

# **GOLDENDALE ENERGY STORAGE HYDROELECTRIC PROJECT**

**Federal Energy Regulatory Commission Project No. 14861**

**Klickitat County, Washington**

## **DRAFT LICENSE APPLICATION Appendix G: Historic Properties Management Plan**

**For:**

FFP Project 101, LLC



**December 2019**

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## **Acronyms and Abbreviations**

ACHP	Advisory Commission on Historic Preservation
AD	anno Domini
APE	area of potential effect
B.P.	Before Present
BPA	Bonneville Power Administration
CFR	Code of Federal Regulations
CRC	cultural resources coordinator
CRP	Cultural Resources Program
DAHP	Washington State Department of Archaeology and Historic Preservation
DLA	Draft License Application
FERC	Federal Energy Regulatory Commission
GIS	geographic information system
HPMP	Historic Properties Management Plan
KPUD	Public Utility District No. 1 of Klickitat County, Washington
Licensee	FFP Project 101, LLC
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PA	Programmatic Agreement
Project	Goldendale Energy Storage Project No. 14861
RCW	Revised Code of Washington
SHPO	State Historic Preservation Office
TCP	traditional cultural property
Tribes	Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation, and Confederated Tribes and Bands of the Yakama Nation
UDP	Unanticipated Discovery Plan
USACE	United States Army Corps of Engineers

## 1.0 INTRODUCTION AND SECTION 106 OVERVIEW

On October 20, 2017, FFP Project 101, LLC (the Licensee), filed an application for a preliminary permit, pursuant to Section 4(f) of the Federal Power Act for the proposed Goldendale Energy Storage Project No.14861 (Project) to be located near Goldendale, Washington, in Klickitat County, Washington, and Sherman County, Oregon. The preliminary permit application was accepted by the Federal Energy Regulatory Commission (FERC) on December 15, 2017; on March 8, 2018, FERC issued an order granting priority to the Licensee to file a license application. The permit is effective for 36 months from the date on the order. The Licensee also filed with FERC a Notice of Intent for an original license pursuant to 18 Code of Federal Regulations (CFR) § 5.5 and a request to utilize the Traditional Licensing Process pursuant to 18 CFR § 5.3. On March 21, 2019, FERC staff granted the Licensee's request to use the Traditional Licensing Process and to be FERC's nonfederal designee for purposes of consultation pursuant to Section 106 of the National Historic Preservation Act (NHPA) and the Endangered Species Act (ESA).

The Project will be a new power generation and energy storage facility in Klickitat County, Washington, as described in the Project's FERC License Application. The proposed Project is a closed-loop pumped storage hydropower facility located off stream of the Columbia River at John Day Dam, located on the Washington (north) side of the Columbia River at River Mile 215.6. The Project will be located approximately 8 miles southeast of the City of Goldendale in Klickitat County, Washington. The proposed Project will involve no river or stream impoundments, allowing for minimal potential environmental impact. Initial fill water and periodic make-up water will be purchased from Public Utility District No. 1 of Klickitat County, Washington (KPUD) using a KPUD-owned conveyance system and municipal water right. The proposed Project Boundary is shown in Exhibit A, Figure 1.1-1, of this Draft License Application (DLA).

The Project facilities include:

- An upper reservoir consisting of a rockfill embankment dam approximately 175 feet high, 8,000 feet long, a surface area of about 61 acres, storage of 7,100 acre-feet, at an elevation of 2,940 feet above mean sea level;
- A lower reservoir consisting of an embankment approximately 205 feet high, 6,100 feet long, a surface area of about 63 acres, storage of 7,100 acre-feet, and an elevation of 580 feet above mean sea level.
- An underground water conveyance tunnel and underground powerhouse;
- 230-kilovolt transmission line(s).

This Historic Properties Management Plan (HPMP) includes a review of currently available documentation to help identify known cultural resources, and provides guidance and procedures for considering and managing potential effects that may result from activities associated with the construction, operation, and maintenance of the Project. This HPMP also includes an Unanticipated Discovery Plan (UDP) in the event that previously unknown cultural resources are discovered during Project activities. This Draft HPMP will continue to be developed and refined as the Project progresses through the FERC licensing process.

The term “cultural resources” when used in this HPMP is intended to collectively include archaeological sites and objects, historic architectural resources, and traditional cultural properties (TCPs) that are or could be within the area of potential effect (APE) (eligible, non-eligible, and unevaluated resources) consistent with NHPA Section 106 requirements. Examples of these resources include prehistoric and historic archaeological sites, Indian religious sites, and historical structures or buildings.

This HPMP includes procedures for evaluating whether any discovered cultural resources should be managed as Historic Properties consistent with NHPA Section 106 requirements. Because there are no existing structures within the Project Boundary or proposed APE, the term “cultural resources” is intended to encompass archaeological resources and TCPs rather than “built” or architectural resources.

## **1.1 Section 106 Overview**

Section 106 of the NHPA requires federal agencies such as FERC to take into account the effect of their undertakings on historic properties. An undertaking includes any project, activity, or program requiring a federal permit, license, or approval. Many FERC actions, such as the issuance of new and original licenses, license amendments, surrenders, and terminations, are undertakings subject to Section 106. Section 106 is implemented through the Advisory Commission on Historic Preservation’s (ACHP) regulations, Protection of Historic Properties (36 CFR 800), in collaboration with the State Historic Preservation Office (SHPO). Thus, prior to FERC taking action, it must demonstrate its compliance with Section 106 of the NHPA. Such compliance can be achieved by, among other things, avoiding an adverse effect on historic properties or developing appropriate management measures and executing a Programmatic Agreement (PA) requiring such mitigation.

Historic properties are districts, sites, buildings, structures, or objects included in, or eligible for inclusion on, the National Register of Historic Places (NRHP). Historic properties can also include properties of traditional religious and cultural significance to Indian tribes that are eligible for listing in the NRHP; these properties are commonly referred to as TCPs. Because the cultural practices or beliefs that give a TCP its significance are typically still observed in some form at the time the property is evaluated for inclusion in the NRHP, it is sometimes perceived that the intangible practices or beliefs themselves, not the tangible property, constitute the

subject of evaluation. These conditions include the ongoing use of a property in spiritual practice or other traditional activities. TCPs are defined in National Register Bulletin 38 as a place “eligible for inclusion in the NRHP because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community” (NPS 1998). Consultation with groups such as Indian tribes is critical in identifying historic properties of religious and cultural significance.

Because the proposed Project does not include any buildings, this HPMP includes procedures and processes associated with NRHP-eligible archaeological sites and TCPs, rather than historic architectural properties. If, in the future, the buildings and facilities that are constructed become eligible, future updates to this HPMP (every 5 years) will be modified to include architectural resources as needed.

