FINAL

LEVEL II SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT REPORT

Prepared for

City of Ashland, Ashland, Oregon

April 16, 2010

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Brown AND Caldwell
201 North Civic Drive
Walnut Creek, California, 94596

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LIST OF ABBREVIATIONS

bgs	below ground surface
BMPs	best management plans
BC	Brown and Caldwell
CPECs	chemicals of potential ecological concern
ERA	ecological risk assessment
HQ	hazard quotient
HCl	hydrochloric acid
IDW	Investigation-derived waste
Level II ERA	Level II Ecological Risk Screening
LWI	Local Wetland Inventory
mg/kg	milligrams per kilogram
NCDC	National Climatic Data Center
NWI	National Wetlands Inventory
NRCS	Natural Resources Conservation Service
HNO3	nitric acid
NWTPH-Gx	Northwest Total Petroleum Hydrocarbon Gasoline Range Method
ODEQ	Oregon Department of Environmental Quality
PAHs	polynuclear aromatic hydrocarbons
RTE	rare, threatened and endangered
SLVs	Screening Levels Values
SVOCs	Semi-volatile organic compounds
Level I ERA	the Level I Scoping Study
TCLP	Toxicity Characteristics Leaching Proceedure
USFWS	U.S. Fish and Wildlife Service
USEPA	United States Environmental Protection Agency
USGS	United States Geologic Survey
VOCs	Volatile organic compounds
XRF	X-ray florescence

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LEVEL II SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT REPORT

EXECUTIVE SUMMARY

The Ashland Gun Club has operated at its current location in Ashland, Oregon since 1968 under a lease from the City of Ashland. As the site's lease is due for renewal and in accordance with published guidance from the Oregon Department of Environmental Quality (ODEQ), an ecological risk assessment (ERA) was considered necessary by the City. Under ODEQ guidelines, the ecological risk assessment should be performed in steps known as Levels. The City retained Brown and Caldwell (BC) to perform the Level I Scoping Study (Level I ERA) and Level II Ecological Risk Screening (Level II ERA) (which are first two steps of a potentially four step process) and to provide consultation on the results and best management plans (BMPs) for gun ranges. The Level I ERA was performed by BC in July 2009 and submitted to the City for review. The conclusion of the Level I ERA, using the guidance documentation and criteria provided by ODEQ, was that sufficient evidence existed for potential impacts to soil, groundwater, surface water and/or sediment by gun club activities and that a Level II ERA was advisable. The results of the Level I ERA are as follows:

- The Level I ERA identified ecologically important species of plants and animals and their associated habitat to be potentially present on site or within the Site's 2-mile Study Area; these species may be of a threatened or endangered status as defined by either state or federal law.
- The Level I ERA found that the Site provides habitat for these ecologically important species and the potential presence of contaminants in soil. Groundwater, surface water and/or sediment may potentially impact those wildlife and plant species; the potential presence of both the contaminant and the wildlife in the same place is considered to be a completed pathway.

Thus, the Level I ERA, based on ODEQ guidance criteria, recommended the performance of a Level II ERA.

Under ODEQ guidelines, the Level II ERA involves sampling of soil, groundwater, surface water and sediment in potentially impacted areas to determine if the contaminant concentrations are sufficient to potentially impact ecological receptors (wildlife or plants) at the Site. Prior to the Level II ERA, BC prepared a cost proposal which outlined the recommended sampling plan including the number of samples, the types of samples, the media to be sampled, the laboratory tests for each sample and the sample locations. BC met with City of Ashland personnel to tailor the proposed sampling plan outline to account for the institutional information that the City possessed regarding the Site. After agreement was reached on the proposed sampling plan outline, BC implemented the sampling activities in January 2010. The soil, groundwater, surface water and sediments samples collected from the sampling activities were submitted to licensed laboratories for analysis selected in the plan outline. Laboratory results were received in late January and February of 2010.

The purpose of this Level II ERA was to evaluate whether:

1. Contaminants exist at the Site in the soil, groundwater, surface water and/or sediment at the site;
2. Contaminant concentrations are sufficiently high (exceed ODEQ or EPA criteria) to cause potential impacts to the wildlife and/or plants;
3. The wildlife and/or plants have sufficient potential to come in contact with contaminants.

If all three conditions are found (through the sampling and laboratory testing) to potentially exist, then there exists completed ecological exposure pathway(s) and further investigation via the last two steps of the ERA process may be warranted.

With respect to Condition No. 2, it is possible, that even though the contaminant concentration is sufficiently high to exceed ODEQ or EPA criteria, the risk of the contaminant and the wildlife interacting is lessened by some other factor such as the contaminant depth in soil. Therefore, in addition to the comparison of contaminant concentrations to guidance criteria, the actual risks associated with the contaminant concentrations and the potential exposure routes to wildlife and plants are estimated for those chemicals for which complete pathways were identified.

A Level II ERA is designed to be conservative so that any potential risk will not be underestimated; that is, the process has a tendency to lean to the side of protecting wildlife and plants by somewhat overestimating the actual impact from the contaminants. The finding that there are risks above ecological screening levels does not necessarily mean that there is a threat to the ecological community but only that further evaluation might be warranted.

In summary, the results of this Level II ERA indicate that further ecological evaluation is warranted for elevated concentrations of contaminants such as metals, in particular lead and antimony, in soil samples from the berms used for target practice. Although iron concentrations were sufficiently high to have an elevated risk, the consistent iron concentrations in areas where target practice was not taking place, suggests that high iron concentrations are present in the background and may be part of the natural geology of the region. Further evaluation of iron and cobalt as background metals is warranted. Other conclusions from the Level II ERA include:

- There is no evidence that further ecological evaluation of metals or organic chemicals in the skeet range is warranted.
- The concentrations of chemicals in surface water and sediment do not indicate evidence of impact from the chemicals in the berms.
- Although a few chemicals in groundwater exceeded their criteria, there is no known method of contact between wildlife and groundwater and the high contaminant concentrations in groundwater may be the result of the groundwater sampling method rather than actual high concentrations of contaminants.

1. PROBLEM FORMULATION

Problem formulation evaluates the site characteristics, ecological habitats and representative organisms, threatened and endangered species, site investigation sampling plan, nature and extent of chemicals in soil, sediment, surface and groundwater, fate and transport factors. An ODEQ ecological scoping checklist is provided in Appendix A and was completed based on information in the Level I Scoping Study and a site visit conducted in August, 2009.

Sections 1.1 and 1.2 were compiled from Brown and Caldwell's Level I Scoping Study Report (August 2009). Sections 1.3 through 1.6 were compiled from Turnstone Environmental Consultants' Biological Survey Report (February 2010).

1.1 Site Location and Description

The Site comprises 66.1 acres in southern Jackson County, in a basin approximately two miles southeast of the City of Ashland at 555 Emigrant Creek Road referred to as the "Lithia Springs Property," shown in Figure 1. The site has been owned by the City for 75 years. The site is bordered to the north by Emigrant Creek, with gradual to steep up sloping hills to the south, east and west of the basin. Emigrant Dam and Lake lie about 8 miles upstream (southeast) of the site. Emigrant Lake drains 64 square miles of the north slope of the Siskiyou Mountains west of the Cascade Divide. A substantial portion of that flow is to Emigrant Creek. Greatest inflow into the Emigrant Creek is December through March.

Approximately half of the eastern side of the property consists of a relatively level alluvial terrace within which is located the Lithia Spring, one of many mineral springs in Oregon. Lithia mineral waters are piped to the downtown Ashland area to a fountain for public consumption.

The Site landscape has been extensively altered during the historic time period, particularly on the alluvial terrace. Most of the terrace has been artificially filled by the City, with approximately 33 acres reshaped into recreation area and small arms firing ranges with soil berms rising as high as 20 feet. These 33 acres have been leased to the Ashland Gun Club since 1968. Other portions of the Site appear to have been filled to possibly alleviate the marshiness associated with the mineral springs. Emigrant Creek appears to have been diverted from its original channel and original retaining walls are evidenced along wet areas at the Site several feet inland from Emigrant Creek. Surface waters observed at the Site appear to be seepage from the spring or subsurface channels. The City constructed a general fill landfill in 2003 along the eastern corner of the terrace. No original surface (present prior to historic occupation) was observed. The hillside slopes remain relatively unaltered but are used for archery practice ranges by the Ashland Gun Club. The creekbed riparian community found along Emigrant Creek is vibrant and unaltered. The creek is fast moving and turbid with a muddy rock bottom.

