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## Upper North Fork John Day Focus Group

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c/o North Fork John Day Watershed Council  
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10-15-14

### **Dear Oregon Watershed Enhancement Board:**

Throughout Oregon, most people have some familiarity with the John Day River. Whether that River is viewed from high in the conifer forests of the Blue Mountains or downstream, where it winds among the Basalt Columns of arid canyons, the River's character is dependent upon its source. Fully, 70% of water in the John Day River is contributed by the North Fork, and the upper reaches of that branch are both "High Productivity," and "High Risk." Through the gift of water, the Headwaters of the North Fork provide economy, social values and ecological services that far exceed the understated modesty of this rarely-visited landscape. The discreetness of this area beckons us to become familiar with its contributions to Oregon, the Pacific Northwest, and the world.

This letter will review how the upland water of the **Upper North Fork John Day contributes to Oregon's ecology, economy, and society**. It is crucial to focus on these headwaters to protect values throughout the John Day Basin. In the following pages, several questions will be answered. What is most important about where the headwaters originate, and how they flow into the iconic John Day? What are the threats to headwaters health? In the long term, can these waters maintain their perennial impact on the hydrology and fisheries of the Pacific Northwest? Who is working to protect and restore this vital area? The answers are subtle, but imperative to identifying countless solutions to broad, regional issues.

This landscape, spawning the headwaters of the John Day River, impacts over 1 million anadromous fish, supports numerous industrial facilities, irrigates 60,103 acres of farm land producing crops that help feed the world, and sustain a region. The land is majestic, full of stunning vistas and exceptional habitat, some of it intact, some in desperate need of restoration. The majority of water that eventually traverses the charismatic channel of the John Day River rises here, high in the Blue Mountains of Grant County.

Recognizing the inherent values of the North Fork John Day Headwaters, the affiliates of the ad hoc: **Desolation/Granite Creek Partnership**, request your sincere consideration to apply a **Focused Investment Area in the Upper Reaches of the North Fork of the John Day River**. This is a workable-sized landscape where projects are ready to be implemented and **landscape scale success can be measured in a realistic time frame**.

Private lands lend themselves to rapid implementation, and the intended federal lands projects have NEPA documents enacted to move forward equally as quickly. In this area, restoration opportunities span the political boundaries of public and private land. And, the partnership already in place has experience crossing those jurisdictions together to provide comprehensive, measurable results. They have developed a volume of strategic planning documents, which interact to leverage additional projects and funds. Some solutions have already been implemented, but many more remain, patiently awaiting the necessary resources to accommodate their engagement. The overarching, resource values are countless, but the various elements of the landscape and its contributions are **highly quantifiable with historic data available** to document the restoration success story.

The following brief helps explain the validity of emphasizing restoration in the headwaters of the North Fork of the John Day River, and answer the question, "Why here, why now?"

## **1. Proposed Priority Description**

The subject area consists of four (4) watersheds at the Hydrologic Unit Code (HUC) 5 Level: Granite Creek Watershed (HUC # 1707020302), Desolation Creek Watershed (HUC #1707020304), North Fork Watershed (HUC # 1707020301), and Big Creek Watershed (HUC # 1707020303). The four watersheds together contain **533.5 square miles**. They produce disproportionately higher percentages of Cold Water into the John Day River making this area critical to overall water quality and flow in the John Day River. These sub-basins flow into the North Fork of the John Day River from the western slopes of the Blue Mountain's Elkhorn Range streaming to the west for 112 miles before joining the John Day River's mainstem near Kimberly, Oregon. The basin receives a strong maritime climactic influence with up to 40" of precipitation a year in the highest elevations which is primarily received from late fall through early summer in the form of snow. The elevations and climactic factors support 'cool/moist' forest types in the headwaters landscapes.