Local, state, tribal, and federal agencies shall be consulted as provided in this HPMP in any future FERC undertaking related to the Project license. The SHPO is appointed by each state to protect the interests of its citizens with respect to issues of cultural heritage. The SHPO in this case is the Washington State Department of Archaeology and Historic Preservation (DAHP) and the Oregon SHPO, collectively referred to as the SHPO. In addition to the SHPO, the lead federal agency (FERC in this case) has an obligation, as appropriate, to work with state and local governments, private organizations, or individuals with a demonstrated interest from initiation to completion of the review under Section 106 of the NHPA.

Once the lead federal agencies have identified the appropriate SHPO, 36 CFR 800.3(f)(2) requires the federal agencies to identify Indian tribes that may attach religious and cultural significance to historic properties within the APE and invite them to be consulting parties.

If consultation results in a determination that an historic property may be affected by the Project, FERC will follow the provisions of 36 CFR 800.5 to determine if the effect is adverse. If FERC finds that an effect is adverse, it will consult with the parties identified above to resolve the adverse effect either through avoidance of the effect or mitigation of the effect pursuant to 36 CFR 800.6.

## **1.2 Area of Potential Effect**

The final APE will be determined pursuant to consultation between the Licensee, the SHPO, and consulting Indian Tribes (i.e., Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation, and Confederated Tribes and Bands of the Yakama Nation). The proposed Project Boundary is depicted in Exhibit G of this DLA. Unless otherwise modified during consultation with Tribes and other stakeholders, this area is anticipated to become the Project APE. The proposed Project Boundary encompasses approximately 652 acres of private lands owned by NSC Smelter, LLC. The only public lands within the Project Boundary are associated with the Bonneville Power Administration (BPA)

transmission right-of-way. The APE may be refined based on consultation with the SHPO, Tribes, and other interested parties.

## **2.0 CULTURAL RESOURCE ASSESSMENT**

Previous cultural resources surveys have identified archaeological sites in and around the Project area, and these are described in more detail in Section 2.2.3. In addition, the Project received a comprehensive archaeological resources survey performed by the Yakama Nation in 2019. The existing documentation suggests that the area includes sensitive archaeological resources. DAHP has indicated that there are recorded archaeological sites in the general area and that the area's landforms and environment have the potential to contain archaeological resources. DAHP requested that an archaeological survey be completed in areas proposed for disturbance.

### **2.1 Cultural Context**

The Columbia River has been the dominant natural feature affecting the social and cultural patterns of the region encompassing the vicinity of the proposed Project, and has been the subject of archaeological investigations since the 1920s. Early archaeological excavations conducted along the Columbia River have shown human occupation of the area to span at least the last 10,000 years including prehistoric, historic, and current Indian groups, historic Euroamerican period settlements, and recent historic and modern populations.

This section provides information regarding the cultural setting of the Project vicinity. Analysis of material culture, in combination with ethnographic data, oral tradition, and historical documentation, allow for interpretations regarding technological development, subsistence adaptation, land use, settlement patterns, and cultural interaction within the region. These interpretations form a regional framework necessary to understand the contexts in which artifacts, features, buildings, and structures were acquired, manufactured, used, and abandoned or discarded in the past.

### **2.2 Precontact Period**

A number of cultural chronologies have been established for the southern Columbia Plateau. The following overview uses the terminology set forth in the chronology developed by Ames et al. (1998) for the southern Columbia Plateau. The Project area falls within the southwestern subregion of the southern Columbia Plateau (Ames et al. 1998). The subregion encompasses a portion of the Columbia River and its tributaries near the Project area.

The first known inhabitants to the region lived in small, mobile foraging groups that focused on a wide range of plant and animal species (Ames 2000; Lohse and Schou 2008). Period I (11,500 to between 6,400 and 7,000 B.P.) is divided into two sub-periods that correspond to Paleoindian/Clovis and post-Clovis periods (Ames et al. 1998).

Period I (from 11,500 to around 7,000) was characterized by very low population densities, high levels of mobility, and subsistence orientation emphasizing relatively mesic environments. Early artifact assemblages are marked by the presence of stemmed and shouldered projectile points with wide bases relative to blade size, edge grinding of stems, and highly variable blade shape because of re-sharpening and reworking.

Period II (from between 7,000 and 6,400 to 3,900 B.P.) witnessed a shift in subsistence strategies largely characterized by an increased dependency upon fishing and root gathering within a framework of decreased residential mobility (Ames et al. 1998; Chatters and Pokotylo 1998). This shift in subsistence strategies is evidenced by the appearance of new forms of projectile points, increased presence and diversity of aquatic faunal remains including fish and freshwater mussels, increased frequency of large milling stones, and the presence of semi-subterranean pit houses.

Period III (3,900 B.P. to AD 1720) was marked by increased sedentism and dependence on fishing. Human populations increased, reaching their peak during this period (Chatters and Pokotylo 1998), and large villages were established in the region along the Columbia River. Pit houses became larger in size and the floor plans more irregular as village sizes continued to grow. The people residing in these large riparian villages developed an increasingly heavy reliance on a sophisticated fishing industry, which included salmon storage. The expansion and refinement of a fishing industry is evidenced in both the faunal assemblages and in the fishing technology. The faunal assemblages of the period are dominated by salmon remains and the refinement of fishing technology is indicated by the production of bone tools such as hooks and harpoons. Projectile points from the Plateau suggest that bow and arrow technology was firmly established during this period (Ames et al. 2010); the remains of small and large mammals within the faunal assemblages of the period suggest that such resources continued to be an important part of subsistence practices. The continued presence of milling stones and pestles as well as evidence of intensive camas processing indicates that processed plants also remained an important part of the diet. The development of an extensive trade network is demonstrated by the presence of marine shell beads and other ornaments made of exotic material (Aikens 1993; Ames et al. 1998).

### **2.2.1 Native Peoples**

The Project area falls within the traditional territory of the Rock Creek (qmilláma) band of the present-day Yakama Nation, one of many Sahaptin-speaking groups classified by ethnographers as Western Columbia River Sahaptins (Hunn and French 1998; Ray 1938). Western Columbia River Sahaptins occupied both sides of the Columbia River from Alder Creek to Swale Creek in Washington, and from the Deschutes River to the John Day River in Oregon (Hunn and French 1998). Western Columbia River Sahaptins groups practiced a systematic, seasonal round of subsistence. Winter villages and summer and fall fishing camps were primarily located along the banks and islands of the Columbia River and its major tributaries. During springtime, families or

small groups would move slightly inland to collect roots to bring back to the villages and camps for storage. Spring was also a time to focus on salmon procurement. Once the spring salmon run had ended, small groups spent the late spring in upland locations collecting roots and fishing on tributaries. In early summer, the small groups would move back down along the Columbia River with occasional forays to the uplands to collect berries. As summer waned, small groups moved into the uplands and mountains for better fishing and to gather late summer and early fall foods such as huckleberries and acorns. Elk and deer were also hunted at this time. As fall set in, families returned to the Columbia River to harvest the fall salmon runs and to reoccupy the winter villages (Hunn 1990; Hunn and French 1998). At the winter villages, most families lived in lodges constructed of tule-mat walls attached to a framework of poles in the shape of an inverted-v. Soil was excavated 60 to 90 centimeters below the ground surface to create the lodge floors, and the removed soil was banked along the base of the outer walls to add insulation to the structure.

