

A COMMUNITY VISION FOR  
MIRROR POND  
AND DOWNTOWN BEND



# acknowledgements

## **Mirror Pond Management Board**

The Mirror Pond Management Board (MPMB) was established by the Bend City Council in the summer of 2009. It is a citizen advisory committee formed to advise the Mirror Pond Steering Committee (MPSC) and City Council on the project's proceedings. The MPMB facilitated citizen involvement on the Mirror Pond Sedimentation and Enhancement Project and reported progress and findings to the City Council. The Board was also charged with reviewing the various recommended alternatives that will be developed for Mirror Pond as well as providing direction and assistance in fundraising.

## **The Mirror Pond Steering Committee**

The Mirror Pond Steering Committee (MPSC) is a body established to provide leadership for or the Mirror Pond Management Board and to develop and implement a long-term strategy to address the accumulated silt deposits in Mirror Pond. The MPSC is comprised of the following five stakeholder groups, with one representative from each group: City of Bend, Bend Park and Recreation District (BPRD), Pacific Power, William Smith Properties, Inc., and Bend 2030. The MPSC was formalized by a memorandum of understanding among its members on November 16, 2010.

## **Mirror Pond Ad-Hoc Committee**

The Mirror Pond Ad-Hoc Committee (MPAC) was established by motions of the Bend Park and Recreation District (BPRD) Board of Directors and the Bend City Council on July 17 and 18 of 2013. The working group is composed of two members of the BPRD Board of Directors, two members of the Bend City Council, the Executive Director of BPRD, the Community Development Director for the City of Bend, and two public members. It is the purpose of the MPAC to work with project staff and consultants to develop a preferred alternative based on prior public input. The Ad-Hoc Committee presented findings to the Council and the BPRD Board for adoption and to receive further direction regarding moving forward with the project.



## MIRROR POND AD HOC COMMITTEE

**Scott Wallace**, BPRD Board of Directors  
**Ted Schoenborn**, BPRD Board of Directors  
**Victor Chudowsky**, Bend City Council  
**Mark Capell**, Bend City Council  
**Mel Oberst**, City of Bend  
**Mike Olin**, Citizen Member  
**Ned Dempsey**, Citizen Member  
**Don Horton**, Executive Director - BPRD

## MIRROR POND MANAGEMENT BOARD

**Angela Price**, PacifiCorp  
**Mel Oberst**, City of Bend  
**Ryan Houston**, Deschutes Watershed Council  
**Todd Heisler**, Deschutes River Conservancy  
**Victor Chudowsky**, Bend City Council  
**Mark Capell**, Bend City Council  
**Steve Johnson**, Deschutes Basin Board of Control  
**Chuck Arnold**, Downtown Bend Business Association  
**Leslie Olson**, River West Neighborhood Association  
**Mike Olin**, Old Bend Neighborhood Association  
**Spencer Dahl**, Old Bend Neighborhood Association (alternate)  
**Patrick Oliver**, City of Bend Planning Commission  
**Pat Werner**, City of Bend Planning Commission  
**Bill Smith**, Citizen at Large  
**Bill Olsen**, Citizen at Large  
**David Rosell**, Bend Chamber of Commerce  
**Reagan Desmond**, Citizen at Large  
**Don Horton**, Executive Director - BPRD

## VISIONING TEAM

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### **GreenWorks, PC**

Mike Faha, Principal, RLA  
Robin Craig, Project Manager

### **Otak**

Kevin Timmins, PE

### **InterFluve**

Lon Mikelson, Principal

### **Pacific Habitat Services**

John Van Staveren

### **ECONorthwest**

Mark Buckley, Ph.D.  
Lorelei Juntenen

### **Schueler Consulting Services, LLC**

Kirk Schueler, President

## DAM INSPECTION TEAM

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### **Gannett Fleming**

Dean B. Durkee, Ph.D., PE  
Matt Balven, PE, PMP

### **Becon**

Erik Huffman, PE, PLS, CWRE

## TECHNICAL ADVISORY COMMITTEE

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Ryan Houston, **Upper Deschutes Watershed Council**  
Brett Hodgson, **Oregon Dept. of Fish and Wildlife**  
Jaxon Gritzner, **US Forest Service**  
Karen Allen, **Restoration Ecologist & Wetland Scientist**  
Sasha Sulia, **BPRD Natural Resources Manager**