The Desolation and Granite Watersheds are, "Priority Watersheds" in the John Day River Basin. Providing critical habitat for listed and imperiled species, they are a component of the North Fork John Day Major Population, considered "**Essential for Recovery**" as discussed in the Mid-Columbia Steelhead Recovery Plan. This makes Desolation and Granite "**High Risk – High Value**" watersheds for restoration investment. Specific recommendations in the existing plans include: fuels reduction, Desolation meadows restoration, fish migration enhancement, treatment of acid mine discharge, strategic targeting of future mine reclamation, restoring stream and floodplain connectivity, road decommissioning, and aggressive riparian vegetation planting.

Together, these watersheds form a **workable-sized microcosm** of landownerships, ecologic values, and economic challenges, which mirror the larger more complex landscape of the Blue Mountains and the resource values of the John Day Basin. They offer the **opportunity to accomplish a complete pallet of restoration practices in a reasonable timeframe with detailed evaluation**.

### **a. The Natural Resource Issue : Enhance Ecosystem Processes to Restore Habitat.**

The history of the Granite/Desolation/North Fork/Big Creeks Area (hence forth referred to as: "Granite/Desolation") reveals a saga of anthropogenic impacts to the waterways and landscapes. Beginning with Beaver Trapping in the late 19<sup>th</sup> century, and followed by gold mining, extensive timber harvesting, heavy grazing, and fire suppression, the alteration of native habitats has been ubiquitous across the landscape. Beaver trapping extirpated a natural sediment control process and a nature-driven means of hydraulic regulation, as well as a vegetation management system. The beaver population dropped precipitously. Beaver extirpation has arguably been the greatest and most detrimental anthropogenic effect on river systems. It has altered stream flows, vegetation diversity, sediment systems, and riparian habitat,

Mining followed trapping and became widespread after the 1860 discovery of gold. During the gold era, thousands of people lived in the Granite/Desolation area, pulling water from Olive Lake via a wood aqueduct to the Fremont Powerhouse to light the communities. Innovative mining techniques included complex hydraulic systems and dredges, which turned over entire floodplain and stream habitats, and straightened the stream channels, removing fine particles from the system, disconnecting the floodplains, altering bed loads, accumulating tailing piles, affecting riparian flora and fauna, and to this day, injecting toxic effluent into the waterways. The consequential picture of today's rivers clearly shows: straight channels, altered bed loads, tailing piles, which constrict stream migration, and a lack of vegetation. Further investigation reveals acidic flows, toxic chemicals in waterways, and a lack of fine sediment.

Historically, timber harvests left upland stands concentrated with high-level stocking of small diameter trees. One, single timber sale in the North Fork uplands, the Camas Creek Sale in 1937, contained 221.3 million board feet of timber. That sizeable, single sale exceeds all of 2013's annual

forest-wide harvest of 32.78 million board feet volumes by 188.52 million feet. Associated with timber, fuels management has intricately affected the habitat by minimizing fuels reduction and maximizing fuel buildup.

By the late 1800s the area was heavily stocked with domestic livestock absent of a management strategy and pastures were perpetually over-used. The Starkey Research Station in the Blue Mountains states that, “As the number of livestock increased, the biomass and vigor of the grasses and sedges they grazed declined (Painter & Belsky 1993) thus reducing the competitive dominance of the herbaceous layer (Belsky & Blumenthal 1997),” leading to reduced frequency of low intensity fires. Fire exclusion over the past century, “has caused two major types of landscape change: loss of openings in once patchy landscapes, and imposition of high-severity landscape dynamics in areas where wildfires that escape suppression now burn.” (Agee, J.K. 1998)

**b. Specific Ecologic Outcomes** are delineated in established Watershed Restoration Action Plans:

**Specific Ecological Outcomes for the Upper North Fork John Day:**

1. The focus watersheds will demonstrate increases in complex river structures to sustain healthy function of stream systems with clean water, appropriate water temperatures, abundant water quantity, and appropriate flow as indicated by improved trends revealed through standard scientific stream monitoring practices.
2. The focus watersheds will demonstrate improved quantity and quality of habitat for fish and wildlife to provide abundant, clean shelter, food, and water as revealed through long term monitoring using protocols based in best science.
3. The focus watersheds will exhibit increased resilience of upland communities, which reduce the risk of catastrophic fire, support native species, and contribute to healthy ecosystems as measured through a long-term monitoring program.