1.2 Site History

In the early 1900's the Site was used by early Ashland residents who believed in the medicinal value of bathing in and drinking the mineral waters. For a short time, the water was bottled by Mr. Harry Silver and his partner, G.H. Gillette and construction on a resort were planned. Several wells were installed to pump the mineral water, but eventually the project failed due to lack of funding. Several concrete structures are still on

the site from this era including the Pompadour Chief mineral bath area which is being studied for registry as a National Historic Architectural feature.

From 1944 to 1950, a dry ice manufacturing plant was built on Site and several buildings and wells were constructed at the Site. The process used the natural CO^2 from the Lithia Spring Water to create dry ice. The process used several settling ponds and several of these ponds and wells are still in partial evidence. Portions of building foundations are still at the site.

In the 1960's the site was used for a motor-cross track with an extensive system of motorcycle trails and courses in place. The track operated until the Ashland Gun Club acquired the lease in 1968.

1.3 Ecological Setting

The regional and site-specific ecology are briefly described in this section to provide an understanding of the climate, plants, invertebrates, wildlife, and fish that may inhabit the region surrounding the site, and those potentially found on site. Other than threatened and endangered species that must be considered on an individual level, a particular species must be potentially present on or utilize the site in numbers adequate to allow an exposure level that may result in effects to the species' population. Such significant exposure to site-related contaminants of ecological interest will only occur for those species known or likely to use the contaminated areas on a regular basis and in high numbers or that bioaccumulate or bio-concentrate metals. Information is presented in this section on the regional and site ecology, sensitive environments, and rare, threatened and endangered (RTE) species present at and in the vicinity of the landfill and gun club.

1.3.1 Regional Ecology

The Ashland Gun Club lies on the boundary between the Rogue/Illinois Valleys and Oak Savanna Foothills of the Klamath Mountains ecoregion (Bailey, 1995). The typical vegetation in the Rogue/Illinois Valleys ecoregion is Oregon white oak and California black oak woodland, ponderosa pine, and grassland. The region has a Mediterranean-type climate with little of the original vegetation, although remnants of oak savanna, prairie vegetation, and seasonal ponds persist. The driest areas are dominated by oak woodlands, grassland-savanna, ponderosa pine, and Douglas fir.

The Oak Savanna Foothills border the Rogue and Illinois River valleys, with wetter foothills supporting Douglas-fir, madrone, and incense cedar. The region is a mosaic of rural pasture and forested areas, with few cultivated fields. The forested areas generally are successional deciduous, coniferous, or mixed deciduous/coniferous.

Records from the U.S. Weather Service show mean annual precipitation at 23.10 inches, concentrated during the months of November through March with highest levels of precipitation in November and December. Summer temperatures rise to average highs of 89 °F in July and 85 °F in August; winter lows average 22 °F in December.

1.3.2 Site-Specific Ecology

A team consisting of two wildlife biologists, two ecologists/wetland biologists, and one botanist/wetland biologist, visited the site to identify ecologically important species and habitat potentially present onsite or within the two-mile study area (Table 1). All onsite locations were accessible during the visit on August 10 through August 12, 2009. The biologists and ecologists were present for three days. The botanist was present for one day.

1.4 Botanical Inventory

An intuitive controlled survey effort took place from 8:00 am to 6:00 pm on August 10, 2009, targeting sensitive species on the site. The timing of the survey was not optimum, as most of the species were able to be identified to genus but not to species due to a lack of floral parts or other identifying characteristics. Only late summer flowering species were in bloom. Other species were identified by remnant floral parts from past flowering, but many species were not identifiable. A survey conducted in early spring would more thoroughly capture the diversity of species on site and enable the identification of sensitive species.

Four separate vegetation types (Franklin and Dyrness, 1973) with differing plant communities were identified onsite (Figure 2). Descriptions and dominant species are listed below.

1.4.1 Riparian Habitat – Black Cottonwood/Oregon Ash

This plant community type constitutes 6.53 acres and is associated with Emigrant Creek, which runs along the northern boundary of the site. The overstory is dominated by large cottonwoods *(Populus trichocarpa),* Oregon ash *(Fraxinus latifolia),* with other smaller trees common in the understory including mountain ash *(Sorbus scopulina)* and several willow species *(Salix spp.)*. The area directly around the creek is heavily lined with Armenian blackberries (*Rubus armeniacus,* formerly *Rubus discolor*).

Other species present: skunkbush (*Rhus tribolata*), Oregon grape (*Berberis nervosa*), rye (*Elymus spp.*), mugwort (*Artmesia douglasiana*), St. John's Wort (*Hypericum perforatum*), and currant (*Ribes spp.*).

In the northwest corner of the site, a large population of showy milkweed (*Asclepias speciosa)* exists within this community. This species is of great value to the life history of monarch butterflies and is an important resource for the ecology of the site (Malcolm, 1993).

1.4.2 Oak Woodland – Oregon White Oak/Chaparral

An oak woodland community occupies 20.4 acres of the site adjacent to the riparian areas that are dominated by scattered Oregon white oaks *(Quercus garryana)* in the overstory. Common in the understory are chaparral components including skunkbush *(Rhus tribolata),* Manzanita *(Arctostaphylos menziesii),* birch leaf mahogany (*Cercocarpus betuloides),* and whitethorn ceanothus *(Ceanothus cordulatus).*

Exotic grasses abound in the herbaceous layer, with dogtail grass *(Cynosurus cristatus)* the most common species present. Other grass species noted include fescue *(Festuca spp.)* and sweet vernal grass *(Anthoxanthum odoratum).* Other species present include: lupine *(Lupinus spp.),* yarrow *(Achillea millefolium),* vetch (*Vicia spp.),* goldenrod *(Solidago canadensis),* blue elderberry *(Sambucus mexicana),* and Ponderosa pine *(Pinus ponderosa*).

1.4.3 Disturbed Non-Native Grasslands

A large expanse of the property is disturbed by gun club activities, roads, developed areas, and the mowing of vegetation. These areas, totaling 35.82 acres, are dominated primarily by exotic grasses and non-native forbs. In the shrub layer, blackberry *(Rubus armeniacus)* is widely present. In the herbaceous layer, exotic grasses include non-native bromes *(Bromus spp.),* tall fescue *(Festuca arundinacea),* bluegrass *(Poa pratensis),* and dogtail grass *(Cynosurus cristatus)*. Forbs include chicory *(Chicorum intybus)*, yellow starthistle *(Centaurea solstitalis)*, prickly sowthistle *(Sonchus asper),* bull thistle *(Cirsium vulgare),* vetch (Vicia spp.), teasel (*Dipsacus sylvaticum),* and dog mustard *(Erucastrum gallicum).*

1.4.4 Preliminary Wetlands

Occurring entirely within the disturbed areas on site, 5.18 acres are present that meet wetland criteria. Wetland areas appear to be predominantly seasonally saturated and are dominated by slender hairgrass (*Deschampsia elongata*) and Baltic rush (*Juncus balitcus*), in addition to the other non-native species listed above. More information on the wetlands can be found in Section 2.7.

1.5 Wildlife Inventory

Bird surveys were conducted on the mornings of August 11 and August 12, 2009, following the protocols outlined in *A Habitat-Based Point-Count Protocol for Terrestrial Birds, Emphasizing Washington and Oregon* (Huff, 2000). Bird surveys were conducted in the early morning hours, and not in the evening, to maximize detectability during peak bird activity (e.g., singing, territorial defense). Bird survey sheets are included in Appendix B. In the point-count station-selection process, Turnstone biologists identified a range of community vegetation types. Point-count stations were distributed throughout the four vegetation types described in the Botanical Inventory section, in order to characterize the bird usage throughout the entire site (Figure 3).

The birds noted with the highest incidence during the site visit include turkey vulture, acorn woodpecker, black-capped chickadee, lesser goldfinch, and western scrub-jay. Species observed with high abundance and low incidences were the barn swallow, Canada goose, and house finch. Figure 4 depicts the total number of observations for each species detected more than once. When birds were encountered during the bird surveys, the biologists recorded which habitat type the birds were found using. Habitat usage for each observed species is listed in Table 2.

Signs of mammal presence, such as scat and tracks, suggest that coyote *(Canis latrans)*, black-tailed deer *(Odocoileus hemionus columbianus)*, and raccoon *(Procyon lotor)* are present. Riparian and upland environments may provide suitable habitat for a variety of rodents and bats, porcupine *(Erethizon dorsatum)*, grey fox *(Urocyon cinereoargenteus),* and cougar *(Puma concolor).* No fish were noted in Emigrant Creek, but a few unidentified aquatic invertebrates were noted attached to rocks on the stream bottom. Ground squirrels (*Spermophilus beecheyi)* were observed during the site visit burrowing in the shooting range berms and the slopes in the oak woodland area. Rainbow trout and steelhead, *(Oncorhynchus mykiss),* Coho salmon *(O. kisutch)*, Chinook salmon *(O. tshawytscha),* largemouth bass *(Micropterus salmoides)*, and black crappie *(Pomoxis nigromaculatus)* have been documented in Emigrant Creek in the past (Appendix C).

