

Willamette National Forest Pilot Road Analysis

Appendix I

Heritage Resources Process Paper

October 1998

Background

Heritage Resources by definition include many forms of archaeological, historical, and cultural properties. Such resources are found throughout Willamette National Forest lands and have been identified primarily through project level inventories conducted in compliance with the National Historic Preservation Act (NHPA). These resources are fragile and non-renewable connections to past lifeways (or extant traditional practices of native inhabitants) and human endeavors, and as such are offered a high level of protection under current federal legislation.

Archaeological sites typically exist in the form of buried deposits of stone tools and debris resulting from tool manufacture, usually these represent the remains of the native inhabitants of the area, and as such can be quite ancient. These are commonly known as lithic scatter sites due to the dominance of stone artifacts in the assemblage. Because of the inherently poor preservation qualities of the temperate forest environment, organic cultural remains are generally rare in these assemblages. Some historic era archaeological sites are also found on the forest. These represent more recent endeavors of non-native, Euro-American settlers and explorers. Archaeological sites are usually difficult to identify without intensive field surveys, except when exposed by ground disturbing activities. Road construction, maintenance, road use, and associated erosion can destroy or damage the integrity of archaeological deposits.

Historic sites, in contrast, exhibit a broader range of artifact types, materials, and features in their assemblages. They often include structures as a dominant component, though an archaeological component may also exist. However, they are more readily identified than their archaeological counterparts. Historic properties also include engineering features and travel corridors, such as early roads, trails, railroad routes, monuments, dams, bridges, etc. Often modern roads were developed over historic transportation routes.

Cultural properties are considered to be locations of traditional cultural activities of indigenous people and their descendants, and may not manifest themselves with distinguishable physical remains. Locations may only be known to the specific practitioners or traditional members of the tribe, and information kept in confidence. These places will be most reliably identified through consultation with local tribes and traditional practitioners in the community. Federally recognized Indian tribes retain sovereign status and special consideration in accordance with that status. Furthermore, some tribes have reserved certain rights (e.g., for hunting, fishing, gathering, water, etc.) which must be recognized and access accommodated in land management decisions.

Currently the Willamette National Forest works with four federally recognized tribes who have ancestral ties to the land we manage. These are the Confederated Tribes of Grand Ronde Community of Oregon, the Confederated Tribes of the Siletz Indians of Oregon, the Confederated Tribes of the Warm Springs Indians, and the Klamath Tribe. Of these, only the Warm Springs and Grand Ronde assert their claims to ceded lands within the forest's bounds: The Warm Springs in the Mt. Jefferson wilderness, near their reservation, and the Grand Ronde consider their ceded lands to include all of the Willamette Valley from the crest of the Cascades to the crest of the coast range, including the whole of the Willamette National Forest.

Process Description/Documentation:

Just as the nature of heritage resources as physical and cultural manifestations is varied, so are the potential effects of the forest roads and road system. For the purpose of this analysis, several questions have been identified which can be used to address issues related to heritage resources and the forest's roads policy. For example ***How and where does road access affect archaeological sites and historic properties?*** The answer to this question is complex and requires the assimilation of a vast database. This issue is best examined by more specific key questions, as follows.

❖ ***Are archaeological sites and historic properties adversely affected by the existing road system?***

It is commonly known that many archaeological sites on the forest have been directly impacted by the initial road construction, continued road maintenance and erosion, which unmitigated results in irretrievable data loss. Through continued monitoring numerous sites have been identified throughout the forest which would benefit from road closures and or rehabilitation (See annual Forest Monitoring and Evaluation Reports, 1991-1997). Remnant deposits of sites could be preserved by stabilizing eroding surfaces such as road cuts. Archaeological sites such as those found on the forest are typically not amenable to on-site interpretation that might favor public access because of their fragile nature and discreet properties.

In order to analyze the effects of the current road system on archaeological sites and historic properties it would be necessary to correlate the locations of each and examine site specific information for evidence of impacts. There have been over 2,000 archaeological sites documented on the forest. Documentation exists primarily in the form of paper records (site records and maps) and an ORACLE data base, though two districts (Detroit and Sweet Home) have site location data on GIS. The ORACLE data base, created in 1991, has been maintained at the district level to varying degrees. The database can be used to produce reports in tabular form, listing sites with documented road impacts. This is only as reliable and current as the data input, and would likely produce only a cursory indication of the actual conditions.

