

United States  
Department of  
Agriculture

Forest Service

Pacific Northwest  
Region

2003



# Draft Environmental Assessment

## Mt. Hood Kiwanis Camp Master Plan

### Mt. Hood National Forest Zig Zag Ranger District



# Table of Contents

<b>Chapter I. Purpose and Need .....</b>	<b>1</b>
A. Introduction .....	1
B. Purpose and Need .....	2
C. Management Objectives .....	4
D. Scoping .....	5
1. Process .....	5
2. Results and Issues .....	5
<b>Chapter II. Alternatives Including the Proposed Action .....</b>	<b>8</b>
A. Development of Alternatives .....	8
B. Alternatives Considered But Eliminated .....	9
C. Alternatives Analyzed in Detail .....	9
1. Alternative: No Action .....	9
2. Alternative: Proposed Action .....	12
3. Alternative 3 .....	17
4. Cumulative Actions .....	19
5. Comparison of Alternatives .....	19
<b>Chapter III. Description of the affected environment/ environmental consequences .....</b>	<b>24</b>
A. Watershed Values .....	24
1. Affected Environment .....	24
2. Management Direction .....	27
3. Environmental Consequences .....	28
4. Conformance to Management Direction .....	34
B. Botany .....	40
1. Affected Environment .....	40
2. Management Direction .....	41
3. Environmental Consequences .....	42
4. Conformance to Management Direction .....	46
C. Wildlife .....	47
1. Affected Environment .....	47
2. Management Direction .....	50
3. Environmental Consequences .....	51
4. Conformance to Management Direction .....	55
D. Heritage Resources .....	55
1. Affected Environment .....	55
2. Management Direction .....	62
3. Environmental Consequences .....	62
4. Conformance to Management Direction .....	63
E. Traffic Circulation and Parking .....	63
1. Affected Environment .....	63

2. Management Direction .....	64
3. Environmental Consequences .....	64
4. Conformance to Management Direction.....	65
F. Recreation.....	66
1. Affected Environment .....	66
2. Management Direction .....	67
3. Environmental Consequences .....	67
4. Conformance to Management Direction.....	68
G. Scenic Resources .....	69
1. Affected Environment .....	69
2. Management Direction .....	70
3. Environmental Consequences .....	70
4. Conformance to Management Direction.....	72
H. Air Quality.....	72
1. Affected Environment .....	72
2. Management Direction .....	72
3. Environmental Consequences .....	72
4. Conformance to Management Direction.....	73
I. Noise .....	73
1. Affected Environment .....	73
2. Management Direction .....	73
3. Environmental Consequences .....	73
4. Conformance to Management Direction.....	74
J. ADDITIONAL REQUIRED DISCLOSURES.....	74
1. EFFECTS OF ALTERNATIVES ON PRIME FARM LAND, RANGELAND AND FOREST LAND .....	74
2. ENERGY REQUIREMENTS OF ALTERNATIVES .....	74
3. EFFECTS ON ENVIRONMENTAL JUSTICE.....	74
4. EFFECTS ON WETLANDS AND FLOODPLAINS.....	75
5. COMPLIANCE WITH SECTION 504 OF THE VOCATION REHABILITATION ACT AND THE AMERICANS WITH DISABILITIES ACT (ADA) .....	75
K. Summary of Adverse Impacts Which Cannot be Avoided.....	75
L. Irreversible and Irretrievable Commitments of Resources .....	76
<b>Chapter IV. listing of agencies and persons consulted.....</b>	<b>77</b>
<b>Chapter V. List of Preparers.....</b>	<b>78</b>
<b>Chapter VI. References .....</b>	<b>79</b>
<b>Appendix A. Management of Competing and Unwanted Vegetation</b>	
<b>Appendix B. Kiwanis Camp Improvements Final Biological Assessment (of Aquatic Resources)</b>	
<b>Appendix C. Draft Biological Evaluation of Threatened, Endangered, Proposed, Sensitive and Survey and Manage Wildlife and Botanical Species</b>	

**Appendix D. Results of Archeological and Historical Architectural Survey of the Mt. Hood  
Kiwanis Camp**

**Appendix E. Scoping Comments and Letters**

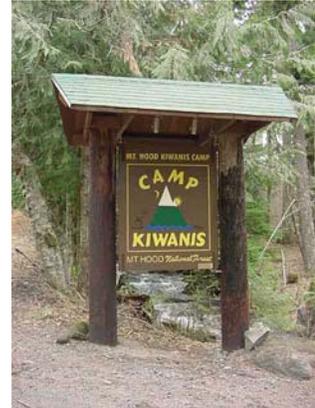
*(Appendices are not included in this document, but can be provided upon request.)*

Figure 1: Site Plan, Alternative 1 – No Action.....	11
Figure 2: Site Plan, Alternative 2 – Proposed Action .....	16
Figure 3: Site Plan, Alternative 3 .....	18
Table 1: Master Plan Elements by Alternative .....	20
Table 2: Comparison of Impacts by Alternative .....	22
Table 3: Federally Listed Fish Species in Upper Sandy River Watershed.....	27
Table 4: Impact of Proposed Kiwanis Camp Improvements .....	30
Table 5: Threatened, Endangered, Proposed, Sensitive, and Survey and Manage Botanical Species with Potential to Occur Within Project Area .....	40
Table 6: Threatened, Endangered, Proposed, Sensitive, and Survey and Manage Species with Potential to Occur Within Project Area .....	47
Table 7: Historic-Period, Associated, and Non-Historic-Period Resources at the Mt. Hood Kiwanis Camp.....	60

# CHAPTER I. PURPOSE AND NEED

## A. INTRODUCTION

Mt. Hood Kiwanis Camp (Camp) is located on the southwest flank of Mt. Hood between Rhododendron and Government Camp at approximately 3,000 feet in elevation. It is located adjacent to the Mt. Hood Loop Highway (USFS Road 2639), approximately three miles east of its intersection with US 26. It is near the center of the Zigzag Ranger District. The Camp has been in operation since 1935 and currently serves adults and children with disabilities. It operates on 20.3 acres on the Mt. Hood National Forest (Forest) pursuant to a 1979 Master Plan and 30-year Special Use Permit. The Camp provides its clients with the opportunity to rest, relax, experience nature, and recreate in a supportive, safe setting in a natural environment on the slopes of Mt. Hood.



The camp currently includes 12 buildings, an in-ground swimming pool, several gravel parking areas, internal roads, and large open spaces, including an open grassy area and associated amphitheater, approximately in the middle of the camp. Other features include a ropes challenge course, small fish pond and four bridges over the Little Zigzag River – two auto bridges and two foot bridges. The camp operates primarily in the summer months (June – September). It occasionally rents Laurel Lodge to private groups during the winter months.

Currently, the Camp is limited in its ability to provide services to its clients due to the lack of accessible facilities and the poor condition of some existing structures. Improvements are needed to address the needs of the special populations the Camp serves and the requirements of the Americans with Disabilities Act. Improvements to the Camp are proposed by Mt. Hood Kiwanis Camp, Inc. to enhance camper safety and housing; improve accessibility for the majority of campers who have disabilities; provide expanded on-site experiences for visitors; improve camp infrastructure; improve vehicular access and sense of arrival; and provide year-round swimming opportunities. Specific improvements would include:

- Construction of seven new camper cabins and a director's cabin
- Construction of a health care center/office building
- Construction of an open air covered shelter in the Camp's ropes course area
- Creation of a campfire assembly area/amphitheater
- Relocation and improvement of the Camp's swimming pool
- Construction of a new maintenance building
- Replacement of two culverts to allow fish passage
- Rehabilitation of stream banks and other disturbed areas with native vegetation
- Construction of a new sewage treatment facility with a sand filter and drainfield
- Construction of an outdoor interpretive area
- Construction of a covered bridge entry and new parking area in the old Barlow campground

No expansion of the permit boundary or change in the authorized uses or operating season are proposed.

## **B. PURPOSE AND NEED**

The purpose of this project is to authorize a new long-term (10 – 15 years) Master Plan for the Mt. Hood Kiwanis Camp. The new Master Plan would replace the current master plan authorized by the Mt. Hood National Forest in 1979. While the new Master Plan would be essentially consistent with the Camp's existing plan in terms of capacity and allowable facilities and activities, it would differ in the configuration and location of several specific facilities. Implementation of the Master Plan would require construction and other activities, with resulting environmental and other impacts. One of the specific objectives of this project is to improve the environmental quality of the site, and many of the impacts would be beneficial to the natural environment in comparison to the current Master Plan.

In conjunction with a new Master Plan, a new 30-year Special Use Permit (SUP) would be issued to Mt. Hood Kiwanis Camp, Inc. for non-exclusive use and occupancy of the project area. The Camp's special use permit is nearing its expiration date. Renewing this permit would allow the Camp to continue to fulfill the needs of its unique populations and help meet US Forest Service goals to enhance access to recreation and natural experiences for a broad range of people. It also will help the Camp to maintain partnerships with Portland State University and other organizations.

Specific needs addressed by the new Master Plan include:

- *Improve housing for campers to meet the special needs of people with disabilities.*

Current housing does not meet the needs of people with severe disabilities. In some cases, cabins do not meet requirements of the Americans with Disabilities Act (ADA). In other cases, housing does not provide adequate personal/individual space for campers with disabilities that require it. Improved housing is essential for the camp to continue to serve this primary population.

Proposed new facilities would provide appropriate accommodations for all people who participate in camp programs. The new cabins would provide campers a safe and accessible place to stay while at camp. Six new cabins would be constructed to replace the existing campers cabins at the camp.

- *Provide adequate health care facilities for campers.*

The current Health Care Center is not easily found and accessed by campers as it is in the basement of the dining hall. To better address camper health care needs, the Center should be centrally placed. In addition, current office space is not adequate for year-round programming and staff needs, and the space is needed for dining hall tables, chairs and equipment storage.

The proposed Master Plan includes construction of a New Health Care Center/Office Building. The new facility would provide a centrally located structure to serve the health care needs of all persons on site and an easily identifiable central camp office.

- *Improve recreational facilities for campers.*

Currently, campers participating in challenge course activities have no place to wait their turn and must wait in makeshift shelters or remain out in adverse weather conditions. A proposed new play area would provide a place out of the weather that would serve as a shelter or instructional facility.

The camp also lacks adequate outdoor facilities for staff and counselor training, campers' show stage and awards facility and other small group activities. A new amphitheater/campfire assembly area would replace the existing amphitheater presently on the new cabin sites. Group activities would take place in a reoriented amphitheater in the central, open lawn area as well as the existing gathering area in front of Laurel Lodge.

The existing swimming pool is outdoors. It can be used for only a limited portion of the year and is in need of repair and rehabilitation given its age. A proposed new pool would be covered and built to current environmental standards.

- *Enhance the natural environment at the Camp by improving fish and wildlife habitat.*

Areas within the camp and along the stream have been denuded of vegetation, with soils compacted and eroded into the stream as a result of a long history of use as a Forest Service campground and currently as an organization camp under special use permit. These areas would be restored using native species of vegetation. Restoration and planting of native vegetation would rehabilitate the banks of the Little Zigzag River within the permit area, improving wildlife habitat and plant values.

The Camp's existing septic system and drainfield require improvement as the current system is expected to begin to reach the end of its useful life within three to five years, presenting potential health hazards to campers and negative impacts on the natural environment. Improvements would decrease proximity of the drainfield to Little Zigzag River. They also would improve environmental quality by providing additional sewage treatment for campers. Improvements call for using a sand filter for additional treatment, and relocating the existing drainfield (and sand filter) up to the existing horse pasture area. Backup drainage fields would be located below (north of) the horse corral and in the existing amphitheater area.

- *Increase awareness of environmental values, while reducing impacts on the environment.*

Campers currently engage in environmental education programs and activities that historically have impacted the Little Zigzag River. A new facility would give campers an opportunity to get close to and experience the river with a minimal impact to the overall riparian community. It also would enhance the educational possibilities for campers. The updated Master Plan includes an outdoor interpretive area adjacent to the Little Zigzag River between Fanning Hall and Cy Lodge.

- *Improve traffic circulation, safety and convenience at the Camp, while reducing off-site transportation impacts.*

The current camp roadway takes vehicles through the maintenance area and the dining hall loading dock, creating safety and operational issues and conflicts. Adequate and safe parking is lacking for campers and counselors. In addition, the current parking and circulation scheme does not provide campers and visitors with a clear sense of arrival at the camp.

The proposed Master Plan would improve safety for campers by separating them from the camp's maintenance and operations activities. Improvements would allow for a sheltered environment for people to meet or wait as they enter or depart the campsite and provide an enhanced sense of arrival for visitors utilizing an existing roadway. Improvements also would reduce the need for people to park on the road adjacent to the Camp, reducing congestion and improving safety there.

Proposed improvements include creating a wider entrance to a new parking area located in the Old Barlow Campground; constructing a pedestrian covered bridge entry leading to the central camp area; and using eco-paving in parking areas to decrease environmental impacts and improve drainage.

## **C. MANAGEMENT OBJECTIVES**

Management direction for the project area is prescribed by the 1990 Mt. Hood National Forest Land and Resource Management Plan (MHNH Forest Plan), as amended by the 1994 Record of Decision (ROD) for the Final Supplemental EIS on Management of Habitat for Late Successional and Old Growth Related Species within the Range of the Northern Spotted Owl (Northwest Forest Plan). The project area is designated by the Northwest Forest Plan as Administratively Withdrawn and by the MHNH Forest Plan as Developed Recreation Site (A10). Administratively Withdrawn areas are managed pursuant to local Forest Plan direction. Developed Recreation Sites are managed to "provide a range of high quality outdoor recreation opportunities for concentrated recreational use at readily accessible, appropriately designed developed sites." The camp also is within the Barlow Road Historic District which is a Special Interest Area (A4).

Nearly all of the project area is within a Riparian Reserve which is defined by a buffer area from the Little Zigzag River corresponding to tree height (two tree heights). Within Riparian Reserves, management direction is provided by the Aquatic Conservation Strategies of the Northwest Forest Plan.

In addition to these designations, the Northwest Forest Plan includes specific standards and guidelines for Spotted Owl habitat and Key Watersheds. The project area also is within a Critical Owl Habitat Unit as designated by the US Fish and Wildlife Service, though the area does not include any known nesting or breeding sites and is more than two miles from such sites. The project area is not within a Key Watershed.

Resource-specific management direction is addressed by topic area in Chapter III.

## D. SCOPING

### 1. Process

The scoping process was used to determine the scope of issues to be evaluated as part of this environmental assessment. These issues also were used to define the alternatives considered in the EA. The formal scoping process began with an announcement and description of the project in the October 2002 issue of *Sprouts*, the Forest's quarterly newsletter. The process also included the following activities:

- **Mailing to interested parties**, October, 2002. Information included a description of the proposed action, purpose and need for the project and a map illustrating improvements proposed as part of the Master Plan update.
- **Media release** distributed to the Oregonian, as well as local newspapers and radio stations in Gresham and Sandy, and the Oregon Public Broadcasting radio network. The release described the proposed action and publicized a public meeting conducted for the project (see below).
- **Public meeting** conducted on December 5, 2002. Approximately 40 people attended this meeting which was conducted to provide information about this project and another effort (proposed improvements to the Timberline Ski Area). Many of the people who attended the meeting were primarily interested in the Timberline project.
- **Telephone contacts** with individuals and groups who had expressed an interest in the project.
- **Briefings** to US Senators Ron Wyden and Gordon Smith.

### 2. Results and Issues

Five individuals or organizations submitted written letters of comment about the project. In addition, two individuals completed comment sheets at the December 5 public open house. Four of the letters submitted were letters of the support from the following (see Appendix E):

- North Clackamas Chamber of Commerce
- Oregon State Representative Patti Smith
- Mazamas
- Oregon Governor John Kitzhaber

These letters expressed support for the mission of the camp to provide services to people with disabilities, proposed positive effects on the natural environment at the camp and a continued partnership between the Mt. Hood Kiwanis Camp and the US Forest Service. One of the written comments submitted at the public meeting also expressed general support for the project. One letter and a written comment form identified several specific issues associated with the proposed improvements at the camp, including the following:

- Proximity of the maintenance yard and new maintenance building to the Little Zigzag River.
- Location of the septic system and potential impacts on water quality, including impacts on waste from horses and other domestic animals.
- Early implementation of streambank restoration efforts

- Control of surface water runoff and sediment migration from buildings and roads.
- Control, removal and prevention of noxious weeds and other non-native vegetation.
- Proximity of parking and drop-off areas to the Little Zigzag River (larger setbacks proposed).
- Potential parking conflicts with winter sno-park areas.
- Potential impacts of night lighting.
- Provision of fire hydrants and sprinklers.
- Storage of woody debris from construction clearing for future in-stream projects in the Sandy River Basin.

In addition, during pre-scoping meetings with Mt. Hood National Forest staff, the following additional potential impacts and issues were identified:

- Threatened, endangered and sensitive plant and animal species.
- Watershed values, including hydrological effects, riparian habitat, aquatic and riparian species and water quality.
- Heritage resources, including potential effects on American Indian archeological resources, structures potentially eligible for the listing on the National Historic Register, and the Barlow Road Historic District.
- Visual resources.
- Transportation, parking and circulation.

A more detailed discussion of these issues follows.

### **Heritage Resources**

The National Environmental Policy Act (NEPA) and the Historic Preservation Act require that this Environmental Assessment evaluate and address the impacts of the proposed Camp improvements on historic and cultural resources in the area, including resources that are considered to be of historic or cultural value to American Indian tribes. Although recent archeological surveys do not indicate prior American Indian use of the Kiwanis Camp area, it is within several miles of areas previously used by American Indians. The Camp also includes a number of historic resources, several of which may be eligible for listing in the National Register of Historic Places (NRHP). The relevant historic and cultural resources that have been evaluated for this project include:

- *Barlow Road.* The Camp is within the Barlow Road Historic District, listed on the National Register of Historic Places. An identified trace of the Barlow Road runs through a portion of the Camp.
- *Mt. Hood Loop Highway.* This highway is adjacent and provides access to the Camp. The Oregon Department of Transportation (ODOT) is studying the eligibility of the Loop Highway for listing on the National Register. ODOT is currently conducting inventories of selected sections of the highway and ultimately will identify and recommend protection objectives.
- *Laurel Lodge and Other Structures Possibly Eligible for the National Historic Register.* According to USFS personnel, Laurel Lodge is eligible for the Historic Register but not yet listed. No direct improvements to the building are proposed as part of the Master Plan.

These modifications would improve the historic, architectural character of the building and setting.

- *Barlow Campground.* The old Barlow Campground is located at the northeast corner of the Camp, in the location of a proposed new parking area.
- *Tribal Use and Resources.* As noted above, the Camp is not identified as within a “traditional tribal use area” though such areas have been identified south and north of the Camp. The Camp is considered to be in a high probability area for discovery of cultural and historic resources, given the presence and/or proximity of the resources described above.

Issues related to these resources include:

- Recommendation of specific structures or other resources for eligibility on the National Historic Register.
- Effects of the proposed Master Plan on these resources.
- Opportunities to avoid or mitigate impacts.

### **Visual Resources**

The Kiwanis Camp is adjacent to the Mt. Hood Loop Highway and small portions of the camp are visible from portions of US Highway 26 and nearby hiking trails. New buildings proposed as part of the Master Plan may be visible from these roads or trails. Issues include:

- Possible effects of new buildings at the camp on the appearance of the camp, including its historic character.
- Impacts of proposed improvements on adjacent or surrounding viewsheds, viewpoints and visual quality objectives.
- Visual impacts on the Barlow Road Historic District.

### **Watershed Values, Fish and Riparian Resources**

The Little Zigzag River runs through the northern portion of the Kiwanis Camp and is subject to Northwest Forest Plan Aquatic Conservation Strategies. Vegetation along the banks of the River and in adjacent riparian areas has been adversely impacted by human activity including historic use of the adjacent Barlow Campground and the Kiwanis Camp. The Little Zigzag River meets minimum habitat requirements for trout species such as steelhead or cutthroat. Until recently, barriers to migration downstream of the Kiwanis Camp did not allow migration of fish to the stream reaches within the camp. However, recent downstream culvert reconstruction and removal projects have eliminated those barriers. Existing culverts at the Kiwanis Camp currently act as barriers to further upstream passage and are proposed to be replaced as part of a separate Forest-wide effort. The impacts would be evaluated as part of a separate programmatic EA. The existing septic system at the camp is reaching the end of its useful life.

Several activities proposed as part of the Master Plan may affect aquatic resources associated with the Little Zigzag. Issues include:

- Opportunities to revegetate areas along the banks of the stream and improve water quality.
- Possible opportunities to eliminate barriers to fish passage.
- Effects of the location of a new septic system.

- How runoff from proposed construction activities and the location of new facilities in the vicinity of riparian or other habitat areas will impact water quality.
- Possible effects on the habitat of sensitive, threatened, endangered or survey & manage species, including amphibians, mollusks, fish and plants.
- Possible effects on vegetation at the site, including management of noxious plants.

### **Threatened and Endangered Plant and Animal Species**

Several sensitive, threatened or endangered (T&E) species of non-aquatic wildlife may be present at or in the vicinity of the Camp, including red tree voles, spotted owls and bats. Issues include possible effects of activities proposed in the Master Plan on T&E and sensitive species and their habitats and potential measures to avoid mitigate impacts.