1.5.1 Sensitive, Rare, Threatened, or Endangered Species

A search of the Oregon Natural Heritage Database was made for an area with a radius of two miles surrounding the landfill and four records were noted. The results of the Natural Heritage Database search are provided in Appendix C.

Plants

The likelihood of special status species were evaluated based on observations at the site and background knowledge, and 'high likelihood' was designated for four special status plants (Table 3). Southern Oregon buttercup is found on grassy hillsides to 500 m in elevation and flowers in early May. Southern Oregon buttercup has been observed at the Emigrant Creek Reservoir and suitable habitat exists on site, although no plants were found during the field visit.

Large-leaved filaree grows in open habitat, grassland, and scrub, and blooms between April and May. Habitat exists on the site, but no individuals were encountered during the site visit. Douglas' microseris is found in grassland, coastal prairie, and scrub-shrub and has a very short flowering period in early spring. Gambel milk

vetch prefers foothill woodland, southern oak woodland, and scrub. Habitat is present at the site; however, Gambel milk vetch flowers in mid spring.

Moderate likelihood for occurrence at the project site was designated for five special status plant species. Howell's camassia is found in wet meadows from 200 to 400 m in elevation and flowers in late spring. Howell's camassia was not found on site; however, marginal habitat exists on the site. White meconella is found on sandy bluffs, meadows, and partly sunny, moist banks 0 to 300 m in elevation and flowers in early spring. Habitat does exist on site in a broad sense, but no meconella was found during the site visit. Clustered lady's slipper blooms in mid-spring and prefers shaded or partly shaded habitats in evergreen forests–particularly mixed conifer and Douglas fir. It can be found in oak forests too, but usually with a significant pine component. Three-toothed horkelia grows in dry openings within coniferous forest; marginal habitat is available on the site. Redberry is a shrub that grows in chaparral and montane forests and flowers March through June. Suitable habitat for redberry exists on site, but it was not seen during surveys and would have been spotted if it occurred on the project site.

Coastal lipfern grows on rocky areas in coniferous forests, particularly mixed evergreen, yellow pine, red fir, lodgepole pine, and Douglas fir and is identifiable year round. There is low likelihood of this species occurring on the project site, because no habitat exists on site and no individuals were observed on site. Nonetheless, coastal lipferns were observed in 1989 at the north end of Emigrant Lake.

Birds

A single Lewis' woodpecker was detected using the oak woodland habitat during the bird surveys. Bald eagles may be using nearby Emigrant Lake, which is eight miles to the southeast, but are not likely to use the project site. Tricolored blackbirds and little willow flycatchers were not encountered during the site surveys but possibly use the riparian habitat on site. Buffleheads were not spotted during the site visit, but may use Emigrant Creek.

Western bluebirds were not seen on the site but nesting habitat exists, as well as good foraging ground in the open areas on the site. A single Peregrine falcon was observed hunting on site throughout the riparian, oak woodland, and disturbed non-native grasslands. Eleven white-breasted nuthatches were seen the project site in the riparian and oak woodland areas. No northern spotted owl habitat was located on the project site.

Reptiles, Mollusks, and Amphibians

No reptiles were encountered during three days of site visits. Pond turtles were not seen on the site, but have been documented in the vicinity. The travelling sideband snail was the only sensitive mollusk species encountered on site. Habitat for the horseshoe vertigo exists on the site, but no individuals were observed.

California mountain kingsnakes were observed at Emigrant Lake in 1982, and are believed to have a high likelihood of occurrence at the project site (Appendix C). Common king snakes have not been documented in the area, but suitable habitat exists on the project site. Neither species were encountered during the site visit.

Black salamanders were documented in 1984 at the northeastern side of Emigrant Lake, and are likely to use the project site (Appendix C). Foothills yellow-legged frog populations have been located within five miles of the project site (Bear Creek) and have a high likelihood of occurrence.

Northern red-legged frog and spotted frogs have not been documented in the vicinity and were not observed during the site visit. Northern red-legged frogs inhabit low velocity streams, lakes, and ponds with substantial emergent vegetation (Behler and King, 1979); therefore marginal habitat exists and there is a low likelihood of occurrence on the project site for northern red-legged frog. Spotted frogs have not been documented in Jackson County and are not likely to occur on the project site.

Fish and Mammals

Few bats (five) were observed foraging at the site during two hours of observation at dusk; however, the species could not be determined. Bat species that were previously documented in the area, including the Pacific pallid, Townsend's big eared, and Brazilian free-tailed bats, are considered to have a moderate likelihood of occurrence. Bat species with no history of occurrence in the vicinity were determined to have low likelihood of incidence on the project site. Bats with low likelihood are the long-eared myotis, fringed myotis, and Yuma myotis.

No fish were encountered during three days of site visits; however, a survey conducted in 2009 documented steelhead in portions of Emigrant Creek and its tributaries (Appendix C). Fingerling Coho salmon are stocked in the nearby Emigrant Lake and are documented pre-1998 as naturally occurring in the nearby Bear Creek (Appendix C).

1.6 Sensitive Environments

Sensitive environments are areas of particular environmental value where a hazardous substance could pose a greater threat than in other non-sensitive areas. Sensitive environments include but are not limited to: Critical habitat for federally endangered or threatened species; National Parks, Monuments, National Marine Sanctuaries, National Recreational Areas, National Wildlife Refuges, National Forest Campgrounds, recreational areas, game management areas, wildlife management areas; designated federal Wilderness Areas; wetlands (freshwater, estuarine, or coastal); wild and scenic rivers; state parks; state wildlife refuges; habitat designated for state endangered species; fishery resources; state designated natural areas; county or municipal parks; and other significant open spaces and natural resources protected under Goal 5 of Oregon's Statewide Planning Goals.

Freshwater wetlands are the only sensitive environments present on the site, and the results of the wetland determination are discussed below.

1.6.1 Preliminary Wetland Determination

As part of natural resource considerations for the Ashland Gun Club project, wetland resources were assessed within the property boundary at the site. Three professional wetland biologists with experience delineating and identifying wetlands according to state and federal regulations thoroughly investigated the site and placed wetland determination plots within the project area. This preliminary wetland assessment documents the results observed during the pre-field review and field visit. Figure 5 is a map showing the results of the wetland reconnaissance.

This report contains only preliminary information as to the wetlands recorded within the study area. It confirms the presence and absence of wetlands within the project area, but is not an accurate representation of the wetland boundaries. A formal wetland delineation would be required to more accurately map any onsite wetlands.

1.6.2 Site Alterations Important to Wetlands

The study area is highly disturbed and includes areas of fill, berms, ditches, and wells, both operational and obsolete. The landscape at the site has been extensively altered during the 75 years that the City of Ashland has owned the site. The alluvial terrace has been significantly altered and filled by the City, generating 33 acres of recreational area and small arms firing ranges (Level I – Scoping Study).

Emigrant Creek appears to have been diverted from its original channel and original retaining walls are evidenced along wet areas at the Site several feet inland from Emigrant Creek. Surface waters observed at the Site appear to be seepage from the spring or subsurface channels. The City constructed a general fill landfill in 2003 along the eastern corner of the terrace (Level I – Scoping Study).

The wetland in the southeast portion of the site described within this report was created by irrigation run-off as a result of neighboring agriculture. The entrance roads also serve as additional berms and play a role in how the water is conveyed through the site. Wetland presence is also due to a substantial subsurface water supply originating from Lithia Springs.

1.6.3 Methods

Wetland determinations were conducted using the U.S. Army Corps of Engineers Wetland Delineation Manual, 1987 (herein referred to as the Manual) and the Interim Regional Supplement: Western Mountains, Valleys, and Coasts (U.S. Army Corps of Engineers, 2008). The method requires the simultaneous presence of hydrophytic vegetation, hydric soils and positive wetland hydrology in wetland delineations.

