

Managing Natural Resource Sustainability

Alternatives on a Former Military Base:

A case study of the United States Army's Camp Bonneville, Clark County, WA



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Managing Natural Resource Sustainability on a Former Military Base: A Case Study of the
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INTRODUCTION

The United States military conducts training, testing and research on numerous installations throughout the country. Army, Air Force, Navy and Marine Corps installations host aircraft, ships and other military instruments in diverse landscapes that also support hundreds of thousands of troops and an almost equal number of military family members (Department of Defense, 2013). These installations sometimes find the end of their usefulness following major conflicts such as World War II and the Cold War, providing the Department of Defense (DOD) with surplus lands that must be disposed of.

Military installations that have been categorized as surplus properties are disposed of in numerous ways. These formerly active training and testing sites can be sold to developers, combined with other installations or converted to other uses following analysis and review by the Base Realignment and Closure commission (BRAC) (BRAC, 2013). The BRAC commission is a group of eight members headed initially by former Republican representative Jim Courter (Koven, 1992). The DOD provides recommendations to the BRAC commission concerning potential disposal options. The BRAC commission then assesses these recommendations and provides final disposition of surplus properties.

The future of closed military installations is decided only after careful consideration of numerous factors. These factors and the details of base closure are relayed within the mission statement of the BRAC commission:

The recommendations provided by DOD are extremely complex and interrelated and will require in-depth analysis and careful attention to detail. The Commission will follow a fair, open, and equitable process, as set forth by statute. The Commission's mission is to assess whether the DOD recommendations substantially deviated from the Congressional criteria used to evaluate each military base. While giving priority to the criteria of military value, the Commission will also take into account the human impact of the base closures and will consider the possible economic, environmental, and other effects on the surrounding communities (BRAC, 2013).

Research Question

This paper will focus on the “possible economic, environmental and other effects” as they relate to one former military base (BRAC, 2013). With a focus on natural resource sustainability and stakeholder engagement, the research and findings within this paper will answer the question: *How can understanding the process of military installation closure and conversion help inform future processes in order to ensure that former military lands meet the needs of both humans and the environment?*

LITERATURE REVIEW

The Sikes Act of 1960 “provides for cooperation by the Departments of the Interior and Defense with State agencies in planning, development and maintenance of fish and wildlife resources on military reservations throughout the United States” (USFWS, 2013). This Act

established rules and directives for wildlife and habitat conservation on military lands, and created the impetus for cooperation between the United States Fish and Wildlife Service (USFWS) and the DOD to accomplish that conservation.

In 1997, the Sikes Act was amended and allowed military institutions to create and implement Integrated Natural Resource Management Plans (INRMPs) “in cooperation with the U.S. Fish and Wildlife Service and the appropriate state wildlife agency” (Boice, 2007, p. 19). Implementing the Sikes Act initiated a new era of cooperation between federal and state agencies. This cooperation fostered sharing knowledge and technology among and between agencies in ways not previously attempted.

The Sikes Act also promotes “sustained multipurpose use” of natural resources associated with DOD lands to include use by surrounding communities (Sampson, 2006, p. 47). To accomplish the sustainability of military operations, habitat and wildlife conservation, and human recreation and use, the DOD has formed partnerships with other agencies such as the United States Department of Agriculture Forest Service (USDA-FS), the USFWS, and natural resource managers employed by the DOD (Queen, 2007). These partnerships represent a way to ensure the long-term conservation and sustainable use of DOD lands and are likely very important in the transfer of ownership and management of closed military bases.

In 1988, the DOD began listing military bases designated for closure or repurposing following recommendations resulting from the first meeting of the BRAC commission. The post-Cold War drawdown of the military was cause for serious consideration about what to do with defunct or inefficient military bases, and DOD leaders needed a process of review and

recommendations on how to dispose of these lands. The BRAC process has led to bases being abandoned (with ownership retained by the DOD but with no management actions taken), sold to developers following cleanup, or conversion to other use, typically as a National Wildlife Refuge (Havlick, 2011). The process of closing a military base and repurposing it is varied and depends on the site history, ecology and proposed future use.

Due to remoteness of military lands, many installations are located in areas that also provide great habitat for wildlife. From a wildlife perspective, less intrusive military operations (those that do not involve bombing or heavy equipment) are almost refuges in themselves, being protected from harvest and exploitation by the public. Wildlife populations on military lands may serve as source populations for other areas, creating increased opportunity for public harvest or observation. Similarly, some military installations allow controlled public hunts on DOD lands, providing some value to outdoor enthusiasts in the community (personal observation).

Military installation managers work closely with community leaders to ensure that resources located on DOD lands are managed according to public and professional desires. This “incorporation of social values into management objectives is essential for successful management programs and long term protection of natural resources” (Jacobson & Marynowski, 1997, p. 771). This idea is critical in the process of building human capital in communities that host military installations because “people affect public lands not only by direct use, but also by influencing management and land-use policies” (Jacobson & Maynowski, 1997, p. 771).

Building of human capital in communities that support and surround military installations may

take some time. However, the closing of a military installation may be much more rapid, and likely has varying effects on communities depending on the disposition of the land after closure.

I created a Sustainability Web (Figure 1) to illustrate the unique social, economic, ecological and political attributes of Camp Bonneville's natural resources, how they relate to sustainability at the site, identify specific drivers that lead to or are barriers to actions, actors and courses of future actions. This sustainability web can be applied to other similar sites to understand the dynamic between stakeholders, community and the land by relating to four key ideas: Access, Equality, Natural Balance, and Policies.

Access refers to the physical ability of humans to use the land as well as the ability to channel the social power of institutions to represent human interest in addressing social and political issues arising from differential access to the land. Camp Bonneville represents a case in which human use was always part of the intended future use of the site.

Equality, tied to both social and economic issues surrounding land use, refers to the continued inclusion of all current and potential user-groups at the site regardless of status. Examining the social and economic attributes of local populations helps to define potential future uses of the land.

The Natural Balance at the site refers to the need to carefully consider both the economic potential as well as the ecological function of the use of natural resources on-site. By ensuring the natural resource use of Camp Bonneville is mitigated off-site and protecting the environmental services the site provides, natural resource sustainability can be preserved.

Policies refer to laws and institutional procedures that direct the harvest, preservation and human use of natural resources. By carefully considering the Policies that govern the use of natural resources, a balance can be found between political and ecological issues affecting natural resources on Camp Bonneville.

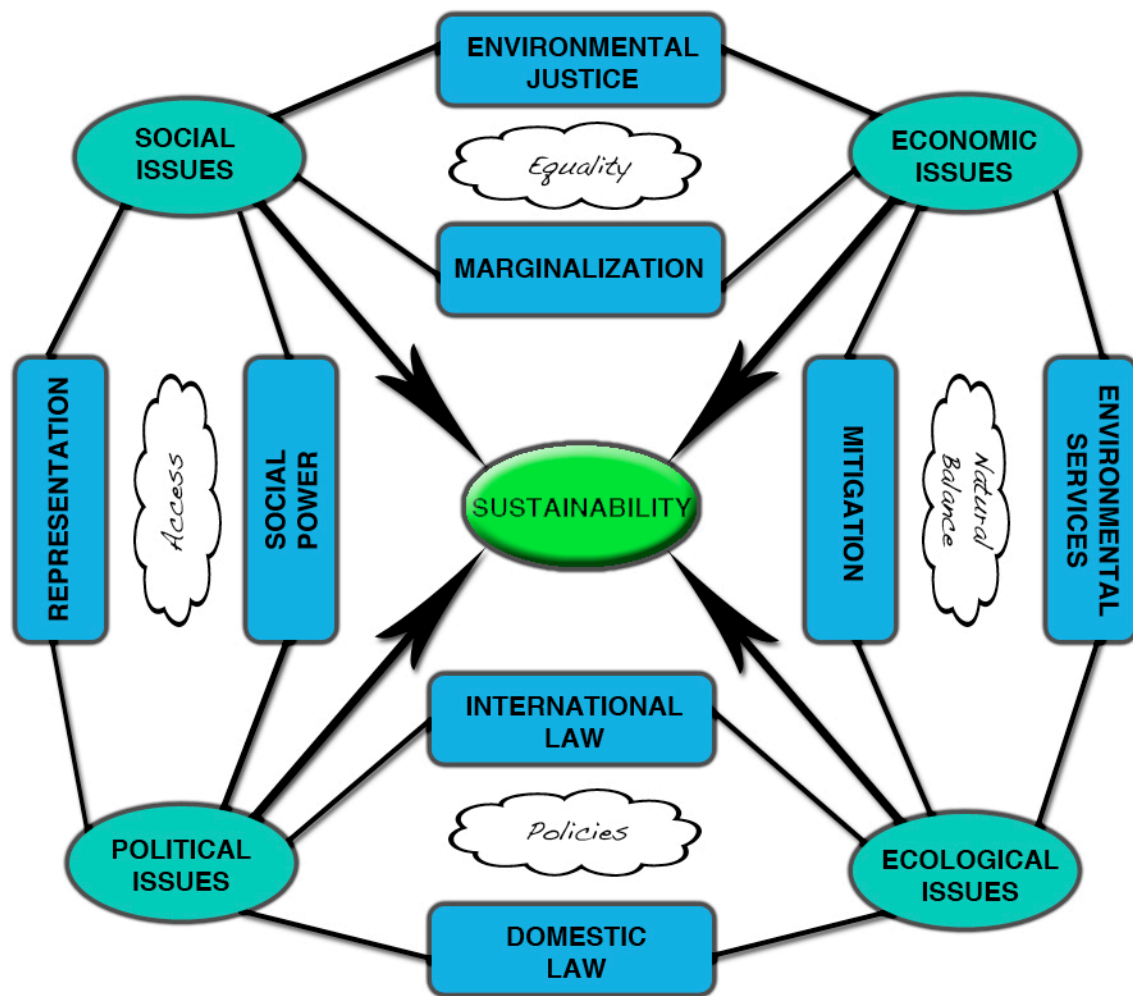


Figure 1. Sustainability web depicting relevant social, economic, ecological, and political issues affecting the sustainability of redevelopment plans with respect to natural resources on former Camp Bonneville, Clark County, WA.

Closure of a military installation: What happens next?

The U.S. government closes military installations for many reasons. Inherently, some installations simply lose their functionality due to an ever-increasing level of technological advancement. For example, the continued operation of an installation used for housing and training U.S. Army cavalry regiments would be difficult to justify in Congressional expenditure reports for a military that uses supersonic jets and tanks. Most installations are closed because of cost; either the installation's infrastructure is too costly to maintain/upgrade or there exists another installation that can accommodate the functions of multiple installations through consolidation (Warf, 1997). The military term for base consolidation is *realignment*.

Through base closures and realignments, the number of military installations has decreased significantly from around 4,000 during the World War II era to 481 in 1993 (Warf, 1997). BRAC activities closed even more installations beginning in 1995, bringing the number of currently active military bases to less than 300, excepting overseas or temporary installations used in current military involvements outside of the United States (Department of Defense, 2012).

