

# Juniper Beach Provincial Park—Mitigation of Archaeological Site EeRg-13

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In August 2011 AMEC Archaeology and Cultural Heritage Resources—Environment & Infrastructure (AMEC, formerly Arcas) was retained by the Ministry of Environment (BC Parks) to mitigate impacts to archaeological site EeRg-13 by the proposed Juniper Beach Provincial Park Water System Upgrades project. The Juniper Beach Provincial campground is located on the north bank of the Thompson River, east of Cache Creek, BC. Assessment and monitoring of the Juniper Beach sites was conducted in collaboration with community members from Bonaparte, Skeetchetn, and Ashcroft Indian Bands.

## Background

The Thompson River valley is inhabited by First Nations people speaking either the Shuswap (*Secwepemc*) or Thompson (*Nlaka'pamux*) languages, which belong to the Interior Salish branch of the Salishan linguistic family (Ignace 1998; Wyatt 1998). The best-known descriptions of Secwepemc and Nlaka'pamux culture and language were published by pioneer B.C. ethnographer James Teit (1900, 1909) with additional accounts published by geologist George Dawson (1892).

EeRg-13 was originally recorded by George Ferguson in 1973 and John McMurdo in 1974 on behalf of the Archaeological Sites Advisory Board. Ferguson recorded a total of 144 prehistoric artifacts collected during a surface survey, including debitage, retouched flakes, and biface-preform fragments (McMurdo 1974). A total of 20 tools and a variety of debitage were collected including a hammerstone, corner-notched projectile points, a shell bead, and birchbark rolls (traditional torches for night-fishing). Buried cultural strata, interpreted as filled-in housepit remnants, were encountered in three of the test units (McMurdo 1974).

In 1985, Arnoud Stryd and Mike Rousseau (Arcas 1985) re-recorded EeRg-13 during an archaeological site inventory for the CN Rail Twin-Tracking Project (non-permit). Their survey primarily focused on lands south of the existing track. Localized concentrations of dense artifact

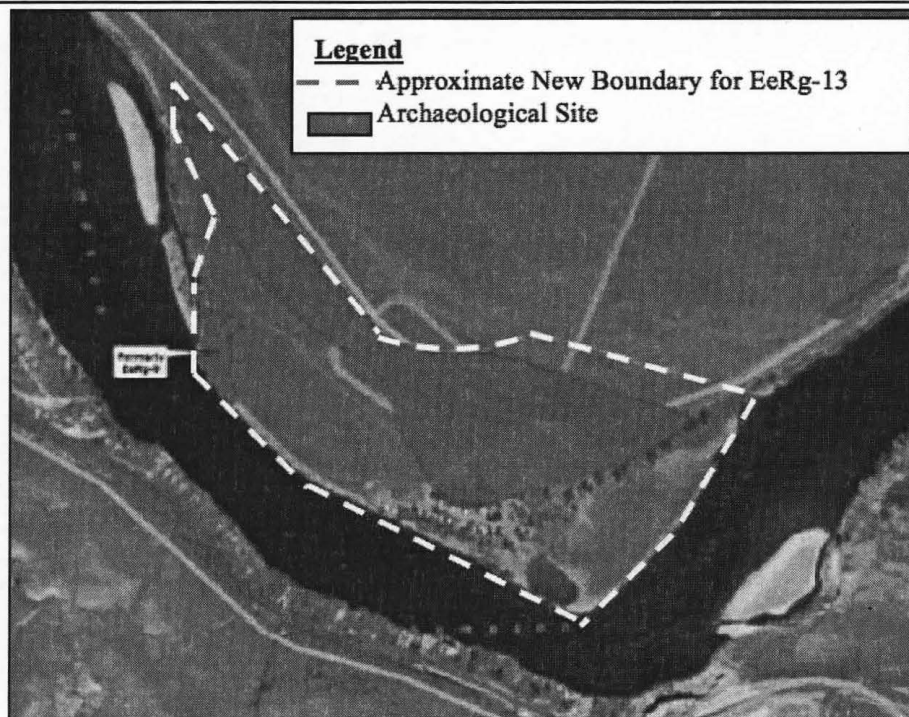


Figure 1. Location of EeRg-13 showing newly defined site boundary.

surface scatter were observed, and several cultural depressions (a few housepit-sized and several cache pits) and some boulder cairns were identified. The site boundary was extended a considerable distance to the west, along the southern side of the CN right-of-way. No cultural materials observed in 1985 were collected (Arcas 1985).