## PROJECT MANAGEMENT

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### **Bend Park and Recreation District**

Don Horton, Executive Director  
Jim Figurski, Landscape Architect  
Vanessa DeMoe, Assistant to the Director

# introduction

Mirror Pond has been an icon in Bend for more than a century. Coupled with Drake and Harmon parks, the area has served as the community's central park, offering a venue for special events, recreation and relaxation. The pond, however, also acts as a settling basin for sediment flowing down the Deschutes River and from City of Bend storm water outfalls. With fluctuating releases of water from Wickiup Reservoir, natural erosion has accelerated the accumulation of sediment beds in Mirror Pond requiring dredging every twenty to thirty years to maintain the pond in its historic form.

The Bend City Council and Bend Park and Recreation District Board of Directors have been studying this issue since 2009. In 2013 the two bodies appointed an Ad Hoc Committee comprised of two city councilors, two park board members, the Bend Park and Recreation District Executive Director, the City of Bend Planning Director and three community members.

The charge from Council and the Board to the Ad Hoc Committee was:

- explore options to reduce sediment in Mirror Pond
- work with the community to develop a referred vision for Mirror Pond
- bring recommendations to the City Council and Bend Park and Recreation District Board of Directors for consideration.



historic center of Bend – image from Oregon Historical Society



historic center of Bend – image from Oregon Historical Society

# context



## Mirror Pond Visioning Project: Context Map

Image by GreenWorks, PC

# Site Opportunities and Constraints Map

## Mirror Pond Visioning Project

April 22, 2013



Image by GreenWorks, PC



### Legend

- VIEW Significant View Corridor
- Park Boundary
- Mirror Pond
- Deschutes River outside study area
- Steep Slopes
- Pedestrian Pathway
- Sculpture/Art Piece
- Outfall field located, not identified in City of Bend GIS
- Outfall location and outfall size (Source: City of Bend GIS)
- Pump Station
- Surface Parking Lot

### Locator Map

The locator map shows the project location in Bend, Oregon, within the context of the Pacific Northwest region, including parts of Washington and Oregon. Key locations marked include Astoria, Portland, Salem, Eugene, and Bend. The Mirror Pond is specifically highlighted in the Bend area.



**Ownership of Mirror Pond:** The waters of Mirror Pond are owned by the State of Oregon and managed for the benefit of the public. The land below Mirror Pond is privately owned by Della M. Tennant (“McKay”) Revocable Trust UTA dated October 3, 2002 (hereinafter the “McKay Trust”). This land is now under an option to purchase by Mirror Pond, LLC.

In 1910 when the Bend Company platted downtown Bend, the hydropower dam had already been built creating what is now called Mirror Pond. When the Bend Company platted lots around Mirror Pond, they platted those lots to the high water mark that existed at the time. While individual deeds use a variety of descriptions to define the pond-side of the property, all of the deeds refer to the edge of the pond as the property boundary. The land around the pond was platted and sold by the Bend Company. Mirror Pond itself was not platted and it has never been sold or otherwise transferred to another party.

The McKay Trust’s ownership of the land beneath Mirror Pond has been verified through a legal review of title research conducted by AmeriTitle in summer, 2013. As long as the McKay Trust or Mirror Pond LLC maintains ownership, their consent must be given prior to any work done that would affect the land beneath the pond.



historic center of Bend – image from Oregon Historical Society



image by BPRD 05/03/2013

**Ownership of PacifiCorp Dam:** The PacifiCorp Dam, the land beneath the pond and river immediately surrounding the dam and some developable property on the east side of the river are all owned by PacifiCorp.

