

# **Rare Plant and Vegetation Survey of Bridgeport State Park**



*Pacific Biodiversity Institute*



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## **Executive Summary**

Pacific Biodiversity Institute (PBI) conducted a rare plant and vegetation survey of Bridgeport State Park for the Washington State Parks and Recreation Commission.

Bridgeport State Park covers 673 acres. The park is located in Okanogan County southeast of the Colville Indian Reservation. It is situated just above the Chief Joseph Dam along the Columbia River system.

Field surveys were conducted on May 7, June 5, July 19, July 24 and August 10. Bridgeport State Park was divided into 37 polygons covered by 14 plant associations and 3 general land cover types. Existing plant communities were characterized within each polygon. The most common natural plant communities are of the big sagebrush steppe series.

No rare plants listed by the State of Washington were found in Bridgeport State Park. Reviews of Washington Natural Heritage Program data determined that no historic sightings are known for the park or the immediate area.

The ecological condition of plant communities in Bridgeport State Park was mostly ranked good or excellent. This is well above average in comparison to other parks in eastern Washington surveyed by PBI in 2008. Noxious weeds that were found at Bridgeport State Park include five Class B weeds and four Class C weeds.

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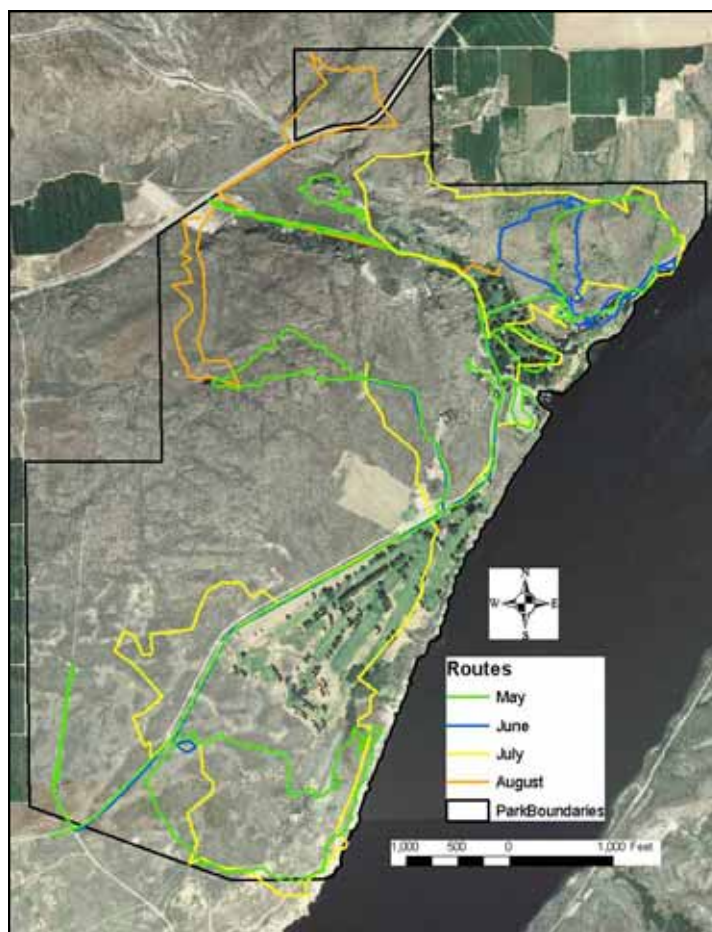
## Introduction

Bridgeport State Park is located along the Columbia River in Okanogan County, southeast of the Colville Indian Reservation. It is situated just above the Chief Joseph Dam. The park covers 673 acres and contains a campground, picnic areas, a golf course, a boat ramp, docks, paved hiking and bicycling trails, a nature trail, and associated roads and parking areas, most of which are paved. Despite the development and amenities, most of the park is still in a natural condition. Natural plant communities are predominantly big sagebrush-steppe.

The climate at Bridgeport State Park is semi-arid, receiving less than 12 inches per year. Soils are derived from glacial and alluvial deposits and from granitic bedrock. Soils also include bedrock outcrops, sandy areas and lake silt deposits. The bedrock is granitic, but many rocks are derived from the Columbia basalts as well.

## Survey Conditions and Survey Routes

Bridgeport State Park was visited on May 7, June 5, July 19, July 24 and August 9 by PBI botanists and field assistants. The survey routes are shown in Figure 1.



**Figure 1. Field survey schedule and routes.**

Access to some of the shorelines above the reservoir at Bridgeport State Park were limited by steep, eroding cliffs. Shorelines were only visited where they could be safely accessed.

# **Vegetation Communities**

## ***Methods***

Pre-field reviews of literature, GIS data, and remote sensing data were conducted early in the season. Maps, GIS data, and remotely-sensed data were assembled together into an ArcMap GIS project covering the project area. Topographic maps and digital elevation models (DEMs) were also used. Using the gathered spatial data resources, discrete vegetation polygons meant to represent specific plant communities or mosaics of plant communities were manually delineated by staff ecologists as polygon features in an ESRI shapefile format.

Areas within the park were visited several times during the field season to assure observation of both early and late-blooming plant species. Initial visits were primarily conducted as a reconnaissance of the project area, meant to create a basic plant list for the park and to conduct initial rare plant surveys for early bloomers. Later visits focused on collecting field data for the vegetation polygon map and adding more species to the plant list during different times of the season. Before the field season was complete, all vegetation polygons that could be accessed safely were visited and field data was collected.

Plant community data was recorded on a form initially developed by the Washington State Parks and Recreation Commission (Appendix A). Recorded data include a wide variety of information about the vegetation composition, environmental characteristics, disturbance history and other notes for each polygon. Each polygon was rated for its overall ecological condition according to a simple ranking system (Appendix B). Vegetation community and land cover classifications were assigned using information and keys from standard literature sources cited in the Reference section of this document (Bourgeron and Engelking 2004, Crawford 2003, Crawford 1999, Daubenmire 1970, Hallock and others 2007, Lillybridge and others 1995).

During field visits survey personnel had printed and digital maps available that included high-resolution aerial imagery. Digital maps were accessed in the field using ArcPad software (ESRI 2007) running on pocket PC, GPS enabled devices. Use of ArcPad allowed all survey routes to be mapped on a GPS recorder in real time, and allowed for viewing and editing data directly from field locations, resulting in field-verified attributes for the vegetation polygons.

Once gathered, the field data was edited and entered into a Microsoft Access database and linked to the vegetation polygon geodatabase. Further refinements and editing of the vegetation data stored in the personal geodatabase were made based on information collected in the field with ArcPad.

## ***Historical Vegetation***

Most of the area within Bridgeport State Park remains in a natural condition similar to historical conditions. The predominant plant communities are dominated by big sagebrush-steppe. Most of the natural communities are ranked in good condition or better. Communities in good condition probably resemble their historic condition prior to European settlement.

Bridgeport State Park has no evidence of recent livestock grazing that is common elsewhere in Okanogan County. This helps to maintain natural ecosystem components within the park. The presettlement condition of shrub-steppe habitats in the Columbia Plateau was influenced by cryptobiotic soil crusts that were later reduced by livestock grazing (Weddell 2001).

The shrub-steppe vegetation at Bridgeport State Park may have evolved with a frequent fire-return interval, based on its floristic similarity to nearby ponderosa pine forests that had a fire-return interval of

8-15 years (Ohlson 1996). However, there is considerable scientific debate on the presettlement fire frequency of the shrub-steppe. The relative abundance of fuels and their continuity in presettlement times is largely unknown. A more conservative estimate of the fire frequency suggests it was more variable than that of coniferous systems. Wyoming big sagebrush communities were found to have fire intervals ranging from 10 to 70 years (Vincent 1992 in Paysen and others 2000, page 142; Young and Evans 1991, *ibid.*). Presettlement conditions are believed to have had a higher percentage of grasses than in the same areas today (Griffiths 1910 in Paysen and others 2000, page 142; Leopold 1924, *ibid.*)

In addition to lightning-caused fires, it is likely that native tribes burned the area on a regular basis, according to historical accounts. However, few trees occur in the shrub-steppe at Bridgeport State Park to verify this with fire scars. Fires can burn rapidly through the shrub-steppe, such as the one that burned in 2008 for many miles along the open slopes north of Wenatchee. Although there is evidence of recent wildfires within the park, these fires were not as extensive as historic fires would have been.

Nearly all of the park was once grazed by livestock. Grazing reduced grass and forb cover and was one factor that led to the dominance of the extensive sagebrush we see today. Irrigated orchards above the park and the irrigated golf course now contribute significant runoff and subsurface moisture that has created artificial wetland communities that were probably not part of the historical vegetation.

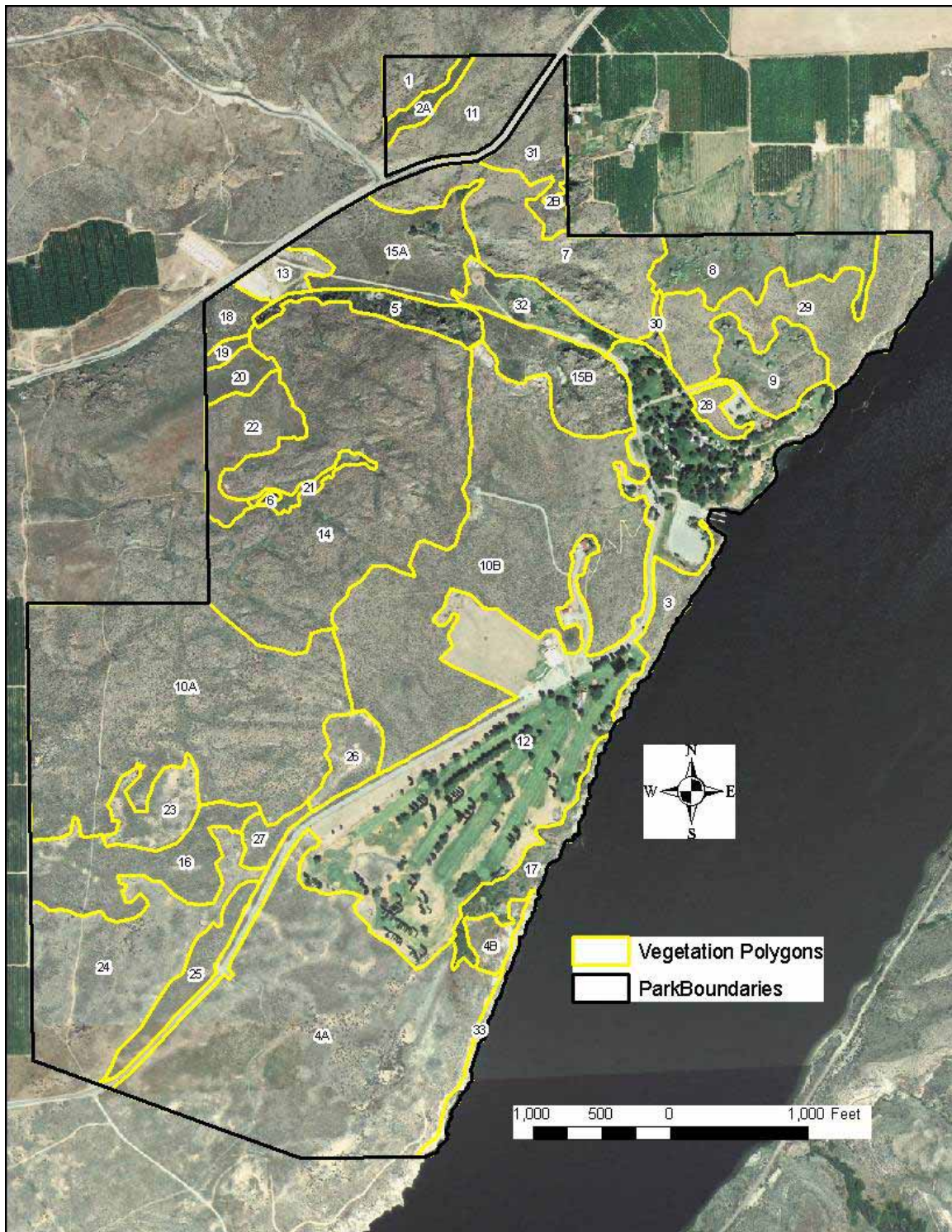
Based on this interpretation, fire suppression has impacted Bridgeport State Park. With more frequent fire in presettlement times, big sagebrush and other dominant shrubs would have been less abundant, while grasses, annuals and seral species would have been more abundant.

## **Results**

### **Vegetation Community Mapping**

A total of 37 vegetation community polygons were mapped and surveyed in Bridgeport State Park (Figure 2). These polygons were categorized into 13 plant associations and four generalized land cover classes (Table 1). Table 2 gives additional reference and global conservation status information about the plant associations (see Appendix C for status codes). The communities were assigned to a primary, secondary or a tertiary community. Primary community types are the dominant or matrix vegetation community within a polygon, whereas secondary and tertiary community types are less abundant vegetation community types that occur within the same polygon and were not conducive to being mapped as a separate polygon due to the size, shape, or pattern of the community patches within the polygon.





**Figure 2. Map of Bridgeport State Park showing vegetation community polygons overlaid onto an aerial photo of the park.**

**Table 1. Plant communities and land cover types observed in Bridgeport State Park (asterisked records are plant associations only found as secondary communities)**

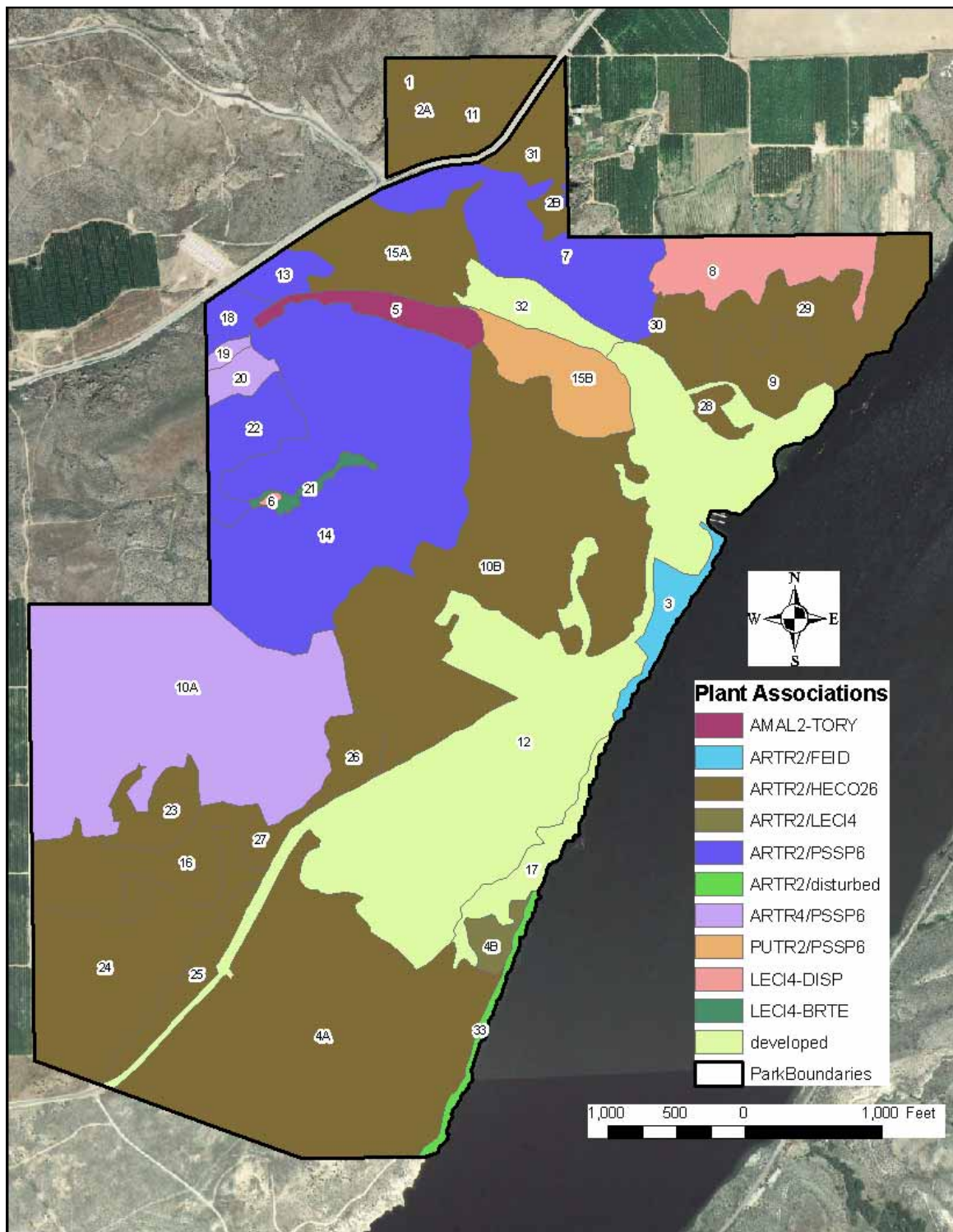
| Plant Association, Vegetation Community or Land Cover (Codes)                            | Existing Vegetation and Land Cover Observed (Codes)                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Saskatoon serviceberry – western poison ivy (AMAL2-TORY)                                 | PHLE4-AMAL2-TORY/PSSP6                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| * Saskatoon serviceberry – Lewis' mock-orange / bluebunch wheatgrass (AMAL2-PHLE4/PSSP6) | AMAL2-PHLE4-ARTR2                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Big sagebrush / Idaho fescue (ARTR2/FEID)                                                | ARTR2-PUTR2/FEID-BRTE-LUPIN                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Big sagebrush / needle-and-thread (ARTR2/HECO26)                                         | ARTR2-ARTR4/HECO26-DISP-BRRA2;<br>ARTR2/HECO26;<br>ARTR2/HECO26/PLPA2;<br>ARTR2-ARTR4/HECO26;<br>ARTR2-ARTR4;<br>ARTR2-ARTR4/HECO26-VULPI-ERIGE2;<br>ARTR2-ARTR4-ERNA10/HECO26-ACMI2-LUSE4;<br>ARTR2-ERNA10;<br>ARTR2-ERNA10/EQLA-ARDR4;<br>ARTR2-ERNA10/HECO26-ARDR4;<br>ARTR2-ERNA10-PUTR2/HECO26-BRTE-EQLA;<br>ARTR2-ERNA10-TECA2/SIAL2-EQLA-ARDR4;<br>ARTR2-PUTR/HECO26;<br>ARTR2-TECA2/HECO26-PSSP6-LECI4-COUM;<br>ARTR4-ARTR2-ERNA10/HECO26-LUSE4-ARDR4;<br>ERNA10-ARTR2/ARDR4-HECO26 |
| Big sagebrush / basin wildrye (ARTR2/LECI4)                                              | ARTR2/LECI4;<br>ARTR2/LECI4-SIAL2-BTRE                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Big sagebrush / bluebunch wheatgrass (ARTR2/PSSP6)                                       | ARTR2/CIAR4-BASSI;<br>ARTR2/PSSP6-BRRA2;<br>ARTR2/PSSP6-BRTE-AGCR;<br>ARTR2-PUTR2/BRTE-PSSP6-LODI;<br>ARTR2-PUTR2/PSSP6-HECO26-BRTE;<br>ARTR2-PUTR-ARTR4/PSSP6;<br>ARTR2-PUTR-ERNI2/PSSP6;<br>ERNA10-ARTR2/CEDI3-SIAL2-BRTE                                                                                                                                                                                                                                                                 |
| Big sagebrush / disturbed (ARTR2/disturbed)                                              | ARTR2-PUTR2/MEOF                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Three-tip sagebrush / bluebunch wheatgrass (ARTR4/PSSP6)                                 | ARTR2-ARTR4-ERHE2/HECO26-LUSE4;<br>ARTR4/PSSP6-ARCOC;<br>ARTR4-RICE-AMAL2/PSSP6/rocks;<br>PSSP6                                                                                                                                                                                                                                                                                                                                                                                             |
| Bitterbrush / bluebunch wheatgrass (PUTR2/PSSP6)                                         | ARTR2-PUTR2/PSSP6-FEID                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Basin wildrye / saltgrass (LECI4-DISP)                                                   | ARTR2/DISP;<br>BRRA2-DISP-BASC5-LECI4;<br>ELAN-LELA2-BASC5 DISP;<br>HOJU-SARU-DISP-LECI4;<br>POBAT-introduced trees/FRLA/LECI4-DISP wetland                                                                                                                                                                                                                                                                                                                                                 |
| Basin wildrye / cheatgrass (LECI4-BRTE)                                                  | LECI4-BRRA2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| * Needle-and-thread dunes (HECO26 dunes)                                                 | ARCAS5-BRTE-HECO26                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| * Yellow rabbitbrush – rubber rabbitbrush – snow buckwheat dunes (ERNA10-CHVI8-ERNI2)    | PUTR2-ERNI2-ERNA10/ARCAS5                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| * Rock outcrop (cliffs)                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| * Rock outcrop (talus)                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| * Reservoir shoreline                                                                    | MEOF-IRPS/cobble beach;<br>reservoir shoreline                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Developed                                                                                | developed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**Table 2. Plant association authority and status. (See Appendix C for status codes. Note that the “~” under Global Status represents the rank estimated by PBI.)**

| Code                     | Scientific Names                                                                            | Authority                      | Global Status              |
|--------------------------|---------------------------------------------------------------------------------------------|--------------------------------|----------------------------|
| AMAL2-TORY               | <i>Amelanchier alnifolia</i> – <i>Toxicodendron rydbergii</i>                               | Crawford 2003                  | ~G2 (imperiled)            |
| AMAL2-PHLE4/PSSP6        | <i>Amelanchier alnifolia</i> – <i>Philadelphus lewisii</i> / <i>Pseudoroegneria spicata</i> | Crawford 2003                  | ~G2 (imperiled)            |
| ARTR2/FEID               | <i>Artemisia tridentata</i> / <i>Festuca idahoensis</i>                                     | Daubenmire 1970                | G4 (apparently secure)     |
| ARTR2/HECO26             | <i>Artemisia tridentata</i> / <i>Hesperostipa comata</i>                                    | Daubenmire 1970                | G4 (apparently secure)     |
| ARTR2/LECI4              | <i>Artemisia tridentata</i> / <i>Leymus cinereus</i>                                        | Crawford 1999                  | G2 (imperiled)             |
| ARTR2/PSSP6              | <i>Artemisia tridentata</i> / <i>Pseudoroegneria spicata</i>                                | Daubenmire 1970; Crawford 1999 | G5 (secure)                |
| ARTR2/disturbed          | <i>Artemisia tridentata</i>                                                                 | Crawford 1999                  | ~G5 (secure)               |
| ARTR4/PSSP6              | <i>Artemisia tripartita</i> / <i>Pseudoroegneria spicata</i>                                | Daubenmire 1970                | G2 (imperiled)             |
| PUTR2/PSSP6              | <i>Purshia tridentata</i> / <i>Pseudoroegneria spicata</i>                                  | Daubenmire 1970; Crawford 1999 | ~G3 (vulnerable)           |
| LECI4-DISP               | <i>Leymus cinereus</i> / <i>Distichlis spicata</i>                                          | Daubenmire 1970; Crawford 2003 | G3 (vulnerable)            |
| LECI4-BRTE               | <i>Leymus cinereus</i> / <i>Bromus tectorum</i>                                             | Crawford 2003                  | ~G4 (apparently secure)    |
| HECO26 dunes             | <i>Hesperostipa comata</i>                                                                  | Hallock and others 2007        | ~G1 (critically imperiled) |
| ERNA10-CHVI8-ERNI2 dunes | <i>Ericameria nauseosus</i> – <i>Chrysothamnus viscidiflorus</i> – <i>Eriogonum niveum</i>  | Hallock and others 2007        | ~G1 (critically imperiled) |

Each vegetation community polygon has at least one primary vegetation community/land cover type assigned to it, and up to two additional sub-types. Figure 3 shows a map depicting the primary vegetation community/land cover class for each polygon within the park. Appendix D describes the attributes described for each polygon mapped within the project area.