In 1989 Richard Brolly (Arcas) conducted an archaeological impact assessment for proposed realignment of the Juniper Beach access road at the CN Rail level crossing. The site boundary was extended slightly south and north from the 1985 boundary based on the observation of dense lithic scatters and five evaluative units (Arcas 1989). Over 100 utilized and retouched flakes, various debitage, a graver, a concave endscraper, and a corner-notched projectile point were observed, but only the latter two artifacts were collected in 1989.

## Landscape

The Juniper Beach site is located on an alluvial fan at a wide bend in the Thompson River between Savona and Cache Creek.

General landscape is typified by rolling grassland terraced up from the Thompson River with protruding bedrock outcrops and steep gullies. The southern extent of the campground is on the bank of the Thompson River and is elevated 3-4m above the current water level, which is higher than average for this time of year. Moving northward, the terrain is gently terraced and elevated approximately 0.5m above the river bank. The northern extent of the campground is elevated approximately 3m above the lower bench and is comprised of large grass field and two parking lots.

Historical changes to the landscape of the park prior to 1950 appear to have been modest, and largely restricted to construction and maintenance of the CN Rail track.

## Assessment

An archaeological impact assessment (AIA) was conducted in August 2011 under Heritage Inspection Permit #2011-0265 by Peter Vigneault, B.A., RPCA and Nova Pierson, M.A. (AMEC). The AIA consisted of systematic subsurface