Cumulative identified projects on federal and private property include the following **Desired Outputs** (quantities are generalized for the purpose of this letter):

Mine Tailings: 3 stream reaches	Mine Actions: 8 sites
Large Wood Placement: 6 stream reaches	Irrigation Ditches: 1 restoration
Culverts: 67 sites	Dam Removals: 1
Fish Passage (other): 8 sites	Spring Developments: 10
Road Projects: 12 sites	Weeds: Multiple sites on private & public
Flood Plain Restoration: 2 stream reaches	Recreation Restoration (Camps, ATV): 19 sites
Meadow Restoration: 11 sites	Fuels treatments: 35,000 acres plus 9 additional sites
Riparian Vegetation Projects: 7 stream reaches	

**c. The Defined Geography** consists of the four hydrologic unit areas articulated on page 1 under ‘Proposed Priority Description.’ **This area is large enough to have landscape scale impact and small enough to provide workable, achievable goals.** A political breakdown of the landscape reveals:

Table # 1

Land Use in Upper North Fork John Day	Quantity
Land in Grant County	304,320 acres
Land in Umatilla County	37,120 acres
Private Lands	22,690 acres
Public Lands	318,850 acres
Wilderness	121,560 acres
Total Area	341,540 acres
Miles of Perennial Stream	662.5 miles

The resource values are described below:

**Vegetation:** The stands, influenced by ambient airflow, include “cool/moist,” mixed- conifer ecosystems with a unique variety of plant associations. In mesic “East side” areas, trees grow larger, species diversity is greater, and wildfires do more damage, despite their lower frequency. The moist forests interact with more ubiquitous dry pine forests typical of the inland Northwest. The juxtaposed forest types deliver forest complexity, management challenge, and sometimes conflict to resource managers in the upper North Fork.

**Soil/Geology/Climate:** From a highpoint of 8,300 feet, to the confluence with Camas Creek at 2,690 feet, this landscape benefits from a sub-humid, continental climate. Soil moisture arrives in up to 40 inches of precipitation per year falling primarily as snow, or in occasional summer thunderstorms. The mean annual temperature is 38 degrees Fahrenheit with an average of only 50 frost-free days. Soils tend to be loess and ash over the basalt, geologic parent material.

**Fuels/Fire:** Wildland fire is a common occurrence in Grant County. People and lightning cause the vast majority of fires. Natural resource management policy and changing ecological conditions have interacted to create hazardous fuel situations throughout Grant County. These hazardous fuel conditions are the result of historic fire suppression policy, changing climatic patterns, and reduced forest management activity on federal lands. The large accumulation of fuels has made the Upper North Fork John Day region very vulnerable to potentially catastrophic wildfire with the resulting loss of important economic, social and ecological values. Grant County’s Community Wildfire Protection Plan (CWPP) recognizes numerous improvements and homes in the Wildland Urban Interface, where they are unprotected by either geographic features or civic services from wildfire in the current at-risk, over-stocked forests.

**Hydrology:** The sub-watersheds being described flow into the North Fork John Day Watershed. As mentioned earlier, this River contributes the vast majority of the flow in the John Day. But flow is not the only value here. Because of the high flow contribution to the entire John Day, water quality brings utmost importance. Two challenges plague the Desolation and Granite Creek systems: high temperatures and acid mine drainage. Despite the hydrologic challenges, this river system is treasured and has been designated in the Department of Interior’s Nationwide Wild and Scenic River Inventory with 27.8 miles of Wild River, 10.5 miles of Scenic River, and 15.8 miles of Recreational River.

**Fish:** The detailed area maintains habitat for and populations of Bull Trout (*Salvelinus confluentus*), Steelhead Trout (*Oncorhynchus mykiss*), and Chinook salmon (*Oncorhynchus tshawytscha*). The resource value of all three species in one system is highly significant. Both bull trout and steelhead are federally listed under the Endangered Species Act in the North Fork John Day system. As a headwater to the longest wild salmon river in the U.S., this geography contributes to opportunities for anadromous fish to access all of their 28 evolutionary mechanisms for survival. The extensive high elevation wet meadow and tributary habitats are critical to aquatic spawning and rearing. This area provides a rare stronghold for native species preservation.

