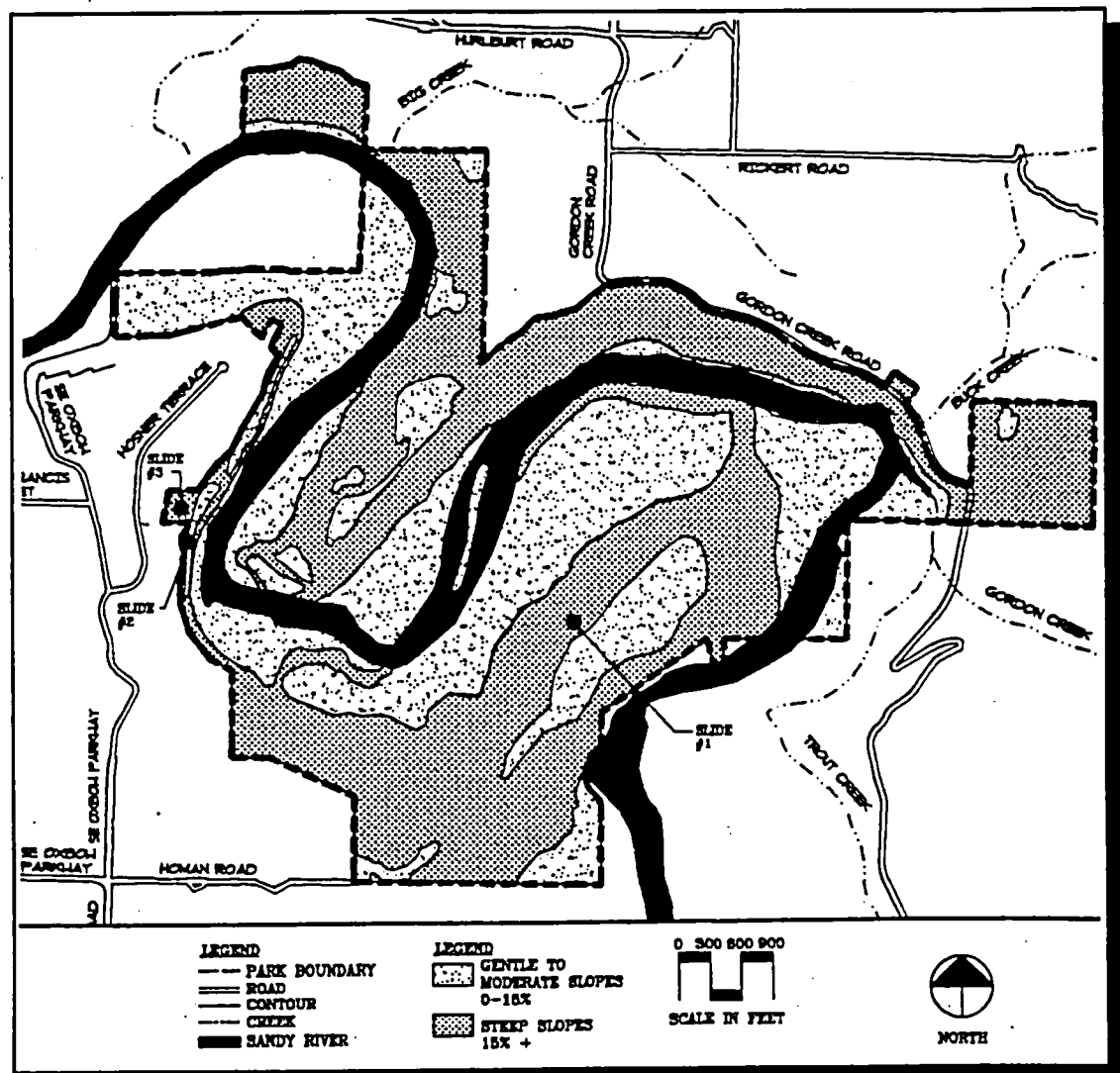


Figure 8 - Land Slides and Slope Analysis Map For Oxbow Regional Park

© Metro

river slope areas near the park road that would be considered active at this time.

An area of overhanging Troutdale formation rock is visible across the access road from the park pump house at an estimated elevation of 150 feet MSL. The overhang appears to be above the contact between the Troutdale and Sandy River Mudstone formations.

Just outside the park, an area of hillside above the road is active from time to time. On occasion, slides in this area have blocked access to the park and YMCA Camp Collins.

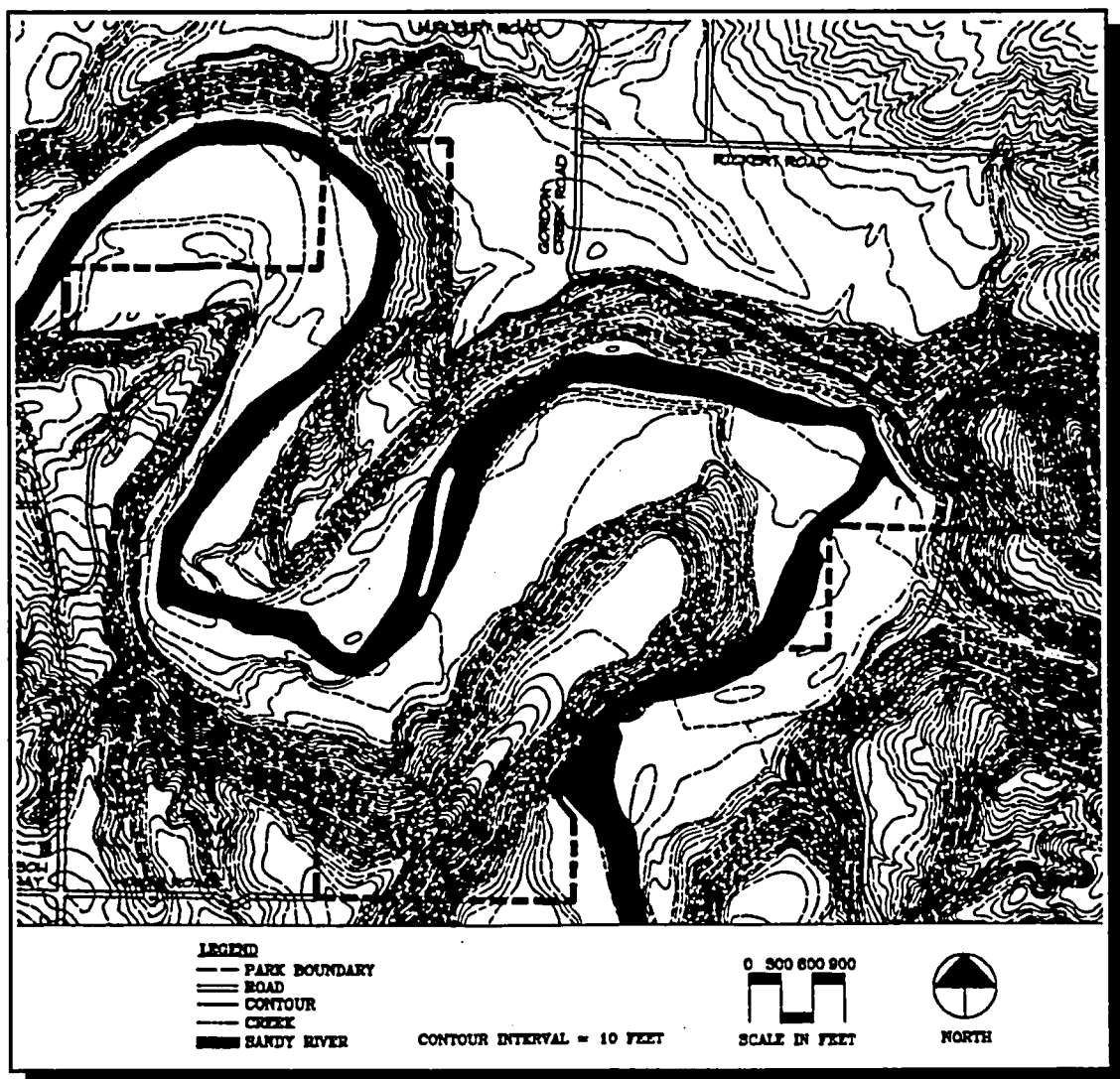


Figure 9 - Slope Map For Oxbow Regional Park and Vicinity

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■ Vegetation Communities

Six primary vegetation types or seral stages currently exist within Oxbow Regional Park: late seral western hemlock forest (ancient forest), mid-seral western hemlock forest, early seral western hemlock forest (red alder-bigleaf maple forest), meadow, flood plain riparian forest and altered rural residential/agricultural sites. Figure 10 illustrates the location of these vegetation types and seral stages within the park boundaries. Appendix E provides scientific names for the plant species discussed below and the full technical report.

Late Seral (Ancient) and Mid-Seral Western Hemlock Forests

Late seral, 300+ year old western hemlock forest covers 160 acres of the north facing slopes of Oxbow Regional Park on the south side of the Sandy River from approximately the pump house east to the existing group picnic areas A and B. Predominant tree species in this forest include Douglas-fir, western hemlock and western red cedar. A smaller area of late seral forest occurs farther to the east, on the southern edge and south of the campground. Mid-seral western hemlock forests (approximately 100 years of age) can be found on steeper northwest and southeast facing slopes, on broad flats on the south side of the Sandy River, and on steeper west, southeast and south facing slopes on the north side of the Sandy river not occupied by hardwood flood plain riparian forest or red alder-bigleaf maple forest.

The late and mid-seral forests of Oxbow Regional Park consist of a complex network of the western hemlock/swordfern-oxalis and western hemlock/dwarf Oregon grape/swordfern plant associations (Halverson et al. 1986). These plant associations generally represent warm, moist, low to mid-elevation sites within the western hemlock zone. In general, the western hemlock/dwarf Oregon grape plant association is found on steep and somewhat unstable slopes, and the western hemlock/swordfern-oxalis plant association is found on flatter slopes, alluvial areas or moist toe slopes.

Early to Mid-Seral Western Hemlock Forest (Red Alder-Bigleaf Maple Forest)

Red alder-bigleaf maple forests occur on upland, northwest facing slopes and ridges south of the Sandy River, and on upland west and south facing slopes north of the River within Oxbow Regional Park (see Figure 10). These forests represent an early to mid-seral, harvest-initiated stage of the western hemlock/swordfern-oxalis and western hemlock/dwarf Oregon grape/swordfern plant associations. They are mostly dominated by an overstory canopy of red alder and bigleaf maple, with seedling to pole-sized Douglas-fir, western hemlock and western red cedar subordinate in the understory. North of the Sandy River, some of these sites have greater conifer development, and may have early mature Douglas-fir, western hemlock and/or western red cedar individuals co-dominating the overstory along with red alder and bigleaf maple. Understory shrubs and herbs are similar to those found in later seral stages, as described above.

Upland Meadow

A 10 acre upland meadow known as Elk Meadow is located on Alder Ridge in the south-east portion of the park (see Figure 10). It was created in 1995 through clearing and grass seeding, and is surrounded by red alder-bigleaf maple forests.

Flood Plain Riparian Forest

Riparian vegetation occupies the flood plains within the park. Vegetation on these sandy, alluvial, frequently disturbed sites includes: black cottonwood, Douglas-fir, western red cedar, red alder, Oregon ash, bigleaf maple, willow and grass species, and equisetum. Introduced exotic/noxious plant species include scotch broom, Himalayan blackberry, reed canary grass, Canadian thistle, and more recently, Japanese knotweed.

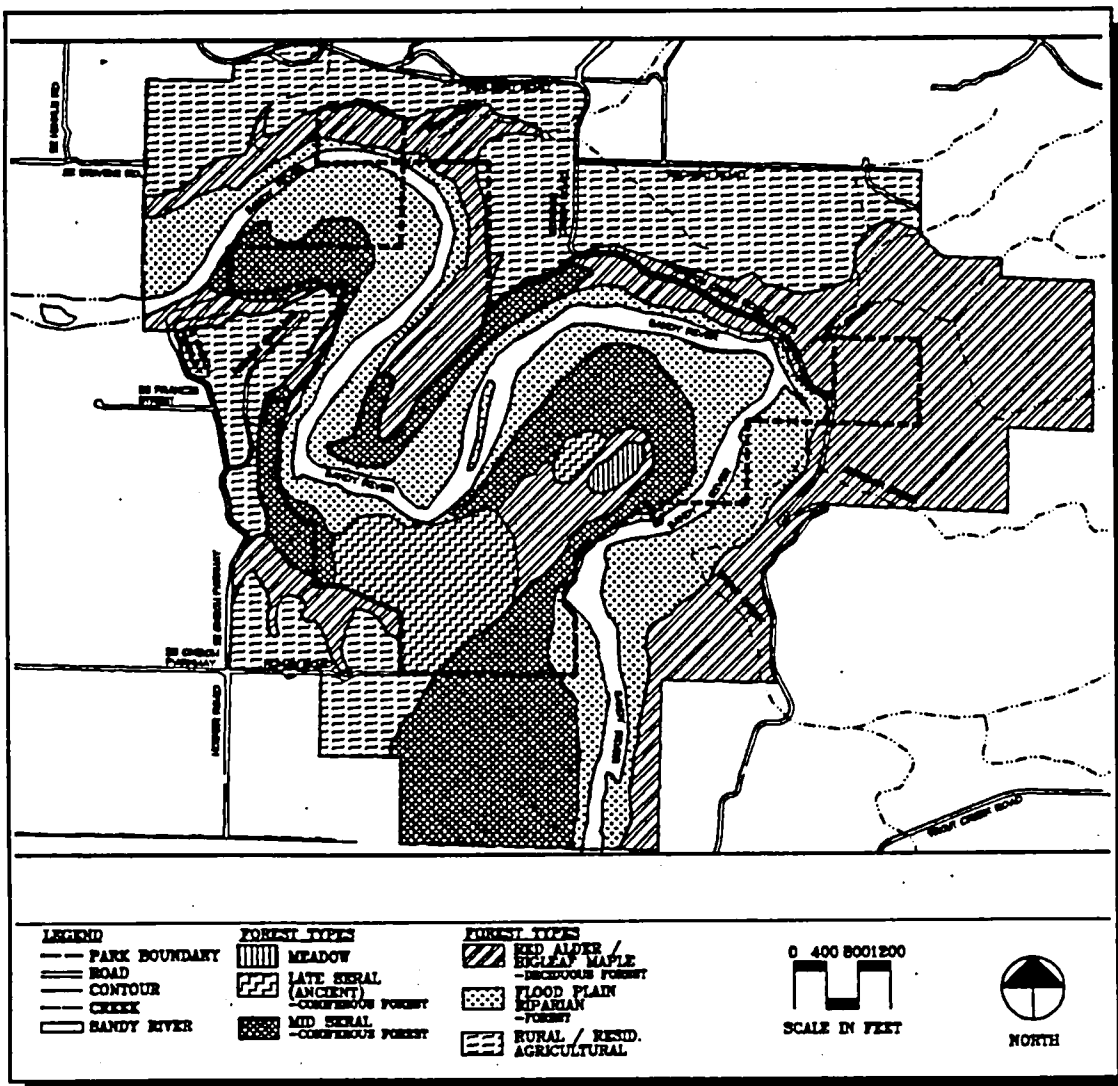


Figure 10 - Vegetation Communities For Oxbow Regional Park and Vicinity

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■ Fish and Wildlife Habitat and Usage

Natural Area and Wildlife Habitat Quality

The Sandy River Gorge offers relatively protected, natural habitats in an area and region where disturbance factors to wildlife are high (BLM, 1992). The quality of a natural area as habitat for wildlife species is very much linked to its size. Wildlife require structure in their habitat, including large trees, snags, downed and dead wood, water, and a wide range of plant species at all canopy levels (Ambuel and Temple, 1983). Within a natural area, each wildlife species has a unique set of habitat requirements, an ecological niche consisting of preferred conditions within the physical environment as well as with its interaction with other species. In order to maintain viable populations of wildlife species, ample resources and adequate environmental conditions must be present to provide for reproduction, foraging, resting, cover and dispersal of animals at a variety of scales across space and time (Morrison, Marcot and Mannan, 1992). Sufficient amounts, types, and arrangements of resources must provide for the needs of reproductive individuals on daily, seasonal and yearly bases. Habitat also must be well distributed and connected over a broad geographic area to allow breeding individuals to interact within and among populations.

The diversity and quantity of habitat types within Oxbow Regional Park provides suitable habitat conditions for most fish and wildlife species found in northwestern Oregon between the Willamette Valley and the western crest of the Cascade Mountains. In addition, the park's 1,040 acres are connected to the larger landscape of the Sandy River watershed, linking Mt. Hood to the Columbia River.

The resources within the park boundary provide the requirements for many of its wildlife residents and seasonal visitors. However, some of the medium and large size mammals that have been observed in Oxbow Regional Park, (i.e. elk, bobcat, cougar and black bear) have larger home ranges and are dependent upon connections to the larger landscape.

Fisheries

Fish habitat in the Sandy River system is considered good to excellent. The Sandy River, with its cold water and substrates of gravel and large-sized cobbles, provide ideal conditions for the spawning and rearing of anadromous and resident fish species. Major tributaries, including Gordon and Trout Creek, also provide important additional spawning habitat (BLM, 1992). This quality of habitat supports anadromous fish species that provide near year-round angling opportunities for anglers in the Oxbow Regional Park area. In addition, some resident species are available year-round to provide angling opportunities for persons who just "want

to catch a fish". Table 1 includes a list of fish species known or believed to be present in the Sandy River.

The Oregon Department of Fish and Wildlife (ODFW) has managed the Sandy River in a manner that maximizes an angler's opportunity to catch a salmon or steelhead. Hatchery fish, with different timing than the River's wild fish, have been introduced to increase availability. Hatchery planting has been shifted to the lower river in places with easy public access (such as Oxbow Regional Park) which results in a concentration of returning fish in those same areas.

Winter steelhead, consisting of both wild and hatchery stocks, are probably the most popular game fish in the Sandy River. The Sandy River has been consistently ranked as one of the top producers of winter steelhead in the state of Oregon. Oxbow Regional Park is a primary angling area for this species. The months of December

Table 1
Fish Species Known or Believed to be Present in the Sandy River

Common Name	Scientific Name
Pacific Lamprey	<i>Entosphenus tridentatus</i>
Sea Run Cutthroat Trout	<i>Oncorhynchus clarki clarki</i>
Steelhead (Rainbow) Trout	<i>O. mykiss</i>
Coho Salmon	<i>O. kisutch</i>
Chinook Salmon	<i>O. tshawytscha</i>
Sucker spp.	<i>Catostomus</i> spp.
Northern Chiselmouth	<i>Aerchellus alutaceus</i>
Northern Squawfish	<i>Ptychocheilus oregonensis</i>
Dace	<i>Rhinichthys</i> spp.
Carp	<i>Cyprinus carpio</i>
Sculpin spp.	<i>Cottus</i> spp.
Columbia River Smelt	<i>Thaleichthys pacificus</i>
Brook Trout	<i>Salvelinus fontinalis</i>
Mountain Whitefish	<i>Prosoplum williamsoni</i>
American Shad	<i>Alosa sapidissima</i>

Information Source: The Oregon State Fish and Game Commission

through February are generally recognized as prime winter steelhead times at Oxbow Regional Park. A boat ramp and four miles of river frontage within the park boundaries provide abundant angling opportunities. Total run size averaged 11,670 fish between 1978 and 1990, falling below 8,900 fish only twice. Harvest averaged 8,716 fish during the same period. From 1991 through 1994, the total run averaged only 6,361 fish. Harvest declined to an average of 4,522 fish during this period.

Summer Steelhead

Summer steelhead are an introduced species in the basin. The upper Sandy River produces a higher catch of this species than the Oxbow Regional Park area because these fish enter the river system beginning as early as March and spend months in the upper watershed before spawning in the fall. During good run years, summer steelhead fishing in the park provides excellent recreation as the fish make their way upstream. A majority of the summer steelhead pass through the park during the months of April through June. However, reports of summer steelhead being caught in the park throughout the summer and into the fall is not uncommon. The ten year average harvest for summer steelhead for run years 1984-1983 is 4,723. However, harvest has declined recently which parallels declining trends in adult returns.

Fall Chinook

Fall chinook are a naturally reproducing mix of both wild and hatchery stocks. These stocks have some recreational value for anglers but they provide a far more important purpose at Oxbow Regional Park for their educational value as observable wildlife. These fish enter the park area in September and usually begin spawning in shallow riffles by the first of October. Five areas within Oxbow Regional Park are closed to angling to protect the fish. A large percentage of park visitation during the last half of September and all of October is dependent upon salmon viewing opportunities. This run has remained stable the last several years with an average of 1,500 fish returning each year.

Spring Chinook

Spring chinook are indigenous to the Sandy River but the current stock inhabiting the River is believed to be mostly of hatchery origin. Peak movement of spring chinook into and through Oxbow Regional Park occurs from April through June. These fish provide some of the best sport because of their size and renowned fighting ability. This fishery has grown in recent years after introduction of the Willamette stock into the system. The estimated annual return to the Sandy River averaged 2,056 for run years 1980-84, 2,005 for run years 1985-89 and 5,118 for run years 1990-94. This is one species that seems to be on the increase.

Coho Salmon

Coho salmon, consisting of a late returning native stock and an early returning hatch-

ery stock, are currently on a severe decline. When the return numbers were high this was an extremely popular fishery, contributing significantly to Oxbow Regional Park visitation especially during the month of September. Coho salmon angling on the Sandy River has been closed for the past two years. Escapement of the late returning winter stock has declined to an average of 784 for the five year period 1991-95. Only 220 fish returned in 1993. Historically, 10,000 to 15,000 wild coho returned to spawn each fall. The early returning run of hatchery coho has also been hard hit. Less than 500 fish have returned to the hatchery each of the past two years, less than adequate to meet egg taking goals.

Resident fish such as rainbow trout and cutthroat trout are native to the system but are available in extremely limited quantities in the Oxbow Regional Park area. Northern chiselmouth suckers, northern squawfish and mountain whitefish provide some recreational opportunities, especially for the younger visitor.

As the above discussion indicates, there has been a decline in the numbers of most species of salmon and steelhead returning to the Sandy River over the last several years. This decrease mirrors the decreases seen in runs returning to rivers throughout much of the Northwest. Figure 11 compares the amount of returning winter steelhead to the lower Sandy River between the months of December and February to the number of cars entering the park during that same time. Car counts entering Oxbow Regional Park during the months of December through February was 10,820 in run years 1978-82 when winter steelhead returns annually averaged about 13,050.

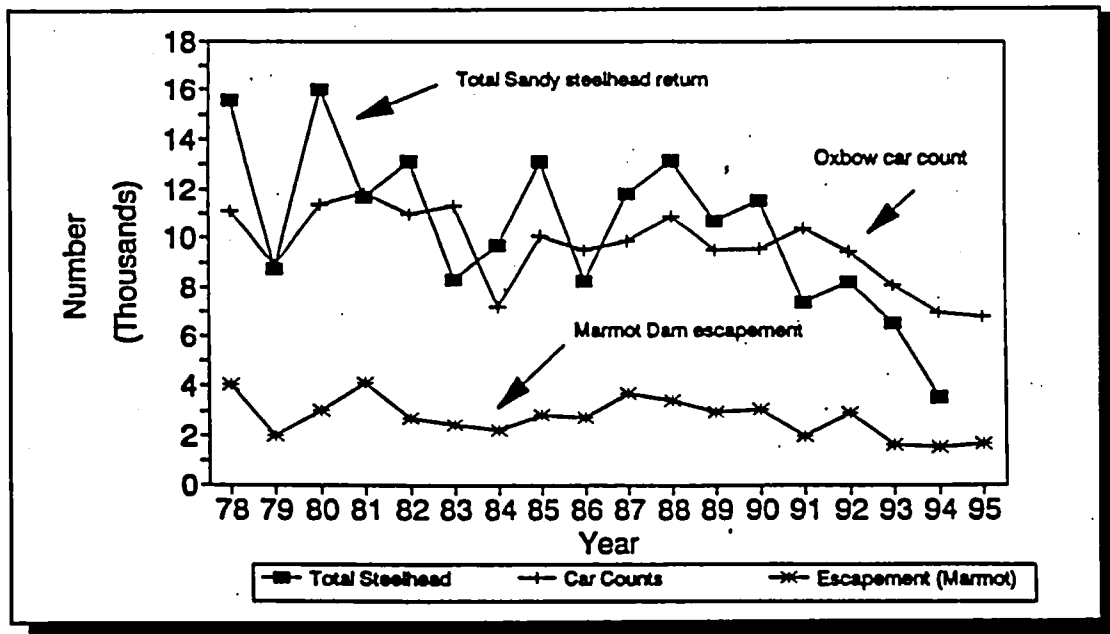


Figure 11 - Oxbow Regional Park Car Counts and Total Winter Steelhead Returns to Sandy River
 © Metro
 Compliments of Oregon Department of Fish and Wildlife, Fish Management Plan, 1997

However, when the average annual winter steelhead return declined to 7,372 during run years 1991-93 the average December through February car count declined to 6,859. The total winter steelhead returns for 1994-95 are presently unknown, but preliminary reports indicate a significant decline. There are relatively few public access locations for salmon and steelhead angling in proximity to the Portland metropolitan area and the angling season is limited to certain times of the year. Angling activities for salmon and steelhead appears to be affected by run strength; that is, more anglers head for the river when they know a strong run of fish has returned. A return to healthy numbers of salmon and steelhead is of great importance at Oxbow Regional Park since it is one of only three public access portals on the lower Sandy River serving the nearby metropolitan area.

Wildlife Species, Habitat Types and Vegetation Communities

Habitat types found in the study area include deciduous, coniferous and mixed forest in various successional stages, riparian, river and upland meadow. Unlike the primarily edge forest habitats of much of the Metro region, Oxbow Regional Park has large areas of contiguous forest creating large patches of interior forest which, in turn, creates specific habitat for some wildlife species.

Table 1 shows wildlife groups and their preferred vegetation communities within Oxbow Regional Park. Generalized wildlife groups were developed to represent the habitat requirements and activities of the bird, mammal, reptile and amphibian species found or expected to occur within the park. Species with similar habits were organized together in groups.

Appendix F provides a list of the species likely to be found within Oxbow Regional Park. In addition to species name, the occurrence level, time of year found in the park and activities are also shown. This list may not include all the wildlife species that have been observed in the park.

Many of the wildlife species observed at Oxbow Regional Park utilize more than one of the habitat types or vegetation communities described in this section. The following are descriptions of each of the habitats types and the wildlife species most commonly associated with them.

Riparian Forest and Floodplain

The Sandy River provides excellent anadromous fish habitat. In addition, the river, riparian zone and canyon provide hunting and nesting habitat for hawks, owls, eagles, osprey and heron. Kingfisher, mergansers, dippers and other waterfowl and shorebirds are common. River otter, mink, flying squirrel, beaver, raccoon, coyote, fox, and black-tail deer are also common along the Sandy River Gorge. Elk, bobcat, cougar and black bear are occasional visitors to the Sandy River and its adjacent

riparian habitats, probably using the river as their travel corridor.

Buck and Gordon Creeks, two of the healthiest creek systems in the metropolitan area, enter the Sandy River within Oxbow Regional Park. They provide important corridors which link Oxbow Regional Park and the Sandy River Gorge to vast public lands on Larch Mountain. Trout, steelhead and salmon are known to inhabit their cool shaded waters. Deer and elk are common along the creeks, as well as dippers in swifter sections of the stream. Mergansers, kingfishers and woodpeckers are commonly observed.

Western Hemlock Forest

The late and mid seral hemlock forests of Oxbow Regional Park are large enough blocks of habitat to provide some interior forest habitat. In the Pacific Northwest, "edge effect" is commonly assumed to occur 150m (500 ft) into forest patches from a forest-opening interface (Diaz and Apostol 1992). That part of the forest not influenced by edge is considered interior forest habitat. Examples of species tending to occur in portions of forest far from edges (interior areas) or those requiring large trees, snags, dead downed material include the varied thrush, owls, pileated woodpeckers, salamanders and newts. Bear, cougar and other medium to large size carnivores also utilize this vegetation community.

Red Alder-Bigleaf Maple Forest

The red alder-bigleaf maple community within Oxbow Regional Park is in an early successional phase and will gradually change to mixed coniferous forest and eventually a conifer dominated forest. Edge loving species that live in a variety of habitats, which feed within the upper and mid-canopy, and ground feeders are found in the red alder-maple forest. Many of the common song birds are found in this habitat including flycatchers, wrens, towhees, warblers and orioles.

Upland Meadow

This vegetation community was recently created at the park. It offers an open grassland, previously limited within the park. Elk and deer, small mammals, raptors and passerines use this area to forage for food.

Considering the amount of human use experienced by the park, the overall ecological condition of the vegetation and associated wildlife species within the park appears to be healthy. There is a diversity of seral/ structural stages providing horizontal landscape diversity while maintaining a block of ecologically significant late seral forest (ancient forest). However, exotic/noxious plant species occur in all areas of the park. In some areas such plants may physically displace native species, reducing native biodiversity. The exotic/noxious plants that have been observed in the park are identified in Appendix E.

Table 2
Wildlife Groups and Significant Habitat Types

Wildlife Group	Late/Mid Seral	Alder-Bigleaf Maple	Riparian	Meadow
Waterfowl	N	N	P	N
Cavity Makers	P	S	L	N
Cavity Users	P/S	S	S	N
Open-Area Raptors	L	L	L	P
Forest Raptors	P	S	L	N
Forest Dependent				
-Canopy Users	P	S	L	N
-Midstory Users	P	S	S	N
-Understory Users	P	P	S	N
-Edge Dependent	S	P	P	N
-Interior Dependent	P	L	N	N
Meadow Dependent				
-Ground Users	N	N	L	P
Small Mammals	S	S	P	S
Small Carnivores	P	P	P	L
Large Carnivores	P	S	P	N
Ungulates (Hooved Mammals)	S	P	P	S
Bats	P	P	P	N
Amphibians	P	P	S	L
Reptiles	L	L	S	P

P-Primary Habitat
S-Secondary Habitat
L-Limited Use
N-Not an Important Component

■ Existing Park Use

The primary reasons people visit Oxbow Regional Park are to relax and enjoy the outdoors. The features that most attract the visitor to the park are the river, the scenery and the natural setting. Currently, the park offers a broad spectrum of recreational uses. Figure 12 shows the current use areas, existing facilities, road alignment and trail network. The type of uses and current facilities are noted in Table 3.

Table 3
Existing Recreation Amenities

Recreation Use	Number of Facilities	Support Structures
River Activities - swimming - waterplay - fishing - river rafting - boating	4 miles of River Frontage	- beach area - boat ramp (1) - car/trailer parking (104) - handicap fishing (1) - hardened access points (5) - information kiosk (1)
Group Day Use - group picnics	4 Areas Group Picnic Area A, B, C, & D	- shelters (4) - parking spaces (234) - picnic tables under shelter (72) - user capacity (326) - picnic tables outside shelter (29) - user capacity (234) - horseshoe pits (4) - pit toilets (8)
Individual / Family Day Use (non-reservable picnic areas)	Dispersed throughout park	- parking spaces (387) - picnic tables (106) - horseshoe pits (3) - play ground (2) - informal ball field (1) - volleyball (2) - pit toilets (17) - information kiosk (1)
Overnight Camping - group sites - individual sites	3 group areas 45 individual sites	- shelters (3) - parking spaces (165) - picnic tables (74) - horseshoe pits (1) - pit toilets (16) - information kiosk (1)
Hiking / Walking Equestrian / Bicycle	12 miles trail 4 miles road	Trails: - asphalt (150 ft.) - gravel surface (2 miles) - bark dust, chip (10 miles) - foot bridges (6, 110 ft.) - board walk (100 ft.) - equestrian parking (10)
Nature / Interpretive Programs	Access to Natural Area	- 'Ancient Forest' Tours - salmon walks - nature tours - school field trips - wildlife viewing - amphitheatre

Existing Facilities at Oxbow Regional Park

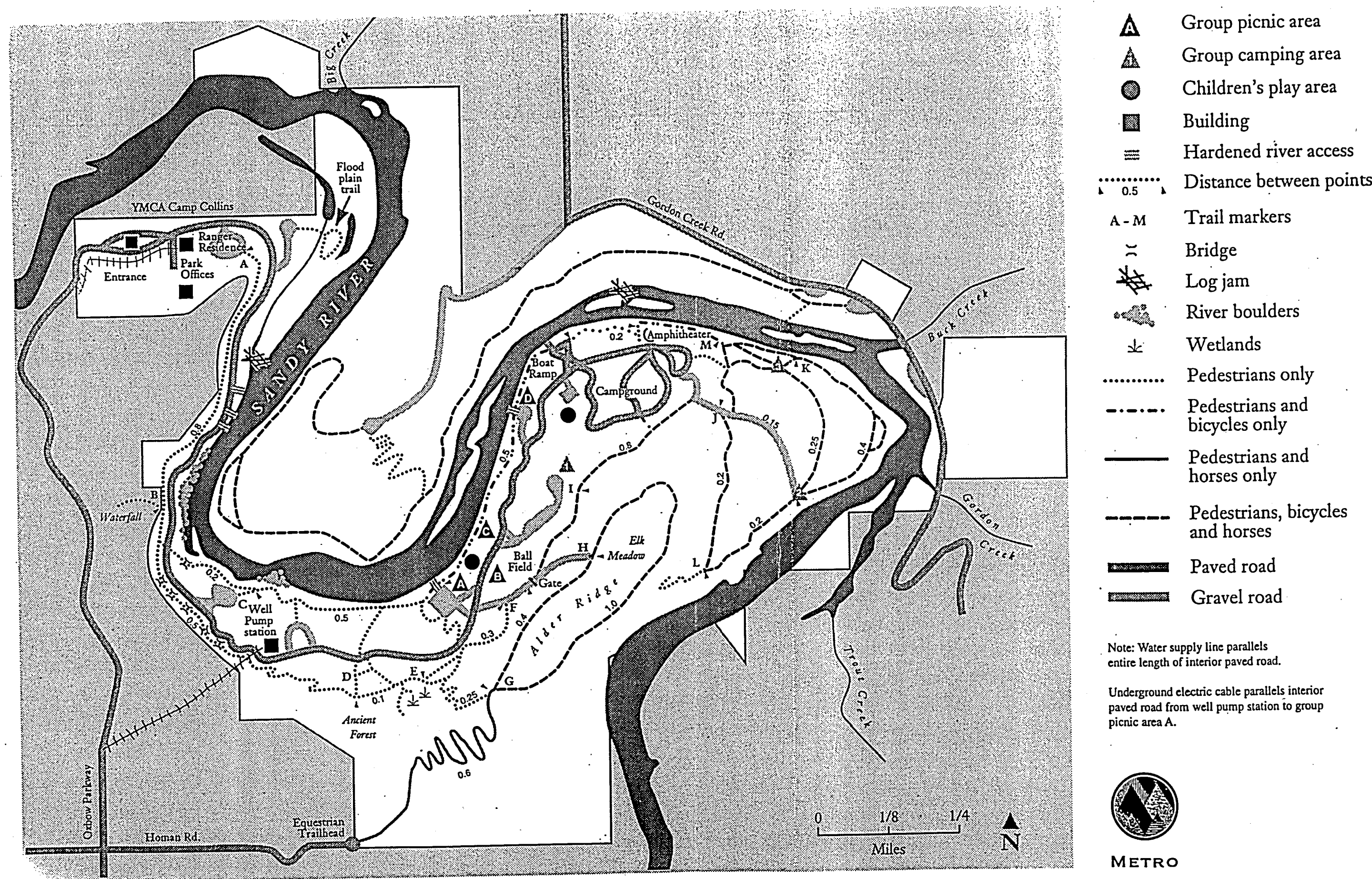


Figure 12

■ Park Attendance

Current annual attendance for the last three years at Oxbow Regional Park is in the range of 218,000 visitors (see Table 4A). Table 4A also shows, the greatest amount of visitation occurs in the months of May, June, July and August. Total visitation was 215,691 during the fiscal year of 1995-96. This total represents an average of 3.5 persons per vehicle along with an additional 20% for people entering the park from all monitored and unmonitored access points. The six peak months (May-October), generate about 72% of the annual use at the park.

- Average peak month activity: 27,058 visitors
- Average non peak month activity: 11,486 visitors

Table 4A
Park Visitation for Oxbow Regional Park**
1992-1996

Month	1992 Visitation	1993 Visitation	1994 Visitation	1995 Visitation	1996 Visitation	Average
January	15,212	13,306	13,969	10,618	9,522	12,525
February	11,651	9,265	6,577	7,862	2,432	7,557
March	13,596	11,298	13,524	13,877	18,325	14,124
April	15,271	12,499	15,137	13,877	15,884	14,534
May	33,533	22,764	22,529	30,576	21,244	26,129
June	28,409	20,252	20,773	24,385	28,229	24,409.6
July	39,875	27,602	46,418	36,632	46,684	39,442.2
August	37,822	34,129	28,216	28,762	31,542	32,094.2
September	16,321	21,386	16,598	19,048	17,254	18,121.4
October *	22,756	21,563	19,328	22,618	16,489	20,550.8
November	6,518	4,385	5,525	4,961	6,023	5,482.4
December	11,441	8,627	10,169	8,034	5,418	8,737.8
Total	251,870	207,077	218,764	217,570	219,046	222,865.4

* Salmon Festival average attendance is 9,000 visitors over one weekend.

** A 20% increase has been added to the entrance counter number. This number accounts for visitation from unmonitored access points. This 20% figure has been provided by Metro.

Total attendance in the last five years (see Table 4A) has remained in the 200,000 plus range. As shown in Table 4A, visitation during the winter months of December, January and February decreased approximately 55% between 1992 and 1996. As previously discussed and shown in Figure 11, a direct correlation can be seen between the decrease in return winter steelhead and park visitors during those months. In part, due to the decline in anadromous fish resources nearly 72% of park use now occurs in the peak season (May to October) and 28% in the winter. This compares to the past years when 35-40% of park use occurred in the winter season.

Table 4B
Summary of Visitation by Month
Fiscal Year 1995-1996

Month	Total Vehicles	Total Visitors
July	8,722	36,632
August	6,848	28,762
September	4,535	19,048
October *	5,385	22,618
November	1,181	4,961
December	1,913	8,034
January	2,267	9,522
February **	579	2,432
March	4,363	18,325
April	3,782	15,884
May	5,058	21,244
June	6,721	28,229
Total	51,354	215,691

* The Salmon Festival average attendance is 9,000 visitors over one weekend.

** Park closed from February 7th to February 23rd due to flooding.

■ Analysis of Oxbow Customer Survey

During the summer and fall of 1995 an on-site customer survey was completed. Summer interns distributed questionnaires to park visitors during the months of July, August and again in October during the Salmon Festival. A total of 68 Salmon Festival participants and 166 July/ August participants completed the survey. Questions ranged from multiple choice options to open-ended responses.