### **Transportation and Circulation System**

Currently, most visitors enter the camp at its main entrance to drop off campers, make deliveries and park temporarily at the Camp. For some events and while campers are dropped off, overflow parking can occur along the Mt. Hood Highway. Issues include:

- Effects of camp improvements, possible shared use of parking facilities, and other transportation issues on the camp and adjacent transportation facilities.
- Potential environmental impacts of new roads or parking areas, including the Mt. Hood Loop Highway.

## **CHAPTER II. ALTERNATIVES INCLUDING THE PROPOSED ACTION**

### **A. DEVELOPMENT OF ALTERNATIVES**

Alternatives for the Master Plan were developed through an iterative, collaborative process among representatives of the Camp, consulting team, and Forest Service. A preliminary draft proposed action was developed to meet the following objectives:

- Provide adequate overnight housing facilities to meet the special needs of campers.
- Upgrade additional facilities at the camp to enhance the recreational experience of campers.
- Avoid environmental impacts and enhance environmental quality by focusing improvements in already disturbed areas and restoring vegetation, particularly in riparian and wildlife habitat areas.
- Improve traffic circulation within the camp and reduce impacts on the adjacent Mt. Hood Loop Highway.
- Design improvements to be consistent with the character of historic structures at the camp.

The proposed action (Alternative 2) was developed based upon an evaluation of existing vegetation, disturbed areas, environmentally sensitive areas, camper and staff needs, architectural design considerations and USFS policies. The preliminary plan was refined based

on comments from Camp and Forest personnel. Refinements primarily included relocation of proposed buildings improvements. A second action alternative (Alternative 3) was developed to address issues raised during scoping related to transportation and circulation, wastewater treatment, and the location of buildings relative to the Little Zigzag River.

## **B. ALTERNATIVES CONSIDERED BUT ELIMINATED**

The following alternatives were considered but eliminated from detailed study:

- **Minor variations to the proposed action.** A range of different configurations of the proposed uses were explored during development of the alternatives proposed for study. Each of these options assumed the same program of activities, capacity and general set of uses and facilities. These alternatives differed slightly from Alternatives 2 and 3 in terms of location and arrangement of specific buildings and other facilities. Effects would not be expected to vary.
- **Changes in permit boundary and authorized uses.** These types of changes were considered but eliminated as Mt. Hood Kiwanis Camp, Inc. does not desire or propose to alter the overall size, or type of services and programs provided at the camp.
- **Implementation of the 1979 Master Plan.** The Camp's 1979 Master Plan authorized significant improvements at the Camp, including a new lodge, three new parking areas, new pool and bath house (larger than in the proposed action), classroom buildings, play pavilions, and approximately 13 new camper or guest cabins (see Figure 1). These improvements would result in a capacity of approximately 200 people. As noted above and in the following sections, the primary intent of the camp is to improve the quality of its facilities and services with a limited increase in capacity. The 1979 Master Plan proposed facilities and services that would not meet the current or future objectives for the camp.
- **No increase in capacity.** The proposed action includes a limited increase in the existing capacity of facilities at the Camp (approximately 10%). An alternative with no increase in capacity was eliminated from detailed analysis because it would not provide the Camp with a level of flexibility over the next 30 years to continue to accommodate the campers it serves (people with disabilities) as those populations grow. Also, the authorized 1979 Master Plan provides for a significant increase in capacity.

## **C. ALTERNATIVES ANALYZED IN DETAIL**

### **1. Alternative: No Action**

As required by NEPA, a No Action alternative is included as a benchmark against which the action alternatives can be compared. This alternative assumes no expansion of or significant improvements to current facilities at the Camp. Under the No Action alternative, the Camp would continue to operate in its current facilities and within the special use permit area (20.3 acres). The existing SUP would expire in 2009.

The 1979 Master Plan authorized a variety of facilities that have not been developed. These facilities would require additional site-specific NEPA analysis and are not included in the No Action alternative. These include: a new lodge, three new parking areas, new pool and bath

house (larger than in proposed action), classroom buildings, play pavilions, and approximately 13 new camper or guest cabins (see Figure 1). A significant expansion of the existing permit boundary also was authorized as part of the 1979 master plan.

Figure 1: Site Plan, Alternative 1 – No Action



**Mt. Hood Kiwanis Camp  
ALTERNATIVE 1  
NO ACTION**

January 2003



## 2. Alternative: Proposed Action

The proposed action would replace the current Master Plan authorized by the Forest in 1979 with a new Master Plan. A new 30-year SUP would be issued to the Mt. Hood Kiwanis Camp, Inc. for non-exclusive use and occupancy of the project area. This alternative includes a variety of improvements proposed to improve facilities and services for campers, including actions to comply with Americans with Disabilities Act and other special requirements; enhance the natural environment; improve transportation circulation and access; provide additional recreational activities; and maintain the historic character of the Kiwanis Camp. This would include construction of new facilities, modification of existing facilities, and retention of other existing facilities and uses as described below (see Figure 2). Improvements would be completed within 5 to 10 years of approval of the new Master Plan. First priority would be construction of new camper cabins. Replacement of the camp's septic system also would be a high priority. Construction would be expected to begin within two years of approval of the Master Plan and renewal of the SUP. A design review process for specific improvements would be conducted with USFS personnel, including cultural resource specialists, prior to construction.

### a. Uses and Capacity

No expansion of the special use permit area or authorized year-round recreation uses would occur. A modest increase in capacity from 126 to 140 people is proposed. This would be significantly lower than the stated capacity (200) of the authorized 1979 Master Plan. No amendment to the Mt. Hood National Forest Plan management direction, land allocations, or standards and guidelines are proposed.

### b. New Facilities

The following new facilities and improvements to the existing Camp are proposed:

- **Seven new camper cabins and a director's cabin.** These cabins would replace all existing camper housing. Cabins would be between approximately 1,300 and 1,450 square feet in size. They would meet ADA accessibility requirements and space and other needs of special needs populations at the camp. Five of the new cabins would be two stories in height and would be slightly larger than the other two. Two cabins would be sited in the location of the existing Hemlock dorm, which would be demolished. The remaining cabins would be located along the southeastern edge of the camp. Architectural design would be consistent with the character of historic structures at the Camp. A new director's cabin would replace the existing "front" and "back" cabins which currently are dilapidated and do not meet the space or other needs of the camp. It would be similar in size and architectural design to the new camper cabins. The total new built area of the cabins would be approximately 8,450 square feet. This does not include the two cabins which would replace the Hemlock Dorm with an equivalent amount of square footage. In addition, three unpaved common areas, totaling approximately 1,000 square feet would be created. Native vegetation would be removed from this area as part of the construction. Native vegetation consists of relatively small (second-growth) trees and shrubs such as rhododendron, salal and other species common to this area. Table 2 summarizes the approximate number and size of trees to be removed in concert with construction of these and other improvements.
- **Health care center/office building.** This building would be approximately 1,450 square feet in size and would include the camp office and a nurses station for campers and staff. It

would be located just east of the existing pond and south of Fanning Hall. The exterior would be similar in design and appearance to the new camper cabins.

- **Covered shelter in the camp's ropes course area.** This relatively small, open-air structure would be located at the east end of the ropes course and would be approximately 300 - 500 square feet in size. It would protect campers from adverse weather conditions during use of the ropes course area. It also would localize impacts in a concentrated area further from the Little Zigzag River.
- **Campfire assembly area/amphitheater.** This would be located in the open space between the cluster of buildings formed by Laurel Lodge, the proposed new pool building, new camper cabins and new staff housing. The entrance to the new pool building would be used as a stage and focal point for activities here.
- **Improvement of the Camp's swimming pool.** A new enclosed and sealed pool building would replace the existing outdoor pool in a similar location, north of Laurel Lodge. It would contain a swimming pool and restroom facilities and could be used year-round. It would be approximately 6,400 square feet in size, including an outdoor, covered porch/stage. The pool would be drained as infrequently as possible to minimize effects of doing so. Prior to draining, the chlorine in the water would be neutralized. The pool would be drained to areas south of Laurel Lodge or, if necessary and required by the camp's special use permit, to the Camp's wastewater treatment system.
- **New maintenance building.** A new maintenance building would be constructed and located approximately 60 feet south of the Little Zigzag River, near the existing maintenance yard. The maintenance building would be used primarily to store equipment and supplies. No major maintenance of motor vehicles, i.e., replacing or repairing engine or other vehicle parts, would occur in or adjacent to this building. It would be approximately 2,400 square feet in size. The vegetative buffer between the building and Little Zigzag River would be expanded and enhanced for a distance of approximately 100 feet along the stream, increasing in width from approximately 20 – 30 feet to 50 - 60 feet. This building would be sited to minimize tree and other vegetation removal.
- **New sewage treatment facility.** The existing septic drainfield for the camp would be reconstructed; contaminated materials from the existing system would be disposed of at an approved landfill. New drainfields would be constructed in the upper equestrian center and on a bench about 30 feet from the equestrian area (reserve drainfield). Currently, only a small number of horses are kept in the equestrian area and only during the summer months. This also would require construction of a lift station to the north of the existing maintenance building. The existing amphitheater area would serve as a second reserve drainfield but would not be expected to be used within the life of the SUP. The new septic system would treat wastewater to state and county standards and keep fecal contaminants from entering Zigzag Creek.
- **Barlow Road interpretive kiosk.** An interpretive sign or kiosk would be located at the base of the existing trace of the Barlow Road to provide information about the historic use and development of the road.
- **New parking area in the old Barlow campground.** Parking in this area would replace parking areas for staff and visitors adjacent to Laurel Lodge and reduce the need for overflow parking on the Mt. Hood Loop Highway. Access from this area would be provided by a covered foot bridge just east of Cy Lodge (distinct from the covered bridge at the main entrance). This parking area would serve as the main drop-off, pickup and meeting area for campers and other visitors during the summer. Approximately 35 parking spaces would be provided. "Eco-paving" surfaces would be utilized to reduce compaction and runoff impacts.

Eco-paving refers to the use of paving stones with holes or spaces between or within them to allow percolation of runoff through the ground, reducing runoff and sediment impacts on nearby waterways. They typically placed over a crushed rock base, similar to construction practices for other roads and parking areas. In addition, bio-swales and other water detention and filtering methods would be constructed along the edge of the parking area closest to the Little Zigzag River to further reduce the impacts of runoff and sediment transport.

### c. Existing Facilities Modified

The following modifications to existing facilities at the Camp are proposed:

- **Conversion of existing maintenance building to staff housing and lounge.** The existing building would be renovated and reconfigured to provide space for staff to sleep and congregate. The building would accommodate approximately 15 to 20 staff and/or counselors overnight.
- **Outdoor interpretive area.** An outdoor educational area would be provided near the Little Zigzag River. Features would include benches, accessible riverbank, erosion protection, and riparian revegetation. The new interpretive area would replace/decommission the existing interpretive trail which meanders along the southern fringe of the river at varying distances up to 20' from the bank, consolidating access to the riparian area in a smaller area to reduce watershed impacts. The current trail runs from the western bridge access to the east bridge adjacent to the rope course. No educational or other activities currently occur or would occur in the future inside the stream.
- **Reconstructed bridge entry.** The existing bridge at the camp's main entry would be replaced in concert with removal of the existing culvert at the main entrance to the camp as part of a separate Forest Service watershed restoration project. In-stream work and related impacts would be evaluated in a separate EA conducted by the USFS for the culvert replacement. The reconstructed bridge at this location would enhance the entrance experience of campers, create a platform from which to view the river, and provide safe pedestrian access for campers at this location.
- **Fish pond.** The pond would be increased in size by about 75 %, with a small pedestrian bridge added near its east end. Reconstruction efforts would retain existing measures to prevent fish from traveling between the pond and the Little Zigzag River. A fish barrier grate and screening would continue to be located at the outflow. Currently, water enters the fish pond from the Little Zigzag River and drains back to the river through an underground pipe. The constant flow of water through the pond would reduce opportunities for contamination and resulting disease.
- **Maintenance yard.** This area would be reduced in size somewhat to allow for location of the new maintenance building adjacent to the yard. Areas on the edge of the existing yard would be revegetated with native plant species to improve the quality of potential plant and animal habitat areas near the Little Zigzag River.
- **Covered foot bridge.** The existing pedestrian bridge between the Old Barlow campground (proposed future parking area) and the main portion of the camp (between Cy Lodge and Fanning Hall) would be modified to include a covered structure. No in-stream work or tree removal is proposed as part of this improvement. Materials would be cedar or other materials not treated with chemicals that would minimize environmental impacts.

#### **d. Existing Facilities Retained**

The following facilities at the Camp would be retained in their existing condition and in their current uses:

- **Cy Lodge.** This building would continue to be used for housing for campers and staff, with an associated small lounge area. Some campers currently housed in this building will be housing in other cabins.
- **Fanning Hall.** This building would continue to function as the Camp's main dining hall and kitchen. It also would be used for large group meetings and include lower-level housing. The existing nurses quarters would be moved to the new health care office.
- **Existing Amphitheater Area.** The open meadow between Fanning Hall and the proposed new camper cabins would continue to be used as a gathering place for large outdoor events. It includes a small stage at its west end (see Figure 2).
- **Laurel Lodge.** In the summer, this building would continue to be used for arts and crafts and other activities, with the second level also used for staff meetings. In other seasons, the building would continue to be rented to other (non-Kiwanis) groups.
- **Ropes/Challenge Course.** The ropes course, which includes a climbing wall, would continue to be located at the east end of the Camp, on the north side of the Little Zigzag River.
- **Caretaker's Residence.** This facility would continue to be located just south of the main entrance to the Camp.

#### **e. Other Actions**

- **Rehabilitation of stream banks and other disturbed areas with native vegetation.** Streambanks within the Camp would be replanted with native vegetation. Approximately 1,000 linear feet would be replanted, with a varying buffer distance of 10 - 30 feet, as conditions allow, totaling about 20,000 square feet of riparian areas. About 50,000 square feet of other existing disturbed areas also would be restored/replanted. These restoration efforts would be coordinated with Forest-wide efforts being undertaken by the Forest.

Figure 2: Site Plan, Alternative 2 – Proposed Action



**Mt. Hood Kiwanis Camp  
ALTERNATIVE 2  
PROPOSED ACTION**

January 2003



COGAN  
OWENS  
COGAN

### 3. Alternative 3

This alternative was developed to identify options for addressing issues related to the location of buildings relative to the Little Zigzag River and the location of the proposed new septic system. One of the issues raised during scoping was the location of new facilities close to the Little Zigzag River, particularly the proposed new maintenance building. A second issue of importance to the Kiwanis Camp is the cost of improvements to the camp's septic system. Alternative 3 was designed to address these two issues. In Alternative 3, the new maintenance building would be located in the Old Barlow Campground area, approximately 100 feet from the Little Zigzag River. To reduce the cost of this alternative, new septic drainfield would be located in the lower (main) portion of the camp within the Laurel Lodge cluster of buildings. The locations of these facilities would affect the location of parking facilities at the camp, as well as the location of the new pool building. This alternative would include the following differences, in comparison to Alternative 2:

- **Locations of new sewage treatment facilities.** The existing drainfield would be reconstructed; contaminated materials from the existing drainfield would be disposed of at an approved landfill. In order to reduce the cost of wastewater treatment, including pumping uphill, a new sand filter approximately 5,000 square feet in size would be constructed in the existing amphitheater area, rather than in the equestrian area as in Alternative 2. New drainfields would be constructed in both the existing amphitheater area and Laurel Lodge cluster area.
- **Location of new maintenance building.** It would be located in the old Barlow Campground area. This would result in the maintenance facility being further from the Little Zigzag River than in Alternative 2.
- **Different parking arrangements.** Parking would continue to be provided in existing parking and drop-off areas at the camp, with the bulk of overflow parking occurring along the Mt. Hood Loop Highway, as other areas within the camp would not provide adequate space or access requirements for parking. Locating the new maintenance building in the old Barlow Campground area would limit the area available for new parking there, necessitating continuation of current parking practices. In comparison to Alternative 2, it also would reduce the number of trees proposed to be removed in this area to accommodate the parking area.
- **Location of the new pool building.** It would be located southeast of Cy Lodge. Location of the septic drainfield in the vicinity of the Laurel Lodge cluster would reduce the availability of land for a new pool building. Consequently, the new pool building would be located on the east side of the existing open area near Cy Lodge. In other respects, the facility would be similar to that in Alternative 2.

All other facilities, uses and capacity would be described as in Alternative 2.

Figure 3: Site Plan, Alternative 3



**Mt. Hood Kiwanis Camp  
ALTERNATIVE 3**

January, 2003



COGAN  
OWENS  
COGAN

#### 4. Cumulative Actions

The following cumulative actions would be common to all alternatives:

- **Replacement of two culverts to allow fish passage.** As part of a separate Forest-wide project being undertaken by the Forest, culverts at the main camp entrance and the east end of the camp would be removed or replaced to remove existing velocity barriers to fish passage. Existing culverts and bridges would be replaced with a bridge or open bottom arc at each location. This action is being assessed as part of a separate programmatic EA being prepared by the USFS.
- **Mt. Hood Loop Highway Historic District Evaluation.** The Oregon Department of Transportation is conducting a study of the potential eligibility of the Mt. Hood Loop Highway for listing in the National Register of Historic Places. Proposed improvements at the Camp could have an effect on the proposed district, if they are visible from the highway. Buffering and architectural design of buildings could be used to reduce or mitigate potential impacts.

#### 5. Comparison of Alternatives

**Table 1: Master Plan Elements by Alternative**

Facilities/Improvements	Alternative		
	1	2	3
Capacity (persons at one time)	200	140	140
Camper Housing (1)	2 cabins, 2 dorms (Cy Lodge and Hemlock Dorm)	8 new cabins (1,300 – 1,430 sq. ft.@) to replace existing housing	Per Alternative 2
Staff Housing	At Cy Lodge and Fanning Hall  Caretaker residence at west end, adjacent to main entrance	Existing maintenance building converted to accommodate 15-20 persons  No change in caretaker residence	Per Alternative 2
Dining Areas/Kitchen	In Laurel Lodge and Fanning Hall	Per Alternative 1	Per Alternative 1
Health Care Center/Office	Within Fanning Hall	New 1,430 sq. ft. building south of Fanning Hall	Per Alternative 2
Activity Centers	Fanning Hall – large groups Laurel Lodge – smaller groups Group amphitheater area in Camp center	Per Alternative 1 plus new amphitheater/campfire assembly area near Laurel Lodge	Per Alternative 2
Ropes Course/Shelter	Ropes course and climbing wall in old Barlow Campground area	Per Alternative 1 plus new covered shelter (300-500 sq. ft.)	Per Alternative 2
Swimming Pool	Outdoor facility near caretaker's cabin	Enclosed pool building (6400 sq. ft.) with outdoor covered area, north of Laurel Lodge	Per Alternative 2 except located southeast of Cy Lodge
Maintenance Building/Yard	Adjacent to Hemlock Dorm	New building (2400 sq. ft.) in parking area west of caretaker's residence; existing building converted to staff housing  Yard size reduced and	New building in old Barlow Campground area

Facilities/Improvements	Alternative		
	1	2	3
		revegetated	
Sewage Treatment Facility	Septic drainfield in existing amphitheater area	Existing drainfield reconstructed; new drainfields constructed in equestrian area and bench below equestrian area	Existing drainfield reconstructed; new sand filter (5,000 sq. ft.) constructed in amphitheater area, with new drainfields in both amphitheater and Laurel Lodge areas
Interpretive Kiosk	None	At base of Old Barlow Trail	Per Alternative 2
Interpretive Areas/Trails	Trail along river behind Fanning Hall and Cy Lodge	New area to replace existing trail	Per Alternative 2
Parking Areas	Adjacent to Laurel Lodge and caretaker residence; loading area next to Fanning Hall	New area (35 spaces) in old Barlow Campground area	Per Alternative 1 except more limited area available
Bridges	2 vehicle bridges at west and east ends of Camp  2 pedestrian bridges	Per Alternative 1 with main entry bridge reconstructed in concert with culvert replacement  Cover added to main pedestrian bridge	Per Alternative 2
Fish Pond	East of swimming pool, 1500 sq. ft.	Size increased by 75%; small pedestrian bridge added at east end	Per Alternative 2
Equestrian Area	Located on bench 30-40 feet above and south of Camp	No change in area/operations, except for siting of septic drainfield	Per Alternative 1
Streambank Restoration/Revegetation	None	75,000 linear ft.	Per Alternative 2

(1) Includes director's cabin

**Table 2: Comparison of Impacts by Alternative**

Resource	Alternative		
	1	2	3
<b>Watershed Values</b>			
• Vegetation/Soils	None Existing building area is 27,807 sq. ft. Existing roads and pathways total 46,451 sq. ft. Additional existing disturbed (cleared or compacted areas) total 100,833 sq. ft.	No adverse effects on listed species. 15,650 sq. ft. of new impervious surfaces; 16,000 sq ft of semi-permeable/permeable surfaces; 75,000 sq. ft. of new revegetation. Minimal soil compaction.	Per Alternative 2
• Hydrologic System	Limited runoff related to impervious and semi-permeable areas described above.	Short-term increase in runoff in conjunction with construction activities; minimal long-term runoff impacts	Per Alternative 2
• Water Quality	Potential long-term septic system impacts	Improved water quality with relocation of septic system and streambank restoration	Greater potential impacts than in Alternative 2 due to closer proximity of the septic system to the river
• Aquatic System	None No proposed restoration of riparian habitat.	Improved riparian habitat. Steelhead, coho, and cutthroat trout – NLAA.	Per Alternative 2
<b>Wildlife</b>			
• Federally listed Species	Bald eagle – NLAA Spotted Owl – LAA	Per Alternative 1	Per Alternative 1
• R6 Sensitive Species	No adverse effects	Per Alternative 1	Per Alternative 1
• NW Forest Plan S&M Species	No adverse effects	Per Alternative 1	Per Alternative 1
Heritage Resources	None	No adverse effect	Per Alternative 2
Traffic Circulation/Parking	Continued lack of adequate parking and conflicts between overflow parking and other Mt. Hood Loop Highway users	Improved circulation and pedestrian access. Reduction in conflicts with other Mt. Hood Loop Highway users (accessing	Without new parking area, ongoing conflicts with other Mt. Hood Loop highway users.