Land ownership of the Pacific Corp Dam has been verified with Pacific Corp documents, although a title search on this property has not been completed. In addition, an environmental assessment of the property and engineering assessment of the dam should take place prior to any transfer of ownership



Image from Gannett Fleming dam inspection report – 05/02/2014

**Liability:** Permission from the landowners must be given prior to any dredging, testing, or other work involving the land under Mirror Pond.

With a history of mill and other industrial operations upstream of Mirror Pond, there is a possibility the sediment at the bottom of the pond contains state and federally listed pollutants. Because of the sediment’s association with waters belonging to the state of Oregon, work involving this sediment requires mitigation of potentially harmful pollutants. Typically, the liability to mitigate for possible pollutants rests with the landowner. Potential contaminants associated with the power house and substation area must also be considered.

A potential source of pollution could also come from the City of Bend’s storm water outfalls that empty into Mirror Pond. Thirteen storm water outfalls drain street runoff directly into Mirror Pond. Should pollutants exist as a result of these outfalls, it is likely that the pollutants will be located in isolated patches at the discharge point of one or more of the outfalls.

In 1981 the sediment was tested prior to the 1984 dredging. At that time identified pollutants were below state and federal thresholds. Since 1984 there has been no development within the Mirror Pond watershed that would suggest an increase in the level of pollutants in the sediment.

**Permitting:** A number of agencies at local, state and federal levels will be involved in permitting the project regardless of what work is proposed. Permitting this project is complex and may take a year or more to complete.

Any work done in-water must be permitted by city, state and federal agencies. Park District staff and legal counsel have met at various times with regulatory agencies brought together by Governor’s Regional Solutions Office. Agencies represented at these meetings included; Oregon Division of State Lands, Oregon Department of Fish and Wildlife, Oregon Water Resources Division (OWRD) and the Oregon Department of Environmental Quality. Project staff met separately with the Army Corp of Engineers (ACOE).

The regulatory agencies have indicated that whatever is done to Mirror Pond must ultimately improve water quality and habitat. Permitting for any kind of action would require comprehensive studies of the potential impacts of any proposed action and an exploration of alternative actions including a “do-nothing” alternative.

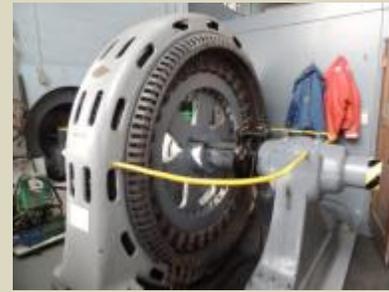
The current vision in this document was presented to all the regulatory agencies except the ACOE. The agencies were consistent in their opinion that the vision concept would fit within current permit requirements.



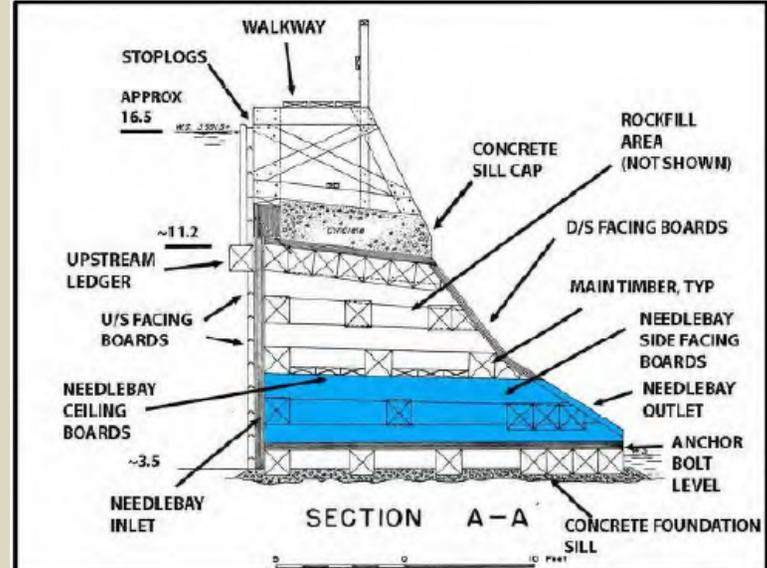
**Age of the PacifiCorp Dam:** The current dam was constructed in 1910 and has a history of significant leaks. Without a dam or dam-like structure Mirror Pond cannot exist.