**Figure 3. Map of the primary plant communities attributed to each vegetation polygon.**

## Vegetation Community and Land Cover Types

### Saskatoon serviceberry – western poison ivy (AMAL2-TORY) (~G2, imperiled)



**Figure 4. An example of the Saskatoon serviceberry – western poison ivy association at Bridgeport State Park.**

The Saskatoon serviceberry – western poison ivy plant association has an overstory dominated by serviceberry and an understory dominated by poison ivy. At Bridgeport State Park, this association occurs in association with bedrock and talus (Figure 4). This association was described by Crawford 2003. It has a rank of G2, imperiled.

The Saskatoon serviceberry – western poison ivy plant association is similar in composition to the Saskatoon serviceberry – Lewis' mock-orange / bluebunch wheatgrass association that occurs nearby. Typically, the former community has rockier soils and talus. These communities provide important structural habitat complexity for wildlife, as well as roosting and cover habitat for migratory song birds. At Bridgeport State Park this community is mostly in good ecological condition, despite being adjacent to some degraded areas with noxious weeds. Because of its rarity, care should be given to careful management of this community.



**Saskatoon serviceberry – Lewis’ mock-orange / bluebunch wheatgrass (AMAL2-PHLE4/PSSP6) (~G2, imperiled)**



**Figure 5. An example of the Saskatoon serviceberry – Lewis’ mock-orange / bluebunch wheatgrass association at Bridgeport State Park.**

The Saskatoon serviceberry – Lewis’ mock-orange / bluebunch wheatgrass plant association has an overstory dominated by serviceberry or Lewis’ mock-orange and an understory dominated by bluebunch wheatgrass. At Bridgeport State Park, this association only occurs as a secondary plant association within the bitterbrush / bluebunch wheatgrass association. It occurs in a rocky valley with numerous bedrock outcrops (Figure 5). It was described by Crawford 2003. It has a rank of G2, imperiled.

The Saskatoon serviceberry – Lewis’ mock-orange / bluebunch wheatgrass plant association is similar in composition to the Saskatoon serviceberry – western poison ivy association that occurs nearby. Typically, the former community has less rocky soils. These communities provide important structural habitat complexity for wildlife as well as roosting and cover habitat for migratory song birds. At Bridgeport State Park this community is mostly in good ecological condition, despite being adjacent to some degraded areas with noxious weeds. Because of its rarity, care should be given to careful management of this community.

**Big sagebrush / Idaho fescue (ARTR2/FEID) (G4, apparently secure)**



**Figure 6. An example of the big sagebrush / Idaho fescue association at Bridgeport State Park.**

The big sagebrush / Idaho fescue plant association has an overstory dominated by big sagebrush and an understory dominated by Idaho fescue. At Bridgeport State Park, this association occurs on a dry terrace just above the Columbia River (Figure 6). It was described by Daubenmire (1970). It has a rank of G4, apparently secure.



**Big sagebrush / needle-and-thread (ARTR2/HECO26) (G4, apparently secure)**



**Figure 7. An example of the big sagebrush / needle-and-thread association at Bridgeport State Park.**

The big sagebrush / needle-and-thread plant association has an overstory dominated by big sagebrush and an understory dominated by needle-and-thread grass. At Bridgeport State Park, this association is widespread in dry, sandy areas (Figure 7). It was described by Daubenmire (1970). It has a rank of G4, apparently secure.

The big sagebrush / needle-and-thread plant association grades into needle-and-thread dune communities at the southern end of the park. These communities in sandy soils can be distinguished from the more typical phase by the presence of smooth horsetail (*Equisetum laevigatum*), as evident in Figure 7.



**Big sagebrush / basin wildrye (ARTR2/LECI4) (G2, imperiled)**



**Figure 8. An example of the big sagebrush / basin wildrye association at Bridgeport State Park.**

The big sagebrush / basin wildrye plant association is co-dominated by big sagebrush and basin wildrye. At Bridgeport State Park, this association occurs in moist to wet swales in association with the disturbed basin wildrye association or with the narrowleaf willow plant association (Figure 8). It was described by Crawford (1999). It has a rank of G2, imperiled.

At Bridgeport State Park, the big sagebrush / basin wildrye plant association often occurs as a concentric zone around wetlands. This community has drier soils than adjacent saltgrass communities and moister soils than adjacent sagebrush communities. Soils are often calcareous.

Because of its rarity, the big sagebrush / basin wildrye plant association should be carefully managed. Conservation measures should avoid permanent hydrologic changes to the sites and avoid disturbances that will increase the cover of noxious weeds.

**Big sagebrush / bluebunch wheatgrass (ARTR2/PSSP6) (G5, secure)**



**Figure 9. An example of the big sagebrush / bluebunch wheatgrass association at Bridgeport State Park.**

The big sagebrush / bluebunch wheatgrass plant association has an overstory dominated by big sagebrush and an understory dominated by bluebunch wheatgrass. At Bridgeport State Park this association occurs primarily in the northwest part of the park. This area has rockier ground and steeper slopes than most of the rest of the park (Figure 9). It was described by Daubenmire (1970) and Crawford (1999). It has a rank of G5, secure.

The big sagebrush / bluebunch wheatgrass plant association can be impacted by the invasion of annual grasses, such as cheatgrass (*Bromus tectorum*). At Bridgeport State Park, invasive species are less common in this association than in other parks in eastern Washington that we surveyed in 2008. This may be due to the relative lack of disturbance in the shrub-steppe areas of Bridgeport State Park. The most common noxious weed is Dalmatian toadflax (*Linaria dalmatica* ssp. *dalmatica*).



**Big sagebrush / disturbed (ARTR2/disturbed) (~G5, secure)**



**Figure 10. An example of the big sagebrush / disturbed vegetation type at Bridgeport State Park (background, on the dry cliffs).**

The disturbed big sagebrush plant association has an overstory dominated by big sagebrush and an understory dominated by invasive species. At Bridgeport State Park, the disturbed sagebrush association occurs in two main areas: a brush disposal area near the west entrance and along the eroding banks of the Columbia River on the east side of the park (Figure 10). It was described by Crawford (1999). It has a rank of G5, secure.

### **Three-tip sagebrush / bluebunch wheatgrass (ARTR4/PSSP6) (G2, imperiled)**



**Figure 11. An example of the three-tip sagebrush / bluebunch wheatgrass association at Bridgeport State Park.**

The three-tip sagebrush / bluebunch wheatgrass plant association has an overstory dominated by three-tip sagebrush and an understory dominated by bluebunch wheatgrass. At Bridgeport State Park, this association primarily occurs in western sections of the park (Figure 11). It was described by Daubenmire (1970). It has a rank of G2, imperiled.

The three-tip sagebrush / bluebunch wheatgrass plant association grows in low elevations sites that tend to have a hotter microclimate than adjacent sites dominated by big sagebrush. The loss of this association to development and agriculture has contributed to its decline. At Bridgeport State Park, occurrences of this association were in good ecological condition. This increases the ecological value of these areas.



**Bitterbrush / bluebunch wheatgrass (PUTR2/PSSP6) (~G3; vulnerable)**



**Figure 12. An example of the bitterbrush / bluebunch wheatgrass association at Bridgeport State Park.**

The bitterbrush / bluebunch wheatgrass plant association has an overstory dominated by bitterbrush and an understory dominated by bluebunch wheatgrass. At Bridgeport State Park, this association occurs in a rocky, dry valley that bisects the park from the west (Figure 12). It was described by Daubenmire (1970) and Crawford (1999). It was tentatively assigned a rank of G3, vulnerable, based on its similarity to the common ponderosa pine / bitterbrush / bluebunch wheatgrass association of Lillybridge and others (1995).

Common species in the bitterbrush / bluebunch wheatgrass association are Saskatoon serviceberry (*Amelanchier alnifolia*) and rice currant (*Ribes cereum*).

The bitterbrush / bluebunch wheatgrass association probably evolved with a frequent fire-return interval in this general area. Similar areas with scattered ponderosa pines had a fire-return interval of 8-15 years (Ohlson 1996). The abundance of grasses in this association would likely have been higher in presettlement times due to the high flammability of bitterbrush, as well as to its preference as a browse species by mule deer.

**Basin wildrye / saltgrass (LECI4-DISP) (G3, vulnerable)**



**Figure 13. An example of the Basin wildrye / saltgrass association at Bridgeport State Park.**

The basin wildrye / saltgrass plant association has an overstory dominated by basin wildrye and an understory dominated by saltgrass. At Bridgeport State Park, this association occurs at the north end of the park adjacent to agricultural areas (Figure 13). It was described by Daubenmire (1970) and by Crawford (2003). It has a rank of G3, vulnerable.

At the north end of Bridgeport State Park, the basin wildrye / saltgrass plant association is seriously impacted by invasion by non-native species. This polygon was ranked in poor ecological condition. The cause of this invasion appears to be changed hydrology from nearby agricultural runoff. The invasion is so profound that most of the original area covered by this plant association cannot be typed. Figure 13 shows one of the few areas that retains its original character.



**Basin wildrye / cheatgrass (LECI4-BRTE) (~G4; apparently secure)**



**Figure 14. An example of the basin wildrye / cheatgrass vegetation type at Bridgeport State Park.**

The basin wildrye / cheatgrass plant association has an overstory dominated by basin wildrye and an understory dominated by cheatgrass and other non-native grasses. The cheatgrass is an invasive species that has changed the ecology of this plant association. At Bridgeport State Park this association occurs along the margin of moist to wet swales (Figure 14). It was described by Crawford (2003). It was assigned a rank of G4, apparently secure, based on the fact that it was disturbed. It is worth noting that the basin wildrye herbaceous plant association in a less disturbed state would have been ranked G2 as a natural community.

The basin wildrye / cheatgrass vegetation type also occurs as a secondary plant association in an area that captures runoff from the golf course, close to the Columbia River. Water from the golf course and orchards above the park has resulted in increased invasion by non-native species.

## Needle-and-thread dunes (HECO26) (~G1; critically imperiled)



**Figure 15. An example of needle-and-thread dunes at Bridgeport State Park, intermixed with areas dominated by three-tip sagebrush.**

The needle-and-thread dunes community is dominated by needle-and-thread grass on sandy ground. At Bridgeport State Park this association only occurs as a secondary association in sandy areas within a matrix dominated by three-tip sagebrush / needle-and-thread grass. It occurs in the southernmost part of the park which becomes increasingly dominated by sandy soils (Figure 15). It was described by Hallock and others (2007). It is unranked by NatureServe (2008). Based on the description by Hallock and others (2007) of this community's abundance in Washington as "infrequently found" it was tentatively ranked G1, critically imperiled.

At Bridgeport State Park, the sand in the needle-and-thread dunes community appears to be derived from outwash deposits rather than aeolian deposits. Deposits are flatter and may be underlain by other soil types. The underlying sediments along adjacent parts of the Columbia River are silt, not sand. Therefore this community may be the bottom of a former lakebed. The needle-and-thread dunes community appears to become increasingly dominated by sand in going south from Bridgeport State Park. There may be better preserved examples on adjacent lands.

The needle-and-thread dunes communities were frequently dominated by smooth horsetail (*Equisetum laevigatum*), which wasn't described as a species in the paper by Hallock and others (2007). At



Bridgeport State Park, the needle-and-thread dunes community may deserve description as a new plant association, based on the above differences with the published description.

The needle-and-thread dunes community is prone to invasion by Russian thistle (*Salsola kali*) and burning bush (*Bassia scoparia*). This has occurred alongside roads and trails. Conservation of this community should conserve the dune resource and prevent invasive species from covering the exposed sand habitat. This community is frequently visited by bicyclists and hikers along the park's nature trail system who can appreciate its subtle, lonely beauty (cover photo of this report).

**Yellow rabbitbrush – rubber rabbitbrush – snow buckwheat dunes (ERNA10-CHVI8-ERNI2) (~G1; critically imperiled)**



**Figure 16. An example of the yellow rabbitbrush – rubber rabbitbrush – snow buckwheat dunes community at Bridgeport State Park.**

The yellow rabbitbrush – rubber rabbitbrush – snow buckwheat dunes community is characterized by sandy areas dominated by yellow rabbitbrush, rubber rabbitbrush and snow buckwheat. At Bridgeport State Park this association only occurs as a secondary association in sandy areas within a matrix dominated by big sagebrush / needle-and-thread grass. It occurs in an area near the Columbia River just south of the golf course (Figure 16). A community that may be the same as this was described by Hallock and others (2007). It is unranked by NatureServe (2008). Based on its apparent rarity, this community was assigned a rank of G1, critically imperiled. However, Hallock and others (2007) cite a similar community with an abundance in Washington of “widely distributed”. If their community is the same as this one, then this one may warrant a lower rank.

At Bridgeport State Park, the yellow rabbitbrush – rubber rabbitbrush – snow buckwheat dunes community appears to be originally derived from glacial outwash deposits, even though wind is currently shaping the land. The ground here is relatively flat, and underlying sediments along adjacent parts of the Columbia River are underlain by silt.

The yellow rabbitbrush – rubber rabbitbrush – snow buckwheat dunes community may be related to or conspecific with the nearby needle-and-thread dunes community, which it partly abuts. However, the floristic composition of the two is different. Smooth horsetail (*Equisetum laevigatum*) is lacking from this community. This community is practically free of Russian thistle, but instead it is suffering from invasion by Dalmatian toadflax.

## Other Land Cover Types

Bridgeport State Park had a number of unclassified areas and general land cover types including the following:

- **Talus.** Talus fields are areas of large boulders, often on steep slopes below rock cliffs. They provide unique habitat for certain plants and animals.
- **Rock cliffs.** Rock cliffs are areas of exposed bedrock, often very steep at Bridgeport State park. They provide unique habitat for certain plants and animals.
- **Reservoir shoreline.** These are areas along the Columbia River reservoir system.
- **Developed areas.** This includes campgrounds, roads, parking areas, roads, lawns and park facilities.

# Rare Plant Surveys

## ***Methods***

Bridgeport State Park was visited five times by several botanists and interns during the 2008 field season. We used the Washington Department of Natural Resources Natural Heritage Program's (DNR NHP) rare plant list to determine the conservation status of vascular plants encountered in the field.

Field surveys were conducted on May 7, June 5, July 19, July 24 and August 10. During the field surveys, we were equipped with reference literature, rare plant lists for the area, maps showing rare plant locations from previous surveys, and a portable plant identification lab. We looked for rare plants in habitats previously identified as being likely occurrence sites. So as not to miss any rare plants, all vascular plant species encountered during the inventory were identified on site, at base camp in the portable laboratory, or back at our office.

Survey routes were determined based on the need to cover efficiently a large proportion of the park's area throughout the field season. We surveyed areas such as cliffs, the lakeshore, and the wetland at the north end, more intensively where rare plants were felt more likely to occur. This method is referred to as the intuitive-controlled method of rare plant surveys (Whiteaker et al. 1998). Survey routes for the rare plant inventory and rare plant locations were recorded as GPS waypoints and trackpoints, which were later compiled into a single GIS data layer, depicted in Figure 1.

## ***Results***

No rare plants listed as threatened, endangered or sensitive by the State of Washington were found in Bridgeport State Park. Pre-field reviews indicated that there were no existing records of plants listed as threatened, endangered or sensitive by the State of Washington in the park.

## Vascular Plant List for the 2008 Project Area

There were 171 taxa identified to species during surveys of Bridgeport State Park (Table 3). An additional 32 genera were observed that were only identifiable to the rank of genus or family. This would bring the total number of taxa observed to 203. However 14 of the genera could possibly be duplicates of other species listed at the specific rank. Therefore the total number of taxa observed is approximately 189, but could be as high as 203. Table 3 also identifies 60 non-native species identified within the park, or approximately 32% of the total number of species observed.

Several taxa would require more extensive herbarium consultation to get 100% positive identification. These are: (1) Flodman's thistle (*Cirsium flodmanii*) was reported for this area by Curtis Bjork (personal communication to G. Wooten) while doing his graduate botany studies for WSU close to this park. That species of thistle is not confirmed for Washington, but is a native of the Great Basin. This species is similar to wavyleaf thistle (*C. undulatum*), which we did find. (2) Two species of similar bulrush (*Schoenoplectus*) may actually be only one. (3) There were three species of broomrape (*Orobanche*) identified, all of which are similar in appearance. These three may represent only one or two species.

**Table 3. Vascular Plant Species of Bridgeport State Park. The column "Symbol" represents the plant code used on the USDA PLANTS database.**

| Symbol | Scientific Name with Author                                                                        | National Common Name   | Family          | Exotic |
|--------|----------------------------------------------------------------------------------------------------|------------------------|-----------------|--------|
| ACER   | Acer L.                                                                                            | maple                  | Aceraceae       | yes    |
| ACMI2  | Achillea millefolium L.                                                                            | common yarrow          | Asteraceae      |        |
| ACHY   | Achnatherum hymenoides (Roem. & Schult.) Barkworth                                                 | Indian ricegrass       | Poaceae         |        |
| AGCR   | Agropyron cristatum (L.) Gaertn.                                                                   | crested wheatgrass     | Poaceae         | yes    |
| AGROS2 | Agrostis L.                                                                                        | bentgrass              | Poaceae         |        |
| AIAL   | Ailanthus altissima (Mill.) Swingle                                                                | tree of heaven         | Simaroubaceae   | yes    |
| ALLIU  | Allium L.                                                                                          | onion                  | Liliaceae       |        |
| AMAL2  | Amelanchier alnifolia (Nutt.) Nutt. ex M. Roem.                                                    | Saskatoon serviceberry | Rosaceae        |        |
| ANDI2  | Antennaria dimorpha (Nutt.) Torr. & A. Gray                                                        | low pussytoes          | Asteraceae      |        |
| ANCO2  | Anthemis cotula L.                                                                                 | stinking chamomile     | Asteraceae      | yes    |
| ARHO2  | Arabis holboellii Hornem.                                                                          | Holboell's rockcress   | Brassicaceae    |        |
| ARCO5  | Arenaria congesta Nutt.                                                                            | ballhead sandwort      | Caryophyllaceae |        |
| ARPUL  | Aristida purpurea Nutt. var. longiseta (Steud.) Vasey                                              | Fendler threeawn       | Poaceae         |        |
| ARCAS5 | Artemisia campestris L. ssp. borealis (Pall.) H.M. Hall & Clem. var. scouleriana (Hook.) Cronquist | field sagewort         | Asteraceae      |        |
| ARDR4  | Artemisia dracunculus L.                                                                           | tarragon               | Asteraceae      |        |
| ARTR2  | Artemisia tridentata Nutt.                                                                         | big sagebrush          | Asteraceae      |        |
| ARTR4  | Artemisia tripartita Rydb.                                                                         | threetip sagebrush     | Asteraceae      |        |
| ASCLE  | Asclepias L.                                                                                       | milkweed               | Asclepiadaceae  |        |
| ASSP   | Asclepias speciosa Torr.                                                                           | showy milkweed         | Asclepiadaceae  |        |
| ASOF   | Asparagus officinalis L.                                                                           | garden asparagus       | Liliaceae       | yes    |
| BASA3  | Balsamorhiza sagittata (Pursh) Nutt.                                                               | arrowleaf balsamroot   | Asteraceae      |        |
| BAHY   | Bassia hyssopifolia (Pall.) Kuntz                                                                  | fivehorn smotherweed   | Chenopodiaceae  | yes    |
| BASC5  | Bassia scoparia (L.) A.J. Scott                                                                    | burningbush            | Chenopodiaceae  | yes    |
| BEOC2  | Betula occidentalis Hook.                                                                          | water birch            | Betulaceae      |        |
| BRAR5  | Bromus arvensis L.                                                                                 | field brome            | Poaceae         | yes    |
| BROMU  | Bromus L.                                                                                          | brome                  | Poaceae         | yes    |
| BRRA2  | Bromus racemosus L.                                                                                | bald brome             | Poaceae         | yes    |

| Symbol | Scientific Name with Author                                                                                | National Common Name    | Family           | Exotic |
|--------|------------------------------------------------------------------------------------------------------------|-------------------------|------------------|--------|
| BRTE   | <i>Bromus tectorum</i> L.                                                                                  | cheatgrass              | Poaceae          | yes    |
| CALY   | <i>Calochortus lyallii</i> Baker                                                                           | Lyall's mariposa lily   | Liliaceae        |        |
| CAMA5  | <i>Calochortus macrocarpus</i> Douglas                                                                     | sagebrush mariposa lily | Liliaceae        |        |
| CAREX  | <i>Carex</i> L.                                                                                            | sedge                   | Cyperaceae       |        |
| CAPR5  | <i>Carex praegracilis</i> W. Boott                                                                         | clustered field sedge   | Cyperaceae       |        |
| CAVU2  | <i>Carex vulpinoidea</i> Michx.                                                                            | fox sedge               | Cyperaceae       |        |
| CASTI2 | <i>Castilleja Mutis ex L. f.</i>                                                                           | Indian paintbrush       | Scrophulariaceae |        |
| CEDI3  | <i>Centaurea diffusa</i> Lam.                                                                              | diffuse knapweed        | Asteraceae       | yes    |
| CESTM  | <i>Centaurea stoebe</i> L. ssp. <i>micranthos</i> (Gugler) Hayek                                           | spotted knapweed        | Asteraceae       | yes    |
| CEEX   | <i>Centaurium exaltatum</i> (Griseb.) W. Wight ex Piper                                                    | desert centauray        | Gentianaceae     |        |
| CERAS  | <i>Cerastium</i> L.                                                                                        | mouse-ear chickweed     | Caryophyllaceae  |        |
| CHDO   | <i>Chaenactis douglasii</i> (Hook.) Hook. & Arn.                                                           | Douglas' dustymaiden    | Asteraceae       |        |
| CHGL13 | <i>Chamaesyce glyptosperma</i> (Engelm.) Small                                                             | ribseed sandmat         | Euphorbiaceae    | yes    |
| CHAL7  | <i>Chenopodium album</i> L.                                                                                | lambsquartars           | Chenopodiaceae   | yes    |
| CHAM   | <i>Chenopodium ambrosioides</i> L.                                                                         | Mexican tea             | Chenopodiaceae   | yes    |
| CHENO  | <i>Chenopodium</i> L.                                                                                      | goosefoot               | Chenopodiaceae   |        |
| CHSI2  | <i>Chenopodium simplex</i> (Torr.) Raf.                                                                    | mapleleaf goosefoot     | Chenopodiaceae   | yes    |
| CHVI8  | <i>Chrysothamnus viscidiflorus</i> (Hook.) Nutt.                                                           | yellow rabbitbrush      | Asteraceae       |        |
| CIAR4  | <i>Cirsium arvense</i> (L.) Scop.                                                                          | Canada thistle          | Asteraceae       | yes    |
| CIUN   | <i>Cirsium undulatum</i> (Nutt.) Spreng.                                                                   | wavyleaf thistle        | Asteraceae       |        |
| CIVU   | <i>Cirsium vulgare</i> (Savi) Ten.                                                                         | bull thistle            | Asteraceae       | yes    |
| COLI2  | <i>Collomia linearis</i> Nutt.                                                                             | tiny trumpet            | Polemoniaceae    |        |
| COUM   | <i>Comandra umbellata</i> (L.) Nutt.                                                                       | bastard toadflax        | Santalaceae      |        |
| COCA5  | <i>Conyza canadensis</i> (L.) Cronquist                                                                    | Canadian horseweed      | Asteraceae       |        |
| COSE16 | <i>Cornus sericea</i> L.                                                                                   | redosier dogwood        | Cornaceae        |        |
| CRAT   | <i>Crepis atribarba</i> A. Heller                                                                          | slender hawksbeard      | Asteraceae       |        |
| CREPI  | <i>Crepis</i> L.                                                                                           | hawksbeard              | Asteraceae       |        |
| CROC   | <i>Crepis occidentalis</i> Nutt.                                                                           | largeflower hawksbeard  | Asteraceae       |        |
| CRRUH2 | <i>Crepis runcinata</i> (James) Torr. & A. Gray ssp. <i>hispidulosa</i> (Howell ex Rydb.) Babc. & Stebbins | fiddleleaf hawksbeard   | Asteraceae       |        |
| CYEC   | <i>Cynosurus echinatus</i> L.                                                                              | bristly dogstail grass  | Poaceae          | yes    |
| DELI3  | <i>Delphinium lineapetalum</i> Ewan                                                                        | thinpetal larkspur      | Ranunculaceae    |        |
| DESCU  | <i>Descurainia Webb &amp; Bethel.</i>                                                                      | tansymustard            | Brassicaceae     |        |
| DIFU2  | <i>Dipsacus fullonum</i> L.                                                                                | Fuller's teasel         | Dipsacaceae      | yes    |
| DISP   | <i>Distichlis spicata</i> (L.) Greene                                                                      | saltgrass               | Poaceae          |        |
| DODEC  | <i>Dodecatheon</i> L.                                                                                      | shootingstar            | Primulaceae      |        |
| DRVE2  | <i>Draba verna</i> L.                                                                                      | spring draba            | Brassicaceae     | yes    |
| ELAN   | <i>Elaeagnus angustifolia</i> L.                                                                           | Russian olive           | Elaeagnaceae     | yes    |
| ELEOC  | <i>Eleocharis</i> R. Br.                                                                                   | spikerush               | Cyperaceae       |        |
| ELCA4  | <i>Elymus canadensis</i> L.                                                                                | Canada wildrye          | Poaceae          |        |
| EPCI   | <i>Epilobium ciliatum</i> Raf.                                                                             | fringed willowherb      | Onagraceae       |        |
| EPILO  | <i>Epilobium</i> L.                                                                                        | willowherb              | Onagraceae       |        |
| EPMI   | <i>Epilobium minutum</i> Lindl. ex Lehm.                                                                   | chaparral willowherb    | Onagraceae       |        |
| EQUIS  | <i>Equisetum</i> L.                                                                                        | horsetail               | Equisetaceae     |        |
| EQLA   | <i>Equisetum laevigatum</i> A. Braun                                                                       | smooth horsetail        | Equisetaceae     |        |
| ERNA10 | <i>Ericameria nauseosa</i> (Pall. ex Pursh) G.L. Nesom & Baird                                             | rubber rabbitbrush      | Asteraceae       |        |
| ERCO4  | <i>Erigeron compositus</i> Pursh                                                                           | cutleaf daisy           | Asteraceae       |        |
| ERCO5  | <i>Erigeron corymbosus</i> Nutt.                                                                           | longleaf fleabane       | Asteraceae       |        |