Resource	Alternative		
	1	2	3
		nearby trailheads) with new parking area.	
Recreation	No impacts to Paradise Trail Camp Low levels of trail use No improvements in services provided	Per Alternative 1  Per Alternative 1 Improved recreational opportunities	Per Alternative 1  Per Alternative 1 Per Alternative 2
Scenic Resources	Minimal impacts to views from US26 and Mt. Hood Loop Highway	Per Alternative 1	Per Alternative 1
Air Quality	Minimal impacts associated primarily with vehicle use	Per Alternative 1, except short-term impacts associated with construction	Per Alternative 2
Noise	Low levels in conjunction with recreational activities and vehicular traffic	Per Alternative 1, except short-term increases associated with construction	Per Alternative 2

LAA = Likely to adversely affect  
NE = No effect  
NLAA = Not likely to adversely affect

# CHAPTER III. DESCRIPTION OF THE AFFECTED ENVIRONMENT/ ENVIRONMENTAL CONSEQUENCES

## A. WATERSHED VALUES

### 1. Affected Environment

#### a. Vegetation and Soils

This section describes the characteristics of selected existing vegetation at the Mt. Hood Kiwanis Camp site, including trees and plants that are not listed or sensitive. A separate Botany section describes conditions and impacts for listed or sensitive vascular plants, lichen and fungi, as well as noxious weeds. Sources include the Zigzag Watershed Analysis (Mt. Hood National Forest, 1995), field surveys conducted by Turnstone Environmental Consultants, Inc., in the spring and summer of 2002, and a Draft Biological Assessment (Turnstone, 2003).

The Kiwanis Camp lies within the Western Hemlock vegetation zone. The Western Hemlock Zone features diverse, productive forests high in biomass, dominated by Douglas fir in early successional stands and by Douglas fir and Western hemlock in late successional stands. Forest stands in the Kiwanis Camp area are classified as mid-seral, characterized by “closed and open small conifer stands and closed sapling/ pole stands,” composed mainly of “even aged, moderately dense stocked stands of 80 to 100-year-old Douglas fir and Western hemlock dominated stands.” Stretches of hemlock/ fir forest border the camp to the north and south. A large patch of lodgepole/lahar forests lies on the eastern edge of the camp grounds (USFS, 1995). Other tree species often associated with western hemlock forest and observed at the Camp include western redcedar and bigleaf maple. The forest understory includes young trees, vine maple, rhododendron, and a variety of smaller brushy species, with a mix of lichens and mosses providing ground cover. There are also scattered, small swampy areas dominated by skunk cabbage and devils club (Archaeological Investigations Northwest, 2002).

Approximately 65% of the permit area is designated as Riparian Reserve under the Northwest Forest Plan. The Forest Plan designates riparian reserve widths of 420 ft. per side, or 840 ft. total within the Western Hemlock Zone (USFS, 1995).

Trees and other vegetation have been removed from the site through past development, including construction of the existing Camp. The trees remaining on site are concentrated in the areas on the outskirts of the camp and in the riparian areas along the Little Zigzag River. Other pockets of trees are scattered throughout the Camp. Areas near the camp contain known infections of laminated root disease (*Phellinus weirii*), a fungus that attacks the roots of Douglas fir and Western hemlock (USFS, 1995).

Soils at the Camp have been compacted and/or disturbed in most areas where improvements are proposed as a result of several decades of use. This includes areas previously used for buildings, roads, parking areas, and trails by both the Kiwanis Camp and the Barlow Campground previously located on the site. These areas of compacted soil are characterized

by increased water run-off and decreased vegetation growth. The majority of the site is relatively flat and no unstable soils have been identified at the Camp.

## **b. Hydrologic System**

The project area is located along the Little Zigzag River, a tributary of the Zigzag River, which is itself a tributary of the Sandy River. It lies wholly within one 6-field watershed (Little Zigzag River) of the Zigzag River Watershed (a 5-field watershed). The Little Zigzag River is not part of a key watershed as designated by the Mt. Hood National Forest. In the western half of the camp, the Little Zigzag River runs along USFS Road 2639, forming the northern border of the Camp. Approximately ¼ mile of the river passes through the project area, while another ¼ mile runs through parts of the Kiwanis Camp permit area that would not be impacted by any of the project alternatives. Farther east, the river bends south away from the road, separating the site of the proposed long-term parking and camper drop-off areas from the remainder of the camp. Runoff is limited as the project area contains few slopes.

Four small potential wetland areas were identified through a visual inspection. All are found in the western half of the camp and are approximately ¼ to ½ acre in size (Field observations, 2003). They are located south of the existing maintenance building and west of the existing storage yard near the caretaker's cabin. Current activities and facilities at the plant are conducted and located away from these areas to avoid impacts.

The Camp's wastewater is treated via a County-approved septic system located approximately 120 feet from the Little Zigzag River at its closest point.

## **c. Water Quality**

The existing temperature conditions within the Zigzag Watershed are categorized as "properly functioning" (Turnstone, 2003). For the most part, stream temperatures within the Zigzag Watershed are well below the state standard of 14.4°C. This is based on both STORET data and water quality data from 1995, with exceptions being an unidentifiable tributary to Still Creek and Wind Creek below Wind Lake. This range meets the state standard of <14.4°C and the NMFS criteria of 10 to 13.9° C (Turnstone, 2003).

Sediment conditions within the watershed are categorized as "at risk." High levels of silt, clay, and sands were measured in all reaches during a stream survey of Little Zigzag River (Turnstone, 2003).

Existing conditions are "properly functioning" with respect to chemical contaminants and nutrients. An Oregon Department of Environmental Quality (DEQ) assessment indicates that sedimentation into the stream channels resulting from highway sanding and road cutbank erosion is a major source of the watershed's non-point pollution. Concentrations of chloride range between 1.75 and 6.8mg/L, which is below the National Water Quality Criteria of 230 mg/L as a four day average and a one hour average of not more than 860 mg/L. A limited amount of fuels are used at the Camp. Propane is used for cooking activities and stored in sealed containers. Small amounts of oil and diesel fuels are used and similarly stored in enclosed, sealed containers and dispensed with a hand pump. The only other chemicals stored at the Camp are cleaning supplies stored in sealed containers indoors. No fuels are drained at the Camp for purposes of vehicle maintenance or other activities. No additional fuel use or

storage is proposed. There are currently no activities in the basin known to significantly increase the probability of a chemical spill (Turnstone, 2003).

#### **d. Aquatic System**

##### FISH HABITAT

Based upon a draft BA prepared for this project, the existing habitat is characterized as “not properly functioning,” because two existing culverts at the Kiwanis camp site are considered barriers to juvenile fish (Turnstone, 2003). The habitat was also found to be not properly functioning in terms of substrate, as the dominant substrate consists of large cobble and coarse gravel, with large amounts of silt, clay, and sands in all reaches of the Little Zigzag River. Large woody debris habitat is limited, with very few debris jams identified in the Little Zigzag River. The debris jams that were found were comprised entirely of small and medium-sized wood, with no large wood present. Large conifers lining the stream banks in the project area indicate a potential for future large woody debris, however.

Pool quality and frequency are also not properly functioning, as the Little Zigzag River does not meet pool quality standards.

Off-channel habitat has been determined to be properly functioning. One side channel was identified in the stream, although side channels are not abundant due to the river’s high gradient and narrow valley width. One braid was identified at RM 3.5, measuring 32 feet long and 10 feet wide. There are no significant backwater areas or off-channel ponds.

Refugia are also properly functioning. The river’s inner riparian zones are intact and include both large and small conifers.

The river’s pools tend to be small lateral scour, often barely meeting the minimum requirement for survey, with little cover for juveniles and poor spawning habitat noted throughout survey area for adult salmonids. This habitat meets the minimum requirements for trout species such as steelhead or cutthroat (Turnstone, 2002).

##### FISH PRESENCE

The Little Zigzag River is home to two federally listed fish species: the Lower Columbia River steelhead (*Oncorhynchus mykiss*) and Southwestern Washington/ Columbia River coastal cutthroat trout (*Oncorhynchus clarki clarki*). The Lower Columbia River steelhead is listed as a “threatened” species by NOAA Fisheries. It is present throughout the Upper Sandy River watershed, with approximately 54 miles of confirmed habitat and 20 additional miles of habitat believed to support the species (Turnstone, 2003).

The coastal cutthroat trout is proposed for listing as a threatened or endangered species by the US Fish and Wildlife Service (USFWS). Resident and fluvial stocks of cutthroat are stable throughout the Upper Sandy River watershed, with an estimated 124 miles of known or suspected habitat. Populations of anadromous cutthroat appear to have greatly declined throughout the Sandy River Basin (Turnstone, 2003).

Other federally listed species exist within other portions of the Upper Sandy River watershed, but are not known to utilize the Little Zigzag River. These are identified in Table 3 by species name, status, and listing agency.

**Table 3: Federally Listed Fish Species in Upper Sandy River Watershed**

<b>Species</b>	<b>Status</b>	<b>Listing Agency</b>
Lower Columbia River steelhead	Threatened	NOAA Fisheries
Coastal cutthroat trout	Proposed	USFWS
Lower Columbia River spring chinook salmon	Threatened	NOAA Fisheries
Lower Columbia River fall chinook salmon	Threatened	NOAA Fisheries
Lower Columbia River coho salmon	Candidate	NOAA Fisheries

Source: Turnstone, 2003

Lower Columbia River chum salmon (Threatened) appear to utilize the lowest reaches of the mainstem Sandy River and its tributaries, but there is no evidence of historic or present utilization of the Upper Sandy River watershed. There is no substantiated evidence of Columbia River bull trout (Candidate) populations currently inhabiting the Upper Sandy River watershed, but this watershed does apparently contain limited suitable habitat for bull trout (Turnstone, 2003).

Two culverts at Kiwanis Camp at river mile (RM) 0.45 and RM 0.6 are considered barriers to juvenile fish. The RM 0.6 culvert is a barrier to adult fish. Currently, juvenile fish have access to only a small part of the portion of the Little Zigzag that runs through the camp (approximately 0.05 miles or less than 10 % of the section within the camp's special use permit boundary). Adults have access to approximately 50% of the section of the Little Zigzag River that runs through the project area.

No listed fish were observed during fish surveys.

## MOLLUSKS AND AMPHIBIANS

Surveys conducted in accordance with the current S&M survey protocols for mollusks and for amphibians did not detect any S&M amphibians or mollusks. Two non-S&M tail dropper slug species (*Prophysaon vanatae*) were observed. Additional surveys (two amphibian and one mollusk survey) were completed in the spring of 2002, and again no S&M species were detected.

## **2. Management Direction**

### **a. Northwest Forest Plan**

Northwest Forest Plan Standards and Guidelines that are applicable to the proposed Kiwanis Camp improvements fall under the headings of Recreation Management (RM), General

Riparian Area Management (RA), Watershed and Habitat Restoration (WR), and Fish and Wildlife Management (FW). Relevant guidelines include RM-2, RA-1, RA-2, RA-3, WR-1, WR-2, WR-3, FW-1, and FW-4.

The Aquatic Conservation Strategies (ACS) of the Northwest Forest Plan are also applicable. These are addressed individually in Section 4, Conformance to Management Direction.

#### **b. Mt. Hood Forest Plan**

The Mt. Hood Forest Plan contains two sets of standards and guidelines that provide management direction for the Mt. Hood Kiwanis Camp improvements: Forest-wide Standards and Guidelines and those specific to A-10 Developed Recreation Sites. The relevant A10 standards and guidelines are listed and addressed individually in Section 4, Conformance to Management Direction. The following Forest-wide Standards and Guidelines are applicable to watershed values within the project area, and are addressed collectively in Section 4: FW-022-023; FW-025; FW-027/ FW-05; FW-055-056; FW-061; FW-080; FW-081; FW-082; FW-083; FW-084; FW-087; FW-102-103; FW-115; FW-137; FW-139; FW-148-150; FW-161; FW-162; FW-174; FW-175.

### **3. Environmental Consequences**

#### **a. Alternative 1: No Action**

##### DIRECT AND INDIRECT IMPACTS

##### **Vegetation and Soils**

Under the No Action alternative, there would be no additional effects on vegetation and soils on the site. The soils and vegetation in the project area have previously been impacted by decades of use. There would be no removal of trees or other vegetation anywhere on the site. The riparian reserves would continue to be considered not properly functioning, as there would be no restoration efforts other than those associated with the Forest's forest-wide restoration project. Effects on listed, sensitive and survey manage species, as well as on competing and unwanted vegetation are described in Section B of this chapter.

##### **Hydrologic System**

Alternative 1 would maintain existing hydrologic conditions, with minimal runoff or other impacts on the Little Zigzag River or wetlands on the site.

##### **Water Quality**

Existing water quality conditions would be unchanged under Alternative 1. Temperature conditions and those associated with chemical contaminants and nutrients would continue to be acceptable. This alternative involves no riparian restoration efforts, so water quality would continue to be impacted through high levels of silt, clay, and sands entering the Little Zigzag River. The existing septic system would remain in close proximity (120 feet) to the river, leading to possible water quality impacts in the long term.

## **Aquatic System**

The fish habitat barriers represented by the two culverts at the Kiwanis camp site would be addressed by a separate USFS project. Fish habitat would continue to be impacted under this alternative through some silt, clay, and sands entering the river. This alternative would not add or remove large woody debris from the river. Pool quality and frequency would continue to be not properly functioning. Off-channel habitat and refugia would not be impacted, and would remain properly functioning. Habitat for listed fish species or S&M fish, mollusk, or amphibian species would not be impacted under Alternative 1.

## CUMULATIVE IMPACTS

The cumulative effects associated with Alternative 1 are those that are anticipated to result from the Mt. Hood National Forest's culvert removal and riparian vegetation restoration projects. The culvert removal would likely result in a short-term negative impact on water quality through increased sedimentation. This project would have a positive long-term impact, as it would open up fish habitat in the upper reaches of the Little Zigzag River that is now inaccessible to fish downstream of the camp. The riparian vegetation restoration efforts, to be coordinated with similar District-wide proposed efforts, would have a long-term positive impact on water quality and fish habitat, with few if any short-term negative impacts.

### **b. Alternative 2: Proposed Action**

## DIRECT AND INDIRECT IMPACTS

### **Vegetation and Soils**

Table 4 lists proposed improvements, as well as the size and distance from the Little Zigzag River for each resulting structure. The sum of the improvements would result in 15,770 square feet of new impervious area and 16,050 square feet of modified semi-permeable or permeable surfaces (in the new parking and commons areas). The improvements would also include 75,000 square feet of restored vegetation areas along the Little Zigzag River and in other portions of the Camp.

**Table 4: Impact of Proposed Kiwanis Camp Improvements**

<i>Proposed Action/Improvement</i>	<i>QTY.</i>	<i>Unit size (sq. ft.)</i>	<i>Total size (sq. ft.)</i>	<i>Approx. Distance from River</i>	<i>Type, Number and Size of Vegetation to be Removed</i>
Phase I Camper Cabins	5	1,350	8,050	90 - 260 feet	30-40 trees; 4 – 12” dia.; 15'-40' tall <sup>(1)</sup>
	1	1,300	1,300	90 - 260 feet	6-10 trees; 4 – 12” dia.; 15'-40' tall <sup>(1)</sup>
Phase II Camper Cabins	2	1,300	2,600	90 - 260 feet	
Hemlock Dormitory	1	(2,600)	(2,600)	320 feet	None
Pool Building <sup>(2)</sup>	1	6,400	6,400	120 feet	None
Convert Maintenance Building <sup>(3)</sup>	1	4,300	4,300	260 feet	None
New Maintenance Building	1	2,400	2,400	60 feet	None
Directors Cabin	1	1,300	1,300	275 feet	2-3 trees/4” – 12” dia.
Fish Pond Enhancement <sup>(3)</sup>	1	2,500	2,500	190 feet	None
All Weather Shelter	1	300	300	20 feet	None
Covered Bridge	1	120	120	0 feet	None
New parking area	1	15,000	15,000	20 - 120 feet	5-10 trees/6”-18” dia./40'-60' tall
New commons areas	3	350	1,050	90 - 260 feet	12-18 trees; 4 – 12” dia.; 15'-40' tall
Restoration areas along streambanks	1	20,000	20,000	0 - 20 feet	NA
Restoration areas along streambanks	1	55,000	55,000	Variable	NA
<b>Total Impervious surface</b>			<b>15,770</b>		
<b>Total modified semi-permeable or permeable surface</b>			<b>16,050</b>		
<b>Total restored/revegetated area</b>			<b>75,000</b>		

Source: Turnstone and Cogan Owens Cogan, 2003

<sup>(1)</sup> It is estimated that 6-10 trees would be removed for each camper cabin. Most trees are about 4” to 8” in diameter, with a few as large as 12” in diameter. Most are 15 - 25 feet tall, with a few as tall as 40 feet.

<sup>(2)</sup> The new pool would be approximately twice the size of the existing pool, with a total increase in impervious surface of 3,200 square feet

<sup>(3)</sup> No additional impervious surface

Most of the proposed improvements to the Camp would take place in areas that have been cleared or otherwise disturbed through previous activities. The majority of the vegetation to be removed under this alternative consists of shrubs and small trees at the site of the new camper cabins and proposed parking area. Approximately 50-80 trees, generally 4 to 8 inches in diameter and 15 to 40 feet in height would be removed at the site of the new cabins, over a total area of 7,800 square feet. Approximately five to ten larger trees (averaging about 12-18 inches in diameter and 40-60 feet in height) may be removed at the parking area. These trees may be left on-site to increase the amount of woody debris in the riparian area. The new maintenance building would be sited to minimize tree and other vegetation removal. No old growth trees would be removed anywhere on the site.

Restoration/ revegetation efforts would consist of replanting banks within the camp with native vegetation. Approximately 1,000 linear feet along the stream banks would be replanted, with a

varying buffer distance of 10 - 30 feet, as conditions allow, totaling about 20,000 square feet in riparian areas. About 50,000 square feet of other existing disturbed areas also would be restored/replanted. These restoration efforts would be coordinated with the Zigzag Ranger District. The sum of the restored vegetation areas would exceed the total of the new impervious and modified permeable/ semi-permeable areas. The improvements to the Kiwanis Camp grounds would thus result in a net reduction of disturbed areas within the permit area, increasing both the quality and quantity of on-site vegetation.

In consultation with the Zigzag Ranger District, control and removal of invasive species would occur during the revegetation of riparian and other impacted areas. Native species would be used and planted at a density to allow successful competition with non-native invasive species.

Effects on listed, sensitive and survey manage species, as well as on competing and unwanted vegetation are described in Section B of this chapter.

Soil impacts would be minimal, as the improvements would be located on previously impacted areas of the Camp to the greatest extent possible. The soil in these impacted areas is already compacted, with limited potential for vegetative growth.

### **Hydrologic System**

The proposed action would not alter the channel of the Little Zigzag River, nor would it directly affect the runoff patterns and existing wetlands on the Kiwanis Camp site. The improvements would increase the total surface area of the Camp that is covered by buildings, leading to increased water runoff. The new parking areas would also produce some increased runoff, but this would be mitigated through the use of semi-permeable parking surfaces.

Construction activities would have the potential to allow sediment to enter the stream channel, causing a temporary reduction in water quality. Such short-term impacts would likely result from excavation and vegetation removal, increased truck traffic, and transport of excavated earth and demolition debris for disposal off-site.

The risk of sedimentation and other channel impacts would be minimized through revegetation and the use of Best Management Practices (BMP's) established to assure compliance with federal and state water quality rules with respect to erosion, fish, spill prevention, fertilizer use, spring/seep protection, and aquatic habitat protection. The application of BMP's would concentrate the project activities in already disturbed areas, phase the improvements over a period of 10 years, conduct construction activities during the dry season to minimize sediment transport, use standard erosion control practices during construction, revegetate the project area with native plants, cover excavated earth removed during construction, minimize the number of access points through the riparian areas, and grade parking areas and roads to reduce channelization and runoff into the Little Zigzag River. Additional actions that would reduce sedimentation risks include the decommissioning or repair of trails and use of "eco-paving" surfaces.

Proposed activities and improvements have been sited outside of existing potential wetlands. In addition, revegetation between these areas and existing and new facilities is proposed. Given these factors and assuming implementation of BMPs during construction, there would be no direct or indirect impacts to wetlands.