Prior to the field investigation, reference materials were compiled and reviewed to provide information regarding the possible presence of wetlands, water features, hydric soils, wetland hydrology and soil topography. The materials reviewed included:

- National Wetlands Inventory (NWI), U.S. Fish and Wildlife Service (USFWS), Riverside and Tangent, Oregon, 1994.
- Local Wetland Inventory (LWI), City of Ashland, Water Resources
- Soil Survey of Jackson County, Oregon from the Natural Resources Conservation Service (NRCS)
- Oregon Hydric Soils List: Jackson County, NRCS
- United States Geologic Survey (USGS) 7.5 minute 1:24,000-scale Ashland topographic map
- Weather data from National Climatic Data Center (NCDC)

The NWI and LWI maps were examined to determine if wetlands are mapped on the site. No wetlands were mapped on the site from the NWI or LWI databases. The Soil Survey Map was reviewed to determine if any hydric soils are mapped on the site. Weather data was reviewed to determine precipitation amounts and patterns during the weeks and months preceding the fieldwork. The USGS topographic maps were examined to determine topography and potential water features on the site.

Field investigations of the wetlands at the Ashland Gun Club occurred on August 10 through 12, 2009. During the investigation, observations of soils, vegetation and hydrology were made using the "Routine Onsite" method of the Manual. Numerous soil profiles were examined around the sites and seven plots were selected as data points to document the three key parameters used to determine the presence of a wetland. Each of the profiles was examined for hydric soils, vegetation wetland indicator status and wetland hydrology field indicators.

The soils and hydrology at each plot were noted and are included in Appendix D: Wetland Determination Data Sheets. Field methods included excavating one foot diameter soil pits to a minimum depth of 16 inches. However, some excavation pits found refusal at less than 16 inches. Data plots were placed strategically throughout the site to give a good representation of the vegetation, hydrology and soils. The portions of the sites where plots were not taken were also investigated thoroughly.

Taking into consideration plot data, aerial photography, soil surveys, and best professional judgment, it was determined that portions of the study area would likely meet jurisdictional wetland criteria established in the 1987 Manual. One of the wetlands encountered on site is fed by neighboring irrigation activities. The other wetlands are naturally fed by groundwater and springs on site. An eventual jurisdictional determination

for the site would be affected by the history of the surrounding landscape and the connectivity of the wetlands to other navigable bodies of water.

1.6.4 Descriptions of Sites and Results

The study area exhibits vegetation patterns common to wetlands in the Rogue/Illinois Valleys and Oak Savanna Foothills of the Klamath Mountains ecoregion. Throughout a good portion of the study area, the vegetation has been removed or sprayed as part of routine maintenance activities at the Gun Club (Level I - Scoping Study). In other areas, native wetland vegetation has become established. Plants noted include cat-tail *(Typha latifolia),* Baltic rush (*Juncus balticus),* slender hairgrass *(Deschampsia elongata),* common teasel *(Dipsacus fullonum),* and sedge *(Carex spp.).* In the areas of the study area not meeting wetland criteria, non-native upland plants are common, including yellow star-thistle *(Centaurea solstitialis),* Timothy-grass (*Phleum pratense*), medusahead *(Taeniatherum caput-medusae),* and pussytoes *(Antennaria* spp.).

Soils within the study area are mapped as Camas-Newberg-Evans complex (0 to 3 percent slopes), Brader-Debenger loams (1 to 15 percent slopes), and Darrow silty clay loam (5 to 20 percent slopes). In the absence of inclusions, each of the three mapped soils types would not be a hydric soil. Soils on site were consistent with the characteristics of this soil, with the exception of soils down slope of the Lithia Springs which contain high amounts of mineral deposits.

Hydrology within the study area predominantly comes from overland flow and surface runoff from the adjacent steeper slopes on the southern side of the site, and on the eastern side from the neighboring irrigated farmland.

1.6.4.1 Wetland A

Location Description

Wetland A is estimated to cover 2.17 acres. The wetland follows the base of the slope in the western portion of the project areas and also extends into the flatter areas to the north near Emigrant Creek and to the east around the shooting range berms and an irrigated section on the neighboring lot. There are two ditches separated by berms created for the shooting ranges. Within the ditch abutting the slope to the west, a scrub-shrub wetland plant community exists that runs north to Emigrant Creek. Within the ditch abutting the shooting range berms to the east, a small Palustrine emergent wetland community exists containing mostly cattails. Both ditches convey water off of the study area to Emigrant Creek to the north.

Hydrology

Indicators of hydrology were observed within Wetland A. During our field work, saturation was found in the wetland and surface water was noted adjacent to and in some areas in the wetland.

Soils

The NRCS has mapped the soils at the project site as Darrow silty clay loam, 5 to 20 percent slopes. Field observations of this soil type matched the soil description. From 0 to 18 inches, the soil had Munsell colors ranging from 7.5 YR 2.5/1 to 7.5 YR 6/1. Redoximorphic features were not present throughout the soil profile; however, the soil meets hydric criteria under indicator F3 (Depleted Matrix).

Vegetation

The vegetation in this wetland is dominated by Baltic rush, teasel, and willow species in the western portion, cattails near Emigrant Creek. The sprawling eastern portion was dominated by Baltic rushes and slender hairgrass.

Wetland Determination

Wetland A contains hydric soils, wetland hydrology, and supports hydrophytic vegetation along the bottom of the slope to the west and to the north along the Emigrant Creek riparian area. Areas abutting the shooting range berms and adjacent farmland (formerly considered Wetland E) are connected to Wetland A through surface waters and also meet wetland criteria.

1.6.4.2 Wetland B

Location Description

Wetland B occupies an estimated 1.01 acres and is located in the central part of the study area, to the north of the landfill and extending north and west towards the riparian area associated with Emigrant Creek. Sections of Wetland B are located in a section where Emigrant Creek once flowed. The northern section of Wetland B contains an old retaining wall, which aided the divergence of the creek to its current location. Old creek bed sections have large river rocks and mineral deposits from Lithia Springs.

Hydrology

Indicators of hydrology were observed within Wetland B. The wetland appears to be fed by a natural spring in the southeastern portion (Photo 4).

Soils

The NRCS has mapped the soils at Wetland B as Brader-Debenger loam (1 to 15 percent slopes) in the eastern portion, and as Camas-Newberg-Evans (0 to 3 percent slopes) in the western portion. Field observations of the soil within the study area matched this description of the hydric soil intrusions commonly found in the alluvial terrace.

Hydric soils were noted within the wetlands, with Munsell colors ranging from 10 YR 3/4 to 10 YR 2/2 in the eastern section with redox features. The eastern portion, near the spring met wetland criteria under indicator F3 (Depleted Matrix). The western portion has very sandy soils that meet wetland criteria under indicator S4 (Sandy Gleyed Matrix). The soils in the western portion had the odor of sulfur and other minerals.

Vegetation

The vegetation along the wetland is primarily Baltic rush in the eastern section and a mosaic of hydrophitic plants, including cattails in the western section.

Wetland Determination

Wetland B contains hydric soils, hydrophytic vegetation and wetland hydrology. The wetlands exist within depressions in the alluvial terrace, adjacent to the riparian zone for Emigrant Creek, and in the vacated creek beds.

1.6.4.3 Wetland C

Location Description

Wetland C covers an estimated 1.05 acres and is located in the southeastern corner of the study area, just north of the fence line for the adjacent property. Wetland C stretches from the property boundary, along the gentle slope to the level terrain bordering Emigrant Creek. Wetland C contains a stretch of surface water that conveys water off of the neighboring property, through a culvert that eventually drains to Emigrant Creek.

Wetland C is located outside the main gun range area and may not be affected through exposure to biological stresses, physical stresses, and chemicals.

Hydrology

Wetland C has four indicators of wetland hydrology with Water Stained Leaves (B9) as the primary indicator. Secondary indicators of wetland hydrology are Drainage Patterns (B10), Dry-Season Water Table (C2), and Geomorphic Position (D2). It appears that the water originates from irrigation to the farm land immediately adjacent to the site.

Soils

The NRCS has mapped the soils at Wetland C as Brader-Debenger loam (1 to 15 percent slopes). Field observations of the soil within the study area matched this description of the hydric soil intrusions in the Brader-Debenger loams. Hydric soils were noted within the wetlands, with Munsell colors ranging from 7.5 YR 2.5/1 to 7.5 YR 5/6 with redoximorphic features and met wetland criteria under indicator F3 (Depleted Matrix).

Vegetation

The vegetation in Wetland C was dominated with non-native teasel (*Dipsacus fullonum*). A rose species was present and no herbs were documented in the determination plot.

Wetland Determination

Wetland C meets wetland criteria for hydric soils, wetland hydrology, and supports hydrophytic vegetation along the slope and downhill to the north ending at the Emigrant Creek riparian area.

1.6.4.4 Wetland D

Location Description

Wetland D is located in the northern central part of the study area, where Emigrant Creek once flowed. The wetland covers approximately 0.46 acres. The wetland is down slope from Lithia Springs and has elevated mineral deposits.