| Symbol | Scientific Name with Author                                                   | National Common Name    | Family           | Exotic |
|--------|-------------------------------------------------------------------------------|-------------------------|------------------|--------|
| ERFI2  | <i>Erigeron filifolius</i> (Hook.) Nutt.                                      | threadleaf fleabane     | Asteraceae       |        |
| ERIGE2 | <i>Erigeron</i> L.                                                            | fleabane                | Asteraceae       |        |
| ERLI   | <i>Erigeron linearis</i> (Hook.) Piper                                        | desert yellow fleabane  | Asteraceae       |        |
| ERPU2  | <i>Erigeron pumilus</i> Nutt.                                                 | shaggy fleabane         | Asteraceae       |        |
| ERHE2  | <i>Eriogonum heracleoides</i> Nutt.                                           | parsnipflower buckwheat | Polygonaceae     |        |
| ERNI2  | <i>Eriogonum niveum</i> Douglas ex Benth.                                     | snow buckwheat          | Polygonaceae     |        |
| ERYSI  | <i>Erysimum</i> L.                                                            | wallflower              | Brassicaceae     |        |
| FEID   | <i>Festuca idahoensis</i> Elmer                                               | Idaho fescue            | Poaceae          |        |
| FERU2  | <i>Festuca rubra</i> L.                                                       | red fescue              | Poaceae          | yes    |
| FRAXI  | <i>Fraxinus</i> L.                                                            | ash                     | Oleaceae         | yes    |
| FRPU2  | <i>Fritillaria pudica</i> (Pursh) Spreng.                                     | yellow fritillary       | Liliaceae        |        |
| GAAR   | <i>Gaillardia aristata</i> Pursh                                              | common gaillardia       | Asteraceae       |        |
| GAAP2  | <i>Galium aparine</i> L.                                                      | stickywilly             | Rubiaceae        | yes    |
| GADI2  | <i>Gayophytum diffusum</i> Torr. & A. Gray                                    | spreading groundsmoke   | Onagraceae       |        |
| GLTR   | <i>Gleditsia triacanthos</i> L.                                               | honeylocust             | Fabaceae         | yes    |
| HACI4  | <i>Hackelia ciliata</i> (Douglas ex Lehm.) I.M. Johnst.                       | Okanogan stickseed      | Boraginaceae     |        |
| HEPE   | <i>Helianthus petiolaris</i> Nutt.                                            | prairie sunflower       | Asteraceae       |        |
| HECO26 | <i>Hesperostipa comata</i> (Trin. & Rupr.) Barkworth                          | needle and thread       | Poaceae          |        |
| HECY2  | <i>Heuchera cylindrica</i> Douglas ex Hook.                                   | roundleaf alumroot      | Saxifragaceae    |        |
| HOJU   | <i>Hordeum jubatum</i> L.                                                     | foxtail barley          | Poaceae          |        |
| HOMU   | <i>Hordeum murinum</i> L.                                                     | mouse barley            | Poaceae          | yes    |
| HYPE   | <i>Hypericum perforatum</i> L.                                                | common St. Johnswort    | Clusiaceae       | yes    |
| IPMI2  | <i>Ipomopsis minitiflora</i> (Benth.) V.E. Grant                              | littleflower ipomopsis  | Polemoniaceae    |        |
| IRPS   | <i>Iris pseudacorus</i> L.                                                    | paleyellow iris         | Iridaceae        | yes    |
| JUARL  | <i>Juncus arcticus</i> Willd. ssp. <i>littoralis</i> (Engelm.) Hultén         | mountain rush           | Juncaceae        |        |
| JUNCU  | <i>Juncus</i> L.                                                              | rush                    | Juncaceae        |        |
| KOMA   | <i>Koeleria macrantha</i> (Ledeb.) Schult.                                    | prairie Junegrass       | Poaceae          |        |
| LASE   | <i>Lactuca serriola</i> L.                                                    | prickly lettuce         | Asteraceae       | yes    |
| LATAP  | <i>Lactuca tatarica</i> (L.) C.A. Mey. var. <i>pulchella</i> (Pursh) Breitung | blue lettuce            |                  |        |
| LELA2  | <i>Lepidium latifolium</i> L.                                                 | broadleaved pepperweed  | Brassicaceae     | yes    |
| LEPE2  | <i>Lepidium perfoliatum</i> L.                                                | clasping pepperweed     | Brassicaceae     | yes    |
| LEDO2  | <i>Lesquerella douglasii</i> S. Watson                                        | Douglas' bladderpod     | Brassicaceae     |        |
| LECI4  | <i>Leymus cinereus</i> (Scribn. & Merr.) A. Löve                              | basin wildrye           | Poaceae          |        |
| LINAN2 | <i>Linanthus</i> Benth.                                                       | linanthus               | Polemoniaceae    |        |
| LIPU11 | <i>Linanthus pungens</i> (Torr.) J.M. Porter & L.A. Johnson                   | granite prickly phlox   | Polemoniaceae    |        |
| LIDAD  | <i>Linaria dalmatica</i> (L.) Mill. ssp. <i>dalmatica</i>                     | Dalmatian toadflax      | Scrophulariaceae | yes    |
| LITHO2 | <i>Lithophragma</i> (Nutt.) Torr. & A. Gray                                   | woodland-star           | Saxifragaceae    |        |
| LIRU4  | <i>Lithospermum ruderales</i> Douglas ex Lehm.                                | western stoneseed       | Boraginaceae     |        |
| LOAR5  | <i>Logfia arvensis</i> (L.) Holub                                             | field cottonrose        | Asteraceae       | yes    |
| LOAM   | <i>Lomatium ambiguum</i> (Nutt.) J.M. Coult. & Rose                           | Wyeth biscuitroot       | Apiaceae         |        |
| LODI   | <i>Lomatium dissectum</i> (Nutt.) Mathias & Constance                         | fernleaf biscuitroot    | Apiaceae         |        |
| LOGR   | <i>Lomatium grayi</i> (J.M. Coult. & Rose) J.M. Coult. & Rose                 | Gray's biscuitroot      | Apiaceae         |        |
| LOMA3  | <i>Lomatium macrocarpum</i> (Nutt. ex Torr. & A. Gray) J.M. Coult. & Rose     | bigseed biscuitroot     | Apiaceae         |        |
| LOMAT  | <i>Lomatium</i> Raf.                                                          | desertparsley           | Apiaceae         |        |
| LOTR2  | <i>Lomatium triternatum</i> (Pursh) J.M. Coult. & Rose                        | nineleaf biscuitroot    | Apiaceae         |        |
| LUPIN  | <i>Lupinus</i> L.                                                             | lupine                  | Fabaceae         |        |



| Symbol | Scientific Name with Author                                                 | National Common Name      | Family           | Exotic |
|--------|-----------------------------------------------------------------------------|---------------------------|------------------|--------|
| LULE3  | Lupinus leucophyllus Douglas ex Lindl.                                      | velvet lupine             | Fabaceae         |        |
| LUSE4  | Lupinus sericeus Pursh                                                      | silky lupine              | Fabaceae         |        |
| MEOF   | Melilotus officinalis (L.) Lam.                                             | yellow sweetclover        | Fabaceae         | yes    |
| MEAR4  | Mentha arvensis L.                                                          | wild mint                 | Lamiaceae        |        |
| MEAL6  | Mentzelia albicaulis (Hook.) Torr. & A. Gray                                | whitestem blazingstar     | Loasaceae        |        |
| MELA2  | Mentzelia laevicaulis (Hook.) Torr. & A. Gray                               | smoothstem blazingstar    | Loasaceae        |        |
| MICRO6 | Microseris D. Don                                                           | silverpuffs               | Asteraceae       |        |
| NECA2  | Nepeta cataria L.                                                           | catnip                    | Lamiaceae        | yes    |
| OEPA   | Oenothera pallida Lindl.                                                    | pale evening primrose     | Onagraceae       |        |
| OPFR   | Opuntia fragilis (Nutt.) Haw.                                               | brittle pricklypear       | Cactaceae        |        |
| ORCO5  | Orobancha corymbosa (Rydb.) Ferris                                          | flat-top broomrape        | Orobanchaceae    |        |
| ORFA   | Orobancha fasciculata Nutt.                                                 | clustered broomrape       | Orobanchaceae    |        |
| ORLU   | Orobancha ludoviciana Nutt.                                                 | Louisiana broomrape       | Orobanchaceae    |        |
| ORBA2  | Orthocarpus barbatus Cotton                                                 | Grand Coulee owl's-clover | Scrophulariaceae |        |
| PARTH3 | Parthenocissus Planch.                                                      | creeper                   | Vitaceae         | yes    |
| PENST  | Penstemon Schmidel                                                          | beardtongue               | Scrophulariaceae |        |
| PHHA   | Phacelia hastata Douglas ex Lehm.                                           | silverleaf phacelia       | Hydrophyllaceae  |        |
| PHLI   | Phacelia linearis (Pursh) Holz.                                             | threadleaf phacelia       | Hydrophyllaceae  |        |
| PHLE4  | Philadelphus lewisii Pursh                                                  | Lewis' mock orange        | Hydrangeaceae    |        |
| PHLO2  | Phlox longifolia Nutt.                                                      | longleaf phlox            | Polemoniaceae    |        |
| PLLA   | Plantago lanceolata L.                                                      | narrowleaf plantain       | Plantaginaceae   | yes    |
| PLMA2  | Plantago major L.                                                           | common plantain           | Plantaginaceae   | yes    |
| PLPA2  | Plantago patagonica Jacq.                                                   | woolly plantain           | Plantaginaceae   |        |
| PLMA4  | Plectritis macrocera Torr. & A. Gray                                        | longhorn plectritis       | Valerianaceae    |        |
| POAN   | Poa annua L.                                                                | annual bluegrass          | Poaceae          | yes    |
| POBU   | Poa bulbosa L.                                                              | bulbous bluegrass         | Poaceae          | yes    |
| POA    | Poa L.                                                                      | bluegrass                 | Poaceae          |        |
| POPR   | Poa pratensis L.                                                            | Kentucky bluegrass        | Poaceae          | yes    |
| POSE   | Poa secunda J. Presl                                                        | Sandberg bluegrass        | Poaceae          |        |
| PODO4  | Polygonum douglasii Greene                                                  | Douglas' knotweed         | Polygonaceae     |        |
| POLYG4 | Polygonum L.                                                                | knotweed                  | Polygonaceae     |        |
| POMO5  | Polypogon monspeliensis (L.) Desf.                                          | annual rabbitsfoot grass  | Poaceae          | yes    |
| POAL7  | Populus alba L.                                                             | white poplar              | Salicaceae       | yes    |
| POBAT  | Populus balsamifera L. ssp. trichocarpa (Torr. & A. Gray ex Hook.) Brayshaw | black cottonwood          | Salicaceae       |        |
| POTR5  | Populus tremuloides Michx.                                                  | quaking aspen             | Salicaceae       |        |
| POARC  | Potentilla arguta Pursh ssp. convallaria (Rydb.) D.D. Keck                  | cream cinquefoil          | Rosaceae         |        |
| POTEN  | Potentilla L.                                                               | cinquefoil                | Rosaceae         |        |
| PRVI   | Prunus virginiana L.                                                        | chokecherry               | Rosaceae         |        |
| PSSP6  | Pseudoroegneria spicata (Pursh) A. Löve                                     | bluebunch wheatgrass      | Poaceae          |        |
| PUTR2  | Purshia tridentata (Pursh) DC.                                              | antelope bitterbrush      | Rosaceae         |        |
| RHGL   | Rhus glabra L.                                                              | smooth sumac              | Anacardiaceae    |        |
| RIAU   | Ribes aureum Pursh                                                          | golden currant            | Grossulariaceae  |        |
| RICE   | Ribes cereum Douglas                                                        | wax currant               | Grossulariaceae  |        |
| ROWO   | Rosa woodsii Lindl.                                                         | Woods' rose               | Rosaceae         |        |
| RUAC3  | Rumex acetosella L.                                                         | common garden sorrel      | Polygonaceae     | Yes    |
| RUCR   | Rumex crispus L.                                                            | curly dock                | Polygonaceae     | yes    |
| SARU   | Salicornia rubra A. Nelson                                                  | red swampfire             | Chenopodiaceae   |        |
| SAEX   | Salix exigua Nutt.                                                          | narrowleaf willow         | Salicaceae       |        |
| SALIX  | Salix L.                                                                    | willow                    | Salicaceae       |        |



| Symbol | Scientific Name with Author                                        | National Common Name     | Family           | Exotic |
|--------|--------------------------------------------------------------------|--------------------------|------------------|--------|
| SAPR3  | <i>Salix prolixa</i> Andersson                                     | MacKenzie's willow       | Salicaceae       |        |
| SASC   | <i>Salix scouleriana</i> Barratt ex Hook.                          | Scouler's willow         | Salicaceae       |        |
| SAKA   | <i>Salsola kali</i> L.                                             | Russian thistle          | Chenopodiaceae   | yes    |
| SADO4  | <i>Salvia dorrii</i> (Kellogg) Abrams                              | purple sage              | Lamiaceae        |        |
| SANIC5 | <i>Sambucus nigra</i> L. ssp. <i>cerulea</i> (Raf.) R. Bolli       | blue elderberry          | Caprifoliaceae   |        |
| SAOF4  | <i>Saponaria officinalis</i> L.                                    | bouncingbet              | Caryophyllaceae  | yes    |
| SAXIF  | <i>Saxifraga</i> L.                                                | saxifrage                | Saxifragaceae    |        |
| SCAC3  | <i>Schoenoplectus acutus</i> (Muhl. ex Bigelow) A. Löve & D. Löve  | hardstem bulrush         | Cyperaceae       |        |
| SCTA2  | <i>Schoenoplectus tabernaemontani</i> (C.C. Gmel.) Palla           | softstem bulrush         | Cyperaceae       |        |
| SEDE2  | <i>Selaginella densa</i> Rydb.                                     | lesser spikemoss         | Selaginellaceae  |        |
| SILEN  | <i>Silene</i> L.                                                   | catchfly                 | Caryophyllaceae  | yes    |
| SIAL2  | <i>Sisymbrium altissimum</i> L.                                    | tall tumbledustard       | Brassicaceae     | yes    |
| SILO3  | <i>Sisymbrium loeselii</i> L.                                      | small tumbleweed mustard | Brassicaceae     | yes    |
| SODU   | <i>Solanum dulcamara</i> L.                                        | climbing nightshade      | Solanaceae       | yes    |
| SOCA6  | <i>Solidago canadensis</i> L.                                      | Canada goldenrod         | Asteraceae       |        |
| SOARU  | <i>Sonchus arvensis</i> L. ssp. <i>uliginosus</i> (M. Bieb.) Nyman | moist sowthistle         | Asteraceae       | yes    |
| SONCH  | <i>Sonchus</i> L.                                                  | sowthistle               | Asteraceae       | yes    |
| SPMU2  | <i>Sphaeralcea munroana</i> (Douglas) Spach                        | Munro's globemallow      | Malvaceae        |        |
| SPCR   | <i>Sporobolus cryptandrus</i> (Torr.) A. Gray                      | sand dropseed            | Poaceae          |        |
| STPA2  | <i>Stephanomeria paniculata</i> Nutt.                              | tufted wirelettuce       | Asteraceae       |        |
| TECA2  | <i>Tetradymia canescens</i> DC.                                    | spineless horsebrush     | Asteraceae       |        |
| THIN6  | <i>Thinopyrum intermedium</i> (Host) Barkworth & D.R. Dewey        | intermediate wheatgrass  | Poaceae          | yes    |
| TORY   | <i>Toxicodendron rydbergii</i> (Small ex Rydb.) Greene             | western poison ivy       | Anacardiaceae    |        |
| TRDU   | <i>Tragopogon dubius</i> Scop.                                     | yellow salsify           | Asteraceae       | yes    |
| TRGR2  | <i>Trifolium gracilentum</i> Torr. & A. Gray                       | pinpoint clover          | Fabaceae         |        |
| TRRE3  | <i>Trifolium repens</i> L.                                         | white clover             | Fabaceae         | yes    |
| TRGRG2 | <i>Triteleia grandiflora</i> Lindl. var. <i>grandiflora</i>        | largeflower triteleia    | Liliaceae        |        |
| TYLA   | <i>Typha latifolia</i> L.                                          | broadleaf cattail        | Typhaceae        |        |
| ULPU   | <i>Ulmus pumila</i> L.                                             | Siberian elm             | Ulmaceae         | yes    |
| URDI   | <i>Urtica dioica</i> L.                                            | stinging nettle          | Urticaceae       |        |
| VETH   | <i>Verbascum thapsus</i> L.                                        | common mullein           | Scrophulariaceae | yes    |
| VERON  | <i>Veronica</i> L.                                                 | speedwell                | Scrophulariaceae |        |
| VULPI  | <i>Vulpia</i> C.C. Gmel.                                           | fescue                   | Poaceae          |        |
| WOOR   | <i>Woodsia oregana</i> D.C. Eaton                                  | Oregon cliff fern        | Dryopteridaceae  |        |

## Discussion and Recommendations

### Noxious Weeds

A list of the noxious weeds found at Bridgeport State Park is presented in Table 4. We found five Class B weeds and four Class C weeds. There were three noxious weeds that were widespread in disturbed shrub-steppe areas, such as along roads. These were burningbush (*Bassia scoparia*), diffuse knapweed (*Centaurea diffusa*) and Dalmatian toadflax (*Linaria dalmatica* ssp. *dalmatica*). The noxious weeds that were observed within each polygon are recorded in the corresponding record in the vegetation database for the park, which is included in this report as Appendix D.

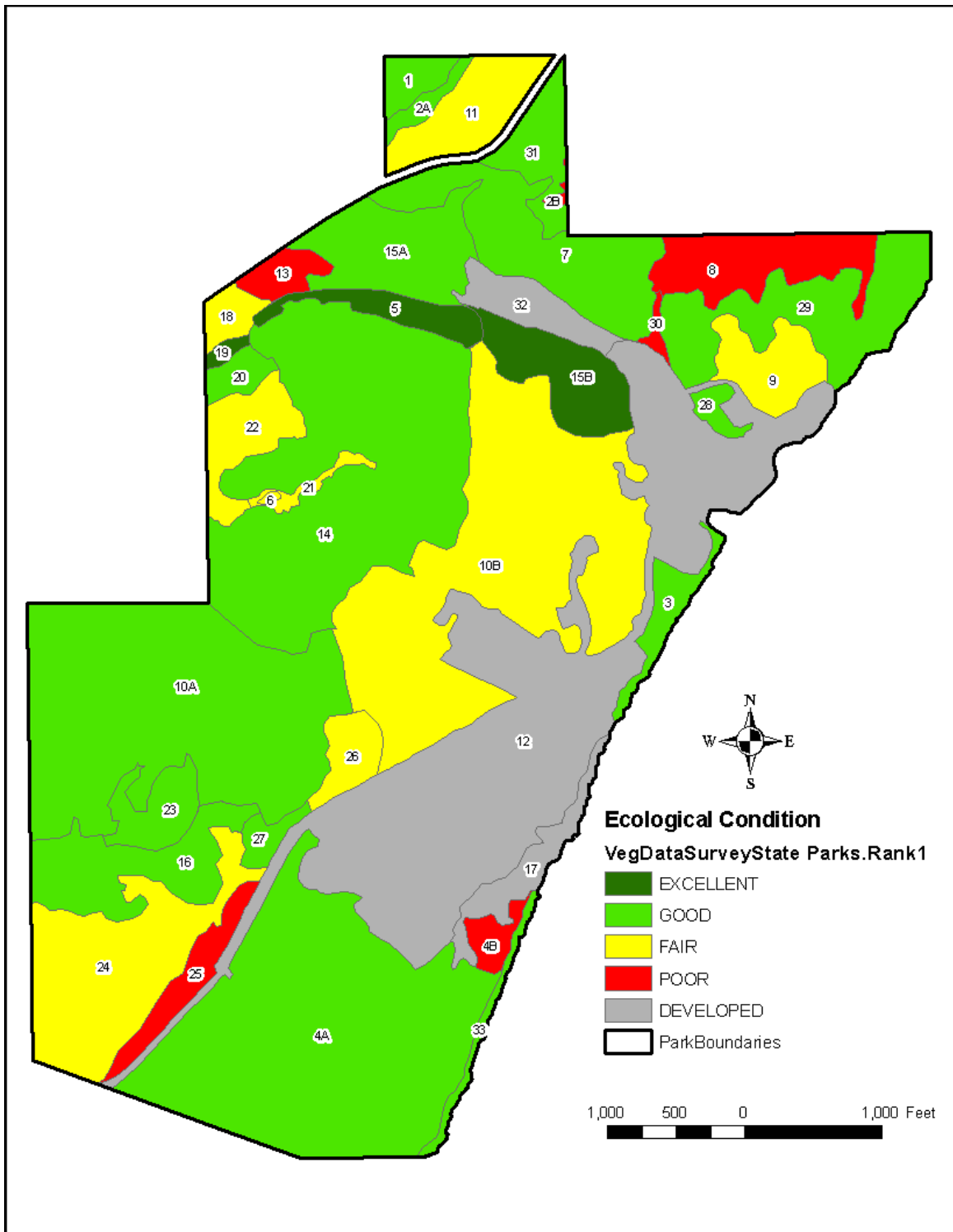
**Table 4. State listed noxious weeds at Bridgeport State Park.**

| Symbol | Scientific Name with Author                                      | National Common Name   | State Weed Status |
|--------|------------------------------------------------------------------|------------------------|-------------------|
| BASC5  | <i>Bassia scoparia</i> (L.) A.J. Scott                           | Burningbush            | B                 |
| CEDI3  | <i>Centaurea diffusa</i> Lam.                                    | diffuse knapweed       | B                 |
| CESTM  | <i>Centaurea stoebe</i> L. ssp. <i>micranthos</i> (Gugler) Hayek | spotted knapweed       | B                 |
| LELA2  | <i>Lepidium latifolium</i> L.                                    | broadleaved pepperweed | B                 |
| LIDAD  | <i>Linaria dalmatica</i> (L.) Mill. ssp. <i>dalmatica</i>        | Dalmatian toadflax     | B                 |
| CIAR4  | <i>Cirsium arvense</i> (L.) Scop.                                | Canada thistle         | C                 |
| CIVU   | <i>Cirsium vulgare</i> (Savi) Ten.                               | bull thistle           | C                 |
| HYPE   | <i>Hypericum perforatum</i> L.                                   | common St. Johnswort   | C                 |
| IRPS   | <i>Iris pseudacorus</i> L.                                       | paleyellow iris        | C                 |

### Ecological Condition

The ecological condition at Bridgeport State Park was mostly ranked good or excellent (see Appendix B for definitions). This is well above average in comparison to other parks in eastern Washington surveyed by PBI in 2008. A map of the overall ecological condition of the primary plant associations is presented in Figure 17.