Using existing data to conduct an analysis of the effects of the road system on archaeological sites would require the comparison of site locations obtained from these records with the current road system. A cumbersome and time consuming process, analysis would best be accomplished at a district or watershed scale, where more site specific information is available. Assessment at a forest scale is not feasible at this time.

❖ ***How does the existing road system contribute to the efficiency and costs of maintaining historic properties, especially structures?***

Historic sites, especially structures, on the other hand, are more conducive to adaptive uses such as interpretation, and in some cases recreation rental opportunities, so access for interpretation as well as maintenance may be more desirable in some cases. Some historic structures are currently used as administrative facilities (e.g., fire lookouts), requiring other access considerations. Other historic structures are not being utilized or maintained by the

forest, but may receive visitor use. Access is desirable for sites of this type from both the maintenance and public use perspectives.

There are 74 historic structures currently listed on the forest inventory. Records and information about these properties exist in the same form as detailed above for archaeological sites. Comprehensive specific data on maintenance efficiency and costs are not readily available, but may be obtained through records search and interviews, primarily at the district level where most maintenance and management is undertaken. The process for analysis would be similar but somewhat simpler in light of the smaller numbers of properties involved.

As a general rule, properties with road access have been more often utilized and more efficiently maintained. In exception to this are properties which are accessible by road (or roads and short trails) but are located some distance from the ranger station. Often these properties are the target of public abuse/vandalism. Costs associated with maintaining these properties is relatively high. Additionally, the kinds of archaeological sites found on this forest would not typically require maintenance unless the site has been impacted by other management or public activities. Then there would be less occurrence of such damages in areas where access is limited.

❖ ***How does the existing road system contribute to interpretation and public use of historic sites or other cultural resources?***

This analysis is closely related to that of the previous question in that the same sorts of properties are utilized by the public and for interpretation (*In fact, perhaps the two questions could be combined, and addressed as one.*) Generally, such uses are associated with recreation and could be addressed as such. Interpretive efforts are generally focused in areas of high(er) public use. Interpretive panels are currently found along many main travel routes (e.g., Scenic Byways, Aufderheide) and in recreation sites (e.g., Bedrock, Box Canyon, Clark Creek, Clear Lake, Delta, Sacandaga, Waldo). Interpretation of more fragile archaeological sites takes the form of off-site interpretation, such as brochures or displays. (See the Region 6 publication, "Windows on the Past," for heritage interpretation locations.) Some additions have been made since its publication.

❖ ***Which roads are historic transportation routes? Where have historic transportation routes been identified and how does maintenance to historic levels affect other resources?***

Many historic transportation routes, such as old wagon roads, trails, and railroad routes, have been adversely affected by road development. As transportation systems evolved over time, modern roads often followed existing historic routes. In some areas this resulted in obliteration or fragmentation; however, in some places pristine segments have survived. In some cases, current roads could be closed and routes rehabilitated to a historic character. Some could be converted into interpretive trail routes.

The process for conducting the analysis of this class of heritage resources is similar to those above in that it relies on review of existing heritage resource records. Many of these routes are fairly well documented in the archives; many have been field verified and recorded. Some have evaluations and management plans in place.

When road decommissioning or other road management activities are being considered, an archaeologist should be consulted in order to assess the potential historic values of the road system under consideration. Again, historic records and maps should be consulted to identify others previously unrecognized, perhaps minor routes. The watershed or district scale is an appropriate level of analysis for the minor routes.

❖ ***How and where do roads provide access for traditional cultural practices for Native Americans?***

The extent to which forest lands are currently utilized by Native Americans for traditional cultural practices is not well-known to forest managers. Recently increased consultation and interactions with local tribes and native practitioners indicates that there is considerable interest in using at least some areas of the forest for cultural activities. Some areas of interest have also been identified through tribal involvement in the watershed analysis process over the last few years. Understanding of these interests and needs will be facilitated by continued interaction and relationship building with the tribes.

For the purposes of this analysis, an informational letter was sent under the Forest Supervisor's signature to the tribal chairpersons and the cultural resource coordinators for each of the four local tribes listed above (Grand Ronde, Siletz, Warm Springs, and Klamath). The letter contained an overview of the pilot roads analysis and provided names of individuals to contact for additional information: I.D. Team leader, Forest Engineer, Forest Native American Program leader, and Forest Heritage Specialist. The letters were followed by phone calls. It is important to note that in order to be successful communications of this nature require a considerable investment of time. As the relationships between the forest and the tribes become better established, information exchange will improve.