While the number of completed questionnaires is less than needed for an accurate sampling and the responses were only for a short duration of the year, the survey does provide good insight into the values, interests and needs of the summer visitors.

Some of the specific findings in the survey were:

- Nearly 40% of the visitors originate from outside Multnomah County.
- A third of the visitors were visiting the park for the first time, while over 20% of the visitors have been visiting it for 10 years or more.
- Approximately 62% of the visitors visit the park more than once a year while 16% visit the park more than 10 times a year.
- Nearly 90% of the visitors use the park during the summer season compared to 13% during the winter. About a third of the visitors use Oxbow Regional Park in the spring and fall seasons.
- The primary reasons people visit Oxbow Regional Park are to relax and enjoy the outdoors.
- The features that most attract the visitor to the park are the river, the scenery and the natural setting.
- When asked what additional facilities or amenities should be developed at Oxbow Regional Park, the most frequently cited responses were flush toilets, and indoor shower facilities in the campground.
- When asked what type of camping should be provided at Oxbow Regional Park, a majority of the respondents (55%) preferred to see semi-primitive camping.
- In general, a majority of the visitors rated the amenities and services at Oxbow Regional Park as good to excellent.

A summary of the survey results is included in Appendix I.

■ Existing Educational Programs

Environmental Education

For the last 12 years, the Oxbow Regional Park staff has been educating the regional community on the fish, wildlife and vegetation communities within Oxbow Regional Park. Programs have grown with over 7,000 people directly participating (24,000 contact hours) in environmental education related programs annually. The following programs are currently offered at the park:

School Field Trips

- Approximately 4,000 students per year.
- Mid-September through mid-November; mid-April through mid-June.
- 30-60 children (one bus load per day), Monday through Friday.
- Field trips have been conducted for all grade levels: preschool, elementary (including migrant summer schools), middle and high school, community college and universities.
- Teacher training programs have been conducted for two school districts and Outdoor School staff.
- Demand for school programs is double what is currently being provided.
- Volunteer naturalist training programs have been conducted for 50 volunteer naturalists who help lead school/group field trips.

Group Field Trips

Field trips have been conducted for a variety of groups including the Northwest Service Academy, Boy Scouts, Girl Scouts, Western Forestry Association, 4-H, Bonneville Power Administration, Mensa, Saturday Academy, Oregon Trout, Cultural Homes International, Northwest International Study Exchange, Oregon Natural Resource Council, Friends of Trees, and many more.

Natural History Classes

Depending on the season, natural history classes are offered to the general public including:

- Animal tracking.
- Wildlife watching.
- Wildflower identification.
- Outdoor survival.
- River exploration.
- Salmon viewing.
- Ancient forest walk.
- Native American arts.
- Discovery days.

Camp Fire Programs

A series of evening Camp Fire programs are presented throughout the summer months. These programs include:

- Slide shows.
- Story telling.
- Music and magic shows.

Sandy River Raft Trips

During the early summer months, Sandy River raft trips are offered to the general public.

Salmon Festival

During the fall salmon spawning period, an annual festival is held at the park. The Salmon Festival originated in 1985 and has become one of the premier annual events at the park and in the region. Attendance typically runs over 9,000 visitors for the weekend. Normal Salmon Festival events include:

- Guided walking tours of the salmon spawning areas.
- Guided walking tours of the Ancient Forest.
- Salmon bake and other foods.
- Educational and craft displays.
- Music.

In addition to the previously mentioned programs and events, many other organizations use Oxbow Regional Park for educational purposes, independently of Metro Parks hosted programs, including: Multnomah County Outdoor School, the Metro Washington Park Zoo, Portland State University Outdoor Program, Portland Audubon, and others.

■ Existing Trails

The trail system within Oxbow Regional Park is one of the major recreation features. Many of the park users come to the park specifically to enjoy the natural setting by utilizing the trail network. The trails are utilized extensively for the outdoor education and interpretation programs. Currently within the park there are over 12 miles of trails. Figure 12 illustrates existing trails at the park. Hikers utilize all trails while mountain bike and equestrian use is limited to a portion of the trails.

Trail widths vary from approximately four feet to one foot. Surfacing varies from compacted crushed rock to natural chip and duff surfacing.

The park has several trail bridge structures. They have been constructed by park staff. Two basic types of bridges have been used. One type is constructed from a flattened log with a hand rail on one side. This type of bridge is appropriate for non-accessible trails in the forest setting. The other type of bridge structure is constructed from dimensional lumber and decking. These bridges have handrails where required and can be made "accessible" as needed.

In 1992, the park staff formulated a trails advisory committee to evaluate the existing trails and recommend improvements. The committee recommended trail use designations that are shown in Figure 12.

During the master planning process, it has been noted that some of the existing trails are in need of corrective measures. It should be understood that an inventory of site specific problems on each of the trails is beyond the scope of this Master Plan. Based on observations made by consultants, and input from the staff and the public, the following are important issues for consideration:

- Erosion is occurring along some trails due to the lack of adequate drainage.
- In the Ancient Forest area, there is evidence of root compaction as well as degradation of the trail edges.
- The swamp area located in the center of the Ancient Forest (south of the park road) is being impacted by social trails.
- Wet soils and pooling water make some trails difficult to use during certain times of the year.

■ Park Facilities

Structures

The facilities at Oxbow Regional Park were constructed between 1960 and 1990 (see Figure 12). Current park operations and maintenance activities fully utilize all existing structures. The facilities have served the park well, but are currently in need of repair, upgrade or replacement.

Facilities were first constructed at Oxbow Regional Park in the early 1960's. Several of these structures are still in service today. They include the two timber frame shelters located at Group Camps 2 and 3, and two A-frame shelters located at Group Camp 1 and Group Picnic Area D. These structures have been maintained over the years, but they are currently in poor condition. They have outlived their useful life expectancy and are in serious need of replacement.

Other park facilities were constructed in the early 1970's. These buildings include the park office, maintenance shop and ranger's residence. They are wood frame structures with board and batten siding, wood windows and raised seam metal roofing. An addition has been added to the park office providing an enlarged ranger's office and staff work area. The addition has plywood and batten siding and aluminum windows. The maintenance shop has been sub-divided to provide office and storage space for the park interpretive staff. The ranger's residence is a three bedroom/one bath ranch style floor plan. It has the only flush toilet in the park.

The entry fee booth is basically a plywood shed located at the entry to the park. It has a concrete slab floor, wood frame walls with plywood siding, aluminum windows and cedar shake roofing. All park visitors must stop at the fee booth. Although this building is fairly functional, it is not aesthetically pleasing. A new fee booth incorporated into a gateway structure will improve the overall first impression of the park and create a sense of arrival.

Group picnic shelters A, B, and C were constructed in the early 1980's. They have concrete slab floors, timber posts, truss roof framing, and cedar shake roofing. The timber posts sit directly on the concrete slab and have been exposed to surface water. Several of these posts have areas of rot. The picnic shelters are heavily used for group gatherings. They should be replaced and upgraded to better serve their function.

The water storage reservoir and pump house were constructed in the late 1960's. The building has a concrete foundation, sub-grade holding tank, concrete floor, steel posts with concrete block infill, and a flat roof with glue laminated beams and timber decking.

A new truck barn/maintenance shop was constructed in the mid 1980's. This build-

ing has a slab on grade floor, wood frame walls with plywood and batten siding, steel doors and frames, gable truss roof framing and composition shingle roofing. This facility is in very good shape and provides flexible maintenance and construction areas.

During the construction of the 1960's, four structures were relocated from the entry road area to the service yard. They were used by the youth crews that did the initial clearing and construction of the park. Four of these structures are small single story wood frame "cabins" with wood floor framing, cedar shingle siding and roofing. A fifth structure is a two-story cabin. It has a concrete foundation and slab floor, wood frame walls with staggered cedar shake siding and a gable roof with cedar shake roofing. These buildings are currently used for miscellaneous storage and maintenance functions, but have outlived their useful life expectancy.

The service yard serves many functions. Maintenance shop buildings form two sides of the main large gravel service area. This is where the park garbage is collected and transferred. Seven 4' X 6' dumpsters and many plastic trashcans are kept in this area. The service yard also includes wood storage and splitting areas and vehicle and equipment storage. The wood storage shelter is a pole building which is in great need of repair or replacement. It currently has blue plastic tarp roofing. Wood storage and processing requires a large area.

The park currently does not have public or staff flush toilets. Lavatories and wash basins do not exist. Pit toilets are utilized throughout the park (44 stalls). The majority of these structures have concrete floors, plywood and 2x2 walls and corrugated fiberglass roofs. Most of these structures date from the 1960's and are in serious need of replacement.

The four pit toilets at the public campground are pre-fabricated structures with two accessible toilet rooms. They have wood frame walls with plywood siding, wood frame roof structure with cedar shake roofing. The interior is lined with fiberglass surfacing. These pit toilets do not have holding tanks. They are approximately 17 years old.

A small amphitheater is located adjacent to the public campground. It has half-log benches with a wood frame projection screen/backdrop structure. The structural integrity of the log benches has been weakened by extensive insect damage and rot.

There are three information kiosks. At the park office and campground there are displays constructed from log posts and wood framing. A radial structure is located adjacent to the boat launch area. It has wood posts and wood framing with six display panels. The display panels have plexiglass protective covering.

See Appendix K for complete inventory of individual structures.

■ Utilities

Existing Water Facilities

Source

The existing source of supply consists of a single, 12" diameter well casing, approximately 107 foot completion depth, constructed in 1964. The existing 5 HP submersible well pump provides for delivery of 125 gallons per minute (gpm) to the adjacent reservoir. The existing well and pumping station are located in the central part of the park (see Appendix H for complete report).

Water Quality - The results of previous testing are as follows:

1. **Iron & Manganese** - The water test showed elevated levels of iron and manganese. The presence of this condition in potable water creates the potential for several undesirable effects. Precipitation of these metals alters the appearance of the water, turning it a turbid yellow-brown to black. In addition, deposition of these precipitates will cause staining of plumbing fixtures and laundry. These elements are also associated with microbial growths within the distribution system. Resuspension of precipitated sediments or sloughing of microbial growth may result in intermittent high turbidities. In concentrations greater than several milligrams per liter, these metals will impart a taste described as metallic, astringent, or medicinal.
2. **Hardness & Aggressiveness** - This water has a moderate hardness and is non-aggressive to asbestos-cement pipe.
3. **Bacterial** - Bacterial testing for the water system has been satisfactory. There are no known sources of potential contamination within the immediate well vicinity.

Treatment

The only treatment currently in use is disinfection using liquid sodium hypochlorite by means of a small chemical metering pump in the pump house. Due to the elevated levels of iron and manganese, it is difficult to maintain required detectable chlorine residuals throughout the water system, particularly during periods of low demand.

Storage

The system has a single, below-grade, concrete reservoir located beneath the pump house. The total storage capacity is 31,000 gallons with an operating volume of 28,000 gallons. The high iron and manganese concentrations result in oxidation and precipitation within the reservoir. The accumulated materials on the floor and walls must be removed every other year to avoid adverse water quality. The storage reservoir is in good condition.

Booster Pumping

A pair of 6" vertical turbine pumps deliver water from the reservoir to the distribution system. One pump operates continuously regardless of actual water demand. The second pump will start automatically if the first pump cannot meet demand. A pressure relief bypass back to the reservoir provides for constant flow through the pumps during periods of low demand. While this system provides an easy pump operating environment it consumes an excessive amount of power. A secondary effect is that the water in the storage reservoir becomes warm after continuous pumping. The original water system included a separate high pressure booster pumping system to supply water to the Alder Ridge and Horse Camp area. This system has reportedly never functioned well and has not been in service for over 20 years.

Distribution

The existing water system provides a supply of water throughout all developed areas of the park. The actual location and configuration of the distribution system is unknown due to inadequate maps. The main supply pipes are 6" Asbestos Cement (AC) pipe. The condition of the water mains is generally good with the system experiencing minimal water loss. The water chemistry is non-aggressive with respect to AC pipe, resulting in a remaining pipe life of 20-50 years or more. AC pipe is susceptible to fracture during ground movement with breaks occurring every one to two years in slide areas.

Current Services

The water system presently serves the park office, picnic areas, boat ramp, 45 camp sites and three group camps. Service throughout the park is provided by 4 frost-proof water spigots, 75 seasonal water spigots and 7 "fire hydrants." The hydrants have 1.5" outlets and serve primarily for water system flushing rather than fire protection.

Existing Water Records and Operation

The water system is managed by a certified water operator and an uncertified assistant. Operating records include the following items: water production (daily), chlorine residual (daily at pump house, once a month at 5 locations), and water temperature (weekly). Other operating conditions are also noted in the pump house log including irrigation activity, water line breaks, distribution system flushing, pump changeovers, and power outages. A certified testing laboratory is under contract to collect bacterial samples quarterly and nitrate/nitrite samples annually. Tables included in Appendix H summarize water production. Water demand has been essentially unchanged in recent years with most water being used for irrigation purposes. During the summer months, irrigation use is heaviest on weekdays, while non-irrigation use is highest on the weekends.

Neighboring Utilities

The YMCA Camp Collins operates a separate water system immediately north of the Park headquarters. Due to the proximity, this system was investigated for potential coordination of water systems facilities. The YMCA Camp Collins water system consists of a single, geothermal (72 degrees) artesian well with a capacity estimated to be at least 60-100 gpm.

Historically this well has had a static pressure of 10 pounds per square inch (psi) and a free-flowing production of over 200 gpm. However, the artesian flows declined to approximately 40 gpm in early summer of 1996 and then to zero flow in early September. YMCA Camp Collins recently replaced its centrifugal pump with a submersible pump to increase the source reliability. The capacity of the new pump is approximately 60 to 80 gpm at normal service pressures. The pumping system includes two 520 gallon hydropneumatic tanks, but has no storage facilities. The distribution system consists of a single three inch pipe supplying all of the YMCA Camp Collins facilities. The water quality of this source appears comparable overall to that available in Oxbow Regional Park. The source is warm and old lab results indicated elevated levels of fluoride (4.12 parts per million (ppm)). Results of an October, 1996 analysis indicated a level of 3.4 ppm. Oregon Administrative Rules (OAR 333-061-0030) require special notification when fluoride levels exceed the primary maximum contaminant level (mcl) for fluoride (4.00 ppm) and for secondary levels (2.00 ppm). A separate fire protection pump draws water from the YWCA Camp Collins swimming pool for distribution through a looped 4" water line system throughout the YWCA Camp Collins Headquarters area.

Irrigation System

Currently, all park turf areas are manually irrigated during the summer months. Irrigated green lawns provide park patrons a pleasant, comfortable recreation setting. In addition, the supplemental moisture is a first line deterrent to fires.

Irrigation is accomplished by manual connections of hoses with sprinklers to seasonal water spigots. Considerable staff time is consumed in setting out hoses and sprinklers and moving them periodically throughout the day. The irrigation water coverage is not uniform because the staff is involved in various other park activities.

Sanitary System Planning

Existing Sanitary Facilities

Existing sanitary facilities consist of pit toilet installations throughout the park and a conventional on-site sewage system for the ranger residence. The breakdown by type of structure is as follows: 7 double stool and 30 single stool.

Existing Operations

The existing systems function with minimal personnel requirements. The pits must be periodically pumped to remove accumulated materials.

Electrical System

Entry Arrival Maintenance Area

The existing service into the entry arrival maintenance area is a single-phase overhead 7,200 volt line. A single 120/240 volt pole mounted transformer serves each of the several buildings. A two-phase (12,470 volt) line serves the adjacent YMCA Camp Collins (secondary voltage 120/240V, 3-phase, "open delta"). The transformer at the ranger's residence could be increased in size to serve an added building.

Pumphouse Area

The Oxbow Regional Park pumphouse is served overhead with a two-phase feeder. Power extends underground from the last pole (and meter) to the park pumphouse. The pump runs as 240 volt, 3-phase, open delta. The primary feeder, from the pole to the pump transformers (two 240 volt pad mounted transformers) run through two underground vaults, each with a load break tap system.

■ Roads and Parking

Roads

Vehicle access to the park is via Oxbow Parkway, a two lane asphalt surfaced road. This road continues approximately two and one-half miles through the park to provide access to the lower park area including the campground and boat ramp. Oxbow Parkway and the first mile of roadway within the park (approximately at Dismal Swamp) are under the jurisdiction and maintenance of Multnomah County. The remaining road and parking areas are within the park the exclusive responsibility of Metro's Regional Parks and Greenspaces Department.

Homan Road / Oxbow Parkway Intersection

At the first community meeting, it was noted that the main intersection adjacent to the park, Homan Road and S.E. Oxbow Parkway, is dangerous. Many near mishaps have occurred due to poor visibility and excessive speed. Multnomah County Department of Transportation is reviewing the intersection to determine what corrective changes, if any, should be made.

Parking

Vehicle parking is provided throughout the park primarily as gravel spaces directly off the access road. Approximately 890 spaces are available within the park. Throughout the park, vehicle access is controlled by the use of wood posts and concrete bumper stops placed along the edges of the road and parking areas.

Up to 10 horse trailer rigs park on the road and right-of-way near the equestrian trailhead at the end of Homan Road. The parking surface is neither level nor wide enough to safely accommodate the rigs. Drainage is also a problem during certain times of the year.

Boat Ramp

The existing boat ramp consists of a small asphalt turnaround with a concrete sloping ramp providing river access. Vehicles with trailers utilize the ramp to launch or pick up boats. Smaller kayaks and rafts are launched from the adjoining beach areas. The boat ramp is also a primary access point to the river for non-motorized boating and water activities such as swimming, wading and fishing. A concrete handicap fishing pier is located near the boat ramp. However, during the recent flooding, the main river channel shifted to the north, leaving the present handicap fishing area only functional in high water periods.

■ Operating Budget

The table below shows the annual operating budget for Oxbow Regional Park for the last six years starting with the 1991-92 fiscal year.

Table 5
Comparison of Operating Budgets- Fiscal Years
1991-92 to 1996-1997
Oxbow Regional Park

Fiscal Year	Operating Budget	Percentage Difference
1991-1992	\$322,215	
1992-1993	\$362,257	+12.4%
1993-1994	\$427,636	+18.0%
1994-1995	\$399,372	-6.6%
1995-1996 (1)	\$426,809	+6.8%
1996-1997 (2)	\$433,282	+2.2%

(1) Budgeted

(2) Budgeted

Based on the table above, the operating budget from the fiscal year 1991-92 to 1995-96 has increased by 32.5%. This is equivalent to an average annual increase of 6.5%. While the straight line projection method of analysis implies a steady but moderate growth, the actual growth rate has occurred more sporadically. The most significant increases occurred between the fiscal years 1991-92 and 1993-94 when several capital improvement projects occurred including roof replacement for the office, shop and ranger residence. This was followed by a 6.6% decrease in the fiscal year 1994-95 and an average increase in the fiscal year 1995-96. While the 1996-97 operating budget is an estimated amount, it reflects a 2.2% increase, which is lower than the five year average of 6.5%.

■ Study Findings

Natural Resources

The Metropolitan Greenspaces Master Plan (1992) identifies Oxbow Regional Park as a greenspace of regional significance and calls for development of a master plan as a primary strategy for balancing public use of with protection of the natural values of the park.

The Sandy River's natural beauty and pristine values were formally recognized in 1973 when Governor Tom McCall issued a proclamation designating 12.5 miles of the Sandy River between Dodge and Dabney State Park as a State Scenic Waterway. In 1988 the same stretch of river received federal Wild and Scenic River segment of the Sandy River.

In 1993 the Bureau of Land Management (BLM) published the Sandy Wild and Scenic River and State Scenic Waterway Management Plan. The development and operation of Oxbow Regional Park should be consistent with BLM's Plan.

Funds for acquisition in the Sandy River Gorge are available from Metro's Open Spaces, Parks and Streams bond measure. The goal of the acquisition program for the Sandy River Gorge is to complement the BLM Management Plan and protect biological linkages for the protection of fish, wildlife habitat, water quality, geologic, scenic, and recreation values.

Metro Regional Parks and Greenspaces Department should continue to be involved in natural resource management issues related to lands outside the park when they have the capacity to impact recreation resources and experiences within the Sandy River Gorge.

The natural character of the park and the Sandy River Gorge should be maintained.

A park user survey revealed that the features that most attract the visitor to the park are the river, the scenery and the natural setting.

To protect natural resources, recreation facilities should be concentrated in areas currently developed and maintained for recreational activities.

Invasive plant species should be eliminated or controlled to maintain native plant diversity.

Park visitors are causing damage to the river bank in a number of locations. Efforts should be undertaken to control this problem.

Certain areas of the park and the Sandy River Gorge are geologically unstable. Park improvements should avoid these areas to the greatest extent possible.

Recreation

The Oregon Outdoor Recreation Plan (1988-1993) reports that Oregonians have an increased preference to recreate in an attractive, natural environment under uncrowded non-stressful conditions.

Natural resource dependent recreational opportunities should be a primary focus at the park.

Park visitation trends show a decrease in winter (non-peak) visitors. This trend follows along with the Oregon Department of Fish and Wildlife fish catch statistics. Due in part to the decline in anadromous fish resources, nearly 75% of park use now occurs in the peak season (May - October) and 25% in the winter compared to past years when 35 to 40% of park use was in the off-season.

Park visitors desire additional recreational facilities to enhance camping, individual and group picnicking, trails and educational use.

There is significant demand throughout the region for reservable picnic shelters and picnic areas. As of June 2, 1997, 54,000 potential park users have been turned away due to limited availability of reservable shelters and picnic areas at Metro Parks.

Recreational use on the north and east properties should be limited to dispersed recreation activities such as hiking and angling access.

Recreational management of the designated 12.5 mile segment of the Sandy River lacks integration and coordination. Metro should consider cooperative agreements with the State Parks, BLM and City of Portland to improve management of natural resources and recreational facilities.

Education

Environmental education and interpretation services should be expanded at Oxbow Regional Park to enhance urban resident's understanding and appreciation of natural resources and to foster a stewardship ethic.

An environmental education center should be developed to facilitate expanded educational programming.

The Diack family has made significant contributions to Oxbow Regional Park, the Sandy River Gorge and the enhancement of environmental education throughout Oregon. Specifically, Arch and Fran Diack were instrumental in the creation of Oxbow Regional Park in the early 1960's when they donated 12 acres to Multnomah County for inclusion in the park, donated 160 acres in the Sandy River Gorge to the Nature Conservancy, effectively advocated for designation of the Sandy River as a component of both the State Scenic Waterway Program (1973) and the National Wild and Scenic River System (1988) and created, through a generous donation, the Diack

Ecology Education Fund which helps finance outdoor ecology education projects throughout the State.

Existing Park Facilities

Some existing park infrastructure and facilities have reached their useful life expectancy and should be renewed, replaced, and upgraded.

As park improvements are phased in during master plan implementation, new and upgraded facilities should comply with the Americans with Disabilities Act.

General park capacity should be maintained but parking spaces should be redistributed to enhance operation efficiency and recreational experiences.

Results from a park user survey show that flush restrooms and indoor shower facilities are the two most desired park amenities.

The existing water supply is high in iron and manganese and should be treated or replaced by an alternative water source.

The existing "accessible" fishing area is functional only during high water periods due to flood damage. Adjustments should be considered to enhance its functionality.

Some trails in the park are in need of repair.

The horse trailer/vehicle parking area along Homan Road is neither level or wide enough to safely accommodate combination trailer/vehicle rigs.

Maintenance yard improvements are needed to facilitate safer, more efficient operation and maintenance activities.

An automated irrigation system should be installed in developed areas of the park to create fire breaks and minimize operation and maintenance costs.

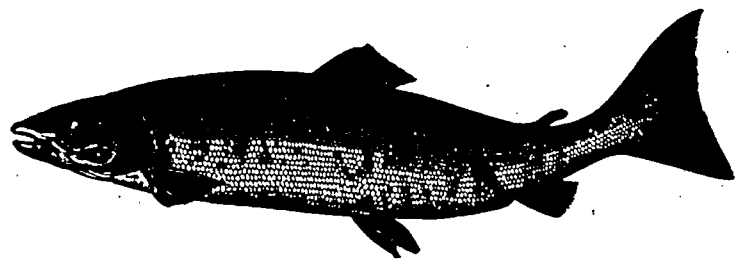
Funding

\$1.25 million of Open Spaces, Parks, and Streams bond measure funds is available to begin master plan implementation.

Approximately \$200,000 has accrued in an environmental education center fund. This seed money can be used to leverage additional funds for project implementation.

With the exception of the environmental education center, full implementation of this master plan will not increase full time staffing requirements. However, increase in park use over time may justify additional staffing support.

MASTER PLAN





MASTER PLAN

■ Introduction

During the Master Planning process for Oxbow Regional Park, a broad range of ideas were considered. Through input from the design charrettes, Project Advisory Committee, community meetings, public agencies, Metro staff and the consultant team, these ideas have been shaped into a Master Plan that will guide the future management and development of the park. Key management objectives of the Master Plan include the following:

- Metro in coordination with other public and private agencies should expand its role in recreation management in the Sandy River Gorge. Suggested areas of expanded involvement include providing management and operational services for Dabney State Park and Dodge Park and management of river recreation between these parks.
- As an important segment within the larger Scenic Sandy River Management area, the natural qualities of the park should be maintained and enhanced. Based on the quality of the habitat and terrain, the Master Plan identifies approximately 90% of the existing park to remain in a natural condition (see Figure 13).
- The Master Plan is intended to maintain the “natural timeless”, recreational experience. The existing area of intensive recreation use, which is only approximately 10% of the total park area, will not be enlarged but will be utilized more efficiently (see Figure 13).
- The current park activities (picnicking, camping, hiking, river access, environmental education, etc.) are to be maintained. The Master Plan envisions a more balanced use throughout the year.
- The park properties on the north and east side of the river will be retained as an important part of the natural corridor within the Sandy River Gorge. The plan limits use and access in these areas to current levels.
- The Ancient Forest area will be preserved and continue to be utilized for outdoor educational, hiking and wildlife observation uses.
- The Elk Meadow will continue to be managed to provide forage for elk and other wildlife.

The following text explains the Master Plan features in more detail. The existing park areas will be enhanced by providing improved, accessible facilities including:

- Flush toilets with on-site wastewater disposal systems.
- Showers in camping area.
- Environmental Education building.
- Expanded group picnic area with new picnic shelters.
- Upgraded water and electrical systems.
- Automatic irrigation system for major turf areas.
- Park office, ticket booth, and arrival area.
- Expanded camping with overnight structures.
- Enhanced group camping areas.

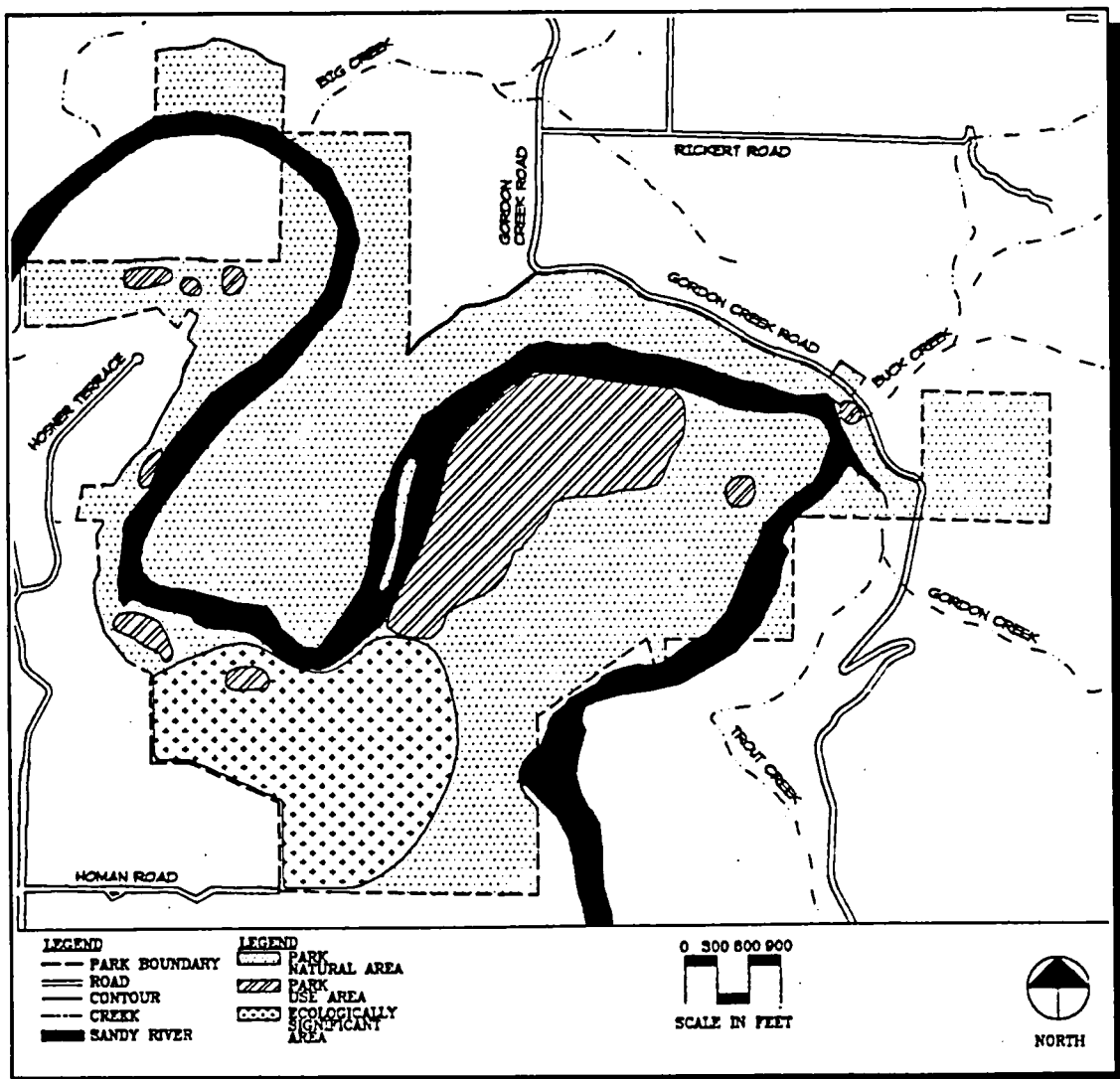


Figure 13 - Concentrated Use Areas

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■ Sandy River Wild & Scenic Management

It is recommended that Metro, working in coordination with other public and private agencies, expand its management role in the Sandy Wild and Scenic River to improve the recreational opportunities, provide integrated management and enhance natural resource values of the Sandy River Gorge. The suggested areas of expanded involvement are recommended to include:

Public Recreation Facility Management

Provide management and operational services for Dabney State Park, Oxbow Regional Park, and Dodge Park.

Typical services may include:

- Daily operations and maintenance.
- Environmental education and interpretive programs.
- Long range planning and recreation development.

Benefits:

- Potential for improved and expanded recreational experience.
- Single source for public information and use reservations.
- Uniform system of regulations and fees.
- Uniform signage.
- Uniform policing program.
- Potential cost savings through improved efficiencies.
- Coordinated recreation planning and development (This approach will allow the most appropriate uses to be developed for each site while insuring a coordinated approach for recreation on the three major Sandy River portal areas).

Sandy River Gorge

Assist in developing and implementing programs to enhance the Sandy River Gorge.

Typical programs may include:

- Environmental education and interpretive programs.
- Restoration projects.
- Vegetation management (noxious weed control, restoration plantings).
- Nuisance management for both private and public lands (control of trespassing, vandalism, littering, inappropriate use).

Benefits

- Improved wildlife habitat and plant communities.
- Improved public relations.
- Improved user experience.
- Integrated law enforcement problems.

■ Master Plan Overview

The Master Plan (illustrated in Figure 14) addresses the major areas and features of the park. The following is a brief summary of the improvements proposed in the Master Plan:

- (A) ENTRY INTERSECTION**
An improved information sign will replace the existing one at the intersection of SE Oxbow Parkway and Homan Road to inform visitors of park rules, fees, and recreation opportunities.
- (B) ENTRANCE GATE / ARRIVAL AREA**
The design for the entry arrival area is intended to provide the park visitor with a more convenient, user friendly entrance sequence. In addition to the basic ticket booth, an adjacent space will provide park patrons with orientation information, telephones, restrooms and additional emergency contact capabilities.
- (C) PARK SUPERVISOR'S RESIDENCE / MAINTENANCE AREA**
The existing maintenance area will be visually screened from the visitor entry. The maintenance access drive is relocated to the east side of the park supervisor's residence to improve circulation patterns. A new office and other buildings will be added to support the operation of the park. The adjacent area east of the park supervisor's residence will be utilized as an overflow camping area.
- (D) FLOOD PLAIN TRAIL HEAD**
The Flood Plain Trail Head is intended to continue to be a small day use space and a trail head for the adjacent flood plain.
- (E) ROAD CORRIDOR (B) Entrance Gate/Arrival Area to (G) Dismal Swamp**
The road from the park entry (B) to Dismal Swamp (G) will be restored along the edges with native vegetation. Except for selected areas, most of the random parking and picnic tables will be relocated. Lawn and gravel areas will be replaced with native vegetation plantings.
- (F) 'HOSNER HOLE' RIVER ACCESS / INTERPRETIVE VIEWPOINT**
This area will continue to offer bank access for fishermen as well as a take out point for the in-park float trips. A small number of picnic tables will be provided for day use as well as vault toilets. To the south, at the landslide area, the existing parking and picnic facilities will remain. A new interpretive view point of the river will be located at the south end of this area.

(G) DISMAL SWAMP DAY USE AREA

The Dismal Swamp area is intended to continue as a turfed day use area with access to the river. In addition, this area is intended to be a major trail head for hikers providing access to the main park trail system. Typical improvements will include: parking, vault toilets, picnic tables, and trail orientation signs.

(H) ANCIENT FOREST PRESERVE

In the metropolitan area, the 160+ acre Ancient Forest within Oxbow Regional Park is a unique example of this stage of forest development. As a resource for educational purposes and research, this area has tremendous value. The Master Plan envisions that this area will be preserved and continue to be utilized for educational, hiking and wildlife observation uses.

(I) ENVIRONMENTAL EDUCATION AREA/MULTI-USE STRUCTURE

A new building is proposed to be located just to the east of the Ancient Forest area on the edge of the main river terrace. The structure will provide for environmental education needs including multi-purpose rooms, offices, storage and other support spaces. In addition, the building will provide opportunities for lecture and meeting spaces, events, a casual lounging space and restroom facilities for general park users. The building will be named in memory of Arch and Fran Diack, benefactors of the park.

(J) GROUP DAY USE AREA

The group day-use area is focused on providing facilities for group picnics. In a setting of green lawns and native trees, areas of various size will be available for rent. Shelters, with electricity and water, are proposed to be developed. Other proposed improvements include: parking, picnic tables, lawn game areas, play areas and restrooms facilities.

(K) INDIVIDUAL / FAMILY DAY USE AREA

The intent of this area is to provide picnic areas available for use by individuals, families and small groups. This area is conveniently located close to the river access area at the boat ramp. Typical improvements will include: parking, picnic tables and restrooms.

(L) ACCESS ROAD AND TURNAROUND

This portion of the existing road is proposed to be relocated to the south side of the river terrace, to reduce traffic and parking conflicts with pedestrians. A turnaround is proposed near the entrance to the camping facilities to help eliminate random traffic in overnight areas of the park. With the installation of orientation and directional signage, the turn around will also provide a major point for park user orientation. Roads will be relocated to allow for vehicular traffic to enter and exit the campground at the same location. This will help separate camping vehicle traffic from family picnic spaces and boat ramp traffic.

(M) RIVER ACCESS (Boat Ramp)

The existing access road and boat ramp will remain. This area will continue to be one of the primary access points to the river for boaters, anglers, water recreation, and wildlife observation. Improvements will focus on upgrading functional and aesthetic qualities. An interpretive display will acquaint park visitors with river safety and fishery resource issues.

(N) GROUP CAMPING AREAS

Two smaller group camping areas are proposed to replace one larger existing group camp area. These 'for rent' facilities will be designed to be flexible allowing a portion or all of the space to be occupied by a single group. Typical improvements will include: parking, camping spaces, fire rings, picnic tables, and restrooms with showers. In addition, one of the two existing walk-in group camp areas will be retained.

(O) CAMPGROUND

The existing campground road system is proposed to be reorganized to allow for two one-way loops. This arrangement is more efficient by allowing for increased camp sites numbers while decreasing vehicle traffic by individual spaces. The redesigned campground will include: 44 upgraded camp sites, (5 will be cluster camp sites - 2 sites per cluster), 16 new individual camp sites, new parking spaces, and restrooms with showers. A long range component of the 16 new individual campsites is to provide 4 to 12 over-night structures similar to yurts or small cabin structures.

