

The Marsh Project: An Ecosystem Services Approach to NEPA Project Planning

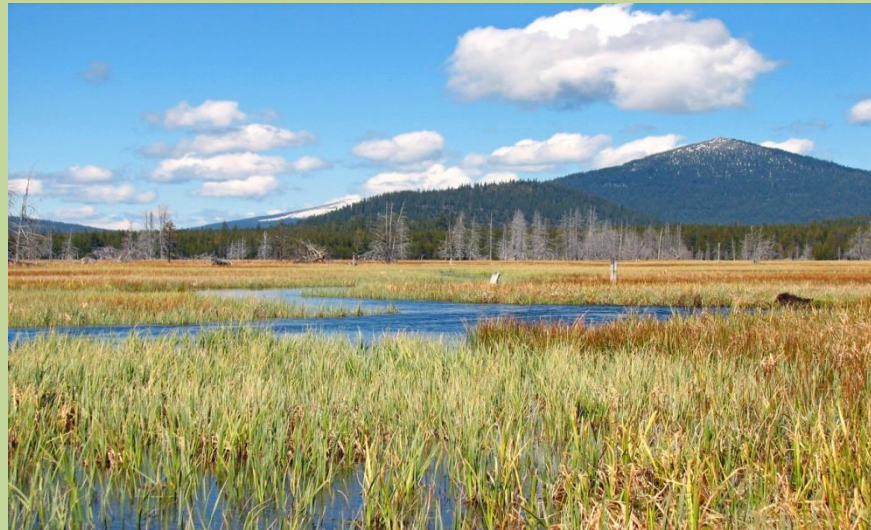


Photo Credit: Carina Rosterolla, Crescent RD



US Forest Service, Deschutes NF, Crescent Ranger District

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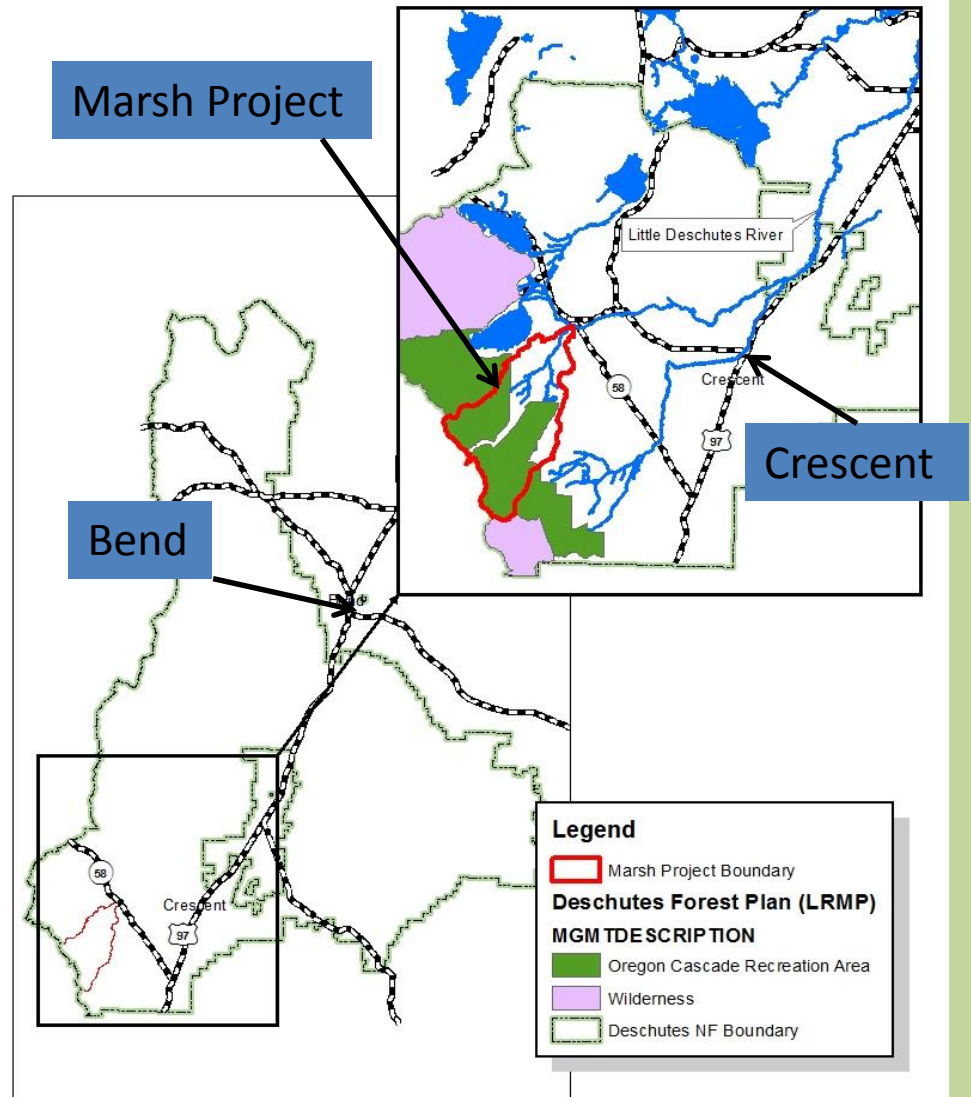
Project Contact: Holly Jewkes, District Ranger, hjewkes@fs.fed.us