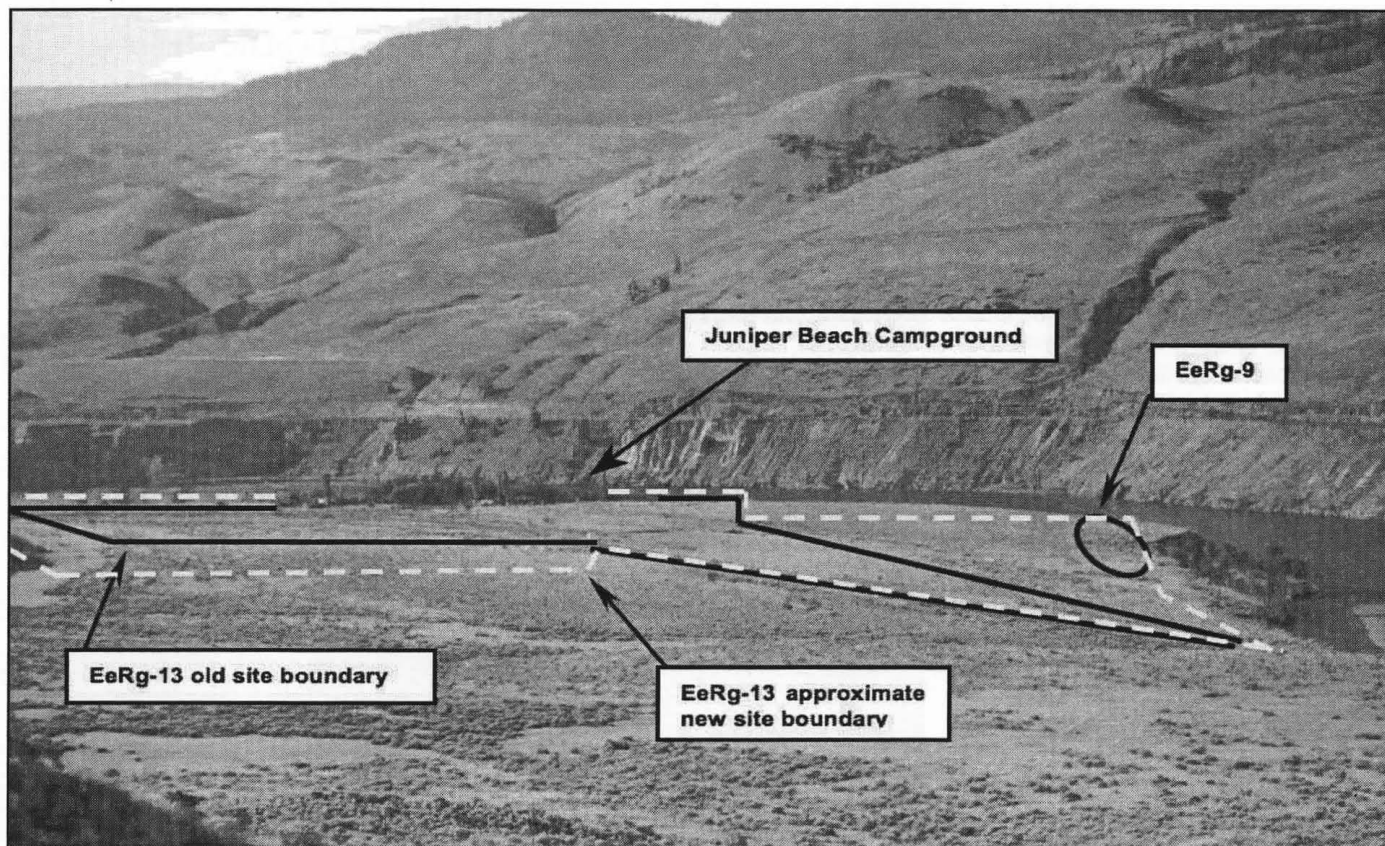


Figure 2. Location of Juniper Beach Campground, EeRg-13 and adjacent EeRg-9.

testing of the proposed development area to confirm the extent and density of the site deposits. Based on the results of testing it was determined that the entire development area is situated within the boundary of archaeological site EeRg-13. Archaeological materials were found in varying densities across the development area, with the highest density of materials recovered from an elevated terrace. The AIA indicated that additional archaeological remains attributable to EeRg-13 were present within the development impact zone. Therefore, it was recommended that all ground-altering activities associated with construction of the water system upgrade project be monitored and screened for cultural material by qualified archaeologists, in accordance with the conditions of a SAP.

#### Monitoring

From September to November 2011 Peter Vigneault, Sarah K. Smith, B.A., RPCA, Marlowe Kennedy, B.A. and Michael Fox, B.A. (AMEC) monitored ground disturbance activities associated with the water system upgrade at Juniper Beach.

Monitoring involved visual inspection during land altering activities, with screening and raking of disturbed material to collect archaeological lithic and faunal remains. Impacts consisted of the excavation of a series of trenches to replace and improve an existing water delivery system within the campsite. Much of the newly installed water system is located beneath gravel roads and camping plots, while the remainder was installed through a grass field on the upper terrace that divides the campground.

During the archaeological monitoring significant numbers of artifacts (over 11,000) and animal remains (almost 10,000) were recovered from archaeological deposits throughout the campground. Seven archaeological features were identified during the construction monitoring.

#### Interior Plateau Cultural Horizons

The Late Prehistoric period on the Interior Plateau has been divided into three successive cultural horizons, each with its own artifact styles, technological attributes, and settlement characteristics (Richards and Rousseau 1987, Pokotylo and Mitchell

1998; see Figure 3). The three horizons are the Shuswap Horizon (3500 to 2400 BP), Plateau Horizon (2400 to 1200 BP), and Kamloops Horizon (1200 to 200 BP). All three horizons of the Late Prehistoric period, as well as early historic remains, are the most common cultural materials recovered from archaeological excavations in the Thompson River region (Bussey 1995; Richards and Rousseau 1987).

#### Lithic Analysis

A significant number of formed stone tools (n=573) were identified during surface survey, subsurface testing and monitoring at EeRg-13. This included projectile points (n=100), utilized flakes (n=148), unifacially retouched flakes (n=105), bifacially retouched flakes (n=83), bifaces (n=77), preforms (n=22), cores (n=14), graters (n=11), scrapers (n=9), hand-maul (n=1) and a fragmented steatite pipe (n=3). A high density of lithic debitage (n=10,539) was also collected, indicating the use of the site for lithic manufacturing activities.