(1) East-Side Park Properties

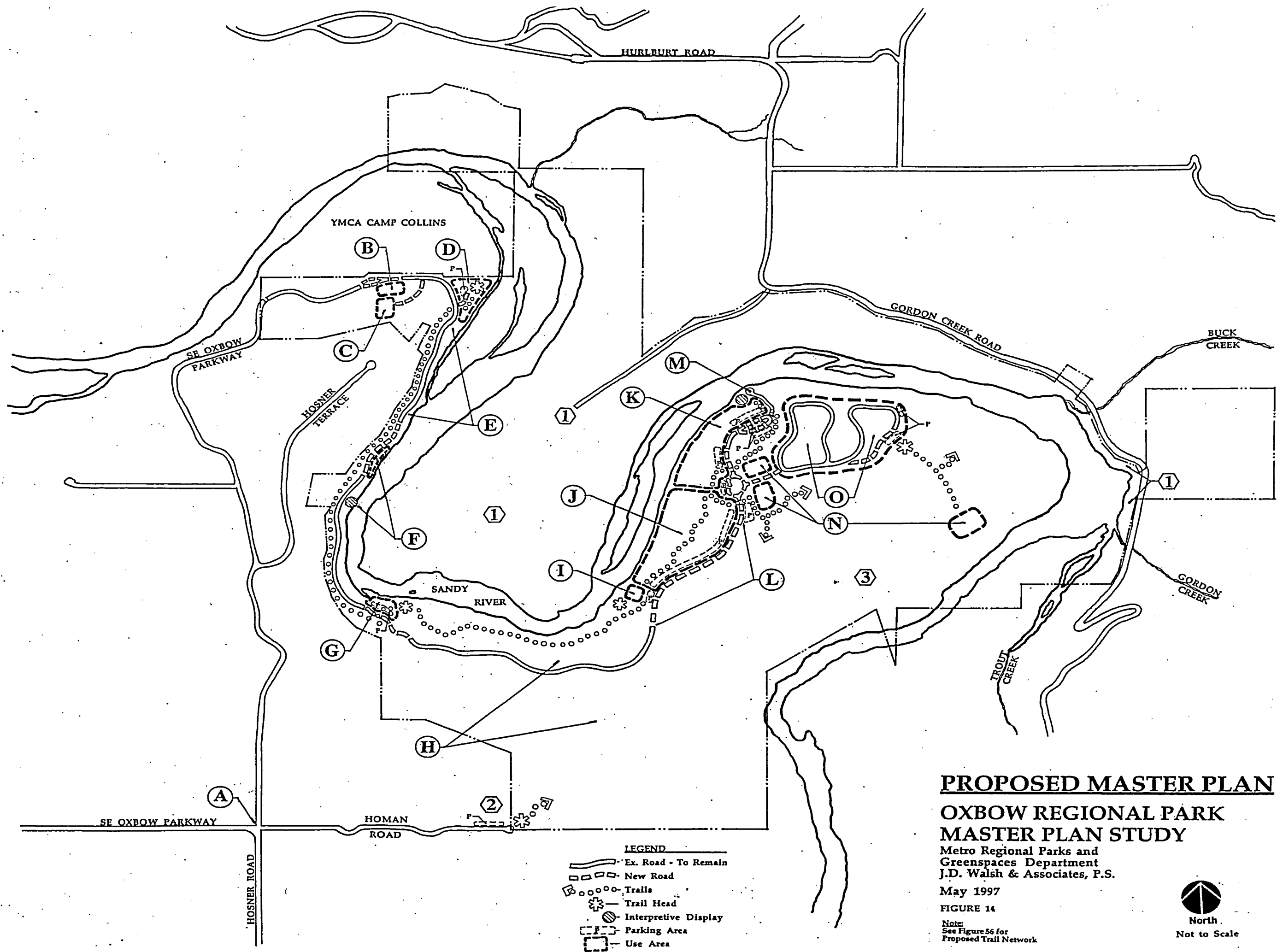
The properties on the north and east side of the river will be retained as an important part of the natural corridor within the Sandy River Gorge. The current river access near Buck Creek will remain with limited parking in a designated area. Unlawful parking along the road will continue to be controlled by towing and parking citations. The existing access off Gordon Creek Road to the forested north area will remain for dispersed fishing and trail use. However, seasonal closures may be implemented during summer months for fire safety purposes. Corrective measures to the existing fire road and trails will be required.

(2) Homan Road Equestrian Access

The existing parking area and trail head at the end of Homan Road will continue to be the primary access point into the park for equestrian users. This area will allow for the parking of vehicles and trailers (limit of six).

(3) Elk Meadow / Forest Preserve

The forested areas of the park will be retained. The meadow will continue to be managed to attract elk and other wildlife. Trails will continue to be available for hiking and equestrian use.



- LEGEND**
- Ex. Road - To Remain
 - - - New Road
 - - - Trails
 - ★ Trail Head
 - ⊗ Interpretive Display
 - P Parking Area
 - - - Use Area

PROPOSED MASTER PLAN **OXBOW REGIONAL PARK** **MASTER PLAN STUDY**

Metro Regional Parks and
 Greenspaces Department
 J.D. Walsh & Associates, P.S.

May 1997

FIGURE 14

Note:
 See Figure 56 for
 Proposed Trail Network



North
 Not to Scale

■ Master Plan - Development Features

To complement the overall Master Plan, additional narrative, support information and illustrative materials have been prepared. These materials have been arranged by the major area headings (A - O) previously described in the Master Plan. The intent of these support materials is to further define and describe the scope, nature, quality and intent of the proposed improvements. The following is a more detailed description of the proposed improvements for the major areas of the park.

Ⓐ Entry Intersection

Improved information and directional signage will be installed at the intersection of SE Oxbow Parkway and Homan Road to inform visitors of park rules, fees, and recreation opportunities.

Information and Directional Signage

Media: One Information Sign

Discussion: Modified bulletin board designed with text size to be read from a car. Park welcome with key regulatory messages: RV's under 35 ft. welcome / entry fee/ no guns, no pets. River graphic icon and graphics of recreation opportunities to be found at Oxbow Regional Park.

② Entrance Gate/Arrival Area

The design for the entry arrival area is intended to provide the park visitor with a more convenient and user friendly entrance sequence. A new fee booth and entry gates are to be relocated approximately 20 feet inside the existing gate. Moving the ticket booth allows free access to YMCA Camp Collins service drive. It also allows the gates to be placed on the entry side of the ticket booth for greater security. Additional screening (short fences, native plant materials) along the north side of the road will help to visually separate the park from YMCA Camp Collins. In addition to the basic ticket booth, an adjacent space will provide park patrons with orientation information, telephones, restrooms and additional emergency contact capabilities. A new orientation shelter will be constructed as a feature of this space.

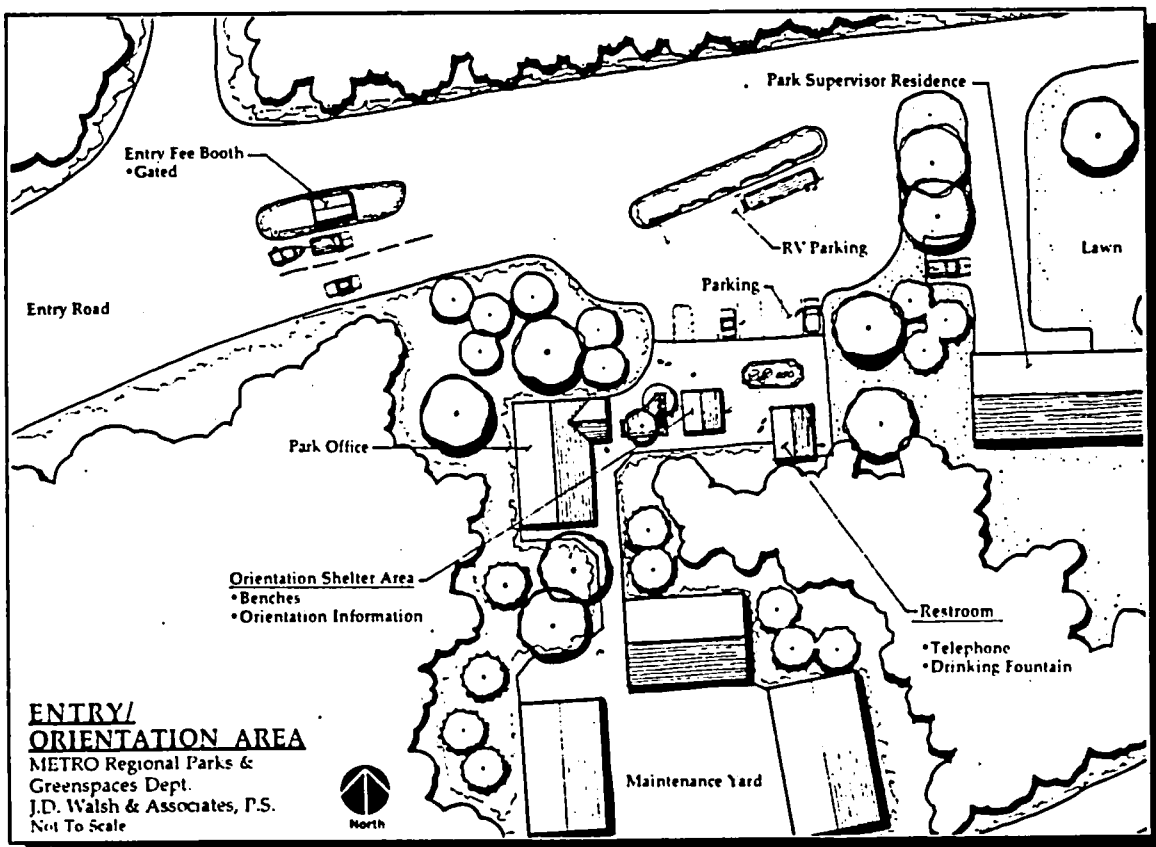


Figure 15 - Entry / Orientation Area

© Metro

Entry Fee Booth

160 s.f. (10'x16')

The entry fee booth, like the other proposed park structures will be constructed of simple rugged materials (Figure 16). Round river rock will be utilized for the build-

ing base as well as the gate entry posts. Wood siding, wood windows and metal roofs are typical materials to be used.

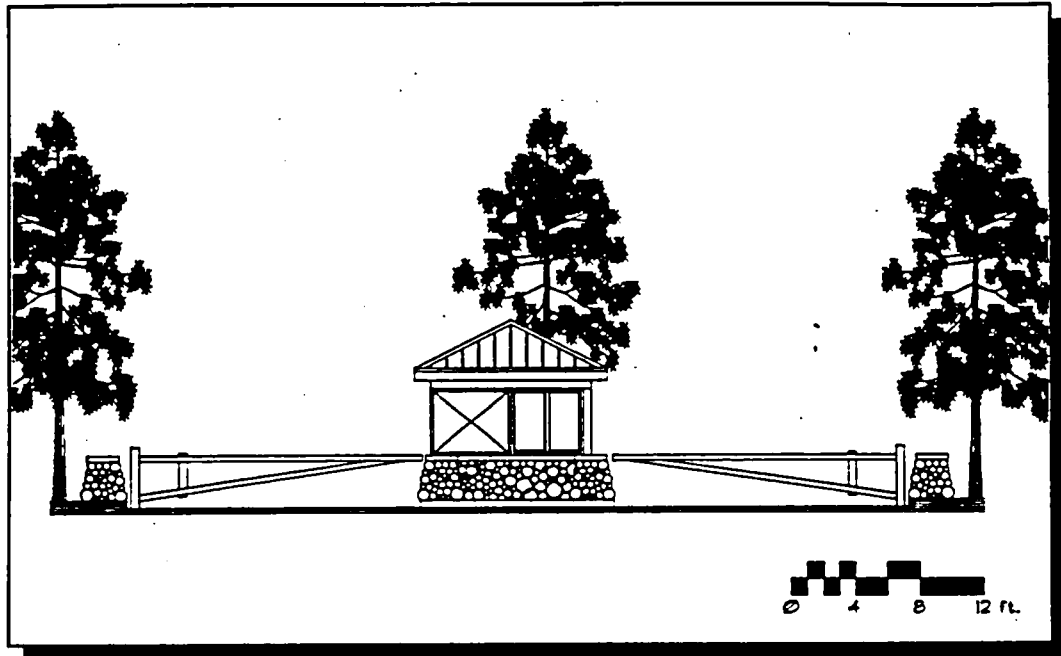


Figure 16 - Entry Fee Booth - Section View

© Metro

New Fee Booth Structure with Staff Office / Work Space

- Accessible facility
- Desk space for two employees, telephone, computer terminal.
- Pass through windows for collecting entry fees and distribution of park information.
- Cash register & park information storage.
- Drop safe for entry fee deposit by staff, as fees accumulate.
- Shutters and alarm for night security.
- Allow for installation of security camera to record arriving and departing vehicles.
- Entry drive should allow for double lanes.
- Paving should allow vehicles to turn around if not entering park, or to return into park.

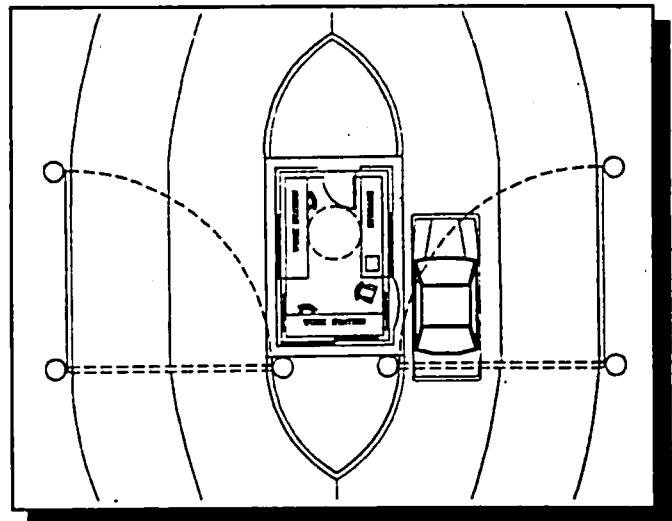


Figure 17 - Entry Fee Booth - Plan View © Metro

Park Office

1,040 s.f.

The front entry sequence will contain a new park office. The park office will serve as the work space for the park staff as well as a 'First-Aid' location for park staff and visitors. The following is the proposed program:

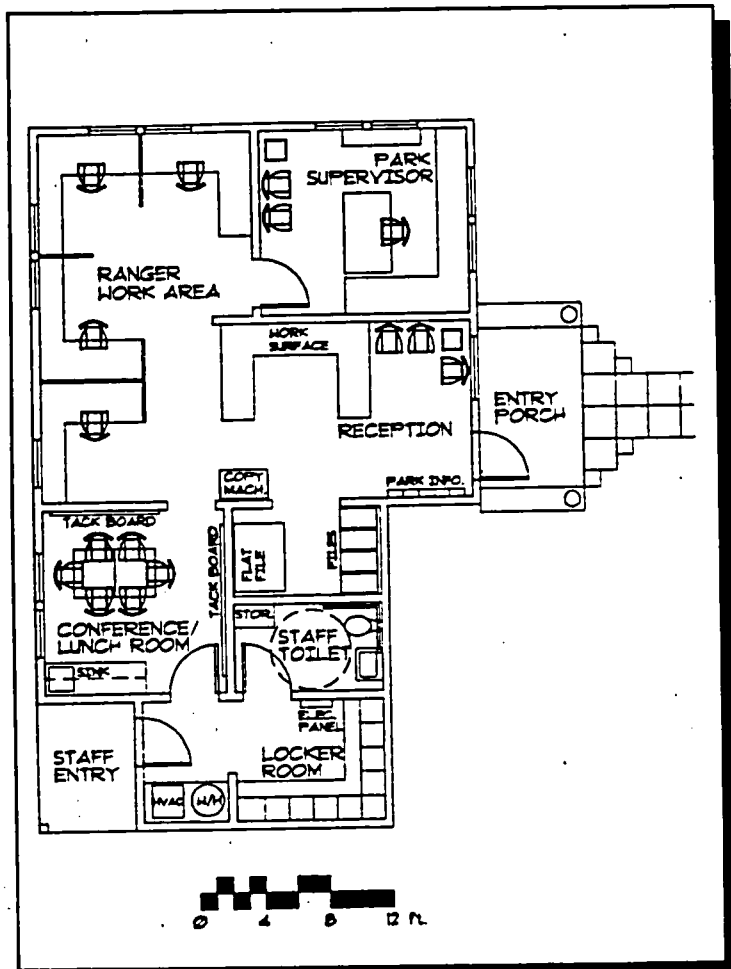


Figure 18 - Park Office - Plan View

© Metro

Public Entry / Reception

168 s.f. (14' x 12')

- Small entry area for public interface. Accessible from park entry / orientation area.
- Limited public access.
- Reception desk & staff work area.
- Photocopier, fax machine, etc.

Park Supervisor's Office

168 s.f. (12' x 14')

- Private office space for Park Supervisor.
- Desk and computer work area, visitor seating / meeting area, telephone, files and storage.

- Ranger's Office** 336 s.f. (14' x 24')
- Shared office area with 4 separate work stations; 3 full time staff, 1 shared by seasonal staff.
 - Computer terminals, telephones, files and storage.
- Conference / Lunch Room** 120 s.f. (10' x 12')
- Multi-use space for staff meetings and work sessions.
 - Staff lunch and break area.
 - Separate from staff work areas so scheduled breaks do not disturb office staff functions.
 - Sink, counter, refrigerator, microwave.
- File / Storage** 60 s.f. (6' x 10')
- Drawer files, flat files for maps, reference books, document storage.
- Locker Room** 80 s.f. (8' x 10')
- Lockers for full time and seasonal staff.
 - Drying area for raingear and boots, adjacent to staff entry toilet areas.
- Staff Toilet Room** 60 s.f. (6' x 10')
- Accessible toilet and unisex lavatory.
- Mechanical Room / Staff Entry** 48 s.f. (6' x 8')
- HVAC equipment and water heater.

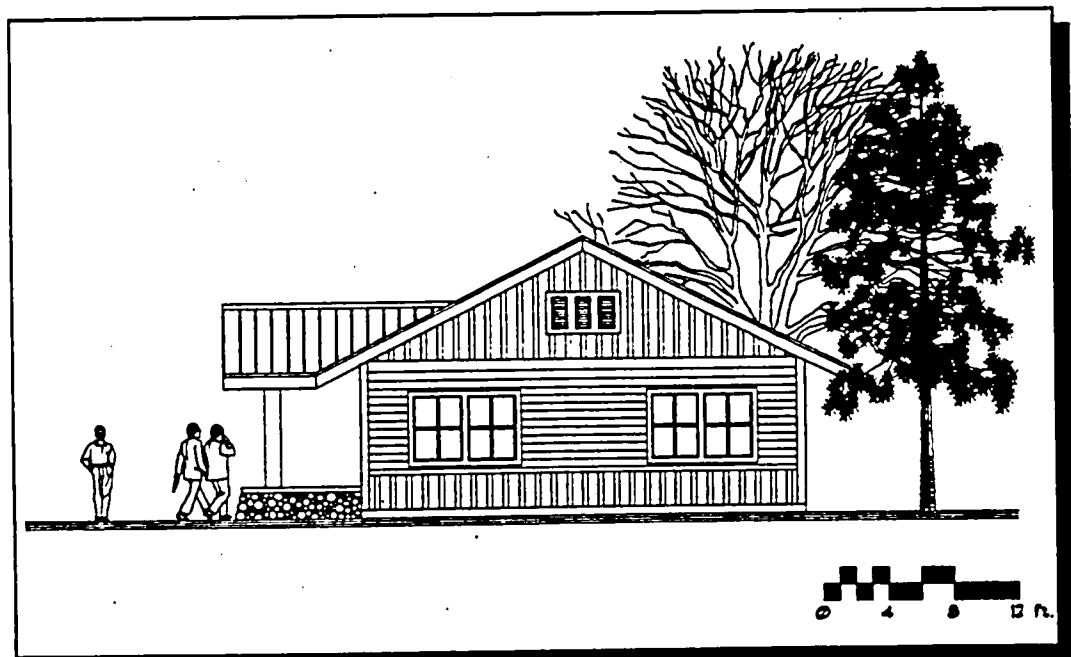
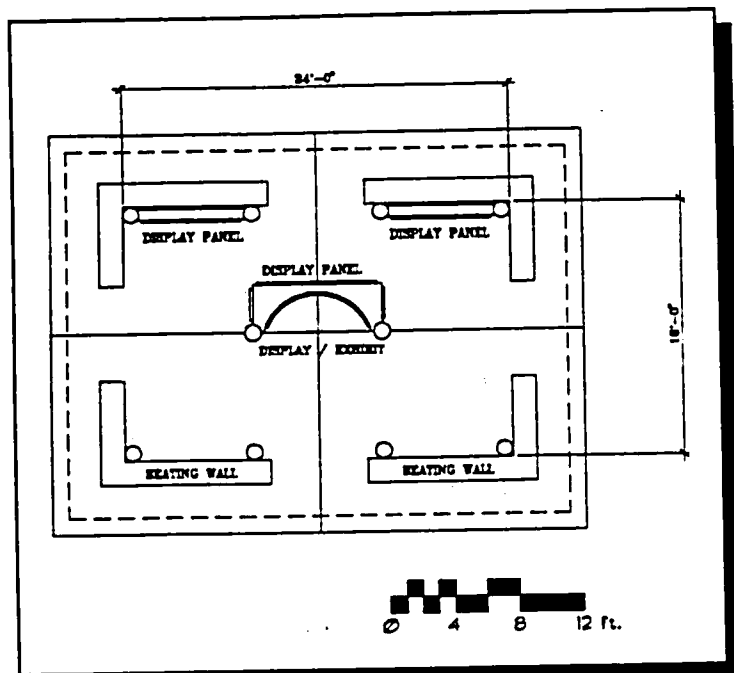


Figure 19 - Park Office - Front Elevation

© Metro

Visitor Orientation Area

The visitors orientation area is where the park user first encounters various information regarding recreation opportunities available within the park. This space is utilized for displays and orientation information which will orient the user to the various use areas and educational elements of Oxbow Regional Park. A pay phone will be available in this area.



Orientation Area 384 s.f.(16' x 24')

- Covered area for the display and distribution of park information, maps, recreation opportunities, natural resources, reservation information, special events and planned activities schedule.

Figure 20 - Orientation Shelter - Plan View

© Metro

Entry/Orientation Interpretation

Theme: Oxbow Regional Park is the heart of the Sandy River Gorge, where the river meanders to connect ancient forests, fish, wildlife, and people.

Media: Two interpretive panels, one 'you are here' map, one regulatory sign and a sculptural element.

Discussion: One general park welcome interpretive panel to provide a brief slice of forest, salmon and wildlife themes to "whet the visitor appetite" for exploring Oxbow Regional Park.

One sign containing 'you are here' map.

One recreation opportunity interpretive panel: This will target individual audiences and suggest what there is to see and do (i.e. angler, boater, swimmer, hiker, family picnic, etc.).

One regulatory sign for modular international symbols with positively written key regulatory messages located near road and readable from a car.

Sculptural element(s) to communicate the 'web of life' linking river, salmon, forest and wildlife.

Other possible Interpretive Elements:

Brochure box for distribution of park brochures.

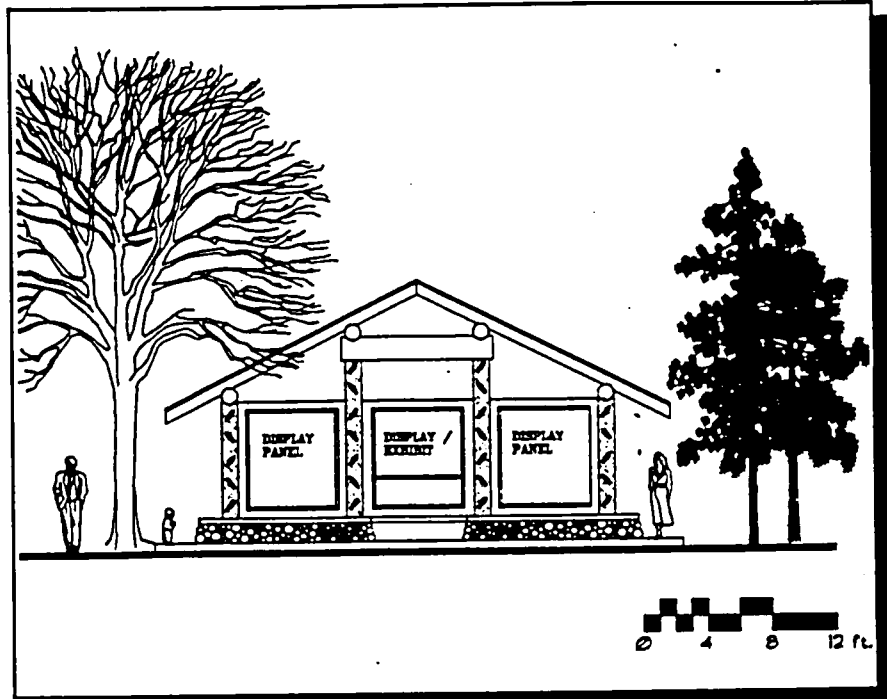


Figure 21 - Orientation Shelter - Front Elevation

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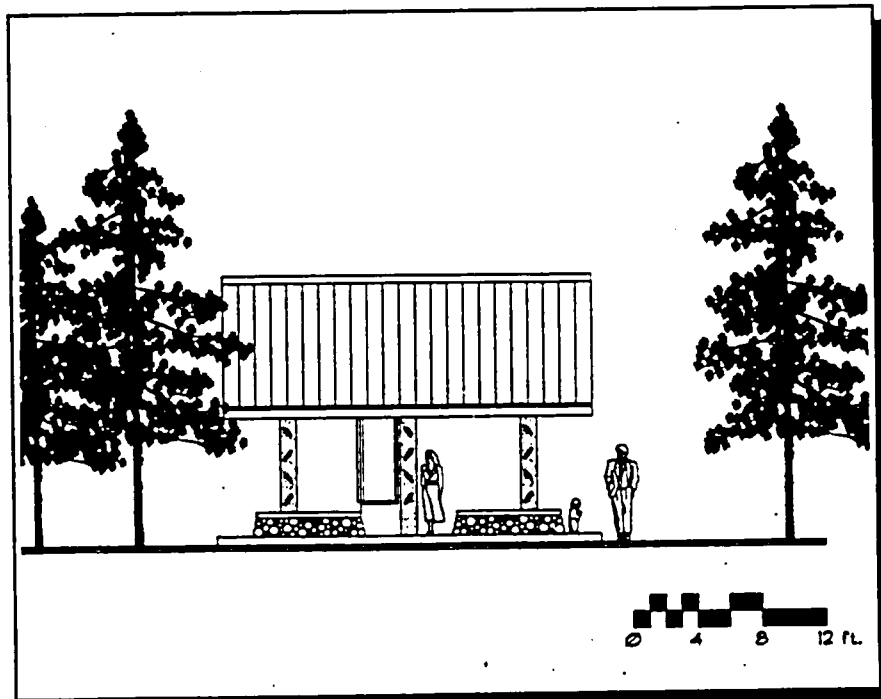


Figure 22 - Orientation Shelter - Side Elevation

© Metro

Restroom Facilities

For the convenience of park patrons, a small restroom facility is planned for the entry / arrival area.

Public Restrooms	256 s.f. (16' x 16')
• 2 accessible, single occupancy, unisex toilet rooms.	80 s.f. ea(8' x 10')
• Toilet, lavatory and baby change table.	
• Electric hand dryers (no paper towels).	
• High and low venting for natural convection.	
• Freeze protected for winter use.	
• Cold water.	
• Plumbing chase.	96 s.f. (16' x 6')
• Pay telephone.	
• Covered outdoor area.	96 s.f. (16' x 6')

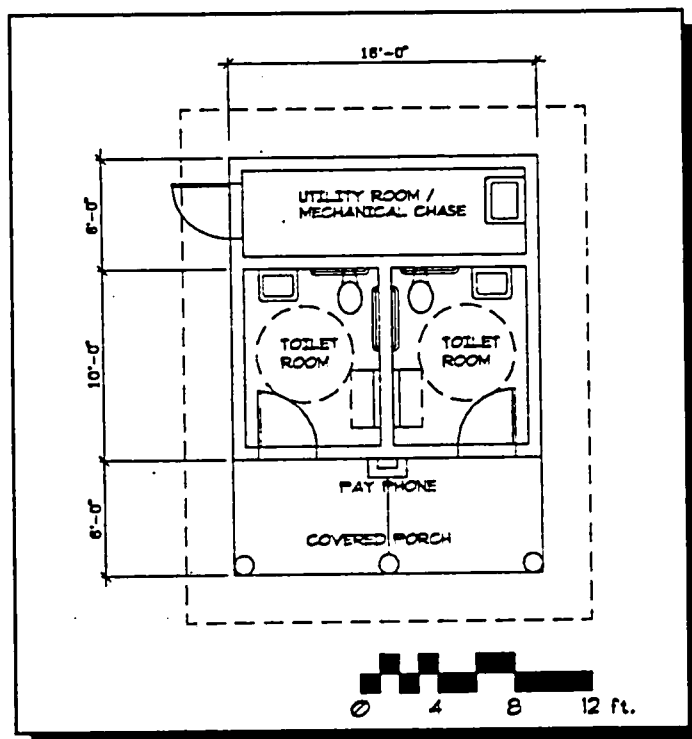


Figure 23 - Two Unit Restroom - Plan View © Metro

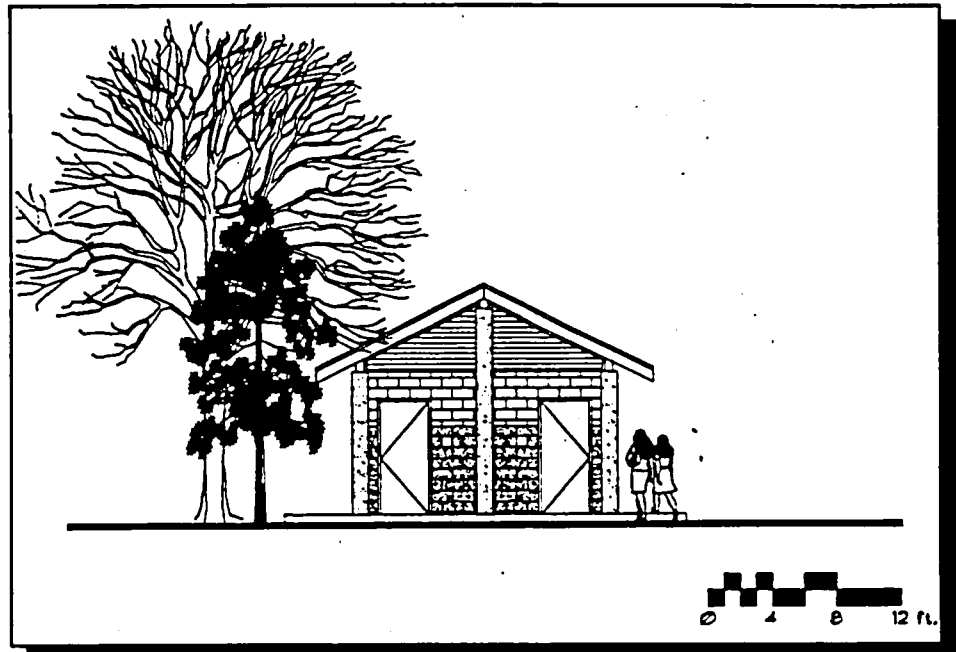


Figure 24 - Two Unit Restroom - Front Elevation

© Metro

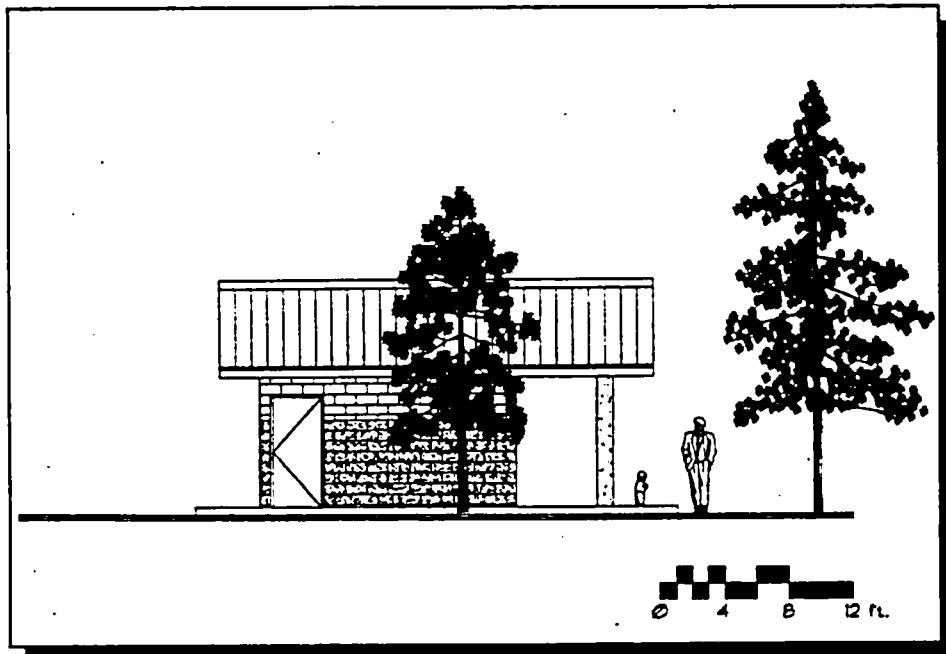


Figure 25 - Two Unit Restroom - Side Elevation

© Metro

© PARK SUPERVISOR RESIDENCE / MAINTENANCE AREA

The maintenance access drive will be relocated to the east side of the supervisor's residence to improve circulation patterns. The existing maintenance area will be visually screened from the visitor entry. Additional low shrub plantings between the entry area and the park supervisor's residence will provide further separation and privacy while maintaining visual contact. The adjacent area east of the park supervisor's residence will be utilized as an overflow camping area with six additional camp sites.

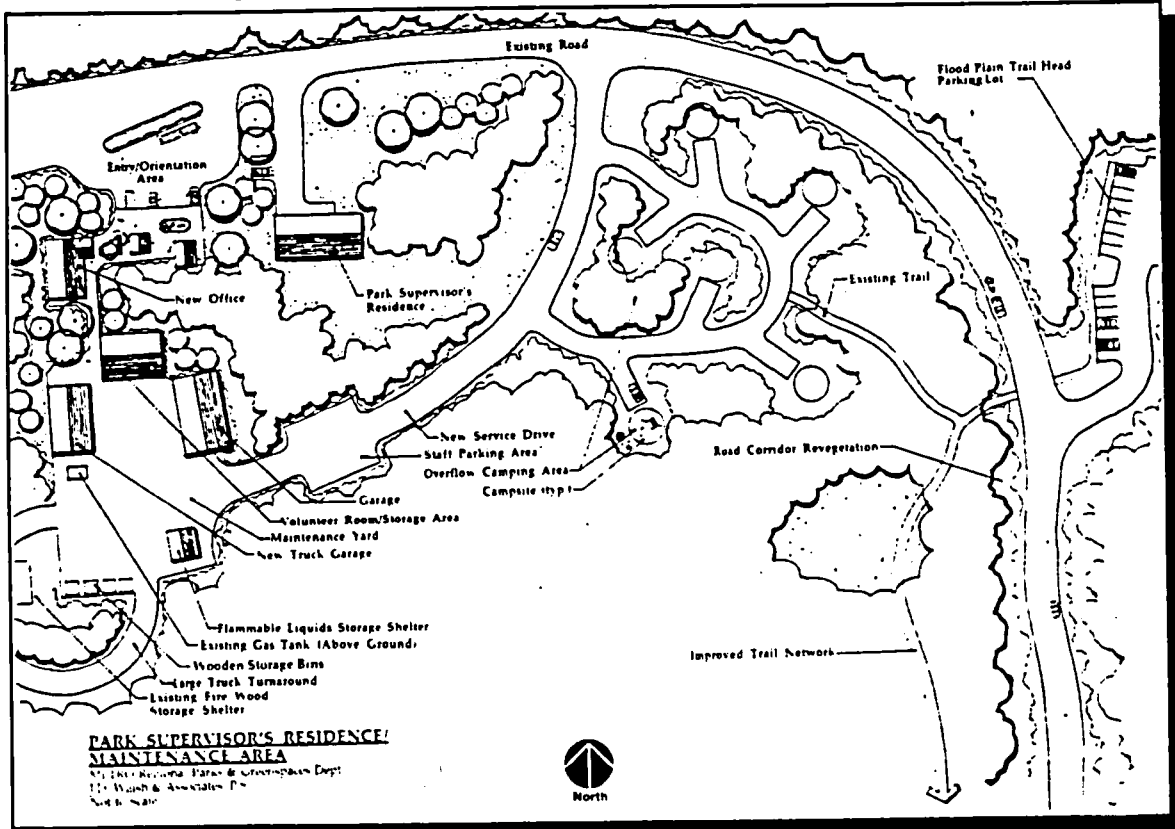


Figure 26 - Park Supervisor's Residence / Maintenance Area

Maintenance Area

Within the existing maintenance area a number of building and maintenance yard improvements are identified as noted below:

Maintenance Yard

- Improved access road with loop turnaround for large trucks with trailers.
- Truck and equipment parking.
- Employee parking (12-14 spaces).
- Remove wooden storage cabins and miscellaneous discarded materials.
- Install wash rack for cleaning equipment.

New Truck Garage**1860 s.f. (30' x 62')**

- Metal pole building with gravel floor and roll up doors, wooded sides
- Unheated work areas, dry storage area for sweeper, log splitter, tractor, equipment, tools and material storage.
- Security systems.
- Incorporate tool and equipment storage currently housed in existing storage cabins.

Garage (Existing)**1860 s.f. (30' x 62')**

- Secure and enclosed, unheated truck garage for park vehicles.
- Possibly weatherize 1 bay of existing truck garage for use as shop expansion; until new shop is constructed. Provide heat and power.

Flammable Liquids Storage Building (Pre-Fabricated)**120 s.f. (10' x 12')**

- Code required storage building for fuel and chemical storage.
- Pre-fabricated structure.
- Location for emergency eye wash station.

Repair & Enlarge Existing Fire Wood Storage Shelter**800 s.f. (20' x 40')**

- Screened / ventilated shelter for up to 100 cords of wood.
- Area for wood splitting (typically wood is purchased pre-split).

Volunteer Work and Storage Areas/Operation and Maintenance Work and Storage Area (Existing)**1,056 s.f.**

One half of the area serves diverse and varied volunteers (individuals and groups) that assist staff with park maintenance and construction projects. These groups include high school students, retired adults, participants in community mental health programs and others. Some groups work independently, others work with park staff. Schedules vary greatly, some groups come once or twice a week, others are annual or short term projects. The other half serves as storage and work space for operations and maintenance staff.

Volunteer Area

- Check in area for arriving park volunteers; scheduling and project information.
- Lunch/break area.
- Shared work surfaces and/or group table.
- Drying area for raingear and boots.
- Storage area for tools to be used by volunteer groups.
- Work area for small construction or repair projects.

Operation and Maintenance Area

- Check in area for arriving park volunteers; scheduling and project information.
- Secure, heated storage for miscellaneous tools.
- Work bench for small repairs.

Overflow Camping Area

- Loop road with six camp sites.
- Each camp site contains: 1 gravel parking space, 1 table, 1 fire ring, and 1 barbeque.
- The restroom at the entrance area will service the overflow camp sites.
- Potable water will be available.

④ FLOOD PLAIN TRAIL HEAD

The Flood Plain Trail Head (formerly called Picnic Area 1) is intended to continue as a small day use space and a trail head. For driver safety, the entry driveway has been realigned. Vehicles will enter and exit at the same location with an improved line of sight. A parking area will be defined and the excess areas currently used for random parking will be restored with natural vegetation. The open meadow will remain a play area.

Program description:

- Parking, 15 gravel surface spaces.
- Open lawn recreation space.
- One unisex toilet (vault type).
- Picnic tables (approximately 6 tables).
- Trail directional sign.

⑤ ROAD CORRIDOR

The road corridor from the (B) Entrance Gate/Arrival Area to (G) Dismal Swamp Day Use Area will be restored along the edges with native vegetation. Except for selected areas, most of the random parking and picnic tables will be relocated. Lawn and gravel areas will be restored with native vegetation plantings. Metro should seek partnerships with volunteer organizations to achieve this component.

