

The District has developed [story maps](#)¹ that utilize ArcGIS Online software to help display some of the information in this letter in an interactive-map format. They explain some background and history of the area and include access to the raw maps and data.

Background

Much of the planning area was once part of the Oregon and California Railroad lands (O&C). The O&C land grant came into existence shortly after the Civil War when Congress provided subsidies, in the form of land grants from the Public Domain (Federally owned land), to the various States for the purpose of aiding the construction of rail and wagon roads and to encourage westward expansion (AOCC 2015). Congress granted specific lands to the State of Oregon in 1866 for the construction of a railroad from Portland, Oregon, southward to the California border near Ashland. Another land grant was given to the State of California for that portion of the railroad. The O&C land grant gave both States the authority to designate a company to construct the railroad and receive the land grant as a subsidy to offset construction costs. The O&C railroad land grant included all odd-numbered sections of Public-Domain land, within 20 miles of each side of the proposed railroad line. If land within the grant land was already homesteaded or otherwise claimed, then the company was allowed to extend the strip and acquire the odd-numbered sections up to 30 miles from the rail line. The online story map shows the O&C lands.

A large fire burned in the area in 1902 that likely reburned areas that had been burned by previous large fires in 1868 and 1883. The online story map shows the fires. There was no salvage on the Forest at that time, and the second-growth stands grew up after planting and natural seeding. The portions of the planning area that had not been burned were the focus of intensive old-growth logging (Paullin 2007). Portions of the LaDee Flats area was owned by the Union Lumber Company that began logging in 1923. They used a railroad and steam donkey system with an incline that lowered rail cars down a steep slope to the confluence of the North Fork Clackamas River. Some adjacent National Forest lands were also logged utilizing the same rail system. On September 11, 1929 a fire started from overheated railroad brakes and it rapidly burned approximately 15,000 acres pushed by an east wind. Much of the burned area was salvage logged and there was another smaller fire in 1939 that reburned portions of the area. The Union Lumber Company land was transferred to the Forest Service as part of a settlement for fire damages. The area was eventually replanted and reseeded and the trees are now approximately 70 years old.

The O&C lands that were intermingled with the Union Lumber Company lands were returned to Federal management after they were found in violation of the conditions of the land grant, and after many years of action by Congress and litigation. A total of 41,637 acres of the former O&C lands are managed by the Mt. Hood National Forest. The old railroad grades were eventually converted to roads.

In 2014 the 36 Pit Fire was started by target shooters near the Clackamas River and it burned into the analysis area. The fire burned with relatively low intensity in areas that had been recently thinned in spite of the high winds and dry conditions.

¹ (https://www.fs.usda.gov/nfs/11558/www/nepa/105362_FSPLT3_4291838.pdf)

LSR Assessment

The North Willamette LSR Assessment (USDA USDI 1998) covers the project area. This assessment recommends thinning plantations (p. 6-17). The assessment specifically recommended actions to accelerate late-seral structure similar to the current proposed action including the following.

- Thinning to produce large trees, or to release advanced regeneration of conifers, hardwoods or other plants
- Killing trees to make snags and coarse woody debris
- Developing multiple canopy layers, canopy gaps, and the development of patchy understory

Watershed Analysis

The project area is overlapped by three watershed analyses. The bulk of the area is covered by the North Fork Clackamas River Watershed Analysis (1996). The rest overlaps the Roaring River Watershed Analysis (1996) and the Lower Clackamas River Watershed Analysis (1996). These are incorporated by reference and summarized below. The analyses contains in-depth discussions with maps, of the setting, the ecological processes, the resource conditions and the history of management. While the analyses were completed in 1996, they relied on GIS vegetation data that was developed in 1988. The analyses used GIS information available at the time with minimal field verification.

Since the recommendations of the watershed analyses were made, many changes have occurred that have been considered to determine whether recommendations made over 20 years ago are still relevant today.