**Social: Population:** There is minimal year-round residency in this focus area. Granite, the only consolidated community in the landscape has a population of 38 people according to the 2010 census. The median household income is \$12,500 compared to Oregon’s state median of \$50,036.

**Economy:** As of this writing, Grant County has the highest unemployment rate in the State of Oregon. Ramping up the restoration industry is one tactic to pacify this statistic. The restoration industry has become a major employment option in a county where creating a single job equates to 103 new jobs in Multnomah County. The area's primary economic drivers are resource based with ranching and timber generating the most revenue. Recreation is a growing sector, but restoration is truly poised to inject influential effects.

**Political:** The lands of the Granite/Desolation Creeks Area present a mosaic of private and federal lands with one large state-owned wildlife refuge on the edge of the geography. Two National Forests share management of these drainages: Umatilla National Forest and Wallowa Whitman National Forest. Private lands create a patchwork pattern within the National Forests. One 13,400-acre parcel in the Desolation Watershed, was recently purchased by a restoration-focused investment corporation – Ecotrust Forest Management. Other large, private parcels are located toward the eastern stretch of the stated geography nearer to Granite Creek. In total there are 85 private landowners outside of towns. The geography contains part of one Wilderness Area – North Fork John Day Wilderness.

## **2. Significance to the State**

### **a. Ecological Significance to State**

Restoration practitioners have come to recognize the paramount value of upland areas to the health of all those landscapes nurtured from “uphill” inputs. The Oregon Department of Fish and Wildlife’s February, 2006 Oregon Conservation Strategy reminds us that “Upland Habitats have a critical role in watershed function and affect riparian and aquatic habitats, particularly in drier, low elevations sites,” such as the John Day River (Oregon Conservation Strategy p.287). Given that the John Day is the Columbia Basin’s most biologically diverse river system, and that the Granite/Desolation system contributes a disproportionately high percentage of clean, cold water, the value of this landscape is massive.

**Climate:** According to American Rivers, the John Day is one of the most ‘at risk’ river basins in the Pacific Northwest as a result of an already dry river basin that is seriously water-limited, especially during summer months. That organization states that increasing summertime temperatures and decreasing snowpacks are expected to influence further challenge, making the cold clear waters of the upper North Fork evidently critical in future years. This is especially important in relationship to climate change. Climate change maximizes the critical nature of the upper NFJDW. As the region experiences a shift toward rain-dominated winter precipitation, meadow habitats with abundant water storage and water quality may provide the only long-term solution. This has been effectively reinforced by Battin et. al. (2007), who suggested we might expect a potential, climatically driven, downstream shift in aquatic populations. The effectiveness of restoration actions in higher elevation and smaller stream channels may offer the only means of sustainability. For the state and region, ignoring the long-term value of the Upper NFJD would result in the loss of wild species, support invasive species, and further contribute to poor water quality downstream, loss of tourism opportunities and additional potentially detrimental consequences.

**Fish:** Anadromous fish runs in the Columbia bring 1 million salmon and steelhead per year. Page I-7 of the Environmental Assessment for the North Fork of the John Day Wild and Scenic River Management Plan states, “The value of the only remaining genetically viable run of spring chinook salmon in the entire Columbia River Basin is incalculable.” Bull Trout are rated as at moderate to high risk of extinction throughout the North Fork John Day River drainage (Ratliff and Howell, 1992). Annual steelhead spawning index counts have been done by the ODF&W since 1959 in the John Day River Basin. The management goal is 8.6 redds per mile. The 5-year average remains well below that goal. The Upper NFJD is critical to recovery of threatened Mid-Columbia steelhead trout providing source waters to the only ‘Highly Viable’ population in the John Day.

