

# Recreation Plan for Green Peter Reservoir and the Quartzville Recreation Corridor



Linn County Parks & Recreation

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# Acknowledgements

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# Green Peter Reservoir Recreation Plan

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# Introduction

## *Why this plan is important*

### **Background**

The U.S. Army Corps of Engineers constructed Green Peter Dam and Reservoir in 1968. In 1969, the Linn County Parks and Recreation Department began operating and maintaining recreation facilities under a lease agreement with the Corps of Engineers. Linn County has also been responsible for managing recreation facilities on nearby Foster Reservoir downstream.

The Corps prepared the first public use plan for Green Peter Reservoir in 1970. Subsequent planning studies and analysis resulted in the 1987 Master Plan for Resource Use. Although outdated, the plan and supporting technical documents provide a solid underlying framework for managing recreation and resource lands. Corps studies and analysis have focused on public desires and trends, resource capabilities and stewardship goals.



Green Peter Dam and Reservoir

Recognizing outstanding recreation potential of Green Peter Reservoir, the Corps of Engineers provided funds for a joint planning effort with Linn County to update the recreation master plan, and to explore opportunities for expanding the county's role in recreation management and operations. David Reed & Associates was contracted in January 2010 to provide planning and outreach services to assist in the project.

### **Planning Context**

Located above the Sweet Home community on the Middle Santiam River and the west slope of the Cascade Mountains, Green Peter Reservoir is part of a system of thirteen multipurpose dams and reservoirs managed by the Corps of Engineers in the Willamette River Basin. Green Peter Reservoir has more shoreline than the other Corps projects, and is three times as large as Foster Reservoir, five miles downstream. Quartzville Creek, designated a National Wild and Scenic River, flows into and forms the north arm of the lake. Quartzville Road parallels the lake and



creek, is designated a National Back Country Byway, and is commonly referred to as the Quartzville Recreation Corridor. The Middle Santiam River flows from the Middle Santiam Wilderness in the Willamette National Forest and forms the south and largest arm of the lake.

Green Peter Reservoir has a primitive, high-mountain lake character, surrounded by private forestlands and large ownerships managed by the Bureau of Land Management. The Willamette National Forest boundary extends to the lake, and the South Santiam River Recreation Corridor connects with downstream Foster Reservoir.

## **Purpose and Need for the Plan**

In 2000, the Corps conducted an assessment of the ten Green Peter management units and prepared an Operational Management Plan, with subsequent updates. The plan identified site and management issues, recommended corrective actions, and has provided guidance for development and operations of each of the sites. Some of the key issues included:

- Public safety and sanitation concerns, campfire risk, vandalism, and adverse resource impacts from dispersed camping along the road in the Quartzville Recreation Corridor
- Undesirable conditions at boat-in sites – primarily sanitation and campfire safety, creating a need to re-evaluate feasibility of the number of existing sites and to realign priorities
- Illegal harvest or destruction of vegetation; soil erosion resulting from use of un-surfaced access roads; illegal digging or artifact collecting at cultural resource sites
- Use of the private logging road along the south shore for uncontrolled access to project lands
- Social conflicts between users, often due to lack of facilities to accommodate user demand
- Inadequate recreation facilities and outdated campground design at Whitcomb Creek Park
- Critical function of undeveloped Billings Park to meet public access demands and meet stewardship responsibilities
- Elk disturbance and habitat damage to soils and vegetation, caused by off-road vehicles in winter months
- Need for interpretive and regulatory signing to promote safety, awareness and respect for natural and cultural resource values

The Corps has made considerable progress to address these management issues over the last several years, including recreation site closures and rehabilitation, road closures and barricades, improving sanitation, and working with Oregon Department of Forestry to designate fire rings and improve safety in the Quartzville Recreation Corridor.

What has become apparent is the need for updating the Green Peter Recreation Master Plan, and to explore opportunities for taking recreation management and development to the next level. Not only is this needed to maintain stewardship responsibilities and meet public demand, but to also capitalize on untapped recreation potential and social, economic, and environmental benefits.

## **Plan Goal and Objectives**

The goal of this plan is to provide the Corps of Engineers and Linn County with strategic direction for future decision-making to improve recreation opportunities and increase public access to Green Peter Reservoir, while helping to protect resource values. The plan requires due diligence, public outreach, policy direction, and consideration of alternative design concepts.

Benefits from fulfilling this planning effort were highlighted by participants during the public outreach process, including an improved quality of life from access to nature and the outdoors, opportunities for family togetherness, public health and well-being, economic impacts to the region, and protection of resource values. Specific planning objectives include the following.

### **Green Peter Recreation Plan Objectives**

- Expand recreation opportunities, provide safe and high quality recreation experiences, improve user satisfaction
- Upgrade recreation facilities, improve management efficiency, brainstorm possibilities
- Protect and enhance natural resources and ecological values; provide public information, strengthen fire prevention
- Explore opportunities for partnering with others including private landowners, Bureau of Land Management, U.S Forest Service, Oregon Department of Forestry, law enforcement
- Position Linn County for balancing entrepreneurial goals (revenue) and its public recreation mandate
- Help Linn County diversify and improve the local and regional economy

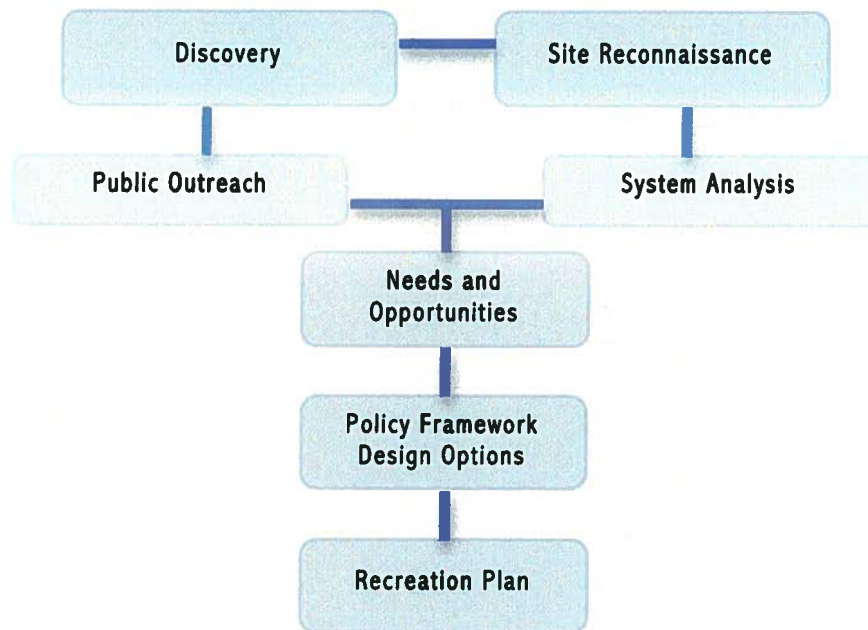
### **Planning Process**

With the quality and extent of Corps plans and background documents, this plan was designed to be a strategic approach focused largely on management issues and opportunities tested against the current Green Peter Master Plan. Planning efforts were therefore able to center on due diligence, feasibility analysis, exploring opportunities, and creating a framework for a preferred future.

Due to the magnitude and complexity of the project, the process was a collaborative effort involving multi-agency staff, community stakeholders, and adjacent landowners, with opportunities for public involvement and engagement. Methods for an interactive process included the following:

- Interviews with Cascade Timber Consulting, Guistina Land & Timber Company, and Guistina Resources
- Interviews with Sweet Home City Manager, Economic Development representative
- Interviews with Oregon Department of Forestry, Bureau of Land Management
- On-site Quartzville Recreation Corridor Inter-agency Committee meeting (Linn County Sheriff deputies, Oregon Department of Forestry, Bureau of Land Management, U.S. Forest Service, Corps of Engineers, Linn County Parks)
- Boat tours and reconnaissance with State Marine Board, Corps of Engineers, Linn County Park staff, Linn County Parks Advisory Board member, and member of the Linn County Board of Commissioners
- Site reconnaissance of parks and facilities with Linn County Parks staff
- Public workshops in Lebanon and Sweet Home communities
- Public Opinion Surveys obtained at the Linn County Fair
- Periodic reviews with the Linn County Parks and Recreation Advisory Commission and Corps of Engineers staff

## Planning Process Green Peter Recreation Plan



Major phases and outcomes of the project included the following, with findings and conclusions:

- Reconnaissance and Discovery
- Public Outreach and Recreation Needs Assessment
- System Analysis (assets and opportunities, problems and concerns)
- Needs and Opportunities (based on findings, strategic issues, and conclusions)
- Policy Framework Plan (Planning Conclusions, Vision and Mission Statement, Policy Goals)
- Two Conceptual Design Alternatives
- Recreation Plan and Implementation Strategies

### Recreation Plan Overview

Based on a Policy Framework including a vision/mission statement and policy goals, two design alternatives were prepared outlining new and expanded roles for Linn County and the Corps of Engineers to consider as a basis for a new recreation plan for Green Peter Reservoir.

Implementation strategies were prepared for Linn County, in collaboration with the Corps of Engineers, to plan, develop, maintain and operate projects identified in the preferred alternative, over a 15-year period with three phases of planning and development.

# Recreation Landscape

## *Green Peter Lake and regional character*

### **Regional Context**

Green Peter Reservoir is located in the heart of Linn County, in a region that has outstanding scenic and recreational qualities (Map 1). A 100-mile radius includes all of the major metropolitan areas of Oregon. Highway 20 is a major travel route 5.5 miles from the dam, and the roadway serves as a gateway to the Cascade Mountains. Sweet Home and Lebanon are nearby communities.

Green Peter Reservoir is accessed from all-paved Quartzville Road, designated by the Bureau of Land Management (BLM) as a Back Country Byway, part of the National Scenic Byways Program. The 50-mile road begins at Foster Reservoir, parallels the north shore of Green Peter Reservoir, extends along the Quartzville Creek National Wild and Scenic River through lands and recreation sites managed by the Bureau of Land Management, and then terminates in the Willamette National Forest where it connects with the West Cascades Scenic Byway.

Quartzville Creek is a popular white water boating and recreational mining area, and the BLM promotes the byway and recreation corridor as “spectacular scenery including rocky outcroppings, old growth forests, and educational values” and an opportunity to “foster economic stimulus to rural communities near public lands.” The BLM manages two developed recreation sites and dispersed camping in the corridor above Green Peter Reservoir.

The Back Country Byway is part of the Mt. Jefferson Birding Trail Loop, one of five loops that make up the 1200-mile Cascades Birding Trail showcasing the region's spectacular scenery and wildlife. The project follows a growing trend of birding trail development across the country, where local partnerships result in bird conservation and sustainable economic development for sponsoring communities.

### **Green Peter Reservoir**

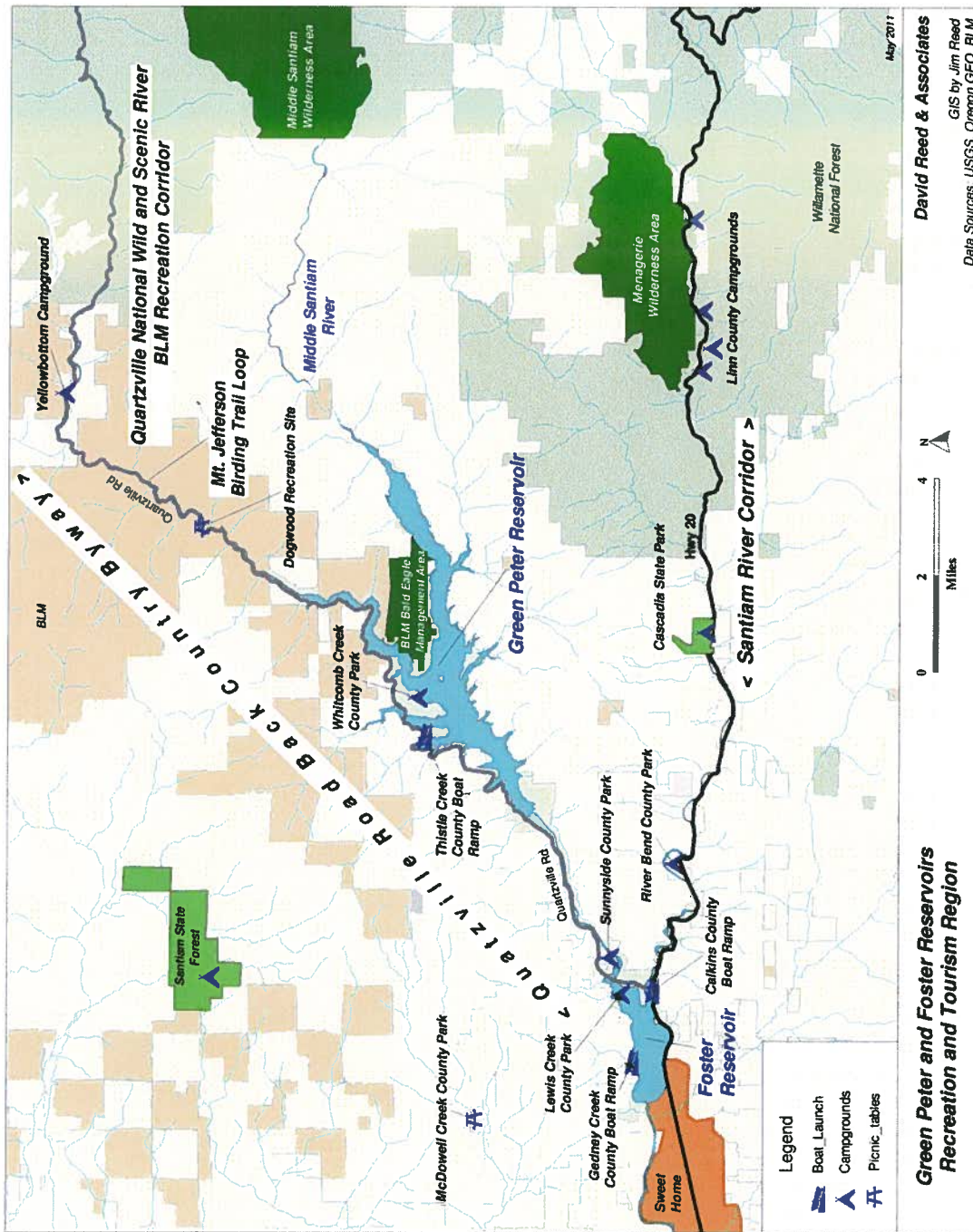
Green Peter and Foster dams work together for the purposes of flood risk management, hydropower, water quality improvement, irrigation, fish and wildlife habitat, and recreation. Based on these authorizations, the Corps developed a water control diagram, or “rule curve” to anticipate water uses and meet the Corps’ legal responsibilities and limitations.

For flood risk management, the Corps maintains low water levels in the winter and gradually fills the reservoirs through the spring. In the fall, the Corps gradually drains the reservoirs to regain capacity for flood damage reduction. Lake levels vary between mid-May and early September and may vary from year to year, depending on inflow to the reservoir. The Endangered Species Act calls for release of a minimum amount of water to maintain river flows for fish and wildlife downstream. These releases also help maintain water quality and provide for purchase irrigation water.