⑥ 'HOSNER HOLE' RIVER ACCESS / INTERPRETIVE VIEWPOINT

This area will continue to offer bank access for anglers, as well as a take out point for the in-park float trips. A small number of picnic tables will be provided for day use. Parking spaces adjacent to the existing road will provide parking for this area.

To the south, at the landslide area, the existing parking and picnic facilities will remain. A new interpretive view point of the river will also be located at the south end of this area.

Program Description:

- Parking, 30 gravel surface spaces.
- Two unisex toilets (vault type) in one structure.
- Picnic tables (approximately 6 tables).
- River bank access.
- ADA parking at interpretive viewpoint.
- One interpretive panel.
- Wildlife track sculptural element.

River Overlook / Interpretive Viewpoint

Interpretation

Sub-theme: The Sandy River has formed and shaped Oxbow Regional Park via catastrophic events and the steady forces of gravity and erosion.

Media: One interpretive panel, wildlife track sculptural element.

Discussion: The preferred site offers views across the river to sandy beaches and an oxbow curve of the river. It is located in conjunction with angler parking, at an existing road slide. A panel mounted horizontally allow visitors to read and look out at the river. The panel interprets the geographic history of the Sandy River and the hydrologic forces which shape and form Oxbow Regional Park. An aerial photo or map would provide a good perspective of river oxbows.

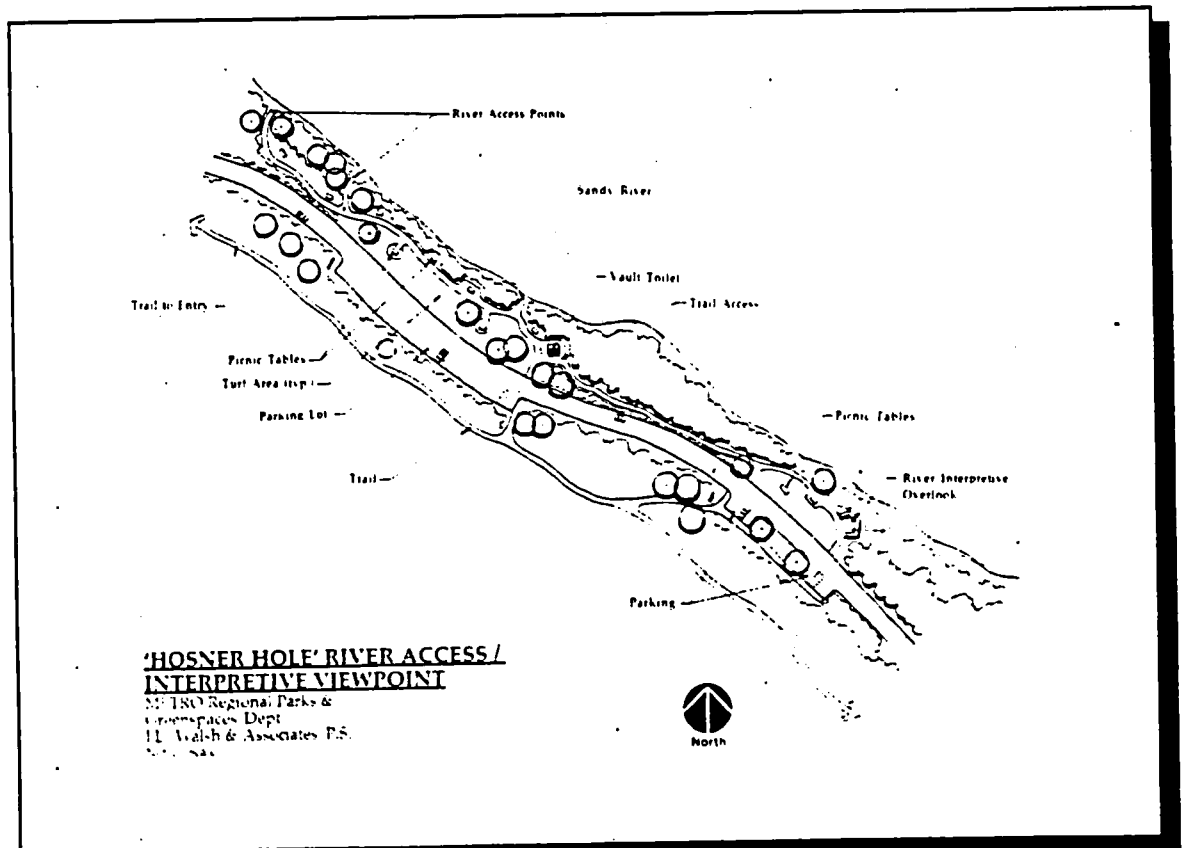


Figure 27 - 'Hosner Hole' River Access / Interpretive Viewpoint

© Metro

Ⓒ DISMAL SWAMP DAY USE AREA

The Dismal Swamp area is intended to continue as a day use area with access to the river. The grass area on the river side of the road is to remain with picnic and recreation activities. The existing road may be relocated to the south to consolidate all parking on the river side of the road.

The existing lawn and parking areas on the south side of the road will be removed in order to restore a wetland in conjunction with Happy Creek.

At the edge of the Ancient Forest, the small creek overflows across the road during flooding conditions. High water flows will be directed into the restored wetland.

In addition, this area is intended to be a major trail head for hikers providing access to all of the main park trails.

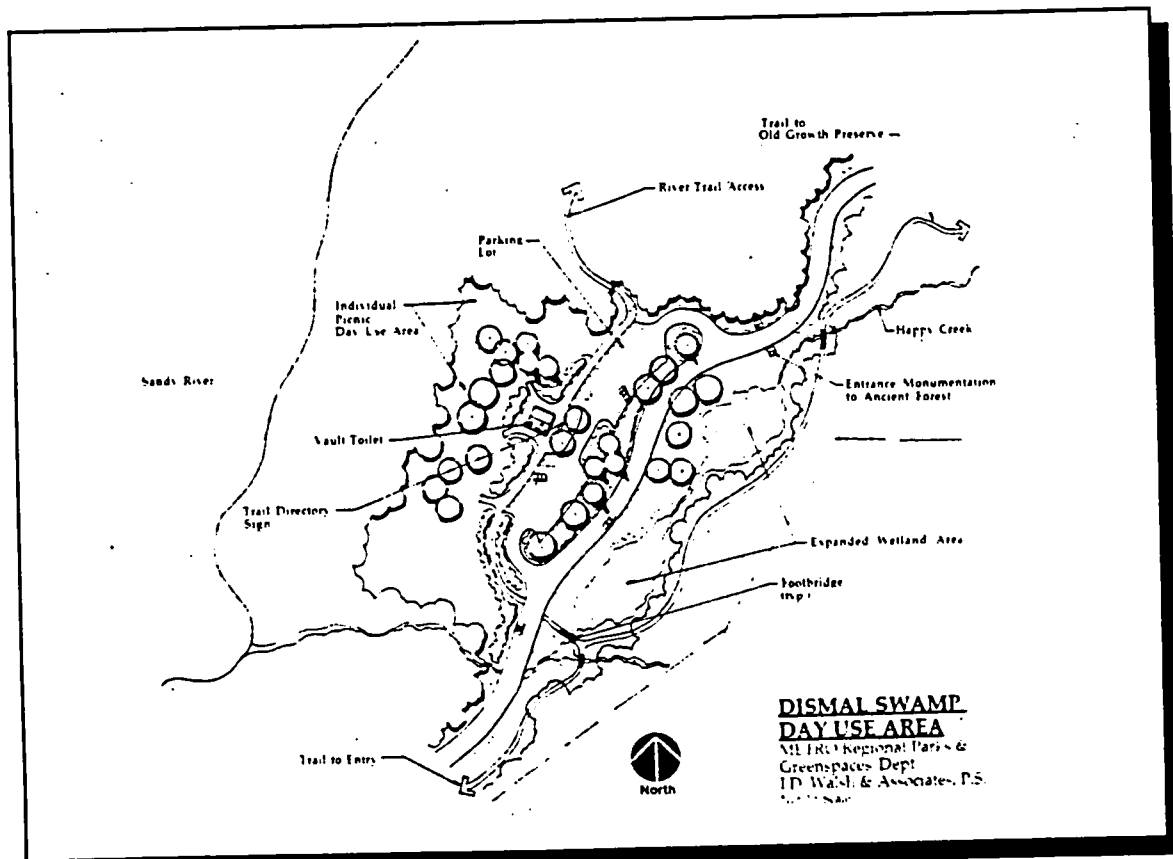


Figure 28 - Dismal Swamp Day Use Area

© Metro

Program Description:

Day use space/trail head.

- Parking, 45 gravel surface spaces.
- Open lawn recreation spaces (irrigated).
- Three unisex toilets (vault type) in two structures.
- Picnic tables (approximately 21 tables).
- One information sign board with 'you are here' map, ancient forest trail map.
- Wetland and Happy Creek restoration.

Trail Orientation

An information signboard will include a 'you are here' map and a detailed map of the trails in the Ancient Forest. Self-guiding Ancient Forest tour brochures may be available in a brochure box at the signboard. A sign on the board will direct disabled visitors requiring hardened surface access to the Ancient Forest to the barrier-free loop trail beginning at the environmental education center.

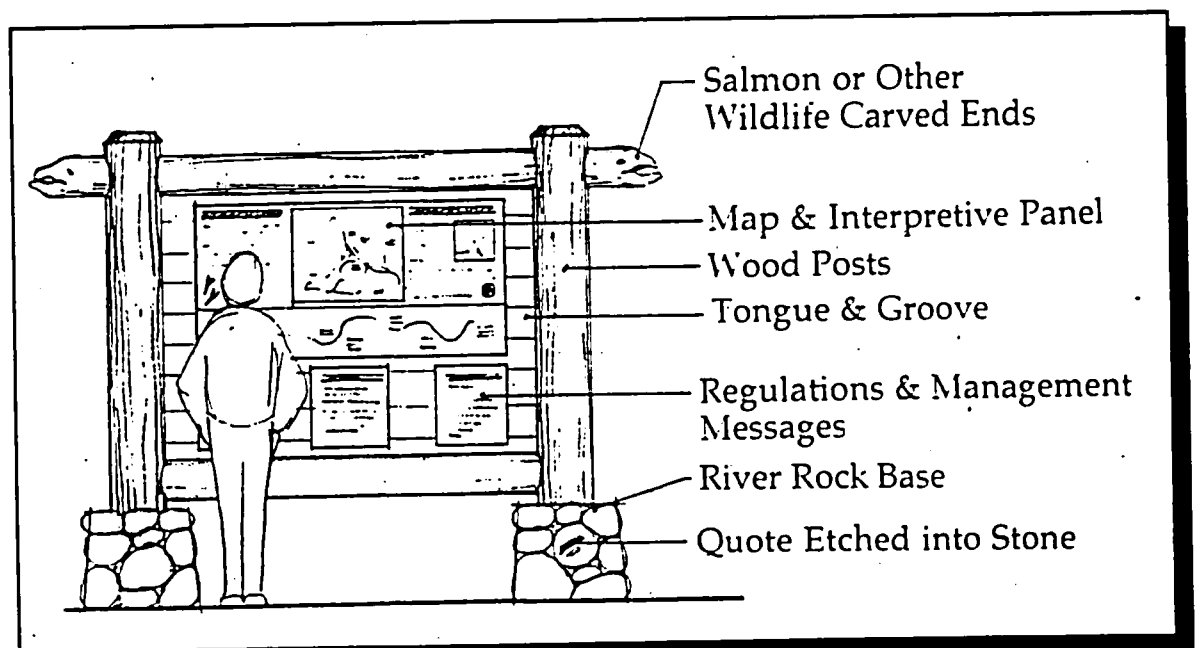


Figure 29 - Information Signboard / Interpretive Display

© Metro

(H) ANCIENT FOREST PRESERVE

The 160+ acre Ancient Forest Preserve inside Oxbow Regional Park is the closest example of this stage of forest development, within the metropolitan area. This area is unique and has tremendous value as a resource for education and research. The Master Plan envisions that this area will be preserved and continue to be utilized for educational, hiking and wildlife observation uses.

At the entry to the Ancient Forest, the proposed river rock pillars will act as a monument to alert park patrons to the special corridor.

Similar to the entry road, it is intended that the random parking and picnic areas will be removed from along the road and be restored with native vegetation.

Access will be retained to the existing pumphouse and a minimal number of parking spaces will be retained for maintenance vehicles. The pumphouse loop road will no longer provide a through access.

① ENVIRONMENTAL EDUCATION AREA

As previously discussed, environmental education is an important aspect of current park patrons' use and enjoyment of the park. During the master planning process, considerable emphasis was placed on making environmental education and natural resource interpretation a major feature of the Oxbow Regional Park experience.

The focus of this activity will be a new building and associated outdoor gathering areas located just to the east of the Ancient Forest Preserve. This site was chosen because of its proximity to abundant natural resources including the Sandy River, Ancient Forest and Alder Ridge. This central location optimizes the potential learning experience for children bussed to the site from local schools. From this location, outdoor educational activities can be complimented with indoor presentations. The location also affords easy access for park users in the main activity areas. The structure will provide for environmental education needs including multi-purpose rooms, offices, storage and other support spaces. In addition, the building will provide opportunities for lecture and meeting spaces, events, a casual lounging space and restroom facilities for general park users.

A special feature associated with the environmental education area will be the development of a barrier-free interpretive trail in the adjacent Ancient Forest Preserve. A short (1/8 mile) loop will provide park users with an introduction to unique qualities of the Ancient Forest Preserve.

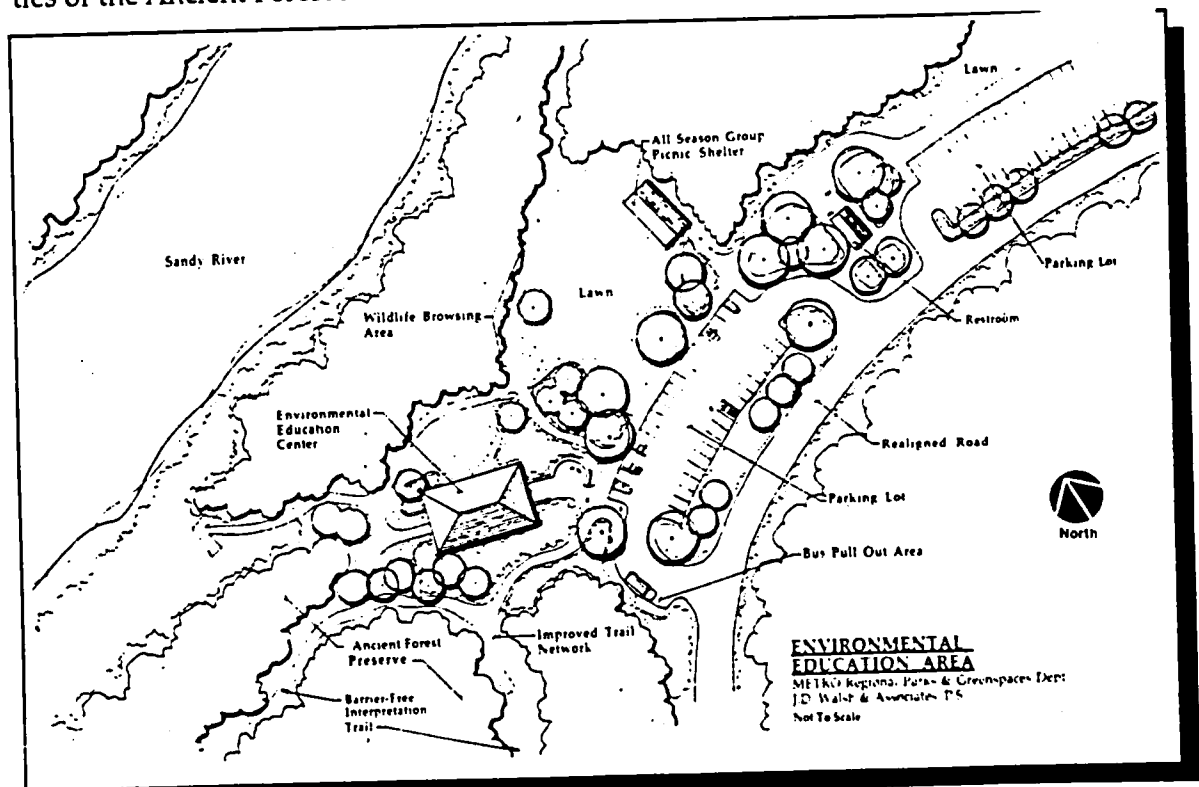


Figure 30 - Environmental Education Area

© Metro

Environmental Education Center

4892 s.f.

- Entry (2 @ 96 s.f. ea.)** 192 s.f.
• Main building access.
- Hearth / Displays / Reference Library** 384 s.f.
• Access to building functions.
• Provide separation / security for after hours events and uses.
• Small sitting area with Fireplace or Stove (Wood or LP Gas)
• Small area for reference books and support materials.
- Naturalist Office** 192 s.f. (12' x 16')
• Private office space for Park Naturalist w/ desk and computer work areas, visitor seating / meeting area, telephone, files and storage.
- Classroom / Multi-Purpose Area** 1344 s.f.
• 60 student capacity, desks, chairs, etc. (65 people @ 20 s.f. each)
• Sub-dividable.
• Marker board, tack surfaces, slide screen and educational material storage.
• Counter with sinks.
• Coat pegs / dry off area.
• Large window areas, low enough for children to look out.
- Classroom Storage (2 @ 144 s.f. ea.)** 288 s.f.
• Storage area for 60 chairs (adult and primary), 10 tables, AV carts, etc.
- Small Group Areas (2 @ 144 s.f. ea.)** 288 s.f.
• Small group study areas, 15 student capacity, possible identities such as "Fox Den", etc. Small scale spaces, fun environments for study.
• Adjacent to classroom or sub-area of classroom.
- Discovery Room / Central Circulation** 648 s.f.
• Interactive displays and exhibits for educational use.
• Hands on activities and investigations.
- Study Collection / Support Facilities** 216 s.f.
• Work table / counters, storage drawers, cabinets, freezer, etc.
- Volunteer Room** 192 s.f. (12' x 16')
• Meeting / work room for volunteer naturalist(s).
• Work surfaces / table and counter area with sink.
- Work Room / Study Area** 120 s.f.
• Slide File, light table, etc.
• Work surfaces / table and counter area with sink.
- Restrooms** 576 s.f.
• Accessible restroom facilities with multiple fixtures, hot and cold water. (Women = 2 WC's, 2 lavs, Men = 1 WC, 1 Urinal, 2 lavs)
• Electric Hand Dryers, trash receptacle.
• Baby change table.
• Access from inside and outside of building.
- Janitor Closet** 30 s.f.
• Storage for cleaning equipment and supplies.
• Mop sink, mop and broom hooks, storage shelves.

Mechanical Room

96 s.f.

- HVAC equipment, water heater, electrical and telephone panels.

Covered Entry Terraces (Front & Back)*

1440 s.f. (720 s.f. ea.)

- Outdoor covered areas for building entry, outdoor study area, lunch

Class Room Terraces (2 @ 360 s.f.)*

720 s.f.

* Square footage is not included in total building square footage.

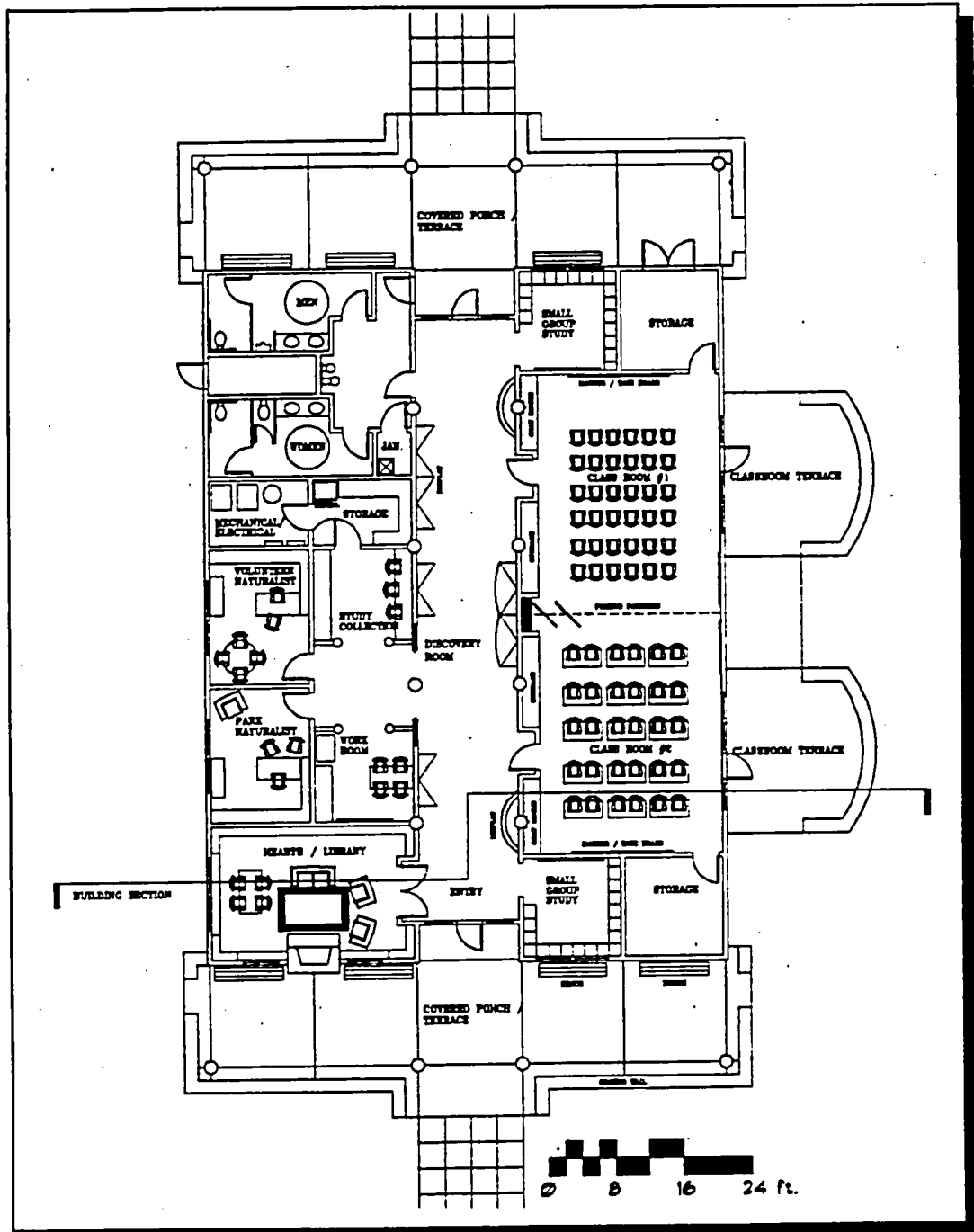


Figure 31 - Environmental Education Center - Floor Plan

© Metro



Figure 32 - Environmental Education Center - Entry Elevation

© Metro

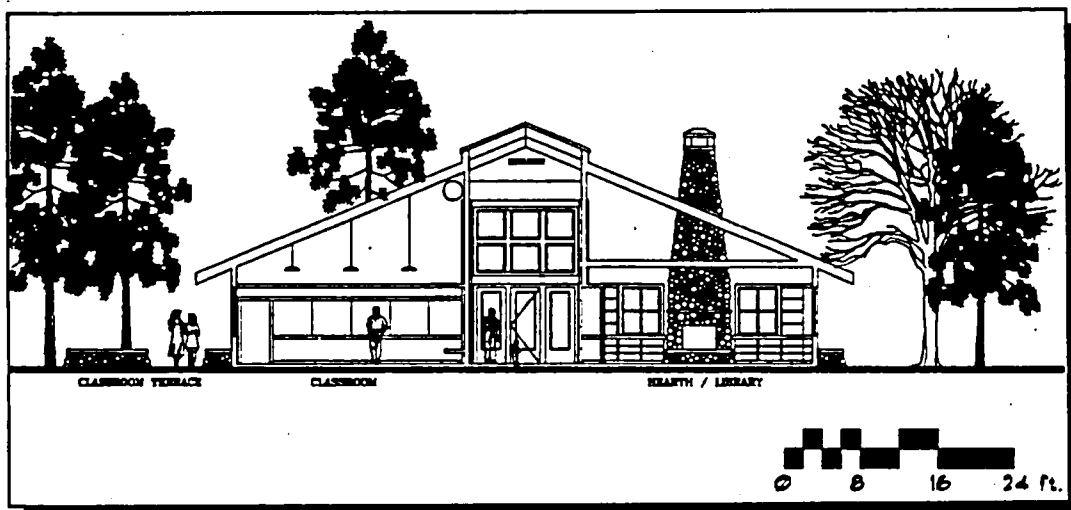


Figure 33 - Environmental Education Center - Building Section

© Metro

Interpretation

The environmental education center should be named in honor and commemoration of the Diack family for their outstanding contributions to the creation of Oxbow Regional Park, protection of the Sandy River Gorge and enhancement of environmental education opportunities for children throughout the State of Oregon.

Facility Interior Themes: The major theme and five sub-themes (discussed on pages 102 through 107 ahead in the Interpretive Program/Signage section) will be expressed in interior exhibitory.

Facility Exterior Sub-theme: Tracks and traces reveal the secret lives of animals.

Media: Interior interpretive exhibits, 'you are here' map on exterior patio, outdoor sculptural elements.

Discussion: Outdoor interpretive area would be interactive and aimed primarily at children and their families. This could be an orientation to wildlife and river themes and offer osprey stories and views of the river. A wildlife tracking game would be designed as a treasure hunt. Bronze track casts could offer children an opportunity to stand in the track of a mountain lion or other wildlife. Then, through the use of a journal, make a track cast as proof of finding their treasure. Large track boxes could be set up to observe tracks along wildlife paths.

Ancient Forest Barrier-Free Interpretive Trail - 1/8 mile loop

Interpretation

Sub-theme: Oxbow Regional Parks' Ancient Forest offers a precious pocket of habitat for a unique community of life.

Media: Five interpretive panels, including one map of Ancient Forest trails.

Discussion: The information board offers maps, introduces interpretive trails and orients visitors to hiking trails. Five interpretive trail panels are located along short accessible loops to immerse visitors in the Ancient Forest story. Also offered are several benches at points for solitude.

J GROUP DAY USE AREA

The group day use area is focused on providing facilities for group picnics. In a setting of green lawns and trees, various size areas will be available for rent. The intent is to cater mainly to smaller groups of 200 and less.

The existing shelters will be gradually replaced with new shelters. A total of 6 shelters are proposed that would accommodate up to 464 picnickers under shelters. Table 6 outlines the proposed shelter and use areas. The numbers correspond to the shelters and the areas illustrated in Figure 34 below. The shelters would have food preparation areas including counters, sinks, barbecues and electrical service. Shelter #1 is also to be constructed for winter use by having a wood fireplace and removable window panels for rain and wind protection. Also, four additional group picnic areas (without shelters) will be available for rent. These areas could accommodate up to 280 additional picnickers.

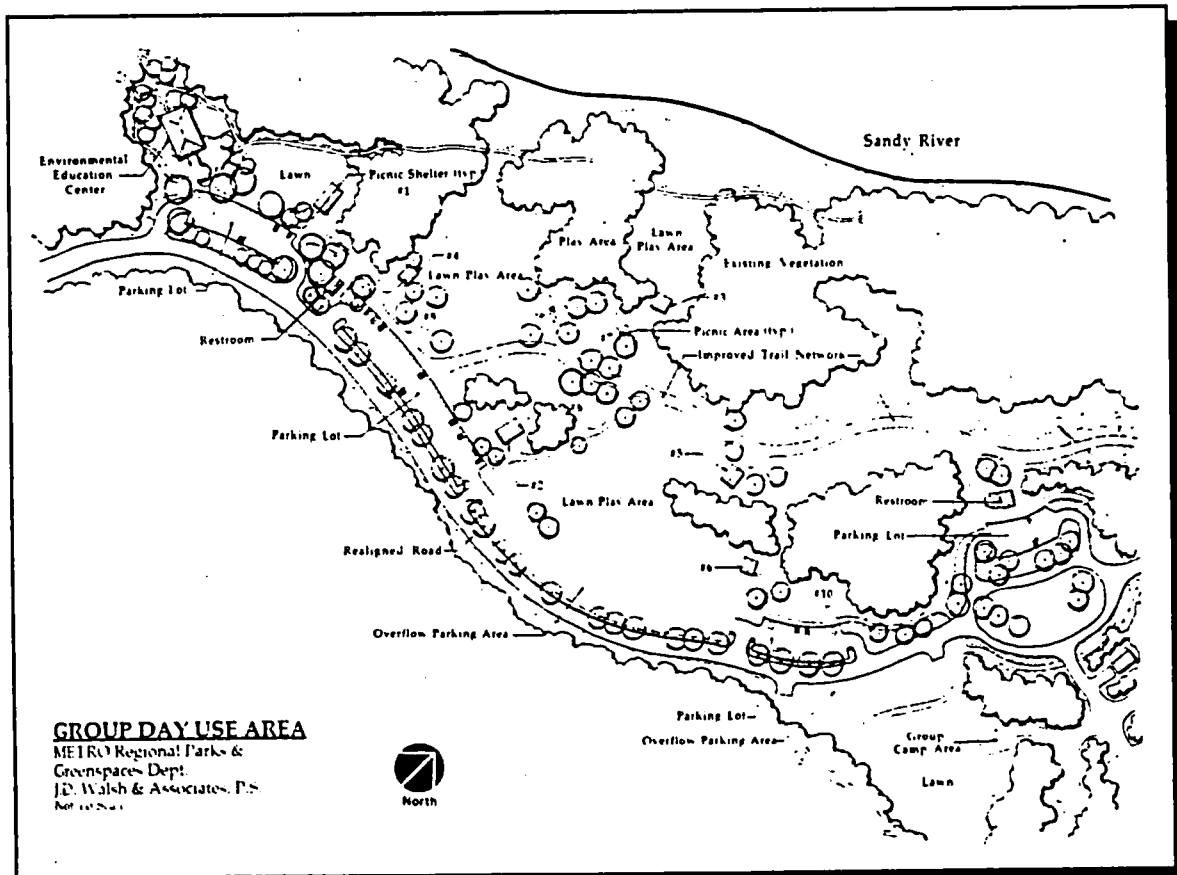


Figure 34 - Group Day Use Area - Plan View

© Metro

The information signboard currently at the park office will be relocated near the restroom at the east end of the group day use area.

Program Description:

- Parking (total of 302 parking spaces).
 - Asphalt Paved (39)
 - Gravel Surfaced (112)
 - Overflow on Grass (151)
- Picnic shelters (6).
- Restrooms - (2 flush type structures with 6 unisex units each).
- Information signboard with a 'you are here' map.
- Picnic tables (approximately 93).
- Open picnic areas (four).
- Play areas.
- Open lawn play areas (irrigated).

Table 6
Proposed Group Picnic Facilities for
Oxbow Regional Park

	New Group Picnic Area	Tables Under Shelter	Capacity	Shelter (sq. ft.)	Tables Outside of Shelter	Capacity	Area Capacity	Proposed Parking Base
	Shelter #1	18	144	1600				
	Shelter #2	12	96	1152				
	Shelter #3	7	56	576				
	Shelter #4	7	56	576				
	Shelter #5	7	56	576				
	Shelter #6	7	56	576				
Sub-Total	6	58	464				464	
Open Area	Area #7				12	96		
	Area #8				12	96		
	Area #9				7	56		
	Area #10				4	32		
Sub-Total					35	280	280	
Total							744	302

Picnic Shelters:

New Group Picnic Shelters (Summer Style):

- Open air shelters with slab on grade floors, accessible from parking areas and main trail systems.
- Roof structure on structural post and beam system.
- Movable picnic tables.
- Electrical outlets and lighting.
- Food preparation space (counter and sink)
- Barbeque under shelter for food cooking.

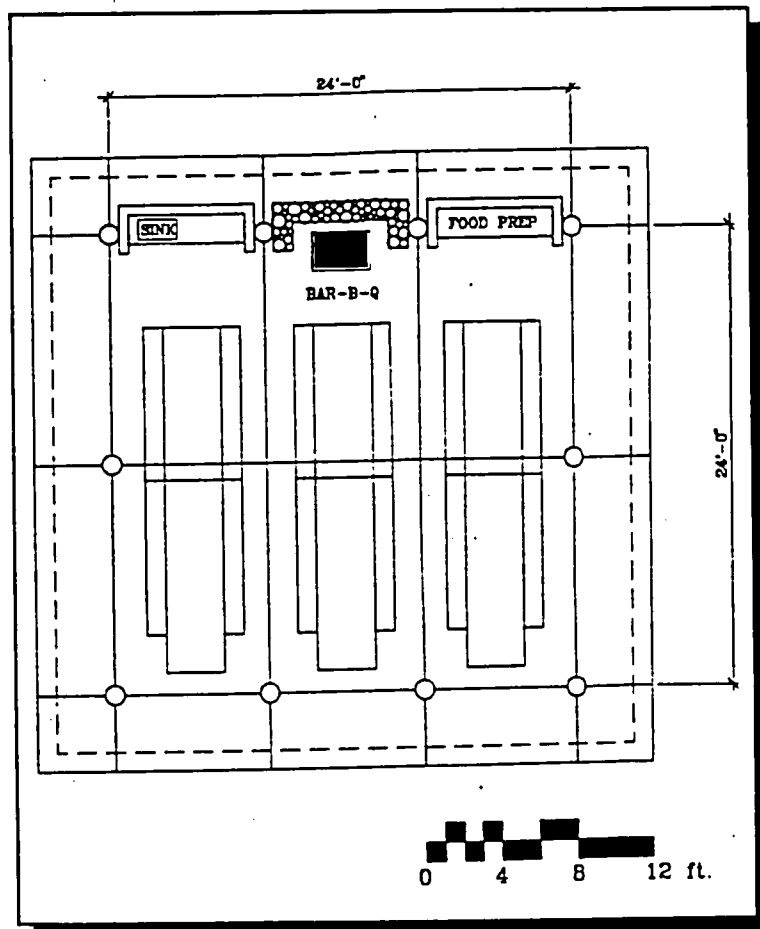


Figure 35 - Small Group Picnic Shelter - Plan View © Metro

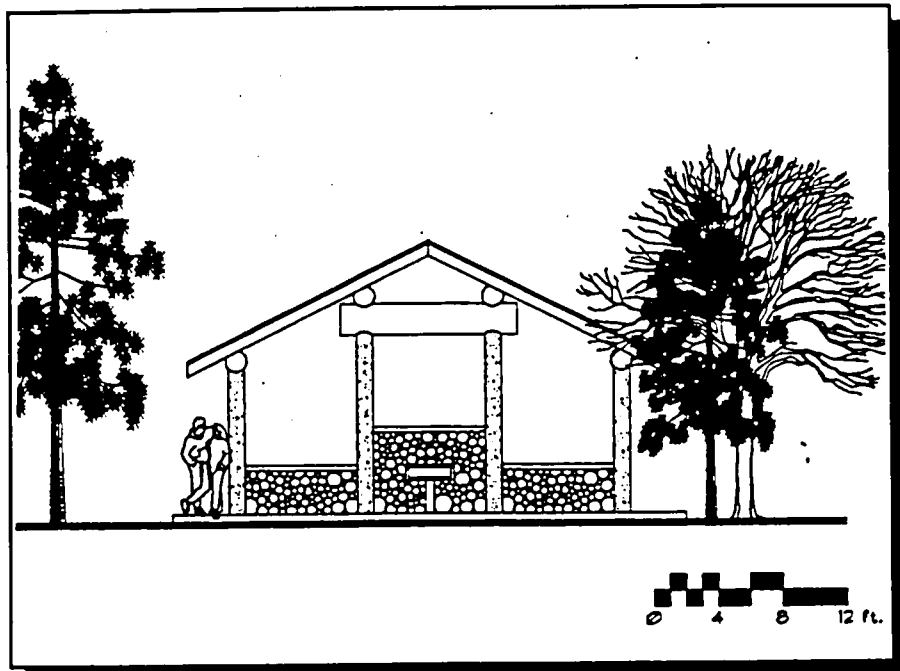


Figure 36 - Group Picnic Shelter - Elevation

© Metro

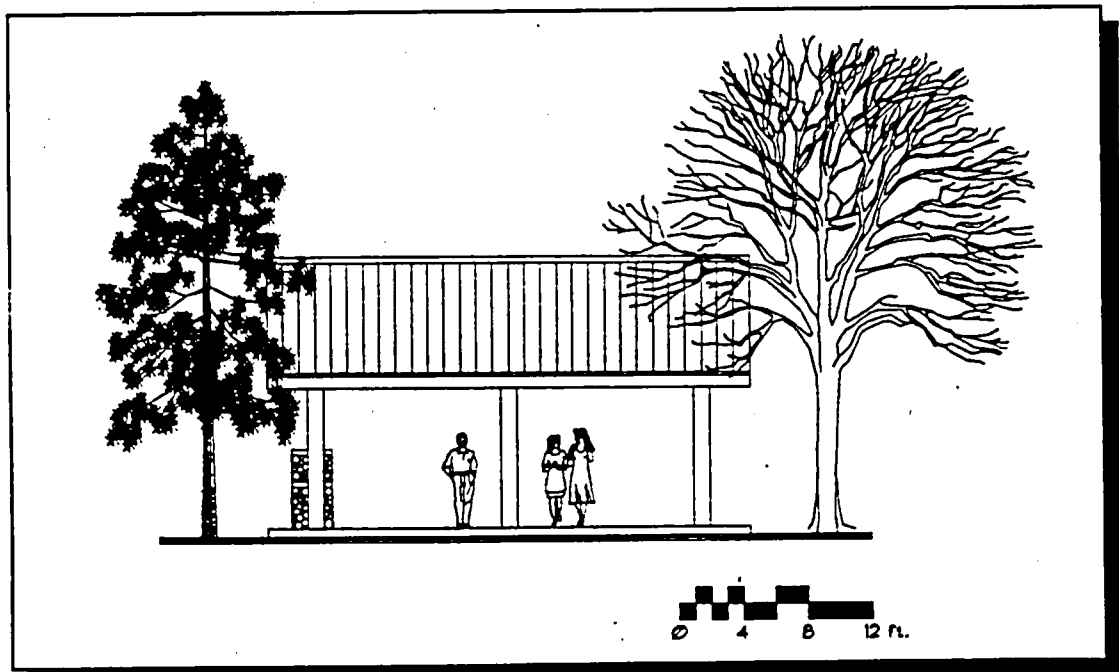


Figure 37 - Group Picnic Shelter - Side Elevation

© Metro

Enclosed Group Picnic Shelter (Winter Style)
- 144 Person Occupancy

1 @ 1600 s.f. (40'x 40')

- Open air shelters with slab on-grade floors, accessible from parking areas and main trail systems.
- Roof structures on structural post and beam system.
- Half walls and infill panels.
- Movable picnic tables.
- Electrical outlets and electrical lighting.
- Fireplace structure.