## **Water Quality**

The proposed action would maintain existing temperature conditions, as the removal of trees would be selective in nature, with negligible loss of shade. The alternative would also involve decommissioning of trails and rehabilitation of stream banks and previously disturbed areas with native vegetation, all of which would contribute to improved water quality over time. A new septic system is proposed with septic drainfields located on the saddle above the main Camp area at the site of the existing equestrian area. They would be located approximately 375 and 435 feet from the river, or 255 and 315 feet farther away than the existing drainfield. This added distance would reduce the risk of contaminants leaching into the river, and would contribute to improved water quality over the long term.

Existing levels of chemical contaminants and nutrients would also be maintained, assuming that no accidental spills occur through a vehicle accident or other mishap. Precautions would be taken to reduce the risk of chemical spills during construction. There currently is very limited use of chemicals and fuels at the camp, and storage precautions are taken that are not expected to change in the future. All hazardous materials storage, refueling areas, and maintenance areas would be designed and located to prevent any spills from entering any body of water. Pool water would be treated to neutralize the chlorine and then drained to the soil at a safe distance from the river, or be drained directly into the septic system. The parking area would be paved with a semi-permeable surface to minimize oil and water runoff.

No adverse water quality effects would be anticipated and the small probability of effects would decrease as the canopy and ground cover are re-established to project conditions. Short-term sedimentation combined with other water quality impacts would not likely result in harm to fish habitat or water quality. Increased runoff related to modest increases impervious surfaces would be offset by restoration of currently disturbed areas.

## **Aquatic System**

The proposed action would be expected to have no negative effect on fish habitat. A separate USFS culvert replacement project would improve conditions by removing barriers at the Kiwanis Camp site.

Substrate conditions would be maintained, as the project activities would be expected to have a negligible impact to substrate composition in the Little Zigzag River. BMPs would be used to mitigate potential erosion causing habitat degradation within or downstream of the project area. Very little, if any, erosion or sediment would impact water quality. Approximately 1,000 linear feet of stream banks would be replanted, with a varying buffer distance of 10 - 30 feet, as conditions allow, totaling about 20,000 square feet of restored riparian area.

Few if any trees would be removed from the riparian area and existing in-stream large woody debris conditions would be maintained. The removal of trees in the area of the new camper cabins would not reduce the quantity of available large woody debris due to the distance between the site of these trees and the river, the presence of existing large buildings between the trees and the river, flat topography in the area and limited history of flooding that could carry downed trees from the site of the camper cabins into the riparian area. Some of these trees could be stockpiled on site for future use as woody debris, if needed. Some of the trees proposed to be removed for the new parking area could serve as future woody debris for the river if they were to fall naturally. It is proposed that trees of 12 inches in diameter or more felled in this area be left on site in riparian areas or the floodplain to serve as future potential

woody debris. As a result, removal of trees in this area would have no effect on the future supply of wood debris. The removal of trees for the septic drainfield reserve area would occur approximately 375 feet from the Little Zigzag River, and would also be expected to have no effect on the supply of woody debris for the river.

Disturbed riparian areas would be revegetated with native plants, and negligible changes would occur to the seral stage of riparian vegetation.

The proposed action would be expected to have a negligible impact on pool frequency, and would not affect pool depths or pool quality because adherence to BMP's would reduce the risk of fine sediments entering stream channels and filling in pool habitats.

This project would involve no removal of large woody debris or channel straightening that would alter channel forming processes. The implementation of this project would thus have a negligible impact on off-channel habitat along the Little Zigzag River.

The proposed action would maintain refugia conditions and improve overall riparian condition. Loss of shade from felled trees and minimal impacts from camper activity in riparian areas could impact fish in the Little Zigzag River, but in the long term the proposed action would result an overall positive trend to the riparian and off-channel habitat condition as trails are decommissioned and other historically disturbed areas are revegetated. Late seral patches would not be disturbed.

The existing conditions for the drainage network, flow/ hydrology, floodplain connectivity, streambank condition, and water/ depth ratios would all be maintained.

The proposed action would not be expected to have any long-term adverse effects on any listed, proposed, or candidate fish species, and riparian and aquatic habitats would benefit from riparian restoration in the long term. The implementation of this project warrants a "May Affect, Not Likely to Adversely Affect" (NLAA) determination for Lower Columbia River steelhead, Lower Columbia River/Southwest WA coho, and Southwestern Washington/Columbia River coastal cutthroat trout. A "No Effect" (NE) determination is warranted for Columbia River chinook and Columbia River chum salmon because these species are not present and are not known to have been historically present. A "No Effect" (NE) determination is also appropriate for Columbia River bull trout, as this species has already been extirpated from the Sandy River system (Turnstone, 2003).

The proposed action "May Not Adversely Affect" essential fish habitat as designated under the 1996 Amendment to the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

The project would not be expected to adversely impact any Survey and Manage species of mollusks and amphibians.

### CUMULATIVE IMPACTS

In addition to the direct and indirect impacts described above, cumulative impacts would be expected from the Forest's culvert removal and riparian restoration projects. The proposed action, in combination with the Forest Service restoration project, would significantly improve the quality and quantity of vegetation in the riparian area of the Little Zigzag River.

The Forest's culvert removal project would improve the hydrologic system by restoring the channel of the Little Zigzag River in the project area to its natural state. Short-term negative water quality impacts would be anticipated from the culvert removal project, although BMP's would be used to keep these impacts to a minimum. The revegetation of the riparian area and other parts of the camp would reduce erosion, sedimentation, and water runoff, leading to a long-term improvement of overall water quality in the Little Zigzag River. This improvement in water quality would improve habitat for fish, mollusks, and amphibians in the Little Zigzag River. The culvert replacement project would ultimately allow resident and anadromous fish to pass through the camp and access a total of 0.9 miles of habitat upriver. This would be expected to have a beneficial long-term effect on fish populations.

### **c. Alternative 3**

#### DIRECT AND INDIRECT IMPACTS

The direct and indirect impacts from Alternative 3 would be similar to those anticipated for the proposed action, with the following differences:

- The location of the septic drainfields would be 255 and 235 feet closer to the river under Alternative 3 than under Alternative 2 (as measured from the closest edge of each drainfield). This could result in more water quality impacts over time, although such impacts would be minimal as the drainfields would be County-approved and would meet the standards set by DEQ under OAR 340-71 and 340-73. The construction of the drainfields at this closer location could result in greater short-term water quality impacts from erosion and sedimentation than would be expected under Alternative 2.
- The new parking area that is proposed under Alternative 2 would not be built under Alternative 3. This could result in the removal of fewer trees in the area of the old Barlow Campground where the parking area would be built. However, Alternative 3 includes the construction of a new maintenance building on that same site. The construction of the maintenance building at this site could have similar impacts to the construction of the parking area. Effects could vary somewhat, if the duration of the construction periods for the building and parking lot differed.
- Under Alternative 3, the maintenance building would be located farther from the river than its current location, which would not be changed by Alternative 2. Locating the maintenance building further from the river would reduce the possibility, albeit remote, of water quality impacts from a chemical or fuel spill.

#### CUMULATIVE IMPACTS

Cumulative impacts would be as described for Alternative 2.

## **4. Conformance to Management Direction**

Throughout this and other sections of this chapter, discussion of conformance to Management Direction will generally be applied only to the action alternatives (Alternatives 2 and 3). Because the No Action Alternative (1) does not assume any specific management action, it is not appropriate to consider its conformance or consistency with Management Direction.

**a. Mt. Hood Forest Plan**

The management direction goal for A10 sites is to “Provide a range of high quality outdoor recreational opportunities for concentrated recreational use at readily accessible, appropriately designed developed sites.” All alternatives would conform to this goal, as the Camp is already providing a range of outdoor recreational opportunities concentrated in a readily accessible site, and would continue to do so even if no improvements were made on the site. The improvements proposed under Alternatives 2 and 3 would allow the Camp to continue to offer these recreational opportunities and would improve the overall design of the site.

The following A10 management direction is relevant to the impact of the proposed Kiwanis Camp improvements on watershed values:

**A10-011:** Wildlife and fisheries habitat improvement activities should be allowed when consistent with Management Area management direction.

The vegetation restoration in riparian areas of the Little Zigzag River associated with Alternatives 2 and 3 would improve wildlife and fisheries habitat in the vicinity of the Kiwanis Camp.

**A10-014:** Watershed rehabilitation and enhancement activities shall be encouraged.

The vegetation restoration associated with Alternatives 2 and 3 would enhance and rehabilitate the watershed of the Little Zigzag River. Alternative 2 would further rehabilitate the watershed by moving the Camp’s septic field to a location farther away from the River.

**A10-017 – 018:** Vegetation management shall compliment the development and recreational experience level planned for the site, and shall be consistent with the Northwest Region (R6 “Managing Competing and Unwanted Vegetation” FEIS, Vegetation Management Environment Impact Record of Decision (1988) and Mediated Agreement (1989).”

The vegetation management, including both removal and restoration, that would take place in Alternatives 2 and 3 would enhance the recreational experience opportunities provided by the Mt. Hood Kiwanis Camp, as well as create a net benefit to local habitat and watershed conditions. The vegetation management activities would be consistent with this and all other applicable guidelines.

**A10-027:** Management of down woody material should compliment the development and experience level planned for the site. See Forestwide Wildlife Standards and Guidelines regarding snags and down logs.

Under all alternatives, down woody material in the riparian or undeveloped portions of the project area would remain undisturbed, while that located in developed portions of the Kiwanis Camp site would be removed in order to preserve safety and use of the facilities.

**A10-032:** Rodents, other animals, and unwanted vegetation may be controlled to protect public safety.

Under Alternatives 2 and 3, invasive plant species would be controlled through the re-vegetation of riparian and other impacted areas. Native species would be used and planted at a density to allow successful competition with non-native invasive species.

The following Forestwide Standards and Guidelines (S&Gs) are applicable to watershed values within the project area: FW-022-023; FW-025; FW-027/ FW-05; FW-055-056; FW-061; FW-080; FW-081; FW-082; FW-083; FW-084; FW-087; FW-102-103; FW-115; FW-137; FW-139; FW-148-150; FW-161; FW-162; FW-174; FW-175.

#### ALTERNATIVE 2: PROPOSED ACTION

Alternative 2 meets all of the applicable Forestwide S&Gs. BMPs would be used under Alternative 2 to implement the State Water Quality Management Plan and to minimize soil erosion, compaction, displacement, or puddling as called for in the Forestwide S&G's. Water quality would continue to meet state and federal requirements, and would be improved over the long term through the riparian area restoration associated with Alternative 2. Vegetation management activities would be dispersed in time and space to minimize cumulative watershed effects. The riparian area improvements would reduce sediment delivery to the river and restore streambank areas that have been degraded through past activities. The quality and quantity of fish and aquatic habitat in the project area would be improved through restoration of the riparian and other vegetated areas, movement of the septic drainfields to a location farther from the river, and the Forest Service culvert replacement project. The S&G's related to habitat management for plant and animal species would be met through the restoration of the riparian and other vegetated areas.

#### ALTERNATIVE 3

Alternative 3 would conform to the applicable Forestwide S&Gs in much the same manner as Alternative 2. The water quality and aquatic habitat improvements would be less significant, as the septic drainfields would be closer to the river under Alternative 3 in comparison to Alternative 2.

#### **b. Northwest Forest Plan Standards and Guidelines**

##### ALTERNATIVE 2: PROPOSED ACTION

**Recreation Management:** The proposed improvements to the Kiwanis Camp and the recreation practices that would take place after the improvements are complete would comply with all ACS objectives and would conform to S&Gs for recreation management.

**General Riparian Area Management:** Proposed improvements would have no effect on in-stream flows for the Little Zigzag River. Trees identified as safety risks would be felled and left on-site as coarse woody debris. Herbicides, insecticides, and other toxicants would only be used in a manner that complies with ACS objectives. This alternative would meet S&Gs for general riparian area management.

**Watershed and Habitat Restoration:** Mt. Hood Kiwanis Camp, Inc. has cooperated with federal, state, local and tribal agencies, as well as surrounding private landowners, to develop cooperative agreements to meet ACS objectives. The proposed action includes the revegetation

of riparian and other areas on the Kiwanis Camp site. These improvements would include restoration in addition to the prevention of habitat degradation. Approximately 70,000 square feet within the camp would be replanted with native vegetation, including about 20,000 square feet in riparian areas. This would be coordinated with other restoration proposed to be undertaken by the US Forest Service. A verbal agreement has been reached between Kiwanis Camp and the Zigzag Ranger District to cooperate on the culvert replacement project to remove barriers to fish passage along the Little Zigzag River. Cooperation would include coordination of culvert construction activities, construction of a new bridge for the camp, and riparian and other vegetative restoration activities. These improvements would serve to promote long-term ecosystem integrity and the genetic integrity of native species, as well as further ACS objectives, and would be consistent with S&Gs for watershed and habitat restoration.

**Fish and Wildlife Management:** The habitat restoration efforts associated with this project would further ACS objectives as described below. The proposed action would not affect native fish stocks. This alternative meets S&Gs for fish and wildlife management.

### ALTERNATIVE 3

**Recreation Management:** The physical improvements and recreation practices proposed under this alternative are the same as those under Alternative 2, and would comply with ACS objectives. This alternative would conform to S&Gs for recreation management.

**General Riparian Area Management:** As in Alternative 2, improvements to the Kiwanis Camp site would have no effect on in-stream flows for the Little Zigzag River. Practices related to hazardous trees and toxic chemicals would comply with ACS objectives and meet S&Gs for general riparian area management.

**Watershed and Habitat Restoration:** The revegetation of riparian and other areas proposed under Alternative 2 would also take place under Alternative 3, with a similar level of cooperation among governmental agencies and private landowners to develop cooperative agreements to further ACS objectives. Alternative 3 would be consistent with S&Gs for watershed and habitat restoration.

**Fish and Wildlife Management:** The habitat restoration efforts associated with Alternative 3 would further ACS objectives as described below. The proposed action would not affect native fish stocks. This alternative meets the Standards and Guidelines for fish and wildlife management.

#### **c. Northwest Forest Plan Aquatic Conservation Strategies**

All proposed activities comply with ACS objectives by maintaining or improving water quality and connectivity within the Upper Sandy River Watershed Management Unit.

**ACS Objective 1. Maintain or restore the distribution, diversity, and complexity of the watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.**

The proposed actions under Alternative 2 are designed to maintain and or increase the natural distribution, diversity and complexity on the Little Zigzag River by reducing present forest visitor

activities within the riparian area and increasing the restored/repaid riparian area by 75,000 sq. ft. Additionally, the proposed relocation of existing pathways farther from streambanks/ riparian areas would further enhance the riparian areas. Thus, this project is consistent with ACS Objective 1.

The riparian restoration efforts under Alternative 3 would be identical to those described under Alternative 2, and Alternative 3 therefore is consistent with ACS Objective 2.

**ACS Objective 2. Maintain or restore spatial and temporal connectivity within and between watersheds.**

Alternatives 2 and 3 would replace the existing interpretive trail along the river, consolidating access to the riparian area in a smaller area to reduce watershed impacts. Features would include benches, accessible riverbank, erosion protection, and riparian revegetation. Thus, these alternatives are consistent with ACS Objective 2 by improving large-scale connectivity.

**ACS Objective 3. Maintain or restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.**

In both Alternatives 2 and 3, the creation of an interpretive trail system would maintain the current physical integrity of the aquatic system, including shorelines, banks, and bottom configurations of the Little Zigzag River. Streambanks within the Camp would be replanted with native vegetation. Approximately 1,000 linear feet would be replanted, with a varying buffer distance of 10 - 30 feet, as conditions allow, totaling about 20,000 in riparian areas. About 50,000 square feet of other existing disturbed areas also would be restored/replanted. The in-channel activities would maintain the current physical integrity of the banks and bottom configurations by using only areas that can handle foot traffic and disturbances associated to macroinvertebrate, water quality, and stream flow sampling. Examples of these areas are hardened surfaces such as cobble or bedrock bottoms. These actions are consistent with ACS Objective 3.

**ACS Objective 4. Maintain or restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.**

In addition to the riparian area improvements, Alternative 2 would reduce and funnel forest visitor activities, which would maintain or reduce the risk of high levels of sediment inputs into the streams. "Eco-paving" surfaces would be utilized to reduce compaction and runoff impacts, improving water quality on an incremental basis. Water quality would also be improved by the construction of the new septic drainfields, which would be 255 and 300 feet farther away from the river than the existing system. These actions would meet the intent of ACS Objective 4.

In addition to the riparian area improvements, Alternative 3 would also reduce and concentrate forest visitor activities. The existing dirt parking lot would remain in place, causing minimal runoff. The existing septic drainfield would be reconstructed in its present location, and two additional drainfields would be constructed approximately 80 feet farther away from the river. These actions would be consistent with ACS Objective 4, but may not restore water quality to the same extent as in Alternative 2.

**ACS Objective 5. Maintain or restore the sediment regime under which aquatic ecosystems evolved.**

The decommissioning/repair or improvement of trails under Alternatives 2 and 3 would reduce the risk of future catastrophic mass sediment inputs, which could damage the physical integrity of the stream channel. "Eco-paving" surfaces would be utilized to reduce compaction and runoff impacts. Improvement of pedestrian trails is consistent with ACS Objective 5.

**ACS Objective 6. Maintain or restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing.**

None of the alternatives would affect current in-stream flows, wetland habitats, or patterns of sediment, nutrient, and wood routing. These alternatives would all help further ACS Objective 6.

**ACS Objective 7. Maintain or restore the timing, variability and duration of floodplain inundation and water table elevation in meadows and wetlands.**

All three alternatives would maintain the timing, variability and duration of floodplain inundation and water table elevation in meadows and wetlands. Trails and bridges constructed or replaced under Alternatives 2 and 3 would not alter or cut off flood plain access or water table elevation. These alternatives would help further ACS Objective 7.

**ACS Objective 8. Maintain or restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.**

Under Alternatives 2 and 3, reducing and concentrating forest visitor pedestrian trails and revegetating the banks within the Camp with native vegetation would maintain the current species composition and structural diversity of plant communities in riparian areas to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability. Streambank integrity would be maintained by using only areas that can handle foot traffic and disturbances associated to macroinvertebrate, water quality, and stream flow sampling. In addition, any trees larger than 12 inches in diameter felled during construction of the proposed new parking area would be left on site for future use as large woody debris. These alternatives would help further the ACS Objective 8.

**ACS Objective 9. Maintain or restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.**

The activities proposed under Alternatives 2 and 3 would restore habitat for native plants, macroinvertebrates, and vertebrates such as salamanders and frogs. This would occur by increasing the connectivity of vegetation within the riparian reserve and restoring/ revegetating degraded areas. These alternatives would maintain or improve conditions pertaining to ACS Objective 9.

## B. BOTANY

### 1. Affected Environment

#### **Threatened, Endangered, Proposed, Sensitive, and Survey and Manage Species**

The Zigzag Watershed is home to 581 vascular plant species, including 37 that are listed as “survey and manage” species in the Northwest Forest Plan (USFS, 1995). The project area provides potential habitat for 10 species of Survey and Manage (S&M) mosses, lichens, and fungi. Protocol surveys conducted by Turnstone Environmental Services uncovered no specimens of any survey and manage species (Turnstone, 2003). One threatened plant species has the potential to exist in the Mt. Hood National Forest, *Howellia aquatilis*. However, habitat for this species consists of ponds and no ponds are present on the Kiwanis site.

One S&M species, a false truffle known as *Rhizopogon brunneiniger*, is documented to exist at the Kiwanis Camp site. This is one of five known localities of this fungus in the Pacific Northwest (USFS, 1995). No survey was conducted for this fungus, as Forest Service protocol indicates that pre-disturbance surveys for this species are not practical. This is due to the fact that the species lives underground, and it is impossible to survey for it without disrupting its habitat (Turnstone, personal communication, 2003). In addition, the specific location of this truffle is unknown. It is documented to be somewhere “at the former Barlow Forest Camp (now Kiwanis Camp).” It was observed in the 1960s.