Examples of military installation closures

Some examples can illustrate effects of military installation closures with respect to land and resource use. The following illustrate a few ways in which military lands can be disposed:

(1) *Naval Air Station Alameda*. Naval Air Station (NAS) Alameda became operational in

1940 as the United States was increasing efforts to prepare for its involvement in World War II (Alameda Naval Air Museum, 2013). Located on the western end of Alameda Island, in San Francisco and Alameda counties, the base was the largest air base at the time, encompassing 300 acres in 1940 and over 2,500 at the time of its closure in 1997 (Alameda Naval Air Museum, 2013). Due to the way in which the land was originally developed (vast areas of wetlands were filled in), it is unlikely that the former U.S. Navy base could be converted back into a natural area. The U.S. Navy turned over management and ownership of the land to the city of Alameda which originally sold the land to the Navy for \$1 (Alameda Naval Air Museum, 2013; Global Security, 2013).

The former NAS was partially redeveloped in the 1980s into “charming neighborhoods of Victorian architecture, two historic downtowns, and marinas” as well as over one million square feet of office space spread throughout several buildings (California State Military Museum, 2013). Some areas remain undeveloped and the remaining air strip is sometimes used in the filming of the popular television show “Myth Busters” (Global Security, 2013). Literature describing any future plans for the remaining undeveloped land could not be located at the time of this writing.

(2) Jefferson Proving Grounds. A number of closed military installations have been converted into National Wildlife Refuges (NWR; Figure 2). Converting a defunct military base into a wildlife refuge seems like an idea born from the desire to preserve habitat and conserve the often delicate species that dwell within the perimeter of the former installation. As Havlick (2011) describes, however, the reason for conversion to wildlife refuges is often environmental irresponsibility.

Havlick (2011) asserts that military-to-wildlife (M2W) conversions of military land are important because they “promise to contribute to the conservation potential and land base of the National Wildlife Refuge system...with the strongest ecological mandate of any federal land system” (p. 183). Important to public perception of M2W conversions is the fact that by merely changing the name of the former base to include the term *National Wildlife Refuge* imparts a trust associated with such a title bestowed upon the managers of these lands (Havlick, 2011). As eluded to in the previous paragraph, M2W conversions are often a result of a lack of options with regard to the disposition of these lands (Havlick, 2011).

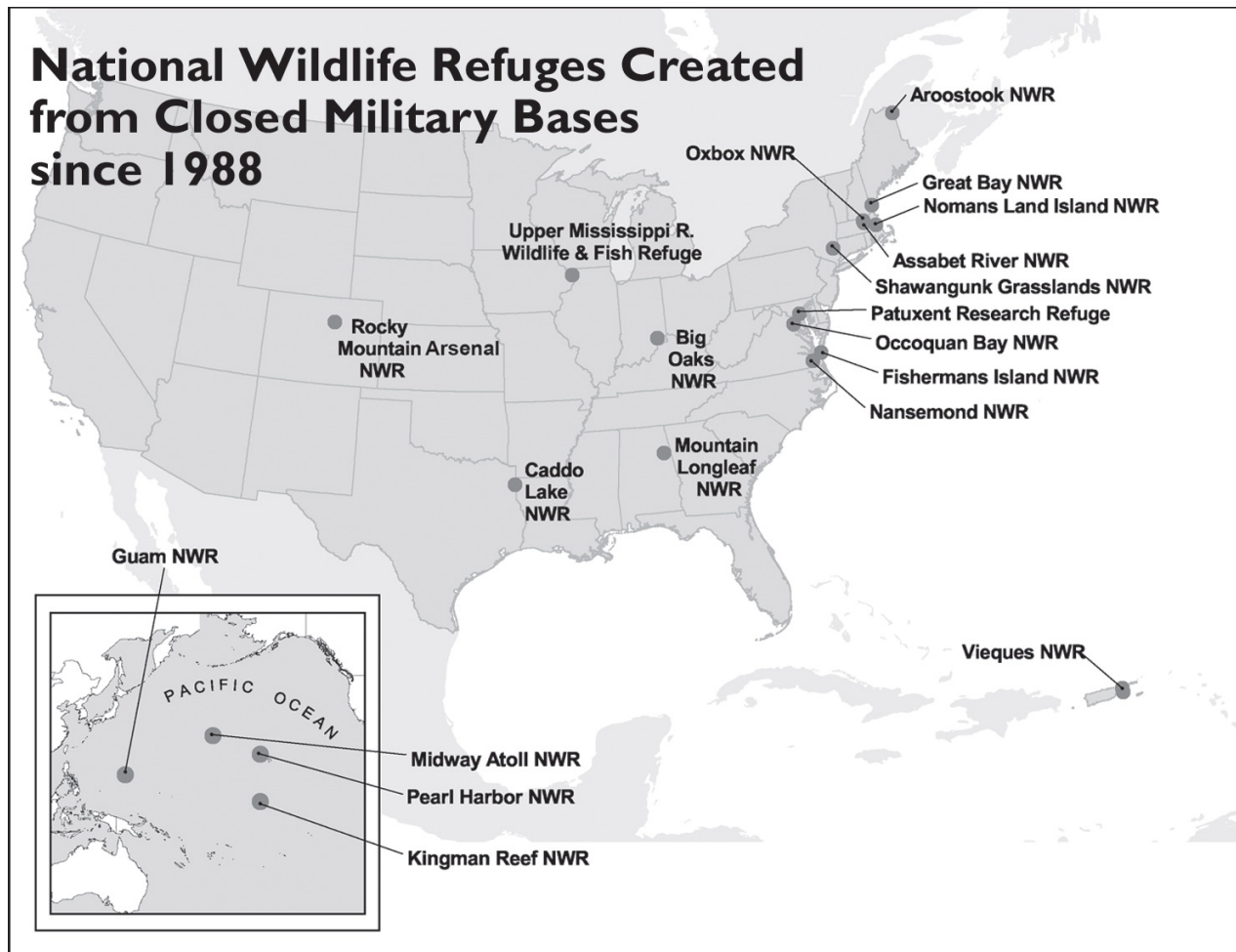


Figure 2. Geographical representation of converted military bases in the United States and outlying territories (Havlick, 2011).

The Big Oaks NWR—formerly the Jefferson Proving Ground—is one such case concerning a M2W conversion created for lack of a better option. The Big Oaks National Wildlife Refuge (NWR) is heavily contaminated with unexploded ordnance, depleted uranium rounds, and other byproducts of nearly a half of a century of ammunitions and weapons testing (Havlick, 2011). Military lands sold to developers or sold for converted human use must be cleaned up to acceptable levels which depend on the intended use. Lands intended for use as a building site for a hospital or school have more stringent requirements than those lands intended for industrial use (Cowan, 2012; Havlick, 2011).

Cleanup costs for Big Oaks NWR were very high. The dangers of unexploded ordnance excluded human use on nearly all of the acreage (Havlick, 2011). Socially, residents around the Big Oaks NWR were faced with having to deal with the current (and future) repercussions of the effects occurring from years of land contamination—repercussions which could include contamination of groundwater and the soil. Making the Proving Grounds a NWR came with a decision to withhold accountability land cleanup. Land managers were excited to gain nearly 55,000 acres of NWR (albeit perhaps with a bit of skepticism) and the Army was able to save money by closing the base and not having to deal with the cleanup (Havlick, 2011).

(3) *Fort Lewis and McChord Air Force Base*. In 2010, the formerly separate U.S. Army and Air Force bases known as Fort Lewis and McChord Air Force Base were combined to form what is now known as Joint Base Lewis-McChord (JBLM) (History Link, 2013). Located approximately nine miles southwest of Tacoma, Washington, JBLM is run administratively

by the U.S. Army and continues to serve the needs of both parent services, hosting “40,000 active, Guard and Reserve Service members and about 15,000 civilian workers” (Joint Base Lewis-McChord, 2013). The combining of Fort Lewis and McChord Air Force Base was directed by proceedings from the 2005 BRAC commission (Joint Base Lewis-McChord, 2013).

(4) *Camp Adair*. In 1941, the U.S. Army chose an approximately 57,000 acre site north of Corvallis, Oregon, to train troops in preparation for military conflicts and named it Camp Adair (Benton County Museum, 2013). The site operated from 1942 until 1946 as an infantry training area, a Naval hospital, and even a temporary housing location for German and Italian prisoners-of-war (Benton County Museum, 2013). Following primary use as an Army base, Camp Adair was taken over by the U.S. Air Force. Camp Adair served as a radar station until 1969 when housing structures on the land were sold individually on the open market and military operations at the site were ceased (Benton County Museum, 2013).

Despite its closing decades before the first BRAC commission hearings, the former base went through a closure and redevelopment phase similar to what occurs in post-BRAC closures today. Camp Adair was developed into what is known today as the city of Adair Village (incorporated in 1971); some of the land has been incorporated into the E.E. Wilson Wildlife Area where people can observe and harvest wildlife (Benton County Museum, 2013; Oregon Department of Fish and Wildlife, 2013).

The previous examples of installation realignment, closure, and post-closure repurposing illustrate ways in which military lands can be disposed. In the relevant examples provided, the

transition from a fully functioning and staffed military installation to a piece of land that has been repurposed for non-military use takes a considerable amount of planning and effort. The transformation also takes some time—often taking years or even decades before the land is ready for reuse. This time may be accompanied by a change in public or institutional values that require land redevelopment plans to be reevaluated. This paper will address one such case in which an Army installation, closed in 1995, is still being cleaned up and awaiting reuse some 15 years after its original redevelopment plan was published.

Background

Camp Bonneville is a former Army installation that was shut down in 1995, the same year it was recommended for closure by the BRAC commission. As an operational installation, Camp Bonneville hosted many active and reserve components of the U.S. Army and was used for training, including the use of ordnance beginning in 1910 (Clark County, 2013; Washington State Department of Ecology, 2013). The site encompasses approximately 4,000 acres and is located 15 miles northeast of Portland, Oregon, on the northern side of the Columbia River (Figure 3; Clark County, 2013).

Since its closure in 1995, the former installation has been turned over to Clark County, WA, which has entered into an agreement with Bonneville Conservation, Restoration and Renewal Team (BCRRT) to clean up the site for future use by the county and the public (Clark County, 2013).



Figure 3. Location of former Camp Bonneville, Clark County, Washington (www.maps.google.com).

Forested areas match those of the nearby Gifford Pinchot National Forest (GPNF) and contain a mix of conifers including Douglas fir (*Pseudotsuga menziesii*) (USDA-FS, 2013). With nearly half of the property being forested, local officials and residents have shown interest in converting the land to public use for numerous outdoor activities. The ability to use the site for such activities is founded on legislation such as the Sikes Act, which helps ensure the conservation of natural resources on military lands.

Site ecology and natural attributes

Camp Bonneville falls within the Cascade Range of mountains which forms a natural barrier from masses of air that originate in the interior Columbia Basin (USACE, 1997). Summer temperate averages are near 65°F with daily high temperatures hovering around 80°F (USACE, 1997). Winters are mild with predominant precipitation falling in the form of rain with snowfall rarely occurring “only five days each year” and measuring “seldom more than a couple of inches” (USACE, 1997, p. 2-2). Average precipitation for the area in 2011 was 47.09 inches (NOAA, 2013).