Green Peter dam generates hydropower and is also one of the first reservoirs in the Willamette River system to be drafted for downstream water flow targets. Foster is normally maintained at a consistent level during the summer. Combined with downstream flow requirements and evaporation during the drier summer months, Green Peter Reservoir pool regularly “draws down” or lowers throughout the summer months.

With declines in winter steelhead and spring Chinook salmon runs, fish passage has become a factor in reservoir drawdown and filling strategies with directives outlined in a Biological Opinion by NOAA Fisheries in order to comply with the Endangered Species Act. These reservoir regulation requirements can affect Green Peter recreation use and facility development and will likely continue in the future, with impacts on boat access when lake levels are low. However, the lake’s size, depth, irregular shoreline, inlets, and embayments can potentially mitigate some impacts of seasonal drawdowns.





Map 1: Green Peter Reservoir - Regional Context

## Lake Characteristics

Green Peter Reservoir has been described as “resembling a remote natural mountain lake.” At maximum pool level, it is 3,720 surface acres in size (three times as large as Foster Reservoir), approximately ten miles in length, and about a mile in maximum width. Green Peter has 54 shoreline miles, more than any other Corps lake in Oregon.

The lake branches into two major arms, the Middle Santiam River and Quartzville Creek forming a Y-shaped pool. Whitcomb Creek, Thistle Creek, Rumbaugh Creek and Talley Creek also create side arms. The shoreline is highly irregular and typical of the rugged topography of this part of the Cascades with high forested ridges, precipitous slopes, numerous inlets and bays, and narrow tributaries.

Of 2,732 acres of Corps land surrounding Green Peter Reservoir, at maximum conservation pool approximately 432 acres (16%) are considered suitable for recreation (Corps Master Plan). Remaining lands are chiefly narrow and often steep strips useful as buffers for adjacent lands and wildlife habitat.

Even though Corps ownership is mostly a narrow strip of ownership surrounding the lake, due to the steep topography and second growth forest along with lands managed by the Bureau of Land Management for connectivity or old growth forest, much of the scenic qualities of the region have been restored since the dam was built.

Corps plans classify land use and prescribe management objectives for recreation (intensive or low-density use), wildlife habitat management, vegetation and natural area management, cultural resource management, and project operations.

## Adjacent Land Use and Ownership

Three timber companies are the major upland landowners surrounding the main body of the lake including the entire south side. All upland lands are zoned forest conservation, and therefore unlike Foster Reservoir near the Sweet Home urban area, Green Peter has a more remote and natural character.

The Bureau of Land Management owns most of the upland area in the Quartzville Recreation Corridor, as well as much of Green Peter Peninsula between the two major arms of the lake. The peninsula is the second largest roadless block of BLM land within the boundaries of the Salem District.<sup>1</sup>

Most of the upland managed by the BLM in the Quartzville Recreation Corridor is designated “Connectivity” – a transition zone between general forest management and management for old growth forest. In 1995, the BLM designated a large part of its lands on Green Peter Peninsula as a Bald Eagle Management Area, with almost a third of this area managed for old growth forest.

## Public Road Access

Public vehicular access to Green Peter Reservoir is limited to the north shore from Quartzville Road, and Billings Park at the dam provides the most direct and paved lake access. A private haul road extends along the south shore and prohibits unauthorized use, although hunting by permit is allowed.

Due largely to the remote location, size and configuration of the lake, extensive private ownership, and lack of a public road system, dispersed recreation patterns and traditions have been established over many years.

## Recreation

The Corps estimates 268,000 visits were made to the lake in 2010, and 574,000 visits to Foster Reservoir five miles downstream. Boating, waterskiing, camping, and fishing are the most popular Green Peter recreation activities, with

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<sup>1</sup> The Corps withdrew lands from BLM ownership directly adjacent to and under the reservoir along Quartzville Creek. While The BLM retained mineral and vegetative rights, the Corps has ownership and manages these lands as part of the reservoir project.

some swimming, canoeing, kayaking, and sailing. In 2006, the Corps estimated \$5m in visitor spending within 30 miles of the lake, creating 60 jobs.

### Recreation Site Inventory

Green Peter recreation sites generally reflect land use allocations designated in the Corps Master Plan; a few other sites have maintained historical use patterns. The largest and most developed site is Whitcomb Creek Park on the north shore – the only site with a developed campground on the lake and location of one of two developed boat ramps. Closer to the dam, Thistle Creek Boat Access is the only improved ramp that offers year-round launching at all pool levels (the facility took advantage of a construction by-pass road).

<b>Green Peter Recreation Site Inventory</b>		
<i>Recreation Site</i>	<i>Acres</i>	<i>Description</i>
North Viewpoint	<1	Information center (kiosk) and viewpoint at the dam
Whitcomb Creek Park	328	Campground (35 sites), boat ramp, group camping; largest site on lake
Thistle Creek Boat Access	9	Only year-round boat ramp on the lake, vault toilets
Billings Park	4	South viewpoint at the dam, unimproved boat access, vault toilets
Moose Creek	<1	Unpaved parking area, vault toilets, near unimproved boat ramp on lake
Trout Creek	--	Dispersed camping area; lake drawdown creates a wild river setting
Whitcomb Creek Bridge	<1	Popular staging area for bridge fishing; day use parking and vault toilet
<b><i>Boat-in Site</i></b>		
Elk Flat	39	Elk mgt. area; public use impacts on south shore; site now off limits
Fools Canyon	<1	Heavily used by water skiers due to wind protection of Quartzville arm
Homestead	<1	Historically popular site on Santiam arm; homestead remnant at low pool
Quartzville	<1	Heavily used by water skiers due to wind protection of Quartzville arm
Rumbaugh Creek	50	Largest boat-in site on lake; camping and day use on creek peninsula
Talley Creek	<1	Historically popular site; more wind protected than Homestead site
Two Mile Cluster	--	Historically popular sites closest to the dam; camping and day use
<b><i>Dispersed Campsites</i></b>		
Quartzville Recreation Corridor		Over 50 fire rings designate sites along Quartzville Rd. on north shore
<b><i>Other</i></b>		
Floating Restrooms		1 restroom on each arm; funded by State Marine Bd., Linn Co. O&M

At the south dam abutment, Billings Park provides the most direct paved access to the lake and the only public access on the south shore. No formal boat launching improvements have been made, although the Corps Master Plan placed a high priority on a boat ramp at this location to provide low water access.

Moose Creek and Trout Creek are largely unimproved recreation sites in the Quartzville Recreation Corridor. An unimproved boat ramp near Moose Creek provides the only lake access in the corridor. Trout Creek is one of the more popular recreation sites for camping, although it was originally designated as a boat-in site.

Fishing is popular from the Whitcomb Creek Bridge on Quartzville Rd, supported by an adjacent day use parking area with restrooms.

Seven boat-in recreation sites provide low-density camping and day use with minimal facilities such as fire rings. Depending on the lake level, these sites provide access to creek peninsulas, terraced areas, and old logging roads

for shoreline activities including camping, picnicking, and hiking. Historical dispersed recreation patterns have created several defacto boat-in sites including Two Mile and Middle Fork.

A viewpoint and information kiosk (North Viewpoint) is located at the dam with access from Quartzville Road. This site was designed to provide a gateway to the project.

The Linn County Parks and Recreation Department maintains and operates Whitcomb Creek Park, Thistle Creek Boat Access, and two floating restrooms under agreement with the Corps of Engineers. The Corps maintains and operates all other recreation sites including dispersed camping in the Quartzville Recreation Corridor and boat-in camping on project lands.

### **Corps Master Plan Implementation**

The 1987 Corps Master Plan is a 15-year plan and several of the recreation projects have been completed – notably boat ramp improvements, restrooms and parking. Projects not implemented include the boat launching facility at Billings Park, a signage and interpretive plan, visitor information and interpretive displays, trail development, and improvements at the boat-in sites including restrooms and designated picnic and camping sites. The campground at Whitcomb Creek Park has 35 campsites originally constructed in 1969; the Corps Master Plan proposed 124 sites.

The Master Plan was prepared prior to the Bureau of Land Management withdrawing its plans to prepare a Special Recreation Management Plan for the Green Peter Peninsula, and instead a Bald Eagle Management Plan was prepared for much of the area. The BLM also determined that the peninsula was a large roadless area and had topographic constraints for road access.

Since four of the Corps boat-in recreation sites are on the peninsula, this shift in management has important implications for future recreation management of Green Peter Reservoir. It is also likely that the framework for the Corps Master Plan at least partially anticipated more active participation of the Bureau of Land Management in managing its adjacent lands for recreation.

### **Corps Operational Management Plan**

The Corps' 2002 Operational Management Plan in large part updated the 1987 Master Plan with an assessment and recommendations for improving recreation opportunities and meeting stewardship objectives as outlined in site management plans. The OMP outlined these areas of concern:

- Dispersed camping in the Quartzville Corridor is largely historical use that is unplanned with critical management problems
- The role of Billings Park as a low-water boat access site is fundamental to the master plan concept and ability to meet stewardship objectives and good relationship with private landowners
- Boat-in recreation sites incur problems of sanitation, campfire safety, and site impacts indicating a need to prioritize and perhaps reduce the number of sites
- The interpretive services inventory and implementation plan has not been undertaken and is needed to improve visitor safety, public awareness, and respect for regulations and natural resource values
- A recommended sign plan has not been prepared, which was to be coordinated with Linn County, the Forest Service and the BLM.

### **Fish, Wildlife, and Vegetation**

Fish populations include Spring Chinook and Kokanee (non-anadromous sockeye) salmon. Resident cutthroat trout and rainbow trout and some warm water and other non-game species inhabit the lake. Kokanee Power of Oregon has sponsored three annual derbies at the lake.



Bald Eagle and Osprey nest along shores of Green Peter Reservoir, and Golden Eagle nest in uplands as do Blue Grouse, Northern Pygmy-Owl, Vaux's Swift, and many other breeding birds. Embayments support populations of waterfowl including mergansers, mallards and wood ducks.

Elk Flat along the upper Middle Santiam arm is a winter range for Roosevelt elk and Black-tail deer that feed in the drawdown zone. At the toe of Green Peter Peninsula, Whitcomb Island provides the most significant raptor habitat on the project, and several osprey nests and a Bald Eagle nest are present. The Corps coordinates raptor surveys with the BLM.

Vegetation types and patterns have been influenced in large part by pre-project timber harvesting so that much of the Corps lands are now second growth timber stands including coniferous and broadleaf forest. Vegetation native to the project area consists principally of Douglas-fir, cedar, hemlock, maple, alder, dogwood, and oak. Understory vegetation includes Oregon grape, salal, vine maple, and deciduous huckleberry. Old growth trees exist on Whitcomb Island. The Corps has a stand inventory and forest management planning project underway concurrent with this recreation planning effort.

In an effort to control and eradicate invasive vegetation, for several years Foster and Green Peter reservoirs have been the focus of substantial work on false brome. In some treated sites, herb Robert is now a problem. An informal partnership between the Corps, Bureau of Land Management, Oregon Department of Agriculture, and the U.S. Forest Service has yielded substantial control of false-brome in the Quartzville Corridor.

Since January 1, 2010, all motorized boats (regardless of length) and non-motorized boats 10ft in length or longer, are required to purchase and carry an Aquatic Invasive Species Prevention Permit. The Oregon State Marine Board has the lead role to implement the program.

The Corps maintains and manages habitat for threatened or endangered fish, wildlife, and plants species; promotes self-retention of species richness and diversity; and establishes and protects vegetation along shorelines and within the drawdown zone to prevent soil erosion and to provide wildlife and fish habitat.

## **Cultural Resources**

A Cultural Resource Management Plan has been prepared for both Foster and Green Peter Reservoirs, including specific site locations. Cultural evaluations identified several sites suggesting that prehistoric occupation tended to occur on open terraces above the normal flow of water and near creeks or rivers at their confluence.

Farrell's Camp, an early Euro-American settlement located near the confluence of Thistle and Whitcomb Creeks, consisted of several houses and a post office and is now submerged by Green Peter Reservoir. George B Whitcomb operated the post office in the late 1880s. An historic cemetery is located on the project. Structural remains of a homestead consisting of cement and cobble material are visible during low water periods.

The Corps of Engineers monitors identified cultural resource sites for disturbances such as illegal digging or artifact collecting, OHV activity, and site disturbance. New or previously undocumented sites identified by the public or Corps personnel are protected and the district archeologist is notified.

## **Information, Education, and Interpretive Services**

Informal trails exist at several recreation sites including Whitcomb Creek Park and some of the boat-in recreation sites. These trails do not have trailheads, are not signed and lack interpretive information. North Viewpoint is the only site with a kiosk and visitor information. Wayfinding signs are limited to the recreation sites and there is little information on the region such as the Back Country Byway or recreation opportunities in the Quartzville Recreation Corridor including BLM recreation sites and the Quartzville National Wild and Scenic River.



### **Development Design Criteria**

The Corps design objectives for development and management include maintaining the natural character of the site with minimal visual and site impacts. Essentially this sets a design theme for rustic facilities and signage that is similar to design standards used by the BLM and Forest Service.

# Recreation Needs

## *Public opinions, recreation needs and trends*

### **Public Outreach**

To gauge public opinion and provide outreach opportunities for the Green Peter recreation planning process, public forums were held during July 2010 in Lebanon and Sweet Home. Opinion surveys were also distributed in July at the Linn County Fair.

The public forums were structured so that participants could obtain an overview of the planning project, silently record individual comments on a worksheet, followed by the "snowball" method to provide opportunity for the group to round-robin collective opinions.



The New Era, Sweet Home, Oregon

Approximately 60 individuals participated in the forums. The Linn County Fair generated 37 responses to the same questions asked at the public forums. The Corps of Engineers also provided results of on-site camping and day use comment cards distributed at several recreation sites from 2006-2007. Approximately 56 campers and 131 day users submitted comments.

### **Public Opinion Results**

Overall, the public forums, Linn County Fair respondents, and the Corps on-site comments tended to generate similar themes in terms of issues and concerns and desire for improvements to recreation facilities and opportunities. However, opinions from the public forums and fair respondents revealed high levels of dissatisfaction and major concerns, while on-site comments indicated high levels of satisfaction. The Corps surveys of day users also generated higher levels of dissatisfaction than for campers.

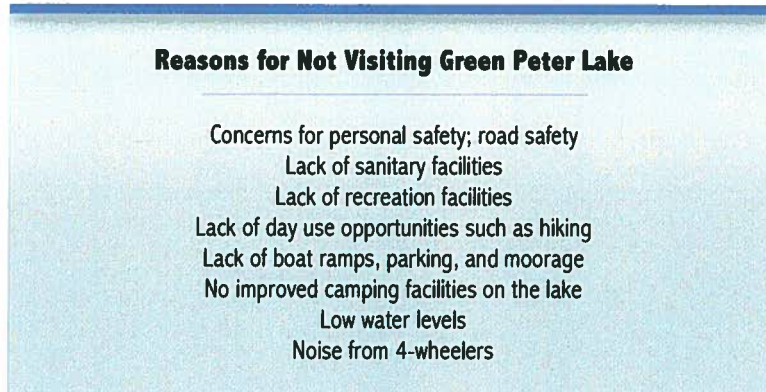
The reason for divergence of opinion between the public forums and on-site surveys is likely due to the many public forum participants and fair respondents who either do not visit the lake or visit less frequently due to high levels of dissatisfaction. Also, most of the participants came to the forums primarily to express concerns and desire for improvements.