Several polygons were rated in poor ecological condition. These areas include dry, disturbed areas; an area used as a dumping area; and some areas adjacent to private agricultural lands or to the golf course that have become dominated by weeds that benefit from agricultural runoff.



**Figure 17. Ecological condition of the primary plant associations assessed for vegetation polygons at Bridgeport State Park.**

Approximately 130 native plant species were observed within Bridgeport State Park, which is about average for a park this size having a broad range of dry and wet habitats.

The percentage of non-native species in Bridgeport State Park was about 32%. However, a number of non-native species in the park have the potential to rapidly expand their presence.

## ***Restoration Opportunities***

There are several priorities for restoration at Bridgeport State Park. One of these is to maintain the relatively good ecological condition already present at the park by preventing disturbances and further weed invasions in the shrub-steppe areas. A program for control of noxious weeds should be considered.

In planning for restoration at Bridgeport State Park it may be possible to include some educational information about restoration along existing trails and roads. The trail at the south end of the park already has some signs giving ecological information about the area.

Another restoration priority is to contain the runoff from adjacent private lands and the golf course. Agricultural runoff is favoring invasive species at the expense of native species. It should be possible to designate drainage areas or piping stations that prevent runoff from impacting the shrub-steppe.

## ***Other Recommendations***

Ownership maps should be maintained and updated on a yearly basis. This map should be in a digital format that is available for public access. Currently Okanogan County has a GIS that could help guide the acquisition of spatial data for a map product.

## **GIS Products Produced**

Associated with this report are polygon layers created by PBI depicting the vegetation community types and associated data mapped within Bridgeport State Park. The datasets have been converted into ESRI shapefile formats and provided to the Washington State Parks and Recreation Commission. The spatial datasets are complete with metadata meeting FGDC standards. Refer to the associated metadata for descriptions and attribute definitions for each spatial dataset.

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# Appendix A – Vegetation Survey Codes and Instructions

**Site** = name of locality of map project

**Name/Date** = your name / day-month-year completed polygon survey

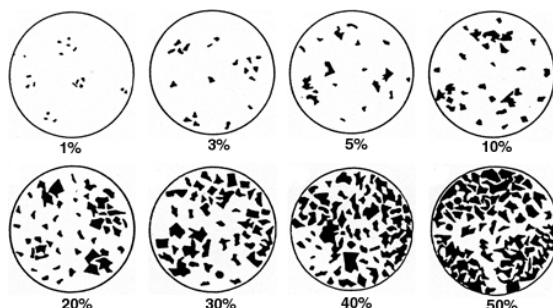
**Polygon #** = number you put on map

## Survey intensity

- 1 = walked or could see most of polygon (high confidence in survey data)
- 2 = walked or could see part of polygon interior (moderate confidence)
- 3 = walked perimeter or could see part of polygon interior (low confidence)
- 4 = photo interpretation or other remote survey

**TOTAL VEGETATION COVER** includes all vascular plants, mosses, lichens and foliose lichens (crustose lichens excluded they are considered rock); this never exceeds 100%. Space between leaves/branches is included in "cover".

| Code | Cover (%) | Cover mid-pt |
|------|-----------|--------------|
| 0    | 0         | 0            |
| 1    | <1        | 0.5          |
| 2    | 1-5       | 3            |
| 3    | 5-25      | 15           |
| 4    | 25-60     | 43           |
| 5    | 60-90     | 75           |
| 6    | >90       | 95           |



**TREES, SHRUBS, GRAMINOIDS, FORBS, EXOTICS** cover includes the space between leaves/branches. Each Life form category canopy cover must be 0-100%. Therefore, the sum of all life forms (layers) can exceed 100%. List most abundant species in each life form category; when trees are cored, note DBH, species, length of core, number of rings counted.

**EXOTICS** = primary species observed; secondary species observed (please pay special attention to noxious weeds). Also, note the relative abundance of exotics in each polygon, using the 1-6 cover codes noted above.

**SUBSTRATES** estimate to nearest % the following, the sum of the categories adds to 100%. Describe in comments if there is wide variation in any category; note % standing water if it is persistent or characteristic of site.

Water = exposed standing or flowing water

Rock Outcrop = exposed bedrock including detached boulders over 1m across

Talus = exposed large, loose rocks

Gravel/Cobble = large fragments between sand and boulder

Bare Ground = exposed mineral soil

Mosses/Lichens = nonvascular plant cover on soil

Litter = includes logs, branches, and basal area of plants

Caves = area covered by caves

Mines = area covered by mines

**LAND USE** - put 0 (zero) if not applicable to site.

## Logging

- 1 = unlogged, no evidence of past logging or occasional cut stumps not part of systematic harvest of trees, no or very little impact on stand composition
- 2 = selectively logged: frequent cut stumps but origin of dominant or co-dominant cohort appears to be natural disturbance
- 3 = heavy logging disturbance with natural regeneration: many cut stumps that predate the dominant or co-dominant cohort with no tree planting
- 4 = tree plantation: dominant cohort appears to be planted after clearcutting

## Stand Age

1 = very young 0-40 yr

2 = young 40-90 yr

3 = mature 90-200 yr

4 = old-growth 200+ yr

5 = young with scattered old trees (2-10 old trees per acre)

6 = mature with scattered old trees

## Fire

Note presence of fire (i.e. charcoal, fire scars, etc.) and, if present, estimate time of fire.

## Agriculture

1 = active annual cropping

2 = active perennial herbaceous cropping

3 = active woody plant cultivation

4 = fallow, plowed no crops this yr

5 = Federal CRP

6 = other

## Livestock

1 = active heavy grazing (most forage used, soil compaction or churning)

2 = active moderate grazing (25-75% forage used)

4 = no current, heavy past grazing

5 = no current, light past grazing

3 = active light grazing (lots of last yr's litter left)

6 = no obvious sign of grazing

#### **Development**

1 = actively used facilities

4 = abandoned facilities

2 = roads

5 = none obvious

3 = established trails

6 = multiple types (detail in comments)

#### **Wildlife**

1 = heavy ungulate use

5 = active beaver

2 = moderate ungulate use

6 = active porcupine

3 = light to no ungulate use

7 = other, list animal

4 = burrowing animals

#### **Recreation Use Severity**

1 = heavy use, abundant soil and vegetation displacement off trail/road

2 = moderate use, frequent soil and vegetation displacement off trail/road

3 = light use, little sign of activity off trail/road

#### **Recreation Use Primary Type**

1 = wheeled

4 = combination of above

2 = hooved

5 = other

3 = pedestrian

#### **Hydrology**

1 = unaltered 2 = altered; dams, dikes, ditches, culverts, etc 3 = not assessed

### **Descriptions of Plant Communities**

**PLANT ASSOCIATION (PA)** = list all PAs encountered in polygon survey, in comments list source of name if not on provided key. NOTE: Contractor is required to consult with the WNHP to obtain the most current classification and condition ranking information available.

**Existing Vegetation Community** – Write down the major tree/shrub/grass-forb-fern community type. Pay attention to indicator species. Alien species may be included in community description.

**Ecological Condition Rank** of PA in key or estimate. (The condition of each plant vegetation community polygon shall be rated using the codes listed in Appendix B.)

**% of Polygon** = your estimate of % of polygon covered by this plant community. (PA1 is the matrix and a greater % than PA2, if there is a PA2; PA2 is a greater % than PA3, if there is a PA3.)

**Pattern** = how PA is distributed in stand

|                              |                                    |                                              |           |
|------------------------------|------------------------------------|----------------------------------------------|-----------|
| 1 = matrix (most of polygon) | 3 = small patches                  | 5 = scattered, more or less evenly repeating | 7 = other |
| 2 = large patches            | 4 = clumped, clustered, contiguous | 6 = linear                                   |           |



## **Appendix B – Ecological Condition Ranking System**

### **Ecological Condition Ranks**

When assessing conservation priorities and management decisions, it can be useful to rank natural communities into levels of ecological condition. For example, an unfragmented area with high native species diversity, absence of non-native species and little soil erosion often has greater conservation value than another area in the same habitat type that is fragmented, infested with weeds or has erosion problems. Likewise, areas with a lower ecological condition rank may be targets for restoration activities.

The following ecological condition ranks were applied to vegetation polygons that were surveyed in this project:

#### **■ Excellent Ecological Condition**

Areas in this class have very few non-native plants. The composition and structure of native vegetation in this condition class correspond to the natural range of variation characteristic to this habitat type. Old-growth conditions often exist. Species diversity of native plants and animals is often high relative to the natural community under consideration. Wildlife habitat conditions are optimal for species of conservation concern. Soil compaction, accelerated erosion and hydrologic alteration are absent. Direct signs of human-induced ecological stress are absent. Many rare plant and animal species may only exist within this condition class.

#### **■ Good Ecological Condition**

Areas in this class have few non-native plants. The composition and structure of native vegetation in this condition class correspond to the natural range of variation characteristic to this habitat type. Old-growth conditions may exist, but have been subject to some human-induced stress. Species diversity of native plants and animals is moderately high relative to the natural community under consideration. Wildlife habitat conditions are adequate for species of conservation concern. Soil compaction, accelerated erosion and hydrologic alteration do not significantly influence the area. Direct signs of human-induced ecological stress are infrequent. Some rare plant and animal species may exist within this condition class.

#### **■ Fair Ecological Condition**

Areas in this class often have both native and non-native plants. The composition and structure of native vegetation in this condition class is altered from the natural range of variation characteristic to this habitat type. Old-growth conditions are absent. Species diversity of native plants and animals is lower than the two higher condition classes. Wildlife habitat conditions may be adequate for some species of conservation concern, but not adequate for many. Soil compaction, accelerated erosion and hydrologic alteration may influence the area. Direct signs of human-induced ecological stress are frequent. Most rare plant and animal species are only infrequently encountered within this condition class.

#### **■ Poor Ecological Condition**

Areas in this class are often dominated by non-native plants. The composition and structure of native vegetation in this condition class is often dramatically altered from the natural range of variation characteristic to this habitat type. Old-growth conditions are absent. Species diversity of native plants and animals is often low. Wildlife habitat conditions are not adequate for most species of conservation concern. Soil compaction, accelerated erosion and hydrologic alteration often influence the area. Direct signs of human-induced ecological stress are frequent. Rare plant and animal species are seldom encountered within this condition class.

■ **Developed**

Developed portions of the park property: campgrounds, offices, facilities, infrastructure, etc.

■ **Ownership Issue**

Areas within the GIS boundary of the park that appear to be owned or controlled by another entity other than the Washington State Parks Commission.

## Appendix C – Definitions of Vegetation Community Conservation Status

The following table defines the ranking system for plants and plant communities used by the Washington State Natural Heritage Program.

| Code | Definition                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| G1   | Critically imperiled throughout its range; extremely rare with five or fewer occurrences or very few remaining acres.                                         |
| G2   | Imperiled throughout its range; rare with six to 20 occurrences or few remaining acres.                                                                       |
| G3   | Either very rare and local throughout its range or found locally in a restricted range; uncommon with 21 to 100 occurrences.                                  |
| G4   | Apparently secure throughout its range, though it may be quite rare in some parts of its range, especially at the periphery; many occurrences.                |
| G5   | Demonstrably secure in its range, though it may be quite rare in some parts of its range, especially at the periphery; ineradicable under present conditions. |
| S1   | Critically imperiled in Oregon; extremely rare with five or fewer occurrences or very few remaining acres.                                                    |
| S2   | Imperiled in Oregon; rare with six to 20 occurrences or few remaining acres.                                                                                  |
| S3   | Either very rare and local in Oregon or found locally in a restricted range; uncommon with 21 to 100 occurrences.                                             |
| S4   | Apparently secure in Oregon, though it may be quite rare in some parts; many occurrences.                                                                     |
| S5   | Demonstrably secure in Oregon, though it may be quite rare in some parts; ineradicable under present conditions.                                              |
| U    | Unknown                                                                                                                                                       |
| NA   | Natural Heritage Rank not available                                                                                                                           |
| NR   | Not Ranked                                                                                                                                                    |

# Appendix D – Vegetation Survey Data

**Polygon Number 1**

**ParkName:**

**Survey Intensity 1 Bridgeport**

**Observer GW**

**Date 8/9/2008**

**Total Vegetation 5**

**Trees Total 0**

**Dominant Trees**

**emergent 0**

**maincanopy 0**

**subcanopy 0**

**Shrubs Total 4**

**Dominant Shrubs ARTR2, PUTR2, ERHE2, CHVI8, ERNI2**

**> 1.5' tall 4**

**< 1.5' tall 2**

**Graminoids Total 4**

**Dominant Graminoids PSSP6, POSE, BRAR5, BRTE, VULPI**

**Graminoids Perennial 4**

**Graminoids Annual 2**

**Forbs Total 2**

**Dominant Forbs ACMI2**

**Forbs Perennial 2**

**Forbs Annual 1**

**Ferns Total 1**

**Ferns Evergreen 0**

**Ferns Deciduous 1**

**ExoticsTotal 1**

**Exotics Perennial 1**

**Exotics Annual 1**

**Water 0**

**Rock Outcrop 5**

**Gravel 2**

**Logging 1**

**Fire: 0**

**Stand Age 1**

**Agriculture 0**

**Livestock 0**

**Development 0**

**Wildlife 3**

**Recreation Severity 3**

**Recreation Type 3**

**Hydrology 1**

## Exotic Species

### Noxious Exotic Plants

LIDAD

### Other Exotic Plants

BRTE, BRAR5

**Water: 0**

**Rock: 5**

**Talus: 2**

**Gravel: 2**

**Bare Ground: 10**

**Moss Lichen: 3**

**Litter: 78**

## Vegetation Types

|                                         | Percent | Pattern | Rank |
|-----------------------------------------|---------|---------|------|
| <b>Existing Veg1:</b> ARTR2-PUTR/HECO26 | 50      | Matrix  | GOOD |

|                                     |                 |    |
|-------------------------------------|-----------------|----|
| <b>Veg Community1:</b> ARTR2/HECO26 | Daubenmire 1970 | G4 |
|-------------------------------------|-----------------|----|

|                                              |    |             |      |
|----------------------------------------------|----|-------------|------|
| <b>Existing Veg2:</b> ARTR2-PUTR-ERNI2/PSSP6 | 50 | Large patch | GOOD |
|----------------------------------------------|----|-------------|------|

|                                    |                                |    |
|------------------------------------|--------------------------------|----|
| <b>Veg Community3:</b> ARTR2/PSSP6 | Daubenmire 1970; Crawford 1999 | G5 |
|------------------------------------|--------------------------------|----|

**Existing Veg3:** 0

**Veg Community3:**

**Notes:** BENCH AND SLOPE- A STEEP ROCK OUTCROP ALONG ONE SIDE IS MADE INTO A SEPARATE PA.

|                             |                                                  |                   |
|-----------------------------|--------------------------------------------------|-------------------|
| <b>Polygon Number</b>       | <b>2A</b>                                        | <b>ParkName:</b>  |
| <b>Survey Intensity</b>     | 1                                                | <b>Bridgeport</b> |
| <b>Observer</b>             | GW                                               |                   |
| <b>Date</b>                 | 8/9/2008                                         |                   |
| <b>Total Vegetation</b>     | 4                                                |                   |
| <b>Trees Total</b>          | 0                                                |                   |
| <b>Dominant Trees</b>       |                                                  |                   |
| emergent                    | 0                                                |                   |
| maincanopy                  | 0                                                |                   |
| subcanopy                   | 0                                                |                   |
| <b>Shrubs Total</b>         | 4                                                |                   |
| <b>Dominant Shrubs</b>      | ARTR2, PUTR2, ARTR4, ERNA10, ERHE2, ERNI2, PHLE4 |                   |
| > 1.5' tall                 | 4                                                |                   |
| < 1.5' tall                 | 2                                                |                   |
| <b>Graminoids Total</b>     | 4                                                |                   |
| <b>Dominant Graminoids</b>  | HECO26, BRTE                                     |                   |
| <b>Graminoids Perennial</b> | 4                                                |                   |
| <b>Graminoids Annual</b>    | 2                                                |                   |
| <b>Forbs Total</b>          | 2                                                |                   |
| <b>Dominant Forbs</b>       | PHLO2, CAMA5, ACMI2, COLI2, PLPA2                |                   |
| <b>Forbs Perennial</b>      | 2                                                |                   |
| <b>Forbs Annual</b>         | 1                                                |                   |
| <b>Ferns Total</b>          | 0                                                |                   |
| <b>Ferns Evergreen</b>      | 0                                                |                   |
| <b>Ferns Deciduous</b>      | 0                                                |                   |
| <b>ExoticsTotal</b>         | 2                                                |                   |
| <b>Exotics Perennial</b>    | 1                                                |                   |
| <b>Exotics Annual</b>       | 2                                                |                   |
| <b>Water</b>                | 0                                                |                   |
| <b>Rock Outcrop</b>         | 4                                                |                   |
| <b>Gravel</b>               | 2                                                |                   |
| <b>Logging</b>              | 0                                                |                   |
| <b>Fire:</b>                | 0                                                |                   |
| <b>Stand Age</b>            | 1                                                |                   |
| <b>Agriculture</b>          | 0                                                |                   |
| <b>Livestock</b>            | 0                                                |                   |
| <b>Development</b>          | 0                                                |                   |
| <b>Wildlife</b>             | 3                                                |                   |
| <b>Recreation Severity</b>  | 3                                                |                   |
| <b>Recreation Type</b>      | 3                                                |                   |
| <b>Hydrology</b>            | 1                                                |                   |

### Exotic Species

#### Noxious Exotic Plants

LIDAD

#### Other Exotic Plants

BRTE

|                     |    |
|---------------------|----|
| <b>Water:</b>       | 0  |
| <b>Rock:</b>        | 4  |
| <b>Talus:</b>       | 1  |
| <b>Gravel:</b>      | 2  |
| <b>Bare Ground:</b> | 10 |
| <b>Moss Lichen:</b> | 3  |
| <b>Litter:</b>      | 80 |

### Vegetation Types

|                                     | Percent | Pattern         | Rank |
|-------------------------------------|---------|-----------------|------|
| <b>Existing Veg1:</b> ARTR2/HECO26  | 100     | Matrix          | GOOD |
| <b>Veg Community1:</b> ARTR2/HECO26 |         | Daubenmire 1970 | G4   |
| <b>Existing Veg2:</b>               | 0       |                 |      |
| <b>Veg Community3:</b>              |         |                 |      |
| <b>Existing Veg3:</b>               | 0       |                 |      |
| <b>Veg Community3:</b>              |         |                 |      |

**Notes:** ONLY WEED OF SIGNIFICANCE IS BRTE, 5%

## Polygon Number 2B

ParkName:

Bridgeport

|                      |                                                       |  |
|----------------------|-------------------------------------------------------|--|
| Survey Intensity     | 1                                                     |  |
| Observer             | GW                                                    |  |
| Date                 | 7/19/2008                                             |  |
| Total Vegetation     | 4                                                     |  |
| Trees Total          | 0                                                     |  |
| Dominant Trees       |                                                       |  |
| emergent             | 0                                                     |  |
| maincanopy           | 0                                                     |  |
| subcanopy            | 0                                                     |  |
| Shrubs Total         | 3                                                     |  |
| Dominant Shrubs      | ARTR2, PUTR2                                          |  |
| > 1.5' tall          | 3                                                     |  |
| < 1.5' tall          | 0                                                     |  |
| Graminoids Total     | 3                                                     |  |
| Dominant Graminoids  | BRAR5, BRTE                                           |  |
| Graminoids Perennial | 1                                                     |  |
| Graminoids Annual    | 3                                                     |  |
| Forbs Total          | 4                                                     |  |
| Dominant Forbs       | CIAR4, ARDR4, URDI, SONCH, COCA5, CHENO, RUCR, NECA2, |  |
| Forbs Perennial      | 4                                                     |  |
| Forbs Annual         | 3                                                     |  |
| Ferns Total          | 0                                                     |  |
| Ferns Evergreen      | 0                                                     |  |
| Ferns Deciduous      | 0                                                     |  |
| ExoticsTotal         | 1                                                     |  |
| Exotics Perennial    | 0                                                     |  |
| Exotics Annual       | 1                                                     |  |
| Water                | 0                                                     |  |
| Rock Outcrop         | 2                                                     |  |
| Gravel               | 0                                                     |  |
| Logging              | 1                                                     |  |
| Fire:                | YES, 5 YEARS AGO                                      |  |
| Stand Age            | 1                                                     |  |
| Agriculture          | 0                                                     |  |
| Livestock            | 0                                                     |  |
| Development          | 0                                                     |  |
| Wildlife             | 3                                                     |  |
| Recreation Severity  | 3                                                     |  |
| Recreation Type      | 3                                                     |  |
| Hydrology            | 2 Altered-irrifated                                   |  |

### Exotic Species

#### Noxious Exotic Plants

LIDAD, CIAR4

#### Other Exotic Plants

VETH, NECA2, SIAL2

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 2  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 2  |
| Moss Lichen: | 0  |
| Litter:      | 96 |

## Vegetation Types

|                 | Percent           | Pattern                        | Rank   |
|-----------------|-------------------|--------------------------------|--------|
| Existing Veg1:  | ARTR2/CIAR4-BASSI | 100                            | Matrix |
| Veg Community1: | ARTR2/PSSP6       | Daubenmire 1970; Crawford 1999 | POOR   |
| Existing Veg2:  | 0                 |                                | G5     |
| Veg Community3: |                   |                                |        |
| Existing Veg3:  | 0                 |                                |        |
| Veg Community3: |                   |                                |        |

Notes: Very weedy area, adj. to private garden; plants are dominated by CIAR4

# Polygon Number 3

ParkName:

Bridgeport

Survey Intensity 1  
Observer PM  
Date 7/19/2008  
Total Vegetation 5  
Trees Total 1  
Dominant Trees ornamental elm  
emergent 0  
maincanopy 1  
subcanopy 0  
Shrubs Total 4  
Dominant Shrubs ARTR2, PUTR2, ARTR4, ERNI2, ERNA10  
> 1.5' tall 3  
< 1.5' tall 2  
Graminoids Total 4  
Dominant Graminoids BRTE, PSSP6, HECO26, FEID  
Graminoids Perennial 3  
Graminoids Annual 4  
Forbs Total 3  
Dominant Forbs ACMI2, LODI, COUM, ERIGE2  
Forbs Perennial 3  
Forbs Annual 2  
Ferns Total 0  
Ferns Evergreen 0  
Ferns Deciduous 0  
ExoticsTotal 4  
Exotics Perennial 2  
Exotics Annual 4  
Water 0  
Rock Outcrop 3  
Gravel 1  
Logging 1  
Fire: 0  
Stand Age 1  
Agriculture 0  
Livestock 0  
Development 4  
Wildlife 3  
Recreation Severity 3  
Recreation Type 3  
Hydrology 2