Geology, hydrology and soils

Regionally, Camp Bonneville is located in the “Northern Cascade Mountains section of the Cascade Sierra Mountains physiographic province” (USACE, 1997). Topography is highly variable, with granitic peaks, numerous valleys, plateaus and remnants of volcanic history (USACE, 1997, p.2-3). Soils in the area are composed primarily of silty and gravelly clay loams; the predominant classification is Hesson gravelly clay loam (United States Department of Agriculture Natural Resources Conservation Service, 2013).

The Camp Bonneville site has a “steep local relief” with elevation ranging from approximately 300 feet to 1,800 feet (USACE, 1997, pp. 2-5). The area drains to the west-southwest through various tributaries of Lacamas Creek including Buck Creek and David Creek. Lacamas Creek drains into the Washougal River (USACE, 1997; Figure 4). The Washougal River drains in to the Columbia River near the town of Camas, Washington, which empties into the Pacific Ocean near the town of Astoria, Oregon.

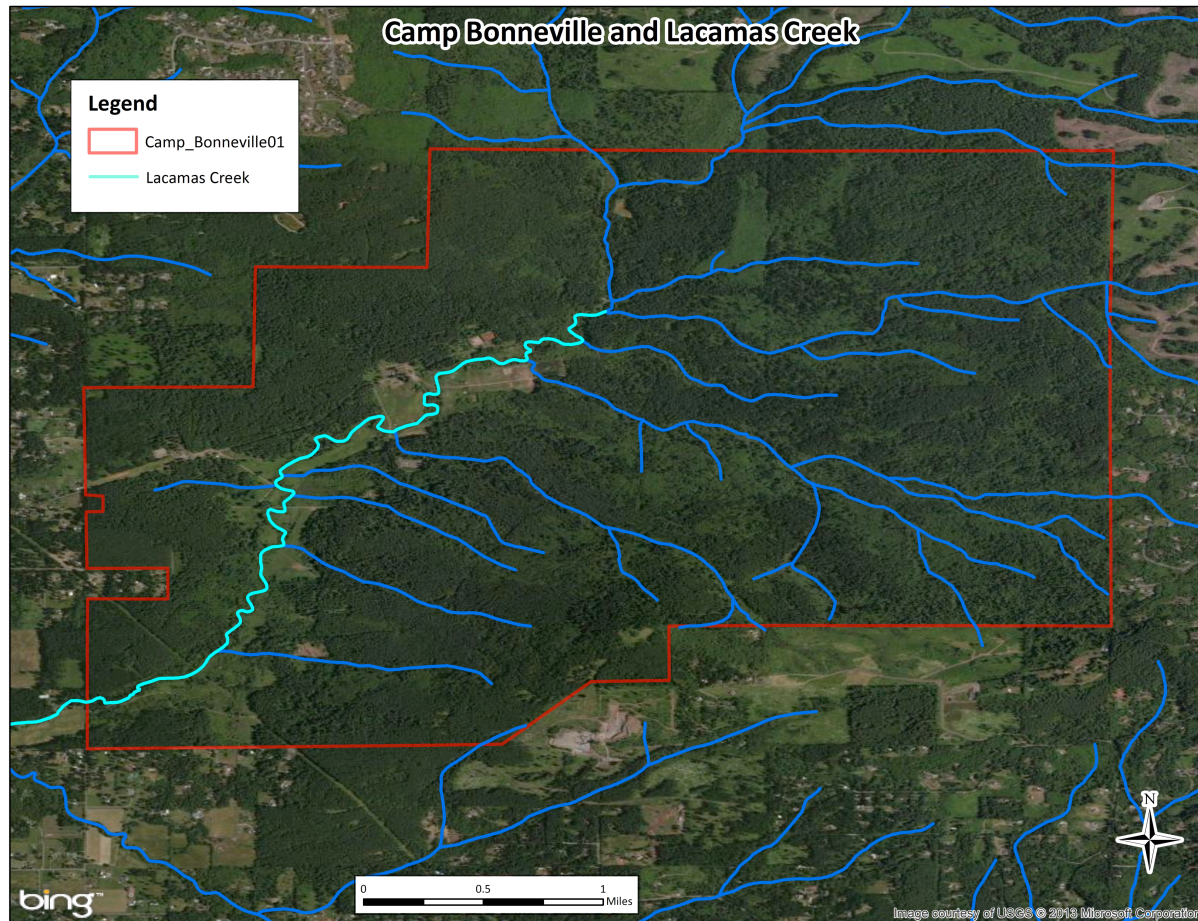


Figure 4. Camp Bonneville boundary and Lacamas Creek, Clark County, WA.

Endangered and Invasive Species

A comprehensive site inventory of endangered or invasive species has not yet been conducted specifically for Camp Bonneville, but data on these organisms can be generically applied from surveys of larger areas that encompass the site. The USFWS lists the threatened or endangered species possibly occurring on the site (Appendix A). Data gathered on invasive species by Clark County specialists can also be generically applied to Camp Bonneville, and can be found in Appendix B.

Site Management

When the former Army installation was transferred in ownership from the DOD to Clark County, management of the site was also transferred to Clark County Public Works Department. Due to the possibility of hazardous materials and unexploded ordnance (UXO) existing on the land, land management remains in the planning phase, with the recently established Camp Bonneville Local Redevelopment Authority (LRA) cooperating with the private urban development company OTAK, Incorporated (Clark County, 2005). The current proposals for management of former Camp Bonneville lands address a number of land use issues represented by a variety of stakeholders.

In 1998, Clark County submitted the Camp Bonneville Reuse Plan to the LRA which proposed four separate management alternatives for the land. The preferred management alternative suggested the site be developed as a multi-use area that include a regional park, law enforcement training center, retreat center/outdoor school, a Native American cultural center, an environmental field station, trails and nature area, an FBI firing range, a timber resource

management area and a wetland/riparian habitat restoration area (Clark County, 2005). This preferred management alternative was decided upon by a stakeholder group that represented government, state, and local interests (Clark County, 2005).

Stakeholders and power affecting sustainable management

When former military installations are turned over to state or local authorities, there are a number of options available to these authorities with respect to the disposition of these lands. The appointed LRA made recommendations to state and county officials concerning the disposition of the former military installation. It suggested a mixed-use alternative meant to satisfy the needs of a diverse user base. Those appointed to propose alternative land use options must solicit inputs from the community and direct discussion and action concerning the disposition of defunct military lands (Bradshaw, 1999; Hill, 2000). Community involvement at high and well-published levels likely elevates the confidence that the community and its leaders have on decisions made concerning military lands.

For communities, having a strong plan in place before the active component of the military leaves a base seems critical to community resilience. Cowan (2012) said of closed military bases:

In some respects, a closed military base shares similarities with other closed industrial facilities such as steel mills, oil refineries, or port facilities. Research and previous economic development experience suggest that converting a closed military base into a source of new competitive advantage is a major community effort (p. 4).

This community effort is supported and guided by the actions of people and institutions with the power to influence decisions regarding land use and sustainability. These leaders come from within the community, social groups, political groups and offices, and others such as federal agencies.

Planning and Decision-making

The Camp Bonneville LRA Board of County Commissioners has taken positive steps to ensure the community has been included and given some power to influence land use decisions. For the purpose of this paper, the community can be considered to be the concerned public having a legitimate stake in the redevelopment of the land. The Board appointed a five-member Reuse Planning Committee (RPC) that in turn established six LRA subcommittees “made up of approximately fifty community representatives to be assisted by county staff and consultants” to ensure that the public had a voice in the reuse planning efforts (Clark County, 2005, p. 2).

Specifically, residents living within close proximity to Camp Bonneville who expressed concern or opinion with regard to the LRA proposals were assigned to the “Neighbors” subcommittee (Clark County, 2005). Allowing this group access to documents, consultants and other resources accomplished what Liegel, Pilz, Love & Jones (1998) refer to as “[C]ommunicating project objectives and results” (p. 32). In their report on the MAB Mushroom Study, Liegel et al. (1998) offer that “[T]ransferring research study and managerial information to diverse clients and cooperators sometimes requires extra effort and outreach” (p. 32). In the case of Camp Bonneville, the public seems to have received this ‘extra effort’ and has likely benefitted by an increase in stakeholder consideration and power in the redevelopment process.

Since the original redevelopment proposal was published in 1998, however, there does not seem to have been any revisiting of the public interest in the redevelopment project. Fifteen years after the initial report, the only update to public involvement found is a 2011 report entitled Public Participation Plan authored collectively by the Washington State Department of Ecology (Washington State Department of Ecology, 2011). This report details future of public involvement and a system of notification that will inform the public about cleanup progress at Camp Bonneville. The report does not address any changes to land reuse initiatives as proposed in the revised 2005 Clark County Camp Bonneville Reuse Plan.

Sources of Political Power

Numerous institutions share in the political power that has shaped the future of the former Army installation. When the DOD's BRAC decided to recommend Camp Bonneville for closure, the Army needed to find an entity willing to accept the property. The ecological history and inherent nature of military land use made Camp Bonneville a unique property with numerous reuse alternatives.

Although needing comprehensive cleanup after a century of use, Camp Bonneville is likely an important natural habitat for plants and wildlife within the greater landscape of the Columbia River Basin. According to land management doctrine, the Army would have had to manage land within Camp Bonneville to existing standards—standards that in general meet or exceed those imposed by national protocol such as the Endangered Species Act, and other state and local natural resource laws. This would require the input and cooperation of numerous state and federal agencies to continue proper management of the land—especially after ownership was

transferred to Clark County, WA. Table 1 lists agencies with political power necessary to potentially shape future Camp Bonneville land management decisions.