While major themes emerged from the two public forums, there were two distinctively different viewpoints on dispersed camping issues and concerns in the Quartzville Recreation Corridor. One group of participants desire basic improvements in road safety, sanitation, and general cleanliness of recreation sites, but they also want to maintain the current policy of no-cost, somewhat unregulated camping opportunities along the road with the ability to moor boats nearby on the lakeshore.

Others expressed concerns for congestion and overcrowding of campers along Quartzville Road, unsafe campsites too close to the road, user conflicts and territoriality, and resource impacts including bank erosion and tree cutting.

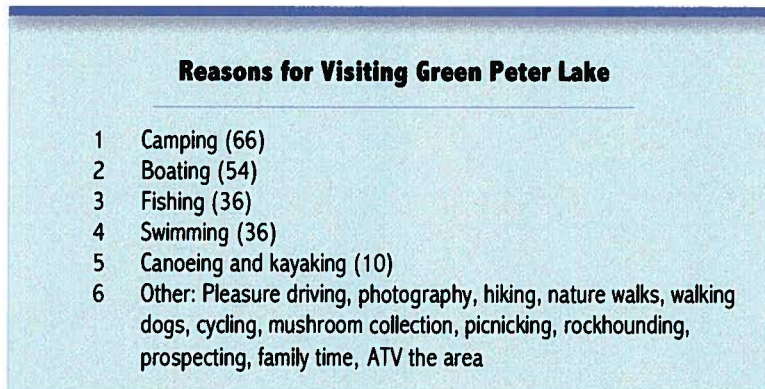
### Deterrents to Lake Visitation

Nine public forum participants stated they did not visit the lake for several reasons; top concerns are personal safety and road safety, and lack of sanitary and recreation facilities.



### Recreation Participation

Public forum participants and county fair respondents visit Green Peter Reservoir for camping, boating, fishing, and swimming. Visitors also engage in a number of recreation activities that tend to reflect Oregon and national trends including hiking, nature walks, and photography.



### Lake Attributes, Opportunities

Natural beauty, scenery, views, wildlife, and remoteness top the list of what visitors like the most about Green Peter Lake. Other attributes are also valued including clear and clean water, and large size providing varying conditions and recreation opportunities with arms, coves and embayments. Depth of the lake is recognized as an asset for offsetting low pool levels, although low water facilities are considered inadequate.

Other important features of the lake and region include year-round use, regional recreation opportunities including free-flowing Quartzville Creek, and advantages of Green Peter compared to Foster Reservoir – larger and less crowded and warmer water due to frequent drawdowns to meet requirements downstream.

Absence of fees for camping, boating, and parking is also important to many visitors to Green Peter Reservoir, especially those who have historically camped in the Quartzville Recreation Corridor for many years.

### **Green Peter Lake Assets and Characteristics**

Natural beauty, scenery, views, wildlife, Whitcomb Island  
Remoteness  
Clear and clean water  
Recreation opportunities of the lake and corridor  
Large size and carrying capacity  
Lake depth offsets low pool levels  
Variety of good fishing, boating, camping opportunities  
Year-round fishing, boating, camping  
Peaceful, quiet, remote, close by  
Great place for family outings  
Varying conditions and areas to explore: (arms, coves, embayments)  
Larger, less crowded, warmer water than Foster Lake  
Floating restrooms  
No fees for camping, boat access, parking  
No after 10 pm rules  
Helps the local economy  
Valuable community resource

Fishing, boating, swimming, and camping are the most popular recreation activities. Group and youth camping, bridge fishing, wakeboarding, waterskiing, and boat-in camping are also valued. Camping along Quartzville Road provides direct access to the lake and visibility and security for boats moored along the shoreline. Camping at Whitcomb Creek Park is also popular, but lack of flush toilets and electricity is considered a factor that limits use.

Popular passive recreation activities include viewing and photographing wildlife such as osprey and elk, and nature walking.

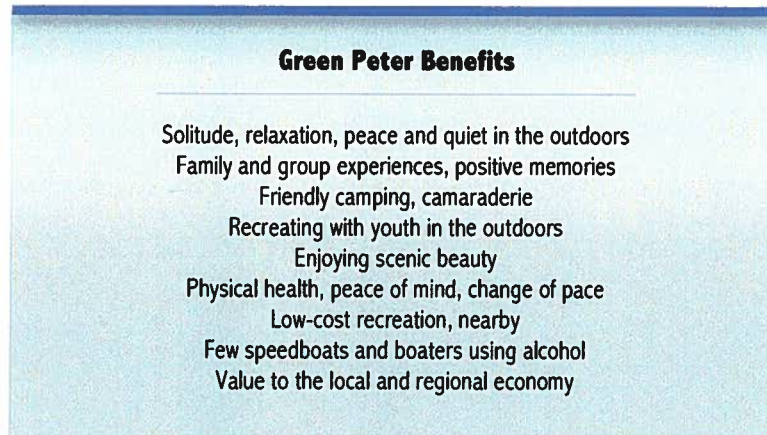
### **Green Peter Recreation Opportunities**

Fishing, boating, camping, scout camping, swimming  
Good Kokanee and bass fishing; bridge fishing  
Great water sports, wakeboarding, water skiing  
Boat-in camping; no fee camping  
Camping along Quartzville Rd with visibility/access to boats  
Scenic viewing, pleasure driving  
Camping at Whitcomb Creek Park  
Enjoying wildlife (eagle, osprey, and elk)  
Photographing wildlife in natural habitats  
Elk and deer hunting  
Nature walking



## Benefits

Public outreach participants believe Green Peter Reservoir provides important social, economic, and environmental benefits including health and well-being, strengthening families and communities, providing access to nature – especially for youth, and contributing to the local and regional economy.



## Issues and Concerns

Outreach efforts indicate a large number of visitors to Green Peter Reservoir are most concerned about safety and security, especially for dispersed camping in the Quartzville Recreation Corridor. They also believe there is a critical lack of basic recreation facilities for both boat access and shoreline recreation, would like for visitors to display a better stewardship ethic, and want more visitor management and law enforcement. Fire danger is also a concern.

Safety is an issue for public agency employees as well – the Corps has concerns with Park Rangers contacting some users year-round, including large groups and small dispersed groups. The Oregon Department of Forestry has also expressed concerns contacting large groups for fire violations.

With the long history and tradition of recreation use of Green Peter Reservoir, some visitors are passionate about the future and are concerned about potential threats from changes in current management or development.

## Needs and Priorities

Public outreach participants identified a lengthy list of specific needs and priorities for improving recreation opportunities and experiences on Green Peter Reservoir. Clearly there is support for major expansion, upgrading, and enhancement of recreation facilities and infrastructure, with the highest priority on safety and security.

High priorities are placed on boat access improvements and parking, moorage facilities, and more sanitation facilities including additional floating restrooms. There is support for improved camping and day use opportunities, and providing facilities for those that do not own boats, as well as hiking trails and interpretive information. Designated swimming areas are also desired.

Participants are supportive of volunteer efforts to assist in keeping areas litter free and clean, and would like to see efforts to initiate a “pack-in/pack-out” effort in camping areas and boat-in recreation sites. Need for public awareness of the importance of resource protection is also a priority. Increased visitor management and law enforcement are high priorities.

Public information, signage, and education are high priorities to improve wayfinding, appreciation and respect for the outstanding scenic and recreational qualities of Green Peter Reservoir and the Quartzville Recreation Corridor.



Participants are also sensitive to the need to be good neighbors with private landowners and to listen to their concerns.

## **Green Peter Issues and Concerns**

### **Safety and Security**

- Poor image of the general public with concerns for personal safety and security
- Security of boats and cars; carjacking, theft
- Quartzville Rd. unsafe – speeding vehicles, narrow, winding, log trucks mixed with boats, RVs
- Speed of vehicles on fishing bridges
- Hazardous conditions at the informal, unimproved boat access sites
- Alcohol use and loud parties; drunk driving
- Employee safety concerns for contacting some visitors, especially in group and dispersed situations

### **Quartzville Recreation Corridor**

- Camping along Quartzville Rd. – littering, sanitation, unsafe, abandoned campfires, overcrowding, congestion, camping too close to road, not enough designated sites, bank erosion, tree cutting, lack of cleanliness; garbage left behind, vandalism and graffiti

### **Recreation Facilities**

- Lack of camping opportunities; lack of developed campsites on the lake
- Inadequate and crowded boat ramps, no dual boat ramps; access during windy conditions
- Lack of year-round boat access; low water boat access in the summer
- Inadequate boat parking; cannot accommodate larger boats and vehicles; cars park in boat trailer spaces, boat-in campers park long-term
- No moorage facilities
- Lack of recreation opportunities on the south side of the lake
- Low water makes boat-in camping very unpleasant
- Lack of designated swimming areas

### **Management and Enforcement**

- Fire danger; not enough enforcement on fires
- Lack of no-wake zones; lack of information on existing zones; lack of enforcement
- Lack of information and signage, limited public education and enforcement presence
- Lack of responsibility for the public to be good stewards
- Concern for quality management and what the future will bring
- Unsightly chain link fence along Quartzville Rd.

### **Threats**

- Discontinuing no-fee camping due to need for revenue to support basic services
- Threat of losing current atmosphere for dispersed camping on Quartzville Rd.
- Becoming too "touristy"
- Overdevelopment, commercialization, fear of "ending up like Detroit Lake"
- Concern for closing access across dam, preventing access to the lake on the south side
- Zebra mussel contamination



## **Green Peter Needs and Priorities**

### **Quartzville Recreation Corridor**

- Improve or discontinue camping on Quartzville Rd.; consider phasing out and developing campgrounds in safer locations
- Improve safety for children and families in dispersed camping areas on Quartzville Rd.
- Establish slow zones in congested areas and reduce speed up to Yellowbottom Recreation Area
- Make safety improvements – more guard rails, repair/upgrade chain link fence below the dam
- Keep no fee camping on Quartzville Rd. and fees at formal campgrounds

### **Recreation Facilities**

- More developed, organized campground facilities with boat docks and moorage
- More developed, affordable camping opportunities near the lake at Whitcomb Cr. Park
- Provide developed group camping opportunities
- More campgrounds for families who do not have boats; provide more variety
- Charge fees, require registration, or issue permits for camping and day use
- More free primitive campsites
- Build one or two campgrounds near boat ramps
- Provide more car parking vs. boat parking
- Need hiking trails

### **Boating Facilities**

- Improve boat access and parking
- Provide moorage facilities, designed for low water
- Boat-in campground with moorage facilities
- Improve public access on the south side of the lake (Billings Park)
- Primitive boat-in campground at Whitcomb Creek Park
- Need more floating restrooms, especially near the Quartzville Arm
- Safe storage for trailers

### **Recreation Opportunities**

- Provide more day use areas; fishing opportunities; lakeshore opportunities for picnicking
- Create designated swimming areas
- More opportunities for persons with disabilities

### **Management**

- More public education, information and education, signs
- Cleaner restrooms; provide more restrooms on the shore and lake
- Enforce rules and regulations
- Work with volunteers to assist with litter and clean-up; work with SOLV to adopt sections of the Quartzville Recreation Corridor
- Resource protection (sanitation, erosion control, tree protection)
- Post and enforce "Pack-in and Pack-out" in all camping areas and sites, including boat-in sites
- Need quiet times at night
- Need to maintain current atmosphere of no-fee, primitive camping with minimal regulations
- Stop meth labs as soon as they appear; prohibit outdoor living
- Keep close contact with CTC and other private landowners to listen to their concerns

## Oregon Recreation Participation and Trends

The Oregon Department of Parks and Recreation has been conducting outdoor recreation research for the last several years as the basis for updating the State Comprehensive Outdoor Recreation Plan (SCORP). The 2003-2007 SCORP augments the Green Peter public outreach program with information on outdoor recreation participation, needs, and trends at both the regional and state level.

Even though fishing and power boating have been increasing in popularity in Oregon over the last several years, the top six Oregon recreation activities include passive recreation activities associated with nature enjoyment, and large numbers also participating in sightseeing and camping.

<u>Activity</u>	<u>Annual User Days (millions)</u>
Running/Walking for Exercise	49.2
Walking for Pleasure	47.4
Birdwatching	18.7
Nature/Wildlife Observation	17.6
Sightseeing/Driving for Pleasure	12.3
R/V Trailer Camping	11.0

For the Green Peter Recreation Plan, this has major implications due to the lack of camping facilities and basic infrastructure such as hiking trails and interpretive services with displays and sightseeing information. As for sightseeing and driving for pleasure, there is also support for making the Quartzville Recreation Corridor a safer and more enjoyable travelling experience.

## Recreation Trends and Needs

Based on data from the Statewide Outdoor Recreation Plan, for the Linn County region the recreation activities with the highest growth rate are nature and wildlife observation (254%), fishing from a boat (97%), sightseeing/driving for pleasure (69%), R/V trailer camping (49%), day hiking (21%), and power boating (17%).

These growth trends are similar at the state level, except for a 138% increase in non-motorized boating (0.2% for Linn County region), 27% increase in waterskiing (2.5% for Linn County region), and 3.1% increase for power boating (17% for Linn County region).

The SCORP identified a need for increasing water-based recreation resources and facilities for both motorized and non-motorized boating to support the growing demand for boating, fishing, and water-based camping.