- Since the watershed analyses were written, the delineation of watersheds has changed. With the old delineations, each of these were once considered separate 5th field watersheds but are now part of the current Middle Clackamas 5th field watershed.
- There is much less early-seral habitat and more mid-seral habitat.
- The stands that were 40 years old then are now 62 and stands that were 50 years old then are now 72; this represents a substantial period of rapid growth and stand development.
- The actual quantity of thinning harvest to date has been approximately ½ the level recommended.
- The recommended small openings were not achieved.
- Forage, particularly for deer and elk, is now in short supply because plantations have grown up and shaded out forage.
- Some stands not previously considered suitable northern spotted owl habitat have grown and developed to the point where they are now considered suitable.
- Road 4611 was realigned from its location along Winslow Creek to an upland location.
- A revised Survey and Manage plan was developed in 2001.
- A portion was added to the Wilderness system in 2009.

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- In 2010 the LaDee Flat OHV area was established.
- An area closure was issued that restricts target shooting.
- In 2014, the 36 Pit Fire burned. Its greatest acreage and intensity burned in the Lower Clackamas River Watershed Analysis area, creating a mosaic of burned and unburned patches, with abundant snags.
- The watershed analyses recommended increasing late-seral habitats, and they provide for prioritization of the quantities, methods and distribution of timber harvest to achieve landscape objectives and timber harvest goals. They also made recommendations for road management, some of which have been implemented.
- The North Fork Clackamas River Watershed Analysis calculated that less than 15% was late-successional forest (p. 1-15 & 4-3) and invoked the Northwest Forest Plan standards at page C-44. Since the delineation of 5th field watersheds has changed, a new calculation shows that late-successional stands in the Middle Clackamas 5th field watershed are at approximately 33%.

After reviewing the changed conditions listed above, the District found that few of the previous recommendations were still valid and opted instead to develop a proposed action for North Clack Integrated Resource Project that dealt with current conditions and current management direction.

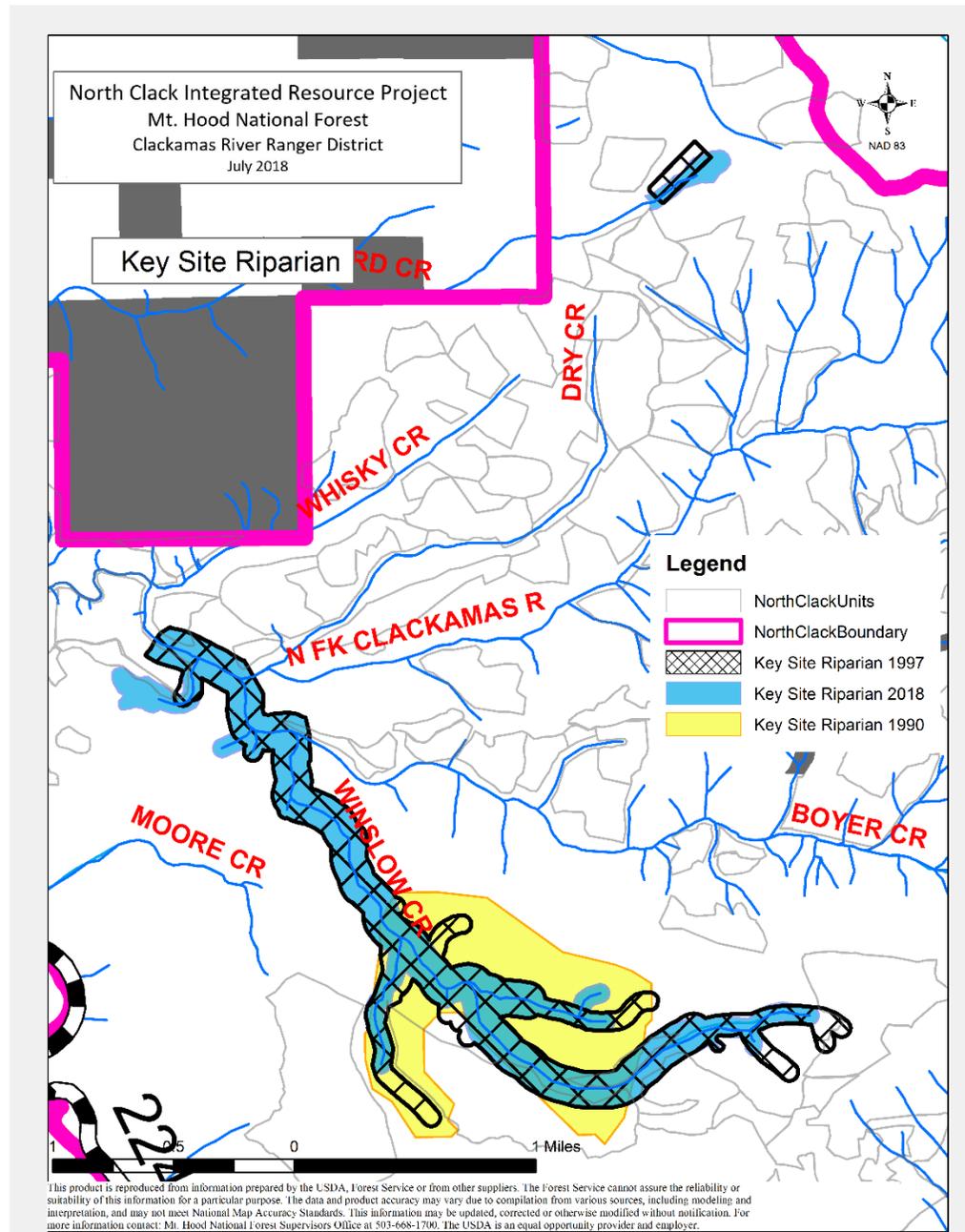
This project has adopted the concepts for Riparian Reserve delineation described in the watershed analysis. The site-potential tree height for this project is 180 feet. Also included in Riparian Reserves are certain unstable geological features. While streams, rivers, ponds, wetlands and certain unstable geological features were shown on maps in the watershed analyses, they were conceptual based on data available at the time with limited field verification. For this project, maps were refined based on field inspections. For example, some streams shown on the watershed analysis maps are not present while other unmapped streams were discovered. There is also newer information about fish presence. The project areas have been examined by a geologist to determine the presence or absence of unstable landforms. All of this field-verified information was used to create a more accurate Riparian Reserve map. This new map is not considered a change to the recommendations put forward in the watershed analyses or the Northwest Forest Plan but simply a more accurate refinement of the intent of those documents.