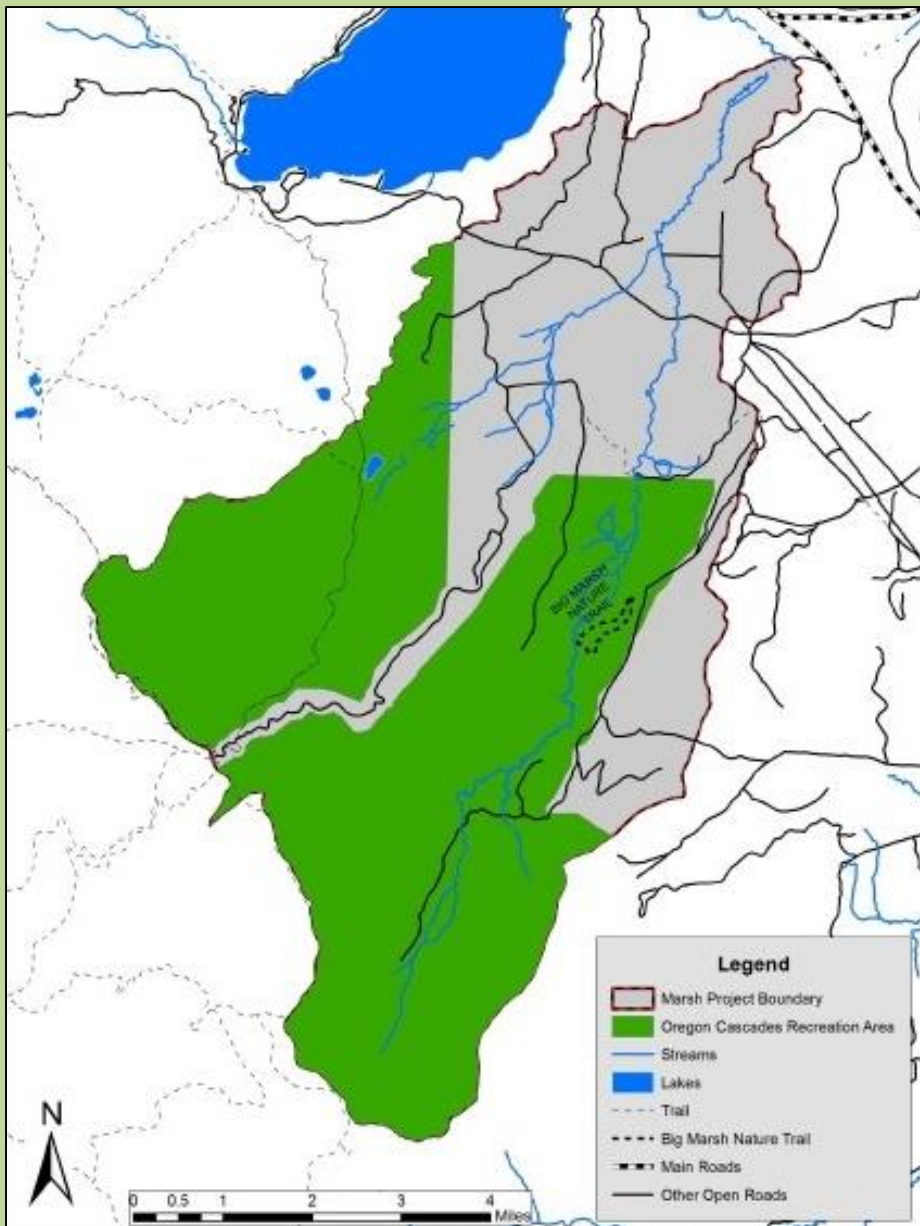
Marsh Project Overview

- 30,000 acre watershed
- One of the largest high-elevation Marsh complexes in the US
- Upland vegetation of lodgepole & ponderosa pine and mixed conifer