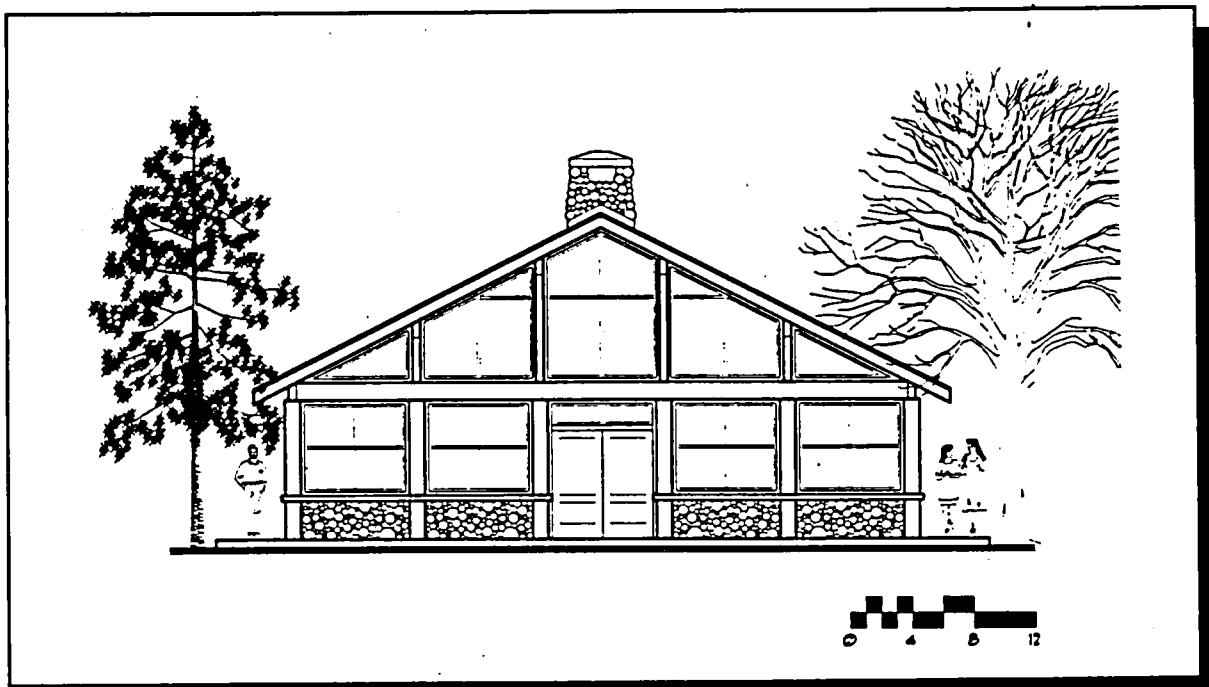


Figure 38 - Enclosed Shelter - Elevation

© Metro

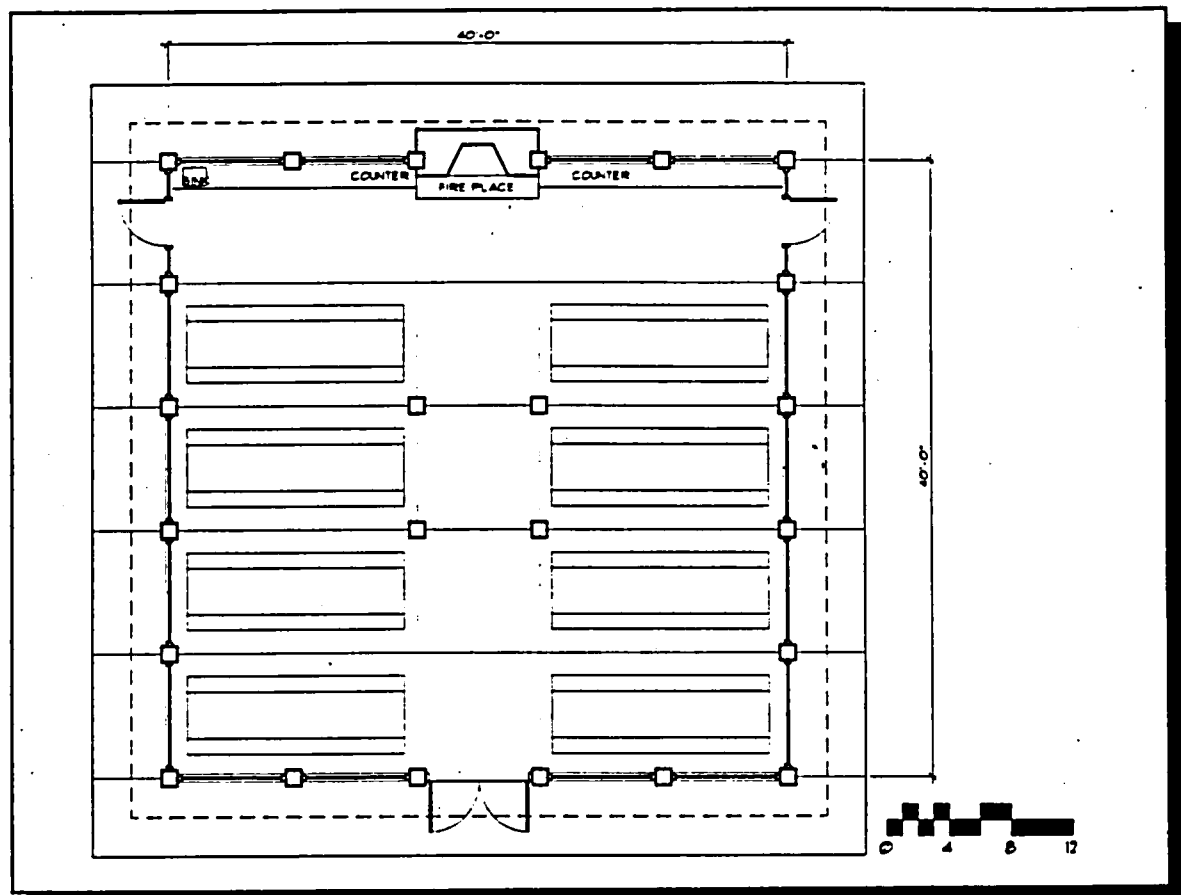


Figure 39 - Enclosed Shelter - Plan View

© Metro

(K) INDIVIDUAL / FAMILY DAY USE AREA

The intent of this area is to provide non-reservable picnic areas open for use by individuals, families and small groups. The picnic sites displaced along the entry road and the Ancient Forest will be relocated to this area. The total number of parking and table spaces available to individuals will remain the same as the existing conditions. This area is conveniently located close to the river access area. A new restroom with flush toilets will be constructed to serve picnickers and the river access boat ramp. An existing information signboard will be relocated from the campground area and placed near the restroom. A 'you are here' map will be mounted on the signboard.

Program Description:

- Parking (total parking 307 spaces).
 - Asphalt Surface (99)
 - Asphalt Surface - Vehicle w/ Boat Trailer (21)
 - Gravel Surface (57)
 - Overflow on Grass (130)
- Picnic tables (approximately 35 tables).
- Restrooms (1 flush type structure w/ 6 unisex units; 1 unisex vault toilet).

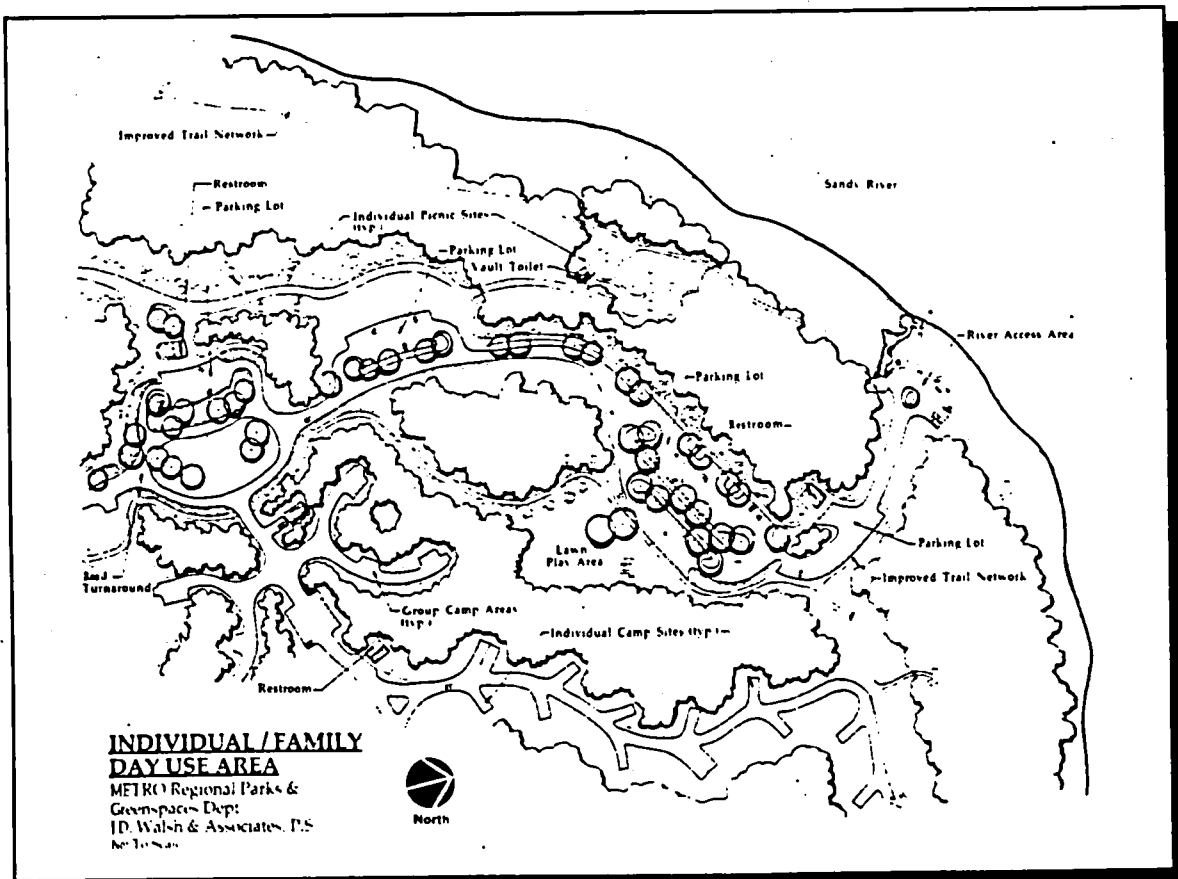


Figure 40 - Individual/Family Day Use Area - Plan View

© Metro

Park Unisex Restrooms:

Public Restroom Facilities (Flush Type):

- Accessible single occupancy toilet rooms, multiple units for seasonal flexibility. 8' x 10' each plus chase
- Slab on grade, masonry walls, wood roof system with metal roofing.
- Wall hung toilet, lavatory, floor drain, stainless fixtures.
- Tempered mirrors, electric hand dryers, baby change table (no paper towels).
- Electric lighting and ventilation.
- Freeze protection at some locations.

Six Single Occupancy Units with Chase

624 s.f. (24' x 28')

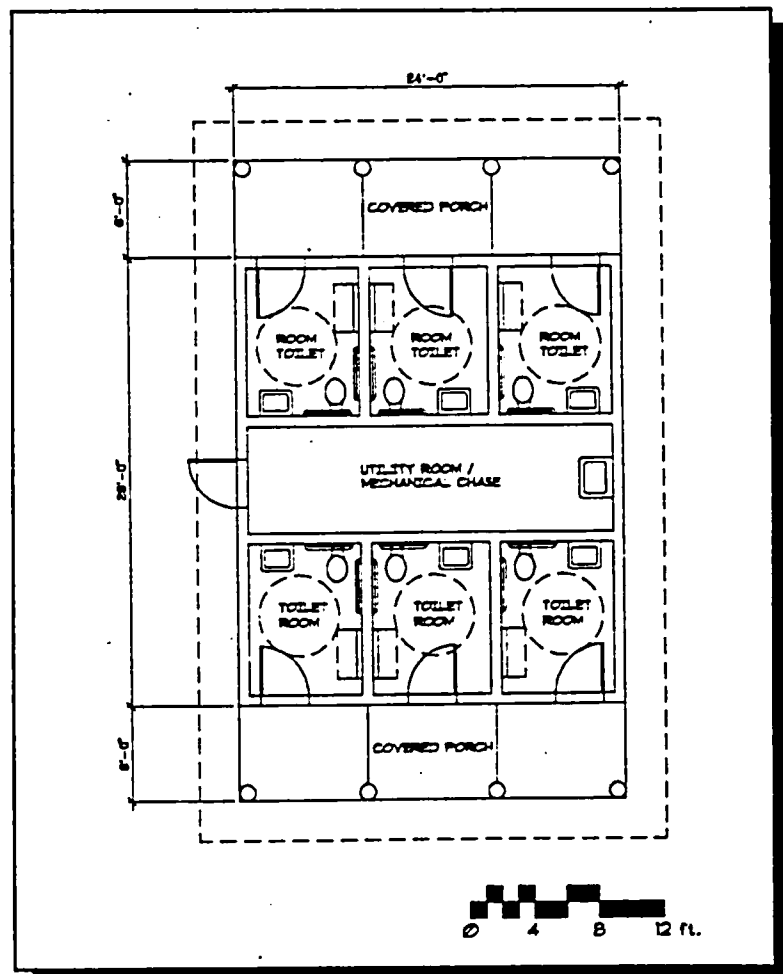


Figure 41 - Six Unit Restroom (Flush Type) - Plan View © Metro

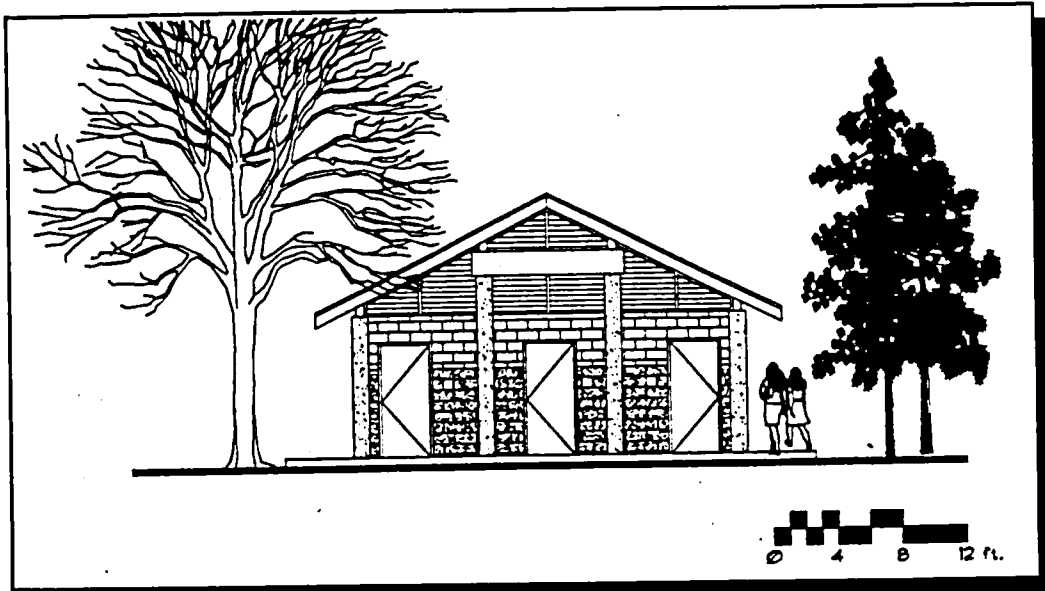


Figure 42 - 6 Unit Restroom - Front Elevation

© Metro

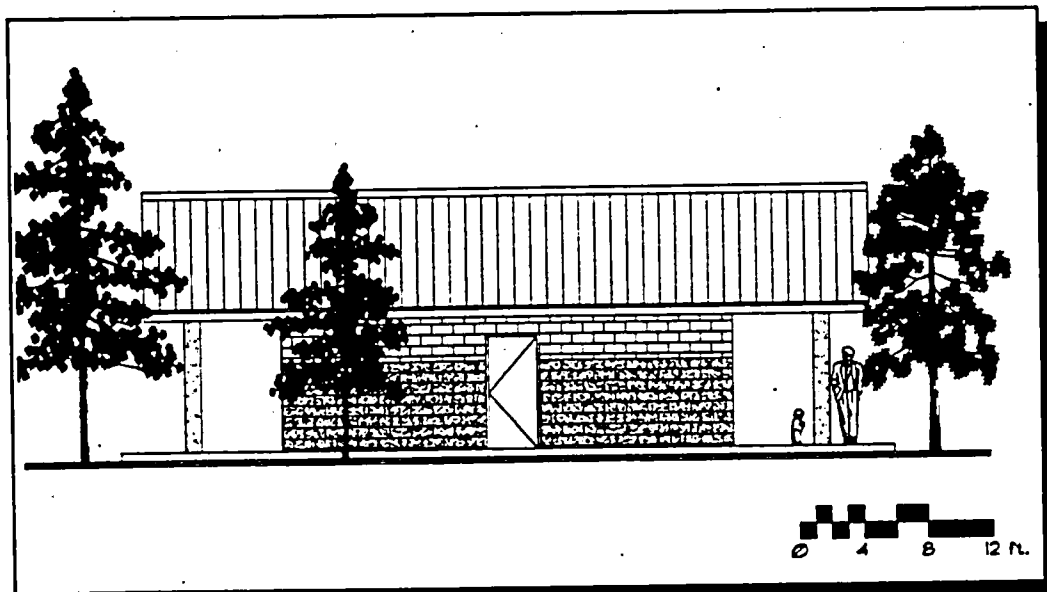


Figure 43 - 6 Unit Restroom - Side Elevation

© Metro

Public Restroom Facilities (Vault Type)

- Accessible single occupancy toilet rooms, multiple units for seasonal flexibility.
- Slab on grade with pre-fabricated or site built structure.
- Tempered mirrors, baby changing table.
- Electric lighting, natural ventilation.

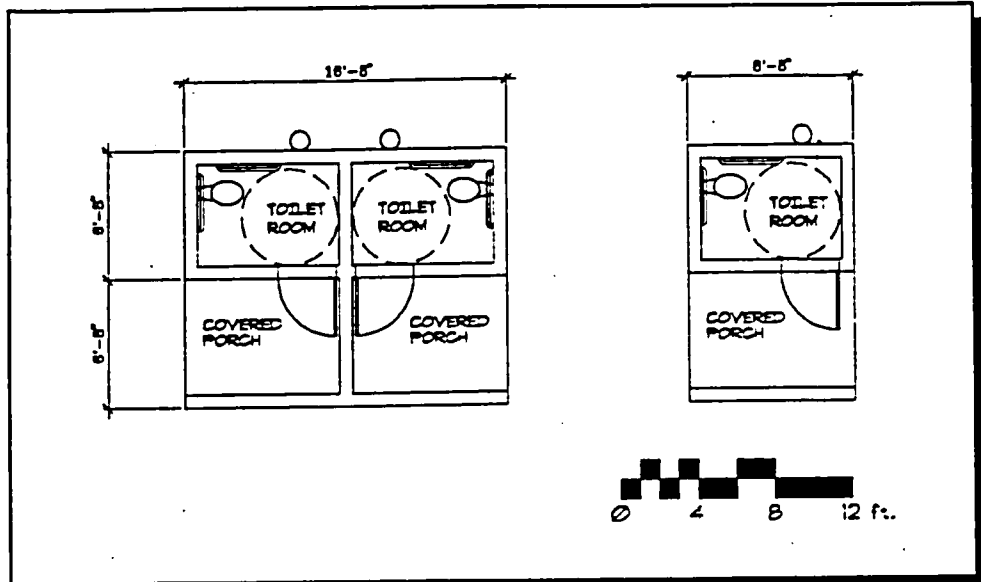


Figure 44 - One / Two Unit Vault Toilets - Plan View

© Metro

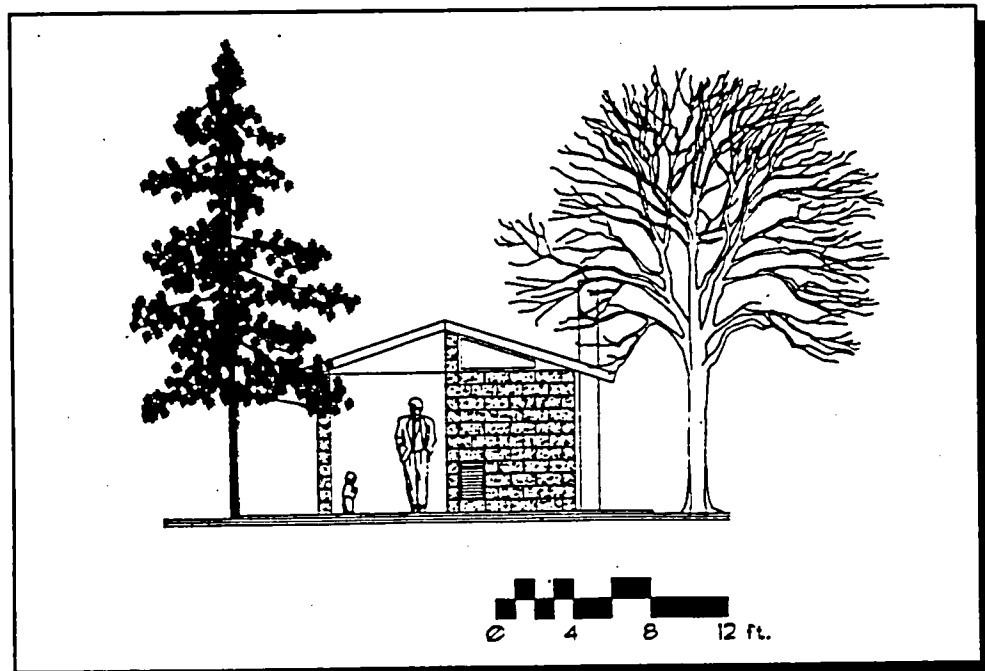


Figure 45 - Vault Toilets - Front Elevation

© Metro

L ACCESS ROAD AND TURNAROUND

The road is proposed to be relocated to the south side of the river terrace, to reduce traffic and parking conflicts with park user. A turnaround is proposed at this point to help eliminate random traffic in other areas of the park. The well signed turnaround will also provide a major point for park users to orient themselves. Roads have been relocated to allow for camping traffic to enter and exit the camping area at one location. This will help separate camping vehicle traffic from individual picnic spaces and the boat ramp traffic.

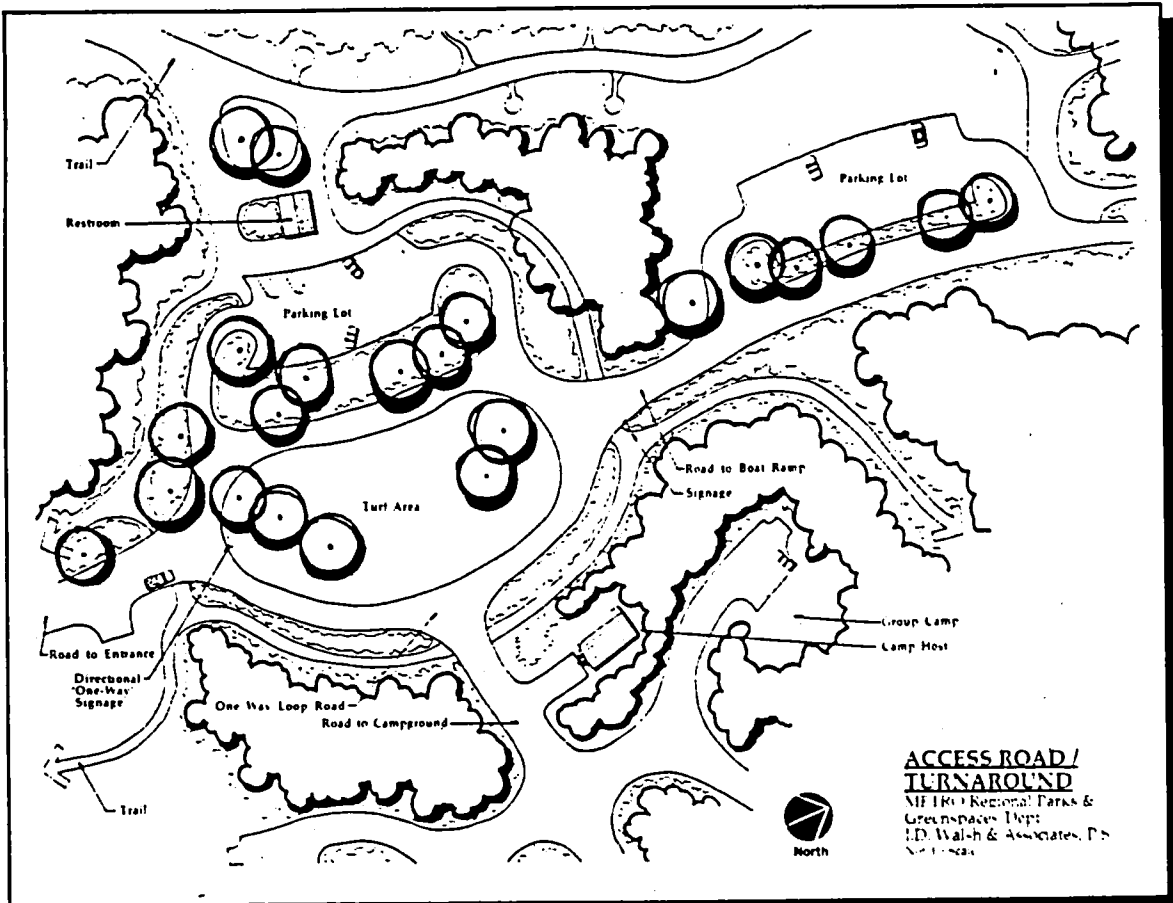


Figure 46 - Access Road & Turnaround

© Metro

(M) RIVER ACCESS AREA (Boat Ramp)

The river access point will continue to provide for boat launching and pick-up, angler access, and water contact for swimming, sunbathing, etc. An interpretive area is proposed to be developed at this area to acquaint park users with the river, salmon, and boating safety. In addition, terraced areas are planned which will allow easier access to the river while making the area more aesthetically pleasing.

Program Description:

- Parking (2 accessible paved spaces, all other vehicles will park at the top of the boat ramp access drive).
- Interpretive view point.
- Beach Access Terraces.
- Handicap fishing access.

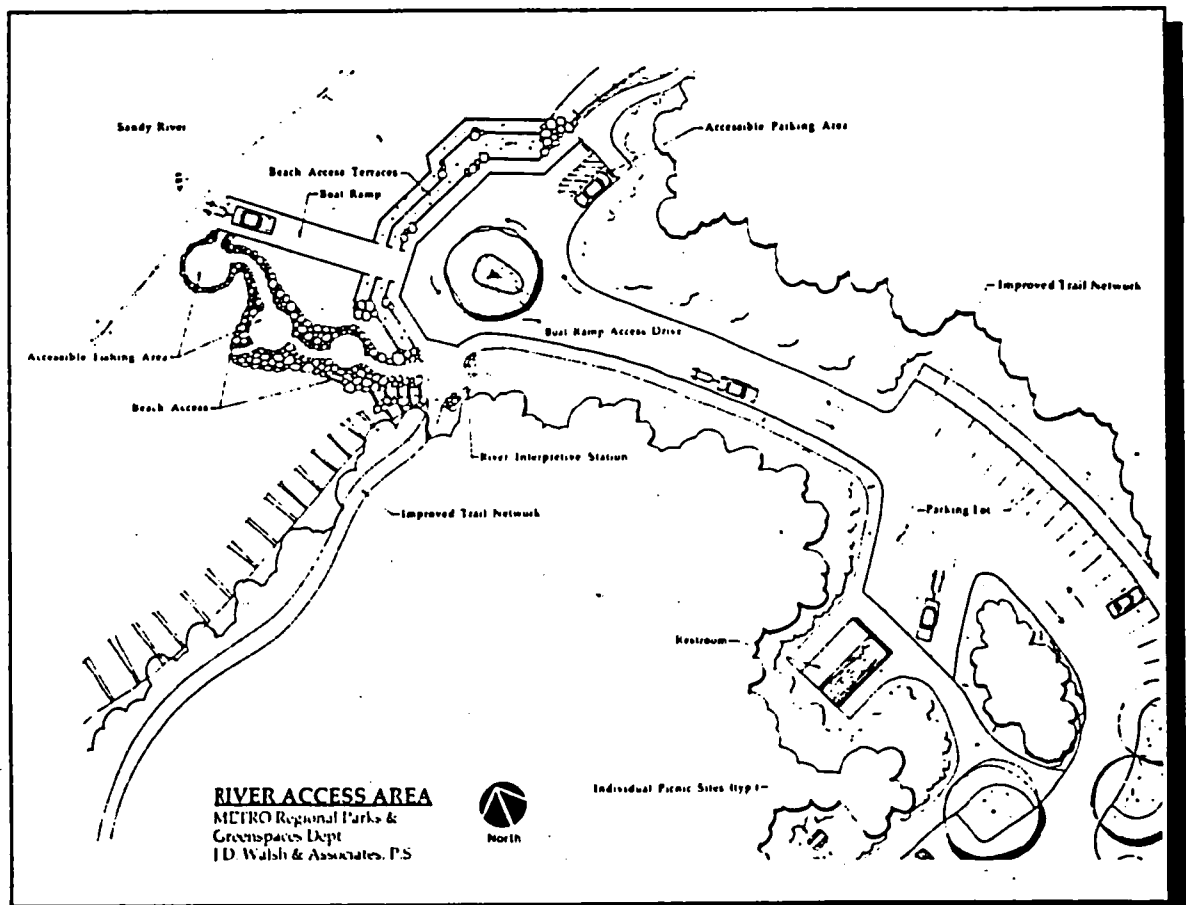


Figure 47 - River Access Area (Boat Ramp)

© Metro

Interpretation

Sub-theme: Since the ice age, Chinook salmon return to their ancestral spawning grounds within Oxbow Regional Park, inspiring celebration, participating in the web of river life, and bringing fertility to the soil with their decaying bodies.

Media: Four interpretive panels, tactile elements, and multi-lingual water safety / regulatory messages.

Discussion: The interpretive panels would be on a rock wall that would nestle into the hill at the bottom of the boat ramp, next to the trail junction which leads downriver. A separate sign with creative regulatory and safety messages will be sited in visible location where people gather near the beach. This sign will have a standardized safety message with an international symbol relating to water hazards.

The four interpretive panels will tell salmon and fisheries stories through the seasons, through the ages. Use of historic fishing and river flood photos should be utilized to talk about the fishing regulations and the changing nature of river currents and obstacles. History is popular with visitors who will often bring visiting family to look at historic photos or "record fish caught", etc.. Sculptural pieces could offer a more ceremonial aspect of the story. Tactile pieces of life size bronzed or concrete salmon and the rest of life phases imbedded in concrete and mounted along Cascadian style stone walls are some possible design solutions.

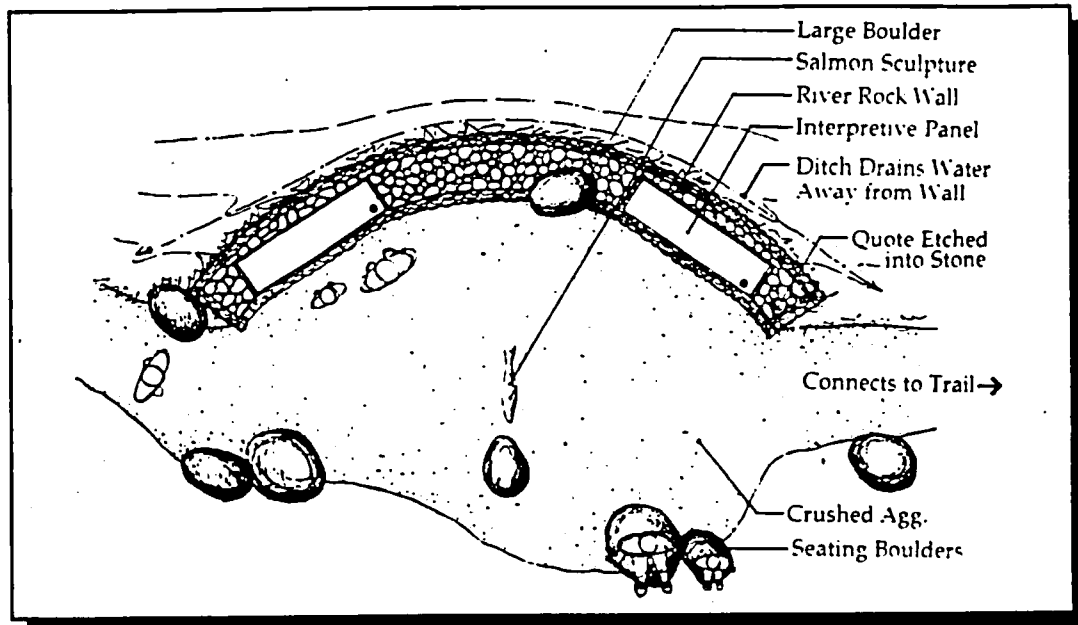


Figure 48 - Salmon Interpretive Site - Plan View

© Metro

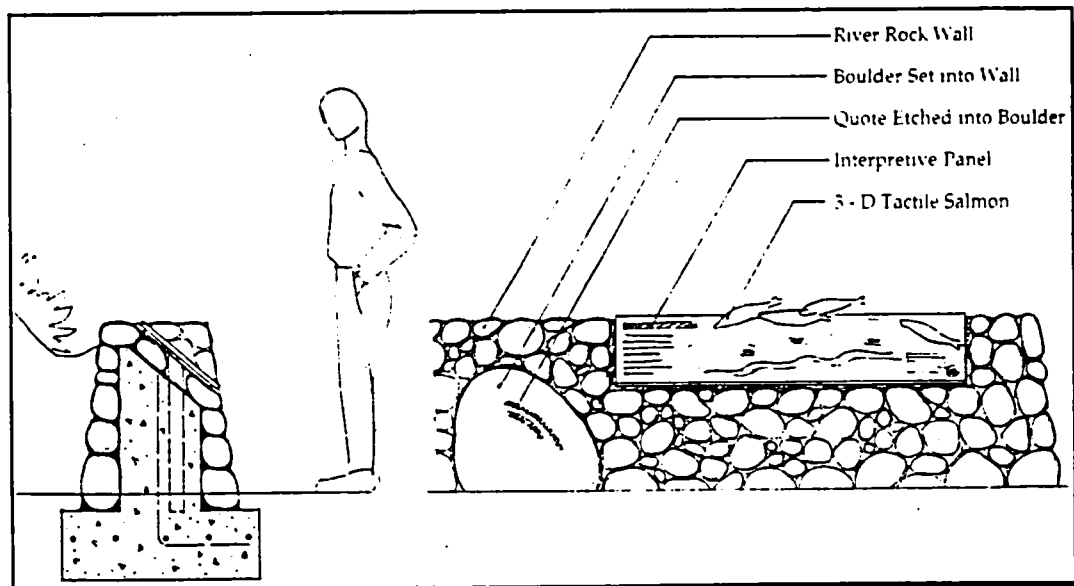


Figure 49 - Salmon Interpretive Site - Elevation

© Metro

(N) GROUP CAMPING AREAS

Two group camping areas are proposed to be developed to accommodate approximately 60 people in each area. These 'for rent' facilities will be designed to be flexible, allowing all or only a portion of the space to be occupied by a single group. A third group camp area is proposed as a 'walk-in' only site.

Program Description:

- Group Camping Areas (3 areas with 4-5 parking spaces and up to 20 people at each camp). Each camp provides a fire ring, picnic table, barbeque and parking spaces.
- Restrooms (shared with camping areas; unisex vault and flush type with showers).
- Shelters (may be added to facilitate winter use).
- Parking of 14 additional spaces provided for group members off main camp entry road.

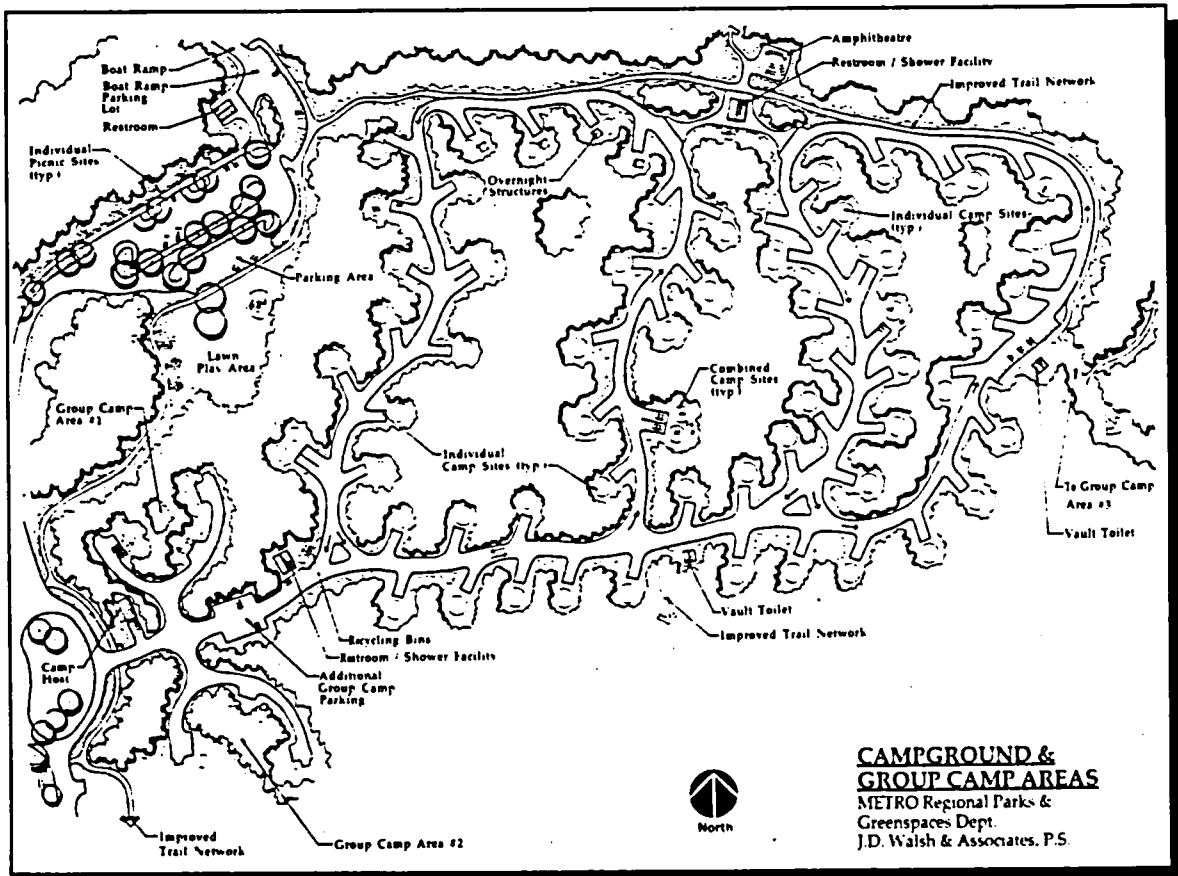


Figure 50 - Group Camp & Campground Area - Plan View

© Metro

① CAMPGROUND

The Master Plan concept for the campground is to retain the “semi-primitive” camping experience. Camp sites are to be located a minimum of 100’ apart which is the standard for a ‘Roaded Natural’ setting. The ‘Roaded Natural’ setting is based on the Recreation Opportunity Spectrum established by the USDA Forest Service. Under story vegetation is to be retained or restored in order to provide privacy. Facilities will be rustic in character. Full hook-up services for RV vehicles will not be provided. However, restrooms with flush toilets and showers will be provided.