**Table 5: Threatened, Endangered, Proposed, Sensitive, and Survey and Manage Vascular Plant, Moss, Lichen and Fungi Species with Potential to Occur Within Project Area**

Species	Habitat	Presence	Surveys
<b>Survey and Manage Vascular Plants</b>			
<i>Botrychium minganense</i>	Y	N	Y
<i>Botrychium montanum</i>	Y	N	Y
<i>Carex livida</i>	Y	N	Y
<i>Cimicifuga elata</i>	Y	N	Y
<i>Coptis trifolia</i>	Y	N	Y
<i>Corydalis Aquae-gelidae</i>	Y	N	Y
<i>Cypripedium fasciculatum</i>	Y	N	Y
<i>Cypripedium montanum</i>	Y	N	Y
<i>Erigeron howellii</i>	Y	N	Y
<i>Howellia aquatilis</i>	Y	N	Y
<i>Lycopodium complanatum</i>	Y	N	Y
<i>Ophioglossum pusillum</i>	Y	N	Y
<i>Sisyrinchium sarmentosum</i>	Y	N	Y
<i>Wolfia columbiana</i>	Y	N	Y

Species	Habitat	Presence	Surveys
<b>Survey and Manage Mosses</b>			
<i>Schistostega pennata</i>	Y	N	Y
<i>Tetraphis geniculata</i>	Y	N	Y
<b>Survey and Manage Lichens</b>			
<i>Bryoria tortuosa</i>	Y	N	Y
<i>Dendriscoaulon entracatum</i>	Y	N	Y
<i>Hypogymnia duplicata</i>	Y	N	Y
<i>Loberia linita</i>	Y	N	Y
<i>Nephroma occultum</i>	Y	N	Y
<i>Platismatia lacunosa</i>	Y	N	Y
<b>Survey and Manage Fungi</b>			
<i>Bridgeoporous nobil</i>	Y	N	Y
<i>Rhizopogon brunneiniger</i>	Y	Y	N <sup>2</sup>

<sup>2</sup> Historical records

## **Competing and Unwanted Vegetation**

There is evidence of competing and unwanted vegetation (noxious weeds) near the project area. There is spotted knapweed (*Centaurea maculosa*) on Hwy 26, south and east of the project area, that could be a potential source of weed seed. Orange hawkweed (*Hieracium aurantiacum*) and Scotch broom (*Cytisus scoparius*) are found west of the project area, near Rhododendron, and are another potential source of seed. However, neither are directly adjacent to the Kiwanis property and no noxious weeds were observed at the Camp during botanical surveys.

## **2. Management Direction**

### **a. Northwest Forest Plan**

As an Administratively Withdrawn area, management direction for the project area is primarily provided by the Mt. Hood Forest Plan. Relevant Northwest Forest Plan S&Gs include those for Riparian Reserves and S&M Species.

### **b. Mt. Hood Forest Plan**

For developed recreation sites, the Forest Plan provides the following management direction:

**A10-017, 018** Vegetation management shall compliment the development and recreational experience level planned for the site, and shall be consistent with the Northwest Region (R6 "Managing Competing and Unwanted Vegetation", Vegetation Management Environmental Impact Record of Decision (1988) and Mediated Agreement (1989).

The referenced ROD and Mediated Agreement require completion of a noxious weed survey and mitigation measures to prevent the introduction and spread of noxious weeds and invasive non-native plants.

Forestwide management direction is also provided for threatened, endangered and sensitive plants and animals (FW-170 through FW-179 and FW-241 through FW-246):

- Implementation of recovery efforts for threatened and endangered species.
- Protection of bald eagle nesting habitat,
- Protection or improvement of habitat for other T, E & S species.
- Management of T, E & S species consistent with the Federal Endangered Species and Oregon Endangered Species Acts.
- Preparation of biological evaluations for T, E & S species.
- Consultation with USFWS for T, E & S species.

### **3. Environmental Consequences**

#### **a. Alternative 1: No Action**

##### DIRECT AND INDIRECT IMPACTS

##### Threatened, Endangered, Proposed, Sensitive, and Survey and Manage Species

###### Federally Listed Species

###### *Howellia aquatilis*

As noted previously, no suitable habitat exists for this plant at the Kiwanis site. Therefore there would be no impact on it.

###### Northwest Forest Plan S&M Species

Although the project area includes habitat for some S&M species, this alternative does not include any proposed actions within such habitat at the Camp. Therefore, the No Action alternative would have no effect on these species.

##### Competing and Unwanted Vegetation

Ongoing maintenance and operation of the camp could increase the risk for introduction of competing and unwanted vegetation through entry of vehicles and equipment into the camp and soil disturbance activities.

##### CUMULATIVE IMPACTS

##### Threatened, Endangered, Proposed, Sensitive, and Survey and Manage Species

There would be no additional cumulative impacts for any of the listed species or survey and manage species listed in section (a) as no species were found during botanical surveys.

## Competing and Unwanted Vegetation

Revegetation of riparian and other areas could increase the potential for introduction of competing and unwanted vegetation

### b. **Alternative 2: Proposed Action**

## DIRECT AND INDIRECT IMPACTS

### Threatened, Endangered, Proposed, Sensitive, and Survey and Manage Species

#### Federally Listed Species

##### *Howellia aquatilis*

As noted previously, no suitable habitat exists for this plant at the Kiwanis site. Therefore there would be no impact on it.

#### Northwest Forest Plan Survey and Manage Species

##### *Botrychium minganense*

Habitat typically includes meadows and moist coniferous forests. During protocol survey efforts, no specimens of *Botrychium minganense* were present, warranting a determination of “no impact” **(NI)**.

##### *Botrychium montanum*

Habitat typically includes shady western red cedar forests & grassy areas. During protocol survey efforts, no specimens of *Botrychium montanum* were present, warranting a determination of “no impact” **(NI)**.

##### *Carex livida*

Habitat typically includes swampy woods and peat bogs. During protocol survey efforts, no specimens of *Carex livida* were present, warranting a determination of “no impact” **(NI)**.

##### *Cimicifuga elata*

Habitat typically includes mixed coniferous/deciduous forests. During protocol survey efforts, no specimens of *Cimicifuga elata* were present, warranting a determination of “no impact” **(NI)**.

##### *Coptis trifolia*

Habitat typically includes dry woods. During protocol survey efforts, no specimens of *Coptis trifolia* were present, warranting a “no impact” **(NI)**.

##### *Corydalis Aquae-gelidae*

Habitat typically includes moist soil at edges of streams. During protocol survey efforts, no specimens of *Corydalis Aquae-gelidae* were present, warranting a determination of “no impact” **(NI)**.

##### *Cypripedium fasciculatum*

Habitat typically includes montane dry to fairly moist open to shrub or forest covered valley or mountainsides. During protocol survey efforts, no specimens of *Cypripedium fasciculatum* were present, warranting a determination of “no impact” **(NI)**.

*Cypripedium montanum*

Habitat typically includes moist to dry, rather rocky open coniferous forests. During protocol survey efforts, no specimens of *Cypripedium montanum* were present, warranting a determination of “no impact” **(NI)**.

*Erigeron howellii*

Habitat typically includes moist rocky areas. During protocol survey efforts, no specimens of *Erigeron howellii* were present, warranting a determination of “no impact” **(NI)**.

*Howellia aquatilis*

Habitat typically includes ponds and lakes. During protocol survey efforts, no specimens of *Howellia aquatilis* were present, warranting a determination of “no impact” **(NI)**.

*Lycopodium complanatum*

Habitat typically includes moist coniferous woods. During protocol survey efforts, no specimens of *Lycopodium complanatum* were present, warranting a determination of “no impact” **(NI)**.

*Ophioglossum pusillum*

Habitat typically includes moist meadows and woods. During protocol survey efforts, no specimens of *Ophioglossum pusillum* were present, warranting a determination of “no impact” **(NI)**.

*Sisyrinchium sarmentosum*

Habitat typically includes moist meadows. During protocol survey efforts, no specimens of *Sisyrinchium sarmentosum* were present, warranting a determination of “no impact” **(NI)**.

*Wolfia columbiana*

Habitat typically includes aquatic areas. During protocol survey efforts, no specimens of *Wolfia columbiana* were present, warranting a determination of “no impact” **(NI)**.

## **Mosses**

*Schistostega pennata*

Habitat typically includes crevices of root wads where humidity is high all year. During protocol survey efforts, no specimens of *Schistostega pennata* were present, warranting a determination of “no impact” **(NI)**.

*Tetraphis geniculata*

Rotten logs During protocol survey efforts, no specimens of *Tetraphis geniculata* were present, warranting a determination of “no impact” **(NI)**.

## **Lichens**

*Bryoria tortuosa*

Habitat typically includes semi-open coniferous stands in low elevation transitional areas between wet coastal and inland. During protocol survey efforts, no specimens of *Bryoria tortuosa* were present, warranting a determination of “no impact” **(NI)**.

*Dendriscoaulon entracatum*

Habitat typically includes cyano-lichen rich areas at low to mid elevations. During protocol survey efforts, no specimens of *Dendriscoaulon entracatum* were present, warranting a determination of “no impact” **(NI)**.

*Hypogymnia duplicata*

Habitat typically includes moist coniferous forests, on Douglas-fir, pine twigs, mosses on rocks. During protocol survey efforts, no specimens of *Hypogymnia duplicata* were present, warranting a determination of “no impact” **(NI)**.

*Loberia linita*

Habitat typically includes moist forests, on trees, shrubs, mossy rocks. During protocol survey efforts, no specimens *Loberia linita* were present, warranting a determination of “no impact” **(NI)**.

*Nephroma occultum*

Habitat typically includes coniferous forests, on bark. During protocol survey efforts, no specimens of *Nephroma occultum* were present, warranting a determination of “no impact” **(NI)**.

*Platismatia lacunosa*

Habitat typically includes moist riparian forests on upper branches of *Alnus*. During protocol survey efforts, no specimens of *Platismatia lacunosa* were present, warranting a determination of “no impact” **(NI)**.

## **Fungi**

*Bridgeoporous nobil*

Habitat typically includes true fir snags. During protocol survey efforts, no specimens of *Bridgeoporous nobil* were present, warranting a determination of “no impact” **(NI)**.

*Rhizopogon brunneiniger*

Habitat typically includes low to high elevation dry old growth coniferous forest. There are widely scattered remnant old growth trees within the project area and historical records of *Rhizopogon brunneiniger* occurring on this site. However, there are few areas with intact sections of any substantial size of mature or old growth trees. In addition, the project would minimize the number of trees to be felled. Tree removal would be limited in scope (Table 2) and no old growth trees are slated to be felled. Furthermore, most improvements at the Camp are proposed to take place in previously disturbed areas. In addition, there are no non-intrusive methods to survey for this species and given the very general nature of the information about the location of this fungus within the project area, no means to reasonably mitigate for it. As a result, it is determined that proposed project may impact individuals but would not be likely to cause a trend to federal listing or loss of viability (MIIH) effect.

### **Competing and Unwanted Vegetation**

Improvements to the camp proposed as part of this alternative could increase the risk for introduction of competing and unwanted vegetation through entry of vehicles, equipment, and construction personnel into the camp, as well as soil disturbance activities.

### **CUMULATIVE IMPACTS**

#### **Threatened, Endangered, Proposed, Sensitive, and Survey and Manage Species**

Federally Listed Species

*Howellia aquatilis*

Impacts would be the same as in Alternative 1.

Northwest Forest Plan S&M Species

As with Alternative 1, there would be no cumulative impacts to these species as none have been found on the project site, with the exception of *Rhizopogon brunneiniger*. For that species there are no cumulative actions that would affect it.

### **Competing and Unwanted Vegetation**

Impacts would be the same as in Alternative 1.

#### **c. Alternative 3**

Direct, indirect and cumulative effects would be as described under Alternative 2.

### **4. Conformance to Management Direction**

#### **a. Alternatives 2 and 3**

#### **Threatened, Endangered, Proposed, Sensitive, and Survey and Manage Species**

Both Alternatives 2 and 3 would conform to all applicable management direction. The following actions and procedures would be undertaken to ensure conformance with management direction:

- No bald eagle nesting habitat would be affected.
- Impacts to habitat for other federally listed species would be minimized or avoided by concentrating improvements in previously disturbed areas and conducting most construction activities outside of nesting and breeding seasons for northern spotted owls.
- Federally listed species would be managed consistent with the Federal Endangered Species and Oregon Endangered Species Acts.
- Biological evaluations and/or assessments for federally listed species have been prepared pursuant to NEPA and USFS guidelines. No federally listed species were observed in the project area during field surveys.
- Consultation with USFWS has been conducted for federally listed species.

- No hardwood communities would be affected by the proposed improvements.

### **Competing and Unwanted Vegetation**

Management direction requires preparation of a noxious weed risk assessment and identification of mitigation actions to reduce the possibility of introducing or spreading noxious weeds. A noxious weed risk assessment has been performed for the project area (see Appendix A), resulting in a “moderate” weed risk rating.

As a result, a variety of best management practices (BMPs) are recommended to be undertaken during the course of improvements where applicable to reduce the potential for introduction and proliferation of competing and unwanted vegetation. These BMPs are described in Appendix A.

## **C. WILDLIFE**

### **1. Affected Environment**

The Kiwanis Camp includes a mix of forested areas, riparian areas adjacent to the Little Zigzag River and other wet areas that provide potential habitat for a variety of wildlife species. Two federally listed species have the potential of occurring on or adjacent to the Zigzag District. There are sixteen Forest Service Region 6 (R6) sensitive species and thirty three Northwest Forest Plan Survey and Manage (S&M) species with potential to be found on the Zigzag District and for which the project area potentially provides habitat.

**Table 6: Threatened, Endangered, Proposed, Sensitive, and Survey and Manage Species with Potential to Occur Within Project Area**

Species	Habitat	Presence	Surveys
<b>Threatened, Endangered or Proposed</b>			
<b>bald eagle</b> ( <i>Haliaetus leucocephalus</i> )	N	-	-
<b>northern spotted owl</b> ( <i>Strix occidentalis caurina</i> )	Y	Unk <sup>1</sup>	N
<b>Canada lynx</b> ( <i>Lynx canadensis</i> )	N	-	-
<b>R6 Sensitive Species</b>			
<b>wolverine</b> ( <i>Gulo gulo luteus</i> )	Y	Unk <sup>1</sup>	N
<b>Baird's shrew</b> ( <i>Sorex bairdii bairdii</i> )	Y	Unk <sup>1</sup>	N
<b>Pacific fringe-tailed bat</b> ( <i>Myotis thysanodes vespertinus</i> )	N	-	-
<b>Pacific fisher</b> ( <i>Martes pennanti</i> )	Y	Unk <sup>1</sup>	N
<b>peregrine falcon</b> ( <i>Falco peregrinus anatum</i> )	N	-	-
<b>Larch Mountain salamander</b> ( <i>Plethodon larselii</i> )	Y	N	Y
<b>harlequin duck</b> ( <i>Histrionicus histrionicus</i> )	N	-	-
<b>bufflehead</b> ( <i>Bucephala albeola</i> )	N	-	-
<b>horned grebe</b> ( <i>Podiceps auritus</i> )	N	-	-
<b>Gray flycatcher</b> ( <i>Empidonax wrightii</i> )	N	-	-

Species	Habitat	Presence	Surveys
Cope's giant salamander ( <i>Dicombodon copei</i> )	Y	N	Y
Cascade Torrent salamander ( <i>Rhyacotriton cascadae</i> )	Y	N	Y
Oregon slender salamander ( <i>Batrachoseps wrighti</i> )	Y	N	Y
Oregon spotted frog ( <i>Rana pretiosa</i> )	N	-	-
northwestern pond turtle ( <i>Clemmys marmorata marmorata</i> )	N	-	-
painted turtle ( <i>Chrysemys picta</i> )	N	-	-
<b>Survey and Manage Mollusks</b>	Y	N	Y
Puget oregonium ( <i>Cryptomastix devia</i> )	Y	N	Y
Columbia oregonium ( <i>Cryptomastix hendersoni</i> )	Y	N	Y
Evening fieldslug ( <i>Deroceras hesperium</i> )	Y	N	Y
Crater Lake tightcoil ( <i>Pristiloma arcticum crateris</i> )	Y	N	Y
Basalt Juga Juga ( <i>Oreobasis</i> ) n. sp. 2	Y	N	Y
Columbia duskysnail ( <i>Lyogyrus</i> n.sp. 1)	Y	N	Y
<b>Survey and Manage Mammals</b>			
red tree vole ( <i>Aborimus longicaudus</i> )	Y	N	Y

<sup>1</sup> Species that have the potential to reside or wander into the project vicinity for which no surveys were conducted

#### a. Federally Listed Species

##### BALD EAGLE

No Suitable habitat exists for bald eagles in the area. There are no mapped bald eagle areas in the area (Alan Dyck, personal communication). The area would not be used for nesting. Foraging may occur in the Kiwanis Camp area as steelhead and cutthroat trout are known residents. The fish pond, stocked with large brook trout, affords additional foraging opportunities and may attract eagles.

##### NORTHERN SPOTTED OWL

Surveys conducted on the District since 1979 have revealed a number of documented sightings. The project area has not been called to protocol. There are activity centers within approximately two miles of the Kiwanis Camp (Alan Dyck, personal communication). Nesting, roosting and foraging (NRF) habitat surrounds the project site but is subjected to seasonally fluctuating levels of disturbance from the existing road use as well as from visitors to the Camp.

#### b. R6 Sensitive Species

Potential habitat within the project area is limited to the following R6 sensitive species. No potential habitat exists for other sensitive species listed in Table 5.

##### WOLVERINE

Wolverine tracks have been observed near the Highway 35 corridor, which is generally west of the project area. No potential denning habitat is located adjacent to the project area. The

nearest potential denning habitat as determined by GIS analysis is two miles away both to the north and south. The project area is mapped as potential summer and winter habitat for Wolverine (Alan Dyck, personal communication). The general area could be considered potential foraging or travel habitat by wolverine. However, wolverines are secretive animals and try to avoid humans. Existing road uses and recreation preclude use of the area by wolverines except to travel across the road from one point to another.

#### PACIFIC FISHER

Fisher habitat from a variety of localities within its geographical range is commonly described as widespread, continuous-canopy forests at relatively low elevations and may prefer riparian areas (Powell, 1981). Only three specimens of fishers from Oregon are on deposit in systematic collections, two from Lane County and one from Douglas County. Fishers are primarily carnivorous. Small and medium-sized forest mammals are the primary prey; porcupines, snowshoe hares, tree squirrels, mice and voles are among the most common preyed upon. Such habitat exists adjacent to the proposed project area; therefore fishers could utilize the surrounding area for foraging or other activity. However, existing road uses and Camp activity may reduce or prevent use of the area by fishers.

#### BAIRD'S SHREW

Baird's shrew is found in riparian areas, as well as moist forest floor, with downed logs and woody debris. This type of habitat exists along the margins of the Little Zigzag River that flows through the Kiwanis Camp.

#### LARCH MOUNTAIN SALAMANDER

The Larch Mountain Salamander has been found in a variety of habitats in the Columbia River Gorge and Washington. One location has been documented on the Mt. Hood National Forest outside the Columbia River Gorge. It can be found near the surface under rocks during wet weather. Individuals occur far from streams and seepages and seem to be less common in perpetually wet talus. During amphibian surveys, no specimens were present.

#### COPE'S GIANT SALAMANDER

Cope's giant salamanders are normally restricted to streams and seepages in moist coniferous forest. They occasionally occur in clear, cold mountain lakes and ponds. They can be found under stones, slabs of bark, or other cover in streams. After and during heavy rainfall, individuals can be found at night, out of the streams, crawling among wet rocks and vegetation at streamside. Few metamorphosed adults have ever been found. This species' requirement for clear, cold water may make it sensitive to clearing trees and related habitat disturbance. The Kiwanis Camp meets the habitat conditions for supporting Cope's giant salamanders. During amphibian surveys, no specimens were present.

#### CASCADE TORRENT SALAMANDER

Larval Cascade torrent salamanders are found in small mountain streams, spring heads, and seepages. Metamorphosed individuals are found in humid coniferous forests seldom far from lotic (flowing) waters. Small cold streams with water seeping through moss-covered gravel are preferred habitats. Other typical habitats include the splash zones of rocky, tumbling brooks in shady canyons and the spray zones of waterfalls. The Kiwanis Camp provides habitat conditions for supporting Cascade torrent salamanders, but none were found during protocol surveys in 2002.

## OREGON SLENDER SALAMANDER

Oregon slender salamanders are most common in the mature Douglas fir forests on the slopes of the Cascade Mountains. They also occur in the recent lava flows near the crest of the Cascades and in second growth forest. They often occur under bark and logs lying on the forest floor and in rotten logs. The Kiwanis Camp meets the habitat conditions for supporting Oregon slender salamanders, but none were found during protocol surveys in 2002.

### **c. Northwest Forest Plan S&M Species**

Table 5 summarizes information about potential habitat and survey findings related to these species. Additional information is included in a biological evaluation/biological assessment prepared for this project (Turnstone Environmental, 2003).

## **2. Management Direction**

### **a. Northwest Forest Plan**

As an Administratively Withdrawn area, management direction for the project area is primarily provided by the Mt. Hood Forest Plan. Relevant Northwest Forest Plan S&Gs include those for Riparian Reserves and S&M Species.

### **b. Mt. Hood Forest Plan**

For developed recreation sites, the Forest Plan provides the following management direction:

- A10-011** Wildlife and fisheries habitat improvement activities should be allowed when consistent with the Management Area management direction.
- A10-012** Recreational use of A10 Management Areas located within deer and elk winter range should be restricted between December 1 and April 1.

Forestwide management direction is also provided for threatened, endangered and sensitive plants and animals (FW-170 through FW-179 and FW-241 through FW-246):

- Implementation of recovery efforts for threatened and endangered species.
- Protection of bald eagle nesting habitat,
- Protection or improvement of habitat for other T, E & S species.
- Management of T, E & S species consistent with the Federal Endangered Species and Oregon Endangered Species Acts.
- Preparation of biological evaluations for T, E & S species.
- Consultation with USFWS for T, E & S species.
- Protection of hardwood communities as habitat for wildlife.

### **3. Environmental Consequences**

#### **a. Alternative 1: No Action**

##### DIRECT AND INDIRECT IMPACTS

##### **Federally Listed Species**

###### *Bald Eagle*

As noted previously, no suitable habitat exists for bald eagles in the area and there are no mapped bald eagle areas in the area. Consequently, this alternative would have no effect on bald eagles.

