



MEETING NOTICE

TUALATIN PARK ADVISORY COMMITTEE
November 8, 2016 - 6:00 PM

COMMUNITY SERVICES ADMINISTRATION OFFICE
Tualatin Community Park
8515 SW Tualatin Road

A. CALL TO ORDER

1. Roll Call

B. APPROVAL OF MINUTES

1. October 11, 2016

C. ANNOUNCEMENTS

1. Chair
2. Staff
3. Public

D. OLD BUSINESS

1. Tualatin River Greenway Trail Design Award
2. Parks and Recreation Master Plan Update

E. NEW BUSINESS

1. Tree City USA Application
2. Access Recreation Information
3. Development Project Update
4. Tualatin Tomorrow Progress Report
5. Ice Age Floods National Geologic Trail

F. FUTURE AGENDA ITEMS

G. COMMUNICATIONS FROM COMMITTEE MEMBERS

H. ADJOURNMENT



DRAFT MINUTES

TUALATIN PARK ADVISORY COMMITTEE
October 11, 2016

COMMUNITY SERVICES ADMINISTRATION OFFICE
Tualatin Community Park
8515 SW Tualatin Road

MEMBERS PRESENT: Krista Nanton, Dana Paulino, Valerie Pratt, Anthony Warren,
Dennis Wells

MEMBERS ABSENT: Kay Dix (excused)

STAFF PRESENT: Rich Mueller, Parks and Recreation Manager
Tom Steiger, Park Maintenance Manager

PUBLIC PRESENT:

OTHER:

A. CALL TO ORDER

Chairperson Dennis Wells called the meeting to order at 6:07 pm.

B. APPROVAL OF MINUTES

The minutes of the September 13, 2016 meeting were unanimously approved on a motion by Krista Nanton and seconded from Anthony Warren.

C. ANNOUNCEMENTS

1. Chair

There were none.

2. Staff

Rich Mueller provided updates on the following: Pumpkin Regatta news articles and announcement, volunteer projects, monthly trail count numbers, Pohl Center programs, Youth Advisory Council update, Arbor Day newsletter, Tree City USA bulletin, Tualatin Historical Society newsletter, regional trail count volunteers, America's Best Communities update, ConnectOregon VI projects and Concerts on the Commons survey.

3. Public

There were none.

D. OLD BUSINESS

1. Tualatin River Greenway Trail Project Award Application

It was announced by Rich Mueller that the City received the Award for Excellence from the League of Oregon Cities for the new section of the Tualatin River Greenway Trail. The award news release, news article, criteria, entry form and application were distributed and discussed.

2. Parks and Recreation Master Plan Update

Rich Mueller shared specific park site information sheets from other agencies master plans, as an example of how Tualatin might show neighborhood, community and regional park data. This information included the service area demographics, description of the parkland, geographic service area, land use, management issues and recommendations. A document from the National Recreation and Park Association titled *NRPA Americans' Engagement with Parks Survey* was distributed. This document shows national data on park use with key findings for parks and recreation support.

E. NEW BUSINESS

1. Park Maintenance Update

Parks Maintenance Manager, Tom Steiger provided an update on maintenance and projects in parks, greenways and natural areas. Tom highlighted the Commons turf replacement, Ibach Park field renovation, volunteer services projects, nonprofit partnerships, street trees, park benefits and park operations staffing. Mr. Steiger answered committee member's questions about park facilities and operations.

2. Pohl Center Annual Report

The Annual Report of the Juanita Pohl Center Advisory Committee was distributed along with the power point presentation. Highlights included an increase in programs and facility rentals at the Pohl Center. The recent furniture replacement project was highlighted.

3. Quilt Barn Trail

Committee members received information about the City partnership with the Westside Quilters Guild, who recently placed a painted quilt pattern on the barn at Brown's Ferry Park, as part of the Quilt Barn Trail of Oregon's Washington County. The intent of this project is to highlight the agricultural and historical heritage, promote area tourism, create public art and showcase the art of quilting. The design "Crossed Canoes" is the name of this traditional quilt block, chosen because a quiet stretch of the Tualatin River is just behind the trees.

4. Intertwine Alliance Information

Information from the Intertwine Alliance was distributed by Rich Mueller. Members received a fact sheet with the alliance principles, vision, focus areas and health benefits. Documents about the alliance Regional Conservation Strategy, Our Common Ground and the Regional Trails System Plan were reviewed and discussed.

F. FUTURE AGENDA ITEMS

G. COMMUNICATIONS FROM COMMITTEE MEMBERS

Krista Nanton shared information about the Extraordinary Playscapes national exhibition that is currently at the Portland Design Museum. This exhibit examines the art, history, science and importance of play. There are over 40 international playgrounds featured in drawings, sketches, videos, models and playable installations.

H. ADJOURNMENT

Dennis Wells adjourned the meeting at 7:51 pm, on a motion from Anthony Warren, and second by Valerie Pratt.



Accessible outdoor recreation for all...

AR Access Recreation

Our partners



Access Recreation [AR] is a Portland, Oregon ad hoc committee that had developed guidelines for minimum information that should be provided about hiking trails and outdoor facilities, that would benefit hikers with disabilities, and which can be applied to websites, printed materials and at trail sites.

Based on the success of the guidelines, as of 2014, AR was awarded two Nature in Neighborhoods [NIN] grants from Metro to conduct 36 trail assessments and to produce 18 videos over a three-year period. Click here for the dedicated AccessTrails website.

AR was conceived by Georgena Moran who discovered that the primary obstacle to being able to hike trails was a lack of useful information.

The committee is made up of representatives from federal, state and local park agencies and organizations that support people with disabilities.



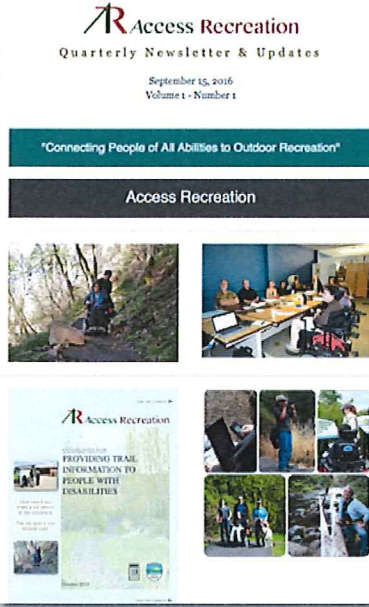
Click on image, above, to visit the AccessTrails website

[Online article in the Oregonian](#)

[Printed article in the Oregonian](#)

[Channel 8 news coverage](#)

**Hot off the digital presses!
Access Recreation's first
newsletter has arrived!
Click on image below to read
the entire newsletter. Do it now!**



Click on image, above, to read the entire newsletter

Inform
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Links to other pages

- [AccessTrails](#)
- [Trail guidelines](#)
- [Awards and presentations](#)
- [Agenda next meeting](#)
- [Meeting minutes](#)
- [Our partner agencies](#)
- [Team photos](#)
- [AR logo and graphics](#)

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AccessTrails Project

AccessTrails project

All the trails

Supported by our partner agencies, Access Recreation [AR] was fortunate to have been awarded two multi-year Metro Nature in Neighborhoods [NIN] grants to conduct trail assessments from the perspective of the user with a disability. This three-year period spans from July 1, 2014 through June 30, 2017.

AR is now in the process of concluding the first of 24 or more trail assessments and the creation of 12 or more videos that focus on trails of particular interest and/or complexity.

It is not the purpose of these trail assessments to identify which trails are considered ADA accessible, but rather to share information about the trails as they are, so that people with disabilities can make their own determination about whether to try a particular trail or not. This is an extension of the Guidelines that were prepared by Access Recreation through an earlier grant.

The purpose of this webpage is to orient the user to the features that were developed by AR to share its information.

Although the information presented addresses concerns about people with disabilities, we feel that this information will benefit all trail users and sets a new standard that should be applied to all hiking trail descriptions.

Go hiking with
AccessTrails.org
...go beyond accessible
to
adventure!

We provide useful information about trails in the Portland Metro region for people with disabilities and for people of all abilities.



This is a three-year project conducted by Access Recreation and made possible through two generous Metro Nature in Neighborhoods grants that will result in 36 trail assessments and 18 videos.



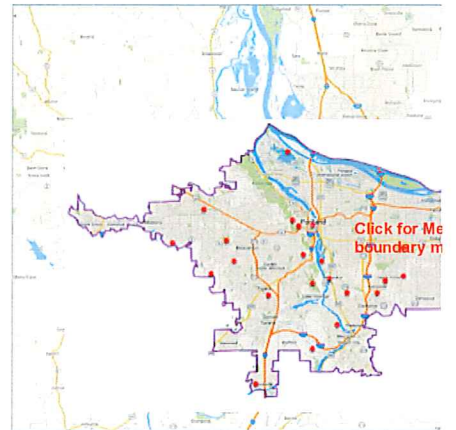
AccessTrails informationa

from **Access Recreation**

03:34

Informational video about the AccessTrail
Note there are options for *HD CC* and to view *Fulls*

All the trails that have been assessed thro
Click on inset map for trails within the Metro District



Contact us
About Access Recreation
Our partner agencies

About the AccessTrails project
Provide trail feedback
Map of all the trails

Current newsletter
Past newsletters
Publicity and articles

Access Rec
Upcoming
Site map

A new hope for hikers with disabilities – access to information



By [Jamie Hale | The Oregonian/OregonLive](#)

[Email the author](#) | [Follow on Twitter](#)

on May 28, 2016 at 6:00 AM, updated May 30, 2016 at 11:49 AM

It's hard to stop an adventurous Pacific Northwest spirit from getting to the trail. Weather won't stop it, and neither will a wheelchair.

Portland-based [Access Recreation](#) isn't pushing for better access on trails, it's pushing for better access to *information* on trails. For these hikers, that makes a world of difference.

Because while paved trails are nice, they're not the only thing hikers with disabilities are looking for. Some want to know if there are bathrooms, or benches, or Braille on the signs. Just knowing what to expect at the trailhead can help them prepare.

For years those details haven't been readily available, but with a new push from Access Recreation – which so far has documented [24 local trails](#) – hikers with disabilities are finally getting what they need the most: information.

A DRIVE TO EXPLORE

Like a lot of people in the Pacific Northwest, Georgena Moran is an outdoors enthusiast. She likes the water, the trails, the fresh air on her face – she likes to climb mountains, find waterfalls and smell the Pacific Ocean air.

These days she just has to enjoy it from a wheelchair.

OREGON TRAILS

[Stunning Tam-a-lau Trail has amazing views of The Cove Palisades](#)

[Pilot Butte is the community's viewpoint in Bend](#)

[Timberline Trail reconnected at last, completing 40-mile Mount Hood loop](#)

[Eagle Creek Trail set to reopen by March, but it could be closed another year](#)

[When Detroit Lake is dry, hike to Dome Rock up above it](#)

[All Stories](#)

ADVERTISING

inRead invented by Teads

After decades of hiking, building cabinets and racing outrigger canoes, Moran, at 40 years old, was diagnosed with multiple sclerosis. It progressed quickly, and within three years she was in a motorized chair.

"A lot of my friends knew who I was, knew that I liked adventure," she said. "I've always kind of lived life on the edge, so I guess for me I'm always trying to figure out how to do the next thing ... how do I get back on the water, how do I get back on the trail?"

Her journey hasn't always been easy, but more than a decade later she's finally making headway, not just for herself but for all hikers with disabilities. In 2009 Moran founded Access Recreation, a group dedicated to helping people with physical limitations get outdoors.

In the process she's become a quiet figurehead in the community, with aspirations to expand her message to hikers around the world. That message is resonating in part due to how simply it defies all our preconceived notions about hiking with disabilities.

Patricia Kepler, recreation coordinator for Portland-based **Independent Living Resources**, is one of the hikers who works with the group. Kepler, who is completely blind, said the prospect of hitting a trail can bring up a lot of fear, from transportation to amenities once she gets there.

"Putting that information out there silences those fears," she explained.

While simply labeling trails as "accessible" is meant as an act of inclusion, she said it unnecessarily creates a division; it tells her only certain trails are for her.

"Do you want someone to tell you what trail you can and can't go on?" she said.

Moran certainly doesn't. Even as she adjusted to life in the wheelchair, she tried to find a way to continue exploring nature. That passion, that drive doesn't go away.

"I'm like a dog at the bone," she said. "Every time I've explored something it's always a little bit of an adventure, a little bit of a risk."

She reached out to local land management agencies – the **U.S. Forest Service**, **Oregon State Parks**, **Portland Parks and Recreation** and others – to learn more about local trails, to get the information she needed to prepare.