Individual Sahaptin-speaking groups were locally autonomous. The Rock Creek (qmilláma) band historically resided at qmil, a village at the confluence of Rock Creek and the Columbia River, and are referenced as the Kah-milt-pah in the 1855 Yakama Treaty (Hunn 1990; Hunn and French 1998; Ray 1938). Villages usually consisted of several households, each led by a senior male (Hunn and French 1998). Close ties were maintained with neighboring villages through intermarriage and exchange. Additionally, the groups that make up the Western Columbia River Sahaptins frequently interacted with other Sahaptin-speaking groups such as the Yakama and the Kittitas as well as with Upper Chinook, Nez Perce, and Cayuse groups (Hunn and French 1998).

In 1805, the Lewis and Clark expedition passed by the mouth of Rock Creek on their way to the Pacific Ocean and noted “five lodges of Indians fishing” along the north bank. On their return voyage in April of 1806, the expedition camped at the mouth of Rock Creek and traded with the villagers for dogs, wood, and bread. The people at the village were reportedly waiting for the spring salmon runs to begin.

The introduction of diseases such as measles and smallpox caused a series of epidemics between 1780 and 1855, decimating the native populations (Hunn and French 1998). By the 1840s, European-Americans began immigrating to the Pacific Northwest in waves, further displacing native populations and disrupting subsistence practices. By the 1850s, a series of treaties were negotiated with Indian tribes and bands. The Project area falls within the lands ceded under the terms of the 1855 Yakama Treaty. A total of 14 tribes and bands signed the treaty, which reserved the lands that now constitute the Yakama Reservation (Kappler 1904). Even after the ratification of the 1855 Yakama Treaty, the Rock Creek (qmilláma) band continued to utilize the area around the mouth of Rock Creek. Though the bands and tribes that compose the Yakama Nation have lived together on the reservation since 1859, and have intermarried, the bands still retain their individual identities. The Rock Creek (qmilláma) band continues to use the Rock Creek drainage for hunting and gathering as well as other traditional and spiritual activities.

### **2.2.2 Historical Period**

The first well-documented European explorations of the Pacific Northwest occurred in the 1770s and consisted of scientific surveys conducted by England and Spain. In 1805, the American Lewis and Clark Expedition arrived at the Pacific Ocean via the Columbia River. A short time later, exploration of the inland regions was undertaken by competing fur trade companies such as the North West Company and the Hudson Bay Company (Ficken and LeWarne 1988). By 1824, the Hudson Bay Company opened Fort Vancouver, located approximately 75 miles upriver from the Pacific Ocean on the north bank of the Columbia River. This was to become the headquarters of one of the most prolific fur trading networks of its time, reaching as far north as Alaska (Kirk and Alexander 1995).

By the 1850s, European-American settlement of Klickitat County was well underway. The increased American presence and settlement displaced Indian groups and forced the British Hudson Bay Company to withdraw from the region. The trails associated with Hudson Bay Company trade network remained, however, and along with previously established Indian trails became the first major European-American overland routes in western and central Washington. Until the arrival of railroads and territorial roads in the 1850s, overland travel and transportation was restricted to these routes, which connected navigable waterways. Territorial roads were constructed to promote trade and settlement (Kirk and Alexander 1995). Several of the territorial roads consisted of improved Hudson Bay Company trails. In 1851, the north bank of the Columbia River was the site of some of the earliest railroad activity in the Pacific Northwest. By 1908, the Spokane, Portland & Seattle Railway (SP&S) completed construction of a railroad along the north bank of the Columbia River (Cheever 1948). Towns soon developed along the various railroad routes throughout the region. Livestock and lumbering were the first primary industries of the Klickitat County. Early settlers brought large herds of cattle into the region and settled the bottomlands. In the late 1800s farmers began experimenting with various grains and fruit production. An expanding population forced settlement into the hills and soon it was discovered that slopes were more productive for wheat than the bottomlands (Meinig 1968). By the 1930s, wheat crops had depleted the soils of nutrients and alfalfa was introduced in an attempt to rebuild the nutrient base. New strains of wheat and improved irrigation systems advanced agriculture in the 1950s.

In 1958, the U.S. Army Corps of Engineers (USACE) began construction of the John Day Dam. The hydroelectric dam was completed in 1968, creating the 76-mile-long Lake Umatilla, also known as the John Day Reservoir (USACE 2006).

### **2.2.3 Archaeological Resource Surveys**

The density of documented archaeological sites in the Project vicinity is reported to be greatest in the lower reaches of streams, particularly near confluences with other streams. Large, dense archaeological village sites are most likely to be present in these locations. Confluences of any

salmonid streams or any easily accessible areas along such streams are areas of high probability for archaeological sites. In upland locations, archaeological sites are more dispersed and associated with a greater variety of resources. Such sites are often lithic scatters, which are the stone-chip remnants of stone tool-making activities and stacked stone features on ridgelines. These can be observed anywhere that hunting, gathering, or camping may have taken place.

Forty-one sites have been documented within 1 mile of the proposed Project (Table 2.2-1) from previous studies. Those identified to be within the proposed APE are indicated in the first column of Table 2.2-1. Thirty-six sites consist of precontact archaeological sites, including isolated artifacts, lithic and artifact scatters, rock features, and a petroglyph. Five consist of historic period archaeological sites, including an artifact scatter, residential features, and farmstead ruins. Lastly, one historic-period architectural resource was documented and consists of BPA's Horse Heaven-Harvalum No. 1 transmission line. Of these previously documented resources, 9 are considered eligible for inclusion in the NRHP, 10 are considered not eligible, and the remaining 22 are undetermined, unevaluated, or require further work/additional information to make a formal eligibility determination.

Table 2.2-1: Archaeological Resources Previously Identified within 1 Mile of Proposed APE in Past Studies, **Filed as Privileged Information**

#### **2.2.4 2019 Yakama Nation Survey**

In response to early consultation with Tribes, the Licensee contracted the Yakama Nation Cultural Resources Program (CRP) to perform an archaeological resources identification survey of the proposed APE in 2019. Yakama Nation CRP conducted the survey to meet the Secretary of the Interior's Standards and Guidelines for Identification as well as pertinent aspects of standards for cultural resources reporting. The study included documenting sites of religious or cultural importance to the Tribes. Yakama Nation CRP, in consultation with the Tribes, identified such locations and their spatial relationship to the Project. The survey report is included as Appendix H of this DLA (filed under Privileged Information). In addition to the survey, the report also includes a detailed literature search and review summarized briefly in Section 2.2.3 above. A summary of the results of the 2019 survey is described below.