Hydrology

Several indicators of hydrology were observed within Wetland D, including High Water Table (A2), Saturation (A3), Surface Soil Cracks (B6), Salt Crusts (B11), and Hydrogen Sulfide Odor (C1).

Soils

The NRCS has mapped the soils at Wetland D as the Camas-Newberg-Evans Complex (0 to 3 percent slopes). Field observations of the soil within the study area matched this description of the hydric inclusions found within this soil type, but with greater mineral content. Hydric soils were noted within the areas meeting wetland criteria as a Depleted Matrix (F3), with Munsell colors of 5 Y 6/2. In the test pit, there was refusal at 3-inch depth due to large aggregate river rock from the abandoned creek bed.

Vegetation

The vegetation in this wetland is dominated by baltic rush (Juncus Balticus) and slender hairgrass (Deschempsia elongata). Hydrophytic vegetation was observed around the margins of Wetland D with standing water in the interior.

Wetland Determination

Wetland D contains hydric soils, hydrophytic vegetation and wetland hydrology in the location where Emigrant Creek once flowed. The wetland is down slope from Lithia Springs and has elevated mineral deposits.

1.6.4.5 Wetland F[1]

Location Description

Wetland F is located on the northwestern portion of the site, and covers an estimated 0.48 acres. The hydrology in this wetland initiates at the south side Emigrant Creek Road just west of the entrance road. It is characterized as a spring fed area at the head of a roadside channel. The wetland area has less than 5 percent slope and meets wetland criteria. The water from the wetland flows down an increasing grade and develops into a surface water feature, which eventually feeds Wetland A.

Hydrology

Indicators of hydrology were observed within Wetland F. Saturation and surface water were both noted during our field work.

Soils

The NRCS has mapped the soils at the project site as Darrow silty clay loam, 5 to 20 percent slopes. Field observations of this soil type matched the soil description. From 0-18", the soil had Munsell colors ranging from 2.5 YR 2.5/1 to 2.5 YR 5/8. Redoximorphic features were also present throughout the soil profile, and the soil meets hydric criteria under indicator F6 (Redox Dark Surface). Areas just above the wetland in elevation have similar color and redox features, but were very dry during our examination.

Vegetation

The vegetation on the site is typical wetland vegetation, with non-native teasel, cattails, and willow species. Adjacent upland vegetation was primarily pasture grasses. Hydrophytic vegetation was characterized within our sample plots. Vegetation suggests seeps along the hillside during spring.

Wetland Determination

The seepage area below Emigrant Creek Road running along the entrance roadside entirely meets wetland criteria, and connects through the surface water (which does not meet wetland criteria) and eventually leads to Wetland A.

1.7 SITE INVESTIGATION

January 11 through January 13, 2010, Brown and Caldwell conducted sampling activities at the Site. Site activities consisted of the following:

- sampling water and sediment from Emigrant Creek,
- XRF scanning for lead in soil in the shooting range berms,
- sampling soil of the gun range berms, and
- trenching and sampling soil and groundwater at the skeet shooting range.

[1]Wetland E no longer exists; it is now the eastern section of Wetland A.

Copies of Brown and Caldwell's field data sheets and field notes for this investigation are provided in Appendix E.

Each sample was collected following BC's standard operating procedures for environmental sample collection and handling. The samples were placed in an acceptable container, properly labeled, placed into resealable plastic bags, stored in a cooler containing ice, and transported under chain-of-custody documentation to Accutest, an Oregon-certified analytical laboratory. All non-disposable sampling equipment (e.g., trowels) were decontaminated using a triple decontamination sequence with Liquinox prior to sampling each location and clean disposable gloves were worn at each sampling location and while decontaminating sampling equipment.

The landfill noted in Section 1.1 and shown on Figure 1 was not sampled.

1.7.1 Emigrant Creek Water and Sediment Sampling

Brown and Caldwell sampled Emigrant Creek water and sediment on January 11, 2010 (Figure 6 shows the sample locations.)

A creek water sample was taken upstream and downstream of the Site boundary. Water was collected in an unpreserved bottle and decanted into laboratory-supplied nitric acid (HNO3) and hydrochloric acid (HCl) preserved sample bottles and an unpreserved bottle. Each sample submitted was analyzed for the following:

- Metals: arsenic, antimony, chromium, cobalt, copper, lead, iron, nickel, tin, and zinc using United States Environmental Protection Agency (USEPA) Method 6010
- Volatile organic compounds (VOCs) using USEPA Method 8260
- Semi-volatile organic compounds (SVOCs) using USEPA Method 8270
- Northwest Total Petroleum Hydrocarbon Gasoline Range Method (NWTPH-Gx) established by the ODEQ
- NWTPH Diesel/Lube Oil Range (NWTPH-Dx) Method established by the ODEQ.

A sediment sample was taken upstream and downstream of the Site boundary. The sediment samples were collected at the edge of the Creek where sediment had accumulated. Using a trowel, the sediment was placed in the sample jars. Each sample submitted was analyzed for the following:

- Metals: arsenic, antimony, chromium, cobalt, copper, lead, iron, nickel, tin, and zinc using USEPA Method 6010
- VOCs using USEPA Method 8260
- SVOCs using USEPA Method 8270
- NWTPH-Gx established by the ODEQ
- NWTPH-Dx Method established by the ODEQ

1.7.2 XRF Analysis of Soil

Brown and Caldwell conducted an X-ray florescence (XRF) scanning for lead on January 12, 2010 at each shooting range berm. Sample frequency ranged from 10 to 16 XRF samples at each berm. Samples were spread out along the areas that visually appeared to be impacted, namely, the end of the berm. A trowel was used to scrape off a sample of surface soil into a plastic bag that was then flattened and examined for bullet fragments. Bullet fragments, if any, were removed and XRF scanning was performed on the soil. Refer to the field data sheets and field notes for sample locations and XRF results (Appendix E).

Investigation-derived waste (IDW) generated during the field sampling activities included soil from the XRF scanning of the berms and equipment decontamination water. Disposable sampling supplies (e.g., gloves) were collected and disposed as municipal waste.

1.7.3 Berm Soil Sampling

Brown and Caldwell collected soil samples from the berms following the XRF scanning on January 12, 2010. One soil sample was collected from each of the five berms with the highest XRF results. A soil sample was not collected from the sixth berm. Within each of the five berms the specific sample location was selected based on the area that reported the greatest XRF reading. Figure 6 shows the sample locations. Each sample submitted was analyzed for arsenic, antimony, chromium, cobalt, copper, lead, iron, nickel, tin, and zinc. An additional sample was collected from the sample location that had the highest overall XRF reading and analyzed for polynuclear aromatic hydrocarbons (PAHs) using USEPA Method 8270. Samples were collected with a trowel and placed in a glass jar followed by the BC standard sample collection and handling procedures.

The five berm samples were also rerun later for Toxicity Characteristics Leaching Proceedure (TCLP) to deteremine if the soil would be classified as U.S. Enivironmental Protection Agency Hazardous Waste for off-site disposal.

1.7.4 Skeet Shooting Range Soil and Groundwater Sampling

Brown and Caldwell collected soil samples from the Skeet Shooting range after initial activities by the City of Ashland. The City of Ashland notified the Oregon Utility Notification Center and physically marked water lines prior to the excavation activities. On January 13, 2010 at the area with the highest concentration of skeet fragments, the City began by scraping the bullet and skeet fragments out of the way before commencing the trenching to avoid fragments falling into the groundwater. Brown and Caldwell collected one surface soil sample (approximately 3 inches below ground surface [bgs]) and one soil sample from a depth of 1.5 feet bgs. Jars were filled by a trowel at each depth and samples were analyzed for the following: PAHs, arsenic, antimony, chromium, cobalt, copper, lead, iron, nickel, tin, and zinc.

After collecting soil samples, the City of Ashland dug the trench deeper until groundwater was encountered at approximately 15 feet bgs. Brown and Caldwell waited approximately 10 minutes for the water level to come to equilibrium and for some of the sediment to settle out and then collected one grab groundwater sample with a dipper. Groundwater was collected in the dipper and decanted into laboratory-supplied unpreserved glassware. Each sample submitted was analyzed for PAHs, arsenic, antimony, chromium, cobalt, copper, lead, iron, nickel, tin, and zinc.

Sample locations are provided in Figure 6.

After sample collection, the trench was backfilled by the City, taking care to keep the original surface soil containing skeet fragments from infiltrating the groundwater.

1.7.5 Results of Site Investigation

The results of the laboratory analyses are discussed for each media in a context of the default background concentrations published by the ODEQ. The concentrations are compared to ODEQ Level II Screening Levels Values (SLVs) to determine if further evaluation of the risk for each medium is warranted. If all concentrations are below SLVs, then there is no evidence of an ecological concern.