Results and Interpretation:

Results of the Heritage portion of the analysis may seem limited or general. Because of the vast body of data available, and lack of manageable data systems, more time and resources are needed to assimilate the appropriate information. GIS has not been utilized to the extent it has for many other resources on the forest. The ORACLE data base has limitations, partially based on the current conversion to IBM, as well as inconsistent data upkeep on the district. Decisions around roads should give more specific consideration to heritage resources in determining effects of specific or programmatic undertakings, as per National Historic Preservation Act requirements. Below are the preliminary results of the analysis, arranged by Issues and Key Questions, as above. Additionally "hot spots" identified by other resource area specialists could be assessed for potential heritage resource concerns or compatible opportunities.

❖ ***How and where does road access affect archaeological sites and historic properties?***

❖ ***Are archaeological sites and historic properties adversely affected by the existing road system?***

The short answer for this is "yes". However, in order to identify specific roads and sites would require more time, and should be focused at a finer scale, as described above. In the interest of testing the available data for application to this analysis, GIS and ORACLE were

used to derive data about the frequencies of sites associated with roads, including records which indicate road related impacts.

One map was created from GIS (cr1) which shows the interface of roads and heritage sites on the Detroit and Sweet Home districts. (None of the data was verified, or checked for consistency.) This map displays sites as shaded polygons for one district, and "bull's eyes" for the other. According to end of year reporting for FY 97, the total number of recorded sites for Detroit is 450, and for Sweet Home is 390. Though no frequency counts were produced by GIS, one district exhibits nearly one hundred such polygons, while the other show only about a dozen "bull's eye" sites. That is, about 22% of Detroit's sites, and 3% of Sweet Home's sites, have been impacted by road related activities, according to these data sources. The road systems nor site distributions of these two adjacent districts are not so different that it would account for such a difference in the GIS representation.

Another attempt at assimilating data was made using the ORACLE (cr_site) data base. Two standard queries were run using the forest links to the data base. The queries asked for listings of sites that had documented impacts from (1) road or bridge construction, or (2) road maintenance. Originally, this data base had been created in 1991 inputting data from the 7 districts. The queries reported data from not more that four districts. These four districts that are represented by the data have a site count of approximately 1355 (FY97 year end report).

Results:

- ✧ Impacts from Road Maintenance: 86 sites (3 districts represented)
- ✧ Impacts from Road or Bridge Construction: 312 sites (4 districts represented)

A very simple analysis of these results tells us that about 29% of the sites on these districts have recorded impacts from roads. None of these data were closely scrutinized for this analysis, so it should be viewed with considerable caution.

Review of monitoring reports from 1991-1997 indicate a commonly reported cause of (continuing) impacts to sites is road maintenance or road use (97) and off-road vehicle use (95). We have had 2 important sites damaged by road maintenance activities in the past few years.

As per NHPA, eventual decisions regarding road closures, obliteration or continued use and maintenance will require the determination of effects of specific actions on known significant sites. In some cases, road closure may be adequate to ameliorate the existing effects of road use, while other sites may require some level of rehabilitation or stabilization to prevent further damage through erosion. Effects of road obliteration must be addressed at the site-specific level. Roads analysis on a more local or watershed scale should also identify adverse effects of continued use and maintenance of some roads on archaeological sites, allowing for the design of protective measures (i.e., mitigation).

✧ *How does the existing road system contribute to the efficiency and costs of maintaining historic properties?*

Again, this question needs more focused analysis. "Efficiency and cost" were not addressed as such, but clearly access is an important aspect of this. The road system contributes to the use and enjoyment of many historic structures on the forest. Typically the structures that are

used are better maintained. Decisions regarding continued use and access to historic structures should take into consideration other management options, such as recreation and administrative uses, as well as historic values. Usually the preservation needs can best be met by adaptive use, which is sensitive to historic values.

❖ *How does the existing road system contribute to interpretation and public use of historic sites or other cultural resources?*

Recreation is probably the most common “adaptive use” of historic structures on this forest. For the purposes of this road analysis, access will be addressed through the recreations section. Often in conjunction with recreation sites, interpretation of historic sites is also common on the forest. Interpretation is a national priority for the Heritage program. At the Regional scale, we have “Windows on the Past” as the Heritage interpretive program. A publication, *Windows on the Past: Guide to Pacific Northwest Historical Sites* (1990), currently lists six visitor sites on the Willamette, though certainly more could be added. It would be desirable to maintain access to interpreted heritage sites, though not necessarily strictly road access. Trails also can provide adequate access in many cases.