The principal objective of the survey was to relocate existing sites and survey for any previously unrecorded archaeological, historic, or cultural properties within the proposed Project APE. Activities undertaken to analyze the Project included review of Project plans, an examination of historic maps of the area, a review of the DAHP cultural site and cultural survey GIS database, an examination of the Yakama Nation cultural site atlas, and a field survey of the proposed APE. Additionally, CRP Cultural Specialists were consulted to identify any known significant cultural properties within the area. No subsurface testing was conducted for this stage of the investigation. The Project was surveyed in July 2019, and included approximately 500 acres.

#### 2.2.4.1 *Survey Results*

One new site (Pre contact lithic scatter) was encountered within the Project APE. Seven (45KL566, 45KL567, 45KL569, 45KL570, 45KL744, 45KL745, 45KL746) sites were relocated and site forms were updated for those sites. Two sites were not relocated (45KL1712, 45KL772). Three sites (45KL1296, 45KL1297, 45KL1298) were not surveyed as they are outside of any area where Project activities are anticipated to take place but appear within the Project APE boundary. Areas outside the tunnel entrances, laydown areas and the dam footprint areas were not surveyed. The sites and their locations are described in detail in Appendix H.

#### 2.2.4.2 *Traditional Cultural Properties (TCP) Analysis*

Although the overwhelming majority of NRHP evaluations of properties determined to be “archaeological” sites have been done with a sole focus on their archaeological data, this approach only outlines a portion of the potential NRHP eligibility of a given site and may result in future management difficulties and potential damage if mitigation occurs. If the site is also eligible for an aspect of cultural value, archaeological data recovery would likely not be an appropriate means of mitigation. Thus, the Yakama Nation CRP, in conducting its survey of the Project area, evaluated sites for both archaeological and cultural significance.

The Yakama Nation CRP used four general criteria set forth in National Register Bulletin 15 (NPS 1997) to evaluate the potential significance of a TCP (Criteria A–D) listed below, which are described in detail in Appendix H:

- Criterion A—Association with Significant Event(s)
- Criterion B—Association with Significant Individual(s)
- Criterion C—Design, Construction, and/or Artistic Expression
- Criterion D—Information Potential

The Project area is located within an existing Multiple Property Documented TCP and is eligible for the NRHP under criterion A.

The entire Columbia Hills and the archaeological sites contained within are significant to the understanding of how Yakama people lived and utilized the land. Information yielded from “archaeological” resources is important to Yakama elders to determine what kinds of activities took place at a specific location. It also lends itself useful in identifying what kinds of resources are present.

The foods and medicines (plants) present within the TCP are contributing elements to its significance under Criteria A and B. During legendary times, the roots were beings, much like the animals, and walked and spoke like humans. At the time when humans were to arrive, the roots, like the water and earth beings, sacrificed themselves. In return, Tamanwitla (Creator) and

the humans entered a Treaty that dictated a pact. The resources agreed to sacrifice themselves with the understanding that the human beings took care of all the resources. There is a certain order with which the resources sacrificed themselves starting with salmon, lamprey, deer, etc. Since some of these areas have been cut off from Yakama use, some of them are very rare and very sensitive. See Table 2.2-2 for vegetation encountered by the Yakama Nation within the Project area.

Table 2.2-2: Species Present at Juniper Point within the Project APE

Scientific Name	Common Name
<i>Achillea millefolium</i>	Yarrow
<i>Allium acuminatum</i>	Tapertip onion
<i>Lomatium laevigatum</i>	Smooth desert-parsley (State- Threatened Species)
<i>Lomatium nudicaule</i>	Barestem biscuitroot
<i>Lomatium triturnatum</i>	Nine-leaf biscuitroot
<i>Lomatium papilioniferum</i> (L. grayi)	Pungent desert parsley
<i>Lomatium macrocarpum</i>	Biscuit root
<i>Lomatium dissectum</i>	Fernleaf buiscuitroot
<i>Balsamorhiza sagittata</i>	Arrowleaf balsamroot
<i>Crataegus</i> spp. ( <i>C. suksdorfii</i> or <i>C. douglasii</i> )	Black Hawthorne
<i>Rhus glabra</i>	Smooth sumac
<i>Juniperus occidentalis</i>	Western juniper
<i>Pinus ponderosa</i>	Ponderosa pine
<i>Eriogonum strictum</i> var. <i>proliferum</i>	Strict buckwheat
<i>Eriogonum thymoides</i>	Thyme-leaved buckwheat
<i>Eriogonum compositum</i>	Arrowleaf buckwheat
<i>Lupinus latifolius</i>	Columbia Gorge broad-leaf lupine
<i>Ericameria nauseosa</i>	Rubber rabbitbrush
<i>Fritillaria camschatcensis</i>	Chocolate lily
<i>Rosa nutkana</i>	Nootka rose
<i>Triteleia hyacinthina</i>	Brodiaea
<i>Cirsium undulatum</i>	Wavyleaf thistle
<i>Crepis aribarba</i>	Slender hawksbeard
<i>Wyethia amplexicaillis</i>	Northern mule-ears
<i>Lewisia rediviva</i>	Bitterroot
<i>Erodium cicutarium</i>	Common stork's-bill
<i>Claytonia perfoliata</i>	Miner's lettuce
<i>Apocynum androsaemifolium</i>	Spreading dogbane
<i>Uropappus lindleyi</i>	Silver puffs
<i>Amsinckia menziesii</i>	Menzies' fiddleneck
<i>Celtis laevigata</i>	Netleaf hackberry
<i>Delphinium nuttallianum</i>	Nuttal's larkspur
<i>Amelanchier alnifolia</i>	Western serviceberry

### 2.2.4.3 Tribal Survey Conclusions

Based on Archaeological and Traditional Cultural Property Analysis, a detailed literature review and a pedestrian survey of the proposed Project APE, 6 sites were encountered within the proposed Project APE (45KL566, 45KL567, 45KL570, 45KL744, 45KL746, LS-3). Three sites (45KL1296, 45KL1297, 45KL1298) are in the APE boundary but are outside the area proposed for Project implementation. Two sites were not relocated (45KL1172, 45KL772).

The proposed Project area is within a NRHP-eligible TCP (Push-pum) and a NRHP-eligible Multiple Property Documentation TCP (Columbia Hills) and one Archaeological District (Columbia Hills District). In addition, there is an existing PA between the Washington SHPO and BPA covering the upper portion of the APE. Within that PA, there is a stipulation for BPA to create a plan that will allow Tribal members to access Push-pum to gather foods and medicine significant to the Tribe. Only the Yakama Nation can determine what is significant to the Tribe.