1.7.5.1 Emigrant Creek Water and Sediment Sampling

There is no indication of impacts to the water in Emigrant Creek. The concentrations of the two metals identified in surface water (antimony and iron) were higher in the upstream sample than in the downstream sample (Table 4). The concentrations in both samples were well below ODEQ Level II SLVs.

There is no evidence of ecological concerns with sediments in the downstream sample (Table 5). The concentrations of arsenic, copper, iron and zinc are the same or higher in the upstream sample. The concentrations of chromium, cobalt, lead and nickel are slightly higher in the downstream sediment but the differences are within analytical variability limits, e.g. 10-20 percent difference between duplicates is generally acceptable. Also the downstream concentrations are well below ODEQ SLVs for those metals where such SLVs exist. Antimony was not detected in the upstream sample and was reported in the downstream sample. The concentrations of antimony are below ODEQ SLVs.

1.7.5.2 Soil Samples

In the five berm soil samples, all metals for which samples were analyzed, except chromium, are present at concentrations above the default ODEQ background. Chromium concentrations are above some of the SLVs but the SLVs are also below background (Table 6).

Several metals are significantly elevated in the berm soil samples. Most notable are lead and antimony with maximum concentrations of 2,440 and 131,000 milligrams per kilogram (mg/kg); substantially elevated above the default ODEQ background samples of 4 and 17 mg/kg respectively.

There is no ODEQ background default for iron and the concentrations are above SLVs. However, it is likely that iron is not elevated above background. The concentrations of iron are consistent in all samples and consistent between the berm and skeet range samples.

The two skeet range soil samples had substantially lower concentrations for all metals except iron (lending support to the hypothesis that iron concentrations are background). Cobalt concentrations in the skeet range are also consistent with those in the berms. There are no Oregon background values for iron and cobalt (Table 7). All metals except lead with default ODEQ background values had concentrations that were lower. The maximum concentration of lead in the skeet range soil of 21.9 mg/kg is less than 20 percent higher than the Oregon default background value of 17 mg/kg.

The concentrations of PAHs in the skeet range samples are within the range typically found in urban and rural soil (ATSDR, 1992). PAHs are ubiquitous in the environment because of multiple sources ranging from vehicles to forest fires. There is no evidence of elevated PAHs due to skeet shooting.

The results of the TCLP analysis (Table 8) show that the leachable level of lead exceeded EPA standards for definition of a hazardous waste in every sample. This will affect future disposal considerations.

1.7.5.3 Groundwater Samples

The groundwater sample was an unfiltered grab sample from a trench. Four metals were detected in the sample collected from the groundwater (antimony, copper, nickel, and zinc) (Table 9). The concentration of copper exceeds its Level II SLVs for surface water aquatic life and background. Antimony's concentration was above background but below SLVs. Nickel and zinc had concentrations below background and the SLVs.

There is no completed exposure pathway for ecological receptors and groundwater which is 10 to 15 feet below ground surface.

1.8 Contaminant Fate and Transport

Fate-and-transport information describes how chemicals degrade and where they travel in the environment, whether naturally occurring or released. Chemicals in the environment are analyzed in terms of a modeling system that indicates not only how the chemicals move through air, water, and soil (transport), but also how the chemicals change in the presence of other chemicals and particles (fate).

Physical processes influencing contaminant fate and transport include diffusion (e.g., random movement of molecules) and advection (e.g., flow of groundwater to surface water). Soil erosion, sedimentation, and sediment resuspension describe the sequestering or transport of soil and sediment particles to which contaminants may be sorbed.

Groundwater flow provides a mechanism for groundwater constituents to migrate to local surface-water bodies.

Chemical processes that affect contaminant fate and transport include various chemical reactions. Acid-base reactions affect the chemical form of the contaminant; precipitation reactions can result in sequestering of contaminants with carbonates, hydrous oxides, and sulfides; and oxidation-reduction reactions can alter the chemical form or speciation of a contaminant. Sorption reactions are dependent on the hydrophobic properties of contaminants and the likelihood of sorption of contaminants to soil and sediment particles; these reactions affect bioavailability and toxicity. Volatilization, hydrolysis, photolysis, and ligand complexation can also affect the persistence and properties of contaminants.

Biological processes may also affect contaminant fate and transport. Biotransformation is a chemical reaction occurring within an organism that alters the chemical form of a contaminant. Contaminants may transfer from the atmosphere, water, soil, and sediment to biota in the process of bioaccumulation.

PAHs are composed of various combinations of fused benzene rings. Properties of PAH compounds vary with molecular weight. Higher-molecular-weight compounds are generally less mobile and less toxic than lower-molecular-weight compounds. PAHs in the atmosphere, water, or soil and sediment become associated with particulate material. PAHs in sediment and soil may transfer to plants or other biota. Environmental degradation occurs by chemical oxidation, photo oxidation, and biological transformation. Soil- and sediment-bound PAHs can persist for an extended time. Biological transformation is likely the final fate of PAHs. PAHS tend not to bioaccumulate because these chemicals are metabolized by most organisms.

Metals vary widely in chemical form and properties; however, metals differ from organic compounds because none degrade in the environment, many exist naturally in soil and sediment, and a few are essential nutrients for living organisms. The fate of metals in the environment is primarily dependent on sorption, chemical speciation, complexation, biotransformation, and bioaccumulation. Metals occurring in soil and sediment may be sorbed to particles (silt- and clay-size), bound in a complex molecule, bound in a precipitate (e.g., sulfides), or may exist in a free ionic state. Some metals can bioaccumulate if in a biologically available form.

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2. LEVEL II SCREENING LEVEL ASSESSMENT

This section presents the identification of chemicals of potential ecological concern (CPECs), selection of the assessment endpoints and measures used to determine if the concentrations of the CPECs pose a concern to ecological receptors and the calculation of ecological hazard quotients to quantify the extent to which concentrations exceed ecological SLVs.

2.1 Identification of CPECs

In accordance with ODEQ guidance, all chemicals reported in at least one sample with concentrations above the default ODEQ background concentrations were included as CPECs. In the case of the stream samples, the upstream sample was considered as background along with the default ODEQ values. Also, if all concentrations of chemicals in a medium are below SLVs, then no further evaluation was conducted. The chemicals and/or media excluded are as follows:

- **Surface water** - No CPECs were identified in surface water from Emigrant Creek. Two metals detected at concentrations that were higher in the upstream sample and are considered below background. The concentrations in both samples were well below ODEQ Level II SLVs.
- **Sediment** - No CPECs were identified in sediment from Emigrant Creek. The concentrations of all metals reported in the sediment were either the same or lower than those in the downstream sample (arsenic, copper, iron and zinc) or below SLVs (antimony, chromium, lead and nickel). The metal higher than upstream and without SLVs (cobalt) does not appear to be elevated above natural variability of soil samples between the upstream and downstream samples.
- **Groundwater** - There is no completed exposure pathway between groundwater and ecological receptors and groundwater is only considered as a potential source to surface water in Emigrant Creek.
- **Berm Soil** – All metals for which the samples were analyzed, except chromium, are found at concentrations above background and are included as CPECs. Only one PAH (benzo(a)pyrene) has an SLV and the concentration reported in the soil is well below the SLV. The concentration is consistent with urban and rural soil. (ATSDR 1992) Cobalt and iron do not have default background levels for soil. The concentrations in the berm samples are consistent across samples and do not show the high variability seen with the lead results. The concentrations are also reasonably consistent with those in the skeet range. It is reasonable to conclude the iron and cobalt concentrations are background; however, iron and cobalt were included as CPECs.
- **Skeet Range Soil** – Cobalt, iron and lead were included as CPECs for the skeet range although the concentrations suggest that all three may be present at background concentrations. Antimony, arsenic, chromium, copper, nickel and zinc are not included as CPECs because the concentrations are below Oregon default background. Cobalt and iron do not have Oregon background values but, as noted in the previous bullet, may be at background concentrations. Only one of the PAHs (benzo(a)pyrene or BaP) has an SLV and the concentration reported in the soil is well below the SLV. BaP is considered the most toxic of the PAHs. The concentrations of PAHs are consistent with urban and rural soil.

2.2 Assessment Endpoints and Measures

This screening-level ERA evaluates plants, soil invertebrates, birds, and mammals as potential ecological receptors. Aquatic life is not included because CPECs were not identified for surface water and sediment.

The terrestrial assessment endpoints are the survival, growth, and reproduction of populations of plants, invertebrates, mammals, and birds. Measurement endpoints are hazard quotients which are the ratio of the CPEC concentration and ODEQ SLVs.