**Fire:** Oregon has the second highest fire suppression costs in the western U.S. In 2013, the state spent \$183,000,000 fighting wildfires. That is more than all of the funds allocated to Oregon's Departments of Veteran's Affairs, housing, and Community Services combined! Over \$1.5 billion has been spent in this short century in fire suppression costs alone. Large fires account for only 6% of the fires burning, but for 35% of the wildfire suppression costs. Climate change and warming temperatures are identified to increase future wildfire costs in the state as large wildfires continue to increase. This growing number of large wildfires will increase exposure to dangerous levels of air pollution, even in communities hundreds of miles from the fires themselves. Fire risk is extremely high in this focused area. The potential cost and consequences are enormous, particularly with adjacency to Wild/Scenic Rivers.

**Wildlife:** The upper North Fork John Day is a major migration route for big game species. Approximately 2,500 Rocky Mountain elk migrate in and around the drainage from their summer range in the Elkhorn Mountains to their winter range in the Bridge Creek Wildlife Area. Approximately 1,000 mule deer also use that route. There are documented sightings of black bear, cougar, bobcat, wolf, and wolverine in the drainage. The wolverine is a sensitive species and is listed as threatened by the Oregon Department of Fish and Wildlife. Wildlife migration routes are high priority systems for restoration.

**Water Quality:** The Oregon Department of Geology and Mineral Industries estimates that at least 13 million cubic yards of material was moved on the North Fork Granite Creek system over decades of mining. Additional hard rock (tunnel) mines are located throughout the system. Mine runoff injects a unique and significant stress on the system. It needs to be addressed to maintain the necessary downstream benefits. The four watersheds defined have high impact limitations in water quality due to: Altered Disturbance Regimes, Invasive Terrestrial Species, Habitat Fragmentation/Connectivity/Fish Passage, Altered Habitat Complexity, and Limited In-Channel Wood, Floodplain Connection, and instream flow. These, water quality needs, represent a mix of simple to complex restoration practices, and all are integral to the cross-discipline restoration.

**Timber:** The higher elevations of the Blue Mountains receive adequate rainfall to enhance site index and timber productivity compared to the dry forest ponderosa pine areas that constitute much of the Blue Mountains. As the State of Oregon looks to increase timber production to create jobs, the logical approach is to restore those areas that are **capable of producing the highest volumes in the shortest time** frames. In order to accomplish that, the forests must first be returned to a higher average diameter and lower stem count, by thinning the over-dense stands which have resulted from past management practices. The outcomes will be exponential with benefits from additional timber and reduced fire.

**Forest:** One estimate of 'forest ecosystem values' calculates that U.S. forests have an ecosystem services value of \$12.23 per acre (Krieger, D.J 2007). This focus contains 341,450 acres resulting in an overall ecosystem value of \$4,175,934 if the system is in a healthy state. Restoration must occur to maintain these values within the State.

### **b. Social/Economic Benefits to State:**

The estimated total Economic Impacts of Columbia River Salmon and Steelhead catch is \$88,783,000 (NW Council.org 2005). The John Day contributes significantly to this number as a result of its high quality, dam-free state. The Upper North Fork, in turn, with its high flow of cold water, and extensive meadows is contributing vastly to the entire system indicating a strong argument for concerted attention to restoration of its upper reaches.

The six worst wildfire seasons since 1960, have occurred since 2000. In 2013, State of Oregon fire suppression costs set an historic record. State protected timber losses were estimated at \$370 million and suppression costs on non-federal lands were \$122 million. (ODF Agency Affairs 2013: An Epic Fire Year). The federal government spent \$2.76 billion dollars suppressing wildfires in 2012 (Headwaters Economics 2013). Current fire potential is high in this geography due to densely growing, low diameter trees with significant ladder fuels. The economic impact of minimal action for restoration is staggering.

Governor Kitzhaber has emphasized efforts in rural areas, focus on rural jobs, and commitment to pastoral lifestyles. **The Granite/Desolation areas are archetypal frontier areas where habitat**

**impacts have mirrored population and settlement dynamics.** In these areas, collective impact efforts have been historically lacking. This team represents a new opportunity to implement large landscape collective impact with a grassroots initiative. The new, statewide initiative, "Frontier Oregon," identified for intense focus by Kitzhaber, is illustrated by this project.