Table 1. Sources of political power with respect to land management on former Camp Bonneville, Clark County, WA.

| Agency or Institution | Primary Land Mgmt. Responsibility | Political Power Derivative | Likely Future Input on Camp Bonneville |
|--|---|---|---|
| Clark County Board of Commissioners | Development and implementation of reuse alternatives | Voting public of WA | Reuse alternative implementation and project oversight |
| Department of Natural Resources, WA State | “[P]rovides innovative leadership and expertise to ensure environmental protection, public safety, perpetual funding for schools and communities, and a rich quality of life” ¹ | Commissioner of Public Lands is a public office; political power comes from WA state residents by proxy | Ensuring any land use or actions fit DNR policy and environmental protection measures |
| Department of Defense (U.S. Army) | Establish and carry out land transfers following BRAC actions | U.S. Congress via the Defense Base Realignment and Closure Act of 1990 | Ensure contractual agreements to fund site cleanup are met |
| Department of Ecology (DOE), WA State | “[P]rotect, preserve and enhance Washington’s environment, and promote the wise management of our air, land and water for the benefit of current and future generations” ² | WA State legislature; Specifically the Revised Code of Washington Chapter 43.21A RCW ³ | Ensure land use alternatives meet DOE regulations and objectives; DOE will likely play a large role in managing Camp Bonneville’s aquatic resources |
| U.S. Fish and Wildlife Service | Creation and enforcement of national regulations affecting fish and wildlife | Fish and Wildlife Act of 1956; United States Department of Interior | Ensure proper incorporation of natural areas on Camp Bonneville into existing regulations affecting fish and wildlife |
| Washington Department of Fish and Wildlife | “To preserve, protect and perpetuate fish, wildlife and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities” ⁴ | WA State legislature; Specifically the Revised Code of Washington RCW 77.04.012 ³ | Ensure proper incorporation of natural areas on Camp Bonneville into existing regulations affecting fish and wildlife |
| U.S. Forest Service | “[T]he improvement of water resources, development of climate change resiliency, creation of jobs that will sustain communities and restoration and enhancement of landscapes” ⁵ | United States Department of Agriculture | Working with state and federal agencies to develop sustainable harvest and management of forest resources on Camp Bonneville lands |

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| WA State Governor's Office of Indian Affairs | "[R]ecognizing the importance of sovereignty, affirms the government-to-government relationship and principles identified in the Centennial Accord to promote and enhance tribal self-sufficiency and serves to assist the state in developing policies consistent with those principles" ⁶ | Centennial Accord between the Federally Recognized Indian Tribes in Washington State and the State of Washington | Consult with interested tribes of the Yakima Nation to provide potential ancestral lands for tribal ceremonies or other cultural use |
|--|--|--|--|

¹ <http://www.dnr.wa.gov/>

² <http://www.ecy.wa.gov/>

³ <http://apps.leg.wa.gov/RCW>

⁴ <http://wdfw.wa.gov/>

⁵ <http://www.fs.fed.us>

⁶ <http://www.goia.wa.gov>

Social and Cultural Issues

The 2010 census for Clark County, Washington, reveals that residents living in close proximity to Camp Bonneville are mostly white (88.1%); the next largest demographics are Hispanic/Latino (7.8%) and Asian (4.3%) (US Census Bureau, 2013). This is in stark contrast to pre-settlement when area residents were probably Yakima tribal members (Washington State Governor's Office of Indian Affairs, 2013). Now registered as the Confederated Tribes of the Yakima Indian Reservation, this group represents $\leq 1\%$ of Clark County's total population (US Census Bureau 2013; Washington Governor's Office of Indian Affairs, 2013).

The former Camp Bonneville has been turned over by the U.S. Army to Clark County lands managers; all groups residing within Clark County have at least some stake in how the now-public lands are managed. These stakeholders bring ancestral tribal knowledge, post-contact historic and anecdotal information concerning pre-military use, and a host of socio-economic and socio-cultural values that could be incorporated into land use decisions (Cowan, 2012). Of specific importance is any traditional ecological knowledge that Yakima tribal members may have that can aid in the restoration of the lands.

Tribal knowledge can constrain, modify and enhance resource management decisions on Camp Bonneville. Concerns over historically significant sites could constrain future land use, especially in the context of a Section 106 review of the National Historic Preservation Act of 1966 (King, 2008). Tribal knowledge would enhance management decisions by providing evidence of the historic uses and ecologic makeup of the land. Finally, public desires for access to the lands for non-timber forest product (NTFP) harvest and other recreation may modify

management decisions, especially if all of the stakeholder groups and individuals are considered as possible users of the land.

Each state in the U.S. produces, at the request of the National Park Service (NPS), an annual Statewide Comprehensive Outdoor Recreation Plan (SCORP). This report captures the land use preferences of survey participants from a recreational standpoint. In order for a state to be eligible for outdoor recreation grant money from federal sources, the state must have a NPS-approved SCORP (National Park Service, 2013). The 2006 SCORP for Washington State can be generally applied to Camp Bonneville. Doing so reveals that outdoor recreationists in the state of Washington have high preferences for many of the activities that Camp Bonneville has or has the potential to offer (Appendix C).

The *Reuse Plan* was updated in 2003 to include adjusted cost estimates of redevelopment activities (Clark County, 2005). In 2005, the *Reuse Plan* was again updated to reflect a change in the mechanism that transferred Camp Bonneville from the Army to Clark County (Clark County, 2005). This update was especially significant; it categorized the transfer of property under a Congressionally approved “[C]onveyance of surplus real property for natural resource conservation” instead of the economic development conveyance in the 1998 *Reuse Plan* (United States Government Printing Office, 2013, p. 1645). The updated conveyance mechanism would allow transfer of Camp Bonneville lands to “[A] State or political subdivision of a State” and would also allow the State to “conduct incidental revenue-producing activities on the property that are compatible with the use of the property for conservation purposes” (United States Government Printing Office, 2013, p. 1646).

One such revenue-producing activity that has already taken place on Camp Bonneville is the selective harvest of timber. In 2012, The Columbian newspaper reported that “Clark County’s forestry management plan for Camp Bonneville includes selective thinning to reduce fire danger” on the site which has otherwise been left unharvested since 1985 (Rice, 2012). Within the same news report, Kevin Gray, the director of Clark County Environmental Services explained that the forest management and harvest plan for Camp Bonneville “focuses on improving wildlife habitat by diversifying the types of trees...as well as restoring the buffer areas along Lacamas, Buck and David Creeks” (Rice, 2012). Forest thinning seems to fit the intent of the natural resource conservation conveyance described in 10 USC 2694a (United States Government Printing Office, 2013). Thinning may also provide needed revenue for projects on the site.

Economic Attributes of Camp Bonneville

Clark County is considered part of the larger Portland Metropolitan Area (PMA), and according to the Washington State Employment Security Department (WSESD) website (2013), its economy “can be understood only in that context”. This is because a very large portion of residents commute from Clark County to the PMA on a daily basis. Nearly ten times as many workers commute to the PMA from Clark County compared to those who do the opposite (WSESD, 2013). Like many places in the PMA, Clark County has roots in agriculture and timber. Other economic bases include milling (beginning 1870s), smelting aluminum (1930s-2001), electronics (beginning 1970s) and various other industries that continue today. These include healthcare, retail, leisure/hospitality, manufacturing and government employment

(WSESD, 2013). Median wages for Clark County are historically below the median wages of the State (WSESD, 2013).

Ethical issues

A very important issue that must be addressed when discussing the topic of differential access and equality with respect to former Camp Bonneville is environmental ethicality. The presence of minority populations in Clark County and a history of pre-contact habitation by Native American tribes suggests that consideration needs to be given to all stakeholders equally when deciding how to manage the land. Attfield (1998) defines environmental ethics as “the study of normative issues and principles relating to human interactions with the natural environment (and to some extent, to this environment as modified by previous human activity, e.g., through agriculture and human settlements), and to their context and consequences” (p. 74). The ‘human interactions with the natural environment’ that Attfield discusses are precisely those that need to be addressed in order to include all social groups equally in the development of land management plans.

One way in which land managers on installations such as Camp Bonneville can solve ethical issues that may arise during planning processes is to thoroughly consult with affected parties. Doing so will accomplish a few important things. First, engaging in early, thorough discussions with minority groups will help establish a sense of trust between the groups and managers. As the USDA-FS learned in the 1970s through the 1990s, early and thorough communication with tribes (and minorities in the case of Camp Bonneville) is critical to the success of land management plans. The failure of the Gasquet-Orleans road in northern

California cost the USDA-FS a very large amount of time and money that could have been saved with thorough collaboration. This was a lesson that “the Forest Service in California, to its great credit, learned...and now—in contrast with some other Forest Service regions—has an exemplary program of cooperative forest management and cultural resource management” (King, 2008, p. 297).

A second way in which land managers must address environmental ethics in the social context is to ensure affected peoples are included in the management process. In 1994, the United States National Marine Fisheries Service (NMFS) issued the landmark paper, *Guidelines and Principles for Social Impact Assessment, The Interorganizational Committee on Guidelines and Principles for Social Impact Assessment* (1994). This document, particularly of interest in land use conversions such as those taking place at Camp Bonneville, contains important information regarding the ways in which stakeholder groups can be included in planning processes. The USNMFS states that inclusion should occur by “identifying and working with all potentially affected groups starting at the very beginning of planning for the proposed action” (NMFS, 1994, p. 127).

Spatial-temporal issues on Camp Bonneville

Current land use proposals for Camp Bonneville do not explicitly address spatial or temporal issues that may arise from differential use of similar spaces save one example. The Plan does address the need and the intent to separate spatially and limit temporally the use of firing ranges on the site (Clark County, 2005). An additional instance in which time and space considerations may be needed on the landscape is when activities within forested areas are

planned. These could include general recreation (e.g., hiking, walking), timber harvest, interpretation, or NTFP harvest. Harvesting of timber may exclude other activities from taking place, and may semi-permanently prohibit the harvest of NTFPs until the forest is reestablished. All land users should be considered when planning activities which may inadvertently disadvantage others. Opening new areas to use when another must be closed should be considered in land use plans. This could be accomplished by establishing forest reserves, which can be preserved as a means of offering diverse alternatives to those who may be prevented from using designated areas.

Conducting public interviews is one means to resolve spatial-temporal issues arising from different or disputed stakeholder land use alternatives. Engaging stakeholders to provide as much information as possible about preferred and potential areal and temporal uses of a target area is an important step in making consensus-driven resource management decisions. The USNMFS explains, “[I]deally, mitigation measures are built into the selected [land management] alternative, but it is appropriate to identify mitigation measures even if they are not immediately adopted” (1994, p. 135). Currently, proposed management alternatives for Camp Bonneville, including the preferred alternative, do not address mitigation as it relates to spatial and temporal issues.

Creation of the reuse plan

Following the closure of Camp Bonneville, ownership was turned over to the state and management of the nearly 4,000 acre site was delegated to the Clark County Public Works department via the creation of the LRA (Clark County, 2005). After public input and reuse

requests were considered, four reuse alternatives were considered in which a preferred alternative was selected. These reuse alternatives were derived from suggestions made during the public participation and scenario development phase of planning. During the planning process, 27 public meetings were held between November 1995 and May 1998 (Clark County, 2005). Opportunity for public participation and comment was provided via publicly advertised meetings, newsletter mailings, and the holding of open houses and workshops (Clark County, 2005).