Key Site Riparian Changes

The Forest Plan identified a land allocation called Key Site Riparian Areas or A9. It has management direction that is very similar to the Riparian Reserve land allocation that was included in the Northwest Forest Plan: maintain or enhance habitat and hydrologic conditions. See Forest Plan p. Four-179. The guidance for A9 indicates that actual on-ground boundaries are located and adjusted during project implementation planning and analysis. The North Clack project area contains two A9 blocks; one along Winslow Creek and the other at the headwaters of Bedford Creek. The map below shows the original 1990 delineation. In 1997, through the Winslow Environmental Assessment, the Winslow Creek A9 boundary was changed to align with Riparian Reserves. However, at that time, no field verification took place. Through the North Clack project, extensive field examination with GPS, verified that some streams on older maps were not present while others were discovered and mapped. As

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directed by the Forest Plan, the boundaries will be adjusted, as shown on the map below, to better fit the riparian conditions in the North Clack project area.



Northern Spotted Owl Recovery Plan

The Revised Recovery plan (June 2011) indicates that the most important range-wide threats to the spotted owl are competition with barred owls, ongoing loss of spotted owl habitat as a result of timber harvest, habitat loss or degradation from stand-replacing wildfire and other disturbances, and the reduction in quantity and alteration of distribution of spotted owl habitat as a result of past activities and disturbances (USDI 2011). Critical Habitat for northern

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spotted owls was delineated (USDI 2012). While large portions of the Forest's matrix lands are now overlapped by Critical Habitat, there is very little in the project area. Approximately 50 acres of Critical Habitat occurs in the project area, and it is entirely in Late-Successional Reserve. No proposed actions occur within the 50 acres.