The raw material composition of the lithic assemblage is dominated by coarse to fine-grained basalt (more properly,

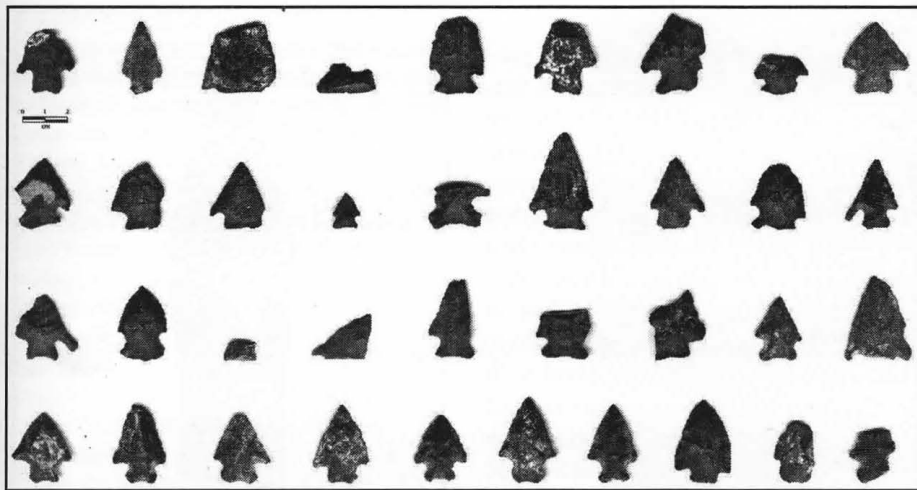


Figure 3. Plateau and Shushwap Horizon projectile points collected from EeRg-13.



Figure 4. Steatite smoking pipe fragments.

trachyandesite). Trachyandesite is the most abundant lithic raw material in the Thompson Plateau region, with several sources documented from the Ashcroft-Cache Creek area, most notably in the Arrowstone Hills north of the Juniper Beach project locality. Other materials, such as quartzite, chalcedony, jasper, agate and chert (cryptocrystalline silicates) are present, in lower frequencies. Several types of chert are represented in the assemblage, including a reddish-brown, fine-grained chert identified by Rousseau (2008) at a source in the Hat Creek valley, approximately 30km west of EeRg-13.

From the projectile point assemblage (Table 1), 80 demonstrate temporally diagnostic characteristics that can be classified into cultural traditions within the Late and Middle Prehistoric cultural periods of the Thompson Plateau (Rousseau 2008; Stryd and Rousseau 1996). Twenty additional projectile points are too fragmented to

classify to a cultural horizon. There is considerable diversity in the projectile point assemblage, that ranges from Early Nesikep (7500 to 4500 BP) to Kamloops Horizon (1200 to 200 BP). However, there is a clear predominance of Late Prehistoric horizons (79%), and of these most are attributable to the Plateau (n=34) and Shushwap (n=29) horizons. This corresponds to population density data from the Thompson Plateau region (Teit 1909).

All but four of the points are made of medium to fine-grained trachyandesite with the remaining specimens made from chalcedony (n=1) and chert (n=3). All of the lithic raw materials represented in the assemblage are available locally.

One of the unique artifacts collected from EeRg-13 is a steatite (stone) smoking pipe fragmented into three pieces. The artifact would have measured approximately 60cm in length when complete (Figure 4).

The Middle Prehistoric Nesikep

Phase (7000 to 6000 BP) is potentially represented in the EeRg-13 assemblage by a single, finely flaked projectile point (Figure 5) manufactured from fine-grained trachyandesite. This point displays laterally recurvent margins with V-shaped corner notches that appear hook-like – a distinctive attribute of Nesikep projectile points (Rousseau 2008). The thinness of this projectile point is another characteristic of the manufacturing technique. While the presence of a Middle Prehistoric projectile point amongst the otherwise Late Prehistoric occupation at EeRg-13 is unusual, it is possible that this point was found and curated by the people who resided at Juniper Beach in later times.