Recommendations from the survey report are included in the consultation section of this DLA, Exhibit E, Section 10.

## 3.0 POTENTIAL EFFECTS TO HISTORIC PROPERTIES

There are known archaeological resources and TCPs within the proposed Project APE and Project footprint in the vicinity of the upper reservoir. However, there are no existing structures (new or historic) within the Project Boundary or APE including both the upper and lower reservoir areas. As a result, impacts are limited to known and unknown archaeological resources including damage during construction activities and/or permanent loss through land use conversion (e.g., constructing permanent structures over cultural resources). The scale and potential for impact depends on presence of eligible cultural sites, location of the facility, type of construction, and size of the footprint. Indirect effects (i.e., visual, auditory, vibrational, or atmospheric) caused by construction and/or operation activities could affect certain types of sensitive resources. Additionally, historic structures and buildings located outside the direct Project footprint could also be affected indirectly by the proposed Project, as visual, auditory, vibrational, or atmospheric impacts could compromise the properties' historic sense of setting, feeling, or character.

Construction and/or operation activities could have the potential to disrupt (via visual or auditory effects) traditional cultural use associated with cultural resources within the Project APE. The potential for impacts to archaeological resources and TCPs will be further defined during the licensing process and Tribal consultation.

### 3.1 Methodology and Evaluation Criteria

In consultation with the SHPO and Tribes, FERC must apply the criteria of adverse effects to historic properties within the APE to evaluate the potential effects of the proposed Project, as

codified in 36 CFR 800.5. This process is similarly applied to evaluation TCPs. Historic properties are districts, sites, buildings, structures, or objects included in, or eligible for inclusion on, the NRHP.

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of an historic property that qualify the property for inclusion in the NRHP. Adverse effects may include reasonably foreseeable effects that occur later in time, are farther removed, or are cumulative. Archaeological resources that are determined not eligible for listing in the NRHP will not receive further consideration under Section 106 during review of the proposed Project.

### **3.2 Potential Effects to Historic Properties**

During the license proceedings, FERC will confer with consulting parties to determine the undertaking's effects on historic properties to resolve adverse effects, and to develop mitigation measures as necessary, and a PA will be developed between FERC and the Licensee. After license issuance, the PA and HPMP will be implemented after they are finalized during the final license application process

Direct effects are generally caused by the undertaking and occur at the same time and place, while indirect effects caused by the undertaking are later in time or further removed in distance but are still reasonably foreseeable. For the proposed Project, the following is a summary of potential effect types that will be evaluated for development of and finalization of the PA and HPMP:

- Physical disturbance or damage caused by ground disturbance (e.g., digging);
- Introduction of visual, atmospheric, or audible elements that could diminish the integrity of the property's significant cultural features during short-term construction and operation of aboveground facilities and roads, as well as long-term effects from operation; and
- Change in the character of the use or of physical features within the historic property's setting that contribute to its significance.

Effects determinations have the following three possible outcomes:

- Finding of no effect: The undertaking does not have the potential to cause effects on historic properties that may be present.
- Finding of no adverse effect: The historic property will be affected; however, the effects of an undertaking do not meet the criteria of adverse effect, or measures have been taken to avoid or minimize adverse effects.
- Finding of adverse effect: The undertaking may affect the integrity, which will alter, directly or indirectly, any of the characteristics of the historic property that qualify it for inclusion in the NRHP. If an adverse effect is found, FERC will consult further to resolve the adverse effect.

The potential for the proposed Project to affect an historic property may depend on the Project stage and the development and use of the Project. Potential effects that may occur during the construction and operations of the proposed Project are discussed in the following subsections.

### **3.2.1 Construction**

The proposed Project construction activities could affect historic property in a variety of ways, including the following:

- Possible physical damage within the construction footprint;
- Possible damage through vibrations caused by earth-moving and heavy equipment;
- Temporary loss of community access to TCPs;
- Potential permanent visual effects that alter the viewshed to or from a resource as it pertains to its setting and feeling;
- Potential temporary visual effects while heavy equipment and numerous personnel are present;
- Discovery of previously unknown historic properties within the construction footprint.

The duration of the construction phase will affect the degree of effects on historic properties. Many of the potential visual, visual, atmospheric, or audible effects during construction—such as noise, dust, vibrations, heavy equipment traffic, and certain changes in viewshed—could be temporary and would be expected to last for the duration of construction in specific areas and for discrete periods of time.

### **3.2.2 Operations**

During the operations phase of the proposed Project, only previously surveyed and assessed areas are expected to require periodic disturbance during the term of the license; therefore, the potential for additional physical effects after construction will be limited. However, in the event of discovery of unanticipated cultural resources, the procedures outline in Section 4.5 shall be followed.

Indirect effects during operations could consist of a permanent change in viewshed to historic structures or TCPs near Project area facilities, and a periodic increase in noise, vibration, and dust created by vehicular traffic conducting operation and maintenance activities.

## 4.0 MANAGEMENT MEASURES

### 4.1 Management Philosophy

The Licensee is committed to properly managing cultural resources that have been determined through the evaluation process established in this HPMP to be historic properties affected by the Project, through consultation with Commission staff, the SHPOs, and affected Indian Tribes. This HPMP sets forth the standards and procedures for evaluating cultural resources and managing those determined to be historic properties and while protecting the safe and efficient operation of the facility. This HPMP includes procedures for evaluating whether any discovered cultural resources should be managed as Historic Properties consistent with NHPA Section 106 requirements.

The Licensee seeks to maintain integrity of any potential historic properties while operating the Project through avoidance, minimization, and mitigation measures. Examples of these measures include:

- Avoidance could be accomplished by shifting the footprint away from the resource, limiting activities in the vicinity of the resource, monitoring construction activities near the resource to inform whether additional actions are warranted, or through any combination of these techniques.
- Minimization will reduce the effects on the resource through avoidance measures as described above, but will not completely eliminate the effects.
- Mitigation will offset that effect through some of the following means:
  - Protection of a similar resource nearby;
  - Detailed documentation of the resource through data recovery (i.e., excavations in the case of archaeological sites);
  - Contributions to the preservation of cultural heritage in the affected community;
  - Interpretative exhibits highlighting information gained about cultural resources through the proposed Project; and
  - Some combination of the above strategies.
- In emergencies, while priorities will focus on protecting safety of human life, every effort to avoid impacts to known archaeological resources and TCPs.

Throughout the term of the license, the Licensee will evaluate all Project activities on historic properties, which districts, sites, buildings, structures, or objects included in, or eligible for inclusion in, the NRHP per Section 106 of the NHPA. If adverse effects to historic properties are determined, FERC will consult with the SHPO and Tribes to identify practicable ways to avoid, minimize, or mitigate the harmful effects of the undertaking. The ACHP will become involved in

consultation if requested by an agency, SHPO, Tribes, other consulting parties, or member of the public with a demonstrated interest. If an adverse effect were identified, FERC will have to notify the ACHP, who may become involved if the effect met their criteria for involvement.