Key Watersheds

Key watersheds provide refugia for at-risk stocks of anadromous and resident fish. This delineation includes the Roaring River Watershed and a narrow band along the Clackamas River. The standard and guideline for Key Watersheds requires no net increase of system and non-system roads.

Within the project area, in the Key Watershed delineation there are 25 miles of roads including Highway 224. There would be a net reduction in the amount of roads in the Key Watershed. No new system roads would be constructed and 4.4 miles of system roads would be decommissioned and 1.2 miles of a system road would be converted to a hiking trail.

Other standards and guidelines for Key Watersheds are met: Watershed Analysis has been completed prior to harvest operations, and there are no actions in inventoried roadless areas.

Transportation Analysis Report (TAR)

In order to better manage the Forest's transportation system, the Forest has embarked on several planning processes that address travel and access management. The Forest-wide Roads Analysis (USDA 2003) examined the transportation system and the risk it poses to aquatic habitat. The Roads Analysis, which addressed both the access benefits and ecological impacts of roads, highlighted the fact that Forest Service budgets have not kept pace with what it costs to maintain all roads so they are functioning properly. If the Forest is not able to adequately keep up with road maintenance needs, then the Forest's backlog of roads needing maintenance could impact hydrologic function. In response, the Roads Analysis recommends decommissioning road segments having high environmental risk factors coupled with low access needs. It also recommended keeping roads on the Forest's system, but closing and stormproofing them where they present lower risk and higher levels of future need.

The Forest Travel Analysis Report (TAR)(USDA 2015), is a synthesis of previous efforts and sets the stage for project-level decisions about whether to retain roads, close or decommission them, and what level of maintenance they should receive. A project-level analysis was conducted that took the general information in the TAR and looked at the local roads with proposals that may differ from what was listed in the TAR based on better site-specific information and field reconnaissance. For example, some roads were identified as 'not likely needed' that were found to be needed at least in the near future, and other roads that were thought to be needed are not actually needed even for long-term management and are being proposed for decommissioning. The information from the project-level analysis is included in a transportation planning report.

Collaboration with Clackamas County

There are emerging technologies that utilize wood products in innovative ways to provide alternatives to steel and concrete to frame mid and high-rise buildings. Clackamas County is

working to foster the development of the cross laminated timber (CLT) industry within the county to encourage sustainable forestry and contribute to local economies, especially as the demand for CLT grows in urban communities such as Portland. The Clackamas River Ranger District will be working with Clackamas County to explore supply-side needs and harvest considerations associated with the CLT market, while meeting multiple vegetative objectives. The timber harvest from the North Clack project that may contribute to this initiative is already included in the harvest units of the proposed action. We encourage anyone interested in CLT to visit [Clackamas County documents](#)².

Stewardship Authority

The Forest acting alone cannot achieve the proposed actions designed to meet the goals of increasing health and diversity of stands or the other actions identified. The proposal is to offer the rights to remove and utilize the timber to qualified contractors in exchange for accomplishing the variable-density thinning and other important work of the proposed action. Most projects are large enough to be broken into three or more contracts, and the Forest typically uses a mix of traditional Timber Sale Contracts and Stewardship Contracts. The type of contract used is outside the scope of typical NEPA analysis and would be determined later depending on site-specific circumstances. Since stewardship contracting is new to some, the following is a brief overview comparing the contract types.

Legislation permanently authorizing stewardship contracting was included in the 2014 Farm Bill. It allows the Forest Service to enter into contracts to meet land-management objectives to reduce wildland fire risk and improve forest health. Stewardship contracts focus on producing desired results on the ground that improve forest health, restore resources and provide benefits to local communities. Among other things, the stewardship contracting authority allows the value of forest products to be exchanged for ecological restoration services. Some key factors to consider for stewardship contracting are that the logging component has some restorative elements and that a collaborative public participation process occurs. These things are not required for traditional timber sale contracting and a timber sale contractor cannot be required to do projects unrelated to the timber removal.