###### *Northern Spotted Owl*

The project area is located in a Riparian Reserve and existing activities would impact potential nesting, roosting, foraging (NRF), or dispersal habitat; it also is within a critical habitat unit. Therefore, a continuation of existing activities may effect, and would be likely to adversely affect, the northern spotted owl (or their habitat). However, because the Camp does not include any owl nesting sites and most activities with the potential to disturb owls would occur outside of breeding and nesting seasons, effects would not be expected to be significant.

##### **R6 Sensitive Species**

Although the project area includes habitat for some R6 sensitive species, this alternative does not include any proposed actions within such habitat at the Camp. Therefore, the No Action alternative would be expected to have no effect on these species.

##### **Northwest Forest Plan S&M Species**

Although the project area includes habitat for some S&M species, this alternative does not include any proposed actions within such habitat at the Camp. Therefore, the No Action alternative would have no effect on these species.

##### CUMULATIVE IMPACTS

There would be no additional cumulative impacts for bald eagles. For northern spotted owls, construction impacts associated with the proposed culvert replacement project could affect owls during nesting and breeding season if conducted during that time.

There would be a potential for cumulative impacts to sensitive amphibian (salamander) species related to the Forest's proposed culvert replacement and revegetation projects. That project could have short-term effects on water quality, sedimentation and other indicators. Impacts of that action will be evaluated under a separate NEPA process.

Given the nature of habitat and characteristics of wolverine and pacific fisher in the project area, no cumulative impacts to these species would be expected. Construction or restoration activities would not affect their use of the area, given the proximity of the projects to the existing road and other improvements which already discourage use of and travel through the project area by these species.

There could be some impacts to sensitive S&M mollusk species related to the proposed culvert replacement project. In-water activities associated with that project could have short term impacts on habitat related to effects on water quality, sedimentation and other indicators. Impacts of that action will be evaluated under a separate NEPA process.

**b. Alternative 2: Proposed Action**

DIRECT AND INDIRECT IMPACTS

**Federally Listed Species**

*Bald Eagle*

The proposed increase in the size of the fishpond under this alternative may make the project area slightly more attractive foraging habitat. If the area were used for foraging, it is likely that any occurrence would be irregular transient use. Eagles also could be affected by noise disturbance during construction activities only if they are foraging in the Camp area. However, the project area is immediately adjacent to an open and active road with a seasonally dependent degree of ambient background noise. After the construction phase, increased noise or other disturbance levels would return to previous levels as negligible increased activity is expected following construction of proposed improvements at the Kiwanis Camp. Since there are no mapped bald eagles in the area, the proposed action would have no measurable effect on bald eagles or their habitat.

*Northern Spotted Owl*

There would be impacts from a continuation of current activities, as described for Alternative 1 and would include increased noise during construction phases and limited tree removal. After completion of construction, noise disturbance levels would return to pre-existing conditions. Therefore, this alternative may effect, and would be likely to adversely affect, the northern spotted owl (or their habitat). However, because the Camp does not include any owl nesting sites, with the nearest nesting site more than two miles away, and most activities with the potential to disturb owls would occur outside of breeding and nesting seasons, effects would not be expected to be significant.

**R6 Sensitive Species**

*Wolverine*

There is no known denning habitat within two miles of the project area. The proposed improvements would negligibly alter habitat conditions for travel, foraging or denning from existing conditions both physically and through changes in noise or disturbance levels. In addition, wolverines are secretive animals that try to avoid humans. The current disturbance level of the Kiwanis Camp likely results in avoidance of the area by wolverines. This alternative would not substantially add to the existing level of disturbance. Should a wolverine happen through the general area, the proposed improvements would not significantly change conditions from the current situation. Therefore, this alternative may impact individuals but is not likely to cause a trend to federal listing or loss of viability (MIIH) wolverines or their habitat.

### *Pacific Fisher*

There is potential habitat within areas surrounding the project site. The proposed improvements would negligibly alter habitat conditions for travel, foraging or denning from existing conditions both physically and through changes in noise or disturbance levels. Should Pacific fisher be using the area or pass through the general area, the proposed improvements would not significantly change conditions from the current situation. Therefore, this alternative may impact individuals but is not likely to cause a trend to federal listing or loss of viability (MIIH) Pacific Fisher or their habitat.

### *Baird's Shrew*

Baird's shrew is found in riparian areas with downed logs and woody debris. This type of habitat exists along the margins of the Little Zigzag River that flows through the Kiwanis Camp. Woody debris will not be removed as part of this project. Tree removal may alter habitat conditions and would adversely change conditions from the current situation but to a limited degree for a limited duration. Placement of some of these felled trees would be performed in consultation with district biologists to maximize the potential value of the woody debris. The replanting of historically disturbed areas would increase the suitability of shrew habitat over time. As a result, this alternative would have no impact on Baird's shrew or their habitat.

### *Larch Mountain Salamander*

The Larch Mountain Salamander has been found in a variety of habitats in the Columbia River Gorge and Washington. One location has been documented on the Mt. Hood National Forest outside the Columbia River Gorge. It can be found near the surface under rocks during wet weather. Individuals occur far from streams and seepages and seem to be less common in perpetually wet talus. During general amphibian survey efforts, no specimens of this species were present, and no impacts would be expected.

### *Cope's Giant Salamander*

Cope's giant salamanders are normally restricted to streams and seepages in moist coniferous forest. They occasionally occur in clear, cold mountain lakes and ponds. The Kiwanis Camp contains these types of habitat. The proposed project has no in-stream components and would not disturb this habitat. Some slight sediment increases may result from earth disturbing activities. Mitigation, minimization, and avoidance measures have been designed to address sediment impacts. During general amphibian survey efforts, no specimens of this species were present, and no impacts would be expected.

### *Cascade Torrent Salamander*

Larval Cascade torrent salamanders are found in small mountain streams, spring heads, and seepages. Metamorphosed individuals are found in humid coniferous forests seldom far from lotic (flowing) waters. Small cold streams with water seeping through moss-covered gravel are preferred habitats. Other typical habitats include the splash zones of rocky, tumbling brooks in shady canyons and the spray zones of waterfalls. The Kiwanis Camp meets the habitat conditions for supporting Cascade torrent salamanders. However, this alternative has no in-stream components and would not disturb this habitat. Some slight sediment increases may result from earth disturbing activities. Mitigation, minimization, and avoidance measures have been designed to address sediment impacts. As a result, this alternative would have no impact on this species or its habitat.

### *Oregon Slender Salamander*

Oregon slender salamanders are most common in the mature Douglas fir forests on the slopes of the Cascade Mountains. They also occur in the recent lava flows near the crest of the Cascades and in second growth forest. They often occur under bark and logs lying on the forest floor and in rotten logs. The Kiwanis Camp meets the habitat conditions for supporting Oregon slender salamanders. During general amphibian survey efforts, no specimens of this species were present. Tree removal may alter habitat conditions and would adversely change conditions from the current situation but to a limited degree for a limited duration. Placement of some of these felled trees would be performed in consultation with district biologists to maximize the potential value of the woody debris. The replanting of historically disturbed areas would increase the suitability of Oregon slender salamander habitat over time. As a result, overall, there would be no impact on this species or its habitat.

### **Northwest Forest Plan S&M Species**

Habitat exists for eight S&M species in the project area, though no specimens were discovered during surveys. The proposed action would not be expected to adversely affect any S&M species. Detailed information about these impacts is included in Appendix C.

## CUMULATIVE IMPACTS

### **Federally Listed Species**

There would be no additional cumulative impacts for bald eagles. For northern spotted owls, construction impacts associated with proposed culvert replacement could result in impacts similar to the direct and indirect impacts described above. While effects of the proposed action and other cumulative actions would be additive to some degree, in combination, they would not be expected to be significant.

### **R6 Sensitive Species**

As with Alternative 1, there could be some impacts to sensitive amphibian (salamander) species related to the Forest's proposed culvert replacement project. That project could have short-term impacts on habitat related to effects on water quality, sedimentation and other indicators. Impacts of that action will be evaluated under a separate NEPA process. Effects of the culvert replacement on these species would be expected to be greater than the effects of the proposed action.

Given the nature of habitat and characteristics of wolverine and pacific fisher in the project area, there would not be any cumulative impacts to these species. Construction or restoration activities would not affect these species use of the area, given the proximity of the projects to the existing road and other improvements which already discourage use of and travel through the project area by these species. While effects of the proposed action and other cumulative actions would be additive to some degree, in combination, they would be expected to be minor.

### **Northwest Forest Plan S&M Species**

As with Alternative 1, there could be some impacts to sensitive S&M mollusk and amphibian species, including Cope's giant salamander and Cascade Torrent salamander related to the proposed culvert replacement project and other ground disturbing activities. In-water activities

associated with that project could have short-term impacts on habitat related to effects on water quality, sedimentation and other indicators. Impacts of that action will be evaluated under a separate NEPA process. Effects of the culvert replacement on these species would be expected to be greater than the effects of the proposed action.

**c. Alternative 3**

Direct, indirect and cumulative effects would be as described under Alternative 2.

#### **4. Conformance to Management Direction**

##### **Alternatives 2 and 3**

Both Alternatives 2 and 3 would conform to all applicable management direction. The following actions and procedures would be undertaken to ensure conformance with management direction:

- No bald eagle nesting habitat would be affected.
- Impacts to habitat for other federally listed species would be minimized or avoided by concentrating improvements in previously disturbed areas and conducting most construction activities outside of nesting and breeding seasons for northern spotted owls.
- Federally listed species would be managed consistent with the Federal Endangered Species and Oregon Endangered Species Acts.
- Biological evaluations and/or assessments for federally listed species have been prepared pursuant to NEPA and USFS guidelines. No federally listed species were observed in the project area during field surveys.
- Consultation with USFWS has been conducted for federally listed species.
- No hardwood communities would be affected by the proposed improvements.

## **D. HERITAGE RESOURCES**

### **1. Affected Environment**

Following is a summary of historical use of the project area by native peoples, early Euroamerican settlers, historical development of the Kiwanis Camp facilities and condition of historical elements of the project area.

#### **Native Peoples**

There are a few references to American Indians use of the upper Sandy River drainage from the nineteenth and early twentieth centuries, although most of these are for areas downstream of the confluence of the Zigzag and Sandy rivers. By the 1830s and 1840s, Indian trails in the upper Sandy River drainage were being used by Euroamericans traveling between The Dalles and Oregon City. The missionary Daniel Lee met a large camp of Indians, probably in the present Brightwood area, in September, 1838. He noted that this “hilly and mountainous region abounds with varieties of berries, and is the September resort of many Indians, who pick and dry them, in large quantities of food” (Lee and Frost 1968 [1844]:158). West from the area of

the Indian camp, Lee followed a trail that appears to have been the route of the future Barlow Road (Lee and Frost 1968 [1844]:158-159).

Transformation of the Indian trails into the Barlow Road may have discouraged Indian use of the traditional route for a few decades. There are no references to Indians in the diaries and journals of Euroamerican settlers along this stretch of the Barlow Road into the 1860s (Beckham 1979; Beckham and Hanes 1992; Clackamas County 1993). It is also likely that Euroamerican settlement in the mid-nineteenth century, the negotiation of treaties with most American Indian groups in Oregon Territory, and relocation of many American Indian populations to reservations resulted in the disappearance of or substantial changes in traditional lifeways of Native people. Indian people did not disappear from the project region during the late 1800s, however. The Coalmen family, who settled in the Cedar Creek drainage south of the Sandy River in 1859, recalled that Indians camped on their property in the summer months through the 1860s, 1870s, and 1880s, fishing at the nearby "Sandy River Falls" (White 1972:18-20, 23-24), a short distance up the Sandy River from the modern town of Sandy.

Two ethnographic studies have been conducted in the general project area that have identified areas of traditional American Indian use. About 5 km (3 mi) to the west of the Kiwanis Camp is Enola Hill, which was a location of traditional importance for some Warm Springs and Yakama Tribal members (Winthrop 1991). A more general ethnographic study of the MHN identified 10 clusters of camps and resource areas on the Forest, including one centered in the Salmon River drainage but extending north to include much of the Zigzag River drainage. Lady Creek and Zigzag Mountain were specifically identified as important resource locations in the Salmon River "cluster." This cluster also included a Government Camp "subarea" that extended from modern Government Camp southwest to Tom Dick and Harry Mountain. There were numerous camps associated with these resource areas, the nearest of which was at Toll Gate. The use of many of these resource areas and camps dates back to at least the late 1800s and has continued to the present at many of them (French et al. 1995).

The ethnographic data thus indicates that the area around Mt. Hood has been extensively used by Tribal members of the Warm Springs Tribes and the Yakama Nation, primarily for gathering berries and fishing. There are no data, however, specific to the Little Zigzag River or the Kiwanis Camp location.

### **Historical Overview (mid-1800s to early 1900s)**

Recreation in the Mt. Hood National Forest developed in the early 1900s. Small cabins, roadhouses, and the occasional homestead characterized the mid-to-late-1800s landscape. The final leg of the Oregon Trail, the Barlow Road, skirted south of Mt. Hood and was the main transportation artery for east to west. With the dawn of the automobile age, summer cabins, hotels, camps, and settlements at Brightwood, Welches, Wemme, Zigzag, Rowe (Rhododendron), and Government Camp brought year-round outdoorsmen and recreational travelers to the region. These mountain communities catered to tourists, hunters, campers, hikers, mountain climbers, and fishermen. Public winter recreation was further developed with the creation of the Mt. Hood Loop Highway (1919-1924), a narrow, but gently curving scenic roadway that in many places followed the route of the old Barlow Road. Present Highway 26 (1958) is a wider and straighter version of the Loop Highway.

From 1846 until the 1910s, Barlow Road served as the main transportation route either as the last leg of the Oregon Trail or as a route for east-bound settlers leaving the Willamette Valley for Central and Eastern Oregon between the 1860s and 1880s. The perilous dirt road was deeded

to the State of Oregon in 1919 and redeveloped or realigned as the Mt. Hood Loop Highway. Construction markedly changed the appearance and in some places the route of the older wagon road, especially the tortuous section descending Laurel Hill. Work on construction of the west leg of the Loop Highway between Zigzag and Government Camp occurred between 1919 and the early 1920s. The completion of the west leg made travel to the wilderness areas of Mt. Hood much more accessible from the Portland area. The east leg from Government Camp to the upper Hood River Valley, now Highway 35, was completed in the mid-1920s.

### **Mt. Hood Kiwanis Camp Historical Development**

Mt. Hood Kiwanis Camp was developed in 1934, when twenty-seven members of east Portland's Montavilla Kiwanis Club approved the construction of a summer camp for underprivileged children. An ideal area ringed by forests and backed by Laurel Hill, about 10 km (6 miles) east of Rhododendron along the Mt. Hood Loop Highway, was agreed upon. The location contained several building spots since it had been used only 12 years previously as a construction camp for road crews laboring on the Loop Highway (Mt. Hood Loop Recreation Plan 1922). The buildings were probably temporary shelters that were no longer in place by the 1930s.

The fourteen-acre plot acquired by the Kiwanis was leased from the U.S. Forest Service on a year-to-year basis under a special use permit. The U.S. Forest Service provided land for the camp, and also advised on the structural plans and supervised the cutting of timber and the construction of all the buildings (Anonymous ca. 1978). Donations from various groups and organizations were secured for materials and funds to build Kiwanis Camp. Labor for construction was supplied by the State Emergency Relief Administration (SERA), a Depression-era relief agency that helped the unemployed. About 400 SERA workers were billeted at Camp Withycombe near Clackamas. Forty to 50 of these men were sent to Kiwanis Camp to erect two barracks and a mess hall that the men could use during the two-year stay required to construct the Kiwanis Camp lodge and other buildings. The first Kiwanis Camp building erected by the SERA was Laurel Lodge in 1935, which remains in use today.

The SERA laborers not only constructed the main Kiwanis Camp buildings, but also a water system with a 14 m (40 ft) well, a 3,000-gallon water tank, a septic tank, latrines, trails, playgrounds, and other improvements. The "Back Cabin," which was originally the caretaker's cabin, then the director's cabin, was built in the late 1930s. Several Kiwanis clubs in the Portland area contributed generously to improve and enlarge the camp in the late 1940s and early 1950s.

Several other buildings and structures were added to the complex between the 1950s and the 1990s. An infirmary and boy's shower facility (a cinder-block addition to the east elevation of Hemlock Dormitory), a wading pool, and a fishpond were constructed in the 1950s. A new caretaker's house was completed in 1969. The adjacent Barlow Forest Camp came under the special use permit for Kiwanis Camp in 1974. In 1976 and 1977, a girl's shower facility (an addition on the west elevation of Hemlock Dormitory), new well building, and a sanitation system were installed. The back addition to the 1930s lodge was also completed. The vehicle maintenance building was constructed in 1980, an adventure course in 1982, Cy Lodge in 1983, the horse barn in 1984, the amphitheater and fire ring in 1986, and Fanning Hall in 1990. The wading pool was also reconstructed during this period, in 1985. The accessible pathways were built in 1997 and the climbing wall in 2000. Laurel Lodge was restored in 2001.

The horse barn and corrals are located on the hill above Laurel Lodge, where a playground at the Kiwanis Camp originally was located. The area is accessed by a short segment of curving, paved road that is part of the original route of a ca. 1868 wagon road connected to the historic Barlow Road. The ca. 1868 wagon road was constructed as an adjunct to Barlow Road to provide the east-bound traveler with a way of crossing Mt. Hood without climbing the steep slopes of Laurel Hill. The route of the historically significant 1846 Barlow Road is located south of the Kiwanis Camp property.

### Status of Historic Structures and Features

There are 23 buildings, structures, sites, and objects that comprise the Kiwanis Camp complex (Table 7). Ten buildings and structures are known or are likely to be 50 years old or older and were therefore considered possibly eligible for listing in the NRHP during research and field surveys and analysis. All 10 of these resources were constructed for use at the Kiwanis Camp and include Laurel Lodge, Hemlock Dorm, cabins, outbuildings, and landscape features such as the wading pool. All of these resources are known or are likely to predate 1950, with the possible exception of the wading pool and the wood shed.

Of these 10 resources, six have been so altered that their historic character has been compromised, and they are considered to lack sufficient integrity to be eligible for listing in the NRHP. Three other structures (the Front Cabin (ca. 1948-1952), the Back Cabin (ca. 1937-1940), and the Restroom (ca. 1934-1936)) have had limited alterations but are not proposed to contribute significantly enough to the historical integrity of the camp to warrant listing on the NRHP. One building is considered eligible for listing in the National Register: Laurel Lodge (1934-1935), (Figure 2) based on the recommendation of the Mt. Hood National Forest Archeologist, with concurrence by the State Historic Preservation Office. It dates to the early period of the Kiwanis Camp and has retained much of its historical character and condition. This recommendation differs somewhat from recommendations of the consulting archeologist who prepared the cultural and historic resources report (Appendix D). That report recommends four additional resources as potentially eligible for the National Register of Historic Places (see Table 7).



There are three additional resources used by the Kiwanis Camp that have historical associations unrelated to the camp. The road used to access the main camp area with the equestrian center is a segment of an alignment of the Barlow Road developed in the 1860s for stage travel. This segment has been listed as a contributing resource for the Barlow Road Historic District. The primary access to the Kiwanis Camp from U.S. 26 is along a surviving segment of the Mt. Hood Loop Highway. The highway was constructed between 1919 and 1924 and served as the main route to Mt. Hood until construction of U.S. 26 in the late 1950s. The segment used to access the Kiwanis Camp is the only remaining portion around Laurel Hill and dead-ends about 400 m (1,312 ft) east of the camp. The third resource consists of the remains of the Barlow Forest Camp, which was built by the MHNH in 1925-1926. The Barlow Forest Camp was operated by the MHNH until 1975, when it was abandoned and use of the forest camp area transferred to the Kiwanis Camp.