The Licensee's objectives include minimizing disturbance and protecting any identified resources and sites within the proposed Project area. Evaluation of options in siting proposed Project facilities and construction/maintenance activities in the context of sites can reduce the impacts. In cases where disturbance to significant identified resources is unavoidable, mitigation measures will be identified and implemented, in consultation with FERC, the SHPO, and Tribes, to reduce adverse effects.

## **4.2 Cultural Resource Coordinator**

Once a FERC License has been issued, the Licensee will designate a cultural resources coordinator (CRC) as the person of contact/reference for cultural resource-related issues throughout the term of the FERC license. The CRC will be responsible for providing the appropriate protection and mitigation information to Project employees for implementation. The SHPO, and the Tribes will be furnished with the CRC contact information and will be notified in the event that this coordinator is replaced by a new employee. The CRC will have the following responsibilities:

- Review construction- or operations-related activities that may impact cultural resources.
- Provide the Project employees, contractors, and subcontractors with information and training that ensures the appropriate measures for protection and/or mitigation of historic properties (and potential historic properties) are carried out in the greater Project area. Specific training materials will be developed in conjunction with Tribal consultation when this HPMP is finalized.
- Coordinate consultation with the SHPO and Tribes.
- Prepare the Annual Report.
- Maintain confidentiality of sensitive archaeological or other cultural information.

## **4.3 Project Review Proceedings**

The lower portion of the Project APE is partially located on industrial property that has been heavily disturbed during historical activities and will be disturbed during construction of the proposed Project. Therefore, it is unlikely that operation and maintenance of the Project in the lower reservoir portion of the APE will affect unknown cultural resources. In the APE portion of the upper reservoir, particular care will be taken to avoid known resources. Future actions (if any) outside the APE may also affect known resources, however no such actions are currently anticipated. The following section identifies the process that the CRC will follow to ensure appropriate consideration of cultural resources.

All proposed actions involving potential ground disturbance or changes of any kind to Project facilities will be reviewed by the CRC. The CRC will review the description of the proposed action and determine if the activity is exempt from review because it does not have the potential to affect historic properties. A list of appropriate exempt activities will be developed as Project design progresses and presented in the final HPMP. If the CRC determines that that certain activities are exempt from review, they will inform the project manager that the work can commence. Exempt actions require no further documentation or consultation. If the CRC determines that the reviewed action is not exempt and has the potential to affect any historic property, the CRC will follow the following procedures.

#### **4.3.1 Review Proceedings for Projects with Potential Effects**

Any actions involving ground disturbing activities, and the development of additional off-site facilities associated with the Project that would alter the APE definition will need to be reviewed or surveyed for potential historic properties. This process includes consultation with FERC, the SHPO, and Tribes. The procedure should include the following steps described below.

- If the proposed action will occur within an area previously surveyed for archaeological resources (where there are none) and TCPs is not identified, the work may proceed. The action will be documented in the Annual Report submitted to FERC, the SHPO, and the Tribes.
- If the proposed action is in an area that that has not been surveyed for archaeological resources or if it outside the current APE and will have the potential to affect archaeological resources and TCPs, the CRC will notify the appropriate SHPO and the Tribes that a cultural resources survey will be conducted. A technical report meeting SHPO guidelines for the reporting of cultural resources surveys will be completed. A copy of the report will be submitted to the SHPO and the Tribes.
- If the proposed action is within a TCP or other resource and/or otherwise has the potential to affect a known resource, the CRC will do the following:
  - Consult with the SHPO and Tribes to determine if the potential effect can be avoided while still accomplishing the needed action, and, if it cannot, consult to determine if the effect is an adverse effect.
  - Identify strategies and consult with the SHPO and Tribes on ways to minimize or mitigate any identified adverse effects (see Section 4.6).
  - Ensure the SHPO and Tribes are given 30 days to comment on all consultation requests, reports, and documents.

The SHPO will provide concurrence on projects that will have no effect or no adverse effect. If the Project will have no effect or no adverse effect, work proceeds.

If the SHPO concurs that the Project has the potential to affect resources, then additional consultation and/or studies may be necessary to determine if the effect is adverse. This could involve Phase II evaluation to fully evaluate the eligibility of archaeological resources or TCPs for the NRHP.

If the SHPO concurs that the Project will have an adverse effect, they will review recommended alternative approaches or mitigation measures suggested by the CRC and all parties will reach agreement on an approach.

If mitigation of adverse effects of a historic property is required, mitigation will be resolved through consultation with SHPO, and Tribes and approved by FERC.

When an alternative approach or mitigation measure agreed upon by the SHPO and the Tribes have been completed, the work may proceed.

If agreement is not reached, the CRC will follow the terms stated in Section 4.7.

#### **4.4 Consultation with State Historic Preservation Offices**

Situations requiring consultation with SHPOs include, but are not limited to, any proposed activities that may include any of the following:

- Discovery of unrecorded archaeological resources or TCPs;
- Identification of activities which might affect an archaeological resources or TCP;
- Passage of time during the FERC license process that may justify reevaluation of potentially-affected sites previously deemed eligible or ineligible for listing in the NRHP at the time of license issuance.

The Licensee's operating staff will contact the CRC prior to performing any proposed activities likely to require consultation with the SHPO. The CRC will consult the HPMP to determine whether or not the activity requires consultation with a SHPO and, if so, will make initial contact. The Licensee will submit a formal report to the SHPO (following current guidelines) requesting concurrence with the activities and any actions that should be taken to avoid or mitigate adverse effects.

If the SHPO does not object within 30 calendar days of the submittal, the Licensee will assume that the SHPO concurs and will proceed with the activity as proposed. If the SHPO objects to the activity or any part of the activity within the allotted 30 calendar days, then the Licensee will consult with the SHPO to resolve the matter. If the matter cannot be resolved, the procedures outlined in Section 4.7 will be followed.

## 4.5 Unanticipated Discovery Plan

Surveys cannot locate all buried archaeological resources and human remains that could be encountered during the course of a FERC License. Additionally, other types of resources such as buildings and structures could reach an age to be considered under the NRHP criteria during the course of the Project license. The UDP below describes the procedures to follow in the unlikely event a previously undocumented resource.

Unanticipated archaeological discoveries fall into two primary classes. The first class includes archaeological materials such as features (e.g., hearths, pit features, remains of dwellings) and artifacts. The second class consists of human remains. The two classes are governed by different laws and regulations and require different treatment procedures. Procedures for dealing with the unanticipated discovery of archaeological materials are outlined in Section 4.5.1, and procedures for dealing with discovery of human remains are outlined in Section 4.5.2.