Traditional Timber Sale contracts are still an important tool and are used where appropriate. These contracts typically return monetary value to federal and local governments, and allow the Forest to retain funds for post-contract work. In traditional timber sale contracting, the contract is awarded to the high bidder; whereas stewardship contracts are awarded on a best value basis. The award of a stewardship contract is based on a proposal that addresses five factors, including how they would utilize the local work force to accomplish the work. Stewardship contracts also can include required stewardship projects to achieve a wide range of restoration objectives. Recent stewardship projects have included fire hazard reduction, huckleberry enhancement, road repairs, road decommissioning, snag creation, precommercial thinning, culvert upgrades, riparian planting, stream restoration, and restoration of unauthorized off-highway vehicle damage. Stewardship contracting authority also allows for any cash value that remains after funding the required stewardship projects to be retained and pooled with the receipts retained from other stewardship contracts. This pool of money is

² <https://dochub.clackamas.us/documents/drupal/271475c2-9a70-4237-a83c-a62c01c47db1>

used to pay for restoration projects, even ones that are off-Forest. Some large projects require the pooled funding from several stewardship contracts.

The stewardship authority has a key collaborative element; local collaborative groups help the agency evaluate restoration proposals. For this project, the Clackamas Stewardship Partners (CSP) has been involved. The Clackamas Stewardship Partners is a collaborative group that describes itself as “a group of diverse stakeholders dedicated to restoring ecological function of the Clackamas River Basin while benefiting local economies.” CSP meetings are open to the public. The CSP has a wide range of diverse participation such as environmental groups, the Clackamas River Basin Council, local water providers, Clackamas County, Oregon Department of Fish and Wildlife, local sawmills, and hunting groups. The Forest has been collaborating with this group since 2004. The CSP has collaborated on several million dollars of stewardship projects that have been generated through stewardship contracting in the Clackamas basin. Recent stewardship contracts have provided retained receipts funding that was pooled and used as matching dollars to leverage more funding for larger projects. For example, culverts that were blocking fish passage where Porter Road crosses Delph Creek were replaced by a bridge. This off-Forest project was facilitated by CSP with \$90,000 of retained receipts from Stewardship Contracts that leveraged the \$355,000 of the total cost for the project.

Cumulative Effects

A discussion of cumulative effects is included where appropriate, for each resource topic in environmental assessments. Cumulative effects are impacts on the environment that result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions. If the proposed action would have little or no effect on a given resource, a more detailed cumulative effects analysis is not necessary to make an informed decision.

The land area and the time scale used for cumulative effects analysis varies by resource depending on factors such as how far in space and time the direct and indirect effects are manifested. The analysis considers the impact of activities on other ownerships where appropriate.

In order to understand the contribution of past actions to the cumulative effects of the proposed action and alternatives, this analysis relies on current environmental conditions as a proxy for the impacts of past actions. This is because existing conditions reflect the aggregate impact of all prior human actions and natural events that have affected the environment and might contribute to cumulative effects.

The cumulative effects analysis does not attempt to quantify the effects of past human actions by adding up all prior actions on an action-by-action basis. There are several reasons for not taking this approach:

A catalog and analysis of all past actions would be impractical to compile and unduly costly to obtain. Current conditions have been impacted by innumerable actions over the last century (and beyond), as well as by natural processes of growth and recovery since. Trying to isolate the individual actions that continue to have residual impacts would be nearly impossible.

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Providing the details of past actions on an individual basis would not be useful to predict the cumulative effects of the proposed action or alternatives. In fact, focusing on individual actions would be less accurate than looking at existing conditions, because there is limited information on the environmental impacts of individual past actions, and one cannot reasonably identify each and every action over the last century that has contributed to current conditions.

Focusing on the impacts of past human actions risks ignoring the important residual effects of past natural events, which may contribute to cumulative effects just as much as human actions. By looking at current conditions, we are sure to capture all the residual effects of past human actions and natural events, regardless of which particular action or event contributed to those effects.

The Council on Environmental Quality issued an interpretive memorandum on June 24, 2005 regarding analysis of past actions, which states, “agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions.