**Table 7: Historic-Period, Associated, and Non-Historic-Period Resources at the Mt. Hood Kiwanis Camp**

Resource No.	Name	Year Built	Architectural Classification	Resource Type	Condition/ Integrity	Eligible? *	Notes
<b><u>HISTORIC-PERIOD RESOURCES</u></b>							
1	Laurel Lodge	1934-1935	Oregon rustic	recreational lodge	excellent/good	yes	rear addition 1977; restored 2001
2	"Front Cabin"	ca. 1948-1952	vernacular/Oregon rustic	recreational cabin	good/good	No	
3	"Back Cabin"	ca. 1937-1940	vernacular/Oregon rustic	recreational cabin	good/good	no	north elevation additions ca. 1950s
4	Hemlock Dorm	ca. 1948-1952	vernacular/Oregon rustic	dormitory/infirmary	good/fair	no	additions in late-1950s and 1970s
5	"Cottage Cheese" Building	ca. 1937-1940	vernacular	recreational cabin	good/fair	no	altered
6	Wood Shed	ca. 1950s	utilitarian	shed	good/fair	no	altered
7	Wading Pool	ca. 1950s	utilitarian	pool	good/fair	no	altered 1985
8	Fishpond	ca. 1955	utilitarian	landscape feature	good/fair	no	altered
9	Restroom	ca. 1934-1936	utilitarian	service building	good/poor	no	altered
10	Rock Retaining Wall	ca. 1930s	rock wall	landscape feature	good/good	no	associated with Wagon (Barlow) Road
11	Memorial Plaque on Rock	ca. 1930s	monument	commemorative plaque	good/good	no	possibly moved
<b><u>ASSOCIATED RESOURCES</u></b>							
12	Barlow Forest Camp	1925-1926	none	campground	fair/poor	no	altered
13	Mt. Hood Loop Highway	1919-1924	none	road	good/poor	yes	altered section
14	Barlow Road Historic District	ca. 1845-1918	none	road	good/good	Yes (and currently listed)	section of road within camp modified with paving

---

NON-HISTORIC-PERIOD RESOURCES

15	Vehicle Maintenance	1980	utilitarian/Oregon rustic	mechanic's garage	good/good	no	
16	Fanning Hall	1990	Northwest Regional	recreational lodge	good/good	no	
17	Cy Gengelbach Lodge	1983	Northwest Regional	recreational lodge	good/good	no	
18	Amphitheater	1986	utilitarian	open stage	good/good	no	
19	Utility Building	ca. 1990	vernacular	utility building	good/good	no	
20	Horse Barn and Corrals	1984	pole-barn	equestrian center	good/good	no	
21	Flagpole	1992	flagpole	landscape feature	good/good	no	
22	Caretaker's House	1969	contemporary	house	good/poor	no	altered
23	Laundry Building	ca. 1977-1978	utilitarian	service building	good/fair	no	

\*Preliminary recommendation except Resource No. 14, Wagon (Barlow) Road.

The entire Kiwanis Camp is within the Barlow Road Historic District, which is a National Register property. The road has been used by the Kiwanis for accessing the upper bench area since the 1930s, the latter having served as a playground from the 1930s to at least the 1960s, and as the equestrian center more recently. The road has been altered for Kiwanis Camp use through installation of an underground drainage system and asphalt pavement. Associated with the lower end of the road is the Rock Retaining Wall, that was constructed for the Kiwanis Camp. Given that the road has been integrated into routine operation for the Kiwanis Camp since the creation of the camp and has been modified by the Kiwanis for their use, the road is considered to be an important historic-period resource of the Kiwanis Camp, as well as being a contributing resource for the Barlow Road Historic District.

The Oregon Department of Transportation is presently conducting a study of the surviving segments of the Mt. Hood Loop Highway to determine if these segments are eligible for listing in the national Register. The segment that now constitutes Forest Service Road 39 (from U.S. 26 east past the Kiwanis Camp) is one of the few surviving segments of the Loop Highway on the west side of Mt. Hood and retains integrity of setting, and at its eastern end, approximately 400 m (1,312 ft) east of the Kiwanis Camp, several elements remain, such as an archway for the Bridal Trail and a ca. 1920 bridge. This segment is therefore likely to be eligible for listing in the NRHP.

The Barlow Forest Camp location has been substantially altered since the USFS transferred use of the area to the Kiwanis. The only remaining elements of the Barlow Forest Camp are four stoves, a portion of the circulation network, and the restroom. The stoves are constructed of mortared basalt blocks and probably date to construction of the Barlow Forest Camp in 1925-1926. The road network at the Barlow Forest Camp was largely retained from the 1930s into the early 1960s, although the vehicle crossing of the Little Zigzag River was shifted upstream between 1937 and 1964 (Blanchfield and Royer 1934; Laird and De Young ca. 1937b; Steiger 1964). The road system has been modified by the Kiwanis subsequent to 1975, when the Barlow Forest Camp was incorporated into the Kiwanis Camp. The Barlow Forest Camp Road south of the Little Zigzag River is still in use along its original alignment. The road network north of the river has been substantially modified with use of this area for the ropes course. The original road system is difficult to trace in this area except for the main entrance road from the old Mt. Hood Loop Highway.

The uses of the former campground since 1975 have substantially altered the relationships among these elements. Many new elements have been introduced into the campground that have destroyed the unity it once had. The former Barlow Forest Camp has lost the integrity that would identify it as a historic-period resource separate from the Kiwanis Camp. The Barlow Forest Camp area now appears to be an extension of the Kiwanis Camp. Lacking this integrity, the Barlow Forest Camp is not recommended as a significant historic-period resource.

The remaining 10 resources date to circa 1960 or later. They are less than 50 years old and do not appear to have any noteworthy architectural values. These resources include two major buildings at the camp, Fanning Hall and Cy Gengelbach Lodge.

No evidence of either prehistoric or historic-period archaeological resources was observed during a pedestrian survey of the project area.

## **2. Management Direction**

Forestwide standards require that professionally supervised cultural resource inventories be conducted for all activities that might affect resources that could be eligible for the NRHP (FW-598, 599). Resources identified as eligible for the NRHP must be managed as if they were listed on the NRHP (FW-600) and protected by avoiding adverse impacts (FW-615). Consultation with other agencies such as the State Historic Preservation Office (SHPO), Advisory Council on Historic Preservation and Indian tribes also must be conducted (FW-601). Use permits may contain stipulations or clauses for protection or mitigation of cultural resources when they are present within the affected area (FW-623).

As noted above, the Mt. Hood Kiwanis Camp is within the Barlow Road Historic District. The Forest Plan requires that the entire Kiwanis Camp continue to be managed to preserve the qualities that qualified the Historic District for inclusion on the National Register.

## **3. Environmental Consequences**

### **a. Alternative 1: No Action**

#### DIRECT AND INDIRECT IMPACTS

The No Action alternative does not include any proposed alterations to historic structures or resources at the camp beyond routine maintenance and operation of the camp. No changes are proposed to Laurel Lodge as part of this alternative. Consequently, there would be no impacts on heritage resources.

#### CUMULATIVE IMPACTS

The only related cumulative action is the potential listing of the Mt. Hood Loop Highway on the NRHP. As there would be no major improvements to the Camp as part of this alternative, there would be no impact on the Mt. Hood Loop Highway and no cumulative impacts.

### **b. Alternatives 2 and 3**

#### DIRECT AND INDIRECT IMPACTS

Alternatives 2 and 3 would include removal of the Hemlock dormitory, the "Back Cabin", the "Front Cabin", and two other non-eligible properties located east of Laurel Lodge. They also would include construction of new facilities including cabins, parking areas, a septic system and stream bank rehabilitation. The Mt. Hood National Forest Archeologist has determined that these proposed improvements have a "No Adverse Effect" on any historic properties. The No Adverse Effect finding would be contingent on the formation of a Design Review Team, including a Forest Service historic preservation specialist, to develop and review specific designs. The historic preservation objective for the Team will be to preserve the historic character of the Barlow Road Historic District and Laurel Lodge. The Oregon State Historic Preservation Office concurs with this finding of "No Adverse Effect" with the condition that any demolition and new construction at the camp meet the Secretary of Interior's Standards for new construction in a historic district, and that new construction be compatible with the setting of Laurel Lodge and the Barlow Road Historic District. In addition, final construction plans must be submitted to SHPO for review.

## CUMULATIVE IMPACTS

No alterations are proposed for the Mt. Hood Loop Highway, although some minor changes are planned for both the lower and upper entrance from the Loop Highway to the Kiwanis Camp. Most proposed changes to the Camp would not be visible from the Mt. Hood Loop Highway and none would adversely affect the historic integrity of the Highway in this area.

### **4. Conformance to Management Direction**

#### **Alternatives 2 and 3**

As noted above, because Laurel Lodge has been determined to be eligible for the NRHP, the Forest Archeologist has determined that Laurel Lodge will need to be managed as if it were listed on the National Register, and maintained and operated in a manner that will preserve its historic qualities. The Barlow Road Historic District was entered on the National Register on April 13, 1992. The entire Kiwanis Camp will need to continue to be managed to preserve the qualities that qualified the Historic District for inclusion on the National Register. Proposed improvements to the camp would be consistent with this management direction in concert with formation of a Design Review Team, including a Forest Service historic preservation specialist, to develop and review specific designs. Consultation with SHPO has been conducted resulting in a finding of no objection to the Forest Archeologist's finding of "No Adverse Effect." These alternatives would be consistent with management direction, assuming compliance with the stated conditions of approval.

## **E. TRAFFIC CIRCULATION AND PARKING**

### **1. Affected Environment**

Currently, most visitors enter the Kiwanis Camp from the main entrance near the Camp's western edge via a gravel road. After a short distance, the road splits to provide access to a small parking and loading area on the west side of Fanning Hall and a storage yard/parking area west of the caretaker's residence. Past that point, it leads to the Laurel Lodge cluster (Laurel Lodge, Hemlock Dormitory and existing maintenance building). Informal parking areas are located in the Laurel Lodge area adjacent to the buildings and the existing swimming pool. A paved road provides access to the Camp's equestrian area. This road follows an identified trace of the Barlow Trail and is described in more detail in Section C of this chapter. Another unpaved road beginning in the Laurel Lodge cluster provides access to other portions of the camp, primarily for maintenance activities. It follows the perimeter of the western portion of the Camp's boundary, passing along the south edge of the amphitheater area before crossing a bridge over the Little Zigzag River. It then doubles back along the northern edge of the camp, adjacent to the ropes challenge course and through the old Barlow Road campground area where it connects to the Mt. Hood Loop Highway (Forest Road 2639).

Parking areas at the Camp provide for a relatively limited amount of parking (approximately 15 - 20 spaces). Circulation and parking locations within the Laurel Lodge area are somewhat confusing. The lack of established, well-articulated parking and drop-off areas makes arrival at the camp a somewhat confusing experience for visitors. In addition, the location of parking areas near the existing maintenance building leads to potential conflicts between campers and maintenance staff and vehicles. Overflow parking for events typically occurs along the Mt. Hood Loop Highway, resulting in some conflicts between parked cars and other vehicles using the road.

In addition to the roads that provide access for vehicles within the camp, several paths and foot bridges provide pedestrian access. An interpretive trail is located along the south side of the Little Zigzag River behind and between Fanning Hall and Cy Lodge. A foot bridge over the Little Zigzag River connects the old Barlow Campground area to the portion of the camp between Fanning Hall and Cy Lodge. A second footbridge is located adjacent to the ropes challenge course, with a connecting trail to the access road along the south side of the camp.

## **2. Management Direction**

The following Forest Plan management direction relates specifically to transportation systems, travel and access management in developed recreation sites (A-10):

**A10-022** Roads, associated facilities, and road signing shall conform to the development and recreational experience level planned for the site within required safety regulations.

**A10-022** Motorized vehicles, except over-snow vehicles, shall be restricted to access roads and parking areas.

**A10-022** Non-motorized modes of travel, including bicycles, shall be encouraged.

In addition, Forest-wide standards FW-576, FW-577 and FW-578 relate to construction of new roads, new utility rights-of-way and new transmission lines and communication towers.

## **3. Environmental Consequences**

### **a. Alternative 1: No Action**

#### DIRECT AND INDIRECT IMPACTS

As noted above, the experience of arriving, dropping off campers and other visitors, and parking at the Camp can be confusing and result in conflicts between campers and staff. The No Action alternative would perpetuate these conditions. The lack of adequate parking areas at the Camp and continued use of the Mt. Hood Loop Highway for overflow parking would continue to affect travelers accessing the Hidden Lakes and Little Zigzag Falls trailheads.

#### CUMULATIVE IMPACTS

Potential designation of the Mt. Hood Loop Highway as eligible for the NRHP could affect future use of that road for parking by Kiwanis Camp visitors, further exacerbating the issue of use of the road for overflow parking.

### **b. Alternative 2: Proposed Action**

#### DIRECT AND INDIRECT IMPACTS

One of the objectives of the proposed action is to address issues related to circulation, parking and sense of arrival within the Camp. The proposed action would have the following impacts on transportation and circulation:

- Improve the sense of arrival for visitors to the Camp by creating established drop-off and parking areas.
- Reduce impacts of parking on the Mt. Hood Loop Highway by increasing the supply of parking spaces within the Camp.
- Reduce potential conflicts between maintenance and other vehicles and campers in the Laurel Lodge area by moving maintenance and parking functions out of this area.
- Improve pedestrian access to the Camp by creating a pedestrian walkway into the Camp at the main entrance and utilizing a pedestrian bridge between the proposed new parking area and the rest of the Camp as the primary entrance for visitors.
- Reduce vehicle traffic and miles traveled within the Camp by moving parking areas and the maintenance building closer to the Mt. Hood Loop Highway.

### CUMULATIVE IMPACTS

As in Alternative 1, Potential designation of the Mt. Hood Loop Highway as eligible for the NRHP could affect future use of that road for parking by Kiwanis Camp visitors. The proposed action would reduce effects on this resource in comparison to the No Action alternative.

#### **c. Alternative 3**

### DIRECT AND INDIRECT IMPACTS

This alternative would not incorporate the new parking area proposed in Alternative 2, though the new maintenance building would be located in this area. As a result, this alternative would have the following effects in comparison to the No Action alternative.

- Reduce potential conflicts between maintenance vehicles and campers in the Laurel Lodge area by moving maintenance functions out of this area.
- Improve pedestrian access to the Camp somewhat, but less than in the proposed action, by creating a pedestrian walkway into the Camp at main entrance.
- Reduce vehicle traffic and miles traveled within the Camp somewhat, but less than in the proposed action, by moving the maintenance building closer to the Mt. Hood Loop Highway.

### CUMULATIVE IMPACTS

Impacts would be as described for Alternative 1.

## **4. Conformance to Management Direction**

### **a. Alternative 1: No Action**

No proposed new roads or other transportation improvements are proposed as part of this alternative. Within the Camp, motor vehicles would continue to be confined to roads and parking areas. Non-motorized travel by campers and others is encouraged within the camp. This alternative would comply with management direction.

**b. Alternative 2: Proposed Action**

No new roads are proposed as part of this alternative. Construction of the proposed new parking area would minimize tree removal and utilize eco-paving materials to minimize impacts on stormwater runoff. Within the Camp, motor vehicles would continue to be confined to roads and parking areas. Non-motorized travel by campers and others would be encouraged through development of the new parking and drop-off area and provision of pedestrian facilities over the main entrance bridge. This alternative would comply with management direction.

**c. Alternative 3**

No new roads are proposed as part of this alternative. Within the camp, motor vehicles would continue to be confined to roads and parking areas. Non-motorized travel by campers and others would be further encouraged through development of pedestrian facilities over the main entrance bridge. This alternative would comply with management direction.

## **F. RECREATION**

### **1. Affected Environment**

The Mt. Hood Kiwanis Camp plays an important role in providing recreational opportunities on National Forest lands in accordance with the Forest Service's National Recreation Strategy. This strategy, a result of the 1987 President's Commission for Americans Outdoors, is an effort by the Forest Service to foster public/ private partnerships for the provision of winter and summer recreational opportunities on National Forest lands (USFS, 1988). The Camp serves an important function within the Mt. Hood National Forest, as it provides access to outdoor experiences for individuals with disabilities. These individuals generally face special challenges in accessing and using recreational resources on US Forest Service land, and the Mt. Hood Kiwanis Camp is the only facility of its kind in the Pacific Northwest that caters specifically to their needs. The Camp is also used by other non-profit groups on occasion, and averages approximately 6,000 visitors per year.

There are four significant recreation uses in the vicinity of the Kiwanis Camp, including all uses or features located along the old Mt. Hood Loop Highway.

Paradise Trail Christian Camp is located on the Mt. Hood Loop Highway approximately one mile southwest of Mt. Hood Kiwanis Camp. It consists of one lodge on a two-acre special use permit area. The lodge is used by various church groups for conferences and recreational activities, and averages approximately 6,000 visitors per year (USFS, 1995).

There are three hiking trails located along the Mt. Hood Loop Highway. Hidden Lake Trail #779 is a five-mile hike which passes Hidden Lake and ends at the Pacific Crest Trail #2000, with access to Timberline Lodge or Ramona Falls. The trailhead and parking area for Hidden Lake #779 is located just east of the Kiwanis Camp entrance. The trailhead for Paradise Park Trail #778 lies just west of the Kiwanis Camp entrance. This 5.8 mile trail passes through an alpine meadow on a ridge just north of the Camp before connecting with the Pacific Crest Trail #2000 near the Paradise Park site. Little Zigzag Falls Trail #795c is a short 0.6 mile trail that follows the Little Zigzag River to Little Zigzag Falls. The parking area for this trail lies at the end of the Mt. Hood Loop Highway, approximately two miles east of the Kiwanis Camp.

## **2. Management Direction**

### **a. Mt. Hood Forest Plan**

Management area guidelines for A10 Developed Recreation sites pertinent to this project include:

**A10-003:** All developed sites shall have an approved site plan (FSM 2333) for construction, reconstruction, and maintenance.

**A10-007:** Development (including new construction, reconstruction, or relocation of improvements), administration, occupancy, and use of sites under special use permits shall conform to Management Area management direction (i.e. as detailed in site specific master plans).

The following Forestwide guideline relates to the mission and objective of the Mt. Hood Kiwanis Camp:

**FW-627:** The Forest shall be managed and administered in such a manner as to provide all persons equal opportunity, regardless of race, color, creed, sex, marital status, age, handicap, religion, or national origin.

Forest special use guidelines FW-682, FW-686, FW-687, and FW-690 also apply.

### **b. National Recreation Strategy**

Guidelines from the National Recreation Strategy (USFS, 1988) that relate to this project include:

- Provide interpretation, information, and environmental education as an important part of outdoor recreation. Promote a better understanding of the long-term compatibility of people living in harmony with nature.
- Provide outdoor recreation opportunities to all the people, strengthening our service to urban residents, ethnic minorities, the disabled and disadvantaged, and the elderly and the young.
- Through partnership arrangements, encourage, establish, and sustain a diverse and balanced range of recreational services and facilities on the National Forests.
- Seek partnerships with groups representing ethnic minorities, the elderly, the disabled, the economically disadvantaged, and youth.

## **3. Environmental Consequences**

### **a. Alternative 1: No Action**

#### DIRECT AND INDIRECT IMPACTS

The No Action alternative would have no direct or indirect impacts on the Paradise Trail Christian Camp and minor impacts on the nearby hiking trails. A small percentage of Kiwanis

Camp visitors would be expected to use the nearby hiking trails. Given the relatively low use of these trails, however, no user conflicts would be expected. As described under the Transportation section of this chapter, use of the Mt. Hood Loop Highway for overflow camp parking would continue to conflict with Hidden Lake Trail and Pacific Crest Trail parking. Water quality in the Little Zigzag River could be negatively impacted in the long term through existing practices at the Kiwanis Camp, which could have a minor but likely insignificant impact on the Paradise Trail Christian Camp downstream.

#### CUMULATIVE IMPACTS

No cumulative effects on recreational uses would be expected. The cumulative impacts of the Forest's riparian restoration and culvert replacement projects would include a short-term negative impact on downstream water quality due to sedimentation from construction of the culvert replacements. This would be followed by a long-term positive impact on water quality resulting from a restored riparian area.

#### **b. Alternative 2: Proposed Action**

##### DIRECT AND INDIRECT IMPACTS

The Paradise Trail Christian Camp would not be adversely affected by the proposed action, as most impacts would be localized on the Kiwanis Camp site. Short-term sediment impacts from project construction could create a short-term negative impact on water quality in the portion of the Little Zigzag River flowing through Paradise Trail Christian Camp. However, the improvements would improve water quality over the long term. As no increase in capacity is proposed, impacts upon the recreational use of the three hiking trails located in the vicinity of the Camp would be as described for Alternative 1, except that trailhead parking conflicts would be significantly reduced with development of new on-site parking.

##### CUMULATIVE IMPACTS

Cumulative impacts would be as described for Alternative 1.

#### **c. Alternative 3**

##### DIRECT AND INDIRECT IMPACTS

Direct and indirect impacts would be as described for Alternative 2, except that trailhead parking conflicts could continue to occasionally occur.

##### CUMULATIVE IMPACTS

Cumulative impacts would be as described for Alternative 1.

### **4. Conformance to Management Direction**

#### **b. Alternatives 2 and 3**

Proposed improvements would improve the ability of Mt. Hood Kiwanis Camp, Inc. to provide outdoor recreational opportunities to developmentally challenged individuals. Alternatives 2 and 3 would therefore conform to the applicable Forestwide standards and guidelines, Management

Area guidelines for A10 Developed Recreation areas, and National Recreation Strategy guidelines.

## G. SCENIC RESOURCES

### 1. Affected Environment

The Kiwanis Camp is located in a low-lying area adjacent to the Little Zigzag River and the Mt. Hood Loop Highway to the north, which provides access to the Camp. Relatively steep ridges flank the Camp to the north and south, with the Laurel Hill located just southwest of the Camp. US Highway 26 runs along the top of the ridge to the south. The Camp is used and developed for recreational uses and two roads mentioned above, several hiking trails, the Barlow Campground, historic Kiwanis Camp itself, Christian camp, mile west adjacent to Highway.