The UDP is intended to do the following:

- Comply with applicable federal and state laws and regulations, particularly 36 CFR 800 (2005) of the regulations that implement Section 106 of the NHPA of 1966, as amended; 36 CFR 63; 36 CFR 61; Washington State Executive Order 05-05; Archaeology Sites and Resources (Revised Code of Washington [RCW] 27.73; Archaeological Excavation and Removal Permit (Washington Administrative Code 25-48).
- Describe to regulatory and review agencies the procedure that the Licensee and its contractors will follow to address the unanticipated discovery.
- Provide the proper procedures that Project personnel should follow in the event that an unanticipated discovery occurs.

### 4.5.1 Discovery of Archaeological Resources

Pursuant to Oregon (Indian Graves and Protected Objects [Oregon Revised Statutes 97.740-97.760]) and Washington (Indian Graves & Records [RCW 27.44; Human Remains RCW 68.50]) State Laws, it is illegal to excavate, remove, damage, or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological material found on lands in Oregon or Washington. Project staff and construction crew members will be made aware of the protocol described below.

If any member of the construction crew believes that he or she has found archaeological material, at a minimum, the activity that resulted in the exposure of the discovery will be immediately halted, followed as soon as possible by the cessation of all other ground-disturbing activity within 30 meters of the discovery. The construction supervisor will be notified immediately. The supervisor shall notify the CRC within 24 hours of the discovery. The area of work stoppage will be adequate to provide for the security, protection, and integrity of the materials. Vehicles,

equipment, and unauthorized personnel will not be permitted to traverse the buffer zone around the site. Examples of archaeological material discoveries include, but are not limited to:

- An area of charcoal or charcoal-stained soil;
- An arrowhead, stone tool, or stone flakes (chips);
- A cluster of animal bones or burned rocks in association with stone tools or flakes (chips); and
- A cluster of cans, bottles, or other historic materials appearing to be older than 50 years that have not previously been identified as materials that can be removed.

Work in the immediate area will not be restarted until treatment of the discovery has been completed.

The CRC will contact a professional archaeologist to inform them of the discovery. The professional archaeologist must meet the Secretary of the Interior standards as described in 36 CFR 61. The professional archaeologist shall examine the find within 48 hours of notification. The archaeologist will recommend whether the discovery is potentially eligible for listing in the NRHP pursuant to 36 CFR 800.4 and 36 CFR 63 and/or if additional investigations are needed in order to make a recommendation. Any additional needed investigations will be completed in consultation between the CRC, the professional archaeologist, the SHPO, and the Tribes.

If the professional archaeologist, in consultation with the SHPO, determines that the discovery is not eligible for the NRHP, then the archaeologist will prepare a memorandum to this effect and deliver it to the SHPO for concurrence. No further consultation between these parties will be necessary, and work may proceed after concurrence is received.

If the professional archaeologist, in consultation with the SHPO, determines that the discovery is an NRHP-eligible deposit, the archaeologist will consult with the SHPO and the Tribes to determine if the Project will adversely affect the resource pursuant to 36 CFR 800.5.

If the professional archaeologist, in consultation with the SHPO, determines that the resource is NRHP-eligible and that the Project will have an adverse effect on it, the archaeologist will first propose whether or not avoidance or minimization of adverse effects is possible via alternative techniques. The CRC and professional archaeologist will consult with the SHPO and Tribes on this matter.

If it is determined that avoidance or minimization of adverse effects via alternative techniques is not possible, then the professional archaeologist will develop a treatment plan in consultation with the SHPO and Tribes to mitigate the adverse effect pursuant to 36 CFR 800.6. The professional archaeologist will consult with the SHPO and the appropriate tribe(s), and follow federal regulations for appropriate treatment measure(s). The plan will be rapidly implemented, and Washington State agencies will facilitate the appropriate permitting needed. Treatment

measures may include mapping; photography; subsurface testing and sample collection; complete data recovery; or other activities. The archaeologist will provide a report on the methods, analysis, and results following 36 CFR 800.13 and in accordance with the treatment plan. The specific work plan and schedule for these procedures will be drafted following the discovery.

If the professional archaeologist, in consultation with the SHPO, determines that the resource is NRHP-eligible but that the Project will not adversely affect it, then the professional archaeologist will prepare a memorandum to this effect and deliver it to the SHPO for concurrence. No further consultation between these parties will be necessary, and work may proceed after concurrence is received.

The Licensee will ensure that field investigations, research, analysis, reporting, and curation of any materials collected during these investigations are sufficiently funded and implemented and follow all federal and state guidelines and procedures.

#### **4.5.2 Discovery of Human Remains**

If any member of the work team believes he or she has made an unanticipated discovery of human remains, the activity that resulted in the exposure of the discovery will be immediately halted, followed, as soon as possible, by cessation of all other ground-disturbing activity in the APE. The remains will not be moved or disturbed, and the supervisor shall be immediately notified. The supervisor shall, in turn, immediately notify the CRC and will be responsible for taking appropriate steps to protect the discovery.

The CRC will retain a forensic anthropologist or an archaeologist trained in the identification of human remains and examine the find within 24 hours of its discovery. The CRC will also notify a professional archaeologist of the discovery. If the forensic anthropologist and/or archaeologist determine the find to be human or possibly human, the CRC will then immediately notify the County coroner and local law enforcement, who will determine whether it should be treated as a crime scene or as a human burial.

Discovery situations will be handled in an expedited and respectful manner, so as to not interfere with the construction schedule any more than is necessary. The archaeologist will complete a form or other acceptable documentation to assess and document a potential discovery each time construction is halted or redirected for a possible discovery.

If the remains are determined to be non-human by the archaeologist and/or forensic anthropologist, and there is no archaeological material identified in association with the remains, then the CRC will notify the supervisor that work can resume.

If the remains are determined to be non-human by the archaeologist and/or forensic anthropologist, but are associated with an archaeological site, the archaeologist will follow the procedures identified in the UDP, Section 4.5.1.

If the remains are determined to be human and associated with a crime scene, the County coroner and/or local law enforcement will assume jurisdiction over the find. Work may continue when approved by these agencies

If the remains are determined to be human and not the result of criminal activity, the archaeologist will notify the SHPO within 24 hours and the SHPO will assume jurisdiction over the find. The State Physical Anthropologist will examine the find to determine if they are Native American, and the SHPO will handle all subsequent notification and consultation with appropriate parties as to the future preservation, excavation, and disposition of the remains. Consultation parties may include the Tribes (if the remains are determined to be Native American), familial descendants, or others.

The CRC, and professional archaeologist will assist the SHPO as needed until their final status is resolved. The CRC will work with the SHPO and consultation parties to determine and implement appropriate treatment measures such as implementing an avoidance and protection plan or removing and repatriating or reburying the remains.

The Licensee will be responsible for any treatment and reburial costs associated with the identification of human remains encountered during construction or operation of the Project.