The state has strong interest in supporting the forest collaboratives practicing in Oregon. The Umatilla Forest Collaborative is active in the area and connected to the project leading to additional broad interactions and benefits to the State of Oregon.

### **c. Regional and Local Significance**

As introduced above, the ecological restoration economy has become a new pathway for economic restoration in areas like the Granite/Desolation watersheds where a history of boom and bust economies have transcended trapping, mining, and most recently, timber. Estimates by University of Oregon indicate that an average of \$0.80 of every \$1.00 spent on a restoration project stays in the county where the project is located, and \$0.90 stays in state (Nielson-Pincus & Mosely 2010). In Grant County where unemployment is the highest in the state, and wages are low, this is an enormously positive impact. Research indicates that each \$1,000,000 generates 5 jobs and in the county with the highest unemployment in the state, jobs are more valued than the gold mined in this watershed.

This area includes ceded lands of **two Tribal Confederations**. Their partnership value is of utmost value to the locale and region and their cultural heritage offers deep learning opportunities for all program partners.

Grazing is the most productive economic service in Grant County. It is tied to restoration in terms of: 1. impact on resources and 2. potential results that can be achieved through proper management. Both, new and traditional managers in these basins are focusing on incorporating holistic grazing practices into their management systems, which opens up broad connections to restoration.

Wildland Urban Interface programs have taken a pro-active approach to safety in remote areas where private land residences have become vulnerable as a result of historic public land management practices. Granite is a classic high-risk area where public safety is a matter of individual preparation. Unfortunately, without restoration on federal lands, individual efforts are minimized. At the same time restoration on private lands must be coordinated with public lands to assure landscape scale impact. For example, if a private landowner is mining upstream of federal water quality efforts, the restoration improvement is minimized. Also, weeds would best be coordinated across boundaries with an effort such as that historically made by partners to this project, to assure long-term impact.

### **3. Limiting Factors:**      **a.) Ecological Limiting Factors -** **(Specifically detailed from Documents in Table #2)**

- High Water Temperatures
- Insufficient Pools
- Shortage of Large Wood Debris
- Roads density, location, impacts
- Unstable banks and undercutting
- Loss of Riparian Vegetation
- Substrate Embeddedness
- Unstable slopes
- Uncharacteristic vegetation, species and fuels
- Grazing in riparian areas
- Overstocking and uncharacteristic fuel loads
- Lack of shade trees in riparian
- Stream-valley floor hydrologic connection
- Channel form, stability, sinuosity, pool/riffle ratios
- Aquatic fish passage and habitat
- Sedimentation and Embeddedness
- Mine drainage and impacts; placer sites
- Wetland state
- Canopy and Large wood recruitment
- Shade/cover
- Beaver habitat
- Federal Clean Water Act TMDL 303(d)

#### **a.1.) Social Limiting Factors -**

- Fuel Build up in Wildland Urban Interface
- Safety Services are Absent
- Grazing practices
- Itinerant Residents
- Recreation Demand

## **B) Existing Frameworks:**

Partnership History: The lands of Desolation/Granite Creeks are a mix of private and public ownerships lending themselves naturally to effective coordination in project planning and implementation. The primary players in this effort include the U.S. Forest Service (Umatilla and Wallowa Whitman Forests), Oregon Department of Fish and Wildlife, Confederated Tribes of Umatilla Indian Reservation, Confederated Tribes of Warm Springs, Rocky Mountain Research Station, Environmental Protection Agency, Oregon Department of Environmental Quality, Ecotrust Forest Management, LLC, North Fork John Day Watershed Council, and other private landowners. Since 2011, these groups have been planning and implementing projects together. A few examples of team-coordinated projects in this geography in recent years include: 1) 8 miles of riparian fencing 2) Three culvert replacements in 2012 and 2013 3) Red Boy Mine Restoration has been an ongoing collaborative project from 2011 through the present and has involved multiple projects. During 2011 and 2012, the team began collective planning with two meetings held in Ukiah, Oregon. In May and August of 2013, all partners attended two follow-up meetings to begin planning synergistic efficiencies and to identify specific processes for moving forward.