Table 2. Camp Bonneville, Washington, preferred alternative sustainability attributes and suggestions for sustainability initiatives in the future.

| Preferred Alternative # | Preferred Alternative Title | Preferred Alternative Sustainability Attribute(s) | Suggestions for Improvement |
|--------------------------------|---|--|--|
| 4.5.1 | Regional Park | Public access, active and passive public use; reuse of existing maintenance equipment. | Consult sustainability professionals to design a plan to prevent over-use (i.e., rotation of activities, temporal relief, etc.). |
| 4.5.2 | Law Enforcement Training Center | Temporal isolation from other activities (only plan to shoot 6 months out of the year during off-peak times), sound pollution mitigation measures. | Mention the plan or the future consideration of a plan for waste cleanup and mitigation. Address more precisely the physical location of the range(s) with respect to Lacamas Creek. |
| 4.5.3 | Rustic Retreat Center/Outdoor School | Reuse of old (barracks) buildings, future expansion consideration. | During upgrades of the buildings (as proposed) consider using renewable energy such as solar or wind. |
| 4.5.4 | Native American Cultural Center | Reuse of old (barracks) buildings. | During upgrades of the buildings (as proposed) consider using renewable energy such as solar or wind. |
| 4.5.5 | Clark College Enviro. Field Station | Knowledge sharing, sustainability education. | During construction of the classrooms (as proposed) consider using renewable energy such as solar or wind. |
| 4.5.6 | Trails and Nature Area | Confined use to existing trails, no new construction. | Address effects of new use compared to old; propose mitigation as necessary when considering erosion, etc. |
| 4.5.7 | FBI Firing Range | Noise pollution considerations. | As per proposals—noise pollution abatement measures. |
| 4.5.8 | Timber Resource Management Area | To be determined after timber use plan issued following unexploded ordnance cleanup of the site. | Ensure the future plan addresses the renewal of the resource. |
| 4.5.9 | Wetland/Riparian Area Restoration/Enhancement & Habitat Restoration | Enhancement of existing riparian habitat and riparian areas. | Outreach to public universities to find funding and manpower for this project. |

The preferred alternative addresses the basics of sustainability from social, economic, and natural resource standpoints. Table 2 highlights the sustainability initiatives incorporated into the original and 2005 revision to the reuse plan's preferred alternative.

METHODS

Study Description

In July and August 2013, as part of requirements for an MNR degree from Oregon State University, I solicited input from inputs from stakeholders that described their feelings about the 1998 reuse plan, its implementation, and their opinions about the land redevelopment process. *Stakeholders* were defined as those persons who were part of the original LRA which produced the 1998 redevelopment plan or those persons who currently serve as proxies for original LRA committee/subcommittee members.

The study was designed as an exploratory, intrinsic case study. An exploratory method was chosen because it can be seen as “a prelude to a large social scientific study” or “as a pilot study...when planning a larger, more comprehensive investigation” (Berg, 2007, p. 292). This study is intrinsic because of a want to “better understand a particular case...because of its uniqueness” (Berg, 2007, p. 291). A case study research approach was chosen because of a need to understand the circumstances and potential repercussions of a particular instance versus the study of multiple instances over time and/or space. Berg (2007) explains that the case study method allows the researcher to “capture various nuances, patterns, and more latent elements that other research approaches may overlook” (p. 284).

This case study research method was chosen to better understand the innate characteristics of the study site and the processes that have left the site in its current state. Of an intrinsic study, Berg (2007)

relates that such a study “is not undertaken primarily because it represents other cases...it is because of its uniqueness or ordinariness that a case becomes interesting” (p. 291). The study site’s uniqueness warranted a broader approach using qualitative methods and analysis instead of a quantitative approach. By using a qualitative approach, a small group of stakeholders could be interviewed to tease out data that may not be generalizable to other, potentially similar cases.

Sample Selection

Utilizing the 1998 land reuse plan for Camp Bonneville, a list of original stakeholders was identified. These stakeholders were part of the following committees/subcommittees identified in the reuse plan: The *Board, Reuse Planning Committee, Steering Committee, Parks Subcommittee, Firing Ranges Subcommittee, Educational/Cultural/Facilities Subcommittee, Neighbors Subcommittee, Finance Subcommittee, Environmental Subcommittee*, and the *LRA Staff*.

Additionally, several agencies/institutions were identified that would serve as proxies for original committees/subcommittees in the event that original stakeholders could not be contacted. These agencies are the Clark County Community Planning Office, Clark County Public Works, U.S. Army Corps of Engineers (Clark County Office), Clark County Government and Community Affairs Office, Clark County Environmental Services Office and the Clark County School District.

Using recruitment and interview materials vetted by the Oregon State University Institutional Review Board, contact was made with as many individuals from the original stakeholder and proxy lists as possible. Initial contact was made by telephone and/or electronic communication (email). Individuals who did not respond were not contacted again. In some cases, original stakeholders were contacted while in other

instances respondents provided contact information for other potential study participants. These sources were also contacted. Those who responded were asked to participate in a short semi-structured interview. A short background of the study and an informed consent document were sent to these individuals for their review and an interview date was established.

Methodology

Three original stakeholders and two proxies were interviewed. Interviews were digitally recorded. Each interviewee was asked the following ten questions to aid in understanding the processes involved in developing the reuse Plan and to develop suggestions for moving forward:

1. The original Camp Bonneville reuse plan was adopted in 1998, some 15 years ago. Can you explain what your personal role was in developing the Plan or what you remember about the Plan's development and adoption?
2. After 15 years since its publishing, do you [still] believe the 1998 reuse plan is still useful in the redevelopment of the land?
 - a. Possible follow-ups: Why do you feel this way?
3. In 2005, the Camp Bonneville management plan was updated to reflect a desire to request land be transferred in ownership from the United States Army to Clark County under a natural resource *Conservation Conveyance* instead of an *Economic Development Conveyance*.
 - a. Do you believe that the *Conservation Conveyance* meets the intended use of the land according to the original redevelopment planning document?
 - b. Possible follow-ups: Why do you feel this way? Is there another type of conveyance that you feel better suits the intended use of the land?

4. Do you feel the *preferred alternative* remains a viable option for former Camp Bonneville?
 - a. Possible follow-ups: Why do you feel this way? Is there something or someone in particular that made you feel this way?
 - b. What do you feel are some barriers to implementation of the preferred alternative
 - c. How might we overcome these barriers?
5. As it is currently written and being executed, the 1998 reuse plan contains many land uses. In current time and looking into the future do you feel that there are any incompatible land uses according to the 1998 plan?
 - a. Possible follow-ups: Why do you feel this way? Are there any land uses *not* included in the original 1998 plan that you feel should be included now? Why is that?
6. As a result of this project, our findings may facilitate development of an updated reuse plan to the 1998 planning document. Would you be willing to be part of a group of stakeholders to review and update the 1998 plan, if such a group were to be formed?
 - a. Possible follow-ups: Why do you feel this way?
7. In the 15 years that have elapsed since the publishing of the original 1998 reuse plan, do you feel the key stakeholders remain the same?
 - a. Follow-ups: Why do you feel that way? Can you suggest any other/additional stakeholders that might be interested in the redevelopment of Camp Bonneville?
8. Camp Bonneville is surrounded by a mix of land owned by different entities including private, state, and national owners such as the United States Forest Service. What role do you believe Camp Bonneville can provide within this landscape?

- a. Follow-ups: Why do you feel this way? Is it possible that Camp Bonneville may end up “competing” against other nearby lands for use? Can you elaborate on this subject?
- 9. Camp Bonneville timber is currently managed under the Clark County Forest Management Plan. One recent sale of timber in 2012 [Clark Co. Dept. of Environmental Services 2012 Annual Report, page 4] has already generated \$.8M in revenue.
 - a. In general, do you feel that timber sales on Camp Bonneville should support Clark County projects?
 - b. Do you feel that timber sales on Camp Bonneville should be a separate line-item on the county budget that allows revenue to be used only for Camp Bonneville projects?
 - c. Follow-ups: Why do you feel this way?
- 10. Is there anything else you would like to tell me about past, present, or future plans for Camp Bonneville that you feel may be useful in this study?

Digital recordings were destroyed following transcription. Interviews were assigned a number (from 1-5) and respondent identities were coded accordingly (i.e., *Respondent #1*, *Respondent #2*). Two respondents (proxies) were interviewed in person at the study site. The other three respondents were interviewed by telephone.

Each set of answers was analyzed first by isolating responses to individual questions. Within each set of question responses, codes were assigned to assist in identifying common phrases, themes or ideas given by the respondents as a whole. Responses that suggested phrase, theme, or idea commonality or disparity were placed in a collective group to be further analyzed for meaning. Grouped responses were examined to identify meaningful patterns of thought or opinion. This type of *collaborative research approach* (Berg,

2007) was used to aid in understanding whether or not the 1998 reuse plan needs updating, and generally how stakeholders and proxies feel about the plan's implementation and processes.

RESULTS

During analysis of respondent answers, six major themes emerged that may explain some of the ways in which different stakeholders or stakeholder groups understand, view and conceptualize the redevelopment of Camp Bonneville. These six themes are used as headings for the analysis results which follow.

- [Redevelopment process understanding and awareness](#)
- [Importance of location and population](#)
- [Redevelopment versus reuse and realistic expectations](#)
- [Relevance of stakeholder origins](#)
- [The constraint of economics](#)
- [The importance of stakeholder and information continuity](#)

Redevelopment process understanding and awareness

Respondents #1 and #3 reported that they were not present for developing the original reuse plan or 2003 and 2005 plan revisions. These individuals served as proxies for original stakeholders and could not comment on the process of the plan's creation or revision. Respondent #4 could not definitively answer questions 2, 3, 4, 5, 7 or 9 which all addressed specific details of the 1998 plan due to an inability to

understand some plan aspects and revisions. Respectively, these six questions addressed the usefulness of the 1998 plan, the land conveyance change, the viability of the *preferred alternative*, compatibility of land uses, and the relevance of stakeholders and timber management actions on Camp Bonneville. Respondent #4 reported an awareness of the 2003 and 2005 revisions but reported a lack of knowledge of their content or purpose. Respondent #4 also reported an unawareness of the preferred reuse alternative or what specific uses of the land it encompassed. Respondent #4 reported, “I didn't understand any of [the process of arriving at the final plan]” (personal communication).

Respondent #2 reported a thorough involvement and understanding of the redevelopment process as well as reuse plan specifics and its proposed implementation. Respondent #2 also relayed a thorough understanding of the BRAC commission processes as well as some specifics of current undertakings on-site. Respondent #4 reported that (of the residents of the area), “...a lot of times people would go to the library to get [the reuse plan] and it was not there. It was not available. And, if you weren't really up on the internet...you didn't get it” (personal communication).

Importance of location and population

All respondents expressed the uniqueness of the site in comparison to surrounding lands. Figure 5 explains this viewpoint; Camp Bonneville represents a large open space in a sea of privately owned land that is very close to both Vancouver, Washington, and Portland, Oregon. Respondent #4 noted, “There’s no other place in Clark County like [Camp Bonneville]. So, I mean, when [County officials] say they don’t have the open green space and parks; that is one beautiful park” (personal communication). Some of the same reasons the U.S. Army chose the site initially may be what makes Camp Bonneville well suited as an open space park. Respondent #2 explained, “There’s a reason they put a military firing range that far up into the hills in

the first place. And for some of the same reasons why it was put way up there out of reach—out of sight, out of sound—are still valid today” (personal communication).

Previously mentioned development of other sites such as NAS Alameda may not be a good model for Camp Bonneville. Respondents #1 and #3 both agreed that Camp Bonneville would serve the people of Clark County and surrounding areas best as a regional park. Respondent #1 related that developing Camp Bonneville in line with the intent of the natural resource conservation conveyance “...fits just fine and...it provides not just open space for the neighbors, but it provides a regional attraction” (personal communication). Similarly, Respondent #3 explained that under the current reuse plan, Camp Bonneville would “...be good open space for all of the neighbors to utilize...it’ll be hiking trails, places for them to walk their dogs and all that stuff” (personal communication).