The future of the PacifiCorp dam is a key consideration in maintaining Mirror Pond in its near-historic form. Multiple inspections of the dam indicates that the dam may be at or near the end of its useful life requiring either major repairs, replacement, or decommissioning, each requiring a significant level of investment. PacifiCorp, in a press release dated November 25, 2013, stated it was no longer cost effective for them to make repairs needed to continue operations. State and federal agencies regulate the decommissioning and removal of dams through a permit process that determines the required mitigation of negative impacts to lands upstream and downstream of the dam.

The PacifiCorp dam is not regulated by the Federal Energy Reserve Commission (FERC) and as a result would be able to close the facility without going through a FERC decommissioning process. The State of Oregon would oversee any necessary decommissioning process. The details of that process cannot be predicted until an actual decommissioning permit is requested from the State.



Photos by BPRD



TIMBER CRIB DAM CROSS SECTION AND NOMENCLATURE

Image from Gannett Fleming dam inspection report – 05/02/2014

**Water Rights:** Water rights associated with the dam allow the dam to exist for the purpose of generating electricity. If the owner of the dam ceases to produce electricity, the water rights must be converted to an in-stream use. It remains to be determined if it is possible to transfer these water rights to another owner and use for the purpose of maintaining Mirror Pond or if a new water right is required.

PacifiCorp holds a non-consumptive water right to store water in order to produce power. The question remains, can the associated water rights continue as a non-consumptive storage right for the benefit of the public?

If Mirror Pond is to remain in its near-historic form, the dam would need to remain intact and Pacific Corp's water right to impound water would need to be transferred to another purpose, or the OWRD must approve another mechanism to allow the impoundment. Three potential mechanisms have been identified:

- A) Water Rights Transfer through the OWRD. The water right transfer process would request a new storage right.
- B) A Potential Transfer of Water Storage Rights. A permit to store water on the Deschutes River in Bend is held at another location by a private citizen. This water right may be sufficient to allow for the continued storage of water in Mirror Pond, if a portion of the storage right

can be transferred from the existing impoundment to Mirror Pond. OWRD would have to agree to the transfer.

- C) Legislative Fix. A bill could be submitted to the Oregon legislature that would establish a special water right for storage at Mirror Pond. The bill would require a legislative sponsor and a compelling case for the legislature to overrule existing statutes and administrative rules for this purpose.
- D) Transfer of Existing Water Rights. It may be possible that existing unused water rights from an irrigation district could be transferred to Mirror Pond.

**Public Process:** The planning process has generated a robust conversation surrounding the future of Mirror Pond. The vision presented here includes elements that address the major concerns expressed during this conversation.

The planning process for this project is similar to other design processes for large public projects. In the early stages, people tend to choose a camp before working toward a common goal. This has been the case for this project with one camp advocating keeping Mirror Pond in its historic form and another camp advocating removing the dam and returning the area to a more natural river condition. Through the public outreach process it became evident that there was a middle ground that could satisfy the majority of those in either camp.

This vision for Mirror Pond and downtown Bend represents the first step in realizing that middle ground. Although there is much more work to be done, outreach efforts indicate there is strong support for the vision.