#### Bone Tools

Five artifacts recovered from EeRg-13 were manufactured from bone, which is not uncommon in Thompson Plateau sites where soil conditions are conducive to their preservation (Richards and Rousseau 1987). A variety of tools were manufactured from bone and antler in the region, including composite toggling harpoons made from multiple worked bone pieces lashed together (Smith 1900).

The assemblage consists of: (1) a finely worked point, possibly part of a composite harpoon (Figure 6); (2) a bone fragment with a ground tip, suspected to be a self-arming harpoon valve; (3) a finely worked rectangular artifact with flattened distal and proximal ends, of indeterminate use, but potentially a composite toggling harpoon foreshaft, blanket or clothing clasp, or a net gauge; (4) an unfinished bone point displaying whittle-marks and grinding at its apex, and likely part of a composite harpoon; and (5) a polished antler tine, showing possible evidence of use-wear, potentially resulting from its use as a pressure flaking tool for finishing stone tools.

#### Faunal

A total of 9842 bones, bone fragments, mollusc shells and shell fragments, representing a broad pre-contact subsistence spectrum were recovered during the AIA field survey and the monitoring at EeRg-13. The presence of European domesticates (i.e., cattle) and sawn bones indicates that at least some of the faunal remains recovered from Juniper Beach are post-contact.

The majority of faunal material identified is mammal, predominantly deer (n=63) but fish and molluscs are also represented in the assemblage; salmon in particular (n=421). Freshwater mussel shell fragments are also abundant (n=100), and likely represent one of three species native to the region. The presence of beaver and gopher or ground squirrel are also consistent with ethnographic subsistence practices, while the presence of dog is consistent with their use in hunting (e.g., Ignace 1998; Wyatt 1998).

Most of the recovered bone was so fragmented that it could not be identified to species. These include 7686 (78.1%) identified as mammal and a further 572 which could not be confidently identified to class. The concentration of deer and salmon bones is consistent with ethnographic subsistence strategies for both Secwepemc and Nlaka'pamux (Ignace 1998; Teit 1900, 1909; Wyatt 1998).



Figure 5. Early Nesikep Point. Photo by Sarah K. Smith

Cultural Period	Horizon	Total
Late	Kamloops	16
	Plateau	34
	Shuswap	29
Middle	Lochnore	0
	Lehman	0
	Early Nesikep	1
Unknown	Indeterminate	20
<b>Total</b>		<b>100</b>

Table 1. Projectile Point Horizon Distribution. Sources: Rousseau 2008; Stry and Rousseau 1996.

### Features

During the AIA and the monitoring program a total of eight archaeological features were identified within EeRg-13. The features consist of five roasting pits and three hearths; both feature types consisted of a compact layer of heated sediment and an abundance of FAR but are distinguished from one another by their size. The roasting pit features are typically >50cm in diameter and the hearths are <50cm, measurements which are consistent with relative feature sizes from subsistence sites in the Interior Plateau Region such as Keatley Creek: EeR1-7 (Prentiss and Kuijt 2004).

One large roasting pit (RP#5) was identified in the northwestern corner of the campground within a gravel parking lot, 4.0m west of the high terrace. RPF#5 measures 1.0m in diameter east-west and extends to a maximum depth of 28cm. The pit feature consisted of 10 to 28cm of dark grey to black silty sand with 70% FAR. Basal sediments underlying the feature were brown silty sand with dense river cobbles.

### Conclusions

Archaeological materials were identified throughout the entire extent of the new water system facilities, with both intact and disturbed settings. Based on the results of the AIA and SAP, the site boundary for EeRg-13 was extended to the north and west to encompass the extent of surface and subsurface site deposits. To the west of the Juniper Beach Campground, as a result of the surface inspection, lithic material was identified for several hundred meters to the west up to and including archaeological site EeRg-9. EeRg-9 consists of approximately 25 cultural depressions including cache pits and house pits as well as a dense surface lithic scatter (Arcas 1989). It was concluded that the two sites were in fact portions of one larger habitation site and have been combined under the Borden Number EeRg-13.