These trends also provide direction for the Green Peter recreation plan:

- Close-to-home recreation travel is increasing; federal agencies will be challenged meeting this demand
- As the baby boomer generation retires, demand for more amenities and accessibility will increase
- Rural communities want to collaborate with providers to diversify economies, while maintaining values
- Nature study activities are rising in popularity – above all other recreation activities
- In some areas in the future, water may be more valuable for recreation than for agriculture
- Managing conflicts between recreational users is becoming more important
- Expanding public-private partnerships is needed to more efficiently and effectively provide recreation opportunities



# Recreation System Analysis

## *Opportunities, problems and concerns*

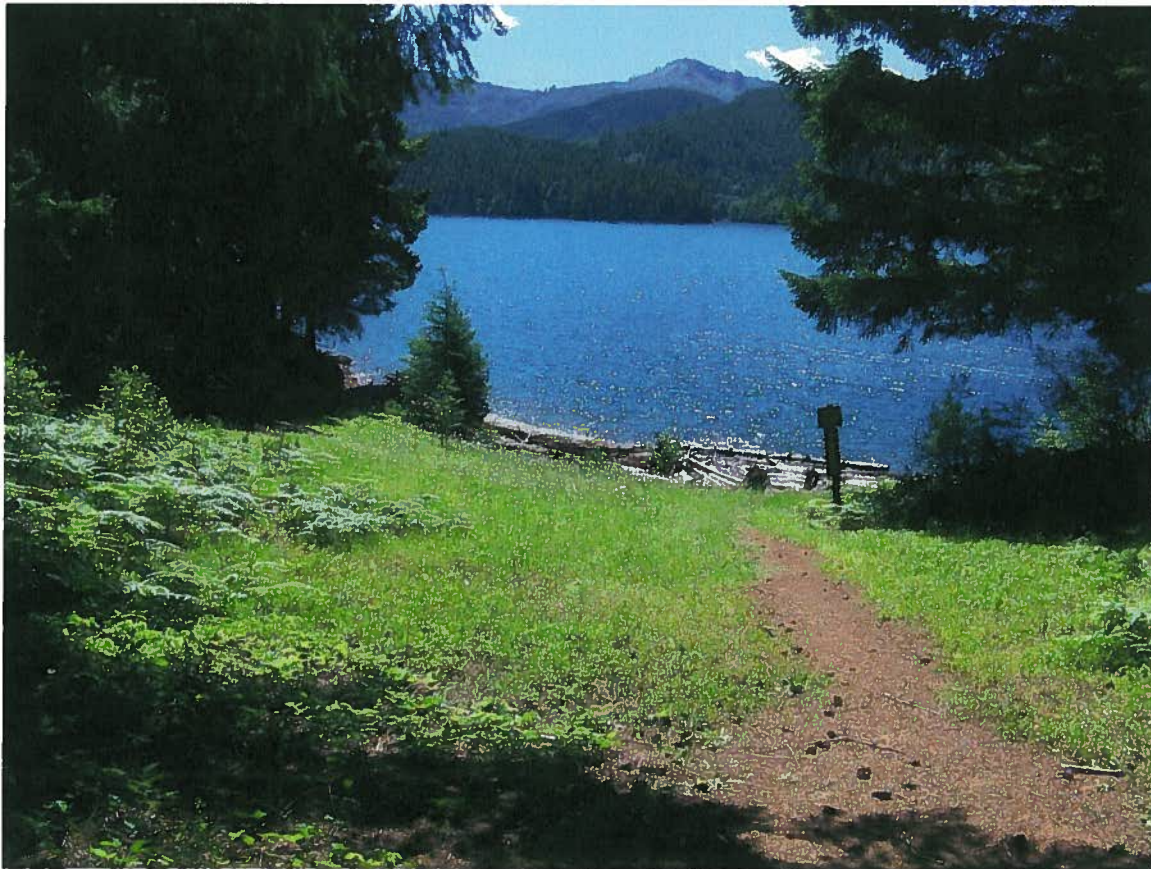
### **Corps Master Plan Context**

The Corps identified five resource use objectives to guide the first phase of master planning (Master Plan for Resource Use, 1981):

- Reflect the best possible combination of social and resource options to meet public needs
- Protect and enhance natural and cultural resources
- Provide regional diversity
- Emphasize and protect unique resources
- Display compatibility with other regional planning activities

The 1987 Master Plan for Resource Use identified four additional goals:

- Eliminate impact to Bald Eagle habitat
- Fire management
- Accelerate the cultural resource management schedule
- Inventory rare, threatened and endangered plant species



Management Unit E: Whitcomb Creek Park

Eleven management units and six boat-in recreation sites framed the master plan based on public needs, observed site use, and facility requirements. Management objectives and development concepts were prescribed for each of the units and recreation sites.

## Green Peter System Analysis

A comprehensive analysis was conducted to assess opportunities and weaknesses of the recreation system for Green Peter Reservoir and the Quartzville Recreation Corridor. Findings for the analysis were based on the following criteria:

- Recreation opportunities and benefits; public access
- Public health, safety and security
- Resource protection and fire prevention
- Public information, way-finding and interpretation
- Economy of scale, management and operations feasibility
- Adjacent landowner effects and opportunities

With this analysis of the existing system as it functions now and conclusions from the needs assessment phase of the planning process, a framework can be established to provide direction for preparing policy direction and conceptual design options for the recreation plan.

## Assets and Opportunities

Written 40 years ago, the best description of assets and opportunities of Green Peter was included in the Corps's first public use plan:

### **General and Scenic Values of Green Peter Reservoir**

Green Peter Lake Public Use Plan, 1970

Green Peter Lake, situated in the Middle Santiam River Basin of the Oregon Cascades, is a part of the scenic outdoor recreational resource that has an outstanding potential to become a prime recreation center of the Willamette River Basin.

In conjunction with existing Foster Lake, it constitutes a complex that will continue to provide water-oriented recreation opportunities for an ever-increasing number of people. Full development and management of Green Peter Lake will be integrated with that of the other lakes on the basis that it will be a major contributor to the essential environmental quality of the general area.

The project created an artificial, inland lake with a wooded, irregular shoreline. The background of rugged mountains offers considerable scenic attraction. The waters of the lake are clear, pleasantly inviting, and relatively stable throughout the normal recreation season.

The perimeter of the lake is characterized by precipitous canyons and high, narrow ridges. There are several accessible sites fronting on the lake that have topography and usable space suitable for development of outdoor recreation facilities.

Green Peter Lake with its rugged terrain, absence of adjacent private development, and heavy timber growth, present an environment well suited to camping.

The Eugene-Springfield, Salem-Albany, and Portland metropolitan areas are all located within the overnight or vacation-use area of the project.

## Recreation Opportunities, Benefits, Public Access

Green Peter Reservoir, downstream Foster Reservoir, Quartzville Recreation Corridor and the Back Country Byway have outstanding potential as a major destination area for recreation, travel, and tourism. Quartzville Road functions as an all-paved gateway not only to the two Corps lakes, but also to outstanding regional recreational opportunities including the Quartzville National Wild and Scenic River, recreation sites managed by the Bureau of Land Management, and ultimately the Willamette National Forest and the Santiam Wilderness Area in the Cascade Mountains.



Green Peter Reservoir and the Quartzville Recreation Corridor have exceptional recreation opportunities, natural beauty, and abundant natural and cultural resource values. The second growth forest has restored much of the scenic qualities of the region, especially on Corps and BLM lands.

Green Peter Reservoir offers outstanding water-based recreation opportunities due to its size, depth and capacity to support a variety of activities on open water as well as sheltered arms and coves. Users value the clean, clear water – warmer than Foster Lake because it has a higher priority for release of water for downstream requirements.

The lake is popular for boat, bank, and bridge angling, and offers excellent Kokanee and landlocked Chinook salmon. Elk Flat is winter range for Roosevelt elk and Black-tail deer, and Whitcomb Island and much of Green Peter Peninsula provide the most significant raptor habitat including bald eagle and osprey nests.



Cultural and historical resources include an early Euro-American settlement (now submerged by the lake), historic cemetery, and structural remains of a homestead visible during low water periods (Homestead Recreation Site). Pre-historic occupations likely occurred on open terraces near creeks and rivers at their confluence.

Natural, cultural, and historic values provide outstanding opportunities for an interpretive and educational program; informal hiking trails – often on abandoned logging roads – provide exceptional views and offer pristine forest environment experiences.

Whitcomb Creek Park is the largest public-owned land (328-acres) designated for recreation on Green Peter Reservoir. It has high potential to function as a hub for the recreation system including boat access. The park provides the only developed campground on the lake with 35 sites, water and restrooms, and is the location of one of two full-service boat ramps.

Fishing from the Whitcomb Creek Bridge is a popular activity, and the day use area nearby provides parking and restroom facilities.

The Thistle Creek Boat Access site provides year-round access to the lake, with restrooms and parking. Two floating restrooms – one in each arm – are very popular with boaters and are maintained by Linn County Parks.

The North Shore Viewpoint and Billings Park at the dam have excellent potential for providing a gateway to the lake, with outstanding views above and below the dam, and the most direct public access to the lake. The Corps has identified Billings Park as having a critical role in providing boat access to the lake and disseminating public

information, while meeting stewardship responsibilities and long-term success in managing and realigning public use along the south shore. Bank fishing is very popular at Billings Park.

A large privately owned peninsula is contiguous with Corps project lands located adjacent to Thistle Creek Boat Access; this site has excellent recreation potential including possible expansion of the Thistle Creek boat ramp and parking facilities.

Trout Creek is the most suitable recreation site for organized camping and day use on the lakeshore in the Quartzville Recreation Corridor – Quartzville Road appears to have been relocated away from the lake. When the lake fails to fill or at the end of the summer when the lake is lowered, Quartzville Creek is restored to a free-flowing river.



Management Unit C-5: Trout Creek

The Moose Creek recreation site is located in the Quartzville Recreation Corridor consisting of a small flat area with steep terrain surrounding an embayment at the mouth of Moose Creek. Mature coniferous forest provides bald eagle and osprey habitat. Although the area is currently used as a parking lot supporting tent and RV camping, it is most suitable for a trailhead and nature interpretation to access high quality natural features in the recreation corridor. A nearby unimproved boat ramp is a heavily used in this part of the corridor.

Opportunities for boat-in dispersed camping and day use activities such as hiking are excellent in some locations for much of the season due to a few gentle terraces, abandoned logging roads, and the scenic landscape setting with protected coves, inlets, and peninsulas. Two Mile and Rumbaugh Creek are considered to be the most suitable sites for use, maintenance, and management.

Several parts of the lake are ideal for non-motorized boating activities, and may have potential for special zoning designations and/or no-wake zones. A number of side arms have scenic qualities and provide wind protection including Rumbaugh Creek, Talley Creek, Thistle Creek and Whitcomb Creek.

BLM lands on scenic Green Peter Peninsula constitute the largest and most strategic, intact, public ownership on the lake – and the second largest roadless area in the BLM Salem District. A large part of the peninsula is managed as a Bald Eagle Management Area, and much of the area adjacent to the Quartzville arm is designated for old growth management. BLM ownership in the Quartzville Recreation Corridor above Green Peter Reservoir is also substantial.

Recreation visitors value Green Peter Reservoir and the Recreation Corridor for the solitude and natural beauty, opportunities for family outings, year-round fishing and variety of boating activities, camping, swimming, hiking and viewing wildlife, and benefits to the local and regional economy.

### **Public Health and Safety**

Funded by the Marine Board, Linn County maintains two floating restrooms to meet sanitation needs of the boating public. Vault restrooms are provided at most of the heavily used recreation sites; both seasonal and permanent portable restrooms are provided in other areas.



Management Unit I: Moose Creek

Linn County sheriff deputies and ODF timber deputies have increased law enforcement activities and presence at Green Peter Reservoir and in the recreation corridor, with notable improvements in public safety and security. The Linn County Marine Patrol is responsible for lake enforcement.

Green Peter law enforcement officers (LEOs) tend to function as “recreation hosts” and support the Corps and Linn County park rangers in visitor management. Linn County park rangers were recently given citation authority to enhance public safety and security.

A “Recreation Corridor Committee” consisting of the Corps of Engineers, Linn County staff and LEOs, the BLM, and the ODF have been collaborating to reduce dispersed recreation impacts and improve public safety and security along Quartzville Rd.

### **Resource Protection and Fire Prevention**

The Corps has been taking corrective action to prevent adverse site impacts and improve public health and safety for dispersed camping in the recreation corridor, with successful closure of some sites considered unsuitable for use along the roadway. The Corps has initiated a ban on dispersed camping in the Quartzville Recreation Corridor between Nov. 1 – April 30 to improve resource protection and fire prevention.

The Corps has gated and installed barriers at several boat-in sites on the south shore to control off-road vehicles and other unauthorized public access, and taken steps to reduce fire risk and improve public health and safety including delineation of campsites with fire rings. Abandoned personal property and household garbage has been removed periodically, including vehicles.

The Corps continues to refine its operations and management plan to address adverse site impacts caused by dispersed recreation and constraints of maintenance management. The Corps has evaluated recreation potential of boat-in sites and ranked them based on criteria of service access, moorage, aesthetics, impact from use, and shoreline condition.

Oregon Department of Forestry has had a major role in fire prevention and resource protection at Green Peter Reservoir, establishing criteria for dispersed camping in the recreation corridor to minimize fire risk, controlling off-road vehicle use, especially on the south side of the lake, and other enforcement activities related to fire prevention and adverse resource impacts from the public.

While fire risk is a major concern, land ownership patterns around the lake assist in fire prevention due to the large tracts of private ownership. Wildfire risk is also minimized by prohibiting public access to the haul road along the south shore.

A forest management plan will be initiated in 2011 and will assist in managing healthy forest settings in recreation areas. The Oregon Fish and Wildlife Department and local and state bass organizations have been active in habitat restoration and enhancement projects on Green Peter Reservoir. The Corps' Natural Resource Specialists and Park Rangers monitor sites for disturbances such as illegal digging or artifact collecting, ORV activity, erosion, and other adverse impacts.

### **Public information, Way-finding and Interpretation**

As a Back Country Byway, Quartzville Road provides an outstanding opportunity to celebrate its gateway function – not only to both Foster and Green Peter Reservoirs as a major destination, but also to regional recreation opportunities including the Quartzville National Scenic and Wild River, BLM recreation sites, the Willamette National Forest, and the Cascade Mountains.



North Shore Viewpoint (at the dam)

The North Shore Viewpoint at the dam provides excellent opportunity to function as the major visitor information and greeting center for both the lake and the recreation corridor, once designed for an outstanding view of the canyon and tailwater at the dam (now overgrown with vegetation)

As the only paved public access to the region and Green Peter, the Quartzville Back Country Byway has the potential to meet visitor needs for wayfinding and information as well as provide trailheads and interpretive information.

Outstanding natural, scenic, and cultural values of Green Peter Reservoir and extensive documentation by the Corps represent an opportunity for preparing a comprehensive interpretive and signage program for the lake, including loop trails.



The combination of both remote boat-in and shoreline recreation opportunities enriches the potential for an interpretive and educational program.

#### **Economy of scale, management and implementation feasibility**

Strategic central location and size of Whitcomb Creek Park offers the opportunity to function as a hub for recreation use to achieve critical mass essential for meeting management and revenue goals. Concentration of public land on the north shore enhances ability to create a sound critical mass for management and development efficiency, and to supervise visitor use.

Two Mile and Rumbaugh Creek boat-in sites best meet economy of scale objectives including service access, moorage, aesthetics, shoreline condition, and resource protection.



Management Unit C-1: Rumbaugh Creek

Billings Park and the North Shore Viewpoint offer the most direct and efficient opportunities for public information and access to the lake, with potential for serving as the major underpinning of the entire recreation system for the lake.

Green Peter Reservoir provides an outstanding opportunity to become a demonstration project through a partnership between local government and a federal agency, exploring innovative approaches to recreation planning, development, and management, including off-grid technology and creative partnering with private landowners and other federal and state agencies.

#### **Adjacent landowner effects and opportunities**

The BLM is the primary natural resource management agency with jurisdiction of federal lands in the Green Peter Reservoir area. Outstanding opportunities exist for partnering with the BLM to develop a comprehensive recreation program.

Two large timber companies manage most of the private land adjacent to Green Peter Reservoir, creating opportunities for partnering and collaborative efforts. Partnering opportunities with adjacent private landowners range from entering into agreements for Linn County or the Corps of Engineers to manage strategic private parcels and improve the recreation system, to a more active role for commercial recreation development on private lands consistent with land use regulations.

As proposed in the original Corps Master Plan, developing Billings Park as the most direct public access to the lake would facilitate prohibiting vehicles from using the haul road to gain access to the south shore and trespass on private lands.



## Problems and Concerns

Many of the system problems and deficiencies are due to historical use patterns that have been established over many years, often creating impacts in areas that were not prescribed in the Corps Master Plan such as dispersed camping in the Quartzville Recreation Corridor. Other problems reflect the fact that many recommendations in the master plan have not been implemented and the plan is ten years past its planning scope.