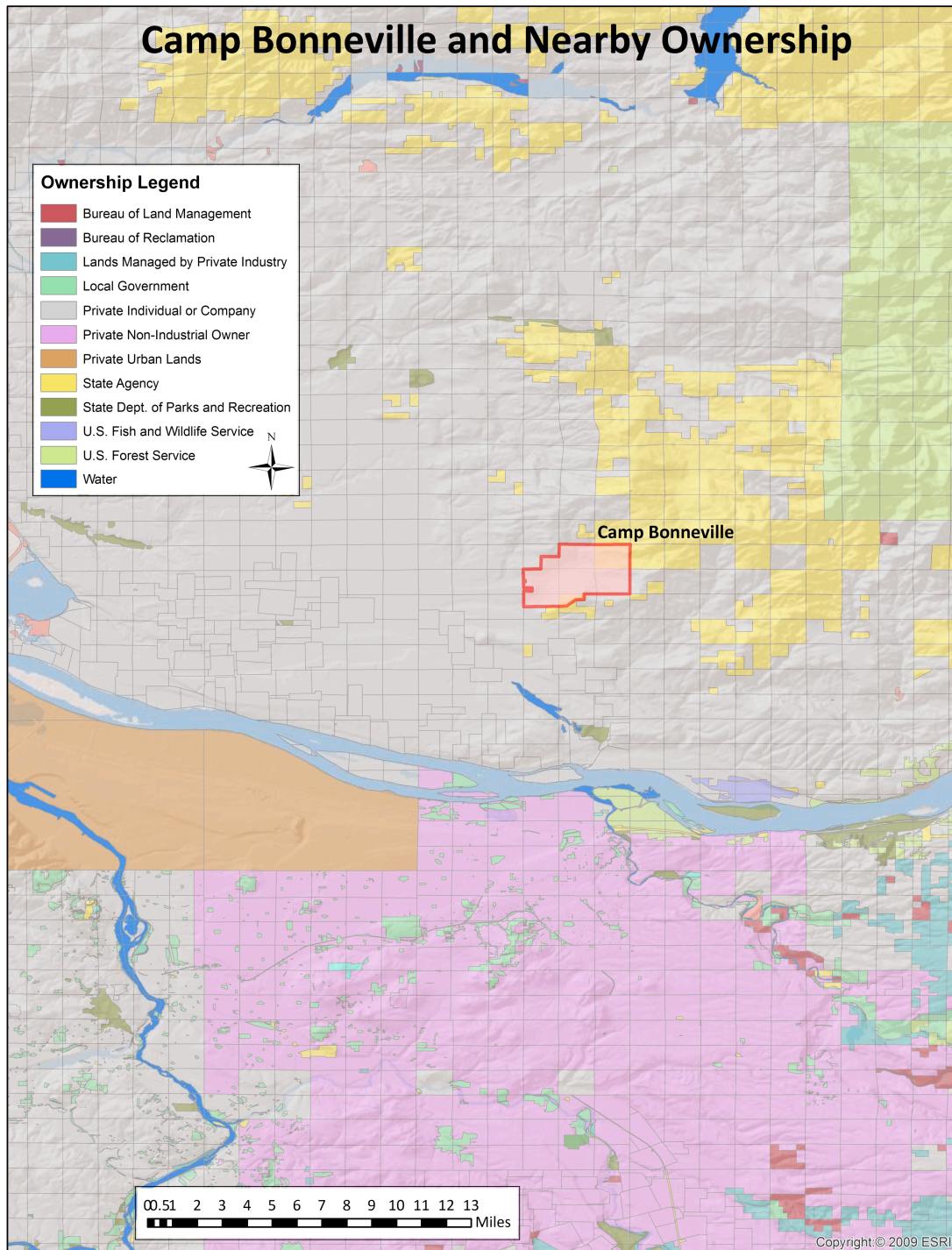


Figure 5. Camp Bonneville and surrounding land ownership.

Redevelopment versus reuse and realistic expectations

Three respondents commented on the presently installed and necessary upgrades to infrastructure on-site. Within the context of responses, it became apparent that a distinction exists, or should exist between the terms *redevelopment* and *reuse* as they are used throughout the 1998 plan and in other literature.

Redevelopment, according to the responses to this study, should refer more specifically to the bolstering or creation of infrastructure and civic services (i.e., roads, plumbing, electricity, wastewater) needed to develop the site for increased use. *Reuse* should refer specifically to the use of existing facilities for a new purpose.

The following interview responses are offered to support this point:

Respondent #1: “I don’t know if you’re familiar with things that have to be done, not only the improvements to the park proper...all of these buildings are—they were constructed as temporary buildings and are in disrepair. The roads would need to be improved, the infrastructure to the water, septic, all of that...electrical...in addition to that there are additions required to the roadway just coming into the facility. So, that’s—that’s the main obstacle we would have to implement [the reuse plan]” (personal communication).

Respondent #4: “...what concerned me was, when [Camp Bonneville] goes public, the need for more traffic on this tiny narrow road. We pull [horse] trailers in and out of here—it’s not a two-lane road...” (personal communication).

Respondent #5: “We had one question at the time whether the roads leading to Bonneville could manage the RVs...the traffic but I don't know if you can say that it *can't* happen (personal communication).

Respondent #2 further emphasized the need to differentiate between *redevelopment* and *reuse*.

Respondent #2 explained that Camp Bonneville could be reused as “[S]ome sort of limited park...possible research or day use by schools, but you know it’s not set up for overnight use in terms of water or sewer” (personal communication). Respondent #2 further expressed hesitation “...to put some sort of a developed county park on the site that would bring a high volume of traffic to those rural roads without road improvements. That doesn’t preclude some sort of park development on the site that would bring low or moderate level traffic...with just modest improvements” (personal communication).

Respondent #2 offered some insight into the creation of the reuse plan, suggesting that the uniqueness of the site and its suitability for reuse instead of redevelopment was not fully understood by all stakeholders at first. Respondent #2 spoke often of the unrealistic suggestions for redevelopment by stakeholders who did not fully understand the limits of the site’s infrastructure. Respondent #2 related that stakeholders included those wishing to turn the site into a “destination resort”, but upon further inspection of the site, “people started getting...realistic” about what the site could support in terms of development (personal communication).

Relevance of stakeholder origins

Two respondents expressed concern about the origins and values of some original stakeholders or of the project management group (i.e., OTAK, Inc.) that facilitated creation of the reuse plan. Respondent #4 stated, “[W]hoever the commissioners were at that time, they revised [the reuse plan]. Each time. They went in and they even had a group of people come in...the revision committee that didn’t even live here. They weren’t even neighbors, and they got the choice of telling us what [the neighbors] were going to live with” (personal communication). Respondent #4 also expressed discontent for what were believed to be ulterior

motives of the planning committee by stating, “I feel like the county just wants to wait until the last person is dead that has anything to do with the area and build houses on it” (personal communication).

Respondent #2 also suggested that stakeholders should have more community roots when considering how to manage local lands. Respondent #2 stated, “[N]ow that I think about it, [the reuse planning]...should be more of a local show. I don’t know why the State should be involved. If the County decided to do something like [developing] a park facility, the State would be involved only as a potential funder and the County Parks people know how to go through those channels” (personal communication). Put more simply, Respondent #2 expressed the importance of “...just having a good solid local group of people” on the reuse committee(s) (personal communication).

The constraint of economics

All respondents expressed concern over the current status and future availability of necessary funds to both implement the Plan and to manage the site into the future. Respondent #1 stated that “...the revenues to construct the improvements” needed to turn the site into a minimal use regional park “...aren’t there yet” (personal communication). Respondent #2 noted that timber sales may not sustain the long-term management of the site. Respondent #2 stated, “...you don’t dare hire people” with revenue from on-site timber sales, and that such revenue “...should be directed back to projects on or directly relating to the site” (personal communication).

Respondent #3 expressed a desire to see the future management at Camp Bonneville be “self-sustaining”, but noted that “... [Camp Bonneville is] going to have a cost to operate” (personal communication). Respondent #4 stated that land managers at Camp Bonneville “...need the revenue [from

timber sales] to keep it going” (personal communication). Respondent #5 added that the most important barrier to implementing the Plan is “[M]oney. It is and it always was, because the number one thing that the [Clark County] Board of Commissioners put out there is that [Camp Bonneville] needs to be self-supporting” (personal communication). Respondents were not asked to provide examples of ways in which to generate revenue outside of timber operations at the site.

The importance of stakeholder and information continuity

Respondent #1 and #3 both expressed that they were not present for the creation of the 1998 Plan and had no insight into the details of the Plan’s creation. Respondent #5 was present during the Plan’s creation but arrived late in the process. Despite being a stakeholder, Respondent #5 offered, “I kind of jumped into it about in the middle, but it had already been underway for a while...and all of a sudden after I [became a stakeholder] I found myself part of this committee that I knew nothing about” (personal communication).

CONCLUSIONS & RECOMMENDATIONS

Through the analysis of relevant literature and the qualitative analyses to responses from the study questions, some conclusions can be made that may offer some insight into the future of Camp Bonneville. These conclusions and recommendations can aid in understanding the process of military installation closure and conversion as well as inform future processes in order to ensure that former military lands meet the needs of both humans and the environment. Specific analysis of the responses to this study should not be generally applied to other land use/reuse situations but can serve as framework and offer insight into the process of military land conversions, stakeholder engagement and how stakeholders perceive the effects of their own actions as well as the actions and decisions of others.

Despite the length of time since the 1998 reuse plan was initially published, the plan seems to remain relevant in the greater contexts of location, demographics, and economic constraints. However, a knowledge gap may have prevented the dissemination of information relating to the 2003 and especially the 2005 update to the plan. Additionally, there seems to be a definitive lack of planning in place to ensure that Camp Bonneville will have a secure source of revenue with which to make necessary infrastructure improvements or to operate as a fully functioning, maintained County park.

The following suggestions are made in an effort to enhance sustainability with respect to natural resources, the economic and social aspects of the reuse plan, and management of Camp Bonneville in the present and into the future. These suggestions are based on my findings and are listed in no particular order.

Ensure information about the current status of the project is published. Details about the current status of the site are available, yet dispersed. Information about timber harvest is located in the Clark County Forest Management Plan (Clark County Public Works, 2013); information about the intended use of the land is contained in the updated 1998 reuse plan (Clark County, 2005), and information regarding the funding and infrastructure still required to finish the project are available anecdotally from stakeholder proxies. With the exception of proxies interviewed, respondents noted an inability to easily locate information regarding the project or its current status.

The creation of the 1998 reuse plan was a significant undertaking, with meetings held on-site after normal working hours. Once published, the plan was used as a tool in the planned redevelopment of the site but may not have been fully explained to some of the stakeholders. In order for a plan to be fully implemented, it should be thorough in its preparation and execution—to include explanation when necessary. Adding such information, or links to it on the Clark County Public

Works website that hosts information about Camp Bonneville would make locating and understanding this information easier for the public and those professionals interested in the progress of the project. Additionally, opposition to some aspects of the plan may be muted by public outreach, especially when revisions are made. Doing so will ensure that plans are continually supported by the stakeholders who created it and the local populace that must endure it.