A site will be developed for a “camp host” near the campground entrance area. The volunteer “camp host” will assist the staff in managing the campground operations. The existing campground road system is proposed to be reorganized to allow for two one-way loops. This arrangement is more efficient by allowing for increased camp site numbers while decreasing vehicle traffic by the individual spaces. Also, during low use periods, a portion of the sites can be closed. The redesigned campground will include: approximately 44 upgraded camp sites and 16 new camp sites. Of the total sixty sites, five will become cluster camp sites (2 sites per cluster). These sites, which are now extremely close together, will now be rented as five combined-family or clustered sites. The long range plan is to provide 4 to 12 overnight structures similar to yurts or small cabin structures. These structures would replace individual camp spaces.

The Master Plan proposes that operational activities should be reviewed and, if appropriate, modified. Activities to review should include:

- Campground managed by a private concessionaire.
- Campground fees collected primarily at the park entry feebooth.
- Firewood, and possibly other items, to be sold by a private concessionaire or non-profit organization.
- Garbage collection provided by a private concessionaire. Convert from individual garbage cans located throughout the park to dumpsters, in wooden enclosures, positioned in key locations.

Program Description:

- Individual camp sites (55)
 - parking space (2 gravel spaces per site)
 - amenities include: fire ring (1), barbeque (1), and table (1)
- Cluster camp sites (5)
 - parking space (4 gravel spaces per site)
 - amenities include: fire ring (1), barbeque (1), and tables (2)
- Overnight Structures (4-12)
 - would replace individual campsites
 - amenities include: fire ring (1), barbeque (1), and table (1)

- Restrooms
 - (2) Flush type structures w/ 3 unisex units
 - (3) Vault type structures w/ 2 unisex units
 - 5 unisex showers at each flush type structure
- Understory plantings for privacy
- Trail improvements

Interpretation

Media: A 3-sided kiosk will be relocated from the boat ramp to the amphitheatre area for the benefit of the visitors using the campground and group camp areas.

Discussion: This structure offers maps, interpretive information, orients visitors to hiking trails, provides information on camping rules and regulations and announces nightly programs found at the camp amphitheater.

Yurts

Overnight structures, or yurts (Year-round Universal Recreational Tent), are facilities which will accommodate use when a more 'refined' camping or inclement weather camping experience is desired. The State of Oregon Parks Department has had an extremely positive response to their installation of yurts in many of their coastal, and other inland, parks. The yurts have proved to be popular due to their 'cozy' feel and the ability to camp during all months of the year.

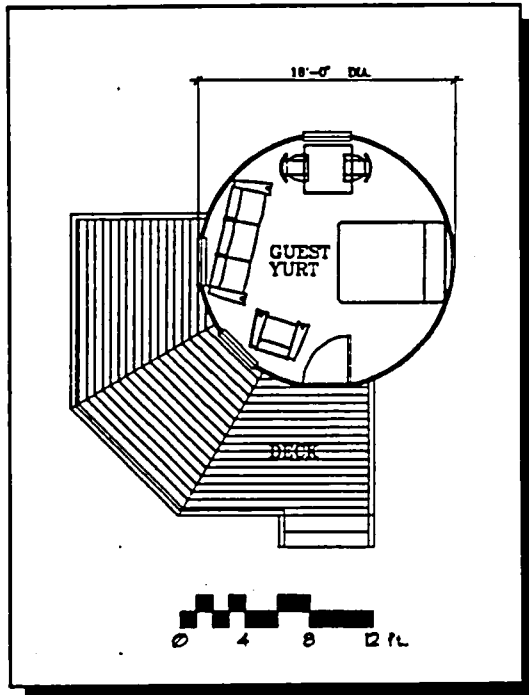


Figure 51 - Yurt - Plan View © Metro

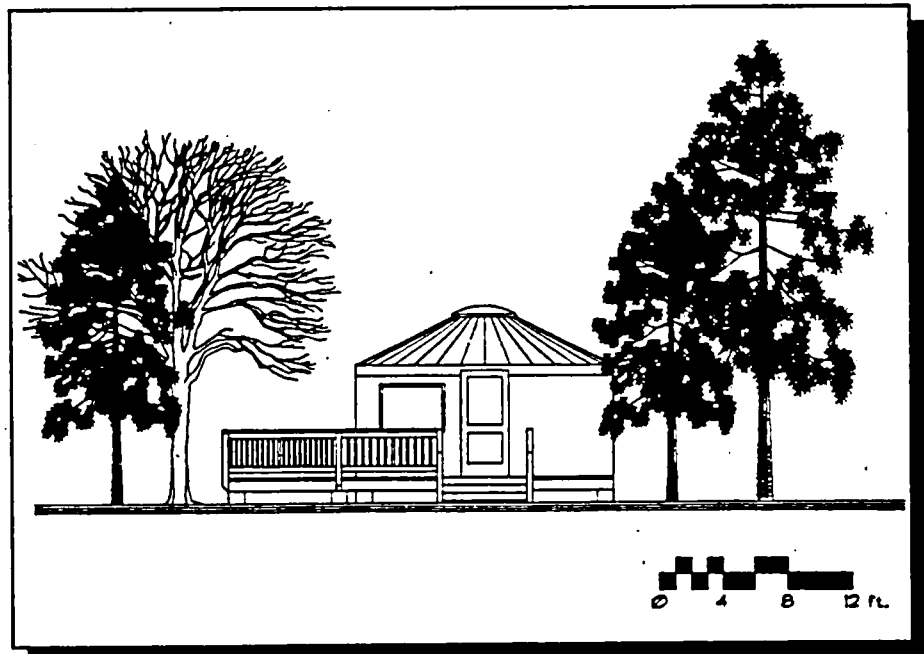


Figure 52 - Yurt - Front Elevation

© Metro

Campground Restroom / Shower Facilities (Flush Type):

- Three accessible single occupancy toilet rooms, multiple units for seasonal flexibility. 8' x 10' each
- Slab on grade, masonry walls, wood roof system with metal roofing.
- Wall hung toilet, lavatory, floor drain.
- Tempered mirrors, electric hand dryers, baby change table (no paper towels).
- Electric lighting and ventilation.
- Freeze protection at some locations.
- Five accessible shower rooms w/ pay shower. 8'x10' each

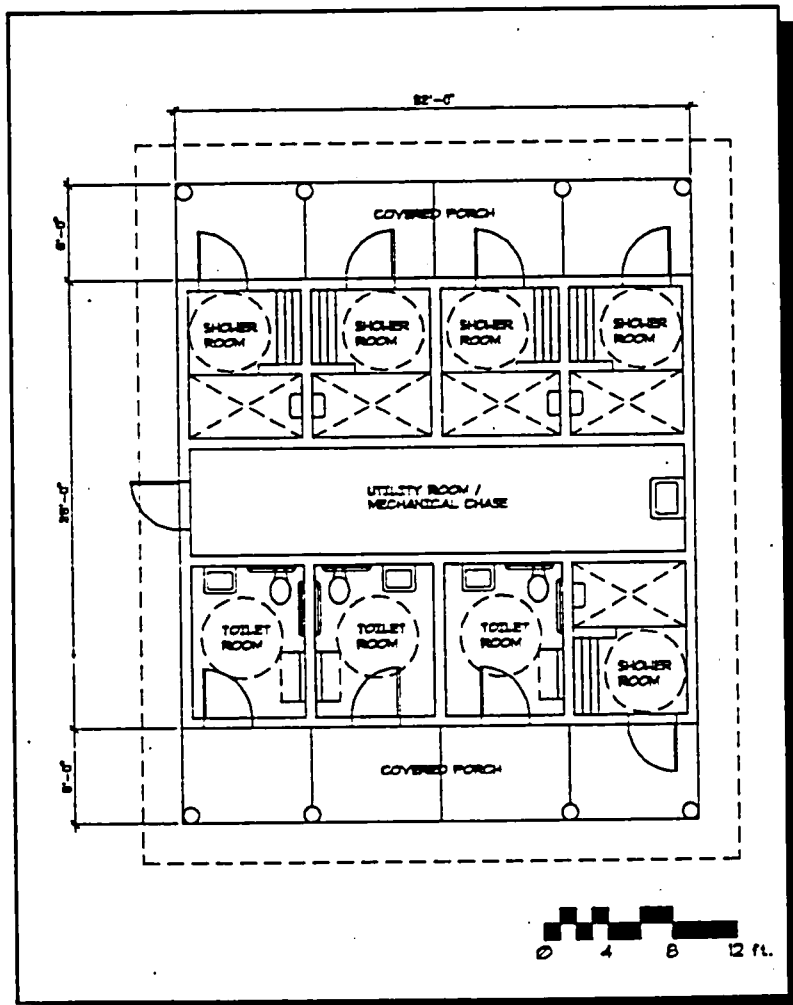


Figure 53 - Restroom/Shower Facility - Plan View © Metro

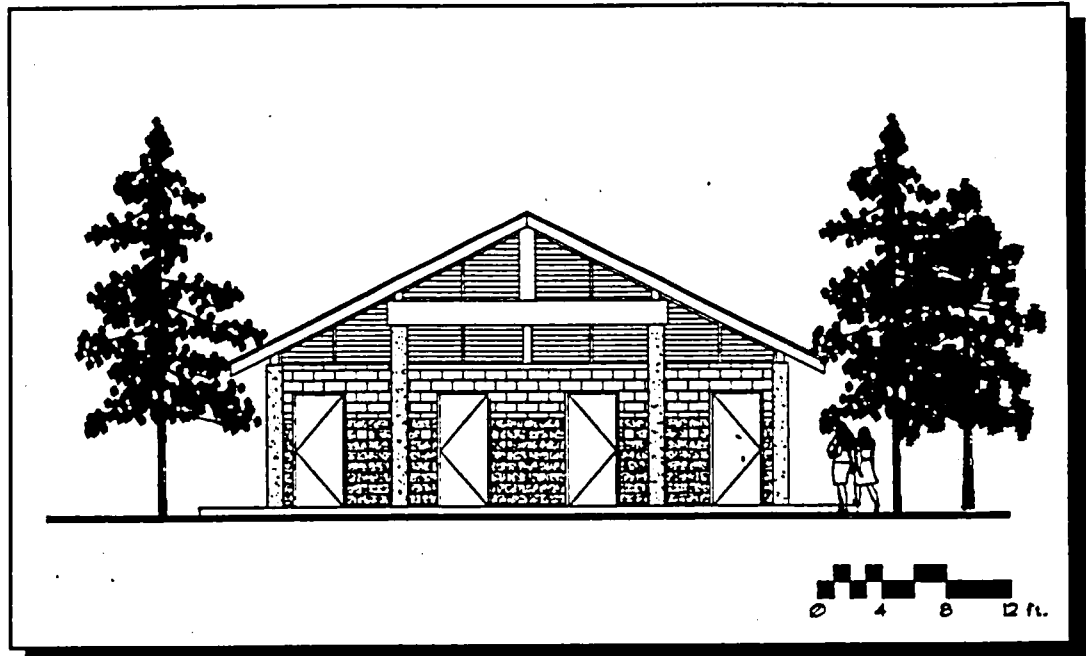


Figure 54 - Restroom/Shower Facility - Front Elevation

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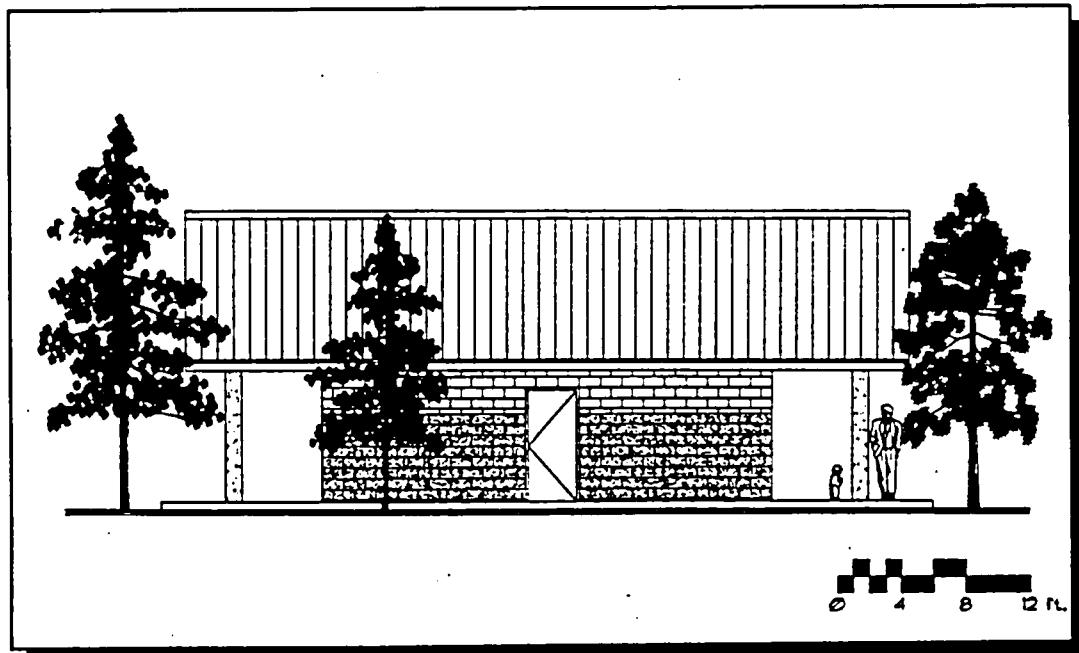


Figure 55 - Restroom/Shower Facility - Side Elevation

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■ INTERPRETIVE PROGRAM / SIGNAGE

Introduction

The proposed interpretive program is intended to encourage fun and new interpretive experiences for visitors at Oxbow Regional Park.

Oxbow Regional Park has amazing stories to tell us of a majestic river, spawning salmon, an ancient forest and all the life in between. Interpretation recommended in this narrative proposes new self-guided experiences to offer all visitors a basic introduction to these stories. Visitors are attracted to Oxbow Regional Park by the Sandy River's outstanding natural beauty and scenic setting. Interpretation in this plan is consistent with retaining this majestic setting.

Site parameters, an overview of neighboring facilities, key issues relating to interpretation, a further discussion of interpretive media recommendations and a complete interpretive narrative for Oxbow Regional Park are located in Appendix G.

Overall Interpretive Planning Goals

- Provide improved visitor orientation.
- Offer self-guided interpretive opportunities in order to introduce a majority of visitors to key Oxbow Regional Park features and stories.
- Provide facilities to serve current educational programs and increase use during off-season months.
- Provide quality interpretation and educational media and experiences to increase visitor appreciation and sensitivity to Oxbow Regional Park's river and forest environment and the importance of this habitat to fish, wildlife and people.
- Provide educational opportunities which also promote visitor self-discovery, contemplation and appreciation of the surrounding natural beauty.
- Promote respectful attitudes and behavior toward Oxbow Regional Park in order to maintain the integrity of the natural environment and visitor services it provides.
- Enhance and increase visitor enjoyment of Oxbow Regional Park by providing barrier-free, interpretive opportunities.
- Demonstrate excellence in design and construction of interpretive sites and facilities to blend with the natural setting.

Visitor Objectives

The following objectives outline the intended visitor experience for interpretive facilities, media and programs related to the rich natural history of Oxbow Regional Park. These should answer, "What do we want to encourage visitors to know, feel, and do while at Oxbow?"

Knowledge

Visitors should have the opportunity to know:

River

Oxbow Regional Park is the heart of the Sandy River Gorge, where the river meanders to connect forest, wildlife and people.

The wild and free flowing Sandy River is part of an intricate web of life.

The special qualities of the Sandy River have been nationally recognized in its' designation as a National Wild and Scenic River.

The drinking water for most Portland residents originates within the 508 square mile watershed of the Sandy River.

Salmon

Salmon serve as barometers of watershed health.

In an age old cycle, fall Chinook return to their spawning grounds within Oxbow Regional Park bringing nutrients as they link ocean to river to forest.

There are several physical characteristics of the Sandy River which are critical to survival of salmon.

Ancient Forest

Oxbow Regional Park's ancient forest is a remnant pocket of habitat for a unique array of life which exhibits fantastic and interesting relationships.

A Pacific Northwest ancient forest can be recognized by the presence of certain physical characteristics.

Wildlife

Oxbow Regional Park is a crossroads, corridor and contiguous habitat for a wealth of wildlife.

Tracks and traces reveal the secret lives of animals.

People and wildlife have been coming to Oxbow Regional Park for thousands of years.

Oxbow Regional Park's plant, fish and wildlife occupants are a valuable part of Oregon's heritage and are protected by laws.

General Orientation

There are specific locations to easily explore and learn more about Oxbow Regional Park's forest, river, salmon and wildlife stories.

Attitudes

Visitors should have the opportunity to feel:

A sense of discovery , adventure and solitude in exploring the Ancient Forest, and sections of the Sandy River within the park.

A sense of awe in walking exploration of the Ancient Forest.

A sense of excitement in searching for wildlife and their signs.

A sense of encouragement to slow down, let go of busy agendas and patiently observe the wild spirit of nature.

Actions

Visitors will have the opportunity to:

Be oriented by a map, directional information and interpretive messages to self-discover the stories of Oxbow Regional Park.

Use interpretive media to successfully locate key river and forest features as well as evidence of fish and wildlife inhabitants.

Self-explore Oxbow Regional Park to observe fish, birds and wildlife in natural settings.

Celebrate the return of the salmon each fall and commemorate year round their contribution to the richness of river, forest and human culture.

Easily access an interpretive trail to explore the Ancient Forest.

Overlook the Sandy River and utilize self-guided media to be introduced to the

river's constantly changing personality and the wealth of life it supports. Participate in a naturalist conducted activity such as campfire talk or hike to learn the rivers' hidden stories.

Leave trees, rocks and other fish and wildlife homes in place and discourage others from vandalizing natural resources.

Participate in environmental education or interpretive programs to learn more in-depth information.

Interpretive Themes

The following major theme and five supporting sub-themes propose a message organization for Oxbow's most significant stories to be told through self-guided media.

Major theme

Oxbow Regional Park is the heart of the Sandy River watershed, where the river meanders to connect ancient forests, fish, wildlife and people.

This is the big picture story that conveys the river personality observable within Oxbow Regional Park. The Sandy Rivers' natural beauty and pristine values have been formally recognized in its' designation and protection as a National Wild and Scenic River. The river bisects the park on its journey from the Cascade Mountains to the gateway of the Columbia River Gorge. The park lies in the geographic heart of the Sandy River watershed. Ancient forests grace the banks of the river. River oxbows are notorious for their rich fish and wildlife personality and Oxbow Regional Park is no exception. The park is less than an hours drive from the homes of more than a million people, and the Sandy River watershed provides drinking water for much of the region.

Sub-theme

The Sandy River has formed and shaped Oxbow Regional Park via catastrophic events and the steady forces of gravity and erosion.

The Sandy River is fed by glaciers on the eastern flanks of a volcano. At the upstream end of the park, the river flows break free of the canyon to bend and meander, forming oxbows. Over eons, the river has carried huge floods of sand and rock from the volcano, and created the terraces that form Oxbow Regional Park. The park is a participant in the rivers' sudden catastrophic events, including volcanic floods and hundred year floods.

Sub-theme

Tracks and traces reveal the secret lives of animals.

The Sandy River offers a contiguous corridor of habitat from glacier to it's mouth at the Columbia River. The river corridor and surrounding forests offer connected habitat for many species that is critical to their survival. Oxbow Park is an entryway to a wildlife corridor that extends to the Cascade Mountains. It is a magic door to wildness, supporting a wealth of wildlife populations including cougar, bear, mink, river otter, beaver, red fox, flying squirrel, and osprey. This story focuses on the natural history and behavior of the various wildlife inhabitants by encouraging visitor exploration of animal signs and tracks. In order to read the subtle signs left by animals, visitors must be encouraged to slow down and detach from hurried agendas to be open to subtle and unexpected discoveries.

Sub-theme

Oxbow Regional Parks' ancient forest offers a precious pocket of habitat for a unique community of life that is in fast decline.

One hundred sixty acres of Pacific Northwest ancient forest grace the banks of the Sandy River within Oxbow Regional Park. This forest offers the largest, easily accessible example of old-growth in the region. Visitors find themselves surrounded by large trees and the sky becomes layered with branches of the forest canopy. Here visitors observe large diameter trees, huge nurse logs and search for the unique diversity of insects, plants, birds, amphibians and a myriad of micro invertebrates to be found here. This is the story about how an old forest functions. The forest structure and physical characteristics of forest inhabitants are given focus through ecological relationships, such as dependence on large diameter trees, long life of standing "dead but life giving" trees, how trees "comb" moisture from the sky and the interactions between all that live here from microrhizza to mushroom, flying squirrel to winter wren.

The Oxbow ancient forest story also includes the river relationship with the forest and how both are influenced by the other. Water quality, temperature and salmon habitat are all affected by the presence of the forest. The forest in turn is affected by the river through periodic flooding. The on-site interpretive story should avoid text book or museum depth of information and rather focus on what is observable and site specific to the ancient forest inhabitants of Oxbow Regional Park.

Sub-theme

Since the ice age, Chinook salmon return to their ancestral spawning grounds within Oxbow Regional Park, inspiring celebration, participating in the web of river life, and bringing fertility to the soil with their decaying bodies.

Chinook salmon have returned to this Pacific Northwest river for many thousands of years, bringing life from the ocean and adding fertility to the volcanic soil with their decaying bodies. Here people can witness their ancient procreation ritual and learn what salmon need to continue to thrive in this environment. Visitors have an exciting opportunity to observe salmon in their natural habitat and learn about their life cycle.

The story of salmon includes messages currently given in guided talks and in "School of Fish" presentations on migration, spawning behavior and related adaptations. It includes ecology of fish stocks, and importance of water quality and healthy riparian and river systems. An attempt should be made to discuss salmon from a seasonal approach to make the story interesting for those who visit during the winter, spring and summer months.

The relationship of salmon within the river web of life is also a focus of this theme to connect salmon to aquatic insects, osprey and other birds, and other fish and wildlife who inhabit the river. The more detailed story of the river used with educational groups communicates that the river is full of tough yet fragile life forms, detailed and interesting to look at, that form an intricate web of life connecting plants, insects, fish and wildlife.

Sub-theme

Descendants of the first peoples in North America made seasonal camps on the terraces of the Sandy River. Using ingenious and artful tools, these people gratefully harvested the rich resources of berries, redcedar bark and wild game.

Human eyes were first laid on the land which is Oxbow Regional Park many thousands of years ago. This story will be told partly in self-guided displays but mostly in live programs, both at the environmental education center. Current hand-on programs in which visitors use and make indigenous artifacts will be continued and expanded. These programs give visitors a chance to interact with the park resources while exploring a different cultural viewpoint, that of tribal hunter-gatherers.

■ Trail Network

Trails

The trail system within Oxbow Regional Park is one of the major recreation features. Many of the park users come to the park specifically to enjoy the natural setting by utilizing the trail network.

Based on recommendations of the 1992 Trails Advisory Committee and provisions related to the Master Plan, a trails map is illustrated in Figure 56. The trails map incorporates existing trails and provides for an additional main looped trail route in the group and individual day use areas. As noted on the trails map, there are three levels of trail accessibility. These levels include: easy, moderate, and difficult.

During the master planning process, it has been noted that the existing trails are in need of corrective measures. It should be understood that an inventory of site specific problems on each of the trails is beyond the scope of this Master Plan. Based on observations made by consultants, and input from the staff and the public, the following are recommendations:

- A funding and work program needs to be adopted to insure trails are brought up to acceptable standards and are consistently maintained.
- In the Ancient Forest area, there is evidence of root compaction, degradation of the trail edges and social trails in the swamp area. These problems should be addressed.
- Erosion is occurring on trails due to the lack of adequate drainage provisions. Improvements need to be made to redirect water away from the trail surface or to allow water to drain.

Typical techniques may include:

- Asphalt or compacted gravel surfacing (easy trails)
- Uphill ditches with culverts under trails or lead off ditches
- Crushed rock base (3-6") with filter fabric and with surface rock (3/4" minus) on top
- Wood split plank puncheon walkways
- Wood walkways raised above grade
- Rock or log water bars across trails to direct water off trail surface
- Barriers (rock and log) along edges of switchback trails

- The following trail standards should be utilized where appropriate:

All-Abilities Recreation Trail Classification

<u>Category</u>	<u>Easy-1</u>	<u>Moderate-2</u>	<u>Difficult-3</u>
Width (min.)	48"	36"	28"
Running Slope	5%	8.3%	+12.5%
Max. Slope	10%	14%	20%
(for a dist. of)	50'	50'	5'
Passing Space	20'	300'	400'
Interval (max.)			
Rest Area	400'	900'	1200'
Interval (max.)			
Surfacing	Asphalt & Compacted Gravel	Gravel & Native Material	Native Material



METRO

M ARIAN DRAKE

Metro Public Hearing

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Date: 8-5-97

Clerk's No.:

Name:

Affiliation:

Citizen

Address:

1705 SE Morrison #4, F

City:

Portland OR

Zip Code:

97214

Phone Number:

236-1736

I wish to speak on agenda item#:

Oxbow

For:

Against:

The Master Plan

Have you testified previously on this subject? Yes ☐ No ☒

c:\r\cnc\dep\2083



METRO

Metro Public Hearing

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PAUL BOY

Date: 8/5

Clerk's No.:

Name:

Affiliation: WESTSIDE PAC

Address:

City:

Zip Code:

Phone Number: 663-5397

I wish to speak on agenda item#: 2 (OX BOW PARK)

For:

Against:

Have you testified previously on this subject? Yes ☐ No ☐

c:\r\cncldep\2083



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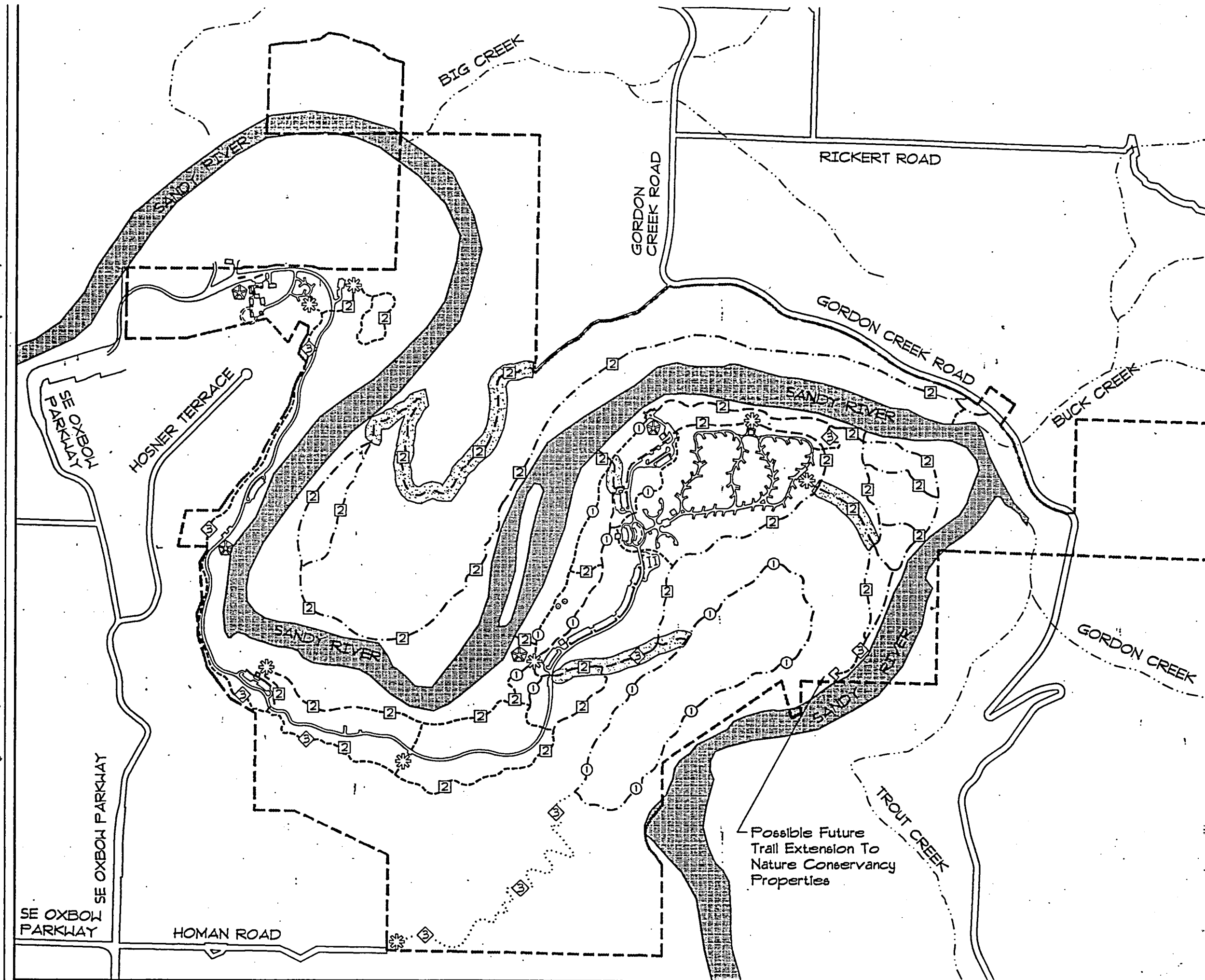
Please print legibly!

Name: Scott Forrester Date: 6/5/97 Clerk's No.:Affiliation: CitizenAddress: 2030 NW 7th Pl.City: GreshamZip Code: 97030Phone Number: 492-1593I wish to speak on agenda item#: 2 (Oxbow)

For: _____ Against: _____

Have you testified previously on this subject? Yes ☐ No ☒

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LEGEND

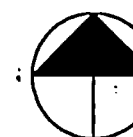
- PARK BOUNDARY
- ROAD
- SANDY RIVER
- CREEK
- * TRAIL HEAD
- ◊ INTERPRETIVE STATION

TRAIL KEY

- PEDESTRIAN ONLY
- PEDESTRIAN & BICYCLE ONLY
- PEDESTRIAN & HORSE ONLY
- PEDESTRIAN, HORSE & BICYCLE
- EMERGENCY & MAINTENANCE ACCESS

ALL-ABILITIES RECREATION TRAIL CLASSIFICATION

CATEGORY	EASY-①	MODERATE-②	DIFFICULT-③
WIDTH (MIN.)	48"	36"	28"
RUNNING SLOPE	5%	8.3%	+12.5%
MAX. SLOPE (FOR DIST. OF)	10% 50'	14% 50'	20% 50'
PASSING SPACE INTERVAL (MAX.)	200'	300'	400'
REST AREA INTERVAL (MAX.)	400'	900'	1200'
SURFACING	ASPHALT & GRAVEL	GRAVEL & NATIVE MATERIAL	NATIVE MATERIAL



NORTH

0 300 600 900



SCALE IN FEET

FIGURE 56 - TRAILS MAP

■ Habitat Enhancement

As discussed in the previous section, the overall existing condition of vegetation within Oxbow Regional Park appears to be healthy. The current balance of human uses and the landscape appears to be capable of supporting viable populations of resident species native to the area. However, to protect and enhance the existing habitat, a number of corrective and preventative measures should be implemented. The following is a list of issues which should be addressed:

Potential conflicts:

- Increased access or use of the Ancient Forest or Elk Meadow may limit or impact wildlife use of these areas.
- The flood plain area is utilized by many mammals. Some of these species are very sensitive to human presence. Therefore, no new trails or development should occur in this area.

Enhancement:

- The current river access points in the main portion of the park require corrective measures and re-vegetation to prevent erosion and maintain vegetation diversity. Limiting human access by placing natural rocks and logs and replanting open areas will help alleviate some random access points. Hardening of some access points by installing concrete open-block with sand or gravel to develop a firm walking surface may help areas where foot traffic is eroding loose soils. The bank upstream from the boat ramp will require an engineering appraisal. Techniques to consider would be the placement of filter fabric "pillows" planting each layer with willow cuttings and placement of tree root diversion barriers.
- An effective integrated noxious weed management program for the park, consistent with any current state or county policies should be developed and implemented. Exotic/noxious plant species occur in some areas of Oxbow Regional Park physically displacing native species, which reduces native bio-diversity (see Appendix E for suggested guidance on developing a weed management program).
- Retaining the Elk Meadow in a healthy meadow condition will require periodic maintenance. Mowing and fertilization of the meadow will help minimize potential for exotic/noxious plant species invasion.
- The drainage in the Dismal Swamp area has been altered due to flooding and various corrective measures. There is an opportunity to restore wetlands and correct the current flooding problems.

- Along the entry and Ancient Forest road corridors, the existing gravel parking areas are to be removed and re-vegetated with native vegetation.
- The Douglas-fir forest within and surrounding the campground area may benefit from modest thinning. Providing more light into the campground will allow the understory vegetation to grow more vigorously and provide additional privacy between camp sites.

Monitoring:

- Establishment of a long-term vegetation and wildlife monitoring program to evaluate the overall health of the ecosystem and changes in vegetation assemblages, plants, amphibian and reptile, mammal and bird species occurrences and numbers is recommended. An assessment of the ecosystem should be evaluated in order to determine whether management of specific habitats needs to be undertaken at the park. This effort should be undertaken in conjunction with local high schools, community colleges and universities.

■ Utilities

See Appendix H for a complete technical report.

Water system

Projected Water Demands

Projections of future water demand have been prepared based on past water consumption patterns and proposed facility modifications. Existing water consumption is dominated by irrigation use during the summer months. The installation of flush toilets and limited shower facilities will significantly increase the need for potable water supply. Projections of annual, peak month, and peak day demand have been based on previous visitor and camper records and the number of parking spaces and camping sites to be provided. The projected loading factors are conservative (high) to ensure adequate supply is available to meet peak load demands.

The proposed showers in Oxbow Regional Park are intended for limited use, primarily by overnight campers. Limited use will be encouraged through their location in the vicinity of the campground, proposed installation of pay-per-use controls, and the use of low-flow showerheads.

Projected Irrigation Needs

Projections of future irrigation use have assumed the installation of automatic, timed sprinkler systems. Previous peak month irrigation demands averaged approximately 100,000 gallons per day applied during the weekdays only. The new irrigation systems should reduce water consumption due to more efficient applications; however, total irrigation water demands might increase due to an increase in the irrigated area. Timers may be set to provide for night-time application which will reduce the losses due to evaporation as well as displace the demand to the period when potable demands are lowest.

The proposed irrigation of the day use areas covers approximately 10 acres with an estimated peak weekly requirement of 2" of water for approximately 10 to 16 weeks a year. This equals an estimated weekly irrigation demand of 544,000 gallons. The required water supply depends on the frequency and duration of irrigation application. Assuming application only on the nights before weekdays to limit interference with day-time activities will require sprinkling 14.5 hours/day over five nights based on the existing well pump capacity of 125 gallons per minute.

Summary of Recommended Water System Improvements

The recommended water source option for Oxbow Regional Park is continued use of the existing well with the addition of iron and manganese treatment. This well has a reliable water quantity in excess of projected needs and with treatment can provide the highest quality water available. The continued use of the existing reser-

proved to provide for intermittent operation only as demands in the system require. Distribution system improvements include mapping and evaluation of existing facilities along with anticipated replacement of 80% of the existing valves. Additional distribution lines will be necessary to provide service through the proposed campground loop and for the automated irrigation. Water meters should be installed at all points of use to allow monitoring of water demands and loading to wastewater systems. Operational improvements include preparation of a cross-connection control program, consideration of a back-up power supply, and continued training opportunities for the water system operator.

The following table summarizes the cost considerations for the alternative water system source improvements.

Table 7
Summary of Alternatives for Water System Source Improvements
for Oxbow Regional Park*

Aspect	Alt. 1 - YMCA Camp Collins Well	Alt. 2 - Iron/Manganese Treatment for Oxbow Well	Alt. 3 - No Change to Water Source
Capital Cost - Source	\$80,000**	\$120,000	\$0
- Distribution System	\$61,000	\$61,000	\$61,000
Sub-Total	\$141,000	\$181,000	\$61,000
Annual Operation/ Maintenance Cost	\$5,000	\$10,000	Difficult to Estimate: \$5,000 to \$10,000
Other Capital	\$4,000	\$4,000	\$4,000
Sub-Total	\$9,000	\$14,000	\$9-14,000
Advantages	<ul style="list-style-type: none"> • Lower capital and annual costs 	<ul style="list-style-type: none"> • Independent Supply • Good source capacity • Best water quality • Good historical operating records 	<ul style="list-style-type: none"> • Independent supply • Good source capacity • No capital cost • Good historical operating records
Disadvantages	<ul style="list-style-type: none"> • No water right • Limited source capacity so irrigation well required • High fluoride and potential for excessive fluoride (costly treatment) • Coordination among two systems • Limited historical system operation record 	<ul style="list-style-type: none"> • Operation of Iron/ Manganese treatment • Highest capital and annual costs 	<ul style="list-style-type: none"> • High annual cost due to continued water quality problems • Public dissatisfaction with color of water • Staining of restroom fixtures

* Table 7 does not include irrigation costs; see Appendix M for breakdown of irrigation costs for each area.

** includes cost of required irrigation well

SANITARY SYSTEM FACILITIES

See Appendix H for a complete technical report.

General Considerations

The construction of modern flush toilet facilities was a high priority according to a survey of park users and questionnaire received during the master planning process. Provision of limited showering facilities was also desirable to enhance the level of service for camp ground users. Potential on-site sanitary sewer systems should provide for treatment and disposal of the wastewater generated while being protective of the environment, reliable, and cost effective with respect to capital investment, operating cost, and expected useful life.