They knew all the information, but putting any sort of rating on that? Telling hikers with disabilities that certain trails were safe? That was an issue.

LIABILITY AND CONCERN

It's not that the agencies didn't *want* to provide detailed trail information, it's just that it was a difficult thing to manage on one hand, and a possible liability on the other.

After Georgena reached out, she and representatives from several of the agencies sat down to discuss what better information for hikers with disabilities might look like. What made most sense at the time was a usability rating, that would tell hikers how difficult each trail would be to manage.

"That's where the problem comes in," said Richard Walkoski, the Americans with Disabilities Act coordinator for Oregon State Parks. "If you're going to rate anything, you're essentially going to certify that that thing is what you say it is."

And that, for a government agency, is a huge liability.

Because trail conditions have a tendency to change, and because every hiker has a different experience, there's no way to guarantee safety. But an independent organization, like Access Recreation, would be more than welcome to offer that information themselves.

"It goes beyond, 'Well is there a parking spot and does it meet the ADA standards?'" Walkoski said. "It was kind of a road block."

But that road block opened the door for Moran to spearhead a new effort, unbound by liability and red tape, driven by personal experience and peer reviews. The frustration she felt at the lack of information drove her forward, she said, to make the kind of resource hikers with disabilities really needed.

After years of work, supported by grants, Access Recreation has posted detailed reports on 24 trails in the Portland Metro area, and will soon do 12 more trails as far away as the Columbia River Gorge.

Portland Parks and Recreation, which has been working with the group, said it's been a huge help, as the agency has few resources to provide that kind of detailed information itself. The same goes for Oregon State Parks and the U.S. Forest Service, both of which cited problems maintaining park websites to that degree.

"It's not quite as easy as training one or two webmasters," Walkoski explained. "We're on that road and it's a good road to be on ... but I wouldn't hazard to guess when that stuff might be 100 percent."

Access Recreation members said it would be great to get their group's information onto park websites, but for now they're just glad to have it accessible to the people who need it.

"It's exciting for me to serve all of these people," Moran said. "It's all about the information."

--Jamie Hale | jhale@oregonian.com | [@HaleJamesB](https://twitter.com/HaleJamesB)

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Access Recreation

Quarterly Newsletter & Updates

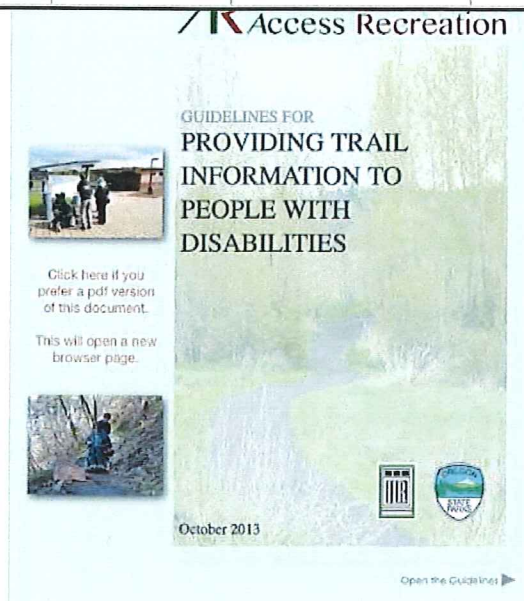
September 15, 2016

Volume 1 - Number 1

"Connecting People of All Abilities to Outdoor Recreation"

Access Recreation





A Brief History:

Access Recreation, a Portland, Oregon ad hoc committee, developed guidelines for basic information that should be provided about hiking trails and outdoor facilities that benefit hikers of all abilities. The Guidelines for Providing Trail Information to People with Disabilities can be applied to websites, printed materials and at trail sites.

Based on the success of these Guidelines and with Independent Living Resources as fiscal sponsor, AR was awarded two Nature in Neighborhoods grants from Metro to conduct 36 trail profiles and to produce 18 videos over a three-year period.

AR was founded by Georgena Moran who discovered the primary obstacle to hiking trails was a lack of useful information before reaching the trailhead. With basic information, easily accessible on park websites, the user can determine if a trail meets their specific needs and make any necessary preparations ahead of time.

AR committee members represent federal, state and local park and recreation agencies, organizations, and individuals that support people with disabilities, a passion for the great outdoors and the vision of accessible outdoor recreation for all.



Access Trails Field Team



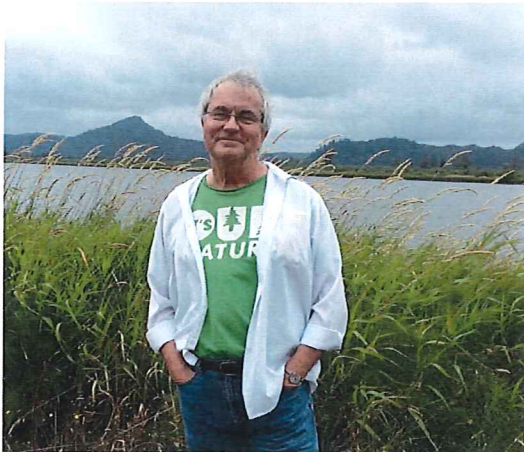
Georgena Moran - Project Manager, Co-Producer of videos, Head Writer & Editor for website content. Georgena founded Access Recreation in 2003 and serves as the Project Coordinator. She is an ICC certified Accessibility Specialist and Plans Examiner, with a passion for outdoor recreation.



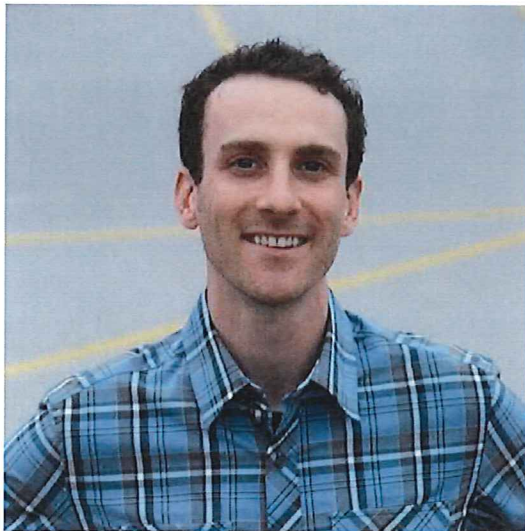
Debbie Timmins - Project Support, Communications, Public Relations, Photographer and Writer. Debbie has been involved with AR since 2009. Therapeutic Recreation Specialist and formally with Portland Parks & Recreation - Adaptive & Inclusive Recreation. Lover of animals, music and the outdoors.



Sharon Mitchell - Videographer, Photographer and Editor for the Access Trails Project. Sharon joined Access Recreation in 2009 and serves as Project Facilitator. She brings a unique skill set to the team as a former Television & Radio Broadcast Journalist.



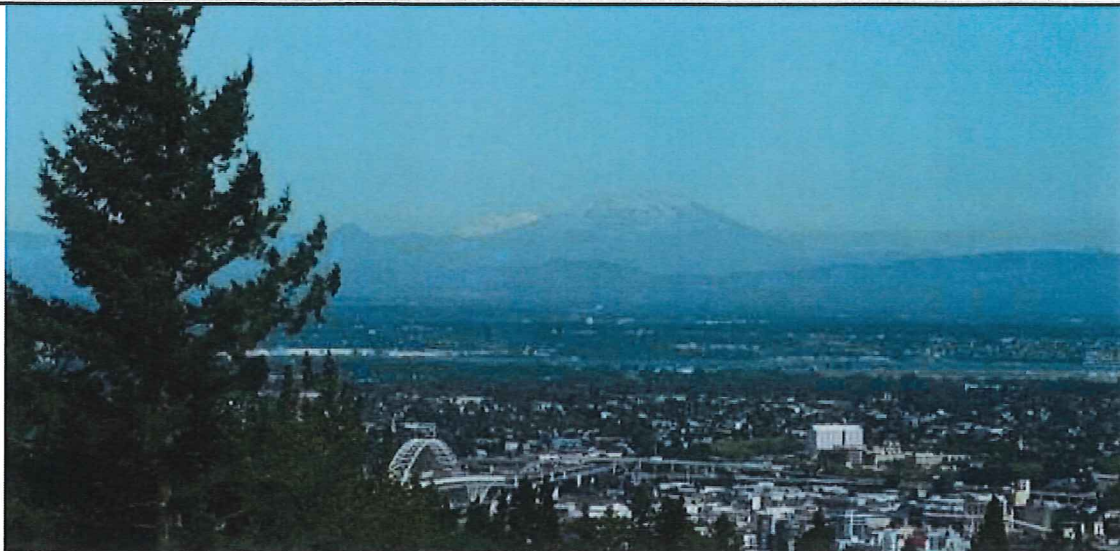
Richard Bosch has been the primary designer and manager of the AR websites. Since 2009, Richard has been instrumental in AR's project development. He is transitioning from this primary role, to volunteer on AR's Executive Committee. Richard's expertise in accessibility and universal design stems from his background as an architect, with Accessible Design, and his professional training at the Commission on Persons with Disabilities in Honolulu, Hawaii.



Eric Rosewall has joined the field team as AR's new web designer and web manager on the AccessTrails Project. In 2011 Eric worked with Richard in developing the AR Guideline website. He has also worked with our partners, The Intertwine Alliance and Vancouver-Clark Parks & Recreation, on their web information. Eric is currently the Executive Dir. of Depave, a nonprofit, removing pavement to create more natural spaces.

Access Trails Latest Video

[Click Here!](#)



4T Trail - Explore Portland: Trolley, Train, Trail & Tram.
A unique way to explore Portland. To view more videos visit our website
at: <http://accesstrails.org>



On the trail at Cook Park - left to right Kyla Laraway, Georgena Moran,
Marissa Grass, Lucy Jones & Debbie Timmins

Sensory Factors of Trail

By Georgena Moran

Kyla Laraway, an OT doctoral student with Pacific University, School of Occupational Therapy, served as an intern with Access Recreation [AR] from April – July 2016. Kyla has a special interest in working with people with post-concussion symptoms, resulting in post-traumatic stress disorder, [PTSD], and other disabilities. She offered AR an opportunity to expand the information provided on parks and trails to include information relevant for this population.

Kyla developed a method to evaluate the trail experience based on sensory factors that could impact people with various disabilities, including sensory, cognitive and intellectual disabilities. These sensory factors include auditory processing, visual processing, touch processing, movement processing, olfactory/smell processing and cognitive/safety factors.

Auditory processing refers to noise that might be bothersome, or severely disabling, for some. For instance, the buzzing of power lines above a trail or the crunching sound of gravel underfoot.

Visual processing refers to conditions along the trail that affect someone's vision, such as, light passing through fluttering leaves on a tree. This could produce a “strobe light” effect that might be uncomfortable or disturbing for some.

Touch processing could be experienced when moving from forest to grasslands or walking on various types of surfaces. Tactile factors of touching tree trunks, playground equipment or plant life might assist someone who is relieved of their symptoms through touch.

Movement processing may be a factor of someone's endurance or balance. It could be remedied if there is information on the length of trail or if there are regular areas to rest, such as benches. Then they can choose whether the seating or length of trail is sufficient.

Olfactory/smell processing relates to smells that may enhance or hinder an individual's ability to enjoy a trail. These might include the smell of bark chips or the smells from a nearby river. Flowering plants may also be a factor in affecting seasonal allergies.

Cognitive safety factors may include adequate signage or whether there may be staff on site for assistance.

Kyla reviewed four of the AR trails previously profiled, detailing their sensory factors. She then trained the AR field team on her sensory evaluation process on a fifth trail. With this information, the AR field team will be able to apply these sensory factors on future trail reviews, making the AccessTrails information even more inclusive.

The sensory review factors that Kyla developed during her internship, will improve AR's ability to provide more people with the information they need to make informed choices

Project!



Metro



Mark Your Calendar

AR Quarterly Meeting

September 22, 2016

1:30pm - 3:30pm

Independent Living Resources

1839 NE Couch St.

Portland, OR 97232

For More Information

[http://info@accessrecreation.org](mailto:info@accessrecreation.org)



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TUALATIN TOMORROW



LETTER FROM THE CHAIR

February 22, 2016

Dear Mayor Ogden and Members of the Tualatin City Council,

I am pleased to present the second Tualatin Tomorrow Annual Progress Report since completing the five-year Action Plan update. In two years, our community partners have initiated or completed 80 of the 100 actions proposed for implementation over the five-year period.

This year we are especially excited that the Tualatin Tomorrow Vision served as a foundation for our application for the America's Best Communities Competition. The Tualatin Tomorrow Vision Advisory Committee and a number of our partners spearheaded the application process, and our Community Revitalization Plan has now made it into the Semi-finals, and we will be competing for \$100,000 in the next round to advance 20 actions in our Tualatin Tomorrow Vision. This is a shining example of the power of community visioning and how the partnerships established through community visioning can be leverage to achieve the vision.