### **4.5.3 Discoveries of Non-Archaeological Historic Properties**

In the event than non-archaeological historic properties (e.g., buildings, structures, objects) are discovered during Project construction or operation, construction activities will be suspended and a reconnaissance level survey of the property conducted. Assuming the Project will have no effect on the historic property, construction activities may resume after the survey. If the Project will affect the property, either physically or through introduction of auditory or visual elements, review proceedings outlined below in Section 4.3.1 should be followed.

## **4.6 Resolution of Adverse Effects**

### **4.6.1 Avoidance**

Avoidance should always be the initial subject of consultation. The Licensee should determine, through consultation with the SHPO, if there can be slight changes to plans that would avoid the adverse effect. The CRC will ensure that a professional archaeologist is on-site during construction-related activities in the immediate vicinity of a known site.

Additional archaeological monitoring could be an appropriate mitigation measure when an activity is within the boundaries of an archaeological resource determined to be not eligible for

the NRHP to ensure that no new archaeological materials are disturbed. When consultation has resulted in a determination that archaeological monitoring is needed, a qualified archaeologist will be present during ground disturbing operations and will be authorized to halt operations should archaeological material be revealed. Upon halting the operation, the archaeologist will evaluate the material and assesses its potential NRHP eligibility. If the material is not considered eligible, the operation may be permitted to continue. If the material is considered NRHP eligible, the SHPO will be contacted.

#### **4.6.2 Other Forms of Mitigation**

In the event that the above forms of mitigation are deemed inadequate, other types of mitigation may be considered. Interpretation of a historic resource, via interpretive panels, displays, walking tours, or other means, will enable the history and importance of historic properties to be shared with the public. Should important archaeological materials or character-defining features of a resource require removal, curation of the artifacts (either in a museum or museum-like setting in the case of archaeological materials, or in a park or park-like setting for large scale machinery or other objects that might be associated with hydroelectric power) may also be an acceptable form of mitigation. This would be determined through consultation with the SHPO and the Tribes.

#### **4.7 Dispute Resolution**

Dispute resolution will be carried out in accordance with the procedures outlined in 36 CFR Part 800, Section 800.7 and future Memorandum of Agreement.

### **5.0 IMPLEMENTATION AND COORDINATION**

The Licensee will be responsible for scheduling and/or performing all needed activities pursuant to this HPMP, including the provision of necessary personnel, equipment rentals, materials purchase, and management oversight.

Provisions in this HPMP will be formally adopted and implemented by the Licensee upon FERC approval and after issuance of the FERC license. Requisite stakeholders will be consulted well in advance of construction efforts being implemented to assure a comprehensive and collaborative planning effort for those measures described above associated with construction.

#### **5.1 Annual Reporting**

All HPMP activities in a given year will be documented as part of an annual report. This report shall include summary of actions that the Licensee implemented, results of surveys conducted the previous year, conclusions from monitoring results, and any other activities pursuant to the requirements of this plan. The report will be submitted to the FERC, the SHPO, and Tribes annually.

## 5.2 HPMP Review and Amendments

Upon issuance of the FERC license, the SHPO, or the Tribes can petition at any time to request revisions or updates to this HPMP. Regardless, the Licensee will initiate input or a meeting every 5 years, to update and/or review historic property information in the Project area as well as potential revisions of the HPMP in consultation with the Tribes and the SHPO. Amendments will only become effective upon FERC approval.

## 6.0 REFERENCES

- Aikens, C. Melvin. 1993. *Archaeology of Oregon, 3rd ed.* U.S. Department of Interior, Bureau of Land Management, Oregon State Office, Portland, Oregon.
- Ames, Kenneth M. 2000. *Review of the Archaeological Data*. Chapter 2 in Kennewick Man: Cultural Affiliation Report. Electronic document. Accessed May 12, 2015. [http://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1064&context=anth\\_fac](http://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1064&context=anth_fac).
- Ames, Kenneth M., Don E. Dumond, Jerry R. Galm, and Rick Minor. 1998. *Prehistory of the Southern Plateau*. In Plateau, edited by Deward E. Walker, Jr., pp. 103–119. Handbook of North American Indians, vol. 12, W. C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Ames, Kenneth M., Kristen A. Fuld, and Sara J. Davis. 2010. *Dart and Arrow Points on the Columbia Plateau of Western North America*. *American Antiquity* 75(2):287–325.
- Chatters, James C., and David L. Pokotylo. 1998. *Prehistory: Introduction*. In Plateau, edited by Deward E. Walker, Jr., pp. 73–80. Handbook of North American Indians, vol. 12, W. C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Cheever, Bruce Bissell. 1948. *The Development of Railroads in the State of Washington 1860 to 1948*. Master's Thesis, University of Washington, Seattle.
- Ficken, Robert E., and Charles P. LeWarne. 1988. *Washington: A Centennial History*. University of Washington Press, Seattle and London.
- Hunn, Eugene S. 1990. Nch'I Wana "The Big River": *Mid-Columbian Indians and Their Land*. University of Washington Press, Seattle, Washington.
- Hunn, Eugene S., and David H. French. 1998. *Western Columbia River Sahaptins*. In Plateau, edited by Deward E. Walker, Jr., pp. 378–394. Handbook of North American Indians, vol. 12, W. C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Kappler, Charles J. [editor & compiler]. 1904. *Indian Affairs, Laws, and Treaties*. Vol. II (Treaties). Government Printing Office, Washington. D.C.
- Kirk, Ruth, and Carmela Alexander. 1995. *Exploring Washington's Past: A Road Guide to History*. Revised. University of Washington Press, Seattle and London.
- Lohse, Ernest S. and C. Schou. 2008. *Southern Columbia Plateau Projectile Point Sequence: An Informatics-Based Approach*. In Projectile Point Sequences in Northwestern North

- America, edited by Roy L. Carlson and Martin P. R. Magne, pp.187–208, Archaeology Press, Simon Fraser University, Burnaby, B.C.
- Meinig, D. W. 1968. *The Great Columbia Plain: A Historical Geography, 1805–1910*. 1995 Reprint. University of Washington Press, Seattle, Washington.
- NPS (National Park Service). 1997. *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*. Accessed December 2019.  
[https://www.nps.gov/subjects/nationalregister/upload/NRB-15\\_web508.pdf](https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf)
- \_\_\_\_\_. 1998. *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties*.
- Ray, Verne F. 1938. *Lower Chinook Ethnographic Notes*. University of Washington Publications in Anthropology 7(2):29–165.
- USACE (U.S. Army Corps of Engineers). 2006. *John Day Construction*. In History of the Walla Walla District, Part II, 1970–1975 pp. 158–163 Electronic document. Accessed May 12, 2015. <http://www.ccrh.org/comm/umatilla/primary/jdconstr.htm>.