Ensure the background/qualifications of stakeholders are understood and clearly

communicated. It is likely that some of the public and perhaps some stakeholders may benefit by knowing why stakeholders are part of the redevelopment plan. It is not suggested that any stakeholder is unqualified, per se. Some validity and cooperation may be gained by ensuring that every person on the reuse committee understands the selection criterion/criteria for committee involvement. If the reasons for committee appointment are understood, it may prevent the perception of what respondents noted as ‘ulterior motives’.

Consider selling timber as part of a habitat banking scheme for the purpose of providing

revenue to sustain management alternatives. No consideration was given to the possibility of selling existing timber as a means of banking habitat for offsite natural resource ventures. Such efforts could be made to provide revenue while participating in a Habitat Conservation Bank (HCB) project. Hay (2010) describes an HCB project as a way to “mitigate the effects human activities have on an endangered species while creating an economic driver to incentivize the perpetual preservation of the habitat” (p. 51). Selling or leasing existing forest habitat on Camp Bonneville with the intent to preserve it would enable deforestation activities to take place off-site and will help ensure a zero-net loss of habitat across the broader ecoregion.

Conduct a detailed inventory and potential harvest analysis for NTFP species on the site.

Within the LRA's reuse plan, there is a prominent lack of consideration of the importance of socio-economic issues as they relate to the future use of Camp Bonneville lands. Specifically, there is no mention of the potential harvest of NTFP, or the potential for benefit these products present for the general public, including minority populations. If NTFP species are found in such numbers as could support a sustainable harvest, access and permitting issues will need to be considered. The USDA-FS, which already has emplaced regulations for NTFP harvest within its Region 6 boundaries may provide valuable input as a model that can be applied to the site (USDA-FS, 2013). Permit revenues from granting recreational and/or commercial NTFP harvesting could be used towards maintaining forest trails, vehicular access to designated parking lots, and upkeep of parking lots used by NTFP harvesters.

Generate a new or updated timber valuation report and incorporated it into a more thorough, detailed economic analysis of how thinning, harvest, and old-growth proposals will provide sustainable management funds into the future.

There exists a conflict in exactly how proposed timber management on the site will provide economic sustainability for site management into the future. The LRA's reuse report suggests that the forested areas on the site—not actively managed since 1981—require thinning to maintain forest health (Clark County, 2005). Additionally, the report details that selective harvest of the timber can provide the funds necessary to execute the management of the site into the foreseeable future. However, no mention is made of how the timber will be sustainably harvested into the future.

In yet another section of the reuse plan, it is suggested that a portion of the forest be left alone to simulate an old-growth stand for study and educational purposes (Clark County, 2005). Appendix B of the reuse report gives the valuation of the timber, but does not detail how any profits will be spent. This is especially important considering other parts of the reuse plan that suggest mixed-use of the forested areas of which some proposals (such as campground development) are not compatible with harvest goals.

Update the proposed trails and hiking use areas to better define recreational opportunities that will be created. Since the initial reuse plan was issued, there has been no update to the recreational aspects of the proposed 2,000 acre trail and natural areas (Clark County, 2005). The plan states that the public will have access to “hiking trails, mountain bike trails, and equestrian riding trails”, utilizing old vehicle and equipment tracks (Clark County, 2005, p. 10). There is no proposal for stables or other tacking facilities at the site. The proposed 1,000 acre regional park is suggested to contain much of the recreational opportunities that will be offered to the public (Clark County, 2005). The proposed trails and hiking area, being much larger in size and having much more intense use (especially with the use of horses) should be analyzed for erosion and soil compaction with an accompanying mitigation plan.

Consider offering some land to businesses specializing in natural resource sustainability. This recommendation was not part of the original reuse plan or one of the considered alternatives. While the preferred alternative reuse of the land did include a 50-60 acre Clark College Environmental Field Station, Clark College has since withdrawn its interest. Nevertheless, there may be an expanded opportunity to annex a small portion of the land to lease to businesses specializing in renewable and

sustainable natural resources (Clark County, 2005, p. 10; personal communication). Any revenue generated could be used to implement sustainable protocols in the management of the land, and to subsidize managerial expenses. Additionally, on-site expertise in natural resource sustainability would benefit land managers seeking the guidance of sustainability professionals in carrying out options within the preferred alternative.

Consider a land swap for areas that cannot be used in the context of the preferred alternative.

After fifteen years, there may now be a need for land closer to the PMA for uses such as urban development, urban parks, or other facilities that would see more use than the more remote Camp Bonneville. Respondent #2 suggested, “some of the land in the remote part [of Camp Bonneville] could get traded to private or other public entities in exchange for other lands closer to the urban core that would be more suitable for urban development”. If it is determined that due to lack of infrastructure or funding, some of the land uses in the preferred alternative cannot be accomplished, then a land swap may work instead. Respondent #1 and #3 both referred to this type of thinking as keeping the reuse plan “fluid”. The concept of plan fluidity creates an opportunity for adaptive management; continuous stakeholder engagement can be used as a mechanism to adjust or adapt the reuse plan as needs arise.

Ensure that personnel turnover is accompanied by an adequate exchange of information. When new stakeholders join a planning committee or when sufficient time has elapsed that new personnel become part of a reuse/redevelopment project, it is imperative that the invested human capital is not lost in the process. In cases such as Camp Bonneville or other similar examples in the future, documentation of both positive and negative process attributes needs to be passed on to subsequent

stakeholders. Additionally, a continually updated list of stakeholders should be maintained in order to make contacting these individuals or institutions easier if reuse/redevelopment plans require updating.

Define the terms ‘redevelopment’ and ‘reuse’ in order to prevent confusion amongst stakeholders or developers when describing the intended use of the land.

Four of five respondents expressed concern about some of the original institutions and agencies that placed bids to develop the Camp Bonneville site without taking inventory of existing infrastructure. The term *redevelopment* should be defined to describe a site that requires significant updates to infrastructure in order to accomplish development goals. *Reuse* should be defined to describe a site that—with limited upgrades to infrastructure—serves a purpose closely aligned with existing uses and structures. Delimiting these terms will prevent needless and costly site visits by entities wishing to develop a site in a way that the site cannot support (personal communication).

Incorporation of these suggestions will hopefully lead to a more environmentally and economically sound reuse plan for former Camp Bonneville. Since the last update to the proposal was completed in 2005, it is likely that inflation, human population, and wildlife population issues need to be reconsidered before the land is opened to the public. Cleanup of UXO at the site continues; Clark County commissioners recently approved a \$7.6M contract extension to continue the removal of hazards (Clark County, 2013). The stalling of cleanup efforts over time represents a problem not addressed in this paper: land managers who decide to accept the transfer of military lands also need to fully understand the implications of what could be an unknown land-use history. Camp Bonneville was closed 18 years ago and has yet to be opened for public use.

In the time that Camp Bonneville was closed, a well-designed alternative use plan was proposed and approved. Updates to the plan were provided to address increased costs of implementing the plan as well as a change in conveyance method. As the final section of this paper pointed out, there are many aspects to land use planning that can address sustainability that are not yet incorporated into the Camp Bonneville reuse plan. With the time that has passed and continues to pass, addressing these issues now will alleviate problems in the future. It is recommended that a comprehensive update to the 2005 reuse plan be researched and published with additional initiatives and considerations that address all of the factors affecting sustainability at the site.

Moving forward

This case study provides evidence that converting a military base into a site that will eventually serve the needs of the public and wildlife is a process that encompasses a host of socio-cultural, socio-political and environmental issues. Interviewing Understanding stakeholders and stakeholder proxies as they relate to the assets of the military base and its local connections provides a means for elucidating information necessary to guide the successful repurposing of a closed military installation This study is useful in understanding the processes involved in turning a defunct military installation into something that extends the conservation of natural resources and facilitates sustainable human use of these resources.

The approaches used in this study can be used in a comparative analysis of similar sites, or to build upon processes already in place elsewhere. In order to ensure that plans are implemented sustainably, further research is recommended. It would likely prove useful to conduct collective case study analyses of similar sites or to conduct a quantitative study based in part on the results disseminated here. A comparison of the process and end product of the Camp Bonneville case to other situations may also provide a benchmark

useful in understanding the success or failures associated with conversion. These successes and/or failures can then be used to build upon and improve conversion processes elsewhere.

Should this study be repeated, early and frequent contact of stakeholders should be a priority. Out of the more than forty listed stakeholders in the 1998 Plan, only five were available for interview. This was likely due to a short time in which the study was designed, proposed, and conducted.

Second, additional research into the current UXO cleanup contracts as well as the limitations of the Conservation Conveyance is required. Wording within these documents may provide land use guidance or limitations that could further shape recommendations provided as a result of interview analysis.

Third, if not already being done, consideration should be given to allowing the U.S. Army or other military branches to conduct UXO training by Explosive Ordnance Disposal teams. Allowing the military to conduct ground penetrating radar training, for example, will provide valuable opportunities as well as assistance in locating and disposing of UXO on the site.

Lastly, consideration should be given to the processes and outcomes involved in similar cases presented by installation closures of other nations' militaries. Commonalities or differences between how the U.S. and other nations reuse military lands may be found that can be incorporated into a more comprehensive literature review.

In order to ensure that lessons learned from Camp Bonneville are carried forward, a stakeholder engagement plan should be developed to communicate the findings and provide a forum for continued action with the stakeholders and proxies interviewed. My hope is that this research, disseminated in a public forum, will help the public and current stakeholder groups more thoroughly evaluate the sustainability of the 1998

Plan. Through the continued evaluation of military installation conversion processes and the understanding that comes with it, the protection of natural resources and human values associated with former military bases can be sustained into the future.