The teams recognize and respect the individual partner niches and work to prevent mission creep between organizations. This helps to build trust and efficiencies. The group is also skilled in outreach to the public with experience in the Intensively Monitored Watershed, Oregon Youth Conservation Corps, extensive assistance to private landowners, workshops and trainings. All of these skills will enhance the focus in the Upper North Fork Watersheds.

## **Current Published Plans:**

Table # 2

Title	Author	Date
Bull Run Creek Watershed Restoration Action Plan	Wallowa Whitman National Forest	9-24-12
Granite Creek Watershed Action Plan	Umatilla National Forest	10-6-08
Trail Creek Watershed Action Plan	Wallowa Whitman National Forest	Due 2014
Desolation Creek Watershed Action Plan	Umatilla National Forest	3-2-2009
Granite/Desolation Culvert Inventory	Umatilla National Forest	8-18-14
Oregon Mid-C Steelhead Conservation & Recovery Plan	Oregon Department of Fish and Wildlife	2013
Fish Passage at Road Crossings Assessment	Umatilla National Forest	2001
Conservation and Recovery Plan for Oregon Steelhead Populations in Middle Columbia River Steelhead Distinct Population Segment	Oregon Department of Fish and Wildlife	February 2010
Umatilla National Forest Proposed Plan of Work	Umatilla National Forest	January 2014 and 2015
John Day Sub-basin Plan	Northwest Power & Conservation Council	3-15-2005
Columbia Basin Fish Accords	Three Treaty Tribes and FCRPS Action Agencies	5-2-2008
Oregon Total Maximum Daily Loads Program	Oregon Department of Agriculture	2008

Example prioritization documents such as the Granite Creek Action Plan (USFS, 2009) and the Bull Run Creek Action Plan (USFS 2012) were products of the USFS's 2009 5<sup>th</sup> Field HUC prioritization process to identify focus basins for restoration. This was further refined through a 2009 Watershed Condition Framework. These assessments complement restoration and protection designations offered in framework documents including those listed in Table #2. Priority projects are listed in several Watershed Action Plans identified above, including 16 pages of tables delineating potential actions ranked according to priority. These actions directly and specifically address the limiting factors in section 3, above.

#### 4. Threats and Benefits

a) The greatest past, present and future human-derived threats to this landscape include: mining, wildfire, excessive grazing, and invasive species. The greatest past, present and future nature-derived threats to this landscape include: climate change, wildfire, and forest pests.

b) If the threats are not addressed via restoration, Oregon can expect to see specific causal effects which inflate limiting factors and contribute to degraded landscape by events such as large conflagrations, increased water temperatures, toxic mine runoff, reduced flows, sensitive species decline and downstream degradation. Human threats specifically propose to degrade habitats here and downstream, reduce numbers of listed species, open habitats to invasive opportunists, reduce soil moisture, erode soils and perturb stream function. Natural threats, if unaddressed, promise to degrade water quality, impact local economies, and magnify impacts downstream.

c) The economic benefits and risks of addressing this landscape are measured by the \$6.1/forest acre spent in fire suppression in Oregon and translated to this watershed at 341,450 acres or \$2,082,845 in potential wildfire suppression costs. National Oceanic Atmospheric Administration records 161 restoration jobs created in this county in the first decade of the 21<sup>st</sup> Century. Every \$1million spent creates 5 jobs and in a county with the highest unemployment in the state, at this writing; that is enormous. Social benefits allow recreation to occur and bring visitors to the area. The iconic anadromous fish species here and throughout Oregon are dependent upon this restoration focus. And in an area with 190 square miles of vulnerable wilderness and 64.5 miles of wild/scenic/recreation river, fuels reduction in adjacent managed lands is absolutely imperative to the iconic nature of the area, the sensitive species, the economy, and the culture. As addressed above, additional characteristics of import include: stream flows, water quality, mine management, riparian health, wet meadow health, sensitive species preservation, and overall ecologic function.