The cumulative effects analysis also follows the direction of Forest Service National Environmental Policy Act (NEPA) Regulations (36 CFR 220.4(f)) (July 24, 2008), which state, in part:

“CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions. Once the agency has identified those present effects of past actions that warrant consideration, the agency assesses the extent that the effects of the proposal for agency action or its alternatives would add to, modify, or mitigate those effects. The final analysis documents an agency assessment of the cumulative effects of the actions considered (including past, present, and reasonable foreseeable future actions) on the affected environment. With respect to past actions, during the scoping process and subsequent preparation of the analysis, the agency must determine what information regarding past actions is useful and relevant to the required analysis of cumulative effects. Cataloging past actions and specific information about the direct and indirect effects of their design and implementation could in some contexts be useful to predict the cumulative effects of the proposal. The CEQ regulations, however, do not require agencies to catalogue or exhaustively list and analyze all individual past actions. Simply because information about past actions may be available or obtained with reasonable effort does not mean that it is relevant and necessary to inform decision making. (40 CFR 1508.7)”

Each specialist includes a discussion of how information on past projects was considered. For the reasons discussed above, the analysis of past actions is primarily based on current environmental conditions. Some specialists utilize the current GIS vegetation layer that includes information on current condition of forest stands as they have been affected by events such as forest fires, past regeneration harvest and road construction as well as the growth that has occurred since.

Other types of projects or activities that are not included in the proposed action but may occur because they are authorized by other documents are also considered where appropriate including road maintenance, road decommissioning, danger tree removal, gathering of special

forest products, and recreational uses. There are several recent, ongoing or foreseeable projects in the vicinity that may be included, depending on the cumulative effects analysis area, which is unique for each resource.

Post Decision Implementation

Prior to and during implementation, a multi-stage process is used on the Forest to ensure that a project is implemented as planned. Before beginning the on-the-ground contract preparation process, which includes layout of the units, designating the trees to retain, and cruising the timber, forestry technicians and field crew members meet with the Interdisciplinary Team to transition to the implementation phase of the project. Resource specialists identify any resource concerns in individual units or highlight any key project design criteria on a unit-by-unit basis. After the fieldwork is completed, the project moves into the appraisal and contract preparation phase. One of the first steps in the process is to complete the Contract Project Design & Implementation Crosswalk Form. The purpose of the crosswalk is to ensure that all components of the NEPA Decision, including the project design criteria and terms and conditions from consultation, are incorporated into the contract. For each required component of the NEPA decision, the crosswalk identifies how and what stage in the process the component would be addressed (e.g., during fieldwork, contract, contract administration, post contract monitoring). The information generated from the crosswalk process is used to guide the contract preparation process and to identify any issues that need to be addressed by resource specialists.

Prior to advertisement, a final review is conducted to ensure that the contract is prepared with the proper contract provisions and language; the project design criteria are properly inserted and contractually enforceable; and the contract and appraisal meets Forest Service Handbook, Forest Service Manual and Stewardship Guide (where applicable) regulations and direction. This final review may be informal or may be formalized in a Forest-level review or "Plan-in-Hand." "Plan-in-Hand" reviews are randomly selected and may or may not include this project. The goal of this formal review is to monitor and evaluate forest resource management prescriptions, to measure compliance with goals and objectives, and to make adjustments when needed. The "Plan-in-Hand" review is summarized in a letter to the Forest Supervisor, which is included in the final appraisal/contract packet.

During implementation, the Contract Administrator in conjunction with the Forest Service Representative and Contracting Officer are responsible to ensure that the contract is administered properly throughout all stages of implementation. The contract administration team monitors compliance with the contract, which contains the provision for resource protection, including but not limited to: seasonal restrictions, snags and coarse woody debris retention, stream protection, erosion prevention, soil protection, road closure and protection of historical sites. The Contract Administrator records observations demonstrating compliance as well as any concerns/issues on inspection reports that are signed by both the Forest Service and Purchaser Representative. The inspection reports would also document any resolutions that have been identified. As needed during the implementation process, the contract administration team may request a resource specialist or Line Officer to come for a field visit to discuss a resource issue that has been identified. In addition, a resource specialist may visit a project to conduct monitoring and to help insure that the project is being implemented as intended by the NEPA decision.

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