Many partners were involved in helping to develop the Community Revitalization Plan for the ABC Competition, but many of the other Tualatin Tomorrow Partners have also been very busy working on moving their actions towards implementation as well. Those successes have been documented in the pages that follow. We have also included an overview of Tualatin Tomorrow for readers who may be new to our visioning project.

On behalf of the Tualatin Tomorrow Advisory Committee, I want to thank the Council for your continued support of our community visioning program. We look forward to connecting with you and other community partners in 2016 as we continue our work on the Vision.

Sincerely,



Candice Kelly, Chair
Tualatin Tomorrow Advisory Committee

ABOUT TUALATIN TOMORROW

The Tualatin Tomorrow Vision and Action Plan was originally adopted in 2007 following a two-year public engagement and planning campaign. In the past seven years, more than 100 community-identified priorities were implemented by the City and partner organizations, including:

- South Tualatin Concept Plan
- New Drug Detection Canine
- City Website Enhancement
- Neighborhood Associations Network (Citizen Involvement Organization (CIO) Program)
- Tualatin Emergency Shelter
- Active Aging Center Expansion
- Tualatin River National Wildlife Refuge Expansion
- Tualatin River Bike and Pedestrian Path
- Summer Arts Festival
- School Inventory and Gap Analysis

As part of its promise to maintain a “living” action plan, the Tualatin Tomorrow Advisory Committee (TTAC) completed a plan update in 2013. Through forums, online surveys, work groups and other outreach activities, more than 1,000 people shared their suggestions and priorities for Tualatin’s future. Four “theme teams” were convened to sort through ideas and develop a new round of actions to advance the community vision plan. In early 2014, the City Council adopted the updated Action Plan which provides a 100-action road map for tackling community goals in the following areas:

- Fostering Shared Sense of Place and Community Identity
- Creating Activities and Attractions for All Ages
- Sustaining Quality Community Services
- Enhancing Mobility
- Promoting Environmental Sustainability
- Ensuring Community Health and Safety
- Creating Economic Opportunity
- Advancing Education and Learning Opportunities

The TTAC continues to oversee and facilitate implementation progress by convening and coordinating with vision partners and provides periodic updates to the community through newsletters and an Annual Progress Report. The Vision Action Plan is available online at www.tualatintomorrow.org or in hard copy by visiting Tualatin City Hall.

2015 ACTIVITIES SUMMARY

The Tualatin Tomorrow Advisory Committee (TTAC) undertook the following activities in 2014:

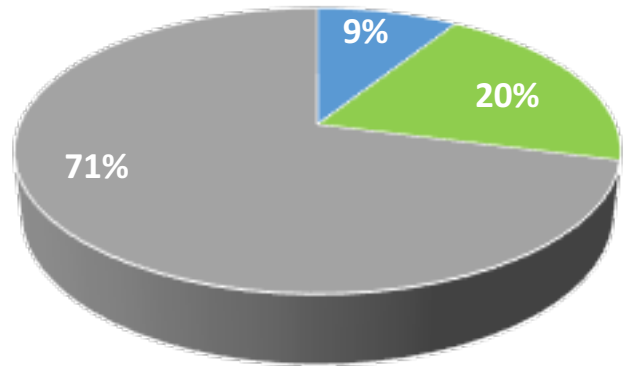
- **TTAC Meetings** – The TTAC met monthly to plan and coordinate vision implementation, partner outreach and other logistics.
- **Partner Events** – TTAC hosted two events to facilitate partner interaction and information-sharing.
- **Partner Survey** – TTAC surveyed lead partners to ascertain implementation progress, and identify highlights and challenges requiring follow-up assistance.
- **America’s Best Communities (ABC) Competition** – The TTAC served on the team developing the ABC application and the Community Revitalization Plan.

Tualatin Tomorrow Advisory Committee

Chair Candice Kelly
 Vice-Chair John Bartholomew
 Councilor Frank Bubenik
 Ed Casey
 Diana Emami
 Larry McClure
 Linda Moholt
 Terry Powell
 Dana Terhune
 Bethany Wurtz

OVERALL PROGRESS

In February 2014, the Tualatin City Council adopted an updated Vision Action Plan with 100 proposed actions. One year later, 65 of those actions are underway, 8 are implemented and 27 are not yet started. Implementation is planned on a staggered timeline, with some actions scheduled to begin in the year 1-2 time-frame, others on a 3-5 year timeline and others – typically those requiring intense capital outlays, scheduled to begin in year 6 or beyond. Some of the many actions underway within the various vision focus areas are highlighted below.



■ Implemented ■ Not Started ■ Underway

PHYSICAL & SOCIAL CONNECTIVITY

» VISION FOCUS AREA: FOSTERING SHARED SENSE OF PLACE AND COMMUNITY IDENTITY

Community Goals:

Goal 1: Establish a stronger sense of place through improvements to our built environment

Goal 2: Increase sense of belonging by enhancing community connections and amenities

Goal 3: Make it easier for people to gather and connect

Goal 4: Proactively engage diverse community groups in local events and decision-making

Action 1.2: City Gateways

In the Vision Update, many citizens requested improvements to Tualatin's gateways, and this year the City worked with the business community to improve one of the City's most prominent gateways into Tualatin. The City's Public Works Department staff coordinated with CenterCal and the Community Development Department to improve and expand the City Gateway landscaping on the west side of I-5 north of the Nyberg off ramp.

Action 2.3: Retail Activity Centers

In 2014, the Nyberg Rivers shopping center opened with the first anchor tenants of Home Goods, Cabelas and New Seasons. The excitement around this new shopping center continued into 2015, as more new restaurants and shops opened their doors including Red Robin, LA Fitness, Pieology, Firehouse Subs and more. The City's Community Development Department played a major role in supporting CenterCal as they developed this property and worked with the new incoming businesses. Other projects underway in 2015 included the Hedges Creek Business Park, where the new Industry Café will be opening in 2016.

Action 3.2: Community Meeting Facility

In 2015, the City completed a City Facilities Study to identify locations for a new City Hall, community meeting space and open the opportunity to expand the Library. This study examined ways to include additional community meeting space in the facilities analyzed. In addition, through the America's Best Communities application, the team developed a Community Revitalization Plan with a long term goal of building a facility that would include space for workforce development, STEAM education, the arts and community meeting space. The team advanced to the quarter-finals in April 2015 as one of 50 communities out of nearly 400 who applied. In January 2016, the team was notified they would advance as one of 15 to the semi-finals.

Action 4.3: Engage and Empower Youth

The City's Youth Advisory Council (YAC) continues to contribute actively in this area through giving monthly presentations to City Council on issues that affect youth in the community, hosting seasonal youth activities and participating in the National League of Cities conference. YAC and the Teen Library Committee (TLC) participated in a Youth and Elected Leaders social. Members of TLC and YAC were engaged in the public involvement for Tualatin's America's Best Community competition entry. A member of TLC continues to serve as a teen representative on the Tualatin Library Advisory Committee.

PHYSICAL & SOCIAL CONNECTIVITY

» VISION FOCUS AREA: CREATING ACTIVITIES AND ATTRACTIONS FOR ALL AGES

Community Goals:

Goal 5: Develop and facilitate access to activities for residents of all ages

Goal 6: Establish and promote the city as a destination for unique activities

Action 5.2: More Sports and Recreational Activities for Youth and Adults

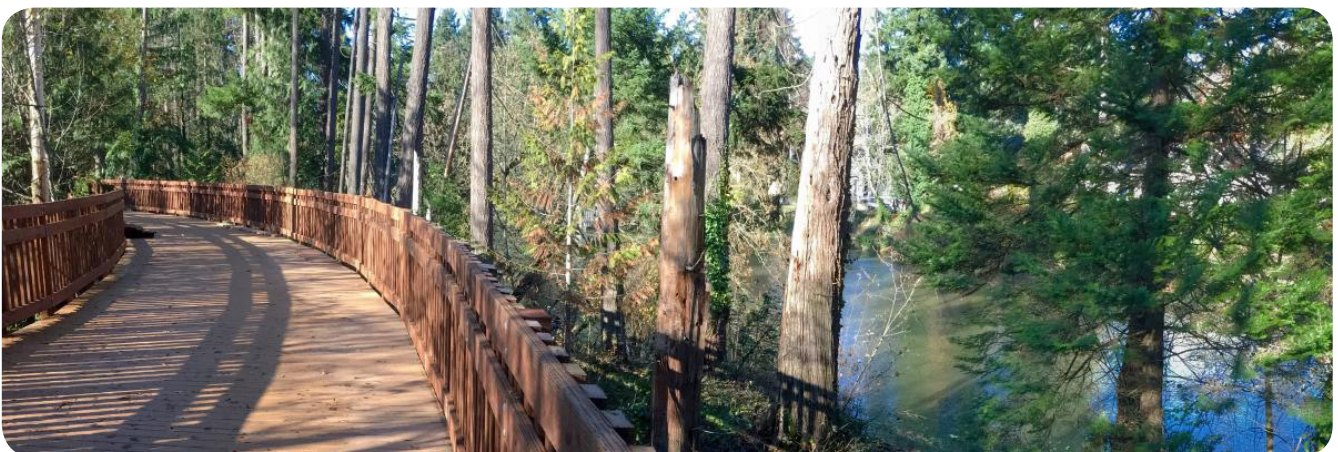
The number of offerings and youth participation in summer camps has increased again in the last year! Summer camps all include physical activity for kids. Participation also increased in the non-competitive, non-timed TRYathlon for kids this year. For adults, the Juanita Pohl Center (Tualatin's Active Aging Center) has partnered with AARP for technology and driving programs, and offers 11 adult fitness classes per week. The Pohl Center also offers adult day trips and family adventure trips for ages 18 and up. The center offers English Is Your Second Language and American Sign Language programs in the evenings, as well as hosting a Latino Women's Support Group.

Action 6.4: Expanded Theatre Performances

In 2015, Mask & Mirror Community Theatre expanded its summer programming to include musical performances at Tualatin High School. Their first such production was six shows of the classic musical "Singin' in the Rain", which sold over 1,400 tickets and included a cast of more than thirty and a live pit orchestra. Cast, crew and musicians were unpaid volunteers. Mask and Mirror donated \$500 of the show proceeds to the Foundation for Tigard-Tualatin Schools.

Action 6.5: Maximize Use and Access to the River

An exciting new trail connection has been under construction and will open in 2016 providing stunning views of the Tualatin River from new lookout points. A new segment of the Tualatin River Greenway trail (under I-5) was constructed this year and another adjacent to River Ridge Apartments on Highway 99 will be constructed in 2016 which will improve viewing access to the river. The City is in the process of installing street signs and river maps for the Tualatin River Water Trail. This signage project for access to the Tualatin River is a partnership with the Tualatin Riverkeepers and the Washington County Visitors Association.



PHYSICAL & SOCIAL CONNECTIVITY

» VISION FOCUS AREA: SUSTAINING QUALITY COMMUNITY SERVICES

Community Goals:

Goal 7: Make municipal services more accessible

Goal 8: Sustain community services through collaborative efforts and stable funding

Action 7.1: Civic Center

The first phase of the City Facilities Study was completed in June, and in December, the City Council narrowed the sites to 2 options for further study and consideration.

Action 7.2: Social Media and Technology

Connecting with the Tualatin community through social media and technology is an ongoing effort as technology changes and evolves. In 2015, the City continued to increase social media audiences on Facebook and Twitter. The City also added an Instagram account in an effort to reach a more diverse population. In addition, the City also used a new online citizen engagement platform Tualatin Town Hall (mySidewalk) to allow the community to participate in discussions on important topics online without having to attend a meeting.

Action 8.3: Public Service Funding Education

This effort happens annually as part of the budget process. Throughout the budget meetings in the spring and following the adoption of the City's budget, informational articles, an award-winning budget/communications document, and a budget in brief are developed to share information about the value of Tualatin's City services. Coming in 2016 will be information about the cost of a new city hall and expanded library.

PHYSICAL & SOCIAL CONNECTIVITY

» VISION FOCUS AREA: ENHANCING MOBILITY

Community Goals

Goal 9: Make it easier to get around town and to and from employment centers

Goal 10: Make it safer to drive, walk and bike

Action 9.4: Transit Access and Route Options

One of the most exciting announcements of 2015 was the new bus line to be implemented by TriMet in 2016. TriMet is working with the community to start Line 97 which will run along Tualatin-Sherwood Rd. connecting the cities of Tualatin and Sherwood. The City of Tualatin has been a supporting partner of the project, and the Tualatin Chamber, the CIOs and many others in the community have been advocating for increased transit service in Tualatin.