## Recreation Opportunities and Public Access

Green Peter Reservoir is underutilized and has untapped recreation potential. Recreation facilities and infrastructure on Green Peter Reservoir and in the Quartzville Recreation Corridor are outdated and inadequate to meet visitor demand, sustain current recreation use, and protect resource values.

Only 16% of the Green Peter project lands is considered suitable for recreation, with largely narrow and often steep strips of public ownership. Lake drawdowns often exacerbate accessibility.

Whitcomb Creek Park is the largest, most suitable site for recreation development on the lake; the small campground in the interior, a group camping area, and one-lane boat ramp and small parking area are the only existing improvements. The site's master plan has not been implemented; an additional water well would likely be required to expand use.

Recreation corridor campsites violate acceptable development standards, which creates overcrowding and social conflicts. Green Peter is the only reservoir operated by the Corps of Engineers that provides for dispersed camping. Boat-in camping is dispersed throughout the lake, with few sanitation facilities at boat-in recreation sites.

Limited boat access and inadequate parking facilities on Green Peter Reservoir have created user conflicts and long wait times, resulting in an unfavorable public image of the lake as a recreation destination. No formal moorage facilities exist.



Management Unit F: Billings Park

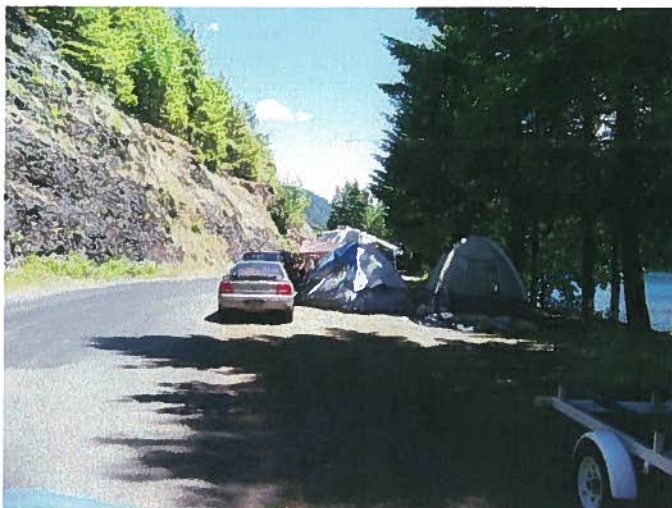
Thistle Creek is the only year-round boat access facility, marginally functions during major drawdown periods, and parking capacity for boat trailers and vehicles is often exceeded.

Day use and group facilities, accommodations for non-motorized boating, trails and interpretive information are major gaps in recreation services. No formal swimming areas are designated; a recent drowning occurred at the Thistle Creek Boat Access area.

Green Peter Reservoir is off-grid, a major constraint for developing basic recreation facilities and infrastructure.

Historical use – especially dispersed camping along the recreation corridor, boat-in recreation, and access to a network of abandoned logging roads – has made it difficult to manage, service and control recreation use. A reoccurring management issue has also been persons living on public land.

The Quartzville Recreation Corridor is the only area where camping is accommodated near the lake, other than the boat-in recreation sites. Lakeside camping and moorage facilities are high priorities for recreation users.



Dispersed camping in Quartzville Corridor next to the lake

Public access to Green Peter Reservoir is limited to Quartzville Rd and Billings Park at the dam. Billings Park is the most direct paved access to the lake and is a popular area for bank fishing, yet there is no formal boat access, parking is inadequate, and there is no infrastructure for day use other than restrooms. The Corps Master Plan emphasizes the crucial role of Billings Park as an underpinning of the recreation system, including ability to prohibit public access through private land and maintain stewardship responsibilities for boat-in recreation sites on the south shore.

The Billings site has topographic constraints for improving and expanding facilities, and the road across the top of Green Peter Dam is single-lane, which could be a challenge if traffic increases over the top of the dam. From time to time the road must be closed to accommodate maintenance of the dam. Additionally, when the reservoir was constructed, the Corps granted an exclusive easement to two timber companies for the Middle Santiam South Bank Road for logging purposes. The timber companies later issued a license to the Corps for public use and maintenance of a portion of the road to provide access to Billings Park, although the agreement has expired. The Corps will investigate pursuing a more permanent access to Billings Park.

Moose Creek and Trout Creek recreation sites are unclear in function and lack organization and design; an informal boat access site near Moose Creek has no parking facilities.

Three sites designated by the Corps as boat-in sites on the Green Peter Peninsula are not serviceable by land because it is a roadless area.

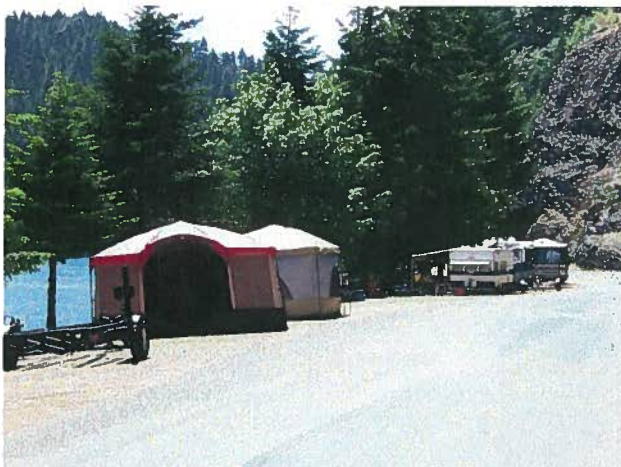
Although Bureau of Land Management ownership in the Quartzville Recreation Corridor and on the Green Peter Peninsula is substantial, the BLM is not actively involved in providing recreation opportunities in these areas near the lake.

The BLM has observed changes in bald eagle breeding and nesting behavior, potentially associated with shoreline recreation-related disturbance on Green Peter Peninsula. With its size and strategic location between the two arms of the lake, the peninsula is an important asset and has high scenic value.

### **Public Health, Safety, and Security**

Quartzville Road is a narrow, winding road and the primary public road access to the lake. Speeding and DWI are major concerns for both the recreating public and law enforcement officers. The road is a major haul road for log trucks that can conflict with large boat trailers and recreation vehicles.

Dispersed camping and day use along the Quartzville Recreation Corridor is hazardous and does not meet minimum safety standards given narrow width between the road and lake. While fire rings designate sites, use tends to be random, unorganized, overflows into the roadway and creates congestion. Lack of restrooms creates sanitation problems and littering is prevalent. Restroom graffiti is often prevalent.



Dispersed camping in Quartzville Recreation Corridor

While improvements have been made in recent years, safety and security and poor image are concerns of the public. Lack of a cohesive, organized, and well managed recreation system, size and remote character of the lake, and lack of signage are contributing factors in the public's perception of the lake.

Lack of flush toilets and hand washing facilities is a major public health concern.

A proliferation of dispersed boat-in recreation use creates public health and sanitation concerns, and is difficult to manage and control.

### **Resource Protection and Fire Prevention**

The present recreation system – numerous unmanaged boat-in sites, unorganized dispersed camping in the Quartzville Recreation Corridor, lack of infrastructure and basic recreation facilities, little or no signage and visitor information – and the lake's size and remoteness all contribute to concerns for adequate resource protection and wildfire prevention.

Adverse soil and vegetation impacts have increased with growing recreation use and camping, especially in the Quartzville Recreation Corridor, requiring site closures and rehabilitation.

Wildfire risk is a major concern, especially for commercial forests that are in remote, roadless areas above the lake. The public has expressed concerns for abandoned campfires and lack of stewardship responsibility exercised by some recreation users.

Elk Flat, Whitcomb Island, and the tip of Rocky Top Peninsula are sensitive and fragile wildlife habitats that require special resource protection and management; some of these and other sites on the lake have cultural values that are vulnerable to illegal digging, artifact collecting, and ORV and ATV activity.

The forest stand at Whitcomb Creek Park is not healthy and has not been managed for insect and disease resistance, windthrow, and sustainability. A forest management plan is needed, especially for thinning in the campground.

### **Public information, Way-finding and Interpretation**

The Quartzville Recreation Corridor misses a gateway opportunity to celebrate the Quartzville Back Country Byway, Green Peter Reservoir, Quartzville National Wild and Scenic River and recreation sites managed by the Bureau of Land Management, and ultimately entryway to the Cascade Mountains. Guardrails are poorly maintained and affect scenic integrity of the corridor.

Green Peter Reservoir and the Recreation Corridor lack an attractive and uniform signage and information system to greet visitors, highlight the lake's qualities and character, and provide wayfinding and basic information to access recreation sites and facilities. This contributes to an atmosphere of random, uncontrolled public use and lack of management oversight.



Empty signboards at North Shore Viewpoint at the dam

The North Shore Viewpoint has all of the elements for an inviting gateway and visitor information center, but lacks information, signage, and functional design; the viewpoint of tailwater and the Santiam River canyon is overgrown with vegetation.

The day use parking lot at the Whitcomb Creek Bridge is not signed and officially recognized by the public as a Corps recreation site supporting fishing activity from the bridge.

No trail system or interpretive program exists to provide public awareness, respect, and enjoyment of the outstanding scenic, natural, and cultural assets of the lake and corridor.

Several signs in the Quartzville Recreation Corridor provide dispersed camping information including length of stay, fire restrictions, and pack-in/pack-out expectations; however, this is the extent of information to orient and educate Green Peter visitors as they travel and recreate along Quartzville Rd.



### **Economy of scale, management and implementation feasibility**

Green Peter's current recreation system is not organized and cohesive to achieve critical mass and an economy of scale for effective, efficient visitor and resource management.

The lake's size, configuration, rugged shoreline, land ownership pattern, and fluctuating pool levels require a strategic and comprehensive planning approach with extensive feasibility analysis to meet desired management objectives and capability.

Boat-in recreation and dispersed camping in the recreation corridor are not manageable given the number of sites and operational costs.

### **Adjacent Landowner Effects**

Green's Peter's existing recreation system, lack of public access, and inadequate infrastructure place major burdens on law enforcement officers and timber deputies to prevent trespass on private lands.

Major shifts in recreation management (e.g. prohibiting dispersed camping along Quartzville Rd.) could potentially impact the BLM and Forest Service with displaced use; the BLM has determined its recreation sites in the corridor have reached capacity.

## **Conclusions**

Major conclusions are drawn from the system analysis findings for assets and opportunities, and problems and concerns.

### **Conclusions Assets and Opportunities**

#### **Recreation Opportunities and Benefits**

- Green Peter Lake, Foster Lake, and the Quartzville Recreation Corridor have outstanding potential as a major destination area for recreation, sightseeing, and tourism – accessible to population centers
- Green Peter Lake has exceptional boat-in recreation potential; creative planning and development could earn the lake a distinctive reputation in the Willamette River Basin
- With its more remote mountain lake atmosphere, Green Peter has size and capacity to attract more visitors and complement downstream Foster Lake recreation
- Extensive and strategic BLM ownerships – Green Peter Peninsula and recreation sites along the Quartzville National Wild and Scenic River – are major assets to the lake region, with excellent opportunities for partnering and collaboration
- Green Peter and Foster Lake, Quartzville Recreation Corridor have exceptional economic development potential

#### **Public Access**

- Several recreation sites and boat-in areas have excellent potential for improving access to Green Peter Lake, with sizable Whitcomb Creek Park as the hub
- Potential exists for substantially improving boat access to the lake, even with the challenge of low pool levels, as well as providing opportunities for non-motorized access not currently in place
- Although Green Peter has a high priority for water release, its depth can offset drawdown periods if access can be accommodated at low pool levels

#### **Public Health and Safety**

- Substantial improvements have been made to improve public safety and health due to increased Linn County law enforcement, designation of campsites by the Oregon Department of Forestry for fire prevention, and partnering with the Oregon State Marine Board to provide sanitation facilities, including floating restrooms
- The Corps, BLM, Linn County Parks and Sheriff's Office, Oregon Department of Forestry, and the State Marine Board are developing a collaborative effort to focus on safety and health issues

### **Resource Protection**

- Excellent potential exists for federal land management agencies, state agencies, the Corps, Linn County Parks, and private landowners to collaborate and partner to protect scenic and resource values of Green Peter Lake and the region
- Bald Eagle habitation on Green Peter Peninsula and the Elk Flat winter feeding area are outstanding resource values

### **Public Information, Wayfinding, and Interpretation**

- Significant upgrading of signage and a design theme along the Quartzville Recreation Corridor could substantially enhance the visitor experience
- High demand exists for nature recreation opportunities; there is excellent potential for trails and interpretation.

### **Economy of Scale**

- Size and central location of Whitcomb Creek Park and several other recreation sites provide the framework for achieving a preferred economy of scale for effective and efficient management

### **Adjacent Landowner Effects**

- With most of Green Peter Lake's upland in private ownership, there is exceptional opportunity to partner and collaborate, minimize public impacts, and explore common goals and projects
- Partnering and close collaboration with the BLM (and even the Forest Service) could significantly create a critical mass to solidly position the Green Peter Lake region as a major destination



View toward Rocky Top Bridge – Upper Quartzville Arm



## **Conclusions Problems and Concerns**

### **Recreation Opportunities and Benefits**

- A collaborative, regional approach is lacking to capitalize on outstanding potential of not only Green Peter and Foster Lakes and the Quartzville Recreation Corridor, but also scenic and recreational opportunities of the Quartzville National Wild and Scenic River, the BLM Back Country Byway and recreation sites, and the Willamette National Forest in the Cascade Mts.
- The Corps Master Plan provides a solid framework for recreation development and management, yet the plan is well beyond its useful life and only minimal infrastructure and recreation facilities are in place
- Inadequate boat access and lack of developed and well managed recreation facilities, especially campgrounds, are Green Peter's most critical deficiencies
- While boat-in recreation could create a special niche for Green Peter Lake, the boat-in sites are not organized and managed as a system, with shortfalls in visitor enjoyment and management oversight
- Green Peter Lake's extraordinary social and economic benefits have not been realized, and could improve the quality of life of residents in the region, especially nearby rural communities

### **Public Access**

- Demand far exceeds the capacity of existing boat ramps and parking facilities with conflicts among users, and impacts on management and enforcement; lack of moorage facilities create recreation use patterns that are unplanned, unorganized
- With only a one-lane, year-round boat ramp in place, prospects of continued water release regimens will exacerbate boat access problems and management issues in the future
- Lack of non-motorized boating access foregoes an opportunity to respond to growth trends for this recreation activity, and the outstanding opportunities offered by Green Peter Lake

### **Public Health and Safety**

- Until road safety and dispersed camping is addressed in the Quartzville Recreation Corridor, conditions will continue to increase beyond acceptable limits and become a major deterrent to recreation visitation to Green Peter Lake
- Significant funding support for law enforcement could be shifted to improving visitor and resource management, if safety issues were rectified
- Fire risk will continue to increase and place burdens on management and enforcement, especially if public access and on-site management presence is not improved

### **Resource Protection**

- Adverse resource impacts are directly related to a dysfunctional recreation system that is difficult to manage and lack of public education for respecting resource values
- Concepts of "limits of acceptable change" and "desired future condition" are not established to fulfill recreation management goals and mandates
- Bald Eagle and other raptor habitats and the Elk Flat winter range have had adverse impacts from recreation-related disturbance; this is symptomatic of a lack of an organized and manageable recreation system designed to provide recreation opportunities while protecting significant resource values

### **Public Information, Wayfinding, and Interpretation**

- Lack of signage, basic wayfinding, and a trail and interpretive program sets a low standard for visitor responsibility and respect for rules, regulations, and resource appreciation
- Special scenic and recreational qualities of the region are not celebrated in a way that could draw recreation visitors

### **Economy of Scale**

- Green Peter Lake's magnitude and complexity requires an economy of scale that facilitates highly efficient and effective recreation management and resource protection

### **Adjacent Landowner Effects**

- Lack of public access to the lake creates potential for adverse impacts on adjacent private lands
- A strategic and collaborative plan must be developed with the BLM if there are shifts in management of historical use patterns including elimination of dispersed camping along the south shore in the Quartzville Recreation Corridor

## Strategic Issues

### *Key themes to frame the plan*

Eight strategic issues emerged from due diligence and feasibility analysis for the Green Peter Recreation Plan project focused on a recreation needs assessment and evaluation of the existing recreation system. These issues and supporting findings are the framework for preparing the vision, goals, and policies of the recreation plan.