Windows on the Past Site	Access Road(s)
Klov Dahl Headgate & Tunnel	Forest Rd. 24, 2421, trail 3551
Oregon central Military Wagon Road	Forest Road 21
Slick Creek Cave	County Route 6220, Forest Road 18, trail out of Bedrock Campground
Fish Lake Remount Depot	Hwy 126
Dee Wright Observatory	Hwy 242
Sand Mountain Lookout	Forest Road 2690, -810

Similarly, public use through the Recreation Rental program is another important priority for the heritage program. Maintaining adequate access to existing and proposed or potential rentals is also desired.

Current Recreation Rentals	Access Road(s)
Indian Ridge Lookout (BR)	Hwy 126, Rd. 19, 1980, -247, -248
Box Canyon Guard Station (BR)	Aufderheide Road (19)
Fish Lake Guard Station (MC)	Hwy 126
Proposed or Potential Rentals	Access Road(s)
Gold Butte Lookout (DE)	Rd 46, 4697
Pearl Creek Guard Station (DE)	FS 2209
Little Cowhorn Lookout (LO)	Rd. 18, 1817, -388

Several more historic structures on the Forest are under Administrative use. They also have interpretive potential because of their historic values. Many of these, as well as the historic recreation facilities, are listed in the INFRA data base. Fire lookouts, guard stations and residences, are common examples. Access to these should be considered in road analysis as well.

❖ ***Which roads are historic transportation routes?***

A review of historic maps and references such as the Forest's Annual Reports, indicates that trails, rails and roads have long existed on the forest. Earliest evidence would be in the documentation of "Indian trails" on GLO plats and notes from before the turn of the century. Over time these were replaced by and large with wagon roads and other transportation routes. Suffice it to say that transportation routes have evolved over time, on this forest as in other areas. Some modern roads overlay portions of historic roads. Some portions of the historic roads have been obliterated in the process of modern road development, yet some retain intact segments near the new route. These are the focus of historic preservation efforts on the forest. Some of the forest's most significant historic transportation routes have management plans in place to protect, and in some cases to restore, their historic character; several have associated interpretation. These include but are not limited to the list below.

Historic Transportation Route	Associated Modern Roads
Hogg Railroad (DE/MC)	Hwys 22/126, multiple forest roads
Santiam Wagon Road (SH/MC)	Multiple roads along Hwy 22: 2032, -302, -024, -048, -060, -065,-066, 2672-305, -810, 2690, -811, and possibly others
Gold Hill Road (BR/SH)	Forest Road 1510
Clear Lake Road (MC)	Near Hwy 126, between Scott Creek and Fish Lake
Old McKenzie Highway (MC)	Hwy 242
Oregon Central Military Wagon Road (MF)	On, along and near Road 21
Box Canyon Road (MF)	Along and adjacent to Forest Road 19, 1934, 1934-747, and others, (High Prairie to Box Canyon GS)
North Fork Railroad Logging system	Various along North Fork Willamette

❖ ***How and where do roads provide access for traditional cultural practices for Native Americans?***

Limited specific information is available at this time. Consultation should continue throughout the analysis and decision-making process, in keeping with federal trust responsibilities to the Native American tribes. We have learned through on-going consultations that our tribal neighbors have interests in forest lands for reasons of resource procurement such as cedar,

huckleberries and medicinal plants. There are interests in some areas for other cultural reasons, such as personal or spiritual.

In addition to the letters sent, person-to-person contact was made with representative individuals of three tribes. In summary, each expressed an interest in the roads analysis subject and process and concern over their abilities to respond in a meaningful way to project of such scope in a short time frame.

The representative of the Klamath indicated they would be interested mostly in the Oakridge area, southern area of the Forest; would like us to send maps.

The Grand Ronde representative thought it best to deal with individual projects early in the planning process, such as when we begin to look at roads by watershed, etc. Also, we agreed it we could discuss it further when we met next for our Memorandum of Understanding in progress with the CTGR.

The Siletz had a few areas of specific concern, but also thought it best to deal with local land managers and participate in a more localized scale of analysis.

There was an interest expressed in reviewing the product of this pilot road analysis so they might have an opportunity to provide more detailed input or comment to the process as a whole.

References

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