Action 10.2: Street Crossing Enhancements

The City has been working closely with the CIOs and residents to identify problem hot spots and implement solutions to improve pedestrian safety in 2015. Improvements include the implementation of “Stop Here for Pedestrian” signing, continental crosswalks, and improved street lighting. The City also installed audible crossings at Seneca and Martinazzi as part of a large street improvement project.

Action 10.3: Sidewalk Network

The City continues to improve its sidewalk network and improving pedestrian connections. In 2015, Washington County completed a sidewalk connection project along Cipole Road that connects new sidewalks on Pacific Drive with existing sidewalks and transit stops on 99W. The Riverpark CIO was a major advocate for this project. Multiple development projects throughout Tualatin have constructed sidewalk improvements in various locations throughout the City.



COMMUNITY HEALTH AND WEALTH

» VISION FOCUS AREA: PROMOTING ENVIRONMENTAL SUSTAINABILITY

Community Goals

Goal 11: Facilitate environmentally-friendly practices, programs and policies

Goal 12: Protect and enhance our environmental resources and assets

Action 11.3: Non-Invasive Tree and Plant Promotion

Clean Water Services (CWS) has been working closely with the City of Tualatin, the Wetlands Conservancy, and other stakeholders to promote native plants and remove invasive non-natives. City and CWS staff work to educate owners of privately-owned water quality facilities to ensure native plants are installed and properly maintained to remove pollution from runoff. Meanwhile, the City's Putting Down Roots in Tualatin campaign continues to grow and includes individuals, families, civic groups and corporations for their large tree-planting events.

Action 11.4: Energy Efficient Construction

The City has been working with code development partners to allow the use of environmentally friendly products, refine energy efficiency measures in construction codes, and provide appropriate level of plan review and inspection oversight to assure energy efficiency in new construction and remodels. Updated building and energy codes were adopted by the State of Oregon and enforced by the City of Tualatin in 2014.

Action 12.5: Tree for All Program

Tree for All planted 5,000 native trees/shrubs in Tualatin in FY 2014-15 bringing the total in the past 10 years to 92,000.

Action 12.6: Wetland and Riparian Clean Up

Through partnerships with Clean Water Services, the City of Tualatin, Volunteers, and Students from Cascade Education Corps., the Wetlands Conservancy has continued to improve the wetlands and riparian areas of Tualatin, as well as draw more attention to the beautiful natural areas. The work of the community has increased the functions of these areas by increasing habitat and water quality. New relationships have been forged with property owners who have valuable stream and wetland habitats. Within these relationships, large scale projects are being explored that will work to improve the functions and values of Tualatin's watersheds. The Wetlands Conservancy is working on securing funding, maximizing the value of volunteer hours, and increasing awareness and appreciation of Tualatin's wetlands.

COMMUNITY HEALTH AND WEALTH

» VISION FOCUS AREA: ENSURING COMMUNITY HEALTH AND SAFETY

Community Goals:

Goal 13: Promote and facilitate community health and wellness

Goal 14: Expand the community public safety network

Action 13.3: Patient Follow-Up Program

TVF&R was involved with a pilot program with St. Vincent's Hospital and Legacy Meridian Park Hospital. They provided follow up visits to patients within 30 days of being discharged from the system when patients are most vulnerable. They found that it helps reduce costs for the hospital and helps to reduce the number of 911 calls. This was a pilot study, and now they are studying the results to determine if the program will continue.

Action 13.7: Drug and Alcohol Addiction Prevention

Tualatin Together has had a busy year, and there are already efforts underway to expand activities in 2016 through their application for a Prescription Drug Disposal Awareness Campaign for the entire community, as well as raising funds for six of the StandUp Tualatin leadership students and four advisors to travel to a National Prevention Training Conference in Washington, D.C. The youth ran a Red Ribbon Week Campaign at Tualatin High and participated at Hazelbrook Middle School in lunch time education/pledge signing session. The youth and adult coalition made a presentation to the Tualatin City Council advocating for a "Smoke Free Tualatin." They have teamed with the Washington County Tobacco Prevention Coordinator to gain knowledge and share why it is important to respect everyone's right to clean air, what the "norm" for Tualatin's youth looks like, and how it could be changed for a healthier lifestyle.

Action 13.8: Community Gardens

Neighbors Nourishing Communities (NNC) had an amazing year helping to facilitate garden plots for low income residents to increase access to fresh and healthy produce. NNC sponsored workshops and celebrations, sometimes in collaboration with Winona Grange. Over 2,000 pounds of fresh produce was donated to the Tualatin Schoolhouse Pantry, 14 low income families were provided their own gardens to feed their families, 27 home gardeners were supported who donated to the pantry, and an extensive seed library was developed with the help of Victory and Territorial Seed Companies in 2015. NNC purchased materials and are building four large mobile seed germinating stations that local students at MITCH Charter School will use for education as well as raising the plant starts for NNC.

Action 14.1: Drug and Gang Enforcement

The Tualatin Police Department implemented the new drug detection canine program in 2014. To prevent gang activity, the Tualatin PD has a patrol officer assigned as a Gang Liaison Officer who coordinates and communicates with the Washington County Interagency Gang Enforcement Team (IGET) on anything gang-related in Tualatin. The Department continues to educate students at the High School and Middle Schools regarding Drug and Gang Prevention. In 2015, the Tualatin PD gave two presentations to parents who wanted to learn about drug prevention and identifying trends with youth. The department continues to hold the Summer GREAT camp for middle school students. This is a team-building class that focuses on Gang and Drug resistance for students at a vulnerable age.

COMMUNITY HEALTH AND WEALTH

» VISION FOCUS AREA: CREATING ECONOMIC OPPORTUNITY

Community Goals:

Goal 15: Identify and accelerate business development within targeted industry clusters

Goal 16: Prioritize economic development that catalyzes community benefits

Action 15.2/15.6: Targeted Business Recruitment and Business Services Point of Entry

The Economic Development program has been able to assist numerous businesses and developers through the permit process, in accessing state assistance programs, and resolving local service issues.

Action 15.5: Local Business Support

Through its new Economic Development Program, the City now provides proactive assistance to local businesses from facilitating permitting to accessing assistance programs and resolving service issues. Those efforts are complemented by the Tualatin Chamber through its Ambassador Program that provides small business advocacy and promoted information-sharing.



COMMUNITY HEALTH AND WEALTH

» FOCUS AREA: ADVANCING EDUCATION AND LEARNING OPPORTUNITIES

Community Goals:

Goal 17: Maintain and perfect existing education and training programs

Goal 18: Strengthen learning options that align with future employment opportunities

Action 17.2: Coordinate efforts to expand and maximize literacy campaigns

The Library partnered with Tualatin schools to promote Summer Reading and is working with elementary school principals to share aggregated data to measure whether students participating in Summer Reading maintain or improve their reading levels. The Library brought Summer Reading to the free summer lunch participants at Community Park, including book giveaways and activities. With support from the Tualatin Library Foundation, the Library hosted open houses for elementary students' families to introduce them to Library resources; each child received a free book. Also with the Foundation's support, the Library donated copies of Oregon Battle of the Books (OBOB) titles to Tualatin elementary and middle school libraries to support student participation in the OBOB literacy program.

Actions 18.1 – 18.6 Tualatin Community Revitalization Plan

These actions were all addressed in the new Community Revitalization Plan developed for the America's Best Communities competition. This plan focuses on increasing opportunity and the standard of living for everyone in the community through advancing STEAM (science, technology, engineering, arts and math) education. The ABC initiative is hyper-focused on one specific target: connecting youth and underserved populations to STEAM education and Career Technical Education training that align with Tualatin's advanced manufacturing industry base. In addition to providing jobs and personal growth opportunities for residents, the plan will help the community begin to develop a workforce pipeline for a large cross-section of employers. The full plan can be found at www.tualatinabc.org. The ABC Team will travel to Durham, North Carolina in April 2016 to compete for the next round of funding in the competition.



ACKNOWLEDGEMENTS

The Tualatin Tomorrow Advisory Committee is grateful to the following implementation partners who continually work to bring our community vision to life:

- City of Tualatin
- Clean Water Services
- Community Action Organization
- Core Area Parking Board
- Legacy Meridian Park Hospital
- Mask & Mirror Community Theatre
- Metro
- Neighbors Nourishing Community
- Oregon Institute of Technology
- Portland Community College
- Republic Services
- South Metro-Salem STEM Partnership
- Tigard-Tualatin School District
- TriMet
- Tualatin Arts Advisory Committee
- Tualatin Chamber of Commerce
- Tualatin Citizen Involvement Organizations
- Tualatin Friends of the Library
- Tualatin Historical Society
- Tualatin Library Foundation
- Tualatin Library Advisory Committee
- Tualatin Parks Advisory Committee
- Tualatin Planning Commission
- Tualatin School House Pantry
- Tualatin Together
- Tualatin Valley Fire and Rescue
- Vision Action Network
- Washington County
- Wetlands Conservancy
- Willowbrook
- Winona Grange

Project Manager and Vision Advisory – Sara Singer, J Robertson and Company

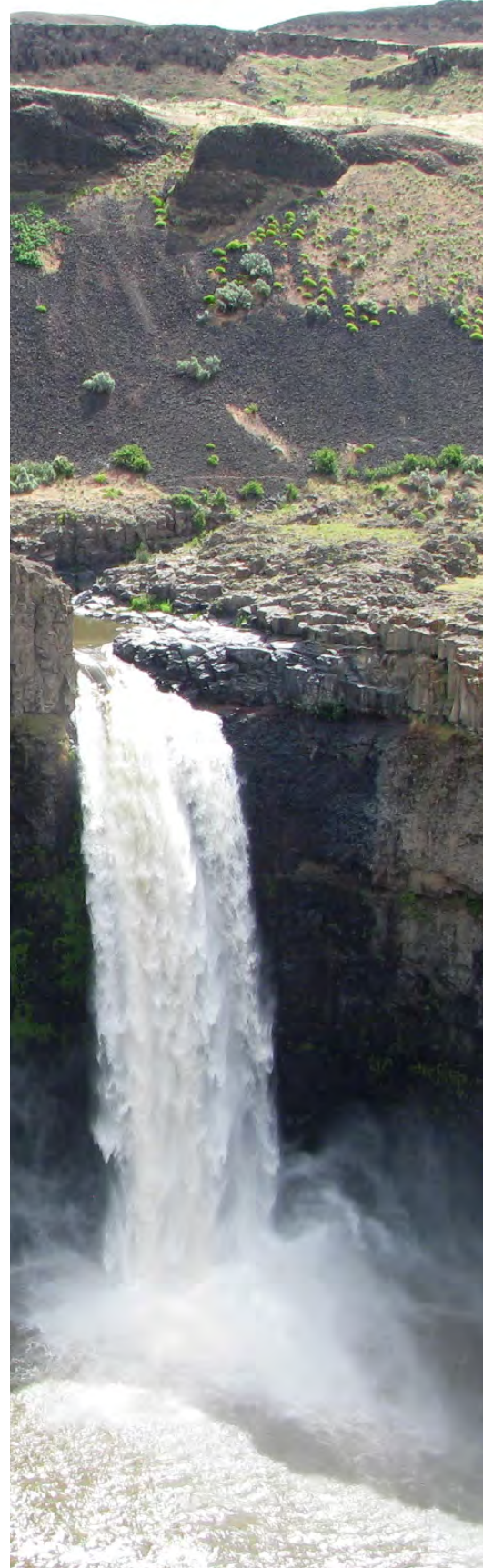
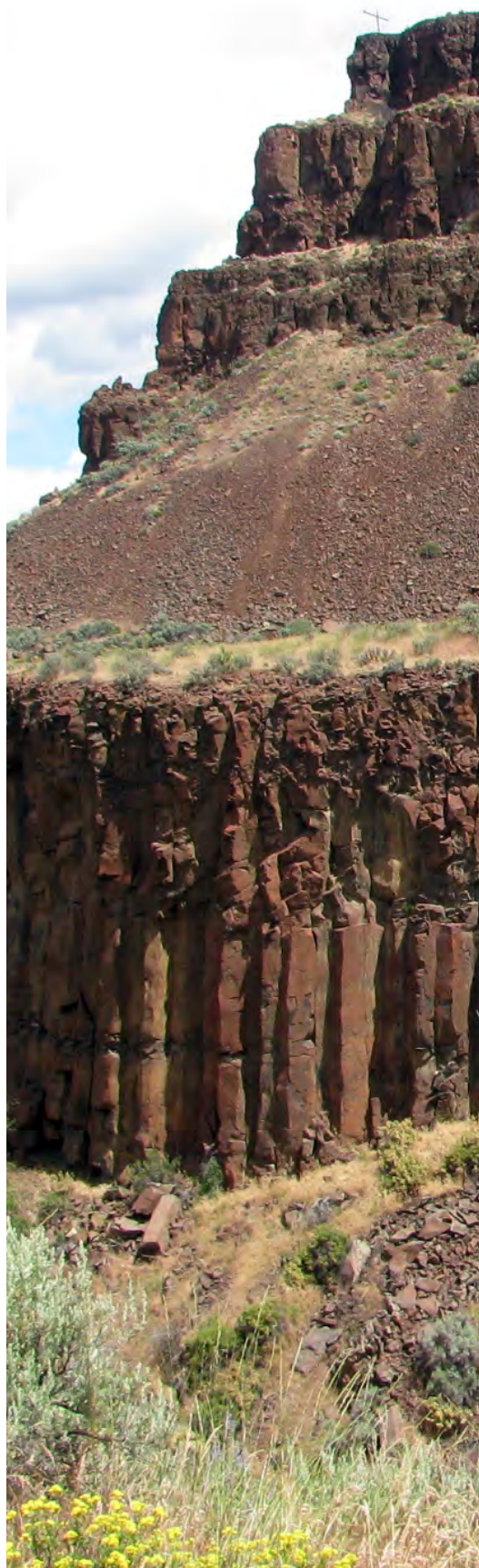