#### **Issue #1: Green Peter Reservoir and the Quartzville Recreation Corridor have outstanding potential to become a major recreation and tourism destination.**

- Green Peter and Foster Lakes, Quartzville Recreation Corridor, 10-mile Quartzville National Wild and Scenic River and adjacent BLM recreation sites, and the 50-mile Quartzville Back Country Byway have exceptional recreational opportunities, scenic beauty, and abundant natural and cultural resource values.
- Recreation users value the natural beauty, recreation opportunities, and benefits of Green Peter Lake, and desire major improvements in infrastructure, management, safety and security.
- "Reservoir recreation such as boating and water skiing are major revenue sources for many basin communities. With the decline of the timber industry in areas like the Santiam Canyon, tourism and recreation have come to play a greater role in local economies." (Willamette Reservoir Study Background Paper, Oregon Water Resource Dept.; Corps of Engineers, 2001).

#### **Issue #2: Magnitude and complexity of Green Peter Reservoir, an outdated recreation plan, and historical recreation use patterns are major planning challenges.**

- Size, configuration, topography, water release requirements, and largely privately owned land surrounding the lake create opportunities but also are constraints. Non-fee historical use, sometimes unmanaged, over many years has resulted in recreation use in some areas that conflict with stewardship objectives. Fire risk is a major concern.
- The 1987 Corps Master Plan is well beyond its useful life; for example the Quartzville National Wild and Scenic River was established in 1988 and the collaboration opportunity with the BLM was not as apparent as today.
- Concepts of "Desired Future Condition" and "Limits of Acceptable Change" are required to address critical planning and management issues.

#### **Issue #3: Lack of recreation infrastructure is reaching a tipping point, with indicators of programmatic stress and dysfunction.**

- Green Peter Reservoir has a poor public image due to perceived safety and security problems such as speeding and alcohol use along Quartzville Rd., unsafe dispersed camping near the road, vandalism, and concern for maintaining secure parking and moorage.
- Boat access is also a top public concern with long wait times at boat ramps, lack of parking and moorage, and drawdown periods when only Thistle Creek Boat Access is functional.
- Enforcement presence, designated campsites, and recent winter closing for overnight camping have improved safety conditions; however social conflicts, littering, sanitation problems, and adverse resource impacts are evident.

#### **Issue #4: The current recreation system is fragmented and unorganized, with major infrastructure and recreation facility shortfalls.**

- Much of the Corps Master Plan has not been implemented including campground expansion at Whitcomb Creek Park, boat access and amenities at Billings Park, and primitive boat-in site facilities. A uniform signage and interpretive services plan has not been prepared.



- The current recreation system does not have an economy of scale for efficient and effective management and operations. Boat-in recreation is unmanageable given the large number of designated sites and distances to maintain and service.

#### **Issue #5: Recreation system elements are in place to achieve a preferred and sustainable future.**

- As the largest recreation site most suited to development, Whitcomb Creek Park is the most logical hub for the recreation system; Billings Park has the most potential to provide direct, paved access for boats and visitors; North Shore Viewpoint could become an excellent gateway and visitor center, Moose Creek and Trout Creek could be upgraded to expand recreation opportunities in the Quartzville Recreation Corridor, and a number of boat-in recreation sites have exceptional potential for targeting recreation infrastructure and management.
- Floating restrooms and vault restrooms at most recreation meet basic sanitation needs, although heated water and flush toilets are preferred by many campers and off-grid limitations are constraints.

#### **Issue #6: Collaboration and partnering opportunities are excellent, with both the BLM and adjacent private landowners.**

- Strategic location of Green Peter Peninsula and BLM's Bald Eagle Management Area between the two major arms presents an opportunity to collaborate for public education and interest as well as resource protection; it will also be essential to partner with the BLM to improve recreation management in the Quartzville Recreation Corridor, especially if there are efforts in rehabilitation and reclamation of dispersed campsites.
- Adjacent landowners have expressed interest in collaborating and partnering to meet common goals and objectives, including fire prevention. This could include not only working together to develop optimum recreation management that minimizes impacts on private land, but also could lead to private recreation investment that is a part of a regional plan for the lake.

#### **Issue #7: A business plan will be required to address current issues and create a sustainable future for Green Peter Lake.**

- Blending enterprise and revenue operations with traditional "no cost" recreation opportunities will be required, with strategies for meeting public recreation needs and expectations of all demographics.
- Partnering with others should be an integral part of a strategic business plan.
- A number of management problems and issues must be addressed including the need for improving safety and security in the Quartzville Recreation Corridor. If this should involve eliminating historical use, there must also be a plan for accommodating recreation demand at other locations of the project to maintain visitor satisfaction and avoid adverse impacts on adjacent lands.

#### **Issue #8: Implementing the Green Peter Recreation Plan could potentially be a demonstration project.**

- Green Peter Lake provides an outstanding opportunity to become a demonstration project through a partnership between local government and a federal agency, exploring innovative approaches to recreation planning, development, and management, applying latest off-grid technology, and partnering with private landowners and other state and federal agencies.
- Federal, state, and other grant funding will be required to take corrective actions, upgrade existing recreation infrastructure and conditions, and expand recreation opportunities.

# Policy Framework

## *A vision and mission for the future*

The draft Policy Framework Plan provides strategic direction for the Green Peter Reservoir and Quartzville Corridor Recreation Plan. Vision and mission statements together with policy goals are based on the findings, strategic issues, and conclusions of the discovery phase of the planning project.

The discovery phase included a system analysis with findings and a visual synthesis of assets and opportunities, and constraints and weaknesses of the current recreation system. This analysis combined with the policy framework provided the structure to prepare a preferred conceptual design for review and discussion.

### **Vision Statement**

The vision for the Linn County Parks and Recreation Department is expressed in its 2009 Master Plan:

#### **Linn County Parks and Recreation Vision Statement**

*To provide a diversity of parks and recreation opportunities that support a healthy community, protect the natural environment, and enhance quality of life for all residents.*

The proposed vision statement for the Green Peter Policy Framework is consistent with the county's vision statement:

#### **Green Peter Vision Statement**

*Green Peter Reservoir and the Quartzville Recreation Corridor are extraordinary recreation destination areas, located above Foster Reservoir on the west slope of the Cascade Mountains. The scenic Quartzville Back Country Byway winds along Green Peter's north shore and the Quartzville National Wild and Scenic River, providing an exceptional gateway experience to access recreation sites managed by Linn County Parks, the Bureau of Land Management, and the Willamette National Forest and the Middle Santiam Wilderness Area.*

*Green Peter Reservoir is highly valued for its remote mountain lake qualities including extraordinary natural beauty, extensive shoreline, many coves and inlets, forested ridges, abundant fish and wildlife, and a wide variety of exceptional recreation opportunities.*

*Visitors to Green Peter treasure the high quality and variety of well-managed and innovative recreation facilities and services that provide safe public access, recreation, and solitude for all, including persons with different abilities. Welcoming, safe and well-maintained places are provided for visitors including families and seniors to recreate and connect with nature and the outdoors, and to enjoy, learn from, and respect the significant cultural, historic, and natural values of Green Peter Reservoir.*

*Green Peter Reservoir generates vital social, economic, and ecological benefits, and is emulated by others for its progressive best recreation management practices and commitment to a preferred and sustainable future. As the lake's operating manager of Green Peter Reservoir, the Corps of Engineers envisions a highly successful partnership with Linn County Parks.*



## Mission Statement

The mission statement for the Green Peter Policy Framework outlines the core purpose, guiding principles, values, and requirements to fulfill the vision.

### Green Peter Mission Statement

*The long-term vision for Green Peter Reservoir and the Quartzville Recreation Corridor is to provide welcoming, safe, and well-maintained places for visitors to recreate and connect with nature and the outdoors, and to enjoy, learn from, and respect the lake's significant cultural, historic, and natural values.*

*To accomplish this vision, Green Peter Reservoir and the Quartzville Recreation Corridor will be managed for recreation as a demonstration area in partnership with the Corps of Engineers, and through collaboration with the Bureau of Land Management, the U.S. Forest Service, and private landowners. To fulfill the project's vision and mission as a demonstration area, federal funding support will be essential.*

*The mission will be to provide a model for local government to assume primary responsibility for recreation development and management of a federal reservoir, and in a manner that achieves a program of excellence.*

*A cohesive, highly organized and themed recreation system will provide a wide range of recreation opportunities, at an economy of scale that will support an entrepreneurial approach to help offset costs, protect natural and cultural resources, and manage use effectively.*

*A balance of recreation activities will be accommodated, both on the lake and on land, managing for a preferred social and resource carrying capacity that achieves maximum natural and cultural resource protection. Off-grid technology will be explored, and every effort will be made to foster stewardship practices such as promoting pack-in/pack-out programs in remote recreation areas.*

*Safety and security, and instilling public appreciation and awareness of natural processes and values will be key management efforts, in cooperation with the Corps of Engineers, law enforcement officers, marine patrol, and other state and federal agencies.*

*Collaboration with federal and state partners will be the hallmark of recreation management and development, with special efforts to work together with adjacent private landowners. A vibrant volunteer program will create a wide variety of opportunities for active stakeholder involvement in resource protection, safety, and security.*

*Leadership excellence will provide creative and strategic direction to achieve the vision, in association with the Linn County Board of Commissioners, the Linn County Parks and Recreation Board, and the U.S. Army Corps of Engineers.*

## Policy Goals

Eight goals provide policy direction for fulfilling the vision and mission, and lay a foundation for preparing design concepts. While policy goals provide a framework for decision-making, they are general in nature for policy makers to provide overall guidance and for managing agencies to work in an agile and adaptive environment.

## **Green Peter Policy Goals**

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### **Overarching Policy Goal – Exemplary Recreation System**

To create a recreation demonstration project and promote Green Peter Reservoir as a tourism/travel area, in partnership with the Corps of Engineers. To develop a prototype for state of the art best management practices and explore creative development alternatives including use of off-grid technology and green infrastructure.

### **Policy Goal 1. Ecosystem Protection and Fire Prevention**

To plan, develop, and maintain an organized and cohesive recreation system with special attention to economy of scale. To meet stewardship goals including Desired Future Condition and Limits of Acceptable Change for protecting and sustaining natural ecosystems and cultural resources. To assure maximum fire prevention strategies are incorporated into all planning and management decisions.

### **Policy Goal 2. Quality of Services**

To provide a variety of high quality recreation opportunities, well maintained recreation sites and facilities, maximum resource protection, and sustainable management and support services including law enforcement.

### **Policy Goal 3. Safety and Security**

To assure highest level of public safety and security, maintaining vigilance and oversight, assuring appropriate, suitable use and facility development, and instilling a sense of stewardship responsibility. To assure maximum road safety in the Quartzville Recreation Corridor.

### **Policy Goal 4. Accessibility**

To provide safe and optimum access to the lake and to lakeshore recreation facilities, with adequate supporting infrastructure to accommodate visitors (parking) and protect natural resources (sanitation). To meet needs of persons with different abilities where feasible.

### **Policy Goal 5. Information and Education**

To provide an attractive and legible way-finding and signage system to access features and opportunities of the lake and recreation corridor. To establish expectations for appropriate recreation use and activities. To develop a trail and interpretive program to instill public awareness, respect, and stewardship for natural and cultural resources.

### **Policy Goal 6. Design Excellence**

To create a design theme for signage and recreation facilities that complement natural beauty and integrity of the lake and recreation corridor, including use of natural materials and maintaining a "rustic" character reminiscent of the Civilian Conservation Corps period.

### **Policy Goal 7. Collaboration and Coordination**

To foster highest levels of collaboration and coordination with the Corps of Engineers in lake management, site reclamation and restoration, as well as with the Bureau of Land Management and the Forest Service in recreation corridor signage, information, and visitor services. To cultivate partnerships with adjacent property owners and promote volunteer participation to the maximum degree possible.

### **Policy Goal 8. Leadership**

To strive for a sustainable future with strategic, adaptive, and entrepreneurial management, providing operational stability and long-term success measured by recreational, ecological, and economic benefits.



# Design Concepts

## *Framing the alternatives*

The Policy Framework Plan acknowledges the extraordinary landscape setting of Green Peter Reservoir and the Quartzville Recreation Corridor, and provides direction for improving recreation opportunities and management.

### **Proposed Concepts and Roles**

Two design concepts have been prepared to implement the framework plan, both based on a new partnership agreement with the Corps of Engineers and Linn County Parks, as well as collaboration and partnering with the Bureau of Land Management and adjacent property owners.

#### **Preferred Concept**

The preferred design concept would best fulfill the vision, mission, and goals of the policy framework: Linn County would have responsibility for all recreation management, operations, and development. The Corps of Engineers would initially fund and implement a plan to correct dispersed camping problems in the Quartzville Corridor, and maintain all reservoir operations including cultural and natural resource management.

#### **Alternative Concept**

The alternative concept proposes a shared responsibility for recreation management between the Corps of Engineers and Linn County. Linn County would continue to manage Whitcomb Creek Park and Thistle Creek Boat Access, and one boat-in recreation site. The Corps of Engineers would be responsible for managing the other recreation sites and correcting problems in the Quartzville Recreation Corridor.

*The design concepts propose consideration of the Green Peter Reservoir and the Quartzville Recreation Corridor as a federal demonstration project. Substantial federal, state and other grant funding would be required to implement the proposed recreation plan, given the lack of waterfront recreation facilities and infrastructure coupled with the poor gateway conditions and signage in the recreation corridor, need for extensive reduction in the number of dispersed recreation sites, extensive resource reclamation, and increased on-site management.*

*The recreation plan also recommends formal designation of Quartzville Road as a "Linn County Recreation Corridor" to give the county authority to make safety improvements such as establishing a safe speed program.*

Due to the magnitude and scope of both concepts, a phased implementation of two, five and ten years is proposed as well as designation of the recreation plan as a federal demonstration project.