## Exotic Species

### Noxious Exotic Plants

LIDAD, CEDI3

### Other Exotic Plants

BRTE

Water: 0  
Rock: 3  
Talus: 3  
Gravel: 1  
Bare Ground: 8  
Moss Lichen: 0  
Litter: 85

## Vegetation Types

| Vegetation Types                                           | Percent | Pattern     | Rank   |
|------------------------------------------------------------|---------|-------------|--------|
| Existing Veg1: ARTR2-PUTR2/FEID-BRTE-LUPIN                 | 79      | Matrix      | GOOD   |
| Veg Community1: ARTR2/FEID Daubenmire 1970                 |         |             | G4     |
| Existing Veg2: ARTR2-PUTR2/BRTE-PSSP6-LODI                 | 20      | Large patch | POOR   |
| Veg Community3: ARTR2/PSSP6 Daubenmire 1970; Crawford 1999 |         |             | G5     |
| Existing Veg3: reservoir shoreline                         | 1       | linear      | DEVELO |
| Veg Community3: reservoir shoreline                        |         |             | na     |

Notes: HEAVY BRTE HERE AND SOME LIDA, MOSTLY IN STEEP SLOPE NEAR RESERVOIR;  
MAIN PART OF POLY IS THAT AND MUCH LESS WEEDY

|                             |                                                      |                   |
|-----------------------------|------------------------------------------------------|-------------------|
| <b>Polygon Number</b>       | <b>4B</b>                                            | <b>ParkName:</b>  |
| <b>Survey Intensity</b>     | 2                                                    | <b>Bridgeport</b> |
| <b>Observer</b>             | GW, AM                                               |                   |
| <b>Date</b>                 | 7/24/2008                                            |                   |
| <b>Total Vegetation</b>     | 6                                                    |                   |
| <b>Trees Total</b>          | 2                                                    |                   |
| <b>Dominant Trees</b>       | BEOC2, POBAT                                         |                   |
| <b>emergent</b>             | 0                                                    |                   |
| <b>maincanopy</b>           | 1                                                    |                   |
| <b>subcanopy</b>            | 2                                                    |                   |
| <b>Shrubs Total</b>         | 3                                                    |                   |
| <b>Dominant Shrubs</b>      | SAEX, ELAN, SAPR3, ARTR2, COSE16, ROWO               |                   |
| <b>&gt; 1.5' tall</b>       | 3                                                    |                   |
| <b>&lt; 1.5' tall</b>       | 3                                                    |                   |
| <b>Graminoids Total</b>     | 4                                                    |                   |
| <b>Dominant Graminoids</b>  | SPCR, POPR, BRAR5, BTRE, ACHY, LECI4                 |                   |
| <b>Graminoids Perennial</b> | 3                                                    |                   |
| <b>Graminoids Annual</b>    | 4                                                    |                   |
| <b>Forbs Total</b>          | 3                                                    |                   |
| <b>Dominant Forbs</b>       | EQLA, MEOF, ARDR4, LIDAD, ASSP, ERNA10, NECA2, SOCA6 |                   |
| <b>Forbs Perennial</b>      | 3                                                    |                   |
| <b>Forbs Annual</b>         | 2                                                    |                   |
| <b>Ferns Total</b>          | 0                                                    |                   |
| <b>Ferns Evergreen</b>      | 0                                                    |                   |
| <b>Ferns Deciduous</b>      | 0                                                    |                   |
| <b>ExoticsTotal</b>         | 4                                                    |                   |
| <b>Exotics Perennial</b>    | 3                                                    |                   |
| <b>Exotics Annual</b>       | 4                                                    |                   |
| <b>Water</b>                | 0                                                    |                   |
| <b>Rock Outcrop</b>         | 1                                                    |                   |
| <b>Gravel</b>               | 0                                                    |                   |
| <b>Logging</b>              | 1                                                    |                   |
| <b>Fire:</b>                | NO                                                   |                   |
| <b>Stand Age</b>            | 1                                                    |                   |
| <b>Agriculture</b>          | 0                                                    |                   |
| <b>Livestock</b>            | 0                                                    |                   |
| <b>Development</b>          | 5                                                    |                   |
| <b>Wildlife</b>             | 3                                                    |                   |
| <b>Recreation Severity</b>  | 3                                                    |                   |
| <b>Recreation Type</b>      | 3                                                    |                   |
| <b>Hydrology</b>            | 2                                                    |                   |

### Exotic Species

#### Noxious Exotic Plants

LIDAD

#### Other Exotic Plants

SIAL2, NECA2, BTRE

|                     |    |
|---------------------|----|
| <b>Water:</b>       | 0  |
| <b>Rock:</b>        | 1  |
| <b>Talus:</b>       | 0  |
| <b>Gravel:</b>      | 0  |
| <b>Bare Ground:</b> | 5  |
| <b>Moss Lichen:</b> | 1  |
| <b>Litter:</b>      | 93 |

### Vegetation Types

|                                              | Percent       | Pattern     | Rank |
|----------------------------------------------|---------------|-------------|------|
| <b>Existing Veg1:</b> ARTR2/LECI4-SIAL2-BTRE | 40            | Matrix      | POOR |
| <b>Veg Community1:</b> ARTR2/LECI4           | Crawford 1999 |             | G2   |
| <b>Existing Veg2:</b> SAEX/LECI4-EQLA-BRAR5  | 50            | Large patch | FAIR |
| <b>Veg Community3:</b> LECI4-BRTE            | Crawford 2003 |             | ~G4  |
| <b>Existing Veg3:</b>                        | 0             |             |      |

#### Veg Community3:

**Notes:** Rank of PA1 is fair not poor because high water table helps if maintain. BRJA is main weed but, lets other plants grow



|                             |                                                 |                   |
|-----------------------------|-------------------------------------------------|-------------------|
| <b>Polygon Number</b>       | <b>4A</b>                                       | <b>ParkName:</b>  |
| <b>Survey Intensity</b>     | 1                                               | <b>Bridgeport</b> |
| <b>Observer</b>             | GW, AM                                          |                   |
| <b>Date</b>                 | 7/24/2008                                       |                   |
| <b>Total Vegetation</b>     | 5                                               |                   |
| <b>Trees Total</b>          | 0                                               |                   |
| <b>Dominant Trees</b>       |                                                 |                   |
| emergent                    | 0                                               |                   |
| maincanopy                  | 0                                               |                   |
| subcanopy                   | 0                                               |                   |
| <b>Shrubs Total</b>         | 3                                               |                   |
| <b>Dominant Shrubs</b>      | ARTR2, CHVI8, PUTR2, ERNA10, OPFR,ERNI2         |                   |
| > 1.5' tall                 | 3                                               |                   |
| < 1.5' tall                 | 2                                               |                   |
| <b>Graminoids Total</b>     | 4                                               |                   |
| <b>Dominant Graminoids</b>  | HECO26, SPCR, POSE, BRTE                        |                   |
| <b>Graminoids Perennial</b> | 3                                               |                   |
| <b>Graminoids Annual</b>    | 3                                               |                   |
| <b>Forbs Total</b>          | 3                                               |                   |
| <b>Dominant Forbs</b>       | ACMI2, ARCAS5, LUSE4, EQLA, ARDR4, PODO4, LIDAD |                   |
| <b>Forbs Perennial</b>      | 3                                               |                   |
| <b>Forbs Annual</b>         | 1                                               |                   |
| <b>Ferns Total</b>          | 0                                               |                   |
| <b>Ferns Evergreen</b>      | 0                                               |                   |
| <b>Ferns Deciduous</b>      | 0                                               |                   |
| <b>ExoticsTotal</b>         | 3                                               |                   |
| <b>Exotics Perennial</b>    | 2                                               |                   |
| <b>Exotics Annual</b>       | 3                                               |                   |
| <b>Water</b>                | 0                                               |                   |
| <b>Rock Outcrop</b>         | 0                                               |                   |
| <b>Gravel</b>               | 0                                               |                   |
| <b>Logging</b>              | 1                                               |                   |
| <b>Fire:</b>                | NO                                              |                   |
| <b>Stand Age</b>            | 1                                               |                   |
| <b>Agriculture</b>          | 0                                               |                   |
| <b>Livestock</b>            | 0                                               |                   |
| <b>Development</b>          | 6                                               |                   |
| <b>Wildlife</b>             | 3                                               |                   |
| <b>Recreation Severity</b>  | 3                                               |                   |
| <b>Recreation Type</b>      | 3                                               |                   |
| <b>Hydrology</b>            | 1                                               |                   |

### Exotic Species

#### Noxious Exotic Plants

LIDAD

#### Other Exotic Plants

BRTE

|                     |    |
|---------------------|----|
| <b>Water:</b>       | 0  |
| <b>Rock:</b>        | 0  |
| <b>Talus:</b>       | 0  |
| <b>Gravel:</b>      | 0  |
| <b>Bare Ground:</b> | 20 |
| <b>Moss Lichen:</b> | 5  |
| <b>Litter:</b>      | 75 |

### Vegetation Types

|                                                                         | Percent | Pattern | Rank |
|-------------------------------------------------------------------------|---------|---------|------|
| <b>Existing Veg1:</b> ARTR2-ERNA10-PUTR2/HECO26-BRTE-EQLA               | 95      | Matrix  | GOOD |
| <b>Veg Community1:</b> ARTR2/HECO26 Daubenmire 1970                     |         |         | G4   |
| <b>Existing Veg2:</b> PUTR2-ERNI2-ERNA10/ARCAS5                         | 5       |         | GOOD |
| <b>Veg Community3:</b> ERNA10-CHVI8-ERNI2 dunes Hallock and others 2007 |         |         | G1?  |
| <b>Existing Veg3:</b>                                                   | 0       |         |      |
| <b>Veg Community3:</b>                                                  |         |         |      |

**Notes:** SANDY SHRUB STEPPE

# Polygon Number 5

ParkName:

Bridgeport

|                      |                                                      |
|----------------------|------------------------------------------------------|
| Survey Intensity     | 2                                                    |
| Observer             | PM                                                   |
| Date                 | 7/19/2008                                            |
| Total Vegetation     | 4                                                    |
| Trees Total          | 0                                                    |
| Dominant Trees       |                                                      |
| emergent             | 0                                                    |
| maincanopy           | 0                                                    |
| subcanopy            | 0                                                    |
| Shrubs Total         | 4                                                    |
| Dominant Shrubs      | PHLE4, AMAL2, ARTR4, ARTR2, TORY, ERNI2, PRVI, ERHE2 |
| > 1.5' tall          | 4                                                    |
| < 1.5' tall          | 1                                                    |
| Graminoids Total     | 3                                                    |
| Dominant Graminoids  | FEID, LECI4, PSSP6, BRTE                             |
| Graminoids Perennial | 3                                                    |
| Graminoids Annual    | 2                                                    |
| Forbs Total          | 1                                                    |
| Dominant Forbs       | HECY, SILENE, ACMI2, LIRU4, COLI2                    |
| Forbs Perennial      | 1                                                    |
| Forbs Annual         | 1                                                    |
| Ferns Total          | 1                                                    |
| Ferns Evergreen      | 1                                                    |
| Ferns Deciduous      | 1                                                    |
| ExoticsTotal         | 1                                                    |
| Exotics Perennial    | 0                                                    |
| Exotics Annual       | 1                                                    |
| Water                | 0                                                    |
| Rock Outcrop         | 25                                                   |
| Gravel               | 2                                                    |
| Logging              | 1                                                    |
| Fire:                | 0                                                    |
| Stand Age            | 1                                                    |
| Agriculture          | 0                                                    |
| Livestock            | 0                                                    |
| Development          | 0                                                    |
| Wildlife             | 3                                                    |
| Recreation Severity  | 3                                                    |
| Recreation Type      | 3                                                    |
| Hydrology            | 1                                                    |

## Exotic Species

### Noxious Exotic Plants

### Other Exotic Plants

TRDU, BTRE

Water: 0

Rock: 25

Talus: 30

Gravel: 2

Bare Ground: 8

Moss Lichen: 3

Litter: 32

## Vegetation Types

| Existing Veg1:                      | Percent       | Pattern     | Rank    |
|-------------------------------------|---------------|-------------|---------|
| PHLE4-AMAL2-TORY/PSSP6              | 45            | Matrix      | EXCELLE |
| <b>Veg Community1:</b> AMAL2-TORY   | Crawford 2003 |             | ~G2     |
| <b>Existing Veg2:</b> talus         | 30            | Large patch | EXCELLE |
| <b>Veg Community3:</b> rock outcrop |               |             | na      |
| <b>Existing Veg3:</b> rock cliffs   | 25            | Large patch | EXCELLE |
| <b>Veg Community3:</b> rock outcrop |               |             |         |

Notes: ROCK CLIFFS, TALUS AND STEEP SHRUBBY SLOPE WITH GRASSY PATCHES

## Polygon Number 6

ParkName:

Bridgeport

|                      |                                              |  |
|----------------------|----------------------------------------------|--|
| Survey Intensity     | 1                                            |  |
| Observer             | GW                                           |  |
| Date                 | 7/19/2008                                    |  |
| Total Vegetation     | 6                                            |  |
| Trees Total          | 0                                            |  |
| Dominant Trees       |                                              |  |
| emergent             | 0                                            |  |
| maincanopy           | 0                                            |  |
| subcanopy            | 0                                            |  |
| Shrubs Total         | 2                                            |  |
| Dominant Shrubs      |                                              |  |
| > 1.5' tall          | 2                                            |  |
| < 1.5' tall          | 1                                            |  |
| Graminoids Total     | 5                                            |  |
| Dominant Graminoids  | JUARL, LECI4, DISP, POSE, SCTA2, BRRA2, HOJU |  |
| Graminoids Perennial | 5                                            |  |
| Graminoids Annual    | 2                                            |  |
| Forbs Total          | 4                                            |  |
| Dominant Forbs       | LACTU, LASE, SARU, BASC5                     |  |
| Forbs Perennial      | 4                                            |  |
| Forbs Annual         | 0                                            |  |
| Ferns Total          | 0                                            |  |
| Ferns Evergreen      | 0                                            |  |
| Ferns Deciduous      | 0                                            |  |
| ExoticsTotal         | 4                                            |  |
| Exotics Perennial    | 1                                            |  |
| Exotics Annual       | 3                                            |  |
| Water                | 0                                            |  |
| Rock Outcrop         | 0                                            |  |
| Gravel               | 0                                            |  |
| Logging              | 1                                            |  |
| Fire:                | 0                                            |  |
| Stand Age            | 1                                            |  |
| Agriculture          | 0                                            |  |
| Livestock            | 0                                            |  |
| Development          | 0                                            |  |
| Wildlife             | 3                                            |  |
| Recreation Severity  | 3                                            |  |
| Recreation Type      | 3                                            |  |
| Hydrology            | 1                                            |  |

### Exotic Species

#### Noxious Exotic Plants

LIDAD

#### Other Exotic Plants

VETH, POPR, TRDU, LASE

|              |     |
|--------------|-----|
| Water:       | 0   |
| Rock:        | 0   |
| Talus:       | 0   |
| Gravel:      | 0   |
| Bare Ground: | 0   |
| Moss Lichen: | 0   |
| Litter:      | 100 |

## Vegetation Types

| Vegetation Types |                      | Percent                        | Pattern | Rank |
|------------------|----------------------|--------------------------------|---------|------|
| Existing Veg1:   | HOJU-SARU-DISP-LECI4 | 100                            | Matrix  | FAIR |
| Veg Community1:  | LECI4-DISP           | Daubenmire 1970; Crawford 2003 |         | G3   |
| Existing Veg2:   |                      | 0                              |         |      |
| Veg Community3:  |                      |                                |         |      |
| Existing Veg3:   |                      | 0                              |         |      |
| Veg Community3:  |                      |                                |         |      |
| Notes:           | POTHOLE WETLAND      |                                |         |      |

# Polygon Number 7

ParkName:

Bridgeport

Survey Intensity 2  
Observer GW  
Date 7/19/2008  
Total Vegetation 5  
Trees Total 0  
Dominant Trees  
emergent 0  
maincanopy 0  
subcanopy 0  
Shrubs Total 4  
Dominant Shrubs ELAN, ARTR2, PUTR2, PHLE4, ARTR4  
> 1.5' tall 3  
< 1.5' tall 2  
Graminoids Total 4  
Dominant Graminoids PSSP6, KOMA, BRTE  
Graminoids Perennial 4  
Graminoids Annual 3  
Forbs Total 2  
Dominant Forbs ACMI2, ERCO5, ERNI2, EPMI  
Forbs Perennial 2  
Forbs Annual 1  
Ferns Total 0  
Ferns Evergreen 0  
Ferns Deciduous 0  
ExoticsTotal 2  
Exotics Perennial 2  
Exotics Annual 2  
Water 0  
Rock Outcrop 15  
Gravel 3  
Logging 1  
Fire: YES, 5 YEARS AGO  
Stand Age 1  
Agriculture 0  
Livestock 0  
Development 0  
Wildlife 3  
Recreation Severity 3  
Recreation Type 3  
Hydrology 1

## Exotic Species

### Noxious Exotic Plants

LIDAD

### Other Exotic Plants

BTRE

Water: 0  
Rock: 15  
Talus: 10  
Gravel: 3  
Bare Ground: 10  
Moss Lichen: 1  
Litter: 61

## Vegetation Types

Percent Pattern

Rank

Existing Veg1: ARTR2-PUTR-ARTR4/PSSP6 100 Matrix GOOD

Veg Community1: ARTR2/PSSP6 Daubenmire 1970; Crawford 1999 G5

Existing Veg2: 0

### Veg Community3:

Existing Veg3: 0

### Veg Community3:

Notes:

# Polygon Number 8

ParkName:

Bridgeport

|                      |                                                           |  |
|----------------------|-----------------------------------------------------------|--|
| Survey Intensity     | 2                                                         |  |
| Observer             | GW                                                        |  |
| Date                 | 7/19/2008                                                 |  |
| Total Vegetation     | 6                                                         |  |
| Trees Total          | 0                                                         |  |
| Dominant Trees       |                                                           |  |
| emergent             | 0                                                         |  |
| maincanopy           | 0                                                         |  |
| subcanopy            | 0                                                         |  |
| Shrubs Total         | 3                                                         |  |
| Dominant Shrubs      | ELAN, ERNA10, ARTR2                                       |  |
| > 1.5' tall          | 3                                                         |  |
| < 1.5' tall          | 2                                                         |  |
| Graminoids Total     | 4                                                         |  |
| Dominant Graminoids  | DISP, LECI4, BRRA2, BRAR5                                 |  |
| Graminoids Perennial | 4                                                         |  |
| Graminoids Annual    | 2                                                         |  |
| Forbs Total          | 4                                                         |  |
| Dominant Forbs       | LELA2, SONCH, LASE, MEOF, Sonchus2, CHENO, LEPE2, Kochia- |  |
| Forbs Perennial      | 4                                                         |  |
| Forbs Annual         | 3                                                         |  |
| Ferns Total          | 0                                                         |  |
| Ferns Evergreen      | 0                                                         |  |
| Ferns Deciduous      | 0                                                         |  |
| ExoticsTotal         | 5                                                         |  |
| Exotics Perennial    | 5                                                         |  |
| Exotics Annual       | 4                                                         |  |
| Water                | 0                                                         |  |
| Rock Outcrop         | 0                                                         |  |
| Gravel               | 0                                                         |  |
| Logging              | 1                                                         |  |
| Fire:                | YES-5 YEARS                                               |  |
| Stand Age            | 1                                                         |  |
| Agriculture          | 0                                                         |  |
| Livestock            | 0                                                         |  |
| Development          | 0                                                         |  |
| Wildlife             | 3                                                         |  |
| Recreation Severity  | 3                                                         |  |
| Recreation Type      | 3                                                         |  |
| Hydrology            | 2- IRRIGATION                                             |  |

## Exotic Species

### Noxious Exotic Plants

LELA2, LIDAD, CIAR4

### Other Exotic Plants

Sonchus, LEPE2, LASE, CHENO, ELAN,

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 1  |
| Moss Lichen: | 0  |
| Litter:      | 99 |

## Vegetation Types

| Vegetation Types |                       | Percent                        | Pattern | Rank |
|------------------|-----------------------|--------------------------------|---------|------|
| Existing Veg1:   | ELAN-LELA2-BASC5 DISP | 100                            | Matrix  | POOR |
| Veg Community1:  | LECI4-DISP            | Daubenmire 1970; Crawford 2003 |         | G3   |
| Existing Veg2:   |                       | 0                              |         |      |
| Veg Community3:  |                       |                                |         |      |
| Existing Veg3:   |                       | 0                              |         |      |
| Veg Community3:  |                       |                                |         |      |

Notes: WEEDY AREA WITH MORE WATER DUE TO NEAR BY AGRICULTURE



# **Polygon Number 9**

**ParkName:**

**Bridgeport**

|                      |                                                       |
|----------------------|-------------------------------------------------------|
| Survey Intensity     | 2                                                     |
| Observer             | GW                                                    |
| Date                 | 7/19/2008                                             |
| Total Vegetation     | 5                                                     |
| Trees Total          | 1                                                     |
| Dominant Trees       | FRAXI                                                 |
| emergent             | 0                                                     |
| maincanopy           | 0                                                     |
| subcanopy            | 1                                                     |
| Shrubs Total         | 4                                                     |
| Dominant Shrubs      | ARTR2, ELAN, ERNA10, RICE, PHLE4, ARTR4, ERHE2, TORY, |
| > 1.5' tall          | 4                                                     |
| < 1.5' tall          | 2                                                     |
| Graminoids Total     | 4                                                     |
| Dominant Graminoids  | LECI4, DISP, BRTE                                     |
| Graminoids Perennial | 4                                                     |
| Graminoids Annual    | 2                                                     |
| Forbs Total          | 2                                                     |
| Dominant Forbs       | ARDR4, ERFI2, LULE3, SPMU2, PLPA2, GAAR               |
| Forbs Perennial      | 2                                                     |
| Forbs Annual         | 1                                                     |
| Ferns Total          | 0                                                     |
| Ferns Evergreen      | 0                                                     |
| Ferns Deciduous      | 0                                                     |
| ExoticsTotal         | 2                                                     |
| Exotics Perennial    | 2                                                     |
| Exotics Annual       | 2                                                     |
| Water                | 0                                                     |
| Rock Outcrop         | 3                                                     |
| Gravel               | 1                                                     |
| Logging              | 1                                                     |
| Fire:                | 0                                                     |
| Stand Age            | 1                                                     |
| Agriculture          | 0                                                     |
| Livestock            | 0                                                     |
| Development          | 6                                                     |
| Wildlife             | 3                                                     |
| Recreation Severity  | 3                                                     |
| Recreation Type      | 3                                                     |
| Hydrology            | 1                                                     |

## **Exotic Species**

### **Noxious Exotic Plants**

LELA2, LIDAD, CEDI3,

### **Other Exotic Plants**

BTRE, MEDF, CIVU

|                     |    |
|---------------------|----|
| <b>Water:</b>       | 0  |
| <b>Rock:</b>        | 3  |
| <b>Talus:</b>       | 2  |
| <b>Gravel:</b>      | 1  |
| <b>Bare Ground:</b> | 3  |
| <b>Moss Lichen:</b> | 1  |
| <b>Litter:</b>      | 90 |

## **Vegetation Types**

|                              | Percent                        | Pattern     | Rank |
|------------------------------|--------------------------------|-------------|------|
| Existing Veg1: ARTR2/HECO26  | 70                             | Matrix      | FAIR |
| Veg Community1: ARTR2/HECO26 | Daubenmire 1970                |             | G4   |
| Existing Veg2: ARTR2/DISP    | 30                             | Large patch | POOR |
| Veg Community3: LECI4-DISP   | Daubenmire 1970; Crawford 2003 |             | G3   |
| Existing Veg3:               | 0                              |             |      |
| Veg Community3:              |                                |             |      |