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APPENDIX A: Potential threatened and endangered species found on Camp Bonneville.

| Name | Scientific Name | Status |
|-------------------------------|------------------------------------|-----------------------|
| Bull Trout | <i>Salvelinus confluentus</i> | Candidate |
| Tailed Frog | <i>Ascaphus truei</i> | Species of concern |
| Northwest Pond Turtle | <i>Clemmys marmorata marmorata</i> | Species of concern |
| Larch Mountain Salamander | <i>Plethodon larselli</i> | Species of concern |
| Cascades Frog | <i>Rana cascadae</i> | Species of concern |
| Spotted Frog | <i>Rana pretiosa</i> | Candidate for listing |
| Pacific Western Big-eared Bat | <i>Corynorhinus townsendii</i> | Species of concern |
| Long-eared Myotis | <i>Myotis evotis</i> | Species of concern |
| Long-legged Myotis | <i>Myotis volans</i> | Species of concern |
| Northern Goshawk | <i>Accipiter gentilis</i> | Species of concern |
| Olive-sided Flycatcher | <i>Contopus borealis</i> | Species of concern |
| Bald Eagle | <i>Haliaeetus leucocephalus</i> | Threatened |
| Northern Spotted Owl | <i>Strix occidentalis</i> | Endangered |
| Clackamas Corydalis | <i>Corydalis aguae-gelidae</i> | Species of concern |
| Cope's Giant Salamander | <i>Dicamptodon copei</i> | State monitored |
| Cascade Torrent Salamander | <i>Rhyacotriton cascadae</i> | State monitored |
| Blacktail Deer | <i>Odocoileus hemonius</i> | Not listed |
| Wood Duck | <i>Aix sponsa</i> | Not listed |

Source: Clark County, 2005

**APPENDIX B: Invasive species currently managed on Clark County,
WA, lands.**

| Name | Scientific Name | Status |
|-----------------------|----------------------------|------------------|
| Bull Thistle | <i>Cirsium vulgare</i> | Actively Managed |
| Canada Thistle | <i>Cirsium arvense</i> | Actively Managed |
| Herb Robert | <i>Geranium robertanum</i> | Actively Managed |
| Meadow Knapweed | <i>Centaruea pratensis</i> | Actively Managed |
| Mouse-ear Hawkweed | <i>Hieracium pilosella</i> | Actively Managed |
| Non-native Blackberry | <i>Rubus armeniacus</i> | Actively Managed |
| Queen Anne's Lace | <i>Daucus carota</i> | Actively Managed |
| Scot's Broom | <i>Cytisus scoparius</i> | Actively Managed |
| Tansy Ragwort | <i>Senecio jacobaea</i> | Actively Managed |

Source: Clark County, 2013

APPENDIX C: Consolidated results from the 2006 Washington SCORP.

Table shows a check for recreation opportunities survey participants preferred. Table also shows a check for whether Camp Bonneville has the potential to provide additional opportunities for these types of recreation preferences.

| Activity | | Preference for more opportunities | | | Camp Bonneville Specifics | | | |
|--|-------|-----------------------------------|-------|-------|---------------------------|------------------|------------------------------|----------------|
| Activity Category 1: Sightseeing | | | Est N | Est % | n | Provides Benefit | Potential to Provide Benefit | Not applicable |
| Sightseeing in General - More | Yes | 779,929 | 49.2 | 159 | ✓ | | | |
| | No | 806,768 | 50.8 | 168 | | | | |
| | Total | 1,586,697 | 100.0 | 327 | | | | |
| Sightseeing - Specific type - More | Yes | 428,655 | 27.0 | 88 | ✓ | | | |
| | No | 1,158,042 | 73.0 | 239 | | | | |
| | Total | 1,586,697 | 100.0 | 327 | | | | |
| Activity Category 2: Nature Activities | | | Est N | Est % | n | Provides Benefit | Potential to Provide Benefit | Not applicable |
| Visit nature/interpretive center - More | Yes | 241,065 | 15.2 | 49 | ✓ | | | |
| | No | 1,345,632 | 84.8 | 278 | | | | |
| Observe/Photograph wildlife/nature - More | Yes | 387,448 | 24.4 | 80 | | ✓ | | |
| | No | 1,199,249 | 75.6 | 247 | | | | |
| Gather/Collect things in nature setting - More | Yes | 184,733 | 11.6 | 38 | | ✓ | | |
| | No | 1,401,964 | 88.4 | 289 | | | | |
| Flower/Vegetable gardening - More | Yes | 425,651 | 26.8 | 80 | | ✓ | | |
| | No | 1,161,046 | 73.2 | 247 | | | | |
| Nature activities in general - More | Yes | 337,556 | 21.3 | 66 | ✓ | | | |
| | No | 1,249,141 | 78.7 | 261 | | | | |
| Nature activities - Other - More | Yes | 3,530 | 0.2 | 1 | ✓ | | | |
| | No | 1,583,167 | 99.8 | 326 | | | | |

| Activity Category 3: Fishing | | | | | Provides Benefit | Potential to Provide Benefit | Not applicable |
|---|-----|-----------|-------|-----|------------------|------------------------------|----------------|
| | | Est N | Est % | n | | | |
| Fishing for shellfish - More | Yes | 212,309 | 13.4 | 40 | | | ✓ |
| | No | 1,374,388 | 86.6 | 287 | | | |
| Fishing from a bank dock or jetty - More | Yes | 318,695 | 20.1 | 59 | | | ✓ |
| | No | 1,268,002 | 79.9 | 268 | | | |
| Fishing from a private boat - More | Yes | 288,359 | 18.2 | 56 | | | ✓ |
| | No | 1,298,338 | 81.8 | 271 | | | |
| Fishing with guide/charter - More | Yes | 106,556 | 6.7 | 24 | | | ✓ |
| | No | 1,480,141 | 93.3 | 303 | | | |
| Fishing in general - More | Yes | 269,133 | 17.0 | 53 | ✓ | | |
| | No | 1,317,564 | 83.0 | 274 | | | |
| Fishing - Other - More | Yes | 68,366 | 4.3 | 13 | ✓ | | |
| | No | 1,518,331 | 95.7 | 314 | | | |
| Salmon fishing - More | Yes | 13,320 | 0.8 | 5 | | ✓ | |
| | No | 1,573,377 | 99.2 | 322 | | | |
| Trout fishing - More | Yes | 32,767 | 2.1 | 6 | ✓ | | |
| | No | 1,553,930 | 97.9 | 321 | | | |
| Steelhead fishing - More | Yes | 3,734 | 0.2 | 2 | | ✓ | |
| | No | 1,582,963 | 99.8 | 325 | | | |
| Catfish fishing - More | Yes | 0 | 0.0 | 0 | | | ✓ |
| | No | 1,586,697 | 100.0 | 327 | | | |
| Halibut fishing - More | Yes | 0 | 0.0 | 0 | | | ✓ |
| | No | 1,586,697 | 100.0 | 327 | | | |
| Exotic/Other species fishing - More | Yes | 9,199 | 0.6 | 2 | | | ✓ |
| | No | 1,577,498 | 99.4 | 325 | | | |
| Activity Category 4: Picnicking | | | | | Provides Benefit | Potential to Provide Benefit | Not applicable |
| | | Est N | Est % | n | | | |
| Picnic, BBQ, or cookout - Location not specifically designated - More | Yes | 416,889 | 26.3 | 82 | | ✓ | |
| | No | 1,169,808 | 73.7 | 245 | | | |
| Picnic, BBQ, or cookout - Site specifically designated - More | Yes | 436,400 | 27.5 | 85 | | ✓ | |
| | No | 1,150,297 | 72.5 | 242 | | | |
| Picnic, BBQ, or cookout - Group picnic facility - More | Yes | 234,817 | 14.8 | 49 | | ✓ | |
| | No | 1,351,880 | 85.2 | 278 | | | |

| | | | | | | | |
|--|-----|-----------|-------|-----|-------------------------|-------------------------------------|-----------------------|
| Picnicking in general - More | Yes | 629,836 | 39.7 | 123 | | ✓ | |
| | No | 956,861 | 60.3 | 204 | | | |
| Picnic, BBQ, or cookout - Other - More | Yes | 12,614 | 0.8 | 2 | | ✓ | |
| | No | 1,574,083 | 99.2 | 325 | | | |
| Activity Category 5: Water Activities | | | | | Provides Benefit | Potential to Provide Benefit | Not applicable |
| | | Est N | Est % | n | | | |
| Beachcombing - More | Yes | 382,833 | 24.1 | 76 | | | ✓ |
| | No | 1,203,864 | 75.9 | 251 | | | |
| Swimming/Wading at beach - More | Yes | 426,058 | 26.9 | 78 | | | ✓ |
| | No | 1,160,639 | 73.1 | 249 | | | |
| Surfboarding - More | Yes | 50,203 | 3.2 | 11 | | | ✓ |
| | No | 1,536,494 | 96.8 | 316 | | | |
| Wind surfing - More | Yes | 17,877 | 1.1 | 6 | | | ✓ |
| | No | 1,568,820 | 98.9 | 321 | | | |
| Inner tubing/Floating - More | Yes | 123,952 | 7.8 | 24 | | ✓ | |
| | No | 1,462,745 | 92.2 | 303 | | | |
| Whitewater rafting - More | Yes | 86,389 | 5.4 | 19 | | | ✓ |
| | No | 1,500,308 | 94.6 | 308 | | | |
| Canoeing, kayaking, row boating, other hand-powered boating - More | Yes | 232,858 | 14.7 | 47 | | ✓ | |
| | No | 1,353,839 | 85.3 | 280 | | | |
| Sail boating - More | Yes | 66,371 | 4.2 | 15 | | | ✓ |
| | No | 1,520,326 | 95.8 | 312 | | | |
| Personal water craft/Jet Ski - More | Yes | 155,158 | 9.8 | 28 | | | ✓ |
| | No | 1,431,539 | 90.2 | 299 | | | |
| Motor boating - More | Yes | 324,228 | 20.4 | 61 | | | ✓ |
| | No | 1,262,469 | 79.6 | 266 | | | |
| Water skiing - More | Yes | 123,672 | 7.8 | 22 | | | ✓ |
| | No | 1,463,025 | 92.2 | 305 | | | |
| Scuba or skin diving - More | Yes | 104,088 | 6.6 | 21 | | | ✓ |
| | No | 1,482,609 | 93.4 | 306 | | | |
| Water activities in general - More | Yes | 164,323 | 10.4 | 30 | | ✓ | |
| | No | 1,422,374 | 89.6 | 297 | | | |
| Water activities - Other - More | Yes | 64,647 | 4.1 | 10 | | ✓ | |
| | No | 1,522,050 | 95.9 | 317 | | | |

| Activity Category 6: Snow and Ice Activities | | | | | Provides Benefit | Potential to Provide Benefit | Not applicable |
|--|-----|-----------|-------|-----|------------------|------------------------------|----------------|
| | | Est N | Est % | n | | | |
| Snowshoeing - More | Yes | 79,661 | 5.0 | 20 | | | ✓ |
| | No | 1,507,036 | 95.0 | 307 | | | |
| Sledding, inner tubing, other snow play - More | Yes | 368,997 | 23.3 | 56 | | ✓ | |
| | No | 1,217,700 | 76.7 | 271 | | | |
| Snowboarding - More | Yes | 167,933 | 10.6 | 28 | | | ✓ |
| | No | 1,418,764 | 89.4 | 299 | | | |
| Skiing - More | Yes | 304,117 | 19.2 | 57 | | | ✓ |
| | No | 1,282,580 | 80.8 | 270 | | | |
| Snowmobiling - More | Yes | 108,152 | 6.8 | 17 | | | ✓ |
| | No | 1,478,545 | 93.2 | 310 | | | |
| ATV riding on snow or ice - More | Yes | 87,072 | 5.5 | 16 | | | ✓ |
| | No | 1,499,625 | 94.5 | 311 | | | |
| Ice skating - More | Yes | 161,088 | 10.2 | 26 | | | ✓ |
| | No | 1,425,609 | 89.8 | 301 | | | |
| Snow/Ice activities in general – More | Yes | 102,900 | 6.5 | 16 | | ✓ | |
| | No | 1,483,797 | 93.5 | 311 | | | |

Source: Washington State Recreation and Conservation Office, 2007.