View of Fanning Hall Roof from Shoulder of US Highway 26

north and south, with southwest of the 26 runs along the top south. The Camp is used and developed recreational uses and two roads mentioned trails, the Barlow Barlow Road, the and the Paradise Park approximately one the Mt. Hood Loop

The majority of the the US Highway 26 scenic viewshed. The Camp also is within the Barlow Road National Historic District. Most of the buildings at the Camp are similar in architectural style and material; most have been constructed or painted to blend in with the surrounding natural environment. Several buildings are visible from the Mt. Hood Loop Highway, though much of the Camp is obscured by trees. A portion of the Camp (the roof of Fanning Hall and a small portion of the adjacent open space) also is visible from US Highway 26, just east of Laurel Hill (see figure below). However, based on observations from the shoulder and travel lanes of the highway, the Camp is not visible to passenger cars driving within the travel lanes of the highway. It is visible only from the shoulder of the road or from a large truck. It is visible for a distance of 30-50 feet, or slightly less than one second. In other words, if someone is looking for the Camp, they could have a fleeting glimpse of it from a large truck or possibly a sport utility vehicle.

A portion of the Camp also is visible from the Hidden Lake trail (USFS Trail #779) which begins from the Mt. Hood Loop Highway just east of the camp (see figure below). A portion of the roof of the existing maintenance building is visible from this trail for a short distance (20-30 feet along the trail), at a distance of approximately one-half mile away. The Camp is not visible from the Paradise Park Trail (USFS Trail #778) which begins from the Mt. Hood Loop Highway approximately one-half mile west of the camp. Similarly the Camp is not visible from the Pioneer Bridle Trail, which parallels US



View of Kiwanis Camp from Hidden Lakes Trail

Highway 26 to the north between its intersection with the Mt. Hood Loop Highway and an abandoned section of the Loop Highway due east of the trailhead for Little Zigzag Falls.

## **2. Management Direction**

From the Mt. Hood Loop Highway and from the Little Zigzag River, the Kiwanis Camp would be in the foreground. From other viewpoints described above, it would be in the middle ground. Within the US Highway 26 viewshed, for recreational areas, a VQO of retention is required. From viewpoints along nearby trails (Hidden Falls and Paradise Park), a modification VQO is prescribed for the middle ground (more than 1,320 feet from the trail). Furthermore, Administratively Withdrawn Areas, including the organizational camps such as the Kiwanis camp, are required to meet a VQO of partial retention. For recreation and administrative site construction: "buildings and other structures should be located and designed to blend with the natural landscape character in both foreground and middleground distance zones within areas with prescribed VQOs of retention and partial retention."

In addition, the Forest's future desired condition for the Barlow Road Historic District which is a Special Interest Area, is a historical and visual landscape consistent with the historic period of significance (1845-1918). Visitors to the District should experience a natural appearing environment. Management activities should not be evident to the casual Forest visitor.

## **3. Environmental Consequences**

### **a. Alternative 1: No Action**

#### DIRECT AND INDIRECT IMPACTS

As noted above, portions of the existing Camp currently are visible from US Highway 26, the Mt. Hood Loop Highway and the Hidden Lake Trail. For the most part, existing buildings have been designed to blend into the natural landscape. Exceptions include the roofs of Fanning Hall and the existing maintenance building, to some degree. While the roofs are green, the relatively light shade of green contrasts with the darker surrounding vegetation. There are no direct visual impacts to adjacent land uses, as the Camp is not visible from the closest developed land uses (Paradise Park Christian Camp and Hidden Lakes, Little Zigzag Falls and Paradise Park trailheads). No additional structures would be constructed as part of this alternative. Therefore, there would be no additional impact on scenic resources for this alternative. Similarly, this alternative would have no additional impacts on the character of the Barlow Road Historic District.

#### CUMULATIVE IMPACTS

As noted above, the Mt. Hood Kiwanis Camp is located in an area already impacted by developed uses and features, most notably US Highway 26. In comparison to that highway, the camp has a relatively minor impact on the overall scenic quality of the area, particularly given its limited visibility from most surrounding viewpoints. The camp is most visible from the Mt. Hood Loop Highway, which currently is being studied by the Oregon State Department of Transportation for its potential eligibility in the National Register of Historic Places. Preliminary evaluation of this segment of the Mt. Hood Loop Highway indicates that the Kiwanis Camp would have little to no effect on the road's historic character.

**b. Alternative 2: Proposed Action**

DIRECT AND INDIRECT IMPACTS

None of the new or modified structures at the Camp proposed in this alternative would be expected to be visible from US 26. Existing vegetation between the highway and the Camp blocks views of nearly all portions of the Camp, including those areas where new camper cabins, the new pool building and new maintenance building would be located. Similarly, it is unlikely that any of the new structures would be visible from nearby hiking trails (Hidden Lake, Paradise Park and Pioneer Bridle trails), given their location and size.

Some proposed improvements would be visible from the Mt. Hood Loop Highway, particularly the new maintenance building. This building would be designed with natural materials and colors to blend into the natural landscape. This and other new buildings at the Camp would be designed and built to ensure consistency with the character of existing historic buildings at the camp. In addition, the vegetative buffer between the Little Zigzag River and maintenance yard and building would be extended to further reduce visual impacts in this area. Similar steps would be taken to reduce visual impacts of the new pool building and covered bridge entry between the new parking area and Cy Lodge. No other proposed improvements would be visible from the Mt. Hood Loop Highway. Consequently, impacts on the character of the Barlow Road Historic District would be minimal.

CUMULATIVE IMPACTS

Impacts would be as described in Alternative 1. Given proposed architectural design, location and vegetative buffers, proposed improvements at the camp would not be expected to adversely affect the historic character of the Mt. Hood Loop Highway if it were determined to be eligible for the National Register of Historic Places.

**c. Alternative 3**

DIRECT AND INDIRECT IMPACTS

Environmental consequences would be the same as in Alternative 2, with the following exceptions:

- The new maintenance building and yard would have similar effects but in a different location.
- The new pool building would not be visible from the Mt. Hood Loop Highway, though a relatively small portion of the roof could be visible from the shoulder of US Highway 26. As with other improvements, this building would be designed to blend into the natural environment.

CUMULATIVE IMPACTS

Impacts would be as described in Alternative 2.

#### **4. Conformance to Management Direction**

##### **a. Alternative 1: No Action**

As no additional structures or improvements that would affect visual resources are proposed, visual quality objectives would be retained and this alternative would comply with management direction.

##### **b. Alternatives 2 and 3**

A visual quality objective of partial retention would be furthered in both Alternatives 2 and 3. Therefore, these alternatives would comply with management direction.

## **H. AIR QUALITY**

### **1. Affected Environment**

Due to its isolation from major sources of emissions, the types of uses that occur at the Camp, and the limited number of vehicles at any one time, the Camp's overall air quality is generally excellent. No known violations of federal and state air quality standards have been recorded. No air quality monitoring occurs within the vicinity.

Primary sources of air pollution within the project area are motor vehicle exhaust, maintenance equipment operation, and campfires. All of these are minor sources and concentrations of air pollutants.

### **2. Management Direction**

National Ambient Air Quality Standards are established by the 1963 Clean Air Act and subsequent amendments and administered by the Oregon Department of Environmental Quality. Forest Plan standards for air quality generally defer to the state's program (FW-039 to 044).

### **3. Environmental Consequences**

#### **a. Alternative 1: No Action**

#### DIRECT AND INDIRECT IMPACTS

The primary source of air pollution within the project area would continue to be motor vehicle exhaust. No increase over current levels of pollution would be expected and no adverse air quality impacts would be expected.

#### CUMULATIVE IMPACTS

Short-term increases in air pollution would be associated with culvert replacement construction activities. Development of a dust control plan would help to minimize dust associated with these construction activities.

**b. Alternatives 2 and 3**

DIRECT AND INDIRECT IMPACTS

Long-term impacts would be as described for Alternative 1. In the short-term, localized air quality impacts (equipment emissions and dust) would occur in conjunction with construction activities. Development of a dust control plan would help to minimize dust associated with these construction activities.

CUMULATIVE IMPACTS

Cumulative impacts would be as described for Alternative 1.

**4. Conformance to Management Direction**

All alternatives would be conformance with federal and state air quality standards.

**I. NOISE**

**1. Affected Environment**

Noise sources within the project area are associated with recreational activities, Camp maintenance operations and vehicular use. The Camp is relatively isolated and offers opportunities for relative quiet and solitude most of the year. During “season”, day-time recreational activities generate moderate noise levels on site. No noise monitoring is in effect within or in the vicinity of the Camp, and there are no known violations of noise standards.

Noise effects on wildlife are addressed in Section B of this chapter.

**2. Management Direction**

There is no specific Forest Plan management direction for noise. Clackamas County regulates excessive noise through the Sheriff’s Office pursuant to County Code Chapter 6.05.

**3. Environmental Consequences**

**a. Alternative 1: No Action**

DIRECT AND INDIRECT IMPACTS

Existing noise levels would remain unchanged. These noise levels are typical to recreational camps and would not be expected to adversely impact Camp visitors or staff. Noise generation would typically be greatest during drop-off and pickup of Camp attendees. Noise generation would be expected to generally be confined to the Camp and have minimal effect on other Forest users.

CUMULATIVE IMPACTS

Short-term increases in noise levels would be associated with culvert replacement construction activities.

**b. Alternatives 2 and 3**

DIRECT AND INDIRECT IMPACTS

As there would be no increase in Camp capacity or change in uses, long-term noise sources and levels would not be expected to change over those in Alternative 1. It is assumed that all major equipment will be housed inside well-constructed buildings and have minimal noise impacts. Relocation of parking to the old Barlow Campground area would concentrate vehicular noise closer to the highway and reduce it in the center of the Camp. In the short term, increases in day-time noise levels would be associated with construction activities.

CUMULATIVE IMPACTS

Cumulative impacts would be as described for Alternative 1.

**4. Conformance to Management Direction**

All alternatives would be expected to conform to County noise standards.

**J. ADDITIONAL REQUIRED DISCLOSURES**

**1. EFFECTS OF ALTERNATIVES ON PRIME FARM LAND, RANGELAND AND FOREST LAND**

All alternatives would be in keeping with the intent of Secretary of Agriculture Memorandum 1827 for prime land. The project area does not contain any prime farm lands or rangelands. "Prime" forest land does not apply to lands within the National Forest system.

**2. ENERGY REQUIREMENTS OF ALTERNATIVES**

There would be no unusual energy requirements for implementing any of the alternatives. Electrical power is currently available from Portland General Electric and is augmented with propane. As capacity would increase minimally (by a maximum of 10% in Alternative 2) or not at all (Alternatives 1 and 3), there would be no significant increase in energy demands over current levels.

**3. EFFECTS ON ENVIRONMENTAL JUSTICE**

Executive Order 12898 of February 11, 1994 as amended by Executive Order 12948, provides that "each federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority populations and low-income populations." Environmental Justice "is achieved when everyone, regardless of race, culture, or income, enjoys the same degree of protection from environmental and health hazards and equal access to a healthy environment in which to live, work, and play" (Whorton and Sohocki 1996).

The work force of and visitors to the Camp would be comprised of variable numbers of minorities and low-income populations, as Mt. Hood Kiwanis Camp, Inc. provides services to disabled persons irrespective of income level and adheres to a no discrimination policy. In

2002, Mt. Hood Kiwanis Camp, Inc. provided \$30,718 in assistance to low-income families participating in Camp activities. The Confederated Tribes of the Warm Springs Reservation have been contacted about the proposed Master Plan and have not expressed any interest. There are no known areas of religious significance in the project area. The alternatives would all comply with Executive Order 12898 as amended and there would be no disproportionate effects on minority or low-income populations or Indian Tribes as a result of implementing any of the alternatives.

#### **4. EFFECTS ON WETLANDS AND FLOODPLAINS**

Effects on and protection of wetlands and riparian areas are described in Chapter III. No direct impacts to wetland resources would be expected in any of the action alternatives and there would be no filling or excavation of any wetland areas. Significant restoration/revegetation efforts would be implemented in the action alternatives, resulting in improvements to riparian habitats over existing conditions. Floodplains have not been mapped within the project area. Because of stream gradients and topography, the area is not prone to flooding and there has been no documented incidence of flooding in the Camp's 70 year history, including during a 1996 Sandy River Watershed 100-year flood event.

#### **5. COMPLIANCE WITH SECTION 504 OF THE VOCATION REHABILITATION ACT AND THE AMERICANS WITH DISABILITIES ACT (ADA)**

As noted under Purpose and Need (Section I.B), one of the purposes of the proposed Master Plan is to bring Camp facilities into compliance with ADA requirements. Compliance with Section 504 and the ADA would be monitored through review of all construction plans and annual Operating Plans. A new special use permit would also include Section 504 and ADA compliance and monitoring provisions.

### **K. SUMMARY OF ADVERSE IMPACTS WHICH CANNOT BE AVOIDED**

Implementation the proposed action (Alternative 2) or Alternative 3 would result in some adverse impacts to the physical and biological environment and the human environment. Many of these impacts can be minimized and/or mitigated, as described previously. The impacts described below represent those that would occur after application of mitigation measures. The degree of impact would be proportional to the degree of construction, operation and maintenance actually undertaken.

#### **Watershed Values**

In the short term, the action alternatives would result in unavoidable, minor impacts to the sedimentation and water quality, primarily during the construction period. Construction activities would be expected to increase sedimentation in the Little Zigzag River due to activities such as transport of equipment, excavation and other activities. Activities in closest proximity to the river would include construction of a new maintenance building and a new parking area (Alternative 2).

## **Vegetation**

Construction of new facilities would result in unavoidable impacts to vegetation in selected areas where it is removed to construct new facilities, including new camper cabins, a new septic drainfield (Alternative 2), new pool building (Alternative 3) and a new parking area (Alternative 2). However, in the long term, these impacts would be offset to a significant degree by restoration of vegetation in other areas within the Camp.

## **Fish and Wildlife Habitat**

Construction of new improvements in selected areas would have short and long-term effects on fish and wildlife habitat. In the short term, sedimentation effects described above would have unavoidable impacts on fish habitat. Removal of vegetation would reduce available habitat for a variety of wildlife species described in section III.B. Given the nature of the Camp and amount and type of vegetation removed, impacts would be expected to be insignificant.

## **Historic Resources**

There would be some impacts to historic structures at the Camp as two structures more than 50 years old are proposed to be demolished as part of the proposed improvements (Front and Back Cabins). However, these structures are not recommended as eligible for listing on the National Register of Historic Places.

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

Irreversible commitment of resources refers to non-renewable resources, such as cultural resources, or to those factors which are renewable only over long time spans, such as soil productivity. Irretrievable commitment applies to losses of production, harvest or use of renewable natural resources. For example, the timber production capability of the area is irretrievably lost while the area is used as a recreation site. The production lost is irretrievable but the action is not irreversible.

Construction of new improvements at the Camp and continued use of the Camp for recreational purposes would result in an irretrievable loss of timber production at the site during the life of the Camp. In addition, continued use of the Camp for recreation also would result in a loss of wildlife habitat in disturbed areas within the Camp during its use.

Most of the proposed actions, including continued use of the Camp, could be reversed through future discontinuation of use and demolition over time if the Camp did not continue to meet the recreation needs of the populations it serves. There would be no irreversible impacts on hydrology, water quality or other watershed values. There could be some irreversible losses of vegetation or wildlife habitat if the ability to grow vegetation in compacted areas were affected to the degree that it could not be reversed over time.

## CHAPTER IV. LISTING OF AGENCIES AND PERSONS CONSULTED

Consultation was conducted with other state and federal agencies pursuant to NEPA and Endangered Species Act (ESA) requirements and Forest protocols. The following groups and persons were consulted:

- Members of the Willamette Valley Level 1 Review Team for Fish
- Members of the Willamette Province Interagency Level 1 Review Team for Wildlife
- Representatives of the Confederated Tribes of the Warm Springs
- Oregon State Historic Preservation Office
- Zigzag Ranger District and Mt. Hood National Forest staff and resource specialists

Consultation processes and results included:

- **Federally listed threatened and endangered fish species.** Consultation was conducted through preparation and review of a biological assessment (BA) through the Willamette Province Level 1 Review Team. Consultants and Forest Service staff met twice with the Level 1 Review Team to review and discuss drafts of the BA and comments by Level 1 Team members. Pursuant to revision based on comments, the Forest Supervisor forwarded the BA on April 9 to the National Oceanographic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) for formal comment. NOAA Fisheries issued a Biological Opinion, concluding that implementation of the Master Plan would result in an incidental take for listed species but that the anticipated level of take is not likely to result in jeopardy to Lower Columbia River steelhead or Lower Columbia River/Southwest Washington coho salmon.
- **Federally listed threatened and endangered terrestrial species.** The only terrestrial federally listed species with the potential to be adversely impacted is the northern spotted owl. The USFS has completed a programmatic assessment of potential effects on spotted owl and their habitat resulting in a Biological Opinion drafted May 16, 2002. Based on this BO and the camp's proximity to owl nesting sites, it was determined that any construction activities at the camp conducted during owl breeding seasons would result in finding of may effect, likely to adversely affect owls.
- **Heritage (cultural, historic and archeological) resources.** The Mt. Hood National Forest Archeologist provided a recommended finding of "no adverse effect" to the State Historic Preservation Office (SHPO) for comment within a required 30-day comment period. SHPO concurred with this finding with the condition that any demolition and new construction at the camp meet the Secretary of Interior's Standards for new construction in a historic district, and that new construction be compatible with the setting of Laurel Lodge and the Barlow Road Historic District. In addition, final construction plans must be submitted to SHPO for review. Government-to-government consultation with the Confederated Tribes of the Warm Springs Reservation is being undertaken by the District Ranger's Office pursuant to established protocols. On May 7, the District Ranger sent project materials by e-mail to Bobby Bruneau, Natural Resource Director and Clay Penhollow of the Confederated Tribes of the Warm Springs requesting comment on the project. She followed up the e-mail with telephone calls on the same day. As of May 22, the Tribes have not provided any comments in response to these communications.

## CHAPTER V. LIST OF PREPARERS

This environmental assessment was prepared by a consultant team led by Cogan Owens Cogan (COC) in cooperation and collaboration with USFS staff. Subconsultants to COC included Archeological Investigations Northwest (AINW) (cultural and historical surveys and analysis), GreenWorks P.C. (landscape architecture and design), Turnstone Environmental (environmental resource surveys and preparation of biological assessments and evaluations) and Waterleaf Architects (architectural design for Master Plan). Consultant and USFS team members are listed below.

### USFS Staff

Paul D. Koehler	USFS Project Manager, Zigzag Ranger District, Special Uses Coordinator
Colleen Madrid	Zigzag Ranger District, District Ranger
Mike Redmond	Mt. Hood National Forest NEPA Coordinator
Marty Stein	Mt. Hood National Forest, Botanist
Duane Bishop	Zigzag Ranger District, Fish Biologist
Jeff M. Jaqua	Zigzag Ranger District, Archeologist
Alan Dyck	Mt. Hood National Forest, Wildlife Biologist

### Consultant Team

#### *Cogan Owens Cogan, LLC*

Matt Hastie	COC Principal, Project Manager and technical analysis and writing, agency coordination
Jim Owens	COC Principal, senior advisor, NEPA analysis, agency coordination
Damian Pitt	COC Associate, EA preparation/technical writing

#### *GreenWorks, PC*

Mike Abbate	GW Principal, landscape architecture and design, site analysis
Michelle Guthrie	GW Associate, site planning and mapping

#### *Turnstone Environmental*

Tom Williamson	Project Manager/Biologist, Environmental surveys and analysis, preparation of biological assessments and evaluations
Matt Gostin	Biologist, Environmental surveys and analysis, preparation of biological assessments and evaluations

#### *Archeological Investigations Northwest (AINW)*

David Ellis, MPA	Archeological and cultural field surveys, research and documentation
Judith A. Chapman, MA	Archeological and cultural field surveys, research and documentation
Elizabeth J. O'Brien, BA	Archeological and cultural field surveys

## CHAPTER VI. REFERENCES

Archaeological Investigations Northwest, Inc. 2002. Results of an Archaeological and Historical Architectural Survey of the Mt. Hood Kiwanis Camp, Mt. Hood National Forest, Clackamas County, Oregon. December 4, 2002.

Clackamas County Code, Chapter 6.05: Noise Control.

Dyck, Alan. 2003. Personal communications with Matt Hastie, Cogan Owens Cogan, LLC.

Owens, Jim. 2003. Field Observations at Kiwanis Camp Site. Cogan Owens Cogan, LLC.

Turnstone Environmental Consultants, Inc. 2003. Draft Biological Assessment Threatened, Endangered, Proposed, Sensitive Wildlife and Survey and Manage Species. February 25, 2003.

Turnstone Environmental Consultants, Inc. 2003. Kiwanis Camp Improvements Final Draft Biological Assessment. January 22, 2003.

Turnstone Environmental Consultants, Inc. 2003. Personal communications with Matt Hastie, Cogan Owens Cogan, LLC. March 12, 2003.

Turnstone Environmental Consultants, Inc. 2002. Statement of Biological Findings, Surveys Conducted Spring/Summer 2002.

U.S. Departments of Agriculture and Interior. 1994. Supplemental Final Environmental Impact Statement Forest Ecosystem Management Assessment Team Report and Record of Decision on Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl.

U.S. Forest Service, Mt. Hood National Forest. 1985. Zigzag Watershed Analysis. United States Department of Agriculture, Forest Service.

U.S. Forest Service, Mt. Hood National Forest. 1990. Land and Resource Management Plan.

U.S. Forest Service, Zigzag Ranger District. 1979. Kiwanis Master Plan: Environmental Assessment Report. March.