With the addition of the 25 house-pit and cache pit features associated with EeRg-9 a total of 36 subsistence and habitation features are located within the newly defined boundaries of EeRg-13. The high density of artifacts and features at Juniper Beach indicates intensive use of the site for habitation and subsistence over a long period of time.

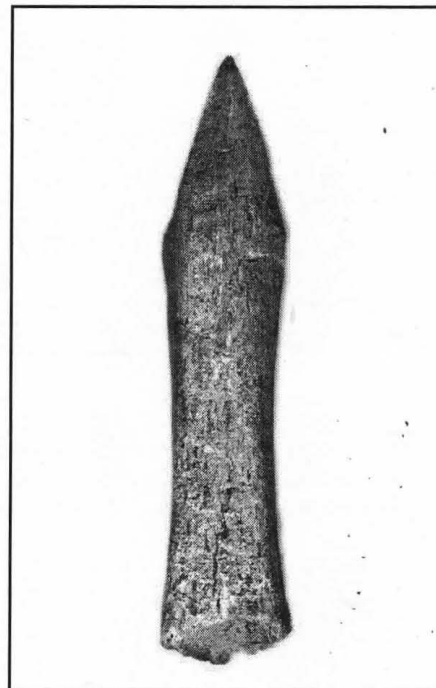


Figure 6. A finely-worked bone point, possible part of a composite harpoon tip (Artifact #11417).

BC Parks has always played a crucial role in the protection and mitigation of impacts to archaeological sites. The lands preserved as parks in our Province are a haven to cultural heritage sites and spiritually significant localities. The variety and quantity of artifacts and data collected from EeRg-13 provide insight into the lives of the people that have inhabited The Thompson River Valley for thousands of years. Positive working relationships between consulting archaeologists, First Nation communities and proponents such as BC Parks are pivotal to ensuring the preservation and systematic documentation of cultural heritage resources in our Province. Based on the density of archaeological material and the presence of intact features land-altering developments in Juniper Beach Provincial Park should be minimized as far as possible to protect what remains of this highly sensitive archaeological site.

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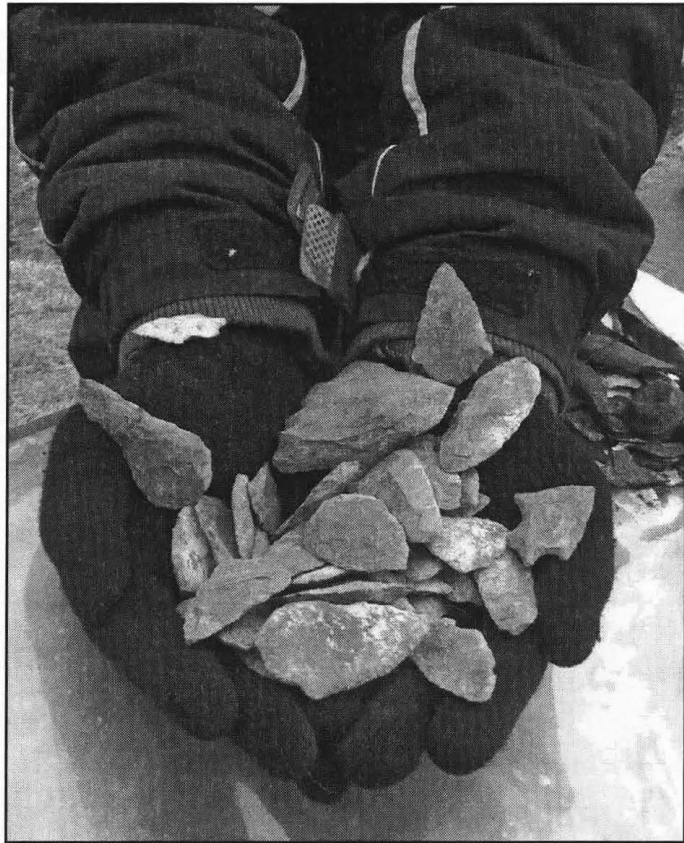


Figure 7. Tasia Pittman (Ashcroft Indian Band) holding 28 projectile points, graters and preforms recovered from a single cache on the upper terrace of EeRg-13. Photo by Sarah K. Smith.