Photo Credit: Carina Rosterolla, Crescent RD





Marsh Landscape Highlights

- Botanical Species Diversity
- Wildlife Species Diversity
 - Oregon Spotted Frog
 - Yellow Rail
 - Spotted Owl
- Hunting and Fishing
- Matsutake Mushrooms
- Dispersed Recreation (Hiking, Canoeing, Camping, Sno-mobiling, etc...)
- Heritage Resources
- Firewood Gathering

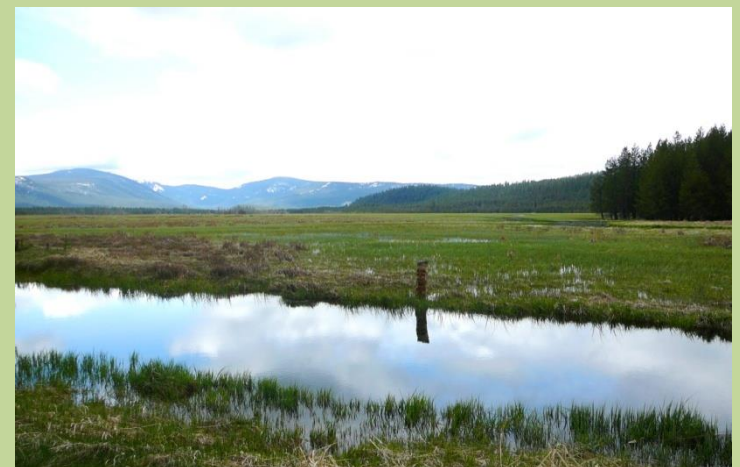
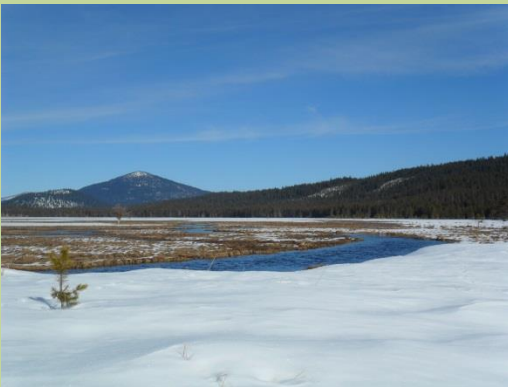


Photo Credit: Carina Rosterolla, Crescent RD

Potential Benefits of the Ecosystem Services Approach

1. Understanding the complex relationships between resources in a project area with multiple values and many interest groups
2. Engaging a more diverse cross-section of the public and listening to ideas as part of project development
3. Engaging partners in project development to set the stage for implementation
4. Engaging more employees in project development, creating a project based around multiple resource areas.



How do we get there from here?

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Marsh Draft Environmental Assessment

Crescent Ranger District, Deschutes National Forest, Klamath County, Oregon
Townships 24, 25, 26 and 26.5 South and Ranges 5.5, 6, 6.5, 7 East; Willamette Meridian

September 2014



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**Engaging a more diverse cross-section of the public and
listening to ideas as part of project development**

Recognized Values in the Marsh Planning Area

- Cultural Resources
- Dispersed Camping
- Downstream Importance
(Contribution of water leaving big marsh to down-stream habitats, especially winter/early spring when irrigation water is low)
- Educational Opportunities
(of Marsh and Restoration)
- Existence Value of Botanical Resources
- Existence Value of Wildlife Species
- Firewood
- Fishing
- Hiking, X-Country Skiing, Snowshoeing
- Hunting (Big Game)
- Kayaking, canoeing, non-motorized water recreation
- Low Use/Development but with accessibility
- Matsutake Mushrooms
- Mountain Biking
- OHV use
- Post and Poles
- Scenery (marsh and panoramic views), pristine viewshed
- Snowmobiling
- Solitude, Wildness (quiet, lack of people, lack of sign of influence, oneness with nature)
- Timber Volume
- Water Quality
- Water Quantity
- Wildlife viewing

1

What do you value in the planning area?



2

What goes into sustaining that value?



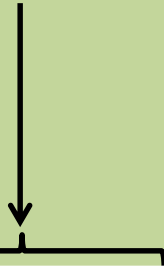
3

How is that component doing on the landscape?



4

What actions could impact that component, either positively or negatively?