d) The various action plans listed above in Table #2 delineate the vast work of planning that is complete. In addition, NEPA planning is currently underway for fuels reduction in the Ten Cent Area of the Granite Watershed, where three culverts were replaced by the partners in 2011. The following year brought a channel restoration project on private lands as well as noxious weed treatment. In 2013 and 2014, two culverts were replaced by partners, along with channel realignment and large wood placement over 3 reaches. Most all of the anticipated work has been completed in the Big Creek Watershed where wilderness is the dominant land use. Still remaining are the many projects listed in the Watershed Action Plans listed above including 16 pages of tables delineating identified potential actions ranked according to priority. These actions directly and specifically address the limiting factors listed above in section 3.

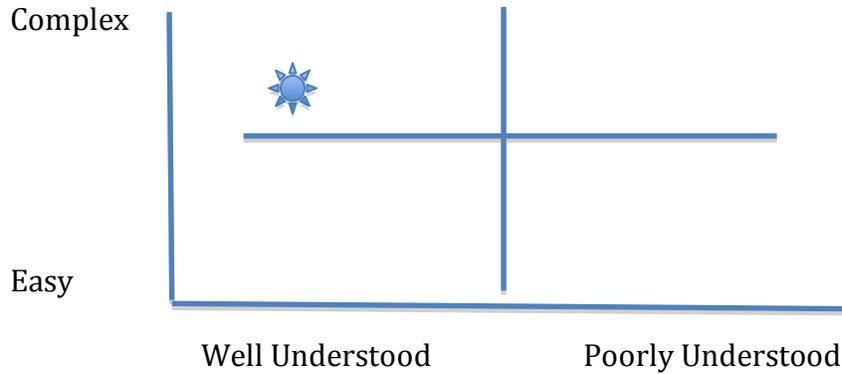
e) The estimate of cost to accomplish high priority restoration in this landscape is \$8 to 12 million dollars.

#### 5. Opportunities:

Socially and economically the system is located in the most economically deprived portion of the state. **A win here generates extraordinary gains in ecologic, social and economic sectors.** The area partners recognize that there is no focus area with potential greater comprehensive outcomes. As climate changes and resources experience greater demand, **the upper reaches of the most productive native salmon river in the U.S. may be the most important single undertaking of resource managers.** The protection of wet meadows will have an exponential effect on downstream resources all the way to the Pacific. This set of basins, more than any other, offer an opportunity for showcase outcomes and impactful results.

Additionally, the entire area falls within the ceded lands of the Confederated Tribes of the Umatilla Indian Reservation and Confederated Tribes of Warm Springs and includes federal and private landownership. The opportunity for interaction between different communities is enormous. The cooperative systems already in place provide a catalyst for progressive, measurable outcomes.

## **6. Complexity Ranking:**



## **7. Additional Information:**



## **8. Supporting Individuals: Partnership Members**

Kelly Stokes: ODFW  
Tracy Wyllie: ODFW  
Ian Reid: Umatilla National Forest  
Marty Eisenbraun: Ecotrust Forest Mgt  
John Zakrajsek: Confederated Tribes  
Umatilla Indian Reservation  
Justin Rowell: North Fork John Day WC  
Brad Lathrop: Umatilla National Forest  
Amy Charette: Confederated Tribes Warm Springs

Kathleen Cathey: Senator Wyden Staff  
Josh White: Wallowa Whitman N. F.  
Elaine Eisenbraun: North Fork John Day  
Watershed Council  
Ana Hernandez: Umatilla National Forest  
Hugo Magaña: Umatilla National Forest  
Kathy Ramsey: Umatilla National Forest  
Joy Archuleta: Umatilla National Forest  
Tom Fritz: Umatilla National Forest  
Chris Helberg: Umatilla National Forest

## **References:**

Note: All local documents and references, along with representative maps, are available to the review committee upon request.

**Gratitude:** The partners of the Upper North Fork planning team would like to offer their gratitude to Oregon Watershed Enhancement Board Directors and Staff for creating the Focused Investment Program and providing the opportunity for accelerated, landscape scale restoration.