**Notes:** SCATTERED LARGE ERRATICS IN PATCHES OF WET OR DRY SHRUB-STEPP;

# Polygon Number 10B

ParkName:

Bridgeport

|                      |                                                       |  |
|----------------------|-------------------------------------------------------|--|
| Survey Intensity     | 2                                                     |  |
| Observer             | GW, PM                                                |  |
| Date                 | 7/19/2008                                             |  |
| Total Vegetation     | 5                                                     |  |
| Trees Total          | 1                                                     |  |
| Dominant Trees       | ULPU                                                  |  |
| emergent             | 0                                                     |  |
| maincanopy           | 0                                                     |  |
| subcanopy            | 1                                                     |  |
| Shrubs Total         | 4                                                     |  |
| Dominant Shrubs      | ARTR2, ARTR4, ERNA10, TETRA3, ELAN                    |  |
| > 1.5' tall          | 4                                                     |  |
| < 1.5' tall          | 2                                                     |  |
| Graminoids Total     | 4                                                     |  |
| Dominant Graminoids  | HECO2, POSE, BRTE, BRAR5                              |  |
| Graminoids Perennial | 4                                                     |  |
| Graminoids Annual    | 3                                                     |  |
| Forbs Total          | 3                                                     |  |
| Dominant Forbs       | ARDR4, VETH, LUSE4, ACMI2, ERLI, SIAL2, LASE, SANIC5, |  |
| Forbs Perennial      | 3                                                     |  |
| Forbs Annual         | 2                                                     |  |
| Ferns Total          | 0                                                     |  |
| Ferns Evergreen      | 0                                                     |  |
| Ferns Deciduous      | 0                                                     |  |
| ExoticsTotal         | 3                                                     |  |
| Exotics Perennial    | 2                                                     |  |
| Exotics Annual       | 3                                                     |  |
| Water                | 0                                                     |  |
| Rock Outcrop         | 0                                                     |  |
| Gravel               | 0                                                     |  |
| Logging              | 1                                                     |  |
| Fire:                | 0                                                     |  |
| Stand Age            | 1                                                     |  |
| Agriculture          | 0                                                     |  |
| Livestock            | 0                                                     |  |
| Development          | 6                                                     |  |
| Wildlife             | 3                                                     |  |
| Recreation Severity  | 3                                                     |  |
| Recreation Type      | 3                                                     |  |
| Hydrology            | 1                                                     |  |

## Exotic Species

### Noxious Exotic Plants

LIDAD

### Other Exotic Plants

SANIC5, VETH, SIAL2, ELAN, BRTE,

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 20 |
| Moss Lichen: | 3  |
| Litter:      | 77 |

## Vegetation Types

| Vegetation Types |              | Percent         | Pattern | Rank |
|------------------|--------------|-----------------|---------|------|
| Existing Veg1:   | ARTR2-ERNA10 | 100             | Matrix  | FAIR |
| Veg Community1:  | ARTR2/HECO26 | Daubenmire 1970 |         | G4   |
| Existing Veg2:   |              | 0               |         |      |
| Veg Community3:  |              |                 |         |      |
| Existing Veg3:   |              | 0               |         |      |
| Veg Community3:  |              |                 |         |      |

Notes: LIDAD is mostly near roads; edge of roads is heavily disturbed, center is in better shape

# Polygon Number 10A ParkName:

Survey Intensity 1 Bridgeport

Observer GE, AM  
Date 7/24/2008

Total Vegetation 6  
Trees Total 0  
Dominant Trees  
emergent 0  
maincanopy 0  
subcanopy 0  
Shrubs Total 4  
Dominant Shrubs ARTR2, PUTR2, ARTR4, ERHE2, ERNI2  
> 1.5' tall 4  
< 1.5' tall 2  
Graminoids Total 4  
Dominant Graminoids HECO26, POSE, PSSP6, BTRE, VULPI  
Graminoids Perennial 4  
Graminoids Annual 3  
Forbs Total 2  
Dominant Forbs BASA3, TECA2, OPFR, LUSE4, PHLI  
Forbs Perennial 2  
Forbs Annual 1  
Ferns Total 0  
Ferns Evergreen 0  
Ferns Deciduous 0  
ExoticsTotal 3  
Exotics Perennial 1  
Exotics Annual 3  
Water 0  
Rock Outcrop 1  
Gravel 0  
Logging 1  
Fire: NO  
Stand Age 1  
Agriculture 0  
Livestock 0  
Development 6  
Wildlife 3  
Recreation Severity 3  
Recreation Type 3  
Hydrology 1

## Exotic Species

### Noxious Exotic Plants

LIDAD

### Other Exotic Plants

BTRE

Water: 0  
Rock: 1  
Talus: 0  
Gravel: 0  
Bare Ground: 15  
Moss Lichen: 1  
Litter: 83

## Vegetation Types

| Vegetation Types                              | Percent | Pattern | Rank |
|-----------------------------------------------|---------|---------|------|
| Existing Veg1: ARTR2-ARTR4-ERHE2/HECO26-LUSE4 | 100     | Matrix  | GOOD |
| Veg Community1: ARTR4/PSSP6 Daubenmire 1970   |         |         | G5   |
| Existing Veg2:                                | 0       |         |      |
| Veg Community3:                               |         |         |      |
| Existing Veg3:                                | 0       |         |      |
| Veg Community3:                               |         |         |      |

Notes: ARTR2 DOMINANT, ROCKER GROUND THEN SUROUNDING AREA,

# Polygon Number 11

ParkName:

Bridgeport

|                      |                                                 |  |
|----------------------|-------------------------------------------------|--|
| Survey Intensity     | 2                                               |  |
| Observer             | GW                                              |  |
| Date                 | 8/9/2008                                        |  |
| Total Vegetation     | 5                                               |  |
| Trees Total          | 0                                               |  |
| Dominant Trees       |                                                 |  |
| emergent             | 0                                               |  |
| maincanopy           | 0                                               |  |
| subcanopy            | 0                                               |  |
| Shrubs Total         | 3                                               |  |
| Dominant Shrubs      | ARTR2, CHVI, ARTR4                              |  |
| > 1.5' tall          | 3                                               |  |
| < 1.5' tall          | 2                                               |  |
| Graminoids Total     | 4                                               |  |
| Dominant Graminoids  | HECO26, BRRA2, BRTE                             |  |
| Graminoids Perennial | 4                                               |  |
| Graminoids Annual    | 3                                               |  |
| Forbs Total          | 2                                               |  |
| Dominant Forbs       | SIAL2, LULE3, PHLO2, ACMI2, ERPU2, ORBA2, PLPA2 |  |
| Forbs Perennial      | 1                                               |  |
| Forbs Annual         | 2                                               |  |
| Ferns Total          | 0                                               |  |
| Ferns Evergreen      | 0                                               |  |
| Ferns Deciduous      | 0                                               |  |
| ExoticsTotal         | 3                                               |  |
| Exotics Perennial    | 1                                               |  |
| Exotics Annual       | 3                                               |  |
| Water                | 0                                               |  |
| Rock Outcrop         | 5                                               |  |
| Gravel               | 0                                               |  |
| Logging              | 1                                               |  |
| Fire:                | 0                                               |  |
| Stand Age            | 1                                               |  |
| Agriculture          | 0                                               |  |
| Livestock            | 0                                               |  |
| Development          | 5                                               |  |
| Wildlife             | 3                                               |  |
| Recreation Severity  | 3                                               |  |
| Recreation Type      | 3                                               |  |
| Hydrology            | 1                                               |  |

## Exotic Species

### Noxious Exotic Plants

LIDAD

### Other Exotic Plants

SIAL2, BRTE, TRDU, BRRA2

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 5  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 10 |
| Moss Lichen: | 2  |
| Litter:      | 83 |

## Vegetation Types

| Vegetation Types                                 | Percent | Pattern | Rank |
|--------------------------------------------------|---------|---------|------|
| Existing Veg1: ARTR2-ARTR4/HECO26                | 100     | Matrix  | FAIR |
| Veg Community1: ARTR2/HECO26 Daubenmire 1970     |         |         | G4   |
| Existing Veg2:                                   | 0       |         |      |
| Veg Community3:                                  |         |         |      |
| Existing Veg3:                                   | 0       |         |      |
| Veg Community3:                                  |         |         |      |
| Notes: BEDROCK BENCH WITH SOME DEEP SOIL POCKETS |         |         |      |

## Polygon Number 12

ParkName:

Bridgeport

Survey Intensity 1  
Observer PM  
Date 7/19/2008  
Total Vegetation 0  
Trees Total 0  
Dominant Trees  
emergent 0  
maincanopy 0  
subcanopy 0  
Shrubs Total 0  
Dominant Shrubs  
> 1.5' tall 0  
< 1.5' tall 0  
Graminoids Total 0  
Dominant Graminoids  
Graminoids Perennial 0  
Graminoids Annual 0  
Forbs Total 0  
Dominant Forbs  
Forbs Perennial 0  
Forbs Annual 0  
Ferns Total 0  
Ferns Evergreen 0  
Ferns Deciduous 0  
ExoticsTotal 0  
Exotics Perennial 0  
Exotics Annual 0  
Water 0  
Rock Outcrop 0  
Gravel 0

Logging  
Fire:  
Stand Age  
Agriculture  
Livestock  
Development  
Wildlife  
Recreation Severity  
Recreation Type  
Hydrology

### Exotic Species

#### Noxious Exotic Plants

#### Other Exotic Plants

Water: 0  
Rock: 0  
Talus: 0  
Gravel: 0  
Bare Ground: 0  
Moss Lichen: 0  
Litter: 0

## Vegetation Types

Existing Veg1: developed

Veg Community1: developed

Existing Veg2:

Veg Community3:

Existing Veg3:

Veg Community3:

Notes: Golf courses, campground, facilities

| Percent | Pattern | Rank   |
|---------|---------|--------|
| 100     | Matrix  | DEVELO |
| 0       |         | na     |
| 0       |         |        |



# **Polygon Number      13**

**ParkName:**

**Bridgeport**

|                      |                                                           |  |
|----------------------|-----------------------------------------------------------|--|
| Survey Intensity     | 1                                                         |  |
| Observer             | GW                                                        |  |
| Date                 | 8/9/2008                                                  |  |
| Total Vegetation     | 5                                                         |  |
| Trees Total          | 0                                                         |  |
| Dominant Trees       |                                                           |  |
| emergent             | 0                                                         |  |
| maincanopy           | 0                                                         |  |
| subcanopy            | 0                                                         |  |
| Shrubs Total         | 4                                                         |  |
| Dominant Shrubs      | ARTR2, ERNA10, COCA5, ARTR4, PUTR2, CHVI8, ERHE2          |  |
| > 1.5' tall          | 3                                                         |  |
| < 1.5' tall          | 3                                                         |  |
| Graminoids Total     | 3                                                         |  |
| Dominant Graminoids  | BRTE, HECO26, POSE                                        |  |
| Graminoids Perennial | 2                                                         |  |
| Graminoids Annual    | 3                                                         |  |
| Forbs Total          | 3                                                         |  |
| Dominant Forbs       | SPMU2, CEDI3, LULE3, ARDR4, EPMI, LASE, SAKA, SIAL2, HEPE |  |
| Forbs Perennial      | 1                                                         |  |
| Forbs Annual         | 3                                                         |  |
| Ferns Total          | 0                                                         |  |
| Ferns Evergreen      | 0                                                         |  |
| Ferns Deciduous      | 0                                                         |  |
| ExoticsTotal         | 4                                                         |  |
| Exotics Perennial    | 1                                                         |  |
| Exotics Annual       | 4                                                         |  |
| Water                | 0                                                         |  |
| Rock Outcrop         | 1                                                         |  |
| Gravel               | 2                                                         |  |
| Logging              | 0                                                         |  |
| Fire:                | 0                                                         |  |
| Stand Age            | 1                                                         |  |
| Agriculture          | 0                                                         |  |
| Livestock            | 0                                                         |  |
| Development          | 6                                                         |  |
| Wildlife             | 3                                                         |  |
| Recreation Severity  | 3                                                         |  |
| Recreation Type      | 3                                                         |  |
| Hydrology            | 1                                                         |  |

## **Exotic Species**

### **Noxious Exotic Plants**

CEDI3, LIDAD

### **Other Exotic Plants**

SAKA, LASE, AGCRP8

|                     |    |
|---------------------|----|
| <b>Water:</b>       | 0  |
| <b>Rock:</b>        | 1  |
| <b>Talus:</b>       | 25 |
| <b>Gravel:</b>      | 2  |
| <b>Bare Ground:</b> | 15 |
| <b>Moss Lichen:</b> | 3  |
| <b>Litter:</b>      | 54 |

## **Vegetation Types**

|                                                                   | Percent | Pattern | Rank |
|-------------------------------------------------------------------|---------|---------|------|
| <b>Existing Veg1:</b> ERNA10-ARTR2/CEDI3-SIAL2-BRTE               | 100     | Matrix  | POOR |
| <b>Veg Community1:</b> ARTR2/PSSP6 Daubenmire 1970; Crawford 1999 |         |         | G5   |
| <b>Existing Veg2:</b>                                             | 0       |         |      |
| <b>Veg Community3:</b>                                            |         |         |      |
| <b>Existing Veg3:</b>                                             | 0       |         |      |
| <b>Veg Community3:</b>                                            |         |         |      |
| <b>Notes:</b> ROCK PILES AND DISTURBED FLAT GROUND                |         |         |      |

# Polygon Number 14

ParkName:

Bridgeport

|                      |                                               |  |
|----------------------|-----------------------------------------------|--|
| Survey Intensity     | 2                                             |  |
| Observer             | PM                                            |  |
| Date                 | 7/19/2008                                     |  |
| Total Vegetation     | 4                                             |  |
| Trees Total          | 0                                             |  |
| Dominant Trees       |                                               |  |
| emergent             | 0                                             |  |
| maincanopy           | 0                                             |  |
| subcanopy            | 0                                             |  |
| Shrubs Total         | 4                                             |  |
| Dominant Shrubs      | ARTR2, PUTR2, AMAL2, PHLE4, ERNI2, ERHE2      |  |
| > 1.5' tall          | 4                                             |  |
| < 1.5' tall          | 2                                             |  |
| Graminoids Total     | 4                                             |  |
| Dominant Graminoids  | PSSP6, BRTE, BRRA2, ARPUL, POA                |  |
| Graminoids Perennial | 3                                             |  |
| Graminoids Annual    | 3                                             |  |
| Forbs Total          | 2                                             |  |
| Dominant Forbs       | LUSE4, LOAR5, ACMI2, COLI2, ERLI, LOAM, LOTR2 |  |
| Forbs Perennial      | 2                                             |  |
| Forbs Annual         | 1                                             |  |
| Ferns Total          | 2                                             |  |
| Ferns Evergreen      | 2                                             |  |
| Ferns Deciduous      | 1                                             |  |
| ExoticsTotal         | 3                                             |  |
| Exotics Perennial    | 1                                             |  |
| Exotics Annual       | 3                                             |  |
| Water                | 0                                             |  |
| Rock Outcrop         | 25                                            |  |
| Gravel               | 2                                             |  |
| Logging              | 1                                             |  |
| Fire:                | 0                                             |  |
| Stand Age            | 1                                             |  |
| Agriculture          | 0                                             |  |
| Livestock            | 0                                             |  |
| Development          | 0                                             |  |
| Wildlife             | 3                                             |  |
| Recreation Severity  | 3                                             |  |
| Recreation Type      | 3                                             |  |
| Hydrology            | 1                                             |  |

## Exotic Species

### Noxious Exotic Plants

LIDAD

### Other Exotic Plants

VETH, BRTE, BRRA2

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 25 |
| Talus:       | 5  |
| Gravel:      | 2  |
| Bare Ground: | 15 |
| Moss Lichen: | 5  |
| Litter:      | 48 |

## Vegetation Types

| Vegetation Types |                               | Percent                        | Pattern | Rank |
|------------------|-------------------------------|--------------------------------|---------|------|
| Existing Veg1:   | ARTR2-PUTR2/PSSP6-HECO26-BRTE | 100                            | Matrix  | GOOD |
| Veg Community1:  | ARTR2/PSSP6                   | Daubenmire 1970; Crawford 1999 |         | G5   |
| Existing Veg2:   |                               | 0                              |         |      |
| Veg Community3:  |                               |                                |         |      |
| Existing Veg3:   |                               | 0                              |         |      |
| Veg Community3:  |                               |                                |         |      |

Notes: Rocky upland area with lots of exposed bedrock; lithosols small depressions

# Polygon Number 15B

ParkName:

Bridgeport

|                      |                                                |
|----------------------|------------------------------------------------|
| Survey Intensity     | 2                                              |
| Observer             | PM                                             |
| Date                 | 7/19/2008                                      |
| Total Vegetation     | 4                                              |
| Trees Total          | 0                                              |
| Dominant Trees       | 0                                              |
| emergent             | 0                                              |
| maincanopy           | 0                                              |
| subcanopy            | 0                                              |
| Shrubs Total         | 4                                              |
| Dominant Shrubs      | ARTR2, ERNA10, RICE, PHLE4, AMAL2, PUTR2, ELAN |
| > 1.5' tall          | 4                                              |
| < 1.5' tall          | 2                                              |
| Graminoids Total     | 3                                              |
| Dominant Graminoids  | PSSP6, VULPI, BRTE, POA (bunch), FEID, HECO26  |
| Graminoids Perennial | 3                                              |
| Graminoids Annual    | 2                                              |
| Forbs Total          | 1                                              |
| Dominant Forbs       | ACMI2, ERCO4                                   |
| Forbs Perennial      | 1                                              |
| Forbs Annual         | 1                                              |
| Ferns Total          | 2                                              |
| Ferns Evergreen      | 2                                              |
| Ferns Deciduous      | 0                                              |
| ExoticsTotal         | 2                                              |
| Exotics Perennial    | 1                                              |
| Exotics Annual       | 2                                              |
| Water                | 0                                              |
| Rock Outcrop         | 20                                             |
| Gravel               | 10                                             |
| Logging              | 1                                              |
| Fire:                |                                                |
| Stand Age            | 1                                              |
| Agriculture          | 0                                              |
| Livestock            | 0                                              |
| Development          | 4                                              |
| Wildlife             | 3                                              |
| Recreation Severity  | 3                                              |
| Recreation Type      | 3                                              |
| Hydrology            | 1                                              |

## Exotic Species

**Noxious Exotic Plants**  
CEDI3, LIDAD, CIAR4, ELAN  
**Other Exotic Plants**  
BRTE

|                     |    |
|---------------------|----|
| <b>Water:</b>       | 0  |
| <b>Rock:</b>        | 20 |
| <b>Talus:</b>       | 5  |
| <b>Gravel:</b>      | 10 |
| <b>Bare Ground:</b> | 10 |
| <b>Moss Lichen:</b> | 3  |
| <b>Litter:</b>      | 47 |

## Vegetation Types

|                                                | Percent                        | Pattern     | Rank    |
|------------------------------------------------|--------------------------------|-------------|---------|
| <b>Existing Veg1:</b> ARTR2-PUTR2/PSSP6-FEID   | 85                             | Matrix      | EXCELLE |
| <b>Veg Community1:</b> PUTR2/PSSP6             | Daubenmire 1970; Crawford 1999 |             | ~G3     |
| <b>Existing Veg2:</b> AMAL2-PHLE4-ARTR2        | 10                             | Small patch | EXCELLE |
| <b>Veg Community3:</b> AMAL2-PHLE4/PSSP6       | Crawford 2003                  |             | ~G2     |
| <b>Existing Veg3:</b> DISTURBED-QUARRIES/ROADS | 5                              | Small patch | POOR    |
| <b>Veg Community3:</b> developed               |                                |             | na      |

Notes: OLD ROAD AND ROCK QUARRIES IN POLY;

# Polygon Number 15A ParkName:

Bridgeport

|                      |                                        |
|----------------------|----------------------------------------|
| Survey Intensity     | 1                                      |
| Observer             | PM                                     |
| Date                 | 7/24/2008                              |
| Total Vegetation     | 5                                      |
| Trees Total          | 1                                      |
| Dominant Trees       | Introduced, POAL7, FRAXI               |
| emergent             | 0                                      |
| maincanopy           | 1                                      |
| subcanopy            | 1                                      |
| Shrubs Total         | 5                                      |
| Dominant Shrubs      | ARTR2, ERNA10, CHVI8, RICE, AMAL2      |
| > 1.5' tall          | 5                                      |
| < 1.5' tall          | 2                                      |
| Graminoids Total     | 4                                      |
| Dominant Graminoids  | HECO26, PSSP6, LECI4, BTRE, FEID, POBU |
| Graminoids Perennial | 3                                      |
| Graminoids Annual    | 3                                      |
| Forbs Total          | 2                                      |
| Dominant Forbs       | ACMI2, COUM, LUPIN, CRAT, ARDR4, LIDAD |
| Forbs Perennial      | 2                                      |
| Forbs Annual         | 2                                      |
| Ferns Total          | 0                                      |
| Ferns Evergreen      | 0                                      |
| Ferns Deciduous      | 0                                      |
| ExoticsTotal         | 3                                      |
| Exotics Perennial    | 2                                      |
| Exotics Annual       | 3                                      |
| Water                | 0                                      |
| Rock Outcrop         | 0                                      |
| Gravel               | 2                                      |
| Logging              | 1                                      |
| Fire:                | 0                                      |
| Stand Age            | 1                                      |
| Agriculture          | 0                                      |
| Livestock            | 0                                      |
| Development          | 2                                      |
| Wildlife             | 3                                      |
| Recreation Severity  | 2                                      |
| Recreation Type      | 4                                      |
| Hydrology            | 1                                      |

## Exotic Species

### Noxious Exotic Plants

LIDAD, SAKA, CEDI3

### Other Exotic Plants

BRTE, POBU, SILO3

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 1  |
| Gravel:      | 2  |
| Bare Ground: | 17 |
| Moss Lichen: | 0  |
| Litter:      | 80 |

## Vegetation Types

| Vegetation Types |                                     | Percent                        | Pattern | Rank        |         |
|------------------|-------------------------------------|--------------------------------|---------|-------------|---------|
| Existing Veg1:   | ARTR2-TECA2/HECO26-PSSP6-LECI4-COUM |                                | 90      | Matrix      | GOOD    |
| Veg Community1:  | ARTR2/HECO26                        | Daubenmire 1970                |         |             | G4      |
| Existing Veg2:   | ARTR2-RICE-AMAL2/PSSP6/rocks        |                                | 10      | Small patch | EXCELLE |
| Veg Community3:  | ARTR2/PSSP6                         | Daubenmire 1970; Crawford 1999 |         |             | G5      |
| Existing Veg3:   |                                     |                                | 0       |             |         |
| Veg Community3:  |                                     |                                |         |             |         |

Notes: broad flat area is dominates by tall ARTR4 with central rocky patch with mixed shrubs and potr5 and north side.