Value	Ecosystem Service	Current Condition	Main Components	Component Ecosystem Service	Condition of Components	Condition Details	Management Actions	Effects	
								Positive	Negative
Matsutake Mushrooms	Provisioning, Cultural (Wild Food)	Excellent	Soils	Regulating-Soil Quality	Good	Compaction from previous TS	Compaction from machinery in Timber and Fuels treatments, Subsoiling		Short Term soil compaction
			Canopy Cover	Supporting-Habitat	Good	Good range = 40%-60%	Fuels/Density Management Treatments	Reduce Fire Danger	Too Open
			Tree Species Composition	Supporting-Habitat	Good	Preferable is LP and PP	Fuels/Density Management Treatments	PP Preferred Leave Species, Fire Tolerant = Stand More Resilient	
			Tree Age/Size	Supporting-Habitat	Good	Tree Age Preferable 80 yr	Regen Cuts		longterm recovery for mushrooms
			Managed Fire risk	Regulating - Natural Hazards	Good	Some past treatments, but could use more	Stratgically placed treatments to protect values	Reducing risk to high value areas surrounding treatments	Reduced values within treatment areas
				Supporting - Habitat					

Purpose and Need

The purpose of this project is to manage for a suite of ecological and cultural benefits expressed by the public and in the Deschutes Forest Plan, which are distinctive to the Marsh planning area and can be effectively managed by the Forest Service and its partners. There is a need to both address natural and human threats to this current range of benefits being provided (including stand-replacing fire, beetle infestations, and unmanaged recreation impacts), and also restore and enhance the ecosystem's capacity to provide a similar amount and diverse set of benefits in the future. The following ecosystem services were identified as a priority by the public and the agency and thus provide the focus for this project:

Provisioning Services

- **Hydrology:** Restore and enhance a clean, functioning, free-flowing water source that provides habitat...
- **Matsutake Mushroom Harvesting:** Maintain the socially and economically important mushroom harvest...
- **Forest Products:** Provide opportunities for timber harvest, firewood gathering and post and pole harvest...

Supporting Services

- **High Quality Plant and Animal Habitat:** Restore, maintain, and enhance marsh and upland habitats...

Cultural Services

- **High Quality Dispersed Recreation Opportunities:** Maintain and enhance the diverse recreation experience...
- **Scenic Views:** Restore, maintain, and enhance the expansive views of both the upland portions of the project...

Proposed Actions

Target Ecosystem Services		Current Threats	Proposed Actions to address threats and enhance ecosystem services
Provisioning Services	Clean, functional Hydrology	- Altered water flows and impacts to water quality (from grazing diversions) - Unmanaged Recreation impacts	- Ditch Closure - Riparian Vegetation Restoration - Dispersed Campsite Management - Restoration of impacts from user-created OHV trails
	Matsutake Mushroom Harvesting	Risk of Stand Replacing Fire	Upland Fuels and Density Management
	Forest Products	- Risk of Stand Replacing Fire - Risk of beetle outbreaks	Upland Fuels and Density Management
Supporting Services	Plant and Animal Habitat	- Altered water flows and impacts to water quality (from grazing diversions) - Risk of Stand Replacing Fire	- Ditch Closure (Oregon spotted frog habitat creation) - Upland Fuels and Density Management (for northern spotted owl habitat and other species) - Instream wood placement (support beaver expansion) - Culvert removal (enhanced aquatic habitat connectivity)
Cultural Services	High Quality Dispersed Recreation including a sense of remoteness	- Unmanaged Recreation impacts - Risk of Stand Replacing Fire	- Dispersed Campsite Management - Trail Maintenance - Marsh Access Improvements - Upland Fuels and Density Management
	Scenic Views	- Risk of Stand Replacing Fire - Risk of beetle outbreaks - Altered water flows and impacts to water quality (from grazing diversions)	- Riparian Vegetation Restoration - Maintenance of scenic overlook - Upland Fuels and Density Management

What did we gain by using Ecosystem Services?

- **More community involvement in planning, especially among the “people without a voice” (middle-ground and those whose jobs are not in advocacy)**
- Better tie of social science into planning and land management, recognizing the community interest in a use value of self-discovery



- Allowed us to look at a complicated landscape from a different viewpoint, and forced employees to think differently
- Allowed USFS to tell our story about the land we manage in a different way
- Made Chapter 1 and 2 of the NEPA document more reader-friendly

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Where did we hit stumbling blocks?

- Moving beyond the traditional USFS way of doing things and sustaining a new approach throughout the process
 - being constrained by a 20 year old forest plan
 - perception of a potato-head project
 - fitting into a target-driven framework
 - specialist reports deferring to what is known to be legally defensible and what “we have to do” (Chapter 3 is 400 pages long!!!)
- Keeping on a timetable that kept the community engaged (delays from finishing up other projects, specialist workloads, USFWS consultation workload, etc)
- Incomplete public buy-in on the concept of Ecosystem Services

Questions?