**Project Website Launch**  
[www.mirrorpondbend.com](http://www.mirrorpondbend.com)  
December 2012



**Values  
Questionnaire**  
January 2013  
1860 responses



**Alternatives Questionnaire**  
July 2013  
1296 responses



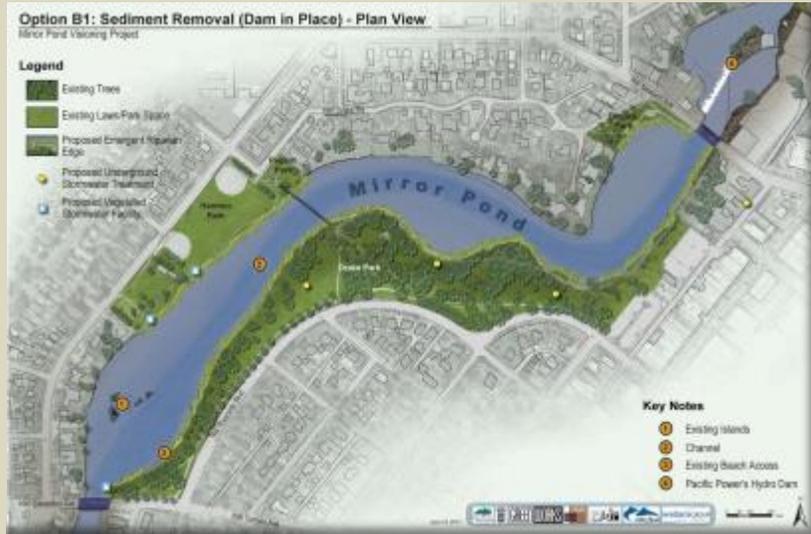
**Mirror Pond & Downtown  
Redvelopment Questionnaire**  
January 2015  
623 responses +  
326 responses at public  
meetings



**Public Meetings:**  
Over 1,000 participants

**Public Process: Over 4,000 people involved**





Maintain Mirror Pond as is: dredge and retain dam



Let it return to a river: remove dam and let vegetation infill



Opposing Views

Middle Ground

**Public Process:** The outreach process confirmed two basic opposing views. It also revealed that there was a compromise view that both opposing views could support.

This compromise view developed into a set of project goals and future vision for Mirror Pond and downtown Bend.



“Designer Dredging”: reuse sediment, selectively narrow channel, maintain pond-like qualities

# the goals

1. Retain Mirror Pond in near historic form
2. Modify the dam to function more like a river
3. Enhance Habitat
4. Enable Fish Passage
5. Maintain or Improve Public Spaces
6. Reduce the frequency and quantity of future sediment removal efforts
7. Identify funding source(s) other than tax dollars
8. **Build a Public/Private Partnership**

**The Mirror Pond Ad Hoc Committee was charged with developing a vision for Mirror Pond that met seven goals established through previous public outreach efforts.**

Pursuing these goals, the project engaged the Bend Community in one of the most robust public involvement efforts the community has experienced. This started with over 1800 citizens participating in a Values Questionnaire that resulted in the development of four different options for moving forward; Do Nothing, Dredge, Partially Dredge and Removing the Dam. These four options were explored both as stand-alone proposals and how each might respond to a future removal of the Dam<sup>1</sup>. Over 1200 citizens participated in a second online questionnaire to evaluate each of these proposals. The Ad-Hoc committee, supported by the Visioning Team, developed drawings (p. 25-26) in an effort to illustrate a future vision that addressed the seven goals and responded to the findings of the public outreach program.

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<sup>1</sup> See project website – [www.mirrorpondbend.com](http://www.mirrorpondbend.com)

# Goal #1: Retain Mirror Pond in near historic form



historic center of Bend – image from Oregon Historical Society



Iconic image by BPRD 05/03/2013

## Historic Form and Function

### Key Elements

- Maintain water levels to retain pond
- Manage vegetation and channel alignment to preserve iconic Views
- Provide access to water for recreation uses

### Desired Outcomes

- Mirror Pond continues in near historic form
- Iconic views are preserved
- Recreation opportunities maintained and expanded to include a river trail for boaters

# Goal #2: Modify the dam to function more like a river



Image by GreenWorks, PC

## River Like Form and Function

### Key Elements

- Modify existing dam
- Use natural forms
- Use natural materials
- Enhance sediment transport

### Desired Outcomes

- Looks like a river
- Dam/impoundment does not look like a dam
- A strong visual amenity is created prompting future enhancements
- Allows passage for kayaks and canoes
- Improvements act as catalyst for redevelopment of riverfront