TUALATIN
TOMORROW

Ice Age Floods National Geologic Trail

Foundation Statement

February 2014





Cover (left to right):
Lake Pend Oreille, Farragut State Park, Idaho, *NPS Photo*
Moses Coulee, Washington, *NPS Photo*
Palouse Falls, Washington, *NPS Photo*

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Introduction

PURPOSE OF THIS FOUNDATION STATEMENT

Every national trail, similar to every national park system unit, needs a formal statement of its core mission to provide basic guidance for all the management decisions to be made—a “foundation for planning and management.” This type of document helps ensure that the most important objectives will be prioritized before other, less important tasks not directly related to the trail’s mission.

This foundation statement establishes a single, shared understanding of what is most important about Ice Age Floods National Geologic Trail. This understanding is grounded in the legislation that established the trail in 2009 and in the knowledge of floods features held by the public agencies and other organizations that manage the trail in partnership.

Managers and stakeholders need to know why Ice Age Floods National Geologic Trail was established, why the floods and associated resources are important within a wider context, and what legal and policy requirements apply to the trail’s management. This foundation statement offers this common understanding, from which all types and levels of planning and decision making can progress.

DEVELOPMENT OF THIS FOUNDATION STATEMENT

The National Park Service prepared this foundation statement in cooperation with partners including the Bureau of Land Management (BLM), Bureau of Reclamation (BOR), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (USFS), U.S. Geological Survey (USGS), Washington State Parks, and the nonprofit Ice Age Floods Institute (IAFI). Initial input was gathered during a three-day workshop that took place during the spring of 2011. The foundation statement was developed through collaboration over the next several months. In the future, new legislation, public comment, or other new information may lead to revisions to the trail foundation statement.

ELEMENTS OF THE FOUNDATION STATEMENT

This foundation statement includes the following elements:

Trail Purpose

A statement of purpose identifies why Congress established the Ice Age Floods National Geologic Trail. It is based on the trail's enabling legislation.

Significance

Significance statements define what is most important about the trail's resources and values. They express why the trail and its resources are significant within a regional, national, and global context—focusing attention on those exceptional qualities that Congress felt were important to preserve and interpret.

Fundamental Resources and Values

Fundamental resources and values are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes that are critical to achieving purpose and maintaining significance. That which is most important about the trail could be jeopardized if these resources and values are allowed to degrade.

The national geologic trail also features *other resources and values* that are not fundamental to purpose and significance, but are nevertheless important considerations for planning and management.

Primary Interpretive Themes

Primary interpretive themes are the key stories or concepts to be communicated to visitors in order for them to understand and appreciate the purpose and significance of the national geologic trail. The primary interpretive themes are the basis for all future educational and interpretive efforts.

Special Mandates and Administrative Commitments

Special mandates are legal requirements that apply specifically to the national geologic trail. Administrative commitments are agreements that have been reached through a formal, documented process, such as a memorandum of understanding among agencies. This section summarizes applicable mandates and commitments to ensure their consideration in planning and decision making.

TRAIL DESCRIPTION

“At the end of the last Ice Age, some 12,000 to 17,000 years ago, a series of cataclysmic floods occurred in what is now the northwest region of the United States, leaving a lasting mark of dramatic and distinguishing features on the landscape of parts of the States of Montana, Idaho, Washington, and Oregon.”

Public Law 111-11, March 30, 2009

Congress established the Ice Age Floods National Geologic Trail with this opening paragraph. The federal trail system already includes national historic, recreational, and scenic trails; however, this national geologic trail is the first of its kind. While in some ways similar to a national historic trail, the geologic trail commemorates our nation’s natural history rather than historic people or events. In 2001, the National Park Service, in

collaboration with public landowners and the nonprofit Ice Age Floods Institute, completed a study recommending federal recognition of the area in order to tell the comprehensive story of the Ice Age floods. Since then, momentum has built within the communities of the floods region, culminating in Public Law 111-11, which designated the national geologic trail.

The national geologic trail commemorates a dramatic series of events. Toward the end of the last Ice Age, a lobe of the Cordilleran ice sheet formed a dam that blocked the Clark Fork River, creating a massive lake 200 miles long and up to 2,000 feet deep. The ice dam broke catastrophically, and Glacial Lake Missoula, which contained more than 500 cubic miles of water, drained within a matter of days. An enormous flood of water, ice, and



Grand Coulee, Washington, *Photo by Joe Rocchio*

debris charged westward along established drainages and across dry land, covering 16,000 square miles. Eventually, the flood waters reached the Pacific Ocean and continued hundreds of miles beyond the shoreline. This process happened many times, each time carving and reshaping the land.

Today, evidence of the immense floods remains in many forms including high water lines, huge current dunes, boulders transported hundreds of miles, giant coulees and dry falls, and enormous gravel bars. These reminders of the floods exist on public and private lands across the four states of Montana, Idaho, Washington, and Oregon. Many of the most dramatic features are managed by federal, tribal, state, and local governments.

The national geologic trail will consist of a network of marked touring routes with interpretive opportunities distributed across this vast area. Existing roadways will link many of the region's superb geologic resources by way of a long, central pathway and designated loops and spurs. In places, other types of foot and vehicle trails may also be a part of this network. Today, the trail is in its earliest stages of planning. Proposed routes are represented on the map included in this foundation statement. Development of the trail will take place in the future, following subsequent phases of planning.

The National Park Service will not manage Ice Age Floods National Geologic Trail as an independent unit of the National Park System.

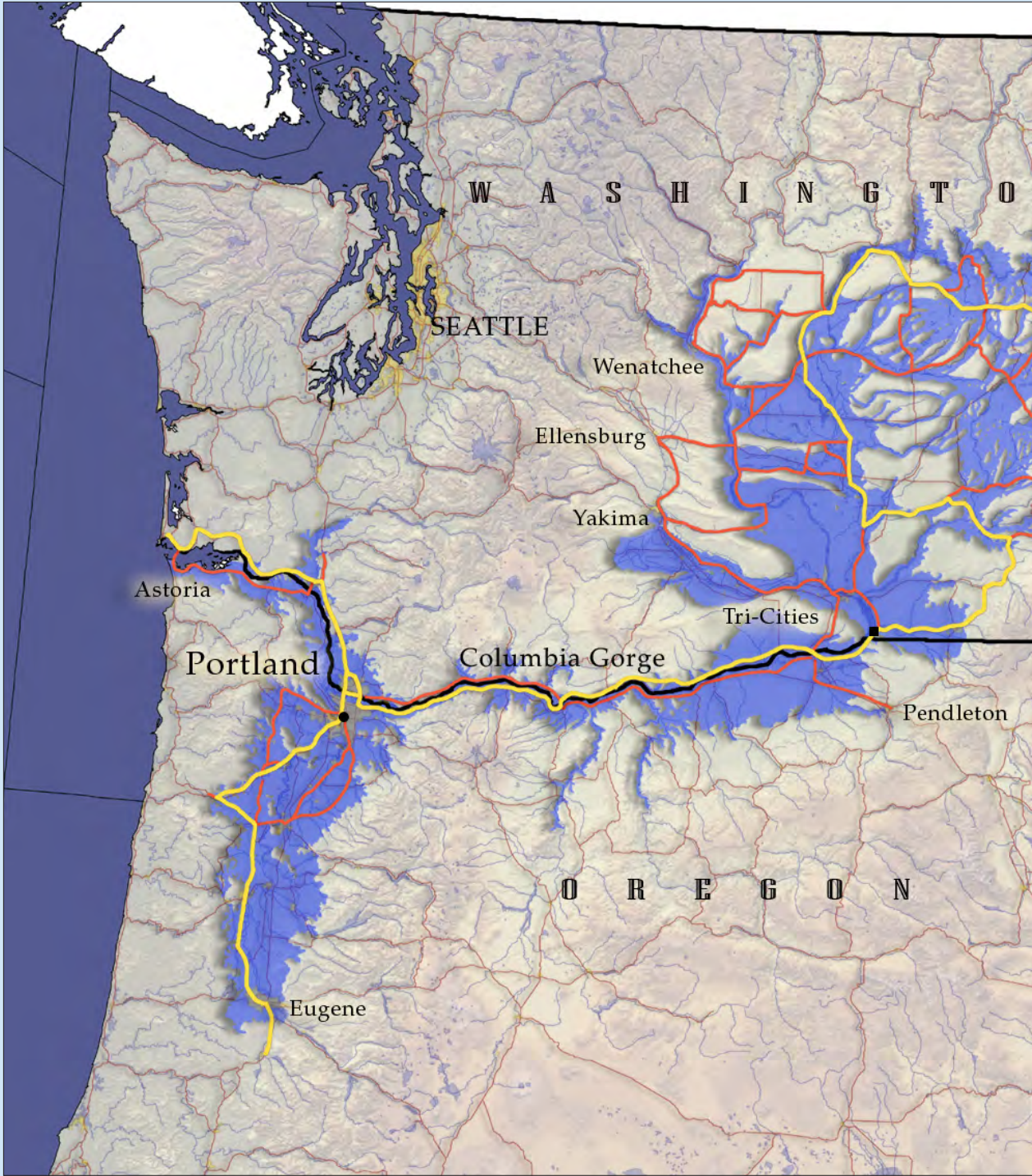
Operational responsibilities will stay with the various land managers (public and private). The role of the National Park Service will be to coordinate planning and development of the trail and interpretation of the floods among the many public and private partners associated with the trail. In this way, the trail may be likened to a necklace, with the many public landowners continuing to manage the "gems" or geologic resources, and the National Park Service coordinating the string that holds the necklace together. In addition to public landowners, there are many other public and private organizations working to bring the story of the floods to visitors.