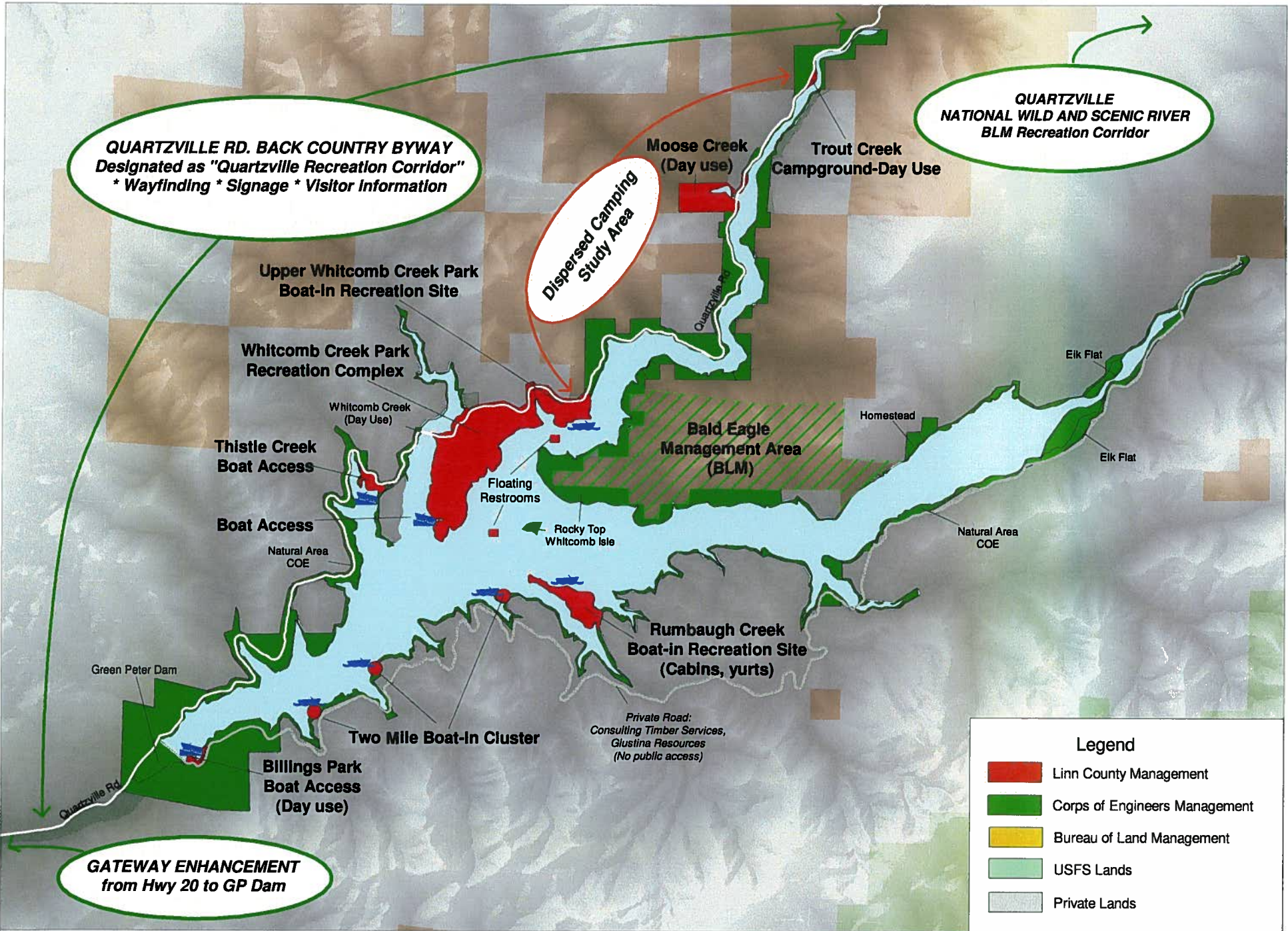
### **Preferred Design Concept**

The preferred concept is designed to fulfill all aspects of the vision, mission, and policy goals of the Policy Framework Plan, and would be the optimum alternative (Map 2). Under this concept, these are the preferred roles for Linn County and the Corps of Engineers:

**Linn County Role** – primary responsibility for boat access, recreation management and operations, site improvements, and facility development including public information, signage, and wayfinding in the Quartzville Recreation Corridor

**Corps of Engineers Role** – oversight responsibility and implementation of a divestment and reclamation plan including dispersed recreation in the Quartzville Recreation Corridor, closing unsuitable boat-in sites, and enforcing off-limit zones in sensitive resource management areas.





**QUARTZVILLE RD. BACK COUNTRY BYWAY**  
 Designated as "Quartzville Recreation Corridor"  
 \* Wayfinding \* Signage \* Visitor Information

**QUARTZVILLE NATIONAL WILD AND SCENIC RIVER**  
 BLM Recreation Corridor

**Dispersed Camping Study Area**

**GATEWAY ENHANCEMENT**  
 from Hwy 20 to GP Dam

**Legend**

- Linn County Management
- Corps of Engineers Management
- Bureau of Land Management
- USFS Lands
- Private Lands



The Corps of Engineers would continue to manage the lake and project lands to meet operational requirements of the reservoir, and provide cultural and resource management.

Terms of the agreement would include a phased management plan with appropriate time frames to make needed infrastructure and recreational improvements, and to obtain adequate funding support. It would be advantageous for the new agreement to include procedures for Linn County to achieve maximum management flexibility within federal policies and guidelines, using best available science. In particular it would be helpful for the Corps to provide assistance in funding and completing environmental clearances.

Under the preferred design concept, the Linn County role would be as follows.



Fishing from the Whitcomb Creek Bridge



**PREFERRED CONCEPT: LINN COUNTY ROLE**

PROJECT	SCOPE
<b>Gateway Enhancement</b>	<p>Quartzville Rd. gateway entry sign, in conjunction with BLM (Quartzville Back Country Byway, Quartzville National Wild and Scenic River)            Construct gateway entry theme and features along Quartzville Rd. (below the dam)            Repair and upgrade guard rails to be more visually appealing            Linn County could officially designate Quartzville Rd. as a recreation corridor and obtain authority to reduce speed limits in congested areas.</p>
<b>Wayfinding, Signage, and Interpretation</b>	<p>Prepare wayfinding signage plan; implement            Prepare interpretive program plan; implement            Develop an education program with brochures, public expectations, ethics            Establish a pack-in/pack-out program for boat-in sites and enforce in 5 years</p>
<b>North Viewpoint</b>	<p>Redesign to function as the lake gateway and visitor information center            New road entry from the west for improved circulation            Reclaim viewpoint site (now obstructed by vegetation)</p>
<b>Billings Park</b>	<p>Redesign parking lot (day use boat trailers only)            Year-round formal boat access facility (day use only)            Fishing and viewing platform            Picnic facilities and day use            Information kiosk</p>
<b>Thistle Creek Boat Access</b>	<p>Expand parking, increase capacity, provide amenities            Potential expansion opportunity with adjacent property owners; willing seller only</p>
<b>Whitcomb Creek Park Base/Anchor</b>	<p>Visitor entry facility and information gateway            Expand campground; group camping facilities, additional water well            Cabins, yurts (off-grid power)            Day use facilities; picnic shelter for families and groups            Swimming platform, tethered to the shore with picnic tables, benches            Work with OMB on possible changes to no-wake and non-motorized areas of Whitcomb Arm            Day use boat ramp (existing ramp)            New year-round boat ramp (relocated to east side of peninsula)            Moorage facilities            Trails, interpretation, signage            New Boat-in Recreation Site at Upper Whitcomb Park with cabins, tent sites, vault restrooms;            access road improved to accommodate a pumper truck; moorage</p>
<b>Moose Creek Day Use Site</b>	<p>Information kiosk            Redesigned for day use with a trailhead and interpretive trail            Site restoration and reclamation            Upgrade restroom facilities</p>
<b>Trout Creek Recreation Site</b>	<p>Information kiosk, signage            Redesigned, developed campground            Site restoration and reclamation            Vault restrooms</p>
<b>Rumbaugh Creek Boat-in Site</b>	<p>Cabins, yurts (off-grid power)            Vault restrooms (potential compost toilets w/ adequate site conditions)            Day use facilities (picnic tables and shelter)            Trails and interpretation            Water well            Moorage</p>
<b>Two-Mile Cluster Boat-In Sites</b>	<p>Tent sites            Picnic tables and shelter            Vault restrooms            Trails and interpretation            Possible future site for yurts and cabins</p>

**PREFERRED CONCEPT: CORPS OF ENGINEERS ROLE**

PROJECT	SCOPE
<b>Recreation Corridor – Dispersed Camping Divestment and Reclamation</b>	Elimination of unsafe and unsuitable dispersed campsites Site reclamation and restoration of dispersed sites
<b>Boat-in Dispersed Recreation Divestment and Reclamation</b>	Elimination of dispersed boat-in recreation sites identified as not sustainable over 10 yr period Site reclamation and restoration Enforce off-limits to these sensitive sites: Elk Flat, Whitcomb Island
<b>Whitcomb Creek Bridge Day Use Site</b>	Manage day use recreation site at the Whitcomb Creek Bridge on Quartzville Rd.; popular fishing site from the bridge
<b>Collaborative Enforcement – Dispersed Camping and Boating Divestment</b>	Enforce divesting Quartzville Recreation Corridor dispersed campsites identified in safety assessment Enforce limits of acceptable use – only in designated boat-in recreation sites Linn County designation of Quartzville Rd. as a “Recreation Corridor” and enforce new traffic safety measures Explore volunteer Quartzville Recreation Hosts program
<b>Reservoir Operations Mgt., Cultural and Natural Resource Mgt.</b>	Manage lands and waters to meet operational requirements of the reservoir Maintain standards of water quality that protect water-contact recreation and fisheries Maintain and manage habitat, supporting populations of unique threatened or endangered fish, wildlife, and plant species Maintain and manage habitat to promote self-retention of species richness and diversity Establish and protect vegetation along shorelines and within the drawdown zone to prevent soil erosion and to provide wildlife and fish habitat Preserve and protect cultural resource sites Maintain boating safety, especially debris removal at boat access sites

**Alternative Design Concept**

The alternate concept reduces the recreation management role of Linn County Parks in the preferred concept, and substantially increases the recreation management role of the Corps of Engineers:

**Linn County Parks Role** – focus on the two existing sites that it currently manages, adds one boat-in recreation site (Rumbaugh), and includes the Quartzville Recreation Corridor gateway enhancement, signage, and interpretation program.

**Corps of Engineers Role** – determine how to manage and improve recreation sites other than Whitcomb Creek Park, Thistle Creek Boat Access, and Rumbaugh Boat-in site; and implement and enforce divestment and reclamation of unsustainable dispersed sites.



The Corps of Engineers would continue to manage the lake and project lands to meet operational requirements of the reservoir, provide cultural and resource management.

<b>ALTERNATIVE CONCEPT: LINN COUNTY ROLE</b>	
<b>PROJECT</b>	<b>SCOPE</b>
<b>Gateway Enhancement</b>	<ul style="list-style-type: none"> <li>Quartzville Rd. gateway entry sign, in conjunction with BLM (Quartzville Back Country Byway, Quartzville National Wild and Scenic River)</li> <li>Construct gateway entry theme and features along Quartzville Rd. (below the dam)</li> <li>Repair and upgrade guard rails to be more visually appealing</li> <li>Linn County could officially designate Quartzville Rd. as a recreation corridor and obtain authority to reduce speed limits in congested areas.</li> </ul>
<b>Wayfinding, Signage, and Interpretation</b>	<ul style="list-style-type: none"> <li>Prepare wayfinding signage plan; implement</li> <li>Prepare interpretive program plan; implement</li> <li>Develop an education program with brochures, public expectations, ethics</li> <li>Establish a pack-in/pack-out program for boat-in sites and enforce in 5 years</li> </ul>
<b>Whitcomb Creek Park Base/Anchor</b>	<ul style="list-style-type: none"> <li>Visitor entry facility and information gateway</li> <li>Expand campground; group camping facilities, additional water well</li> <li>Cabins, yurts (off-grid power)</li> <li>Day use facilities; picnic shelter for families and groups</li> <li>Swimming platform, tethered to the shore with picnic tables, benches</li> <li>Work with OMB on possible changes to no-wake and non-motorized areas of Whitcomb Arm</li> <li>Day use boat ramp (existing ramp)</li> <li>New year-round boat ramp (relocated to east side of peninsula)</li> <li>Moorage facilities</li> <li>Trails, interpretation, signage</li> <li>New Boat-in Recreation Site at Upper Whitcomb Park with cabins, tent sites, vault restrooms; access road improved to accommodate a pumper truck; moorage</li> </ul>
<b>Thistle Creek Boat Access</b>	<ul style="list-style-type: none"> <li>Expand parking, increase capacity, provide amenities</li> <li>Potential expansion opportunity with adjacent property owner; willing seller only</li> </ul>
<b>Rumbaugh Creek Boat-in Site</b>	<ul style="list-style-type: none"> <li>Cabins, yurts (off-grid power)</li> <li>Vault restrooms (potential compost toilets w/ adequate site conditions)</li> <li>Day use facilities (picnic tables and shelter)</li> <li>Trails and interpretation</li> <li>Water well</li> <li>Moorage</li> </ul>

Under the alternative concept, the Corps of Engineers would accept responsibility for managing and improving all other recreation sites, as well divestment and reclamation of sites considered unsustainable and unsuited for quality management and use.

The Corps would determine how to implement the plan, including divestment and reclamation of unsuitable recreation sites and how to best enforce implementation.



### **ALTERNATIVE CONCEPT: CORPS OF ENGINEERS ROLE**

<b>PROJECT</b>	<b>SCOPE</b>
<b>Boat-in Dispersed Recreation Divestment and Reclamation</b>	Elimination of dispersed recreation sites identified as unsuitable (2, 5, 10 years) Site reclamation and restoration
<b>Quartzville Recreation Corridor Dispersed Camping Divestment and Reclamation</b>	Elimination of unsafe and unsuitable dispersed campsites Site reclamation and restoration of dispersed sites Enforce off-limits to these sensitive sites: Elk Flat, Whitcomb Island, Rocky Top Peninsula Enforce day use expectations
<b>Enforcement – Dispersed Camping and Boating Divestment</b>	Enforce divesting Quartzville Recreation Corridor dispersed camping sites identified in safety assessment Enforce limits of acceptable use only in designated boat-in areas
<b>All Recreation Sites except Whitcomb Creek Park, Thistle Creek Boat Access, and Rumbaugh Creek Boat-in Site</b>	Scope of improvements and management to be determined by the Corps of Engineers
<b>Reservoir Operations Management, Cultural and Natural Resource Management</b>	Manage lands and waters to meet operational requirements of the reservoir Maintain standards of water quality that protect water-contact recreation and fisheries Maintain and manage habitat, supporting populations of unique threatened or endangered fish, wildlife, and plant species Maintain and manage habitat to promote self-retention of species richness and diversity Establish and protect vegetation along shorelines and within the drawdown zone to prevent soil erosion and to provide wildlife and fish habitat Preserve and protect cultural resource sites Maintain boating safety, especially debris removal at boat access sites

# Plan Recommendations

## *Implementing the preferred concept*

A strategic and tactical approach will be required to implement the preferred recreation concept for Green Peter Reservoir. Size and configuration of the lake, complexity of recreation management issues, and lack of recreation facilities and infrastructure have been identified as critical areas that must be addressed to fulfill the proposed vision, mission, and policy goals.