# Goal #3: Enhance Habitat



Image by GreenWorks, PC



Image by BPRD

## Enhanced Habitat

### Key Elements

- Replace existing crumbling walls with natural materials
- Native plantings at river's edge that do not obstruct views
- Treat stormwater outfalls
- Provide access to water

### Desired Outcomes

- Attractive natural edge that enhances habitat and contributes to improved water quality
- Enhanced habitat for aquatics and avian species
- Added visual interest
- Controlled access to water's edge
- Educational and interpretive opportunities

# Goal #4: Enable fish passage



Image by GreenWorks, PC

## Fish Passage

### Key Elements

- Low gradient riffle-pool drop structure replaces traditional dam
- Natural appearance
- Safe for kayak and canoe passage
- Safe for fish passage

### Desired Outcomes

- Barrier to fish passage removed
- Educational opportunities
- Creates a strong visual amenity and attraction

# Goal #5: Maintain or improve public spaces



Image from Willamette Legacy Project

## Attractive Public Spaces

### Key Elements

- Controlled access to Mirror Pond and river
- Enhanced access to and through downtown
- Access to adjacent parks and recreation opportunities
- Public spaces that compliment riverfront development

### Desired Outcomes

- Continuation of Deschutes River Trail
- New & enhanced public spaces
- Amenities that attract visitors & residents
- Enhanced recreation opportunities



Image from Willamette Legacy Project

# Goal #6: Reduce the frequency and quantity of future sediment removal efforts



Image by BPRD



Image by BPRD

## Reduce Sediment Removal

### Key Elements

- Ability to manage water velocity and turbulence
- Partial sediment removal
- Manage future sedimentation rate

### Desired Outcomes

- Reduce need for dredging
- Maintain pond level year-round
- Expanded public parks
- City stormwater outfalls are filtered and treated prior to emptying into Mirror Pond