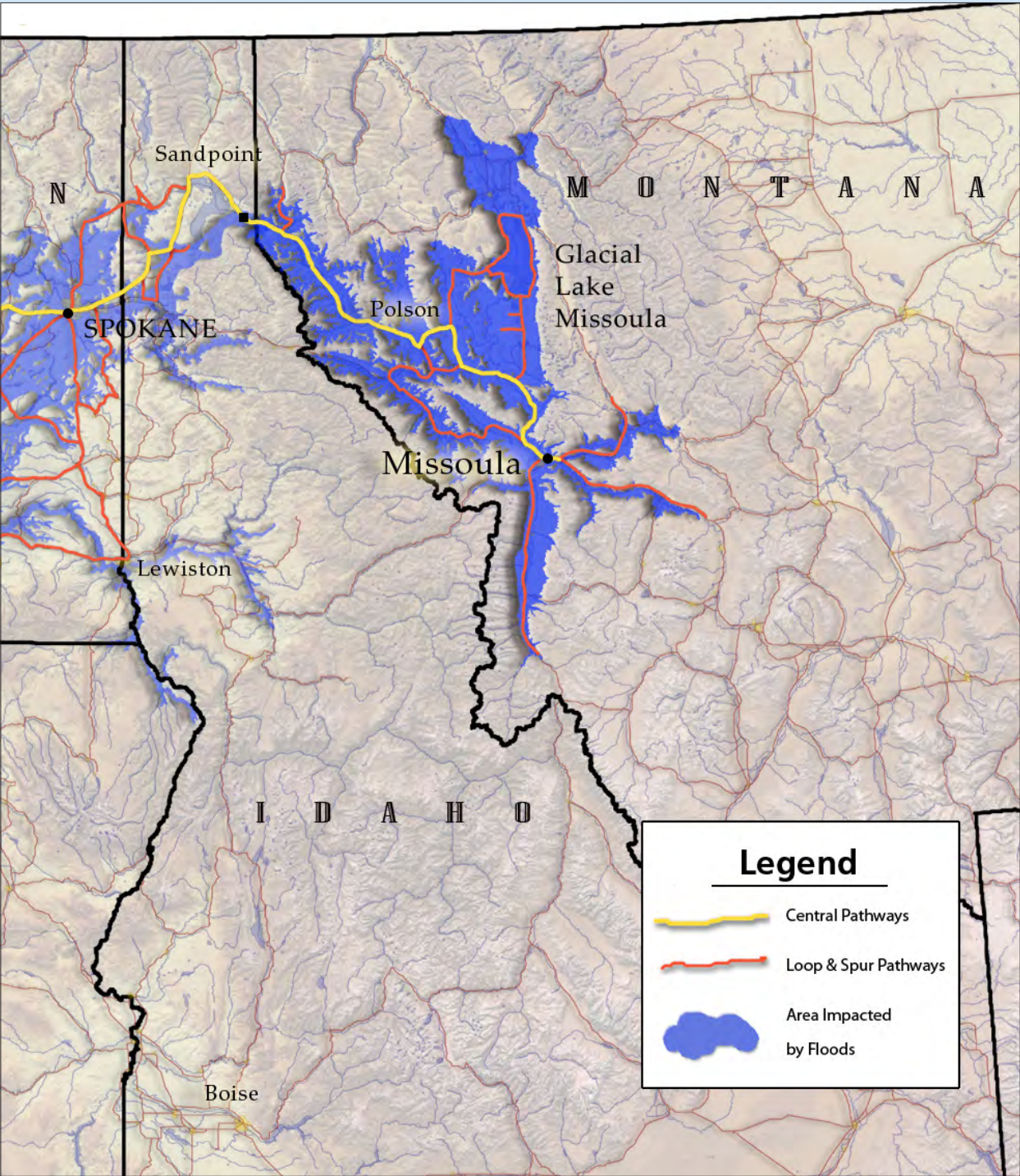
ONGOING COLLABORATION

Collaboration will be essential to planning and implementing the national geologic trail. **Congress has required that planning for the trail include consultation with state, local, and tribal governments, the Ice Age Floods Institute, private property owners, and other interested parties.** Partners will fulfill multiple roles, including:

- providing educational programs,
- preserving geologic resources,
- enabling access for visitors and for scientific research,
- developing interpretive sites and media,
- and otherwise offering diverse recreational opportunities for public enjoyment and appreciation of floods features.

MAP: ICE AGE FLOODS NATIONAL GEOLOGIC TRAIL





Map adapted from *Ice Age Floods Study of Alternatives and Environmental Assessment*, February 2001, prepared for the National Park Service by Jones & Jones Architects and Landscape Architects

Trail Purpose

The Ice Age Floods National Geologic Trail tells the stories of the cataclysmic Ice Age floods and invites people to discover and explore the resulting extraordinary landscapes and distinctive features. Interpretation, research, and stewardship are achieved through collaboration between public and private partners.



Palouse Falls, Washington, *NPS Photo*

Trail Significance

TRAIL SIGNIFICANCE

1 – Cataclysmic Ice Age Floods

Ice Age Floods National Geologic Trail represents the greatest floods on earth. Repeated cataclysmic releases of water exploding from glacially dammed Lake Missoula thundered across the landscape to the Pacific Ocean, carrying water, debris, rock, and ice with a discharge equal to 10 times the flow from all of today's rivers worldwide.

2 – Distinctive Geologic Resources

The Ice Age floods sculpted extraordinary landscapes and left behind a variety of distinctive geologic features across a vast area of the northwestern United States. Gigantic basalt coulees, enormous dry falls, and flood ripples of immense proportion are just a few examples of the evidence that survives to illustrate the scale and power of the floods.

3 – Science and Research

The discovery and investigation of the Channeled Scabland led to an understanding of cataclysmic origin that challenged prevailing geologic thought. Ongoing research has established the Ice Age floods as the quintessential example of megaflood landscapes throughout the world.

4 – Human Settlement and Use

The Ice Age floods transformed the environment of the northwestern United States, greatly influencing the use of the land and its resources from early native peoples to contemporary society.



Glacial erratic, Wallula Gap, Washington, *Photo by Tom Foster*

Fundamental Resources and Values

FUNDAMENTAL RESOURCES AND VALUES

The preeminent responsibility of trail managers is to ensure the conservation and public enjoyment of those qualities that are critical to achieving the trail's purpose and maintaining its significance. These qualities are called *fundamental resources and values*.

In addition, the trail pathway contains resources that are not critical to purpose and significance but are nonetheless important considerations for planning and management. These are referred to as *other important resources and values*.

A variety of geologic, cultural, scenic, and recreational resources are associated with the floods. Trail planners have identified obvious examples that directly support the trail's purpose and different aspects of significance and are therefore fundamental. Yet at this stage many resources have not been fully documented. Additional work would be required to fully inventory and catalog floods resources and definitively identify those that are fundamental versus those that are not.

The fundamental resources and values for the Ice Age Floods National Geologic Trail are:

1. Outstanding Floods-Related Geologic Resources
2. Exceptional Scenery and Views
3. Scientific Knowledge and Research

Other resources and values that are important for planning and management include:

- Floods-Related Cultural Resources, including traditional knowledge and accounts of the flood events
- Access to Diverse Recreational and Educational Opportunities

1 – Outstanding Floods-Related Geologic Resources

Numerous floods-related geologic features exist within this four-state area, but not all have been inventoried. Certain examples possess outstanding potential for interpretation and public enjoyment and may be considered fundamental resources in their own right. In other instances, individual features are not unique or rare, but nonetheless illustrate the extent and scale of floods events, especially in combination with other examples. It is important, therefore, that a large and diverse collection of floods-related geologic resources be highlighted and made available to the public. This collection should be representative of the entire spectrum of floods features and types found within this area.

Below is a list of such resources, organized by seven geologic feature types. Outstanding

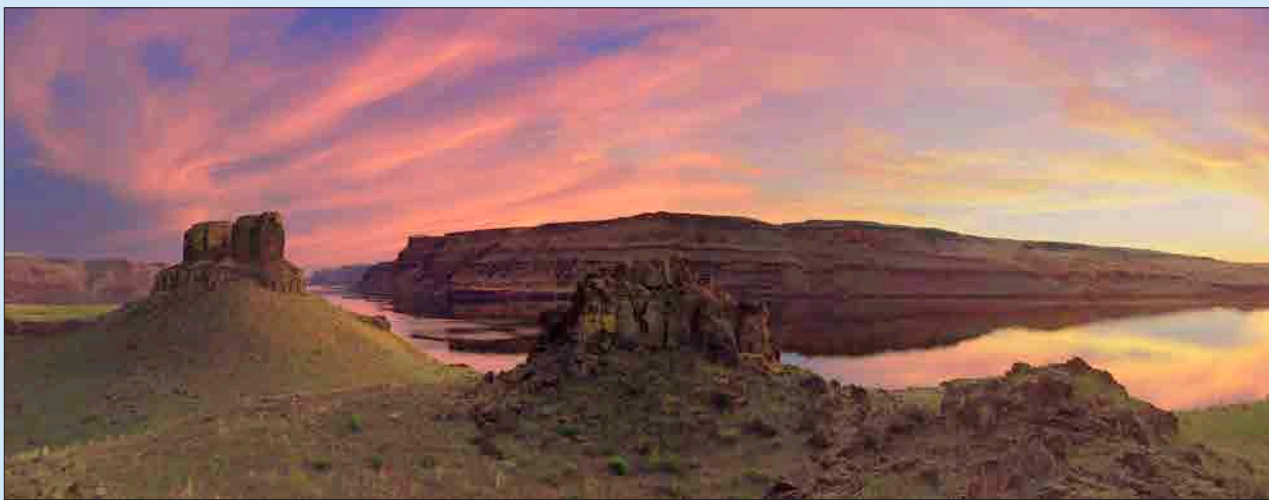
examples of these types are included, where known. This list will continue to be refined during future planning and management.

Bedrock features include basalt flows and dikes.

- *Colonnades and Entablatures:* Frenchman Coulee basalt columns, basalt at Palouse Falls and in Grand Coulee

Terrain features pre-existent to the floods include hydraulic constrictions such as water gaps through a ridge.

- *Hydraulic constrictions:* Sentinel Gap, the narrows at Grand Coulee dam, Wallula Gap, Columbia Gorge, Kalama Gap



Wallula Gap, Washington and Oregon, Photo by John Clement

Erosional landforms created by Ice Age floods include coulees, dry falls, and scablands, among others.

- *Scablands*: the Channeled Scabland, Cheney-Palouse Tract, Grand Coulee, Moses Coulee, Telford Tract, Drumheller Channels
- *Coulees*: Grand Coulee, Frenchman Coulee, Moses Coulee, Wilson Creek coulee
- *Cataracts*: Dry Falls, Potholes Cataract, Palouse Falls, Three Devils Cataract, Chain of Lakes Cataract (in Cheney-Palouse), Staircase Rapids

- Drumheller Channels
- *Streamline loess hills*: many parts of the Cheney-Palouse scabland

Depositional landforms created by Ice Age floods include current dunes and gravel bars, among others.

- *Gravel bars*: Pangborn-Wenatchee bar, Moses Coulee bar, great Athol bar, Midcanyon bar (Snake River)
- *Fan Deposits*: Near Ephrata, Washington
- *Current dunes*: Camas Prairie, Ramsey Road current dunes



Frenchman Coulee, Washington, *NPS Photo*



160-ton Bellevue Erratic, Oregon, *Photo credit: unknown*

- *Stratified deposits (“rhythmites”) in backflooded valleys:* Walla Walla Valley, Yakima Valley, Willamette Valley
- *Lake Rhythmite deposits:* Ninemile Creek
- *Submarine deposits in the Pacific Ocean*

Glacial features include moraines, eskers, erratics, and bergmounds.

- *Erratics:* Bellevue erratic, Frenchman Hills erratics (Quincy Basin), many others
- *Glaciated basin:* Lake Pend Oreille basin, Lake Chelan basin

Lake features include shorelines (or strandlines) and lake-bottom beds.

- *Strandlines:* Cabinet Gorge strandlines, strandlines on Mount Jumbo and Mount Sentinel

Features deposited by wind include dunes and dune fields (sand), and loess hills (silt).

- Sand dunes enclosing the “Potholes” of Moses Lake



Sediment layers from the bottom of Glacial Lake Missoula, Montana, *NPS Photo*



Wave-cut strandlines of Glacial Lake Missoula, Montana, *NPS Photo*

2 – Exceptional Scenery and Views

Vast landscapes and stunning scenery created by the floods are present at many places along the proposed trail routes. Views of natural and human-influenced scenery enable visitors to comprehend the scale of the floods, to appreciate the grandeur that the floods created, and to understand the impact of the floods on human settlement and on the natural world.

Scenery varies across the floods region. Local variations in topography, climate, vegetation, types and levels of use, and other factors combine to establish distinct landscapes that exhibit different qualities of visual character. In many places, the route offers dramatic views of natural areas scarcely touched by people. In other places, human activity is very noticeable, for instance in agricultural areas that exhibit a rural, pastoral character.

Portions of the trail route that are already federally recognized for exceptional scenic quality include the Coulee Corridor National Scenic Byway and the Columbia River Gorge National Scenic Area. Segments of state scenic byways also exist within the floods area.

Seven designated national natural landmarks (NNLs) feature floods resources as their primary component. In some cases, dramatic scenery was a factor in the listing of sites in this registry. One example is Crown Point in Oregon. Perched 700 feet above the Columbia River, Crown Point offers outstanding views of the surrounding Columbia River Gorge.



Sun Lakes-Dry Falls State Park, Washington, *NPS Photo*

Other important viewpoints and scenic corridors may be identified during future stages of planning.

Major Viewpoints include:

- Views to Green Monarch Mountains (evidence of glacial lobe), Idaho
- Steamboat Rock, Washington
- Dry Falls Interpretive Center, Sun Lakes State Park, Washington
- Drumheller Channels National Natural Area, Washington
- Rowena Crest, Mayer State Park, Oregon
- Crown Point State Scenic Corridor, Oregon

- Pacific Ocean from Lewis and Clark Interpretive Center, Cape Disappointment State Park, Washington

Scenic Corridors include:

- Pend Oreille Scenic Byway, Idaho
- Coulee Corridor National Scenic Byway, Washington
- Columbia River Gorge National Scenic Area, Washington and Oregon
- Historic Columbia River Highway, Oregon
- Lewis and Clark Trail State Scenic Byway, Washington



Crown Point, Oregon, Photo by Justin Miller

3 – Scientific Knowledge and Research

Investigation of the Ice Age Floods has greatly contributed—and continues to contribute—to the body of scientific knowledge. In bringing to light the story of the floods, J Harlen Bretz, Joseph Pardee, and other geologists yielded a new theory for the origin of many landforms in the northwest. Aided by new technologies, subsequent researchers built upon these early discoveries and further advanced our knowledge of the floods and its features.