### Overarching Strategies

To guide the planning and decision-making process, these overarching strategies are considered essential:

#### **Strategy 1: Form a new partnership alliance for the Corps of Engineers and Linn County to collaboratively manage Green Peter Reservoir.**

- Manage Green Peter Reservoir as a joint venture between the Corps of Engineers and Linn County, with the highest level of collaboration and partnering.
- Develop a Recreation Operations and Management Plan, responding to the vision, mission, goals, and policies of this planning document.
- Explore alternatives to improve recreation management, such as debris removal near boat ramps and recreation sites, and in popular boating areas.

#### **Strategy 2: Create a partnership with the Bureau Land Management, adjacent landowners, and others to develop a team approach for managing Green Peter Reservoir recreation use**

- Work with the Bureau of Land Management, U.S. Forest Service, Oregon Department of Forestry, Oregon State Marine Board, Linn County Sheriff's Office, and Linn County Road Department to identify common goals and management strategies.
- Develop a collaborative relationship with adjacent property owners to identify issues of concern, common goals, and partnering opportunities.

#### **Strategy 3: Develop a proposal for official designation of Green Peter Reservoir as a recreation demonstration project, and seek federal allocation funds.**

- Explore avenues for designation of Green Peter Reservoir as a recreation demonstration project.
- Develop a work plan for obtaining seed funds required to implement the preferred recreation plan concept.
- Propose innovative sustainability projects such as off-grid power and other green infrastructure development.

#### **Strategy 4: Prepare and implement a corrective program to eliminate dispersed camping and rehabilitate the Quartzville Rd. recreation corridor.**

- Prepare a divestment and rehabilitation plan for dispersed camping, and a timeline for developing new campground facilities and amenities to coincide with corrective actions (USACE and Linn County).
- Time dispersed camping divestment with expansion of Whitcomb Creek Park campground and boat-in camping
- Transfer Trout Creek and Moose Creek to Linn County Parks for future development to provide day use and campground opportunities.
- Close Billings Park as currently managed and prepare a plan for the site to become a major lake access and day use facility
- Minimize impacts of recreation displacement onto adjacent private or public lands



**Strategy 5: Develop feasible and results-oriented projects, creating an economy of scale to achieve the most efficient recreation management.**

- Maintain a strategic, tactical planning process that enhances recreation opportunities and experiences, with improvements that can be sustained by resources essential for high quality maintenance and operations.

**Strategy 6: Create a plan for phased implementation to meet strategic priorities for multiple recreation management and operations objectives.**

- Prepare a phased implementation plan with time frames that respond in a timely way to the most critical public recreation needs, improve resource protection, assure sufficient maintenance and operation resources, and achieve revenue generation goals.

**Priority Strategies and Actions**

These strategies and actions respond to with the policy framework for the preferred design concept, with emphasis on the eight policy goals. For the most part, these are broad planning and management strategies; specific projects are outlined in the Project List (See Appendix)

**Specific Green Peter Implementation Strategies**

**Health, Safety and Security**

- Officially designate Quartzville Road as a Recreation Corridor, with authority for Linn County to establish road safety zones
- Prepare a Quartzville Recreation Study to assess suitable locations for improving recreation opportunities including group camping, day use and interpretive facilities.
- Improve restrooms and sanitation facilities in the Quartzville Recreation Corridor
- Increase law enforcement and presence in the Quartzville Recreation Corridor

**Wildfire Prevention**

- Locate, design, and manage recreation facilities to minimize wildfire risk; work closely with the Oregon Department of Forestry
- Collaborate with adjacent property owners to meet mutual management objectives including wildfire prevention

**Resource Protection**

- With assistance of the Green Peter Habitat Assessment, Forest Management Plan, and Cultural Resource Inventory, identify areas and sites requiring special protection from visitor impacts and/or rehabilitation
- Develop a Forest Management Plan for Whitcomb Creek Park to improve forest health
- Improve visitor awareness and understanding of resource values of Green Peter Reservoir
- Implement a closure and rehabilitation plan for the Corps to close unsuitable boat-in recreation sites; time these efforts to coincide with developing new campground facilities and opportunities
- Establish "Limits of Acceptable Use" and "Desired Future Condition" as design parameters for all project plans, and restrict public use to designated recreation sites

**Gateway Enhancement, Signage, and Visitor Information**

- Collaborate with the BLM to develop a gateway theme, signage, and visual enhancements such as guard rail repair and painting to celebrate the Quartzville Recreation Corridor and Back Country Byway
- Prepare and implement a wayfinding, visitor information, and signage plan
- Develop a strategy for providing clear and concise rules and regulations (expectations)



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# **Project List, Funding and Priorities**

## *Scoping, Phasing, and Financing Projects*

With a year-long planning effort including extensive due diligence and feasibility analysis, a preferred design concept and strategic plan have emerged for improving recreation opportunities on Green Peter Reservoir. In particular, this project has concluded that Linn County Parks has the reputation, capability and past performance to assume primary responsibility for managing recreation and public use of Green Peter Reservoir.

Over the last several years, Linn County has entered into agreements with the U. S. Forest Service to manage recreation sites on the Willamette National Forest including campgrounds, cabins, a food concession, and a small high mountain lake. Linn County is therefore well positioned to continue its legacy of private and public partnerships and to creatively manage Green Peter Reservoir with a focus on healthy family recreation and quality environmental stewardship.

### **Funding and Partnership Support**

For successful implementation, it will be critical for Linn County Parks to obtain substantial support from federal, state, and local partners – the U. S. Army Corps of Engineers, Bureau of Land Management, U. S. Forest Service, Oregon Department of Forestry, Oregon Marine Board, Oregon State Parks and Recreation, adjacent landowners, and the communities of Lebanon and Sweet Home.

Linn County Parks does not receive support from the county's general fund and must rely on user fees for annual operations and maintenance. Federal and state funds including federal allocations, grants, economic stimulus funds or combinations thereof – will therefore be required to develop many of the recreation facilities and infrastructure that are non-revenue generating but essential for operations and management. State legislators will be critical to secure these funds. Most importantly, federal funds will be necessary to create an endowment to offset length of time for revenue generating facilities to mature, and to develop a balance of fee and non-fee recreation opportunities.

*In this regard, every effort must be made to establish Green Peter Reservoir as an outstanding candidate for designation as a federal demonstration project.* This planning report has identified a number of promising areas to explore innovative approaches for reservoir recreation management including off-grid infrastructure, boat-in recreation facilities, partnering and active involvement of adjacent property owners, and collaborative management with other federal agencies. In particular, opportunity exists to develop strategic rehabilitation and corrective actions for Green Peter Reservoir to reach its potential as one of the most outstanding scenic and recreational lakes in the Pacific Northwest.

Exemplary of the need for federal funding is a critical issue of massive woody debris that is interfering with safe recreational use of the lake. While debris is important for habitat management, emphasis could be placed on debris removal in high use recreational areas.

At a minimum, two sources of funds could provide essential support to this project – the America's Great Outdoors Initiative and Land and Water Conservation Funds.

### **Project List**

The Project List is a 15-year plan, with three phases. The list includes project descriptions, development costs, annual maintenance and operations costs, potential funding sources for development, and projected annual revenues and sources. Projects are prioritized to respond to the strategic, tactical approach recommended in the recreation plan. Corrective actions and rehabilitation projects timed with major improvements in recreation opportunities are critical to the success of the program. (See Appendix)

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## Appendix: Project List

**Final Project List**  
**Recreation Plan for Green Peter Reservoir**

7/8/2011

PHASE ONE: Corrective Actions and Rehabilitation					
Priority	Project	Cost	Annual O&M	Annual Revenue	Possible Funding Sources (Planning & Improvements)
1 <sup>st</sup> year	<b>Environmental Assessments – Temporary Closure of Quartzville Rd. Dispersed Camping &amp; Billings Park</b>  <i>Note: Moose Creek and Whitcomb Creek Bridge Recreation Sites maintained as day use only; formalize with signage</i>	\$20,000			Environmental Assessment - USACE  USACE maintains Whitcomb Creek Bridge site; Moose Creek and Trout Creek Recreation Sites transferred to Linn County after Quartzville Corridor closures.
1 <sup>st</sup> year	<b>Site Master Plan – Whitcomb Creek Park Expansion and Billings Park Improvements</b>	\$20,000- 25,000			USACE - Federal Allocation/Grant Funds
1 <sup>st</sup> year	<b>Linn County Designation – “Quartzville Rd. Recreation Corridor “</b>	\$2,500	-----	-----	Grant funds/County
2-3 years	<b>Closure – Quartzville Corridor Dispersed Camping w/ increased law enforcement; rehabilitation</b>  <b>Transfer Moose Creek and Trout Creek Sites to Linn County Parks</b>  <b>USACE Contract w/Linn County to maintain Moose Creek</b>	\$40,000       \$ _			USACE       USACE



## PHASE ONE: Recreation Facility Upgrade

Priority	Project	Cost	Annual O&M	Annual Revenue	Possible Funding Sources (Improvements)
2-3 years	<b>Trout Creek Recreation Site and Campground (Initial primitive design)</b> Information kiosk; signage Campground redevelopment – 20 sites; picnic and restroom facilities	\$50,000	\$10,000	\$10,000-\$15,000 (Facility use fees, RV Licensing Funds)	Local Government Grant Program RV Licensing Grant Funds for Campgrounds Federal Allocation or Grant Funds
2-5 years	<b>Moose Creek Day Use Site</b> Information kiosk Interpretive trail Site redesign; parking Restrooms	\$30,000	\$5,000	Non-generating	Federal Allocation/Grant Funds
2-5 years	<b>N. Shore Viewpoint Gateway/ Information Center</b> Access and parking re-design to accommodate boat trailers; new information kiosk	\$100,000	<i>See note at end of this section</i>	Non-generating	Federal Allocation/Grant Funds Federal Hway Back Country Byway Funds Oregon State Marine Board
	<b>[JOINT PROJECTS]</b> <b>Billings Park – Day Use and Boat Access</b> Redesign/develop parking area(s) Year-round low-pool boat launch Viewing/fishing platform Day-use picnicking, including restrooms	\$100,000	<i>See note at end of this section</i>	\$3,000 (State Marine Board Maintenance Assist.)	Federal Allocation/Grant Funds Oregon State Marine Board

Phase 1 continued

Priority	Project	Dev. Cost	Annual O&M	Annual Revenue	Possible Funding Sources (Improvements)
Phase 1 (2-5 years)	<b>Whitcomb Creek Park – Visitor Complex/Campground Development</b> Visitor entry facility/gateway Campground expansion Group camping facility Additional water source Day-use facilities w/picnic shelter for families and large groups Swimming platform, possibly tethered offshore w/picnic tables and benches Interpretive trail system; signage				
	<b>Upper Whitcomb Creek Park – Boat-in Recreation Site</b> Boat-in recreation sites/camping facility at Upper Whitcomb Park: <ul style="list-style-type: none"> <li>▪ Cabins/yurts (5)</li> <li>▪ Tent sites</li> <li>▪ Moorage</li> <li>▪ Vault or composting restrooms</li> </ul> Improve access road for maintenance Maintenance yard with caretaker facilities	\$1,000,000	\$35,000 <i>See note at end of this section</i>	\$100,000 plus current revenue (State Marine Bd Mntce Assist. Facility fees)	RV Licensing Grant Funds Local Government Grant Program Federal Allocation/Grant Funds
2-5 years	<b>Boat-wash Facilities</b> Install @ all boat access sites	\$20,000			Oregon State Marine Board

**NOTE:** Phase 1 recreation site improvements would require the following staff increases:  
 1 FTE Park Ranger 2 Half-Time Seasonal Ranger/Law Enforcement Deputy

PHASE TWO: Recreation Facility Upgrade and Expansion

Priority	Project	Dev. Cost	Annual O&M	Annual Revenue	Possible Funding Sources
3-10 years	<p><b>Rumbaugh Creek Boat-in Recreation Site</b></p> <p>Cabin and yurts (10) Investigate off-grid power sources Interpretive trails; signage Potable water source Moorage facilities</p> <p><b>Boat-in Campsite Closure – all other sites</b></p>	<p>\$300,000</p> <p>\$40,000?</p>	\$30,000	<p>\$35,000 (RV Licensing Grant Funds; Facility fees)</p> <p><i>Note: Clarification needed to determine if licensing fees are eligible</i></p>	<p>Local Government Grant Funds Campground Grant Funds</p> <p><i>Revenue Sources:</i> RV Licensing Funds Camping fees</p> <p>USACE – closure and rehabilitation of marginal boat-in campsites</p>
<p><b>Phase 2</b> 5-10 years</p>	<p><b>Whitcomb Creek Boat Access</b></p> <p>Year-round low-pool boat launch Moorage facilities Parking expansion</p>	\$500,000	<i>See note above</i>	<p>\$3,000 plus current revenue (OR State Marine Bd. Maintenance Assistance</p>	Oregon State Marine Board



**PHASE THREE: Visitor Enhancements and Continued Facility Upgrade**

Priority	Project	Dev. Cost	Annual O&M	Annual Revenue	Possible Funding Sources
Future years	<b>Gateway Enhancement</b> Gateway entry theme from Highway 20 to N. Shore Viewpoint	\$25,000	\$5,000	Non-generating	Federal Allocation/Grant Funds
Future years	<b>Quartzville Recreation Corridor and Green Peter Reservoir Enhancement</b>  Wayfinding plan and implementation Interpretive plan and implementation Education plan with brochures, public expectations, stewardship ethics and implementation Pack-in/pack-out program for recreation users; enforce when required	\$50,000	\$5,000	Non-generating	Federal Allocation/Grant Funds
Future years	<b>Two-mile Boat-in Recreation Site</b>  Tent sites (20) Picnic facilities incl. possible shelter Vault or composting restrooms Investigate cabin/yurt feasibility	\$50,000 <i>Not including cabins</i>	\$7,500	\$10,000 (Facility use fees)	Local Government Grant Program Federal Allocation/Grant Funds

Phase Three continued

Priority	Project	Dev. Cost	Annual O&M	Annual Revenue	Possible Funding Sources
Future years	<p><b>Thistle Creek Boat Access Improvements</b></p> <p>Expand parking capacity Day use facilities</p> <p><i>Note: Dependent on opportunity to enlarge the site in collaboration with adjacent property owner</i></p>	\$50,000 (Acquire lands; expand parking)	Non-generating	Non-generating	Oregon State Marine Board (Facilities) Local Government Grant Program (Land) Federal Allocation/Grant Funds
Future years	<p><b>Sunnyside Park Visitor Information Center</b></p> <p>New information center</p>	\$200,000	\$5,000	Non-generating	Federal Allocation/Grant Funds
<p><b>TOTALS</b> (Target for Federal Allocation /Grants to support critical development and O&amp;M)</p> <p>All other projects (Development)</p> <p><b>Grand Total</b></p> <p><b>TOTALS</b> (Annual O&amp;M)</p> <p><b>TOTALS</b> (Revenue)</p>	<p><b>Development of needed non-revenue generating facilities</b></p> <p><b>Endowment for O&amp;M support transition to allow for facilities to mature (e.g. woody debris maintenance in lake recreation zones)</b></p>	<p><b>\$2,000,000</b></p> <p><b>\$500,000</b></p> <p><b><u>\$750,000</u></b></p> <p><b>\$3,227,500</b></p>	<p><b>\$102,500</b></p>	<p><b>\$161,000-166,000</b></p>	