1.0 DRAFT CULTURAL RESOURCES STUDY PLAN ANNOTATED OUTLINE

1.1 PROJECT NEXUS AND RATIONALE FOR STUDY [§ 5.9(B)(4)-(5)]

A few archaeological and historic architectural resources are known within the Project Boundary (not all of which have been formally documented), but only limited cultural resources inventory has been conducted to date within the Project Boundary.

Because the cultural resources inventory within the Project Boundary has been limited, there is a need for additional inventory to determine what cultural resources the Cutler Hydroelectric Project's (Project) existing and proposed operations may impact and what the nature of those impacts might be.

- Nexus between Project operations and effects:
  - Fluctuating reservoir levels and wave action from wind-blown or human-caused waves may result in erosion of cultural resources located within drawdown zones or along shorelines.
  - It is unknown whether the new lower elevation limit would result in exposure of the historic Wheelon Dam that was inundated by Cutler Reservoir, but if so, deterioration of that structure may be increased.
  - To the extent that river flow fluctuations downstream of the dam are increased, erosional effects on cultural resources may increase.
  - Historic resources (e.g. those that comprise the Cutler Hydroelectric Power Plant Historic District, Wheelon Dam, or significant irrigation canals) require continued maintenance, repair, upgrading, or removal to meet safety and operational requirements, and those activities may alter important historical characteristics of these resources.
  - Recreational use may have either unintentional (e.g. trampling) or intentional (e.g. looting or vandalism) impacts on cultural resources.
  - Agricultural activities conducted under PacifiCorp's agricultural leasing program may affect archaeological or historic resources.
- How study results will inform the development of license requirements
  - License requirements related to cultural resources are anticipated to be implemented primarily through an Historic Properties Management Plan (HPMP). Study results will inform the HPMP by more completely identifying the cultural resources that would be subject to management actions outlined in the HPMP and by indicating what management actions would be most useful for avoiding, minimizing, or mitigating effects on cultural resources.

1.2 STUDY GOALS AND OBJECTIVES [§ 5.9(B)(1)]

The goals and objectives of this Study Plan are to more completely identify those cultural resources that are potentially subject to effects from Project operations under the renewed license.

Information obtained by this study will be included in standard cultural resource recording forms (e.g., Utah Archaeology Site Forms, an amended National Register Registration Form), consisting of locational and descriptive information about each identified resource and its setting, as well as an evaluation of its National Register of Historic Places (NRHP) eligibility. In addition, further information on the general historic and prehistoric context of cultural resources in the area will be obtained to assist in NRHP eligibility evaluations.

1.3 RELEVANT RESOURCE MANAGEMENT GOALS AND PUBLIC INTEREST CONSIDERATIONS [§ 5.9(B)(2)]

Relevant resource management goals of the proposed studies will facilitate Federal Energy Regulatory Commission's (FERC) and PacifiCorp's consultation obligations under Section 106 of the NHPA regarding the identification of historic properties and the assessment and resolution of adverse effects, thereby helping meet key management goals for cultural resources.

The overall FERC re-licensing process with its scoping component will facilitate FERC's and PacifiCorp's public involvement obligations under Section 106.

1.4 STUDY AREA

PacifiCorp proposes that the Project's Area of Potential Effects (APE) for purposes of Section 106 Consultation be defined as the Project Boundary, plus any areas upstream or downstream of the Project Boundary that planned hydraulic modeling indicates may be affected by changes in river flow regime.

PacifiCorp proposes further that the study areas for the proposed archaeological and historic architectural studies consist of those portions of the APE where direct effects on historic properties from proposed Project operations, proposed capital improvements, or other Project-related activity may be anticipated (Table 1). In addition to the studies proposed for these areas, all of the APE would be subject to management actions, such as discovery protocols, and construction monitoring procedures, that would be specified in the HPMP.

TABLE 1 PROPOSED STUDY AREAS FOR STUDY COMPONENTS

ACTIVITY TYPE	STUDY AREA	STUDY TYPE
Project operations (fluctuating reservoir levels)	Shoreline and riverbanks within zone of water-level fluctuation	Archaeological: intensive-level survey during fall 2019 drawdown of portions of the water-level fluctuation zone that are not inundated, and are not classified as wetland, or medium and high intensity developed in the National Land Cover Database (NLCD)

	Wheelon Dam site	Historic architectural: intensive-level documentation and evaluation of dam during fall 2019 drawdown
Capital improvements	Cutler Hydroelectric Power Plant Historic District	Historic architectural: amendment to National Register Registration Form
Recreation: concentrated use areas	Developed recreation facilities (Cutler Hydroelectric Project PAD Table 6-22), boat launches, and hiking trails	Archaeological: intensive-level survey of these plus 100-foot buffer, or 100-foot-wide corridor for trails, excluding paved/built-up and inundated areas
Recreation: boating	Shoreline in North Boater Zone A[1] and Bear River Boater Zone C[2]	Will be covered by intensive-level archaeological shoreline survey described above
Irrigation	Known irrigation pumps/canal intakes and undocumented segments of known canals within Project Boundary	Archaeological: intensive-level survey of these plus 100-foot buffer, or 100-foot-wide corridor for canals, excluding inundated areas
Agricultural leasing	Agricultural lease areas	Archaeological and historic architectural: reconnaissance-level survey