Ongoing research, at home and abroad, continues to shape our understanding of our world. Contemporary scientists are now applying lessons that were acquired through investigation of the Ice Age floods to landscapes under study in other parts of the world—and even on other planets.

Within the trail corridor, sites and features directly associated with scientific discovery include: Dry Falls, the Camas Prairie current dunes, and rhythmites in the Walla Walla Valley, among many others. Documents,



Camas Prairie ripple marks, Montana, *Photo by Tom Foster*

observations, and other types of information that have contributed to scientific knowledge range from early accounts of floods-related geologic resources, to contemporary programs being conducted in the area by NASA and by other organizations, and ongoing geologic research in other countries.

Places and Features Associated with Science and Research Include:

- Dry Falls – tied to early investigation of the Ice Age floods
- Potholes Cataract – tied to early investigation of the Ice Age floods
- Camas Prairie current dunes – related to the discovery of the source of the floods
- Rhythmites – evidence for a repeated series of floods
- Willamette Valley – evidence for a repeated series of floods
- Area south of Soap Lake – site of NASA research

Other Values Associated with Science and Research:

- Historical research and writings
- Ongoing research – the continuing accumulation of scientific knowledge
- Floods - Related cultural resources, including traditional knowledge and accounts of the flood events



Geologist Richard Waitt overlooks rhythmites in the Walla Walla Valley, Washington, *Photo by Ted Wood*

OTHER IMPORTANT RESOURCES AND VALUES

The identification of certain resources and values as fundamental is not meant to imply that other resources are not important. The National Park Service draws this distinction because it can help trails and other national park system units set priorities among competing management concerns.

Floods-Related Cultural Resources

Although geological resources are the primary focus of the national geologic trail, the human history of the region adds another dimension to the floods' story. The federal and state partners responsible for managing the trail also manage cultural resources in accordance with laws and regulations that mandate their protection.

Cultural resources along the trail corridor convey thousands of years of human history and patterns of settlement across the numerous, varied landscapes shaped by the Ice Age floods. These resources express the continuum of human adaptation to diverse landscapes and settings ranging from lush, fertile valleys well-suited for agriculture, to scoured, barren lands devoid of settlement. Although the entire trail corridor has not been surveyed for cultural resources; significant archeological sites, ethnographic resources, historic structures, and cultural landscapes that have been identified indicate that many more cultural resources are likely to be present.

Archeological and ethnographic resources associated with the Ice Age floods' landscape include prehistoric campsites, elaborately made stone and bone carvings, rock images, plant gathering areas, legends, traditional fisheries, and other sites important to American Indian cultures. Prehistoric and historic trade and travel routes weave throughout the region, often overlapping with geographical features that were created or shaped by the floods. Within this transportation network, natural cataracts were important nodes where fishing and trade activities were concentrated. Two such examples are Willamette Falls and Celilo Falls—the latter now submerged by a reservoir.

More recently, the Ice Age floods landscape became the backdrop for increased agriculture, transportation, and hydropower development. Valleys and basins once inundated by the floods have become productive farmlands. These conditions were made possible both by the Ice Age floods' depositing great quantities of soil in certain areas, and also by construction of huge dams and irrigation networks. Massive hydropower, irrigation, and navigation projects have become significant historic resources in their own right. One example is the Bonneville Lock and Dam on the Columbia River. Its designation as a national historic landmark recognizes the exceptional significance of this project.

Access to Diverse Recreational and Educational Opportunities

Providing for enjoyment and understanding of resources is central to the mission of the National Park Service and to every park unit or trail that the agency administers. Through partnerships, the national geologic trail offers access to a variety of recreational and educational opportunities that enable visitors to learn about, appreciate, and experience the floods features.

Owing to the diversity of landscapes and scenery created by the floods, and to the differing—but complementary—missions of its partners, visitors to the trail will find opportunities ranging from solitary to group activities, and from contemplative to inspirational experiences. Many such recreational and educational opportunities are already available on lands managed by trail partners. These run the gamut from organized tours to rock climbing at Frenchman Coulee to fishing, which is popular at various state parks. A variety of new opportunities may be envisioned for the future.

The national geologic trail will link together and facilitate these activities and experiences through a network of designated touring routes and a coordinated system of wayfinding and interpretation. Enhancing access to resources and to the opportunities they present will be a major consideration.



Tsagaglallal (She Who Watches) petroglyph and pictograph, Columbia Hills State Park, Washington, Photo by Angie Moore, Friends of the Columbia Gorge



Ice dam location, Clark Fork, Idaho, Photo by Bruce Bjornstad

Primary Interpretive Themes

PRIMARY INTERPRETIVE THEMES

1 – Geologic Setting

A remarkable alignment of past geologic forces, resulting terrain, and Ice Age conditions produced a series of some of the greatest floods on earth, dramatically sculpting 16,000 square miles of the northwestern United States and as much of the Pacific Ocean floor.

2 – Cataclysmic versus Incremental

The Ice Age floods remind us that the slow, incremental processes shaping our earth can be punctuated by sudden, epic, cataclysmic events, and that such events are possible in our lifetimes.



Beginning in 1922, J Harlen Bretz spent summers exploring central and eastern Washington with his family and students
Photo credit: unknown

3 – Evidence that Remains

In the wake of the floods, a wide array of floods-formed features remained, just waiting for human curiosity to discover. Some features are gigantic – readily visible from space; others are subtle—only revealed and appreciated through close observation.

4 - In Search of the Truth

Unraveling the mysteries of the Ice Age floods reveals the human, often subjective and sometimes contentious, side of the scientific method that arises when new evidence challenges prevailing paradigms.

5 – Lives and Livelihoods

Just as the Ice Age floods left an enduring mark on the landscape of the northwestern United States, so too has that landscape profoundly shaped human history and culture across the region. The impact of the floods continues to this day.



Camas Prairie current dunes, Montana, *Photo by Steve Corrick*

Special Mandates and Administrative Commitments

SPECIAL MANDATES AND ADMINISTRATIVE COMMITMENTS

The following text summarizes applicable requirements from two sources: the legislation establishing the Ice Age Floods National Geologic Trail (P.L. 111-11, Sec. 5203) and a memorandum of understanding (MOU) among the seven federal agency partners. These documents require the National Park Service to develop and manage the national geologic trail through collaboration with other parties.

Public Law 111-11, Sec. 5203

Section (f) (5) of the legislation requires the Secretary of the Interior to prepare a cooperative management and interpretive plan for the trail within three years of funding being made available for this purpose. The legislation mandates that the Secretary prepare this plan in consultation with:

- (i) state, local, and tribal governments
- (ii) the Ice Age Floods Institute
- (iii) private property owners
- (iv) other interested parties (Public Law 111-11, Section 5203, (f)(5))

It is noteworthy that the legislation specifically mentions the nonprofit Ice Age Floods Institute as one of the partners to engage. Subsequent lines in the legislation outline the primary objectives of the cooperative management and interpretive plan.

The enabling legislation also provides the Secretary of the Interior broad authority to enter into agreements with government officials, private entities, and with the general public for the purposes of trail development and management:

...the Secretary may enter into cooperative management agreements with appropriate officials in the States of Montana, Idaho, Washington, and Oregon in accordance with the authority provided for units of the national park system under section 3(l) of Public Law 91-383 (16 U.S.C. 1a-2(1))

COOPERATIVE AGREEMENTS.—The Secretary may enter into cooperative agreements with public or private entities to carry out this section.

National Park Service Agreement – IAFL # G9003-10-0001

National Park Service Agreement – IAFL # G9003-10-0001 is a memorandum of understanding among the following seven federal agency partners regarding planning, development, and management of the trail:

U.S. Department of the Interior

- National Park Service, Pacific West Region
- U.S. Geological Survey, Western Region
- Bureau of Land Management, Idaho, Montana, and Oregon/Washington State Offices
- Bureau of Reclamation, Pacific Northwest Region
- U.S. Fish and Wildlife Service, Region 1

U.S. Department of Defense

- U.S. Army Corps of Engineers, Northwestern Division

U.S. Department of Agriculture

- U.S. Forest Service, Northern and Pacific Northwest Regions

Agency officials signed the memorandum in 2010 and it remains in effect through August 23, 2020.

The purpose of the memorandum is “to develop a coordinated and scientifically accepted interpretation of the nationally significant values and features associated with the Ice Age Floods National Geologic Trail that are found on federal lands in the states of Idaho, Montana, Oregon, and Washington.” In signing this memorandum,

the agencies acknowledged that they “share a mutual interest in federal land management, scientific research, and a responsibility for providing the public with high quality, cohesive and educational interpretive programs.”

Partner agencies commit to responsibilities, including:

- representing and participating in an Interagency Coordination Committee to collaborate and oversee the activities that will enhance interpretation of the Ice Age floods story and features
- voluntarily consulting with the Coordination Committee to review site development plans and interpretive messages associated with the Ice Age Floods National Geologic Trail and the Ice Age floods story
- leveraging personnel, equipment, and services (at agency discretion) to carry out their respective responsibilities under the memorandum

Terms of the memorandum are subject to modification provided that all parties demonstrate mutual consent by signing. Any party may, at any time before the memorandum’s expiration, terminate their participation in the memorandum in writing.

Appendix A: Enabling Legislation

PUBLIC LAW 111-11, SECTION 5203

SEC. 5203. ICE AGE FLOODS NATIONAL GEOLOGIC TRAIL.

16 USC 1244
note.

(a) FINDINGS; PURPOSE.—

(1) FINDINGS.—Congress finds that—

(A) at the end of the last Ice Age, some 12,000 to 17,000 years ago, a series of cataclysmic floods occurred in what is now the northwest region of the United States, leaving a lasting mark of dramatic and distinguishing features on the landscape of parts of the States of Montana, Idaho, Washington and Oregon;

(B) geological features that have exceptional value and quality to illustrate and interpret this extraordinary natural phenomenon are present on Federal, State, tribal, county, municipal, and private land in the region; and

(C) in 2001, a joint study team headed by the National Park Service that included about 70 members from public and private entities completed a study endorsing the establishment of an Ice Age Floods National Geologic Trail—

(i) to recognize the national significance of this phenomenon; and

(ii) to coordinate public and private sector entities in the presentation of the story of the Ice Age floods.

(2) PURPOSE.—The purpose of this section is to designate the Ice Age Floods National Geologic Trail in the States of Montana, Idaho, Washington, and Oregon, enabling the public to view, experience, and learn about the features and story of the Ice Age floods through the collaborative efforts of public and private entities.

State listing.

(b) DEFINITIONS.—In this section:

(1) ICE AGE FLOODS; FLOODS.—The term “Ice Age floods” or “floods” means the cataclysmic floods that occurred in what is now the northwestern United States during the last Ice Age from massive, rapid and recurring drainage of Glacial Lake Missoula.

(2) PLAN.—The term “plan” means the cooperative management and interpretation plan authorized under subsection (f)(5).

(3) SECRETARY.—The term “Secretary” means the Secretary of the Interior.

(4) TRAIL.—The term “Trail” means the Ice Age Floods National Geologic Trail designated by subsection (c).

(c) DESIGNATION.—In order to provide for public appreciation, understanding, and enjoyment of the nationally significant natural and cultural features of the Ice Age floods and to promote collaborative efforts for interpretation and education among public and private entities located along the pathways of the floods, there is designated the Ice Age Floods National Geologic Trail.

(d) LOCATION.—

(1) MAP.—The route of the Trail shall be as generally depicted on the map entitled “Ice Age Floods National Geologic Trail,” numbered P43/80,000 and dated June 2004.

(2) ROUTE.—The route shall generally follow public roads and highways.

(3) REVISION.—The Secretary may revise the map by publication in the Federal Register of a notice of availability of a new map as part of the plan.

(e) MAP AVAILABILITY.—The map referred to in subsection (d)(1) shall be on file and available for public inspection in the appropriate offices of the National Park Service.

(f) ADMINISTRATION.—

(1) IN GENERAL.—The Secretary, acting through the Director of the National Park Service, shall administer the Trail in accordance with this section.

(2) LIMITATION.—Except as provided in paragraph (6)(B), the Trail shall not be considered to be a unit of the National Park System.