The predominant soil in the Oxbow Regional Park area is identified in the Multnomah County SCS guide as Dabney loamy sand. This soil is well suited for installation of conventional on-site wastewater systems. The use of a pressurized drain field for wastewater distribution will reduce the potential impacts by providing even hydraulic loading throughout the application area. More intensive processes for wastewater treatment and disposal such as conventional mechanical treatment plants are not appropriate for a recreational facility and have not been considered. Analysis has been limited to on-site sewage systems.

It is desirable to provide convenient access to unisex toilet facilities (see Table 8) for the park's users so a combination of conventional septic systems and vault toilets is proposed. The limited use of vault toilets will provide for a balance between the high construction cost of conventional systems and the higher operational cost of vault toilets.

The basic on-site sewage treatment system consists of a septic tank for primary treatment and separation of wastewater solids followed by a drainfield for subsurface treatment and infiltration. Conventional on-site systems (see Table 9) are well suited for Oxbow Regional Park given the suitability of soils at Oxbow Regional Park for conventional systems and the successful use of these systems for YMCA Camp Collins. A pressurized drainfield system may be considered. This modification provides for more consistent application as discussed above.

Important considerations for the development of conventional on-site systems include the design wastewater flows and availability of sites for drainfields and replacement areas. The existing park provides significant areas of open space ideally suited for construction of drainfields. The drainfield and replacement reserve areas must be protected from activities such as vehicle traffic, which could impair the soil's ability to provide effective treatment. It is possible that for one or more of the proposed restroom sites that the location of a drainfield area will not be immediately available. It is possible to pump the wastewater to locations in the near vicin-

ity where such sites may be located. The use of multiple on-site systems, one per source of wastewater, provides for flexibility of operations when one system may be out of service for routine maintenance repairs, or to allow the drainfield to rest. The normal weekly and seasonal variation in wastewater flows will automatically provide for routine recovery of infiltration and treatment capabilities and should extend the useful life of the drainfields.

The on-site systems will require only limited resources for operation and should provide reliable and effective treatment. The septic tanks will require periodic monitoring to measure the accumulated solids to allow for pumping as needed. The volume of materials to be pumped should be less than that found in the existing pit toilets as the tanks will provide for more effective reduction in the volume of materials through natural decomposition and through normal discharges to the drainfield.

The proposed facilities will still include the installation of 8 unisex vault toilet systems in areas where they will provide convenient access and the anticipated demands do not warrant investment in installation of conventional septic systems. The proposed vault toilet locations will not include placement inside setbacks from the river or the existing well. The locations should also readily provide the required 4' separation from groundwater. The existing pit toilet located within the flood plain (Group Camp 3) will be removed. The proposed locations all presently have truck access which will allow for removal of accumulated wastes as necessary.

Greywater disposal systems will be necessary for the sink installations proposed for the group picnic shelters and camp sites. The shelter systems should provide a receiving chamber, settling chamber, and either a seepage chamber or disposal trench. The greywater systems for the new camp sites should be designed to eliminate clogging and backup problems and be clearly marked to discourage disposal of inappropriate wastes.

Projected Wastewater Flows

Estimates of wastewater flows have been based on the guidelines in the Oregon statutes for on-site systems. These flow values are not simply measures of hydraulic flows, but also include an adjustment factor for the anticipated strength of the wastewater.

Design of on-site facilities is based on the peak daily flow values. Wastewater loadings at Oxbow Regional Park will vary widely both on weekly and seasonal cycles. This will result in much lower average rates over the long-term. It is proposed that the wastewater treatment facilities be generally designed based on the peak month loading values plus extra total capacity for all systems to account for uncertainty in the actual allocation of the wastewater flows among the various systems. Providing 50% excess capacity over the design value month peak actually results in total flows equal to the peak day estimates. To further provide for moderation of peak flow and allow for routine resting and recovery of the subsurface infiltration surface, the following design criteria are proposed: construction of multiple drain fields to allow intermittent application among them, monitoring ports to allow observation of ponding due to reduced infiltration, effluent filters in the septic tanks to reduce solids carryover, pressurized distribution to ensure even dosing, and hour meters on the dosing pumps to allow for monitoring of total loading to each bed so they may be cycled regularly. Water meters should also be installed on all facilities which discharge to the on-site systems to allow for measurement of the actual flows to the drainfield. These measures should ensure that the systems are capable of providing for peak day loadings in excess of the design values and allow for recovery of the systems for long lifetime.

Wastewater System Installations

The locations of the proposed wastewater facilities will depend on the actual locations of the restroom facilities and the location of areas well-suited for drainfields. The allocation of the design loadings were based on estimated loadings to each facility according to the following factors: seasonal variation in demand, potential for high peak demand loadings, parking availability and level of use in the area, and the number of toilets and showers to be served. Overall, the values were based on peak monthly design flows plus 50% for a total park wastewater capacity equal to the estimated peak day demand. Estimates of drainfield area have been based on a soil classification A, 2' wide trenches 8' on center with the intervening space representing the reserve drainfield area.

Table 8
Summary of Other Wastewater Systems for
Oxbow Regional Park

Location	Unisex Restroom Vault Toilet Per Unit
Flood Plain Trail Head	1
'Hosner Hole' River Access	2
Dismal Swamp Day Use Area	2 1
Individual/Family Day Use Area	1
Campground (Two Sites)	2 2
Group Camp 2	2
Total	8 structures

Table 9
Summary of Conventional On-Site Wastewater System Installation for
Oxbow Regional Park

Location	Flush Restrooms/ Showers	Design Flow (gal/day)	Drainfield Area (ac)
Park Office	1 Unisex/0	1,000	.06
Arrival Area Restroom	2 Unisex/0	3,000	0.18
Environmental Education Center	2 women & 2 men	4,000	0.24
Group Picnic Area	6 Unisex/0	3,000	0.18
	6 Unisex/0	3,000	0.18
Boat Ramp	6 Unisex/0	5,000	0.31
Group CampGround	3 Unisex/5	7,000	0.43
Campground	3 Unisex/5	7,000	0.43
Total	2 Mens' 2 Womens' 27 Unisex Restrooms 10 Unisex Showers		

■ Electrical System

The existing primary metering will not meet the needs of extending services beyond the well pump. Secondary metering will be required at each new pad mounted transformer. The existing high-voltage line can be tapped at the first vault and run back to the new toilet at the west end of the developed area. The high-voltage line can also be tapped at the vault at the well pump to run to the east. A vault with tap capabilities is required each 400-500 feet. New transformers with meters will be placed at toilets, environmental education building, host site, and yurts. Refer to Sheet E1 (in the Appendix J) for layout details. Sheet E1 shows both new and old roads. It is the intent to run the high-voltage line along the old road bed as this is a more direct route.

■ Phone Service

Phone service is currently limited to the upper entry area. As facilities are developed underground phone service should be provided for the environmental education building and the camp host site. A public pay phone should also be provided at the entry to the campground.

■ ADA Compliance

All new park improvements must meet the requirements of the American with Disabilities Act (ADA). As phased improvements are made throughout the park, it is recommended that accessibility be incorporated into the design revisions. Recommended special provisions may include:

- Additional handicap parking spaces at the lower portion of the River Access Area(Boat Ramp).
- An accessible fishing area as an extension to the existing area.
- Accessible trail systems at varying ability levels.
- Fully accessible Ancient Forest loop trail.
- Assisted listening devices for amphitheater, park programs, tours, etc.
- Existing play areas revised to meet current standards.
- Accessible picnic and camp areas to include all shelters.

■ Parking

As noted in the description of the Master Plan components, parking has been distributed throughout the park in proportion to the anticipated uses. Table 10 outlines the existing and proposed parking in each of the major areas of the park. The following are important points:

- Overall parking in Oxbow Regional Park has been increased by approximately 1.3%.
- The Master Plan has shifted parking away from the entry corridor and the Ancient Forest area to the lower terrace area.
- Of the 902 spaces shown in the Master Plan, 527 are designated permanent parking spaces and the remaining 375 spaces are overflow parking.

Overflow parking will be provided in large turf areas.

- Designated parking areas off the main road will enhance the aesthetic quality of the park while increasing safety for park users.
- Vehicle/horse trailer parking on the north side of Homan Road, near the existing equestrian trailhead, should be widened to safely accommodate parking of 6 vehicles with trailers. Work with Multnomah County Transportation Department for road and right-of-way improvements.

Table 10
Existing / Proposed Parking for
Oxbow Regional Park

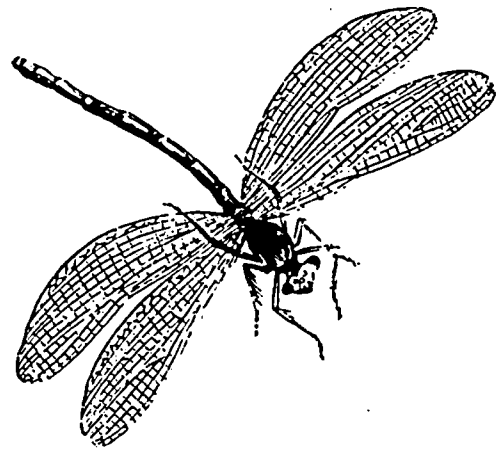
	Location of Existing Parking	Parking # to Remain	Parking # to Relocate	# to Add	Total Parking	% Change
Entry Area	7D	7	-	-	7	0%
Flood Plain Trail Head	22D	15	-	-	15	0%
Hosner Hole Area	15R 36D	30	-21	-	30	-12%
Dismal Swamp Area	14R 50D	45	-19	-	45	-22%
Ancient Forest	3R 70D	0	-73	-	0	-18%
Individual Day Use/Boat Ramp	72R 202D	72 202		-33	307	-11%
Group Picnic	234D	234	-	-68	302	-23%
Overflow Camping	10	6	-4	-	6	-40%
CampGround	90	90	-	-40	130	-45%
Group Camp Existing #1	45	40	-5	-	40	-11%
Walk-In Camp	15D 5R	20	-	-	20	0%
Total	890	761	-122	+141	902	+1.3%

Existing Parking Breakdown

R = River Use Parking

D = Individual Day Use Parking

IMPLEMENTATION





IMPLEMENTATION

■ Finance

The financial aspects for the suggested Master Plan improvements have been projected. The following are summaries of anticipated construction costs, operating expense and revenue.

Although the consultant team has been diligent in reviewing the existing and proposed financial implementation of the Master Plan improvements, it should be realized there are a wide range of variables which may influence the actual financial outcome.

Construction Cost

A construction cost estimate has been prepared for the recommended Master Plan improvements. Assuming all of the improvements were constructed by the private sector through a normal public bid, the total project cost is in the range of \$8,507,552.00. This preliminary construction cost has been based on the concept drawings, utilizing 1997 industry standard cost factors. The preliminary estimates should be used as a guideline. Actual construction costs may vary based on detailed design, bidding requirements, project size, the use of park staff and equipment, volunteer labor and other factors. A detailed cost estimate for individual Master Plan components is contained in Appendix M. The following is a cost break down by area and major work tasks:

Construction Cost Estimate

A	<u>Entry Intersection</u>	\$	1,200.00
B	<u>Entrance Gate / Arrival Area</u>	\$	389,459.00
C	<u>Park Supervisor's Residence / Maintenance Area</u>	\$	340,251.00
D	<u>Flood Plain Trail Head</u>	\$	36,693.00
E	<u>Road Corridor Revegetation</u>	\$	95,367.00
F	<u>'Hosner Hole' River Access / Interpretive View Point</u>	\$	94,554.00

G	<u>Dismal Swamp Day Use Area</u>	\$	205,426.00
H	<u>Ancient Forest Preserve</u>	\$	12,710.00
I	<u>Environmental Education Center</u>	\$	1,398,343.00
J	<u>Group Day Use Area</u>	\$	1,691,087.00
K	<u>Individual / Family Day Use Area &</u>		
L	<u>Access Road Turnaround</u>	\$	202,065.00
M	<u>Boat Ramp</u>	\$	392,004.00
N	<u>Group Camp Areas &</u>		
O	<u>Campground</u>	\$	1,063,413.00
1	Trail Construction & Rehabilitation	\$	203,250.00
2	Upgraded Water System	\$	181,000.00
3	New Electrical System	\$	237,450.00
<u>Extras</u>			
	Project Costs (Design, Surveys, Permits, etc.)	\$	981,640.00
	Contingency	\$	<u>981,640.00</u>
Total			\$ 8,507,552.00

OPERATING COST / REVENUE

The following is an analysis of potential costs and revenues for Oxbow Regional Park when all of the recommended improvements are made. A summary of the costs and revenue projections are shown below in Table 11. The assumptions and background information used to calculate each line item is found in Appendix I. The costs and revenue items are based on fiscal year 1996-1997 dollars.

Table 11
Summary of Potential Operating Costs and Revenue
Oxbow Park Master Plan

Budget Item	1996-97 Year	Forecasted Year
Revenue	\$140,925	\$220,776
Operating Cost	\$347,864	\$375,546
Net Operating Deficit	\$206,939	\$152,270
Deficit Rate	59.5%	40.8%

POTENTIAL OPERATING REVENUE

A breakdown of the potential operating revenue from program fees is summarized in Table 12 below. Appendix I contains a list of the assumptions and calculations for each program. Table 12 does not list other resources such as Glendoveer Golf Course receipts, Oregon RV Registration Fee revenue, and the County Marine Fuel Tax. These items come to the County as lump sums and are distributed to individual parks depending upon need. However, a breakdown of these fees is shown in Appendix I.

Table 12
Summary of Potential Operating Revenue
Oxbow Park Master Plan

1996-1997 Revenue Source	Forecasted Budget	Revenue (1)
Program Fees		
Entry Fees	\$70,055	\$81,326
Camping Fees	\$25,612	\$46,200
Environmental Education Programs	\$18,576	\$27,800
Group Reservation Fees (Shelters)	\$12,925	\$25,800 (2)
Group Reservation Fees (Open Areas)	-	\$2,400 (2)
Firewood Sales	\$5,365	-
Yurts	-	\$18,250
Shower Revenue	-	\$9,100
Miscellaneous Revenue	\$1,110	\$1,400
Total	\$140,925	\$220,776

(1) Based on 2nd year of operation with all improvements completed.

(2) Includes \$3 entry fee.

POTENTIAL OPERATING COST

A summary of the potential operating cost for Oxbow Park is shown below in Table 13. The appendix contains a list of the assumptions and calculations for each cost item. For personnel costs, the current budget was used as the base. From this, time savings and increases were calculated based on the new facilities added to the park. This analysis is found in Appendix I.

Table 13
Summary of Potential Operating Cost
Oxbow Park Master Plan

Cost Item	1996-97 Budget	Forecasted Cost
Personnel Costs (1)	\$266,082	\$273,096
Office Supplies	\$1,395	\$2,000
Park and Equipment Supplies	\$12,096	\$17,000
Merchandise for Sale (Food)	\$4,700	\$5,200
Training Costs	\$1,105	\$1,400
Utilities	\$14,082	\$19,100
Maintenance Services	\$1,124	\$3,850
Printing / Communications	\$2,050	\$4,100
Payment to other Gov't Agencies	\$45,230	\$49,800
Total	\$347,864	\$375,546

Costs based on 1997 dollars. Inflation and potential labor rate increases are not included

■ Project Phasing

The available construction capital for initial development from the 1995 Bond Measure is limited to approximately \$1.25 million. Although a very significant investment, it represents only 15% of the capital required to fully implement the Master Plan improvements. Therefore, a phased development will be required. In addition, Metro has established a special fund for the planning and development of the Environmental Education Center. Currently there are approximately \$200,000 available and plans are underway to raise the remaining needed funding within 3 to 5 years. Wherever possible, park staff and volunteers will perform some of the less technical construction activities to offset implementation costs. Activities may include grading, planting, turf installation and maintenance yard clean up.

To avoid closure of the park, a development sequence will be utilized to minimize access closures and disturbance to existing facilities. Also, work will be scheduled to avoid peak season use of the park.

As a rule, old facilities will be demolished only as new facilities are added. Over time, most if not all of the existing pit toilets will be removed. During removal, earth pits should be filled with granular fill, covered with soil and revegetated.

The consultant team, in coordination with Metro staff and the Project Advisory Committee has formulated a tentative development program which is subject to change. The anticipated approach is outlined in the following three phases.

Phase I Improvements: Years 1-2

The initial focus will be to upgrade the basic park infrastructure to include the water system (potable and irrigation), electrical system, and septic drainfields to service Phase I restrooms. This phase would provide new restrooms in the campground (Area N) with flush toilets and showers and a new restroom building at the park entry (Area B). Development of the entry area restroom should be coordinated with the design of other entry area improvements. Following infrastructure improvements, the main park road will be relocated between Group Picnic Area A and the turnaround. The road relocation would include the development of new parking areas, modifications of the existing road to a trail/service road, and the necessary revisions to grass areas. In addition, the new group camp area south of the turnaround and the campground would be developed.

Also at the entry area, six overflow campsites would be established.

In addition, a number of existing structures will need to be removed or improved to

comply with safety and current building codes. The following is a list of Phase I improvements:

PHASE I IMPROVEMENTS: YEARS 1 - 2

- Construction design and engineering for Phase I improvements
 - Incorporate interpretive media and trail improvement design where relevant
- Site development/clearing for Phase I improvements
- Electrical upgrades
 - Main line
 - Vaults
 - Transformers
- Water system upgrades including irrigation separation
- Entry / Maintenance Area
 - Restroom
 - Overflow camp sites
 - Maintenance yard clean-up
- Road Realignment
 - Area from Picnic Area A to turnaround
 - Remove Group Camp 1 shelter
 - Rough in parking areas
 - Clear areas for future phases
- Ballfield relocation
- Develop Group Camp Area 1 (south of turnaround)
- Campground development
 - Restrooms/showers
 - Host site
 - Additional campsites
 - Reconfiguration of existing campsites
 - Build road from turnaround to campground entrance
- Fundraising for Environmental Education Center

Note:

Temporary relocation/discontinuation of use may result from Phase I improvements.

Phase I Permits

Proposed Phase I improvements will require compliance with a number of agency permitting requirements. The following is a brief summary of the anticipated Phase I permitting requirements:

Site Work:

- Wetlands delineation
- Corps of Engineers - Fill Permit
- State of Oregon - Fill Permit

- Multnomah County Transportation - Right-of-Way Permit
- Multnomah County- Significant Environmental Concerns Permit

Utilities

- Electrical Coordination with Portland General Electric requirements
- State And National Plumbing Codes

Buildings

- Multnomah County Building Permits
- State and National Building Codes

Phase II Improvements: Years 3-4

Phase II improvements would concentrate on revenue generating facilities including picnic shelters and group camping areas. The following is a list of Phase II improvements:

PHASE II IMPROVEMENTS: YEARS 3 -4

- Construction design and engineering for Phase II improvements
 - Incorporate interpretive media and trail design where relevant
- Site development / clearing for Phase II improvements
- Entry Area
 - Entry booth and gates
 - Relocate maintenance road
- Group Day Use Area
 - Shelters
 - Uncovered picnic areas
 - Restrooms
- Group Camping Areas
 - New group camping area 2 (north of turnaround)
- Individual / Family Day Use Area
 - Reconfigure Picnic Area D
 - Restrooms
- Irrigation installation
- Trail upgrades where necessary

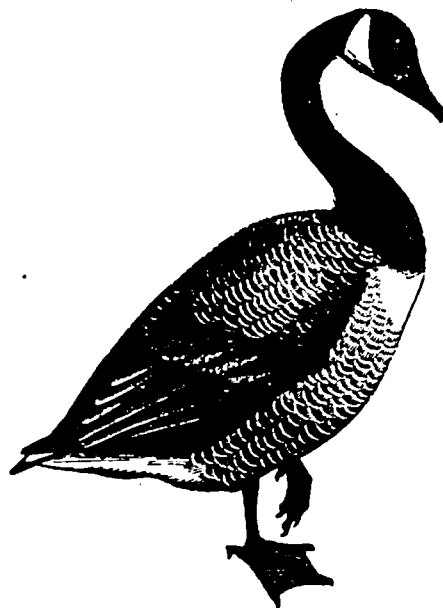
Phase III Improvements: Years 5-10

The continued improvements of the park will be dependent upon available resources. The general strategy will be to first implement revenue producing facilities (i.e. camping areas, group picnic areas and related improvements) and then proceed with improvements area by area to develop general park improvements. The following is a list of Phase III improvements:

PHASE III IMPROVEMENTS: YEARS 5 - 10

- Construction design and engineering for Phase III improvements
 - Incorporate interpretive media design where relevant
- Site development / clearing for Phase III improvements
- Entry Area
 - Office
 - Orientation shelter
 - Residence driveway relocation
 - Maintenance yard improvements
- Road Corridor
 - Restore road edges from Entry Area to Dismal Swamp
- Flood Plain Trail Head
 - Vault toilet
 - Parking
- Hosner Hole River Access/Interpretive Viewpoint
 - Vault toilet
 - Parking
 - Picnic areas
 - Interpretive media
- Dismal Swamp Day Use Area
 - Vault toilet
 - Parking
 - Interpretive media
- Environmental Education Center (may occur during Phase II if funding available)
 - Ancient Forest barrier-free interpretive trail (1/8 mile loop)
- River Access Area (Boat Ramp)
 - Parking
 - Interpretive media
- Group Camp 3 redevelopment
- Homan Road equestrian access improvements

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BIBLIOGRAPHY

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Chapter 3 Parks, Natural Areas, Open Spaces, And Recreational Facilities

Overview

Parks, natural areas, open space, trails, greenways and associated recreational services provide important benefits to the visitors and citizens of the Portland metropolitan region including:

- Personal health benefits from leisure and fitness activities in local parks and open spaces (e.g. hiking, biking, field sports, playgrounds, swimming, picnicking, fishing, wildlife viewing). Recreational pursuits are vital to the social development of youth and the mental and emotional health of adults.
- Community benefits such as park access close to home, environmental education opportunities and community involvement in the planning and management of facilities. Parks and natural areas also provide unique landscape characteristics in the community.
- Economic benefits related to tourism and recreation industries and enhanced property values.
- Environmental benefits helping to maintain air and water resources, providing flood control and protecting fish and wildlife habitat.

Citizens throughout the region have demonstrated the importance of parks, natural areas and recreation services through their support in elections, opinion surveys, recreational activities and volunteer community service. Today, over 700 publicly-owned parks exist within and adjacent to the metropolitan region ranging from Mill End Park (18-inches in diameter) to Forest Park (4,683 acres). These facilities are managed by over 25 public park and recreation service providers. Metro currently manages approximately 6,100 acres of land at more than 40 locations.

With increasing growth in the region, the demand for park facilities and recreational services also has increased. But the supply of facilities and services has not kept pace. The ability of parks providers to maintain existing parks is increasingly strained and resources to acquire and develop new parks are becoming scarce. This is due to a variety of factors including an exclusive dedication of gas tax revenues to highway needs, significant reductions in federal appropriations for federal, state and local parks programs (e.g. Land and Water Conservation Fund), reductions in federal timber harvest receipts to counties, and property tax reduction measures (e.g. Oregon's Measure 5 in 1990; Measure 47 in 1996).

Metro recognizes the desire of citizens to have quality natural areas and parks close to home. Metro is working with federal, state, and local governments to address and meet the park and recreation needs of

the Portland metropolitan area. The Metro Charter, approved by voters of the region in 1992, authorizes Metro to acquire, develop, maintain, and operate a system of parks, open space, and recreational facilities. The Charter also designates these facilities as one of the mandatory components to be addressed in the Regional Framework Plan.

The policies and implementation of the parks, open spaces and recreation component of the Regional Framework Plan is based upon the *Metropolitan Greenspaces Master Plan*, adopted by Metro Council in 1992. The *Metropolitan Greenspaces Master Plan* describes goals and policies related to establishing an interconnected system of natural areas, open space, trails, and greenways for wildlife and people throughout the metropolitan area. The master plan relates to a number of Regional Urban Growth Goals and Objectives (RUGGOs), particularly Objective 15 which calls for protection of natural areas, parks and fish and wildlife habitat.

This chapter of the Regional Framework Plan outlines the policies that guide Metro and local governments in providing services related to the provision of parks, open spaces, and recreational services. It includes policies intended to clarify roles and responsibilities to assure continued access to parks and natural areas and to protect significant natural resources for current and future generations. The policies reflect the importance of parks, natural areas and recreational facilities in the urban fabric of communities throughout the region, and offer measures to ensure that — as the landscape is affected by human settlement, natural resources are protected and citizens are provided appropriate recreational opportunities and facilities, close to where they live.

Background

For decades, parks have played a vital role in the quality of life in the metropolitan region. In 1903, visiting landscape architects Frederick Law Olmsted Jr. and John Charles Olmsted discussed a newly-emerging American notion of making nature urbane and, thus, naturalizing the city. In their report to the Portland Parks Board, the Olmsted's noted, "While there are many things, both small and great, which may contribute to the beauty of a great city, unquestionably one of the greatest is a comprehensive system of parks and parkways."

From the time of the Olmsted's report through the 1960s, the city of Portland was the primary population center and primary parks provider in the region. With continuing urban growth through the 1970s, suburban communities outside the central city established new and expanded parks and recreation programs. A primary emphasis of these programs was, and continues to be, the provision of active recreation opportunities including sports fields, swimming pools, playgrounds and associated recreation programs.

1499 In 1974, the State of Oregon issued the Willamette River Greenway Plan outlining protection and
1500 acquisition proposals for the Willamette River from Cottage Grove to its confluence at the Columbia
1501 River. The Plan directs development away from the river, establishes a greenway setback line, requires
1502 inventories be completed and requires protection of significant fish and wildlife habitats, vegetative
1503 fringe, scenic qualities and viewpoints.

1504 The State of Oregon requires all cities and counties to develop comprehensive plans. These
1505 comprehensive plans must address State Land Use Planning Goals including: Goal 5, Open Spaces,
1506 Scenic and Historic Areas and Natural Resources; Goal 6, Air, Water and Land Resources Quality; Goal
1507 8, Recreational needs and Goal 15, the Willamette River Greenway. Metro, as well as the cities and
1508 counties of the state, must show that their plans are consistent with these goals.

1509 In 1989, Metro published the *Metro Recreation Resource Study*, a work in cooperation with other local
1510 park providers in the region. The purpose of the study was to:

- 1511 • identify existing public parks, natural areas and other recreational resources in the region
- 1512 • describe the general issues, problems, and opportunities relating to these resources
- 1513 • identify needed actions to provide adequate park facilities and services in the Portland metropolitan
1514 region

1515 The study identified the need to increase the inventory of park facilities and services and address the
1516 need for additional natural area park facilities in the metropolitan region, in response to the growing
1517 demand for natural resource-based recreational opportunities (e.g. hiking, biking, fishing, boating,
1518 camping, wildlife watching) close to home. Publicly-owned and managed natural areas were found to be
1519 limited, primarily Forest Park, Oxbow Park and Tryon Creek State Park. A regional, cooperative
1520 planning approach was recommended to address this issue.

1521 In 1990, Metro Council established two advisory committees to coordinate development of a regional
1522 natural areas master plan to guide protection and management of regionally significant natural areas in
1523 the region. The Greenspaces Technical Advisory Committee is composed of parks and natural resource
1524 professionals in local jurisdictions, state and federal agencies and representatives of nonprofit advocacy
1525 groups for parks, natural areas, open spaces, trails and greenways.

1526 A Greenspaces Policy Advisory Committee consisting of elected officials from local jurisdictions in the
1527 region, including Clark County, oversaw development of the *Metropolitan Greenspaces Master Plan*,
1528 which the Metro Council adopted in 1992. The Policy Advisory Committee was replaced by a citizen-
1529 based Regional Parks and Greenspaces Advisory Committee in 1995 to advise Metro Council, Metro
1530 Executive Officer and the Metro Regional Parks and Greenspaces Department on a variety of issues
1531 affecting regional parks and natural area facilities and services.

1532 In 1993, Multnomah County approached Metro concerning the possible consolidation of its Parks
1533 Services Division with Metro's Greenspaces Program. The consolidation was consistent with each
1534 agency's desire to support its own mission (e.g. growth management for Metro; social services for
1535 Multnomah County) and was expected to further the regional vision embodied in the *Metropolitan*
1536 *Greenspaces Master Plan*. In December 1993, Metro Council approved the merger of the Multnomah
1537 County Parks Division with Metro's greenspaces program, creating the Metro Regional Parks and
1538 Greenspaces Department.

1539 The new department began operations in January 1994. Combining Metro's planning experience with
1540 park management experience greatly enhanced Metro's ability to acquire, develop, maintain, and operate
1541 a system of parks, natural areas, and recreational facilities of regional significance. It also put Metro in a
1542 position to better support local parks providers in coordination and planning activities. The parks merger
1543 allowed Metro to better address and coordinate issues common to all local park providers. For example,
1544 Metro coordinated the identification of 90 local park acquisition and improvement projects which were
1545 included in the 1995 open space, parks, and streams bond measure.

1546 In 1995, Metro referred a \$135.6 million bond measure to voters of the region that identified 14 regional
1547 target acquisition areas, 6 regional greenway and trail projects and 90 local natural area acquisition and
1548 development projects that supported the goals of the *Metropolitan Greenspaces Master Plan*. Voters of
1549 the Portland metropolitan region approved Measure 26-26 in May 1995. Metro's goal is to acquire about
1550 6,000 acres within the 14 regional target acquisition areas and corridors.

1551 The *Future Vision Report* (1995) required by the Metro Charter also identifies parks and natural areas as
1552 valuable components of a livable community. The report states that:

- 1553 • "We value a life close to nature incorporated in the urban landscape."
1554 • "We value nature for its own sake, and recognize our responsibility as stewards of the region's
1555 natural resources."
1556 • "...this region is recognized as a unique ecosystem...which seeks to:
1557 • improve air and water quality, and increase biodiversity;
1558 • protect views of Mt. Hood, Mt. St. Helens, Mt. Rainier, Mt. Adams, Mt. Jefferson, and other
1559 Cascade and coastal peaks;
1560 • provide greenspaces and parks within walking distance of every household;
1561 • assure a close and supportive relationship among natural resources, landscape, the built
1562 environment, and the economy of the region; and
1563 • restore ecosystems, complemented by planning and development initiatives that preserve the
1564 fruits of those labors."

1565 In addition, the RUGGOs state under Objective 15 that:

1566 "Sufficient open space in the urban region shall be acquired, or otherwise protected, and
1567 managed to provide reasonable and convenient access to sites for passive and active
1568 recreation. An open space system capable of sustaining or enhancing native wildlife and
1569 plant populations should be established."

1570 "15.1 Quantifiable targets for setting aside certain amounts and types of open space
1571 should be identified.

1572 15.2 Corridor Systems- The regional planning process shall be used to coordinate the
1573 development of interconnected recreational and wildlife corridors within the
1574 metropolitan region

1575 15.2.1 A region-wide system of trails should be developed to link public and
1576 private open space resources within and between jurisdictions.

1577 15.2.2 A region-wide system of linked significant wildlife habitats should be
1578 developed. This system should be preserved, restored where appropriate, and managed
1579 to maintain the region's biodiversity (number of species and plants and animals).

1580 15.2.3 A Willamette River Greenway Plan for the region should be
1581 implemented by the turn of the century."

1582 The policies in this chapter capture the intent of the RUGGOs, *Future Vision* and *Metropolitan*
1583 *Greenspaces Master Plan* related to providing an adequate and viable system of parks, natural areas,
1584 trails, greenways and recreational programs and services in the Portland metropolitan region.

1585 **Analysis**

1586 A key element of the 2040 Growth Concept for accommodating future urban growth in the region
1587 includes encouraging a compact urban design. That is, more households are expected to be
1588 accommodated by higher densities. This means smaller lots in much of the new development and where
1589 transit service is at high levels, such as in regional and town centers, mainstreets and station
1590 communities, residential development types including rowhouses and multi-family development.

1591 New neighborhoods and communities must include adequate parks and open spaces. Land set aside for
1592 parks and open spaces must be included in planning for future urbanization inside and outside the Urban
1593 Growth Boundary. A crucial issue related to parks, natural areas and recreation in the region is how
1594 communities will work together to plan for the provision of these important public facilities and services.

1595 **Identification and Inventory of the Regional System**

1596 The development of the *Metropolitan Greenspaces Master Plan* required the systematic, scientific
1597 identification, inventory and assessment of natural area features in the metropolitan region. A consultant
1598 team was assembled by Metro in 1989 to conduct the inventory and analysis of the Portland metropolitan
1599 region to identify regionally significant natural areas and corridors for fish, wildlife and natural resource
1600 dependant recreation.

1601 The natural areas inventory was based on aerial photography of the total study area (372,682 acres) with
1602 biological field checks of seven percent of the natural areas mapped. Periodic updates of the inventory
1603 will be necessary to assess the status of regionally significant natural areas, monitor trends and to support
1604 future planning and management efforts. Future work will be based on systematic and scientific methods
1605 of identifying and delineating natural resource lands and maintaining and managing links between them
1606 on a landscape level.

1607 Inventories are needed in order to accomplish the following:

- 1608 • Reevaluate protection priorities established in the *Metropolitan Greenspaces Master Plan*. Some
1609 sites identified may no longer be considered regionally significant. New sites may be added to the
1610 regionally significant inventory once current and more complete data are available.
- 1611 • Delineate regionally significant natural areas, research and document the critical natural resources
1612 values for which protection should be justified and supported.
- 1613 • Delineate and conduct field assessments of biological corridors that interconnect regionally
1614 significant sites.
- 1615 • Assure that the regional system of parks, natural areas, open spaces, trails and greenways contributes
1616 to the maximum extent, based on scientific data, to the protection of water quality, fish, wildlife and
1617 botanic diversity within the region.
- 1618 • Inventory existing park facilities, recreational capacity and analysis of park service needs

1619 **Protection of the Regional System**

1620 Ecological principles are important in establishing protection priorities including:

- 1621 • Maintaining biological diversity by protecting and enhancing a variety of habitats such as wetlands,
1622 riparian corridors, forests, and agricultural lands distributed throughout the metropolitan area.
- 1623 • Consolidating natural areas to create or maintain relatively large contiguous acreages connected to
1624 natural habitats outside the urban environment to avoid habitat fragmentation and species isolation.
- 1625 • Protecting, restoring, and recreating stream corridor vegetation by replacing riparian vegetation
1626 where it is lacking or dominated by exotic species and removing barriers, where possible, to maintain
1627 connections with adjacent upland habitats.
- 1628 • Protecting or restoring naturally vegetated connections between watersheds at headwaters or other
1629 appropriate locations.
- 1630 • Planning for capital improvements to provide appropriate access and use of parks and natural areas

1631 A variety of strategies will be used to protect and manage the regional system of parks, natural areas,
1632 trails and greenways to support fish and wildlife populations as well as provide a variety of recreational
1633 opportunities. These include:

- 1634 1. Acquisition
- 1635 2. Environmental education, stewardship and landowner incentives

1636 3. Land use and environmental regulations

1637 Acquisition

1638 One of the most effective means of natural resource protection is public acquisition from willing sellers.
1639 The *Open Spaces Parks and Streams Bond Measure 26-26*, approved by voters in 1995 provided funds
1640 for the acquisition of open space in 14 regional areas, 6 regional greenway and trail corridors. The
1641 measure also provided funds for up to 90 local greenspace projects which support or compliment the
1642 *Metropolitan Greenspaces Master Plan*.

1643 Since 1990, voters in Gresham, Lake Oswego, Portland, Tualatin, Tualatin Hills Park and Recreation
1644 District and other jurisdictions ~~North Clackamas Park and Recreation District~~ have approved general
1645 obligation bond issues which support, in part, elements of the *Metropolitan Greenspaces Master Plan*
1646 and other outdoor recreation facilities and services needs.

1647 More than \$6 million in federal transportation funding under the Intermodal Surface Transportation
1648 Efficiency Act of 1991 has been invested in trail projects in the region. Land acquisition can also be
1649 supported through donations of land, conservation easements and dedication of surplus land as open
1650 space.

1651 Environmental education and incentive programs

1652 Environmental education and incentive programs have the capacity to provide a level of protection for
1653 park and natural areas. Building an increased understanding and awareness of metropolitan natural
1654 resource values and the benefits of parks in general leads to informed management decisions and
1655 increased public participation in volunteer stewardship activities. An informed public uses parks and
1656 natural areas in ways that helps reduce the maintenance costs of these facilities. Incentive programs (e.g.
1657 grants, tax reductions, technical support) provide public agencies and private parties support in the
1658 restoration, enhancement, and management of natural areas.

1659 Land Use and Environmental Regulations

1660 Oregon land use policies and regulations provide limited protection of natural resources in the
1661 metropolitan region. Local governments can use the comprehensive land use planning process to
1662 establish protective zoning standards to protect natural resources within their jurisdiction, but they are
1663 often inconsistently applied. Natural resource management on a regional basis offers the opportunity for
1664 uniform standards to protect these resource values. Local planning efforts are needed to assure that an
1665 adequate supply of park land is available to meet the future demand for community and neighborhoods
1666 parks, sports fields, recreation centers and locally significant open space trails and greenways.

Metro's Title 3 of the Urban Growth Management Plan is a first step towards protecting water quality and water features such as streams and wetlands from human disturbances by requiring vegetated buffers. Title 3 also requires Metro to conduct a regional assessment for identification and protection of Goal 5 resources (see section under Goal 5).

A combination of strategies will be required to protect and connect a regional system of parks, natural areas, trails and greenways for fish, wildlife and people. Metro will work with local governments, state and federal agencies, conservation organizations, businesses, and citizens to review, refine and further implement these protection strategies.

Management of the Regional System

Federal, state, county and local agencies have an important role in the management and operation of the metropolitan region's parks, natural areas and associated programs and services. The Metro Charter provides for Metro to serve as a regional provider of parks, natural areas, and recreational facilities. The 1994 City Club of Portland report, *Portland Metropolitan Area Parks*, cites the value of a regional parks authority. A cooperative, regional management approach can result in equitable distribution of facilities, funding equity, consistency in planning, management and operation of facilities and user benefits.

Currently, Regionally Significant Parks, Natural areas and Trails are managed by a variety of public entities with a variety of financial resources. There is little consistency in development, operation, and management standards and little or no integration regarding funding, user fees, or visitor services. Tax reform initiatives may have serious implications for local and state agencies' abilities to operate and maintain existing parks for the region's growing population. Local governments, in particular, may at some point wish to transfer management of regionally significant facilities to Metro, to address funding equity issues and allow local providers to focus on community and neighborhood parks and other facilities and programs related to active recreation.

Site specific management begins with the preparation of master/management plans. The primary purpose of a master plan is to articulate management, development and operation guidelines. Metro will prepare master/management plans for sites that Metro purchases or expects to manage. Sites which lack master/management plans will be "landbanked" and public use limited until appropriate facilities and services can be planned, developed and maintained.