# **Polygon Number      16**

**ParkName:**

**Bridgeport**

|                      |                                          |
|----------------------|------------------------------------------|
| Survey Intensity     | 1                                        |
| Observer             | GW, AM                                   |
| Date                 | 7/24/2008                                |
| Total Vegetation     | 5                                        |
| Trees Total          | 0                                        |
| Dominant Trees       |                                          |
| emergent             | 0                                        |
| maincanopy           | 0                                        |
| subcanopy            | 0                                        |
| Shrubs Total         | 4                                        |
| Dominant Shrubs      | ARTR4, ARTR2, CHVI8, ERNA10              |
| > 1.5' tall          | 4                                        |
| < 1.5' tall          | 3                                        |
| Graminoids Total     | 4                                        |
| Dominant Graminoids  | HECO26, POSE,BTRE, VULPI                 |
| Graminoids Perennial | 4                                        |
| Graminoids Annual    | 3                                        |
| Forbs Total          | 3                                        |
| Dominant Forbs       | LIDAD, PHLO2, ERFI2, ARDR4, PODO4, STPA2 |
| Forbs Perennial      | 3                                        |
| Forbs Annual         | 1                                        |
| Ferns Total          | 0                                        |
| Ferns Evergreen      | 0                                        |
| Ferns Deciduous      | 0                                        |
| ExoticsTotal         | 3                                        |
| Exotics Perennial    | 3                                        |
| Exotics Annual       | 3                                        |
| Water                | 0                                        |
| Rock Outcrop         | 0                                        |
| Gravel               | 0                                        |
| Logging              | 1                                        |
| Fire:                | YES- ABOUT 10                            |
| Stand Age            | 1                                        |
| Agriculture          | 0                                        |
| Livestock            | 0                                        |
| Development          | 0                                        |
| Wildlife             | 3                                        |
| Recreation Severity  | 3                                        |
| Recreation Type      | 3                                        |
| Hydrology            | 1                                        |

## **Exotic Species**

### **Noxious Exotic Plants**

LIDAD

### **Other Exotic Plants**

BRTE

|                     |    |
|---------------------|----|
| <b>Water:</b>       | 0  |
| <b>Rock:</b>        | 0  |
| <b>Talus:</b>       | 0  |
| <b>Gravel:</b>      | 0  |
| <b>Bare Ground:</b> | 15 |
| <b>Moss Lichen:</b> | 2  |
| <b>Litter:</b>      | 83 |

## **Vegetation Types**

**Percent**

**Pattern**

**Rank**

**Existing Veg1:** ARTR4-ARTR2-ERNA10/HECO26-LUSE4- ARDR4 100 Matrix GOOD

**Veg Community1:** ARTR2/HECO26 Daubenmire 1970 G4

**Existing Veg2:** 0

**Veg Community3:**

**Existing Veg3:** 0

**Veg Community3:**

**Notes:** ARTR4 dominant; patchy fire killed ARTR4; small amount of LIDAD; very sandy



# Polygon Number 17

ParkName:

Bridgeport

Survey Intensity 2  
Observer GW, AM  
Date 7/24/2008  
Total Vegetation 6  
Trees Total 4  
Dominant Trees BEOC2, POAL7, POBAT  
emergent 0  
maincanopy 3  
subcanopy 3  
Shrubs Total 4  
Dominant Shrubs SASC, COSE16, TORY, ROWO  
> 1.5' tall 4  
< 1.5' tall 0  
Graminoids Total 4  
Dominant Graminoids FERU2, POPR, unknown grass  
Graminoids Perennial 4  
Graminoids Annual 0  
Forbs Total 3  
Dominant Forbs PLMA2, TRRE3  
Forbs Perennial 3  
Forbs Annual 0  
Ferns Total 0  
Ferns Evergreen 0  
Ferns Deciduous 0  
ExoticsTotal 4  
Exotics Perennial 4  
Exotics Annual 1  
Water 0  
Rock Outcrop 0  
Gravel 1  
Logging 1  
Fire: 0  
Stand Age 2  
Agriculture 0  
Livestock 0  
Development 6  
Wildlife 3  
Recreation Severity 3  
Recreation Type 3  
Hydrology 2

## Exotic Species

### Noxious Exotic Plants

### Other Exotic Plants

TRRE3, POAN, POAL7, FERU2

Water: 0

Rock: 0

Talus: 0

Gravel: 1

Bare Ground: 1

Moss Lichen: 0

Litter: 98

## Vegetation Types

| Vegetation Types                           | Percent | Pattern | Rank   |
|--------------------------------------------|---------|---------|--------|
| Existing Veg1: BEOC2-POAL7/SASC/FERU2-POPR | 100     | Matrix  | DEVELO |
| Veg Community1: developed                  |         |         | na     |

|                |   |
|----------------|---|
| Existing Veg2: | 0 |
|----------------|---|

### Veg Community3:

|                |   |
|----------------|---|
| Existing Veg3: | 0 |
|----------------|---|

### Veg Community3:

Notes: Golf course edge with trees

# Polygon Number 18

ParkName:

Bridgeport

|                      |                                   |
|----------------------|-----------------------------------|
| Survey Intensity     | 1                                 |
| Observer             | GW                                |
| Date                 | 8/9/2008                          |
| Total Vegetation     | 6                                 |
| Trees Total          | 1                                 |
| Dominant Trees       | GLTR                              |
| emergent             | 0                                 |
| maincanopy           | 0                                 |
| subcanopy            | 1                                 |
| Shrubs Total         | 4                                 |
| Dominant Shrubs      | ARTR2, ARTR4, RICE                |
| > 1.5' tall          | 4                                 |
| < 1.5' tall          | 3                                 |
| Graminoids Total     | 3                                 |
| Dominant Graminoids  | PSSP6, AGCRP8, BRTE               |
| Graminoids Perennial | 3                                 |
| Graminoids Annual    | 3                                 |
| Forbs Total          | 2                                 |
| Dominant Forbs       | ARDR4, CED13, ACMI2, LIDAD, PLPA2 |
| Forbs Perennial      | 2                                 |
| Forbs Annual         | 2                                 |
| Ferns Total          | 0                                 |
| Ferns Evergreen      | 0                                 |
| Ferns Deciduous      | 0                                 |
| ExoticsTotal         | 3                                 |
| Exotics Perennial    | 1                                 |
| Exotics Annual       | 3                                 |
| Water                | 0                                 |
| Rock Outcrop         | 0                                 |
| Gravel               | 1                                 |
| Logging              | 1                                 |
| Fire:                | 0                                 |
| Stand Age            | 1                                 |
| Agriculture          | 0                                 |
| Livestock            | 0                                 |
| Development          | 2                                 |
| Wildlife             | 3                                 |
| Recreation Severity  | 3                                 |
| Recreation Type      | 3                                 |
| Hydrology            | 1                                 |

## Exotic Species

### Noxious Exotic Plants

CED13, LIDAD

### Other Exotic Plants

BRTE

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 0  |
| Gravel:      | 1  |
| Bare Ground: | 8  |
| Moss Lichen: | 1  |
| Litter:      | 90 |

## Vegetation Types

| Vegetation Types |                         | Percent                        | Pattern | Rank |
|------------------|-------------------------|--------------------------------|---------|------|
| Existing Veg1:   | ARTR2/PSSP6-BRTE-AGCRP8 | 100                            | Matrix  | FAIR |
| Veg Community1:  | ARTR2/PSSP6             | Daubenmire 1970; Crawford 1999 |         | G5   |
| Existing Veg2:   |                         | 0                              |         |      |
| Veg Community3:  |                         |                                |         |      |
| Existing Veg3:   |                         | 0                              |         |      |
| Veg Community3:  |                         |                                |         |      |
| Notes:           | DENSE SAGEBRUSH         |                                |         |      |

# Polygon Number 19

ParkName:

Bridgeport

|                      |                                                       |
|----------------------|-------------------------------------------------------|
| Survey Intensity     | 1                                                     |
| Observer             | GW                                                    |
| Date                 | 8/9/2008                                              |
| Total Vegetation     | 5                                                     |
| Trees Total          | 0                                                     |
| Dominant Trees       |                                                       |
| emergent             | 0                                                     |
| maincanopy           | 0                                                     |
| subcanopy            | 0                                                     |
| Shrubs Total         | 3                                                     |
| Dominant Shrubs      | ARTR4, ARTR2, AMAL2, ERHE2                            |
| > 1.5' tall          | 1                                                     |
| < 1.5' tall          | 3                                                     |
| Graminoids Total     | 4                                                     |
| Dominant Graminoids  | POSE, PSSP6, BRRA2                                    |
| Graminoids Perennial | 4                                                     |
| Graminoids Annual    | 1                                                     |
| Forbs Total          | 3                                                     |
| Dominant Forbs       | GAAR, ACMI2, ARCO5, ERFI2, PHLO2, CAMA5, FRPU, COLI2, |
| Forbs Perennial      | 0                                                     |
| Forbs Annual         | 0                                                     |
| Ferns Total          | 0                                                     |
| Ferns Evergreen      | 0                                                     |
| Ferns Deciduous      | 0                                                     |
| ExoticsTotal         | 0                                                     |
| Exotics Perennial    | 0                                                     |
| Exotics Annual       | 0                                                     |
| Water                | 0                                                     |
| Rock Outcrop         | 0                                                     |
| Gravel               | 0                                                     |
| Logging              | 1                                                     |
| Fire:                | 0                                                     |
| Stand Age            | 1                                                     |
| Agriculture          | 0                                                     |
| Livestock            | 0                                                     |
| Development          | 5                                                     |
| Wildlife             | 3                                                     |
| Recreation Severity  | 3                                                     |
| Recreation Type      | 3                                                     |
| Hydrology            | 1                                                     |

## Exotic Species

### Noxious Exotic Plants

LIDAD

### Other Exotic Plants

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 2  |
| Gravel:      | 0  |
| Bare Ground: | 5  |
| Moss Lichen: | 15 |
| Litter:      | 78 |

## Vegetation Types

|                 | Percent                                                                             | Pattern         | Rank   |
|-----------------|-------------------------------------------------------------------------------------|-----------------|--------|
| Existing Veg1:  | ARTR4/PSSP6-ARCO5                                                                   | 100             | Matrix |
| Veg Community1: | ARTR4/PSSP6                                                                         | Daubenmire 1970 | G5     |
| Existing Veg2:  | 0                                                                                   |                 |        |
| Veg Community3: |                                                                                     |                 |        |
| Existing Veg3:  | 0                                                                                   |                 |        |
| Veg Community3: |                                                                                     |                 |        |
| Notes:          | ARTR4 INSTEAD OF ARTR2 AND MUCH MORE PSSP6; SLOPY; RAINED SO LICHENS ARE VERY HIGH. |                 |        |

## Polygon Number 20

ParkName:

Bridgeport

|                      |                                               |  |
|----------------------|-----------------------------------------------|--|
| Survey Intensity     | 1                                             |  |
| Observer             | GW                                            |  |
| Date                 | 8/9/2008                                      |  |
| Total Vegetation     | 6                                             |  |
| Trees Total          | 0                                             |  |
| Dominant Trees       |                                               |  |
| emergent             | 0                                             |  |
| maincanopy           | 0                                             |  |
| subcanopy            | 0                                             |  |
| Shrubs Total         | 3                                             |  |
| Dominant Shrubs      | ARTR2, ARTR4, ERNA10, CHVI8, ERHE2            |  |
| > 1.5' tall          | 1                                             |  |
| < 1.5' tall          | 3                                             |  |
| Graminoids Total     | 5                                             |  |
| Dominant Graminoids  | PSSP6, POSE, LECI4, BRRA2                     |  |
| Graminoids Perennial | 5                                             |  |
| Graminoids Annual    | 2                                             |  |
| Forbs Total          | 2                                             |  |
| Dominant Forbs       | LECI4, LOTR2, COUM, GAAR, CAMA5, LULE3, LIDAD |  |
| Forbs Perennial      | 2                                             |  |
| Forbs Annual         | 1                                             |  |
| Ferns Total          | 0                                             |  |
| Ferns Evergreen      | 0                                             |  |
| Ferns Deciduous      | 0                                             |  |
| ExoticsTotal         | 1                                             |  |
| Exotics Perennial    | 1                                             |  |
| Exotics Annual       | 1                                             |  |
| Water                | 0                                             |  |
| Rock Outcrop         | 0                                             |  |
| Gravel               | 0                                             |  |
| Logging              | 1                                             |  |
| Fire:                | 0                                             |  |
| Stand Age            | 1                                             |  |
| Agriculture          | 0                                             |  |
| Livestock            | 0                                             |  |
| Development          | 0                                             |  |
| Wildlife             | 3                                             |  |
| Recreation Severity  | 3                                             |  |
| Recreation Type      | 3                                             |  |
| Hydrology            | 1                                             |  |

### Exotic Species

#### Noxious Exotic Plants

LIDAD

#### Other Exotic Plants

BRRA2

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 10 |
| Moss Lichen: | 10 |
| Litter:      | 80 |

## Vegetation Types

|                 | Percent     | Pattern         | Rank   |
|-----------------|-------------|-----------------|--------|
| Existing Veg1:  | PSSP6       | 100             | Matrix |
| Veg Community1: | ARTR4/PSSP6 | Daubenmire 1970 | GOOD   |
| Existing Veg2:  |             | 0               | G5     |
| Veg Community3: |             |                 |        |
| Existing Veg3:  |             | 0               |        |
| Veg Community3: |             |                 |        |

Notes: FAIRLY HEALTHY GRASSLAND. LIDAD IS LIMITED TO A SINGLE DRAW.

## Polygon Number 21

ParkName:

Bridgeport

|                      |                                        |
|----------------------|----------------------------------------|
| Survey Intensity     | 2                                      |
| Observer             | GW                                     |
| Date                 | 7/19/2008                              |
| Total Vegetation     | 5                                      |
| Trees Total          | 0                                      |
| Dominant Trees       |                                        |
| emergent             | 0                                      |
| maincanopy           | 0                                      |
| subcanopy            | 0                                      |
| Shrubs Total         | 3                                      |
| Dominant Shrubs      | ARTR2, ERHE2                           |
| > 1.5' tall          | 3                                      |
| < 1.5' tall          | 1                                      |
| Graminoids Total     | 4                                      |
| Dominant Graminoids  | LECI4, HECO26, HOMU, DISP, BRRA2, BRTE |
| Graminoids Perennial | 3                                      |
| Graminoids Annual    | 4                                      |
| Forbs Total          | 3                                      |
| Dominant Forbs       | ACMI2, ASCLE, LIDAD, LACTU, HEPE       |
| Forbs Perennial      | 3                                      |
| Forbs Annual         | 1                                      |
| Ferns Total          | 0                                      |
| Ferns Evergreen      | 0                                      |
| Ferns Deciduous      | 0                                      |
| ExoticsTotal         | 4                                      |
| Exotics Perennial    | 4                                      |
| Exotics Annual       | 4                                      |
| Water                | 0                                      |
| Rock Outcrop         | 4                                      |
| Gravel               | 0                                      |
| Logging              | 1                                      |
| Fire:                | 0                                      |
| Stand Age            | 1                                      |
| Agriculture          | 0                                      |
| Livestock            | 0                                      |
| Development          | 0                                      |
| Wildlife             | 3                                      |
| Recreation Severity  | 3                                      |
| Recreation Type      | 3                                      |
| Hydrology            | 1                                      |

### Exotic Species

#### Noxious Exotic Plants

LIDAD

#### Other Exotic Plants

VETH, BRRA2, LASE, BRTE

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 4  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 10 |
| Moss Lichen: | 0  |
| Litter:      | 86 |

### Vegetation Types

|                             | Percent | Pattern | Rank |
|-----------------------------|---------|---------|------|
| Existing Veg1: LECI4-BRRA2  | 60      | Matrix  | FAIR |
| Veg Community1: LECI4-BRTE  |         |         | ~G4  |
| Existing Veg2: ARTR2/LECI4  | 40      | linear  | FAIR |
| Veg Community3: ARTR2/LECI4 |         |         | G2   |
| Existing Veg3:              | 0       |         |      |
| Veg Community3:             |         |         |      |
| Notes: SERIES OF BEDROCK    |         |         |      |



## Polygon Number 22

ParkName:

Bridgeport

|                      |                                                      |
|----------------------|------------------------------------------------------|
| Survey Intensity     | 2                                                    |
| Observer             | GW                                                   |
| Date                 | 8/9/2008                                             |
| Total Vegetation     | 5                                                    |
| Trees Total          | 0                                                    |
| Dominant Trees       |                                                      |
| emergent             | 0                                                    |
| maincanopy           | 0                                                    |
| subcanopy            | 0                                                    |
| Shrubs Total         | 4                                                    |
| Dominant Shrubs      | ARTR2, ARTR4, ERNA10, ERHE2                          |
| > 1.5' tall          | 4                                                    |
| < 1.5' tall          | 2                                                    |
| Graminoids Total     | 4                                                    |
| Dominant Graminoids  | CAPR5, HECO26, POSE, DISP, PSSP6, LECI4, BRRA2, BRTE |
| Graminoids Perennial | 4                                                    |
| Graminoids Annual    | 3                                                    |
| Forbs Total          | 2                                                    |
| Dominant Forbs       | LULE3, ACMI2, LOMA3, ORFA, PHLO2, CRAT, EPMI, ORBA2, |
| Forbs Perennial      | 2                                                    |
| Forbs Annual         | 1                                                    |
| Ferns Total          | 0                                                    |
| Ferns Evergreen      | 0                                                    |
| Ferns Deciduous      | 0                                                    |
| ExoticsTotal         | 3                                                    |
| Exotics Perennial    | 1                                                    |
| Exotics Annual       | 3                                                    |
| Water                | 0                                                    |
| Rock Outcrop         | 3                                                    |
| Gravel               | 0                                                    |
| Logging              | 1                                                    |
| Fire:                | 0                                                    |
| Stand Age            | 1                                                    |
| Agriculture          | 0                                                    |
| Livestock            | 0                                                    |
| Development          | 0                                                    |
| Wildlife             | 3                                                    |
| Recreation Severity  | 3                                                    |
| Recreation Type      | 3                                                    |
| Hydrology            | 1                                                    |

### Exotic Species

#### Noxious Exotic Plants

LIDAD, TRDU,

#### Other Exotic Plants

LASE, ASOF, BASC5, VETH, BRTE

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 3  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 10 |
| Moss Lichen: | 3  |
| Litter:      | 84 |

## Vegetation Types

|                                                            | Percent | Pattern     | Rank |
|------------------------------------------------------------|---------|-------------|------|
| Existing Veg1: ARTR2/PSSP6-BRRA2                           | 70      | Matrix      | FAIR |
| Veg Community1: ARTR2/PSSP6 Daubenmire 1970; Crawford 1999 |         |             | G5   |
| Existing Veg2: ARTR2-ARTR4/HECO26-DISP-BRRA2               | 10      | Large patch | FAIR |
| Veg Community3: ARTR2/HECO26 Daubenmire 1970               |         |             | G4   |
| Existing Veg3: BRRA2-DISP-BASC5-LECI4                      | 20      | Large patch | POOR |
| Veg Community3: LECI4-DISP Daubenmire 1970; Crawford 2003  |         |             | G3   |

Notes:

# Polygon Number 23

ParkName:

Bridgeport

Survey Intensity 1  
Observer GW, AM  
Date 7/24/2008  
Total Vegetation 5  
Trees Total 0  
Dominant Trees  
emergent 0  
maincanopy 0  
subcanopy 0  
Shrubs Total 4  
Dominant Shrubs ARTR2, ERNA10, PUTR2, ERNI2, OPFR  
> 1.5' tall 3  
< 1.5' tall 3  
Graminoids Total 4  
Dominant Graminoids HECO26, SPCR, PSSP6, ACHY, BRTE  
Graminoids Perennial 4  
Graminoids Annual 2  
Forbs Total 3  
Dominant Forbs ARDR4, PHHA, PHLO2  
Forbs Perennial 3  
Forbs Annual 1  
Ferns Total 0  
Ferns Evergreen 0  
Ferns Deciduous 0  
ExoticsTotal 2  
Exotics Perennial 0  
Exotics Annual 2  
Water 0  
Rock Outcrop 0  
Gravel 0  
Logging 1  
Fire: YES 5 YEARS  
Stand Age 1  
Agriculture 0  
Livestock 0  
Development 0  
Wildlife 3  
Recreation Severity 3  
Recreation Type 3  
Hydrology 1

## Exotic Species

### Noxious Exotic Plants

LIDAD

### Other Exotic Plants

BTRE

Water: 0  
Rock: 0  
Talus: 0  
Gravel: 0  
Bare Ground: 25  
Moss Lichen: 2  
Litter: 73

## Vegetation Types

| Vegetation Types                             | Percent | Pattern | Rank |
|----------------------------------------------|---------|---------|------|
| Existing Veg1: ERNA10-ARTR2/ARDR4-HECO26     | 100     | Matrix  | GOOD |
| Veg Community1: ARTR2/HECO26 Daubenmire 1970 |         |         | G4   |
| Existing Veg2:                               | 0       |         |      |
| Veg Community3:                              |         |         |      |
| Existing Veg3:                               | 0       |         |      |
| Veg Community3:                              |         |         |      |

Notes: BEST CONDITION, LEAST WEEDS; SANDY

## Polygon Number 24

ParkName:

Bridgeport

|                      |                                           |
|----------------------|-------------------------------------------|
| Survey Intensity     | 1                                         |
| Observer             | GW, AM                                    |
| Date                 | 7/24/2008                                 |
| Total Vegetation     | 5                                         |
| Trees Total          | 0                                         |
| Dominant Trees       |                                           |
| emergent             | 0                                         |
| maincanopy           | 0                                         |
| subcanopy            | 0                                         |
| Shrubs Total         | 3                                         |
| Dominant Shrubs      | ARTR2, ERNI2, ERNA10, PUTR2, CHVI8, ARTR4 |
| > 1.5' tall          | 3                                         |
| < 1.5' tall          | 3                                         |
| Graminoids Total     | 3                                         |
| Dominant Graminoids  | HECO26, POSE, BTRE, SPCR                  |
| Graminoids Perennial | 3                                         |
| Graminoids Annual    | 3                                         |
| Forbs Total          | 3                                         |
| Dominant Forbs       | EQLA, ACMI2, LIDAD, ARDR4, ARCAS5         |
| Forbs Perennial      | 3                                         |
| Forbs Annual         | 1                                         |
| Ferns Total          | 0                                         |
| Ferns Evergreen      | 0                                         |
| Ferns Deciduous      | 0                                         |
| ExoticsTotal         | 3                                         |
| Exotics Perennial    | 3                                         |
| Exotics Annual       | 3                                         |
| Water                | 0                                         |
| Rock Outcrop         | 0                                         |
| Gravel               | 0                                         |
| Logging              | 1                                         |
| Fire:                | YES- PARTIAL 10                           |
| Stand Age            | 1                                         |
| Agriculture          | 0                                         |
| Livestock            | 0                                         |
| Development          | 0                                         |
| Wildlife             | 3                                         |
| Recreation Severity  | 3                                         |
| Recreation Type      | 3                                         |
| Hydrology            | 1                                         |

### Exotic Species

#### Noxious Exotic Plants

LIDAD

#### Other Exotic Plants

BRTE, SIAL2

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 30 |
| Moss Lichen: | 8  |
| Litter:      | 62 |

## Vegetation Types

|                                                      | Percent | Pattern     | Rank |
|------------------------------------------------------|---------|-------------|------|
| Existing Veg1: ARTR2-ERNA10/EQLA-ARDR4               | 90      | Matrix      | FAIR |
| Veg Community1: ARTR2/HECO26 Daubenmire 1970         |         |             | G4   |
| Existing Veg2: ARCAS5-BRTE-HECO26                    | 10      | Small patch | FAIR |
| Veg Community3: HECO26 dunes Hallock and others 2007 |         |             | G1?  |
| Existing Veg3:                                       | 0       |             |      |

### Veg Community3:

Notes: unusual out wash sand community with ARTR2 and ERNA10 co domanit and herbs dominated by EQLA, ARDR4 in that order. CHV18 and arteum compestris are also

## Polygon Number 25

ParkName:

Bridgeport

|                      |                                          |
|----------------------|------------------------------------------|
| Survey Intensity     | 1                                        |
| Observer             | GW, AM                                   |
| Date                 | 7/24/2008                                |
| Total Vegetation     | 5                                        |
| Trees Total          | 0                                        |
| Dominant Trees       |                                          |
| emergent             | 0                                        |
| maincanopy           | 0                                        |
| subcanopy            | 0                                        |
| Shrubs Total         | 3                                        |
| Dominant Shrubs      | ARTR2, OPFR, ERNA10, ERNI2, CHVI8, ERHE2 |
| > 1.5' tall          | 3                                        |
| < 1.5' tall          | 2                                        |
| Graminoids Total     | 4                                        |
| Dominant Graminoids  | HECO26, LECI4, BRTE                      |
| Graminoids Perennial | 3                                        |
| Graminoids Annual    | 4                                        |
| Forbs Total          | 4                                        |
| Dominant Forbs       | LUPIN (velvet), EQLA, ARDR4, SAKA        |
| Forbs Perennial      | 2                                        |
| Forbs Annual         | 4                                        |
| Ferns Total          | 0                                        |
| Ferns Evergreen      | 0                                        |
| Ferns Deciduous      | 0                                        |
| ExoticsTotal         | 4                                        |
| Exotics Perennial    | 2                                        |
| Exotics Annual       | 4                                        |
| Water                | 0                                        |
| Rock Outcrop         | 0                                        |
| Gravel               | 0                                        |
| Logging              | 1                                        |
| Fire:                |                                          |
| Stand Age            | 1                                        |
| Agriculture          | 1                                        |
| Livestock            | 1                                        |
| Development          | 2                                        |
| Wildlife             | 3                                        |
| Recreation Severity  | 3                                        |
| Recreation Type      | 3                                        |
| Hydrology            | 1                                        |

### Exotic Species

#### Noxious Exotic Plants

LIDAD

#### Other Exotic Plants

BRTE, LASE, SIAL2, SAKA

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 10 |
| Moss Lichen: | 0  |
| Litter:      | 90 |

## Vegetation Types

|                 | Percent                             | Pattern         | Rank   |
|-----------------|-------------------------------------|-----------------|--------|
| Existing Veg1:  | ARTR2-ERNA10-TECA2/SIAL2-EQLA-ARDR4 | 100             | Matrix |
| Veg Community1: | ARTR2/HECO26                        | Daubenmire 1970 | G4     |
| Existing Veg2:  | 0                                   |                 |        |
| Veg Community3: |                                     |                 |        |
| Existing Veg3:  | 0                                   |                 |        |
| Veg Community3: |                                     |                 |        |

Notes: NARROW DISTURBED ZONE NEAR ROAD

# **Polygon Number      26**

**ParkName:**

**Bridgeport**

|                      |                                       |
|----------------------|---------------------------------------|
| Survey Intensity     | 1                                     |
| Observer             | GW, AM                                |
| Date                 | 7/24/2008                             |
| Total Vegetation     | 5                                     |
| Trees Total          | 0                                     |
| Dominant Trees       |                                       |
| emergent             | 0                                     |
| maincanopy           | 0                                     |
| subcanopy            | 0                                     |
| Shrubs Total         | 4                                     |
| Dominant Shrubs      | ARTR2, ERNA10                         |
| > 1.5' tall          | 4                                     |
| < 1.5' tall          | 3                                     |
| Graminoids Total     | 4                                     |
| Dominant Graminoids  | HECO26, ACHY, BRTE                    |
| Graminoids Perennial | 4                                     |
| Graminoids Annual    | 3                                     |
| Forbs Total          | 3                                     |
| Dominant Forbs       | LIDAD, ACMI2, EQLA, OPFR, ARDR4, PHLI |
| Forbs Perennial      | 3                                     |
| Forbs Annual         | 1                                     |
| Ferns Total          | 0                                     |
| Ferns Evergreen      | 0                                     |
| Ferns Deciduous      | 0                                     |
| ExoticsTotal         | 3                                     |
| Exotics Perennial    | 2                                     |
| Exotics Annual       | 3                                     |
| Water                | 0                                     |
| Rock Outcrop         | 0                                     |
| Gravel               | 0                                     |
| Logging              | 1                                     |
| Fire:                | 0                                     |
| Stand Age            | 1                                     |
| Agriculture          | 0                                     |
| Livestock            | 0                                     |
| Development          | 6                                     |
| Wildlife             | 3                                     |
| Recreation Severity  | 3                                     |
| Recreation Type      | 3                                     |
| Hydrology            | 1                                     |

## **Exotic Species**

### **Noxious Exotic Plants**

LIDAD, ERFI2

### **Other Exotic Plants**

BRTE, SAKA

|                     |    |
|---------------------|----|
| <b>Water:</b>       | 0  |
| <b>Rock:</b>        | 0  |
| <b>Talus:</b>       | 0  |
| <b>Gravel:</b>      | 0  |
| <b>Bare Ground:</b> | 25 |
| <b>Moss Lichen:</b> | 2  |
| <b>Litter:</b>      | 73 |

## **Vegetation Types**

|                                                     | Percent | Pattern | Rank |
|-----------------------------------------------------|---------|---------|------|
| <b>Existing Veg1:</b> ARTR2-ERNA10/HECO26-ARDR4     | 100     | Matrix  | FAIR |
| <b>Veg Community1:</b> ARTR2/HECO26 Daubenmire 1970 |         |         | G4   |
| <b>Existing Veg2:</b>                               | 0       |         |      |
| <b>Veg Community3:</b>                              |         |         |      |
| <b>Existing Veg3:</b>                               | 0       |         |      |
| <b>Veg Community3:</b>                              |         |         |      |
| <b>Notes:</b> VERY DEEP WIND BLOWN SAND             |         |         |      |

# Polygon Number 27

ParkName:

Bridgeport

|                      |                                           |
|----------------------|-------------------------------------------|
| Survey Intensity     | 1                                         |
| Observer             | GW, AM                                    |
| Date                 | 4/24/2008                                 |
| Total Vegetation     | 5                                         |
| Trees Total          | 0                                         |
| Dominant Trees       |                                           |
| emergent             | 0                                         |
| maincanopy           | 0                                         |
| subcanopy            | 0                                         |
| Shrubs Total         | 3                                         |
| Dominant Shrubs      | ARTR2, ARTR4, TECA2, ERNA10, PUTR2, ERNI2 |
| > 1.5' tall          | 3                                         |
| < 1.5' tall          | 2                                         |
| Graminoids Total     | 4                                         |
| Dominant Graminoids  | HECO26, POSE, VULPI, BTRE                 |
| Graminoids Perennial | 4                                         |
| Graminoids Annual    | 3                                         |
| Forbs Total          | 3                                         |
| Dominant Forbs       | ACMI2, LUSE4, STPA2, ARDR4, PODO4, PHLI   |
| Forbs Perennial      | 3                                         |
| Forbs Annual         | 1                                         |
| Ferns Total          | 0                                         |
| Ferns Evergreen      | 0                                         |
| Ferns Deciduous      | 0                                         |
| ExoticsTotal         | 3                                         |
| Exotics Perennial    | 0                                         |
| Exotics Annual       | 3                                         |
| Water                | 0                                         |
| Rock Outcrop         | 0                                         |
| Gravel               | 0                                         |
| Logging              | 1                                         |
| Fire:                | YES- PARTIAL; 10                          |
| Stand Age            | 1                                         |
| Agriculture          | 0                                         |
| Livestock            | 0                                         |
| Development          | 6                                         |
| Wildlife             | 3                                         |
| Recreation Severity  | 3                                         |
| Recreation Type      | 3                                         |
| Hydrology            | 1                                         |

## Exotic Species

## Noxious Exotic Plants

## Other Exotic Plants

BRTE, SAKA

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 20 |
| Moss Lichen: | 1  |
| Litter:      | 79 |

## Vegetation Types

|                 | Percent                          | Pattern         | Rank        |
|-----------------|----------------------------------|-----------------|-------------|
| Existing Veg1:  | ARTR2-ARTR4-ERNA10/HECO26-ACMI2- | LUSE4           | 100         |
| Veg Community1: | ARTR2/HECO26                     | Daubenmire 1970 | Matrix GOOD |
| Existing Veg2:  |                                  | 0               | G4          |
| Veg Community3: |                                  |                 |             |
| Existing Veg3:  |                                  | 0               |             |
| Veg Community3: |                                  |                 |             |

Notes:



## Polygon Number 28

ParkName:

Bridgeport

|                      |                                                  |  |
|----------------------|--------------------------------------------------|--|
| Survey Intensity     | 2                                                |  |
| Observer             | GW                                               |  |
| Date                 | 7/19/2008                                        |  |
| Total Vegetation     | 4                                                |  |
| Trees Total          | 0                                                |  |
| Dominant Trees       |                                                  |  |
| emergent             | 0                                                |  |
| maincanopy           | 0                                                |  |
| subcanopy            | 0                                                |  |
| Shrubs Total         | 4                                                |  |
| Dominant Shrubs      | ARTR2, ARTR4, ERNA10, ERNI2, ERHE2, TETRA3       |  |
| > 1.5' tall          | 4                                                |  |
| < 1.5' tall          | 2                                                |  |
| Graminoids Total     | 4                                                |  |
| Dominant Graminoids  | HECO26, POSE, BRRA2, BTRE, VULPI                 |  |
| Graminoids Perennial | 3                                                |  |
| Graminoids Annual    | 3                                                |  |
| Forbs Total          | 3                                                |  |
| Dominant Forbs       | ERIGE2, ERFI2, ANDI2, LIDAD, PHLO2, ERHE2, PLPA2 |  |
| Forbs Perennial      | 3                                                |  |
| Forbs Annual         | 2                                                |  |
| Ferns Total          | 0                                                |  |
| Ferns Evergreen      | 0                                                |  |
| Ferns Deciduous      | 0                                                |  |
| ExoticsTotal         | 3                                                |  |
| Exotics Perennial    | 2                                                |  |
| Exotics Annual       | 2                                                |  |
| Water                | 0                                                |  |
| Rock Outcrop         | 0                                                |  |
| Gravel               | 2                                                |  |
| Logging              | 1                                                |  |
| Fire:                | 0                                                |  |
| Stand Age            | 1                                                |  |
| Agriculture          | 0                                                |  |
| Livestock            | 0                                                |  |
| Development          | 6                                                |  |
| Wildlife             | 3                                                |  |
| Recreation Severity  | 3                                                |  |
| Recreation Type      | 3                                                |  |
| Hydrology            | 1                                                |  |

### Exotic Species

#### Noxious Exotic Plants

LIDAD, CEDI3, BRTE

#### Other Exotic Plants

BRTE, BRRA2,

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 3  |
| Gravel:      | 2  |
| Bare Ground: | 20 |
| Moss Lichen: | 15 |
| Litter:      | 60 |

## Vegetation Types

|                 | Percent                         | Pattern         | Rank   |
|-----------------|---------------------------------|-----------------|--------|
| Existing Veg1:  | ARTR2-ARTR4/HECO26-VULPI-ERIGE2 | 100             | Matrix |
| Veg Community1: | ARTR2/HECO26                    | Daubenmire 1970 | G4     |
| Existing Veg2:  | 0                               |                 |        |
| Veg Community3: |                                 |                 |        |
| Existing Veg3:  | 0                               |                 |        |
| Veg Community3: |                                 |                 |        |

Notes:

## Polygon Number 29

ParkName:

Bridgeport

|                      |                                  |
|----------------------|----------------------------------|
| Survey Intensity     | 2                                |
| Observer             | GW                               |
| Date                 | 7/19/2008                        |
| Total Vegetation     | 5                                |
| Trees Total          | 0                                |
| Dominant Trees       |                                  |
| emergent             | 0                                |
| maincanopy           | 0                                |
| subcanopy            | 0                                |
| Shrubs Total         | 4                                |
| Dominant Shrubs      | ARTR2, ARTR4, ERNA10             |
| > 1.5' tall          | 4                                |
| < 1.5' tall          | 2                                |
| Graminoids Total     | 4                                |
| Dominant Graminoids  | HECO26, ACMI2, POSE, BRTE, BRRA2 |
| Graminoids Perennial | 4                                |
| Graminoids Annual    | 3                                |
| Forbs Total          | 2                                |
| Dominant Forbs       | LUPIN                            |
| Forbs Perennial      | 2                                |
| Forbs Annual         | 1                                |
| Ferns Total          | 0                                |
| Ferns Evergreen      | 0                                |
| Ferns Deciduous      | 0                                |
| ExoticsTotal         | 3                                |
| Exotics Perennial    | 2                                |
| Exotics Annual       | 3                                |
| Water                | 0                                |
| Rock Outcrop         | 0                                |
| Gravel               | 0                                |
| Logging              | 1                                |
| Fire:                | 0                                |
| Stand Age            | 1                                |
| Agriculture          | 0                                |
| Livestock            | 0                                |
| Development          | 6                                |
| Wildlife             | 3                                |
| Recreation Severity  | 3                                |
| Recreation Type      | 3                                |
| Hydrology            | 1                                |

### Exotic Species

#### Noxious Exotic Plants

LIDAD, LELA2

#### Other Exotic Plants

BTRE, BRRA2

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 0  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 20 |
| Moss Lichen: | 1  |
| Litter:      | 79 |

### Vegetation Types

|                              | Percent | Pattern         | Rank |
|------------------------------|---------|-----------------|------|
| Existing Veg1: ARTR2-ARTR4   | 100     | Matrix          | GOOD |
| Veg Community1: ARTR2/HECO26 |         | Daubenmire 1970 | G4   |
| Existing Veg2:               | 0       |                 |      |
| Veg Community3:              |         |                 |      |
| Existing Veg3:               | 0       |                 |      |
| Veg Community3:              |         |                 |      |

Notes:

# **Polygon Number      30**

**ParkName:**

**Bridgeport**

|                      |                                                    |
|----------------------|----------------------------------------------------|
| Survey Intensity     | 1                                                  |
| Observer             | GW                                                 |
| Date                 | 8/9/2008                                           |
| Total Vegetation     | 5                                                  |
| Trees Total          | 1                                                  |
| Dominant Trees       | FRAXI                                              |
| emergent             | 0                                                  |
| maincanopy           | 0                                                  |
| subcanopy            | 1                                                  |
| Shrubs Total         | 3                                                  |
| Dominant Shrubs      | ARTR2, PHLE4, ELAN, AMAL2, ERNA10, ARTR4, ERHE2    |
| > 1.5' tall          | 3                                                  |
| < 1.5' tall          | 1                                                  |
| Graminoids Total     | 4                                                  |
| Dominant Graminoids  | PSSP6, LECI4, HECO26, ARPUL, BRRA2, POMO5, VULPI   |
| Graminoids Perennial | 4                                                  |
| Graminoids Annual    | 3                                                  |
| Forbs Total          | 3                                                  |
| Dominant Forbs       | ACMI2, MEOF, CIUN, CEDI3, LIPU11, EPMI, HEPE, RUCR |
| Forbs Perennial      | 3                                                  |
| Forbs Annual         | 1                                                  |
| Ferns Total          | 0                                                  |
| Ferns Evergreen      | 0                                                  |
| Ferns Deciduous      | 0                                                  |
| ExoticsTotal         | 4                                                  |
| Exotics Perennial    | 3                                                  |
| Exotics Annual       | 3                                                  |
| Water                | 0                                                  |
| Rock Outcrop         | 4                                                  |
| Gravel               | 1                                                  |
| Logging              | 1                                                  |
| Fire:                | 10 YRS AGO                                         |
| Stand Age            | 1                                                  |
| Agriculture          | 0                                                  |
| Livestock            | 0                                                  |
| Development          | 5                                                  |
| Wildlife             | 3                                                  |
| Recreation Severity  | 3                                                  |
| Recreation Type      | 3                                                  |
| Hydrology            | 1                                                  |

## **Exotic Species**

### **Noxious Exotic Plants**

LIDAD, CEDI3

### **Other Exotic Plants**

BRRA2, TRDU

**Water:** 0

**Rock:** 4

**Talus:** 2

**Gravel:** 1

**Bare Ground:** 15

**Moss Lichen:** 0

**Litter:** 78

## **Vegetation Types**

|                              | Percent | Pattern         | Rank |
|------------------------------|---------|-----------------|------|
| Existing Veg1: ARTR2/HECO26  | 100     | Matrix          | POOR |
| Veg Community1: ARTR2/HECO26 |         | Daubenmire 1970 | G4   |
| Existing Veg2:               | 0       |                 |      |
| Veg Community3:              |         |                 |      |
| Existing Veg3:               | 0       |                 |      |
| Veg Community3:              |         |                 |      |

Notes:

# Polygon Number 31

ParkName:

Bridgeport

|                      |                                                |  |
|----------------------|------------------------------------------------|--|
| Survey Intensity     | 2                                              |  |
| Observer             | GW                                             |  |
| Date                 | 8/9/2008                                       |  |
| Total Vegetation     | 5                                              |  |
| Trees Total          | 0                                              |  |
| Dominant Trees       |                                                |  |
| emergent             | 0                                              |  |
| maincanopy           | 0                                              |  |
| subcanopy            | 0                                              |  |
| Shrubs Total         | 4                                              |  |
| Dominant Shrubs      | ARTR2, CHVI8, PUTR2, ERNI2                     |  |
| > 1.5' tall          | 4                                              |  |
| < 1.5' tall          | 2                                              |  |
| Graminoids Total     | 4                                              |  |
| Dominant Graminoids  | HECO26, POSE, PSSP6, BRTE, BRRA2               |  |
| Graminoids Perennial | 4                                              |  |
| Graminoids Annual    | 3                                              |  |
| Forbs Total          | 3                                              |  |
| Dominant Forbs       | LUSE4, CHDO, ERFI2, PHLO2, LOMA3, PLPA2, ORBA2 |  |
| Forbs Perennial      | 1                                              |  |
| Forbs Annual         | 3                                              |  |
| Ferns Total          | 0                                              |  |
| Ferns Evergreen      | 0                                              |  |
| Ferns Deciduous      | 0                                              |  |
| ExoticsTotal         | 3                                              |  |
| Exotics Perennial    | 1                                              |  |
| Exotics Annual       | 3                                              |  |
| Water                | 0                                              |  |
| Rock Outcrop         | 2                                              |  |
| Gravel               | 0                                              |  |
| Logging              | 0                                              |  |
| Fire:                | 20 YRS AGO                                     |  |
| Stand Age            | 1                                              |  |
| Agriculture          | 0                                              |  |
| Livestock            | 0                                              |  |
| Development          | 5                                              |  |
| Wildlife             | 3                                              |  |
| Recreation Severity  | 3                                              |  |
| Recreation Type      | 3                                              |  |
| Hydrology            | 1                                              |  |

## Exotic Species

### Noxious Exotic Plants

LIDAD

### Other Exotic Plants

BRTE, BRRA2

|              |    |
|--------------|----|
| Water:       | 0  |
| Rock:        | 2  |
| Talus:       | 0  |
| Gravel:      | 0  |
| Bare Ground: | 8  |
| Moss Lichen: | 8  |
| Litter:      | 82 |

## Vegetation Types

| Vegetation Types |                            | Percent         | Pattern | Rank |
|------------------|----------------------------|-----------------|---------|------|
| Existing Veg1:   | ARTR2/HECO26/PLPA2         | 100             | Matrix  | GOOD |
| Veg Community1:  | ARTR2/HECO26               | Daubenmire 1970 |         | G4   |
| Existing Veg2:   |                            | 0               |         |      |
| Veg Community3:  |                            |                 |         |      |
| Existing Veg3:   |                            | 0               |         |      |
| Veg Community3:  |                            |                 |         |      |
| Notes:           | ROCKY BENCH; LOTS OF PLPA2 |                 |         |      |

# Polygon Number 32

ParkName:

Bridgeport

Survey Intensity 1  
Observer GW, PM  
Date 7/19/2008  
Total Vegetation 5  
Trees Total 2  
Dominant Trees introduced popular, FRAXI  
emergent 0  
maincanopy 2  
subcanopy 1  
Shrubs Total 3  
Dominant Shrubs ELAN, TORY  
> 1.5' tall 3  
< 1.5' tall 1  
Graminoids Total 5  
Dominant Graminoids LECI4, DISP, HOJU, BTRE  
Graminoids Perennial 4  
Graminoids Annual 3  
Forbs Total 4  
Dominant Forbs RUCR, CIAR4, ASSP, TYLA, MEAL6  
Forbs Perennial 4  
Forbs Annual 1  
Ferns Total 0  
Ferns Evergreen 0  
Ferns Deciduous 0  
ExoticsTotal 3  
Exotics Perennial 2  
Exotics Annual 3  
Water 0  
Rock Outcrop 1  
Gravel 15  
Logging 1  
Fire: 0  
Stand Age 1  
Agriculture 0  
Livestock 0  
Development 4  
Wildlife 3  
Recreation Severity 1  
Recreation Type  
Hydrology 1

## Exotic Species

### Noxious Exotic Plants

CIAR4, LIDAD, CEDI3, SANIC5, ELAN,

### Other Exotic Plants

BRTE, MEAL6

Water: 0  
Rock: 1  
Talus: 1  
Gravel: 15  
Bare Ground: 10  
Moss Lichen: 0  
Litter: 73

## Vegetation Types

Percent Pattern Rank

Existing Veg1: developed 50 Matrix DEVELO

Veg Community1: developed na

Existing Veg2: POBAT-introduced trees/ARCO5/LECI4-DISP wetland 50 Large patch FAIR

Veg Community3: LECI4-DISP Daubenmire 1970; Crawford 2003 G3

Existing Veg3: 0

### Veg Community3:

Notes: THIS SITE IS VERY DISTURBED (roads, dump, etc.), BUT HAS A MAIN CENTRAL WETLAND; THIS HAS A FAIR BIT OF CIAR4

# Polygon Number 33

ParkName:

Bridgeport

|                      |                                                  |  |
|----------------------|--------------------------------------------------|--|
| Survey Intensity     | 2                                                |  |
| Observer             | GW, AM                                           |  |
| Date                 | 7/24/2008                                        |  |
| Total Vegetation     | 3                                                |  |
| Trees Total          | 1                                                |  |
| Dominant Trees       | ULPU                                             |  |
| emergent             | 0                                                |  |
| maincanopy           | 0                                                |  |
| subcanopy            | 1                                                |  |
| Shrubs Total         | 3                                                |  |
| Dominant Shrubs      | ARTR2, PUTR2, ERNI2                              |  |
| > 1.5' tall          | 2                                                |  |
| < 1.5' tall          | 1                                                |  |
| Graminoids Total     | 1                                                |  |
| Dominant Graminoids  | ELCA4                                            |  |
| Graminoids Perennial | 1                                                |  |
| Graminoids Annual    | 0                                                |  |
| Forbs Total          | 2                                                |  |
| Dominant Forbs       | ASSP, LIDAD, VETH, IRPS, HYPE, MEAR4, LOGR, MEOF |  |
| Forbs Perennial      | 2                                                |  |
| Forbs Annual         | 1                                                |  |
| Ferns Total          | 0                                                |  |
| Ferns Evergreen      | 0                                                |  |
| Ferns Deciduous      | 0                                                |  |
| ExoticsTotal         | 2                                                |  |
| Exotics Perennial    | 2                                                |  |
| Exotics Annual       | 0                                                |  |
| Water                | 20                                               |  |
| Rock Outcrop         | 0                                                |  |
| Gravel               | 5                                                |  |
| Logging              | 1                                                |  |
| Fire:                | NO                                               |  |
| Stand Age            | 1                                                |  |
| Agriculture          | 0                                                |  |
| Livestock            | 0                                                |  |
| Development          | 0                                                |  |
| Wildlife             | 3                                                |  |
| Recreation Severity  | 3                                                |  |
| Recreation Type      | 3                                                |  |
| Hydrology            | 1                                                |  |

## Exotic Species

### Noxious Exotic Plants

LIDAD, HYPE, IRPS

### Other Exotic Plants

VETH, MEOF, BASC5

|              |    |
|--------------|----|
| Water:       | 20 |
| Rock:        | 0  |
| Talus:       | 20 |
| Gravel:      | 5  |
| Bare Ground: | 40 |
| Moss Lichen: | 0  |
| Litter:      | 15 |

## Vegetation Types

|                 | Percent | Pattern     | Rank |
|-----------------|---------|-------------|------|
| Existing Veg1:  | 70      | Matrix      | GOOD |
| Veg Community1: |         |             |      |
| Existing Veg2:  | 30      | Large patch | POOR |
| Veg Community3: |         |             |      |
| Existing Veg3:  | 0       |             |      |
| Veg Community3: |         |             |      |

Notes: STEEP BANK WITH EROSION; NARROW BEACH