# Goal #7: Identify funding sources other than tax dollars

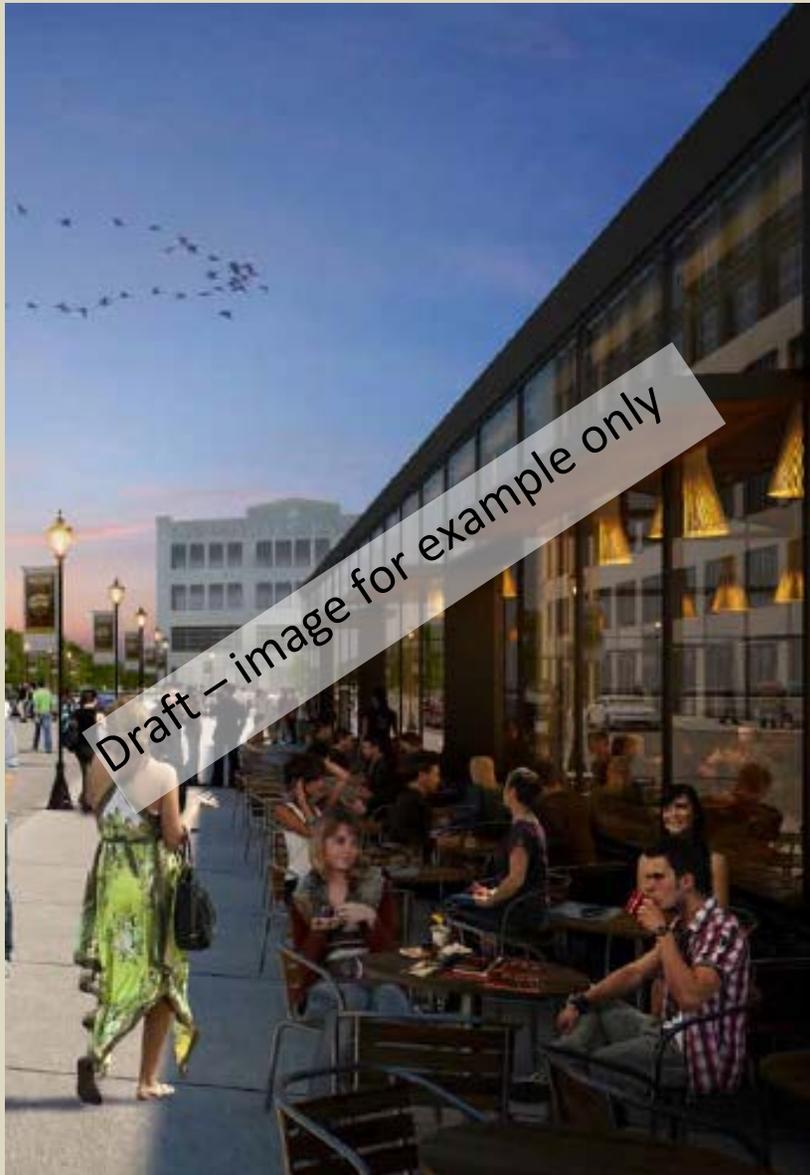


Image from Willamette Legacy Project

**Funding:** A preferred option to address the sediment in Mirror Pond is likely to be expensive. Neither the City of Bend nor the Bend Park and Recreation District have sufficient funds to design, permit, and construct the preferred solution.

The City of Bend and the Bend Park and Recreation District have proposed complex funding strategy to support further refinement of the vision including; design work, permitting, and construction. This strategy will include funding from multiple sources.

## Key Elements

- Relocation of the PacifiCorp substation and donation of associated PacifiCorp lands
- Development and drainage fees collected through an urban renewal district
- A mechanism for property owners benefiting from the development to contribute to long term maintenance
- BPRD contributing funding for development of park and public spaces
- Grants and potential funding from Oregon State Lottery bonds and other sources
- A Public/Private Partnership to develop non-park land

## Desired Outcomes

- No new taxes on the general public to fund development

# Goal #8: Public/Private Partnership

"Greenville never had an iconic image; the bridge and waterfalls became that. We spent \$13 million on the park and within two years had about \$100 million in private investment. LWCF's initial investment led to permanent protection of the site and the support that has since flowed into the park and surrounding area."

— GREENVILLE MAYOR KNOX WHITE



**REEDY RIVER FALLS PARK AND LIBERTY BRIDGE, GREENVILLE, SC** In 2004, Greenville transformed its downtown by restoring Reedy River Falls Park, originally protected by LWCF, and building Liberty Bridge. The pedestrian bridge is the capstone of a park that has inspired a wave of prosperity throughout the West End, including construction of a minor league baseball park.<sup>6</sup>

Image from Land and Water Conservation Fund – success stories

**Public/Private Partnership:** The proposed downtown redevelopment includes nearly nine acres of public and private land. To ensure a vibrant and financially stable downtown it is important that a long term partnership be established to see the vision to completion.

## Key Elements

- Coordination between City of Bend, Bend Park and Recreation District, PacifiCorp and a visionary development team
- A dedicated urban renewal team
- Special zoning
- Bend Park and Recreation District funding for park development
- Revenue from land sales or leases fund general development

## Desired Outcomes

- A vibrant downtown connected to Mirror Pond and the Deschutes River
- An urban renewal district that captures fees from development to fund future maintenance for Mirror Pond

# the vision

Image by GreenWorks, PC



## MIRROR POND: DRAKE PARK MASTER PLAN OVERVIEW PLAN

BEND, OREGON | SCALE 1:150 @ FULL SIZE SHEET 30342

GREENWORKS

AUGUST 18, 2014

# the vision

Image by GreenWorks, PC



MIRROR POND: DRAKE PARK MASTER PLAN | PLAN ENLARGEMENT  
BEND, OREGON SCALE 1:50 @ FULL SIZE SHEET 30642

  
AUGUST 18, 2014

# the vision

Image by GreenWorks, PC



VIEW LOOKING SOUTH

MIRROR POND: DRAKE PARK MASTER PLAN | BIRD'S EYE VIEW

FINAL DESIGN

DRIVE

AUGUST 12, 2014