Metro should provide the forum for addressing issues related to the coordination and integration of management, and of service delivery related to parks, open spaces and recreation. Metro should lead an effort to study and evaluate how park and recreation services are provided and recommend actions which will improve funding stability and equity, operational efficiency, customer service, management integration, coordination, and continuity.

Regional Trail and Greenway System

In their report to the Portland Parks Board in 1903, the Olmsted brothers recommended that a system of interconnected parks serves the public far better than a collection of isolated pieces of land. Regional trails and greenways provide the connective network necessary to link the region's parks and natural areas. It is also the critical component that provides people access to parks and natural areas, and the corridors to support movement of fish and wildlife. They connect communities with regionally-significant natural areas and also connect the metropolitan region to the Pacific Coast, Cascade Mountains and Washington state.

Since 1988, Metro has staffed a Regional Trails and Greenways Working Group composed of parks/trails/bike planners from local, regional, state and federal agencies, and nonprofit trail organizations. The working group assisted Metro in developing the trails and greenways component of the *Greenspaces Master Plan*. Thirty-five trail and greenway corridors are identified in the master plan (see attached map, adopted by the Metro Council in 1995).

Refinement of the trails and greenways has been ongoing since the Master Plan was adopted in 1992. Citizen involvement also plays an important role in trail planning. For example, the Peninsula Crossing Trail was added to the Regional Trail System in 1993 at the request of residents of North Portland. Many of the trails and greenways segments support local comprehensive plans and/or local parks and trails master plans.

In 1996, Metro commissioned a Rails and Trails Strategic Plan which inventoried rail right-of-ways throughout the region and identified those having trail potential, should abandonment occur. Abandoned rail lines provide outstanding trail opportunities. The Springwater Corridor Trail, for example, was envisioned to link the metropolitan area with Mt. Hood National Forest, constructed segments now link S.E. McLoughlin in Portland to the town of Boring and provide 16.8 miles of trail. ~~Constructed segments now link Gresham with Portland and provide 12.99 miles of constructed trail~~ utilized by an estimated 500- 600 thousand people/year.

Public planning and transportation agencies incorporate elements of the Regional Trails Plan into state, regional, and local transportation projects and urban development projects (e.g., Mt. Hood Parkway, Sunrise Corridor, Hwy. 30 Corridor Study; Multnomah County West Hills Study).

Provision of Community and Neighborhood Parks, Open Spaces, Trails and Recreation Programs

Cities and two special districts (i.e., Tualatin Park and Recreation District; North Clackamas Park and Recreation District) in the region are responsible for community and neighborhood parks, open spaces, trails, and recreation programs. In the 1994 City Club of Portland report, *Portland Metropolitan Area Parks*, assessed and considered a vision for parks in the region. The report concluded that the size and

1733 configuration of the parks and recreation system is inadequate to meet current and future demand. In
 1734 order to address this perceived inadequacy, the "completion ... of the core system" was envisioned.

1735 In essence, a core system of parks would ensure that a "minimum level of parks and recreation facilities
 1736 ... be available to all citizens regardless of income or geography in the metro area." The approach was
 1737 based on assessing local community values and making adjustments to reflect "separate social goals...
 1738 held by a specific community." Not surprisingly, neighborhood and community parks were the first
 1739 element of this system.

1740 The City Club report recommended the provision of parks be coordinated with other basic services
 1741 including schools, public safety, land use and transportation planning, and watershed management.
 1742 Citing Portland as an example, the survey concluded that a "multi-generational community center at each
 1743 middle school" should provide local communities in the region with a place of education, recreation, and
 1744 congregation.

1745 Local governments and park and recreation districts have been and will continue to be the primary
 1746 providers of community and neighborhood parks, open space, trails, sports fields, recreation centers and
 1747 recreation programs. These facilities and programs provide important opportunities for active and
 1748 passive recreation in closest proximity to where citizens live.

1749 Local governments should be encouraged to prepare park and recreation master plans which provide a
 1750 framework for community level park and recreation facilities, trails and recreation programs. Master
 1751 plans should:

- 1752 • Identify parks deficient areas and include strategies for addressing these deficiencies.
- 1753 • Integrate local trail systems with the regional trails system.
- 1754 • Identify opportunities for cooperation and cost efficiencies between communities, schools, and
 1755 quasi-public organizations such as the YMCA
- 1756 • Provide for citizen involvement in the development and implementation of master plans.
- 1757 • Identify funding strategies and implementation schedules.
- 1758 • Be responsive to the State Comprehensive Outdoor Recreation Plan (SCORP).
- 1759 • Compliment the Regional System.

1760 Metro should identify and evaluate opportunities to assist local governments and park and recreation
 1761 districts with development and implementation of master plans. Potential opportunities include:

- 1762 • Provide mapping and information services through the agency's Data Resources Center to support
 1763 local planning efforts.
- 1764 • Provide forums for the exchange of ideas, information, strategies and development of partnerships
 1765 between providers, schools, and quasi-public organizations.

- 1766 • Provide funding support by incorporating local parks components in regional funding strategies and
1767 continuing the restoration and education grants program.
- 1768 • Advocate for the identification and implementation of state and federal funding sources which
1769 provide financial resources to supplement local investments in parks, open spaces, trails, recreation
1770 facilities and programs.
- 1771 • Ensure that the regional and local park systems are incorporated into comprehensive plans and
1772 addressed in planning for urban reserve areas.

1773 **Participation of Citizens in Planning, Stewardship, Environmental Education and Recreational Activities**

1774 *"What is not understood is not valued, what is not valued will not be protected, what is*
1775 *not protected will be lost."* Charles Jordan, Portland Bureau of Parks and Recreation

1776 Public understanding and participation in the planning and protection of the region's parks, natural areas,
1777 open spaces, trails, greenways and recreational facilities are the foundation of successful parks and
1778 recreation services. Meaningful citizen involvement is fundamental to an effective response to
1779 community needs, it results in more responsive management through identification of appropriate
1780 priorities, and enhances financial and volunteer support. Metro, local governments, businesses and
1781 citizens working together must build a stewardship ethic and provide meaningful opportunities for public
1782 participation to assure parks and recreational services meet the needs of the metropolitan region and
1783 ensure the protection of natural resources.

1784 As members of the public gain a comprehensive understanding of parks and natural area needs and
1785 opportunities, they will become active partners in efforts to determine future planning choices, and
1786 conduct periodic public review of local master plans and other related plans. Citizens can provide
1787 guidance through forums, participation on advisory committees, and in various other capacities.

1788 **Goal 5**

1789 In Oregon, local governments carry out planning to protect natural areas consistent with the State Land
1790 Use Planning Program. This land use program requires local governments to conform with up to nineteen
1791 statewide planning goals. Goal 5, Open Spaces, Scenic and Historic Area and Natural Resources is one
1792 of the key goals which can result in tools for protecting urban natural areas at the local level in the
1793 metropolitan region. A study, *To Save or to Pave; Planning for the Protection of Urban Natural Areas*,
1794 by the Portland Audubon Society and 1000 Friends of Oregon (1994), analyzed and evaluated the
1795 implementation of Goal 5 in the metropolitan region in protecting urban natural resources during the last
1796 decade. Some of the important findings from the study are listed below:

- 1797 • Over three-fourths of local decisions examined allowed degradation of natural and scenic resources.
- 1798 • Goal 5's rules were site specific and did not protect resources on an ecosystem or landscape level.

1799 • Local governments employed a variety of regulatory and non-regulatory techniques with no overall
1800 consistency in an area.

1801 • Goal 5 does not require standardized inventories or methods of data collection. As a result,
1802 important areas were omitted from consideration for protection, and inventories did not contain
1803 enough information to guide local planning decisions.

1804 • Enforcement of local Goal 5 programs is difficult, inadequate and too reliant on citizen efforts.

1805 • Upland forests are the least protected resource, and are vulnerable to being destroyed.

1806 Metro has addressed natural resource issues in three policy documents: 1) the Metropolitan Greenspaces
1807 Master Plan (1992), 2) the Regional Urban Growth Goals and Objectives (RUGGOs) (1995), and 3) Title
1808 3 of the Urban Growth Management Functional Plan (1996).

1809 The *Metropolitan Greenspaces Master Plan*, adopted in 1992, through a mapping and public process,
1810 identified 57 sites in our metropolitan area that retained significant natural biological characteristics.
1811 Seventeen of these 57 sites are in the process of been acquired through the Open Spaces Parks and
1812 Streams Bond Measure 26-26. The remaining 40 sites are in private property, and are being urbanized at
1813 the rate of 6 percent. These sites are all Goal 5 areas, and land use regulations under the Goal 5 rule will
1814 help protect these regionally significant sites.

1815 Title 3 of the Urban Growth Management Functional Plan (Water Quality and Floodplain Management
1816 Conservation), protects streams, wetlands, floodplains and steep slopes associated with vegetated
1817 corridors along streams by limiting or mitigating the impacts of development activities. Title 3 addresses
1818 Goal 6 and 7 and does not address Goal 5, because Goal 5's rules were changing when Title 3 was being
1819 addressed. However, Title 3 (Section 5 Fish and Wildlife Conservation Area) recommends local
1820 governments to address fish and wildlife habitat, but does not mandate any protection for the at this time.
1821 Title 3 does, however, require that Metro conduct a regional assessment of regionally significant Goal 5
1822 resources and evaluate the protection of these resources. Based on this analysis, Metro will develop a
1823 strategy and action plan to address inadequacies in regional protection of Goal 5 resources. This plan will
1824 be carried out by Metro and local jurisdictions.

1825 Metro recognizes that addressing Goal 5 will result in protecting fish and wildlife habitat, and balancing
1826 it with other economic uses in the metropolitan area. However, Goal 5 will have to be a comprehensive
1827 process which will include, protecting fish and wildlife habitat on a landscape level, standardizing
1828 inventory of resources, determining significance of resources, and systematizing land-use regulations
1829 through out the metropolitan area. In its eighteen month analysis, Metro will propose strategies and an
1830 action plan to address the protection of Goal 5 resources in the Metro region.

Policies

Policies related to the provision of parks, open spaces, and recreational services by Metro and local governments address inventory, protection, management and use of these resources at the regional and local levels. These policies have been derived from the Greenspaces Master Plan, the RUGGOs the Future Vision Report, and participation and involvement from the Greenspaces Technical Advisory Committee.

3.1 Policies related to the Inventory of Park Facilities and Identification and Inventory of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways.

3.1.1. Metro will inventory and identify regionally significant parks, natural areas, open spaces, vacant lands, trails and greenways at the watershed level using landscape ecology ~~as a basis, and watersheds as primary units of analysis~~, so that coordinated protection and enhancement of natural functions across jurisdictional boundaries will be assured.

3.1.2. Metro will identify natural corridors that connect regionally significant parks, natural areas, open spaces, trails and greenways. River and stream corridors, utility corridors, abandoned roads, and rail / road rights-of-way will provide primary linkages.

3.1.3. Metro will inventory lands outside the urban growth boundary and Metro's jurisdictional boundary and identify them as prospective components of the Regional System when protection of these lands are determined to be of direct benefit to ~~citizens~~ of the region.

3.1.4 Metro shall identify urban areas which are deficient in natural areas and identify opportunities for acquisition and restoration.

3.1.5 Metro, with the assistance of local governments shall update the parks inventory which was completed in 1988. The inventory shall include acreage, facilities, environmental education programs, existing school sites and other information as determined by Metro and the Greenspaces Technical Advisory Committee. This inventory should be updated at five (5) year intervals.

3.1.6 Using appropriate landscape level techniques, Metro will inventory urban forestry canopy on a periodic basis and will provide inventory information to local jurisdictions.

3.2 Policies related to the Protection of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways

3.2.1 Metro will continue to develop ~~create~~ a Regional System of Parks Natural Areas, Open Spaces, Trails, and Greenways (The Regional System) to achieve the following objectives:

1861 a) protect the region's biodiversity
 1862 b) provide citizens opportunities for, primarily, natural resource dependent recreation and education.
 1863 ~~e) protect the region's biodiversity~~
 1864 c) contribute to the protection of air and water quality
 1865 d) provide natural buffers and connections between communities

1866 3.2.2. Metro, upon the advice of citizens, and in coordination with ~~the assistance of~~ local governments
 1867 and state and federal resource agencies and appropriate non-profit organizations, will finance and
 1868 coordinate protection and management of the Regional system across jurisdictional boundaries.

1869 3.2.3. Strategies to protect and manage the Regional System and regional Goal 5 resources will
 1870 include, but not be limited to, acquisition, education, incentives, land use and environmental regulations.

1871 3.2.4. Lands inside and outside the Urban Growth Boundary and Metro's jurisdiction will be included
 1872 in the Regional System when protection of these lands are determined to be of direct benefit to the
 1873 region.

1874 3.2.5. Metro shall collect and evaluate baseline data related to natural resource values of the regional
 1875 system to identify trends and to guide management decisions.

1876 3.2.6. New transportation and utility projects shall seek to avoid fragmentation and degradation of
 1877 components of the Regional System. If avoidance is infeasible, impacts shall be minimized and ~~fully~~
 1878 mitigated.

1879 3.2.7. Metro, in conjunction with ~~and~~ affected local governments will work with the State to update,
 1880 reinvigorate and implement a Willamette River Greenway Plan for the metropolitan region.

1881 **3.3 Policies related to the Management of the Publicly-Owned Portion of the Regional**
 1882 **System of Parks, Natural Areas, Open Spaces, Trails and Greenways**

1883 3.3.1. Metro will assume management responsibility for elements ~~parts~~ of the publicly owned portion
 1884 of the Regional System, as outlined in the functional plan.

1885 3.3.2. Metro will assume financial responsibility related to those portions of the publicly owned system
 1886 which are ~~owned or~~ managed by Metro.

1887 3.3.3. Local governments shall be given an opportunity to transfer existing publicly owned components
 1888 of the Regional System to Metro and to acquire components of the Regional System with local resources.

1889 3.3.4. The publicly owned portion of the Regional System shall be managed to protect fish, wildlife,
1890 and botanic values and to provide, primarily, natural resource dependent related recreational and
1891 educational opportunities.

1892 3.3.5. Metro will acquire portions of the Regional System as financial resources allow. Metro will
1893 negotiate acquisition agreements primarily with willing sellers. Powers of eminent domain will be used
1894 only in extraordinary circumstances.

1895 3.3.6 Master/Management plans shall be developed for each component of the Regional system to
1896 insure balance public use is compatible with natural resource protection. Master/Management plans shall
1897 be completed prior to formal public use.

1898 3.3.7. Metro and local government cooperators in the Regional System shall be responsive to recreation
1899 demands and trends identified in the State Comprehensive Outdoor Recreation Plan (SCORP).

1900 3.3.8 Metro shall develop master planning guidelines to assure consistency in the management of the
1901 Regional System.

1902 3.3.9 From time to time, or in conjunction with the periodic up-date of the region wide parks
1903 inventory, Metro shall convene local government park providers to share information, review and
1904 analyse issues, and if appropriate develop recommendations related to:

1905 1. roles and responsibilities
1906 2. funding
1907 3. levels of service
1908 4. information needs
1909 5. user trends and preferences
1910 6. technical assistance
1911 7. interagency coordination
1912 8. public involvement
1913 9. other topics as determined by Metro and local park providers

3.4 Policies related to the Protection, Establishment and Management of a Regional Trails System.

3.4.1. Metro will identify a Regional Trails System which shall be included in the Regional Transportation Plan.

3.4.2. The Regional Trail System shall provide access to publicly owned parks, natural areas, open spaces, and greenways, where appropriate.

3.4.3. Metro will coordinate planning for the Regional Trail System with local governments, federal and state agencies, utility providers, and appropriate non-profit organizations.

3.4.4. Metro will cooperate with citizens and other trail providers to identify and secure funding for development and operation of the Regional Trails System.

3.4.5. Local governments ~~should~~ shall integrate local and neighborhood trail systems with the Regional Trail System.

3.5 Policies related to the Provision of Community and Neighborhood Parks, Open Spaces, Natural Areas, Trails and Recreation Programs

3.5.1. Local governments shall be responsible for the planning and provision of community and neighborhood parks, ~~locally significant~~ open spaces, natural areas, sports fields, recreational centers, trails, and associated ~~recreation~~ programs.

3.5.2. Local governments shall ~~provide a park or recreation facility within one half mile of all residents~~ establish level of service standards for provision of parks, natural areas, trails, and recreational facilities..

3.5.3. Local governments are encouraged to be responsive to recreation demand trends identified in the State Comprehensive Outdoor Recreation Plan (SCORP).

3.5.4. Local governments are encouraged to develop, adopt and implement Master Plans for local ~~community~~ parks and trail systems, natural areas, and recreational programs.

3.5.5. Metro, in cooperation with local governments, state governments, and private industry shall work to establish a supplemental funding source for parks and open space acquisition, operations and maintenance. ~~Local governments are encouraged to secure and appropriate sufficient funds for the provision of community and neighborhood parks, trails and recreational programs.~~

3.5.6 Local government should identify opportunities for cooperation and cost efficiencies with non-profit organizations, other governmental entities, and local school districts.

1943 **3.6 Policies related to Participation of Citizens in Environmental Education, Planning,**
 1944 **Stewardship Activities, and Recreational Services.**

1945 3.6.1. Metro will encourage public participation in natural and recreation resource management
 1946 decisions related to the Regional System.

1947 3.6.2. Metro will provide educational opportunities to enhance understanding, enjoyment and informed
 1948 use of natural, cultural, and recreational resources.

1949 3.6.3. Metro will provide and promote opportunities for the public to engage in stewardship activities
 1950 on publicly owned natural resource lands. Cooperative efforts between Metro and private non-profit
 1951 groups, community groups, schools and other public agencies should be encouraged.

1952 3.6.4 Metro should provide opportunities for technical assistance to private owners for stewardship of
 1953 components of the Regional System.

1954 3.6.5 Metro and local governments should work with state, federal, non-profit and private partners to
 1955 facilitate stewardship and educational opportunities on publicly owned natural resource lands.

1956 3.6.6. Local governments are encouraged to provide opportunities for public involvement in the
 1957 planning and delivery of recreational facilities and services.

RECOMMENDED GLOSSARY OF TERMS FOR CHAPTER 3 TO BE INCLUDED IN THE GLOSSARY SECTION OF THE REGIONAL FRAMEWORK PLAN

active recreation

recreation that uses specially built facilities or that occurs in such a density or form that it requires or results in a modification of the area or resource (e.g., tennis courts, swimming pools).

areas deficient in natural areas

parts of the metropolitan region that have been so intensely developed or altered that natural areas have been all but eliminated.

biodiversity (biological diversity)

it includes the variety of living organisms, the genetic differences among them, the communities and the ecosystem in which they occur, and the ecological and evolutionary processes that keep them functioning, changing and adapting.

buffer

natural area or open space used as a divider between two developed or developing areas, or is located between a natural resource area and a developed area.

community park

is greater than 10 acres, and serve 2-3 neighborhoods with their large size and extensive recreation facilities, such as ballfields, play equipment, and parking lots.

cooperators in the program

all governments that Metro has functional planning or other land use authority over through O.R.S. 268 and citizen groups, resource agencies, jurisdictions and others who are interested in being active partners in the program.

wildlife corridor

linear natural areas and habitats which serve as an avenue for wildlife movement.

enhancement

to improve the functions and values of a wetland, riparian, or upland habitat such as its biological productivity, habitat, unique features, and species diversity.

environmental education

Programs that focus on knowledge of ecological and natural systems; programs aimed at promoting understanding and at providing skills to change behavior that will lead to informed decision-making, constructive action, and knowledge of human effects on the natural world.

greenway

generally linear vegetated corridor associated with rivers and streams that may be shared by both humans and wildlife.

land banking

a set of management activities which are intended to maintain a given property in a stable condition for an interim period of time pending a future use.

landscape ecology

the study of the mosaic of topographic, geologic, biologic functions and features and human uses that modify the natural landscape.

level of service

the extent to which parks and recreational services meet community needs and protect resources.

master/management plan

set of policies and actions, that includes capital improvements and natural resource management objectives, for specific parks and natural areas or a system of parks and natural areas.

mitigation

the creation, restoration or enhancement of a wetland, a riparian area, or an upland area to maintain the functional characteristics and processes such as natural biological productivity, habitats, unique features, and species diversity, to compensate for unavoidable impacts to these functions.

natural area

a landscape unit composed of plant and animal communities, soil and rock; largely devoid of human-made structures; maintained and managed in such a way as to promote natural resource values.

natural resource dependent recreation

recreation that typically occurs in a natural setting, and is designed or is utilized to be compatible with the resource (e.g., picnicking, camping, boating, fishing, nature study, hiking, etc.)

neighborhood park

range up to 10 acres in size, and serve the neighborhood immediately surrounding them. Facilities provided at these parks are generally limited to play equipment and an occasional ballfield or tennis court.

open space

developed parks with active recreational facilities such as ball fields, tennis courts, playgrounds, community gardens, golf courses, cemeteries, vacant lands with the potential for becoming a park or natural area.

parkland (park)

land in public or private ownership designated largely for recreational human uses or park purposes.

parks provider

government or agency directly involved in developing, maintaining and operating public parks and recreational services.

protect

save or shield from loss, destruction, or injury.

regional park

park of larger sizes (often in excess of 100 acres) intended for use by residents of several cities and/or counties in the metropolitan area.

regionally significant

of importance to multi-jurisdictional constituents and/or providing unique ecological value to plants and wildlife communities.

regional system

a region-wide interconnected cooperative system of publicly and privately owned regionally significant parks, natural areas, open spaces, trails, and greenways for the benefit of wildlife and people as envisioned by the Metropolitan Greenspaces Master Plan (1992).

restoration

revitalizing, returning, or replacing original attributes and amenities, such as natural biological productivity, aesthetic and cultural resources, which have been diminished or lost by past alterations, activities or catastrophic events..

riparian

those areas associated with streams, lakes and wetlands where vegetation communities are predominantly influenced by their association with water.

stewardship activities

management of personal behavior and/or natural resources with proper regard for the health of natural functions and sustainability over time.

trail

multi-modal/recreational/commuting (e.g., hiking, biking, pedestrian, equestrian) alignment.

urban growth boundary

a boundary that identifies urban and urbanizable lands needed during the 20-year planning period to be planned and serviced to support urban development densities, and which separates urban and urbanizable lands from rural lands.

upland

high ground, as opposed to wetlands or marsh; ground not likely to flood. Areas that are made up of non-hydric soils and characterized by vegetation communities found in dry areas.

urban forest

is the complex system of trees and smaller plants, associated organisms, soil, water, air and people in and around human settlements ranging from rural communities to densely populated metropolitan areas.

vacant land

land that is largely undeveloped and available for development or that can be expected to become available for development in the near future.

watershed

a topographically discrete drainage unit or stream basin, including the headwaters, tributaries, main channel and associated uplands.

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF CONFIRMING
NOMINATIONS TO FILL VACANCIES
ON THE REGIONAL PARKS AND GREENSPACES
ADVISORY COMMITTEE

) RESOLUTION NO. 97-2537A
)
) Introduced by
) Mike Burton, Executive Officer

WHEREAS, The Metro Council approved Resolution 94-2026A to establish the Regional Parks and Greenspaces Advisory Committee; and

WHEREAS, The Regional Parks and Greenspaces Advisory Committee meets monthly to review and advise on the policies, plans and programs of the Metro Regional Parks and Greenspaces Department; and

WHEREAS, Five (5) vacancies exist on the Regional Parks and Greenspaces Advisory Committee; and

WHEREAS, Resolution 94-2026A requires Council confirmation of nominees to the committee; now, therefore,

BE IT RESOLVED

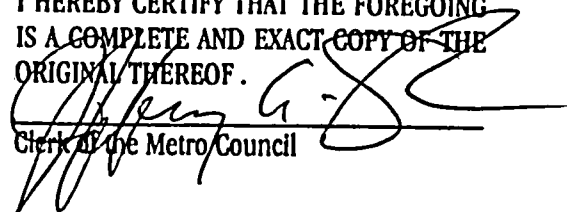
1.) That the Metro Council hereby confirms five (5) nominees listed in Exhibit A to fill vacancies on the Regional Parks and Greenspaces Advisory Committee.

ADOPTED by the Metro Council on this 7th day of August, 1997.



Jon Kvistad, Presiding Officer

I HEREBY CERTIFY THAT THE FOREGOING
IS A COMPLETE AND EXACT COPY OF THE
ORIGINAL THEREOF.



Clerk of the Metro Council

REGIONAL PARKS AND GREENSPACES ADVISORY COMMITTEE

Nominations Forwarded by the Executive Officer to the Council for Conformation

Metro Council District #1

Robert Akers - Retired teacher; Metro Regional Parks and Greenspaces Advisory Committee (Chairman); 40-mile Loop Land Trust (President); served on Gresham Parks Advisory Board and Metro Regional Trails and Greenways working group

Metro Council District #3

John Griffiths - Manager at Intel Corporation; Metro Regional Parks and Greenspaces Advisory Committee; City of Beaverton Budget Committee; served on Tualatin Hills Park and Recreation Land Acquisition Committee; member of Nature Conservancy, National Parks and Conservation Association

Metro Council District #4

A. Jay Hamlin - Software systems engineers at Intel Corporation; vice president of Tualatin Riverkeepers, Friends of Jackson Bottom, Heart of Hillsboro Neighborhood Association; volunteer work at El Centro Cultural in Cornelius

Metro Council District #5

J. Michael Reid - Self-employed; Metro Regional Parks and Greenspaces Advisory Committee; Board of Directors of Friends of Trees; Portland Transportation System Plan Citizen Advisory Committee; Alameda Community Association; Portland Public Schools Budget Committee

Metro Council District #7

Jim Battan - Manager at Infomix Software, Inc.; Metro Regional Parks and Greenspaces Advisory Committee; member of Dragons Breath International (dragon boat team racing), Nature Conservancy, Audubon Society, Oregon Natural Resources Council

Metro Regional Parks and Greenspaces Advisory Committee Roster

District # 1

Robert Akers (Bob), Chairman
1038 S.E. 224th, Gresham, OR 97030
(h) 665-5519 or (w) 762-3206 / (fax) 762-3236
(Term expires March 31, 2000 pending Council approval)

District # 2

Ivy Frances
1038 Bayberry Rd., Lake Oswego, OR 97034
(h) 635-6203 or (w) 823-5326 / (fax) 823-6995
(Term expires March 31, 1998)

District # 3

John Griffiths
10245 S.W. 153rd Ave., Beaverton, OR 97007
(h) 524-6170 or (w) 696-5253 / (fax) 696-5434
(Term expires March 31, 2000 pending Council approval)

District # 4

A. Jay Hamlin
337 NE 2nd Ave., Hillsboro, OR 97124
(h) 640-6936 or (w) 642-0717 / (fax) 642-3630
(Term expires March 31, 2000 pending Council approval)

District # 5

J. Michael Reid, Vice Chairman
2920 N.E. 24th Avenue, Portland, OR 97212
281-4104
(Term expires March 31, 2000 pending Council approval)

District # 6

Brian Scott
1725 NE 61st Avenue, Portland, OR 97213
281-9710 or (w) 275-7462 / (fax) 275-7462
(Term expires March 31, 1998)

District # 7

Jim Battan
7710 S.W. 51st Place, Portland, OR 97219
768-9998
(Term expires March 31, 2000 pending Council approval)

Clackamas County, outside Metro boundary

Rick Charriere (committee alt rep on WRPAC)
19595 S. Fischers Mill Road, Oregon City 97045
631-8140 or (w) 655-9161 / (fax) 655-1726
(Term expires March 31, 1999)

Multnomah County, outside Metro boundary

Seth Tane (committee rep on WRPAC)
13700 NW Newberry Road, Portland, OR 97231
286-6339 / (fax) 735-0337
(Term expires March 31, 1999)

Washington County, outside Metro boundary

Faun Hosey
13515 N.W. Jackson Quarry Rd., Hillsboro, OR 97124
(h) 647-3286 or (w) 649-4643 / (fax) 642-5536
(Term expired March 31, 1999)

Clark County, Washington

Julie Garver
1301 Officers Row, Vancouver, WA 98661
(w) (360) 693-3103 / (fax) (360) 693-3192
(Term expired March 31, 1999)

Metro Staff

Charles Ciecko, Director
Metro Regional Parks and Greenspaces
600 NE Grand Ave., Portland, Oregon 97232
797-1843 / (fax) 797-1849

Ron Klein
Metro Regional Parks and Greenspaces
600 NE Grand Ave., Portland, Oregon 97232
797-1774 / (fax) 797-1849

Liaison to Metro Council

Councilor Lisa Naito
600 N.E. Grand Ave., Portland, Oregon 97232
797-1552
"ex officio" appointed by the Metro Presiding Officer

**Citizen Applicants Received for the
Regional Parks and Greenspaces Advisory Committee**

Metro Council District #1

Robert Akers (incumbent)

Metro Council District #2 (position expires March 1998)

Hal Busch

Metro Council District #3

John Griffiths (incumbent)

Metro Council District #4

A. Jay Hamlin

Metro Council District #5

J. Michael Reid (incumbent)
Michael Wert

Metro Council District #7

Jim Battan (incumbent)

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 97-2537A, FOR THE PURPOSE OF CONFIRMING NOMINATIONS TO FILL VACANCIES ON THE REGIONAL PARKS AND GREENSPACES ADVISORY COMMITTEE.

Date: July 22, 1997

Presented by: Ron Klein

BACKGROUND AND ANALYSIS

On October 13, 1994 Metro Council adopted Resolution 94-2026A to establish the Regional Parks and Greenspaces Advisory Committee. The purpose of the committee is to review, comment, and make recommendations related to policies, plans, programs, user fee structure, annual budget plans and similar issues facing the Metro Regional Parks and Greenspaces department. The committee only serves an advisory role to Metro Council and Metro Regional Parks and Greenspaces.

The committee has 11 positions: one representative from each Metro Council district; one representative from Clackamas, Multnomah and Washington counties outside Metro boundaries; and one representative from Clark County. Attachment 1 lists current members serving on the Regional Parks and Greenspaces Advisory Committee. Committee positions subject to Metro Council confirmation include Metro Districts #1, #3, #4, #5 and #7. The vacancies are a result of term expiration and a member moving out of their district.

Citizen applications were solicited through announcements at public meetings, to the Metro Committee for Citizen Involvement and Metro Regional Parks and Greenspaces Advisory Committee, communications to the Metro Executive Office and Metro Councilors, and publication in the Metro GreenScene. Twenty four (24) committee member applications were sent to interested citizens. Seven citizens (Attachment 2) submitted applications including four from incumbent committee members seeking an additional term.

The appointments for confirmation are made by the Executive Officer for Metro Council consideration (Exhibit A).

STAFF RECOMMENDATION

Staff recommends consideration of Bob Akers (District #1), John Griffiths (District #3), A. Jay Hamlin (District #4), J. Michael Reid (District #5) and Jim Battan (District #7) for confirmation to five (5) positions on the Regional Parks and Greenspaces Advisory Committee as forwarded to the Metro Council by the Executive Officer.

EXECUTIVE OFFICER RECOMMENDATION

The Executive Officer recommends adoption of Resolution No. 97-2537A.

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 97-2537, FOR THE PURPOSE OF CONFIRMING NOMINATIONS TO FILL VACANCIES ON THE REGIONAL PARKS AND GREENSPACES ADVISORY COMMITTEE

Date: June 26, 1997

Presented by: Ron Klein

BACKGROUND AND ANALYSIS

On October 13, 1994 Metro Council adopted Resolution 94-2026A to establish the Regional Parks and Greenspaces Advisory Committee. The purpose of the committee is to review, comment, and make recommendations related to policies, plans, programs, user fee structure, annual budget plans and similar issues facing the Metro Regional Parks and Greenspaces department. The committee only serves an advisory role to Metro Council and Metro Regional Parks and Greenspaces.

The committee has 11 positions: one representative from each Metro Council district; one representative from Clackamas, Multnomah and Washington counties outside Metro boundaries; and one representative from Clark County. Attachment 1 lists current members serving on the Regional Parks and Greenspaces Advisory Committee. Committee positions subject to Metro Council confirmation include Metro Districts #1, #3, #4, #5 and #7. The vacancies are a result of term expiration and a member moving out of their district.

Citizen applications were solicited through announcements at public meetings, to the Metro Committee for Citizen Involvement and Metro Regional Parks and Greenspaces Advisory Committee, communications to the Metro Executive Office and Metro Councilors, and publication in the Metro GreenScene. Twenty two (22) committee member applications were sent to interested citizens. Six citizens (Attachment 2) submitted applications including four from incumbent committee members seeking an additional term. No applications were returned representing Metro Council District #4.

The appointments for confirmation are made by the Executive Officer for Metro Council consideration (Exhibit A).

STAFF RECOMMENDATION

Staff recommends consideration of Bob Akers (District #1), John Griffiths (District #3), J. Michael Reid (District #5) and Jim Battan (District #7) for confirmation to four (4) positions on the Regional Parks and Greenspaces Advisory Committee as forwarded to the Metro Council by the Executive Officer. The committee position representing Metro District #4 will remain vacant until a qualifying citizen applies to serve on the committee.

EXECUTIVE OFFICER RECOMMENDATION

The Executive Officer recommends adoption of Resolution No. 97-2537.

Metro Regional Parks and Greenspaces Advisory Committee Roster

District # 1

Robert Akers (Bob), Chairman
1038 S.E. 224th, Gresham, OR 97030
(h) 665-5519 or (w) 762-3206 / (fax) 762-3236
(Term expires March 31, 2000 pending Council approval)

District # 2

Ivy Frances,
1038 Bayberry Rd., Lake Oswego, OR 97034
(h) 635-6203 or (w) 823-5326 / (fax) 823-6995
(Term expires March 31, 1998)

District # 3

John Griffiths
10245 S.W. 153rd Ave., Beaverton, OR 97007
(h) 524-6170 or (w) 696-5253 / (fax) 696-5434
(Term expires March 31, 2000 pending Council approval)

District # 4

vacant
(Term expires March 31, 2000)

District # 5

J. Michael Reid, Vice Chairman
2920 N.E. 24th Avenue, Portland, OR 97212
281-4104
(Term expires March 31, 2000 pending Council approval)

District # 6

Brian Scott
1725 NE 61st Avenue, Portland, OR 97213
281-9710 or (w) 275-7462 / (fax) 275-7462
(Term expires March 31, 1998)

District # 7

Jim Battan
7710 S.W. 51st Place, Portland, OR 97219
768-9998
(Term expires March 31, 2000 pending Council approval)

Clackamas County, outside Metro boundary

Rick Charriere (committee alt rep on WRPAC)
19595 S. Fischers Mill Road, Oregon City 97045
631-8140 or (w) 655-9161 / (fax) 655-1726
(Term expires March 31, 1999)

Multnomah County, outside Metro boundary

Seth Tane (committee rep on WRPAC)
13700 NW Newberry Road, Portland, OR 97231
286-6339 / (fax) 735-0337
(Term expires March 31, 1999)

Washington County, outside Metro boundary

Faun Hosey
13515 N.W. Jackson Quarry Rd., Hillsboro, OR 97124
(h) 647-3286 or (w) 649-4643 / (fax) 642-5536
(Term expired March 31, 1999)

Clark County, Washington

Julie Garver
1301 Officers Row, Vancouver, WA 98661
(w) (360) 693-3103 / (fax) (360) 693-3192
(Term expired March 31, 1999)

Metro Staff

Charles Ciecko, Director
Metro Regional Parks and Greenspaces
600 NE Grand Ave., Portland, Oregon 97232
797-1843 / (fax) 797-1849

Ron Klein
Metro Regional Parks and Greenspaces
600 NE Grand Ave., Portland, Oregon 97232
797-1774 / (fax) 797-1849

Liaison to Metro Council

Councilor Patricia McCaig
600 N.E. Grand Ave., Portland, Oregon 97232
797-1889
"ex officio" appointed by the Metro Presiding Officer

**Citizen Applicants Received for the
Regional Parks and Greenspaces Advisory Committee**

Metro Council District #1

Robert Akers (incumbent)

Metro Council District #2 (position expires March 1998)

Hal Busch

Metro Council District #3

John Griffiths (incumbent)

Metro Council District #4

Vacant (no citizens applied)

Metro Council District #5

J. Michael Reid (incumbent)
Michael Wert

Metro Council District #7

Jim Battan (incumbent)

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF CONFIRMING)	RESOLUTION NO. 97-2537
NOMINATIONS TO FILL VACANCIES)	
ON THE REGIONAL PARKS AND GREENSPACES)	Introduced by
ADVISORY COMMITTEE)	Mike Burton, Executive Officer

WHEREAS, The Metro Council approved Resolution 94-2026A to establish the Regional Parks and Greenspaces Advisory Committee; and

WHEREAS, The Regional Parks and Greenspaces Advisory Committee meets monthly to review and advise on the policies, plans and programs of the Metro Regional Parks and Greenspaces Department; and

WHEREAS, Five (5) vacancies exist on the Regional Parks and Greenspaces Advisory Committee; and

WHEREAS, Resolution 94-2026A requires Council confirmation of nominees to the committee; now, therefore,

BE IT RESOLVED

1.) That the Metro Council hereby confirms four (4) nominees listed in Exhibit A to fill vacancies on the Regional Parks and Greenspaces Advisory Committee.

2.) That the committee position representing Metro District #4 will remain vacant until a candidate is placed into nomination for Metro Council consideration.

ADOPTED by the Metro Council on this ____ day of _____, 1997.

Jon Kvistad, Presiding Officer

REGIONAL PARKS AND GREENSPACES ADVISORY COMMITTEE

Nominations Forwarded by the Executive Officer to the Council for Conformation

Metro Council District #1

Robert Akers - Retired teacher; Metro Regional Parks and Greenspaces Advisory Committee (Chairman); 40-mile Loop Land Trust (President); served on Gresham Parks Advisory Board and Metro Regional Trails and Greenways working group

Metro Council District #3

John Griffiths - Manager at Intel Corporation; Metro Regional Parks and Greenspaces Advisory Committee; City of Beaverton Budget Committee; served on Tualatin Hills Park and Recreation Land Acquisition Committee; member of Nature Conservancy, National Parks and Conservation Association

Metro Council District #4

Vacant (no citizens applied)

Metro Council District #5

J. Michael Reid - Self-employed; Metro Regional Parks and Greenspaces Advisory Committee; Board of Directors of Friends of Trees; Portland Transportation System Plan Citizen Advisory Committee; Alameda Community Association; Portland Public Schools Budget Committee

Metro Council District #7

Jim Battan - Manager at Infomix Software, Inc.; Metro Regional Parks and Greenspaces Advisory Committee; member of Dragons Breath International (dragon boat team racing), Nature Conservancy, Audubon Society, Oregon Natural Resources Council