The risk for potential ecological receptors is estimated by the hazard quotient (HQ), obtained by dividing the chemical concentration by the ODEQ SLV.

$$HQ = \frac{Maximum\ CPEC\ Concentration}{ODEQ\ SLV}$$

Where:

HQ	=	hazard quotient
SLV	=	screening level value

2.3 Calculation of Hazard Quotients

Hazard quotients were calculated for the berm and skeet range soils separately. A summary for each media is presented in Table 6 for the berm soil and Table 7 for the skeet range soil.

In berm soils, nine metals were identified as CPECs. The majority of the SLVs for the metals were exceeded for each receptor group.

- The HQ values for plants are 2,620 for lead and 488 for antimony. The HQ for iron is 2,600 but iron is likely to be consistent with background. It is not usual to have SLVs that predict risks below background due to the nature of the derivation of the SLVs (background is not considered). The remaining CPECs have HQs below 10.
- The HQ values for invertebrates range from 0.01 for cobalt to 262 for lead. Three of the nine HQs exceed 1.
- The HQ values for birds range from 0.2 for nickel to 8,188 for lead. Lead is the only CPEC with an HQ greater than 10. Four of the five HQs exceed 1.
- The HQ values for mammals range from 0.005 for zinc to 163 for antimony. Antimony and lead have HQs greater than 10. Three of the seven HQs exceed 1.

In skeet range soil, three metals were identified as CPECs.

- The HQ values for cobalt and lead are at or below one for all receptors
- The HQ values for iron are 151 for invertebrates and 3,020 for plants. As noted earlier, the data suggest that the iron concentrations are consistent with background. Further evaluation of background and the basis for the iron SLVs may be warranted.

3. RESULTS AND PRELIMINARY CONCEPTUAL SITE MODEL

Based on the results of this Level II Screening Level Ecological Risk Assessment, further ecological evaluation is indicated for elevated concentrations of metals, in particular lead and antimony, in soil samples from the berms used for target practice. Although iron also has a high HQ value, the distribution of the iron suggests that these concentrations are at background. Further evaluation of iron and cobalt in background as well as the evaluation of the SLVs for iron may be warranted.

There is no evidence that further ecological evaluation of metals or organic chemicals in the skeet range is warranted.

The concentrations of chemicals in surface water and sediment do not indicate evidence of impact from the chemicals in the berms.

Although a few chemicals in groundwater exceeded their SLVs, there is no postulated contact between ecological receptors and groundwater. Also the elevated concentrations may be associated with suspended soil in this grab groundwater sample from a trench.

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4. LIMITATIONS

This document was prepared solely for City of Ashland in accordance with professional standards at the time the services were performed and in accordance with the contract between City of Ashland and Brown and Caldwell dated June 1, 2009. This document is governed by the specific scope of work authorized by City of Ashland; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by City of Ashland and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

Further, Brown and Caldwell makes no warranties, express or implied, with respect to this document, except for those, if any, contained in the agreement pursuant to which the document was prepared. All data, drawings, documents, or information contained this report have been prepared exclusively for the person or entity to whom it was addressed and may not be relied upon by any other person or entity without the prior written consent of Brown and Caldwell unless otherwise provided by the Agreement pursuant to which these services were provided

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FIGURES

Figure 1. Regional Map

Figure 2. Four Vegetation Types Found at the Ashland Gun Club Property

Figure 3. Bird Point Count Station Map

Figure 4. Avian Species Encountered More Than Once

Figure 5. Preliminary Wetland Determination Map

Figure 6. Sample Locations

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FIGURE 1–REGIONAL MAP
EMIGRANT CREEK ROAD, ASHLAND OREGON

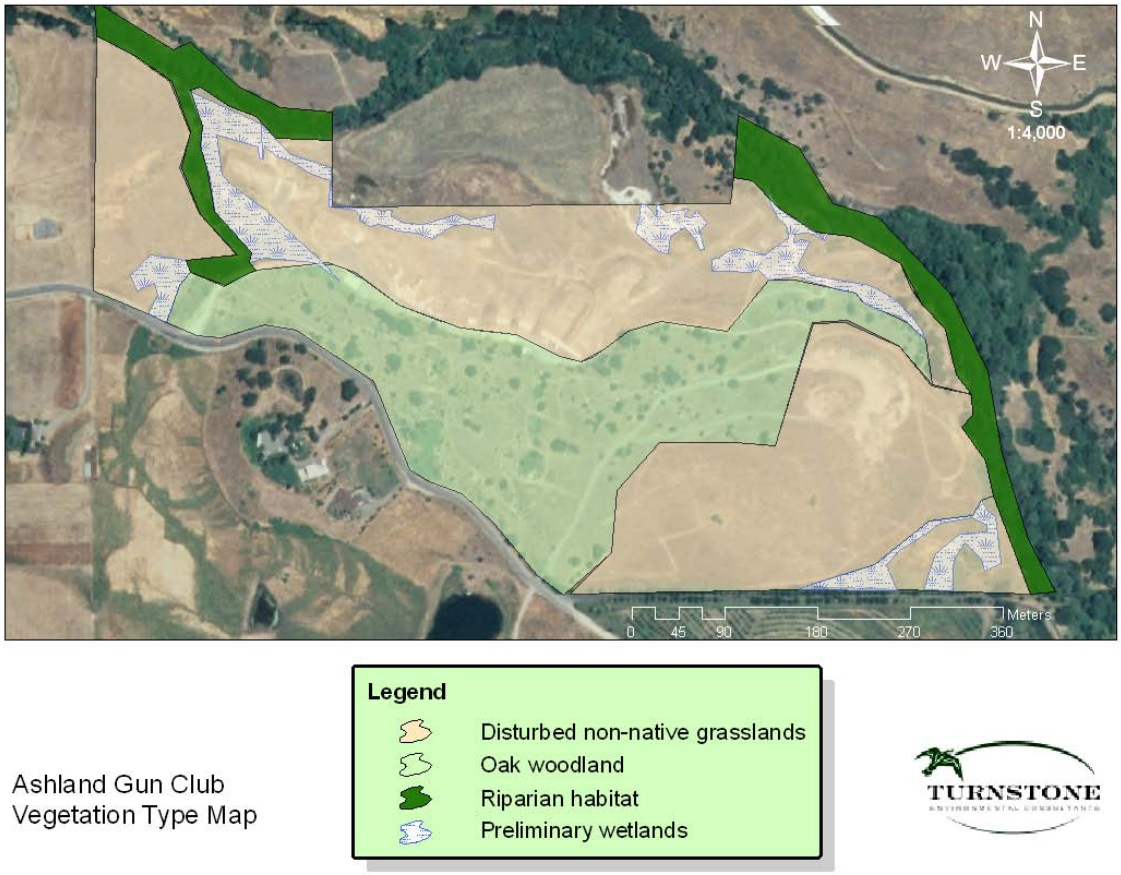
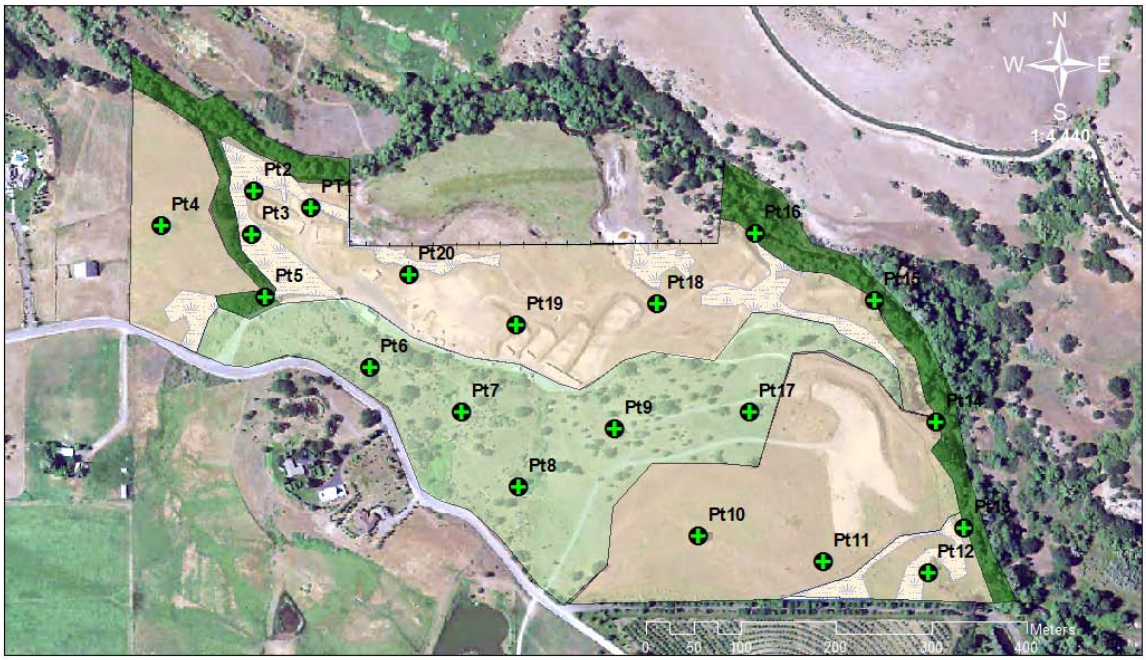