(3) TRAIL MANAGEMENT OFFICE.—To improve management of the Trail and coordinate Trail activities with other public agencies and private entities, the Secretary may establish and operate a trail management office at a central location within the vicinity of the Trail.

(4) INTERPRETIVE FACILITIES.—The Secretary may plan, design, and construct interpretive facilities for sites associated with the Trail if the facilities are constructed in partnership with State, local, tribal, or non-profit entities and are consistent with the plan.

(5) MANAGEMENT PLAN.—

(A) IN GENERAL.—Not later than 3 years after funds are made available to carry out this section, the Secretary shall prepare a cooperative management and interpretation plan for the Trail.

(B) CONSULTATION.—The Secretary shall prepare the plan in consultation with—

- (i) State, local, and tribal governments;
- (ii) the Ice Age Floods Institute;
- (iii) private property owners; and
- (iv) other interested parties.

Federal Register,
publication.
Notice.

Deadline.

(C) CONTENTS.—The plan shall—

(i) confirm and, if appropriate, expand on the inventory of features of the floods contained in the National Park Service study entitled “Ice Age Floods, Study of Alternatives and Environmental Assessment” (February 2001) by—

(I) locating features more accurately;

(II) improving the description of features; and

(III) reevaluating the features in terms of their interpretive potential;

(ii) review and, if appropriate, modify the map of the Trail referred to in subsection (d)(1);

(iii) describe strategies for the coordinated development of the Trail, including an interpretive plan for facilities, waysides, roadside pullouts, exhibits, media, and programs that present the story of the floods to the public effectively; and

(iv) identify potential partnering opportunities in the development of interpretive facilities and educational programs to educate the public about the story of the floods.

(6) COOPERATIVE MANAGEMENT.—

(A) IN GENERAL.—In order to facilitate the development of coordinated interpretation, education, resource stewardship, visitor facility development and operation, and scientific research associated with the Trail and to promote more efficient administration of the sites associated with the Trail, the Secretary may enter into cooperative management agreements with appropriate officials in the States of Montana, Idaho, Washington, and Oregon in accordance with the authority provided for units of the National Park System under section 3(l) of Public Law 91-383 (16 U.S.C. 1a-2(l)).

(B) AUTHORITY.—For purposes of this paragraph only, the Trail shall be considered a unit of the National Park System.

(7) COOPERATIVE AGREEMENTS.—The Secretary may enter into cooperative agreements with public or private entities to carry out this section.

(8) EFFECT ON PRIVATE PROPERTY RIGHTS.—Nothing in this section—

(A) requires any private property owner to allow public access (including Federal, State, or local government access) to private property; or

(B) modifies any provision of Federal, State, or local law with respect to public access to or use of private land.

(9) LIABILITY.—Designation of the Trail by subsection (c) does not create any liability for, or affect any liability under any law of, any private property owner with respect to any person injured on the private property.

(g) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as are necessary to carry out this section, of which not more than \$12,000,000 may be used for development of the Trail.



Rainbow Lake scabland, Montana, *NPS Photo*

Appendix B: National Natural Landmarks

NATIONAL NATURAL LANDMARKS

There are seven national natural landmarks (NNLs) with Ice Age floods features as a principal component. A national natural landmark is a nationally significant area in public or private ownership that has been designated by the Secretary of the Interior. To be nationally significant, a site must be one of the best examples of a biological or geological resource in its physiographic province. The significance of the Ice Age Floods National Geologic Trail relates to the exceptional qualities of these national natural landmarks and other floods-related resources.



Wigeon Lake, Drumheller Channels, Washington,
Copyright © 2000 Teri J. Pieper, www.byways.org

The following brief descriptions are adapted from the National Registry of Natural Landmarks. Some additional information is also provided:

Crown Point, Oregon — Crown Point is a promontory rising nearly vertically about 725 feet above the Columbia River. It provides a strategic vantage point for observing a classic illustration of riverine processes. Designated: 1971. Ownership: state.

Drumheller Channels, Washington — Drumheller Channels are the most spectacular example in the Columbia Plateau biophysiological province of “butte-and-basin” scabland; an erosional landscape characterized by hundreds of isolated, steep-sided hills surrounded by a braided network of underfit channels. This landscape illustrates the dramatic modification of the Columbia Plateau volcanic terrain by late Pleistocene catastrophic glacial outburst floods. These floods occurred at a scale remaining unparalleled on earth, either in the geologic record or in historical account. Designated: 1986. Ownership: federal, state, private.

Glacial Lake Missoula, Montana — Glacial Lake Missoula was the largest of several lakes impounded by the Cordilleran Ice Sheet during the Quaternary Period. Located 12 miles north of Perma, Montana, this site contains the best examples of giant flood ripples in North America. Ripples appear as ridges 15 to 20 feet high, 100 to 250 feet wide, and from 300 feet to one-half mile long. It is believed that these giant ripples could only have been formed by water at least 800 feet deep, flowing at velocities up to 55 miles per hour. Designated: 1966. Ownership: private.

Grand Coulee, Washington — Grand Coulee is an illustration of a series of geological events including outpourings of lava, advance and recession of glacial ice, retreat of waterfalls, and the cutting of the Columbia River channel. Designated: 1965. Ownership: federal, state, private.

The Great Gravel Bar of Moses Coulee, Washington — The Great Gravel Bar of Moses Coulee is a very large example of a pendent river bar formed by the catastrophic glacial outburst floods that swept across the Columbia Plateau prior to the last Pleistocene glaciation. The impressive scale of this feature, deposited

in Moses Coulee, provides dramatic evidence for the violent flood waters that formed and once filled the coulee. As a constructional landform, it thus serves as a complement to Drumheller Channels, which were eroded during the same flood events farther downstream. Designated: 1986. Ownership: state, private.



Willamette Valley, Oregon,
Photo by Melissa Rosin

Wallula Gap, Washington — Wallula Gap is the largest, most spectacular, and most significant of the several large water gaps through basalt anticlines in the Columbia River basin. Designated: 1980. Ownership: federal, municipal, private.

Willamette Floodplain, Oregon — The Ice Age floods stripped enormous quantities of soil from certain areas (predominantly in eastern Washington), and re-deposited it in other areas downstream, such as the Willamette Valley. This deposition is a major factor in creating the Willamette Valley's fertile soils. The

Willamette floodplain represents the largest remaining native unplowed example of bottomland interior valley grassland in the North Pacific Border biophysiological province. These grassland and shrubland communities have become exceedingly rare because most have been cultivated or converted to pastureland. Designated: 1987. Ownership: federal.

Appendix C: Participants

Participant	Title	Organization	Division/Region
Federal Interagency Coordination Committee Representatives			
Joseph Maxwell	Natural Resource Manager	U.S. Army Corps of Engineers	Lower Granite Natural Resource Office
Bonnie Lippitt	Interpretive Specialist	USDA-U.S. Forest Service	Region 6, Pacific Northwest Region
Melody Holm	Geologist	USDA-U.S. Forest Service	Minerals and Geology Management Centralized National Operations
Brent Cunderla	Geologist	USDI-Bureau of Land Management	Wenatchee Field Office
Mindy Mason	Geologist	USDI-Bureau of Land Management	Missoula Field Office
Scott Sanner	Mining Engineer	USDI-Bureau of Land Management	Coeur d'Alene Field Office
Richard Honey	Water Resources Supervisor	USDI-Bureau of Reclamation	Upper Columbia Area Office
Marsha Davis	Geologist	USDI-National Park Service	Pacific West Region
Jorie Clark	Archaeologist / Geologist	USDI-U.S. Fish & Wildlife Service	Region 1, Pacific Region
Alex Schwartz	Landscape Architect	USDI-U.S. Fish & Wildlife Service	Region 1, Pacific Region
Richard Waitt	Geologist	USDI-U.S. Geological Survey	Cascades Volcano Observatory
Other Representatives			
Mark Buser	President	Ice Age Floods Institute	Ice Age Floods Institute
Dave Daugharty	IAFI Board Member	Ice Age Floods Institute	Cheney / Spokane Chapter
Lynne Brougher	Public Affairs Officer	USDI-Bureau of Reclamation	Grand Coulee Dam
Terry Darby	Superintendent	USDI-National Park Service	Whitman Mission National Historic Site; Acting Superintendent Ice Age Floods National Geologic Trail
Jon Riedel	Geologist	USDI-National Park Service	North Cascades NPS Complex
Erv Gasser	Natural Resource Specialist	USDI-National Park Service	Pacific West Region
Cheryl Teague	Landscape Architect	USDI-National Park Service	Pacific West Region
Sarah Bodo	Community Planner	USDI-National Park Service	Denver Service Center
Tom Gibney	Planner / Landscape Architect	USDI-National Park Service	Denver Service Center
Debbie Bird	Superintendent	USDI-National Park Service	Lake Roosevelt NRA
Ken Hyde	Integrated Resources	USDI-National Park Service	Lake Roosevelt NRA
Murray Shoemaker	Interpretive Specialist	USDI-National Park Service	Lake Roosevelt NRA
Keith Dunbar	NPS-VIP-Planner	USDI-National Park Service	Volunteer
Reed Jarvis	NPS-VIP-Planner	USDI-National Park Service	Volunteer
Rhonda Terry	NPS-VIP-Interpretive Planner	USDI-National Park Service	Volunteer
Jack Epstein	Geologist Emeritus	USDI-U.S. Geological Survey	Eastern Geology and Paleoclimate Science Center
Christine Parsons	Capital Program Manager	Washington State Parks	Eastern Region Headquarters
Bill Fraser	Regional Park Planner	Washington State Parks	Eastern Region Headquarters
Ryan Karlson	Interpretive Services Program Manager	Washington State Parks	Resource Stewardship (statewide)



Glacial grooves and striations, Lake Pend Oreille, Idaho, *NPS Photo*

Appendix D: Future Planning Needs

FUTURE PLANNING NEEDS

Planning for the Ice Age Floods National Geologic Trail is at a very early stage. Though the trail was established in 2009, no operational dollars for development of the trail have been forthcoming. In addition, the NPS National Planning Program has placed a hold on starting any new long-term planning efforts at this time.

Development of the trail would take place in the future, guided by enabling legislation, and following subsequent phases of planning. As described in the “Special Mandates and Administrative Commitments” section of this foundation statement, Public Law 111-11 Section 5203 directs the Secretary of the Interior to prepare a cooperative management and interpretation plan for the Ice Age Floods National Geologic Trail. This plan would “describe strategies for the coordinated development of the Trail, including an interpretive plan for facilities, waysides, roadside turnouts, exhibits, media and programs that present the story of the floods to the public effectively.” The legislation outlines additional objectives that correspond to future planning needs, which are summarized below. The National Park Service has been identified as the lead agency.

Legislation directs that the cooperative management plan would, “confirm and, if appropriate, expand on the inventory of features of the floods contained in the National Park

Service study entitled *Ice Age Floods Study of Alternatives and Environmental Assessment*.” This would involve locating floods-related features more accurately and improving upon the description of these floods features. Analysis would also identify sites for interpretation and visitation. In addition to interpretive potential, this analysis would consider critical factors such as land ownership and access. The resulting product is envisioned as an accessible inventory database.

The legislation also directs that the future plan would “review, and if appropriate, modify the map of the trail.” One step would be to analyze the proposed routes depicted in the *Ice Age Floods Study of Alternatives and Environmental Assessment* to determine whether refinements to proposed routes are needed.

Additionally, legislation recognizes a need to “identify potential partnering opportunities in the development of interpretive facilities and educational programs.” Although seven federal agencies have been identified in a memorandum of understanding, planners may choose to engage additional partners in their efforts to identify areas of mutual interest and strategies to advance future operation and public use of the trail. This would include partner commitments for research, resource protection, visitor protection, visitor services, and interpretation.

There is also a need to promote awareness of the new national geologic trail—both among the general public and also internally within the agencies that signed the memorandum of understanding. Increased public and agency support will be critical to ensuring that the trail is realized. To facilitate this public awareness, the development of a public foundation statement newsletter would be recommended.



Frenchman Coulee, Washington, *Photo by Tom Foster*

Pacific West Region Foundation Statement Recommendation Ice Age Floods National Geologic Trail

February 2014

This Foundation Statement has been prepared as a collaborative effort between the National Park Service and trail partners, and is recommended for approval by the Pacific West Regional Director.



2/27/2014

RECOMMENDED

Date

Dan A. Foster, Superintendent, Ice Age Floods National Geologic Trail



02/27/2014

APPROVED

Date

Christine S. Lehnertz, Regional Director, Pacific West Region



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

IAFL P43/110266
February 2014

Ice Age Floods National Geologic Trail
Foundation Statement
February 2014