Proposed operations include fluctuating reservoir levels, with a lower low-elevation limit and slightly increased tolerance than under the current license. The proposed study area for potential effects from proposed Project operations is the zone of proposed water-level fluctuation along the shoreline and riverbanks downstream and upstream of the reservoir, as well as the Wheelon Dam site, which may be exposed, at least partially, during future low-water periods.

Proposed capital improvements consist of like-for-like replacement of the spillway gates and flowline support (as needed) and installation of a new retaining wall between the flowline and the river near the base of the dam to protect the flowline from being undermined in high flow events. These improvements would occur within the Cutler Hydroelectric Power Plant Historic District (District), and the proposed study area for potential effects from these improvements is therefore the District.

Other Project-related activities with potential to affect historic properties are recreation, irrigation, and agricultural leasing.

[1] The area north of the Benson Railroad bridge and west of the confluence with the Bear River.
[2] The Bear River area, east of the confluence with Cutler Reservoir (including the 'horseshoe area').

Recreation has the potential to significantly affect cultural resources in areas where recreational use of land is concentrated, and such areas plus an appropriate buffer therefore constitute one study area for recreational effects.

Boating is another type of recreational activity within the Project Boundary, which may affect cultural resources through wave action along the shoreline. This is likely only a potential effect in Cutler Reservoir boating restriction zones A and C because wakeless speeds are required year-round in zone B. The proposed study area for the potential effects of boating is therefore the shoreline within zones A and C, and it is proposed further that this study area be subsumed by the one described above for operational water-level fluctuations.

Irrigation occurs in and around the Project Boundary associated both with PacifiCorp's Agricultural Lease Program and with fulfillment of non-Project related irrigation water rights. Irrigation pumps and other irrigation infrastructure are located at many locations along the reservoir's edge, and many irrigation canals are present in and around the Project Boundary. The proposed study area for potential effects on historic irrigation-related resources is the locations of known such resources plus an appropriate buffer.

PacifiCorp's Agricultural Lease Program has some potential to affect historic properties, and the proposed study area for such effects consists of leased areas.

1.5 METHODS [§ 5.9(B)(6)]

PacifiCorp proposes to conduct several types of cultural resources studies, each tailored to one or more of the different study areas and types of potential effects as described.

1.5.1 ARCHAEOLOGICAL INTENSIVE-LEVEL SURVEY

Applies to areas described in Table 1. Methods will follow Utah standards for archaeological Intensive-level Survey (ILS).

1.5.2 HISTORIC ARCHITECTURAL INTENSIVE-LEVEL SURVEY

Applies to Wheelon Dam site, which may be altered or removed at some point. Methods will follow Utah standards for architectural ILS.

1.5.3 HISTORIC ARCHITECTURAL NATIONAL REGISTER REGISTRATION FORM AMENDMENT

Applies to the District. Methods will follow National Park Service standards for National Register forms and amendments. In particular, the amendment will clarify which components of the District are or are not contributing elements of the District.

1.5.4 ARCHAEOLOGICAL AND HISTORIC ARCHITECTURAL RECONNAISSANCE-LEVEL SURVEY

Applies to agricultural lease areas. These areas have likely been substantially disturbed by past agricultural activities, and the potential for intact cultural resources within them is therefore likely low. The level of effort for study of these areas will be scaled to this potential and will consist of a reconnaissance-level survey designed to identify any resources that remain intact, which are likely to be large and easily visible, such as building foundations or standing structures. Professional archaeologists and architectural historians will travel through and around the Project Boundary on roads in vehicles and, if possible, along the reservoir shoreline in boats, to look for cultural resources. Any resources found will be documented and evaluated for NRHP eligibility in the same manner as resources identified in ILS surveys.

1.6 ANALYSIS AND REPORTING

Will follow Utah State Historic Preservation Office (SHPO) standards for archaeological and architectural reporting.

1.7 SCHEDULE, PERIODIC REPORTING, AND ONGOING CONSULTATION

The anticipated Study Plan development and implementation schedule will be identified in the final Study Plan.

1.8 LEVEL OF EFFORT AND COST [§ 5.9(B)(7)]

To be determined.

1.9 REFERENCES

Utah State University. 1905. Cover page photo of Wheelon Dam in Bear River Canyon. Accessed June 14, 2019. http://digital.lib.usu.edu/cdm/ref/collection/Bear/id/11335.