Figure 2. Four vegetation types found at the Ashland Gun Club property



Ashland Gun Club
Vegetation Type and
Bird Point Count
Station Map

- Bird point count stations
- Disturbed non-native grasslands
- Oak woodland
- Riparian habitat
- Wetland boundary

TURNSTONE
ENVIRONMENTAL CONSULTANTS

Figure 3. Bird Point Count Station Map

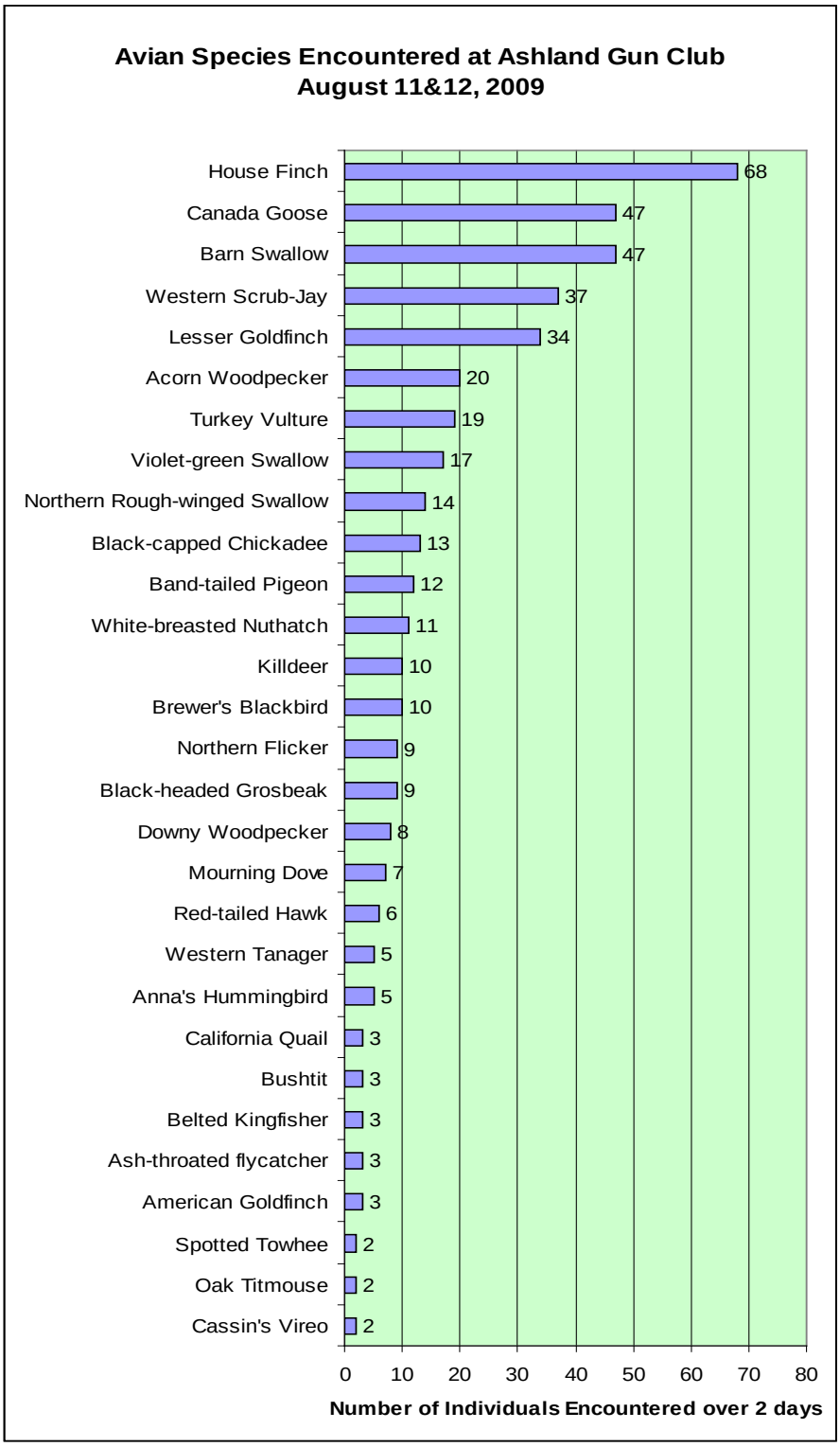


Figure 4. Avian Species Encountered More Than Once

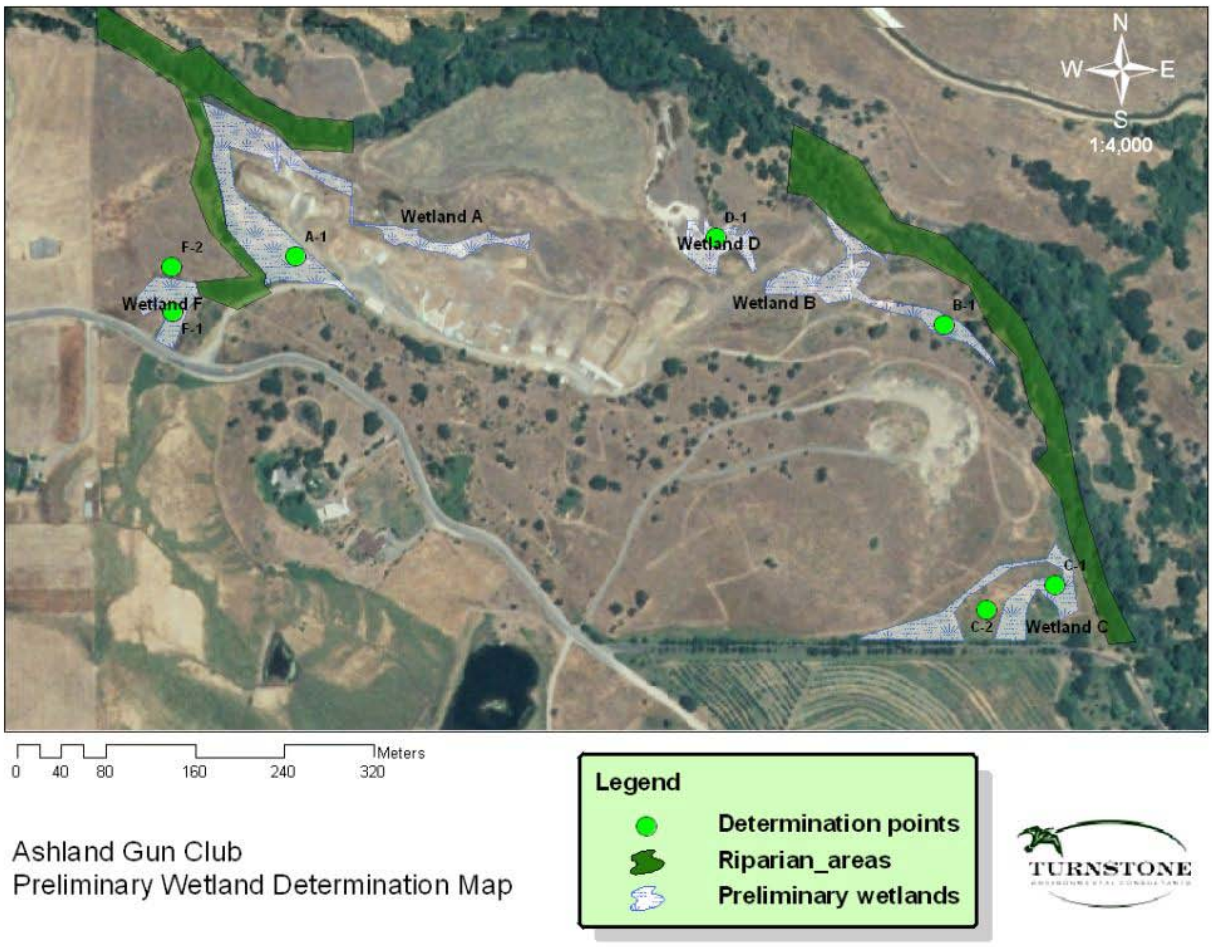
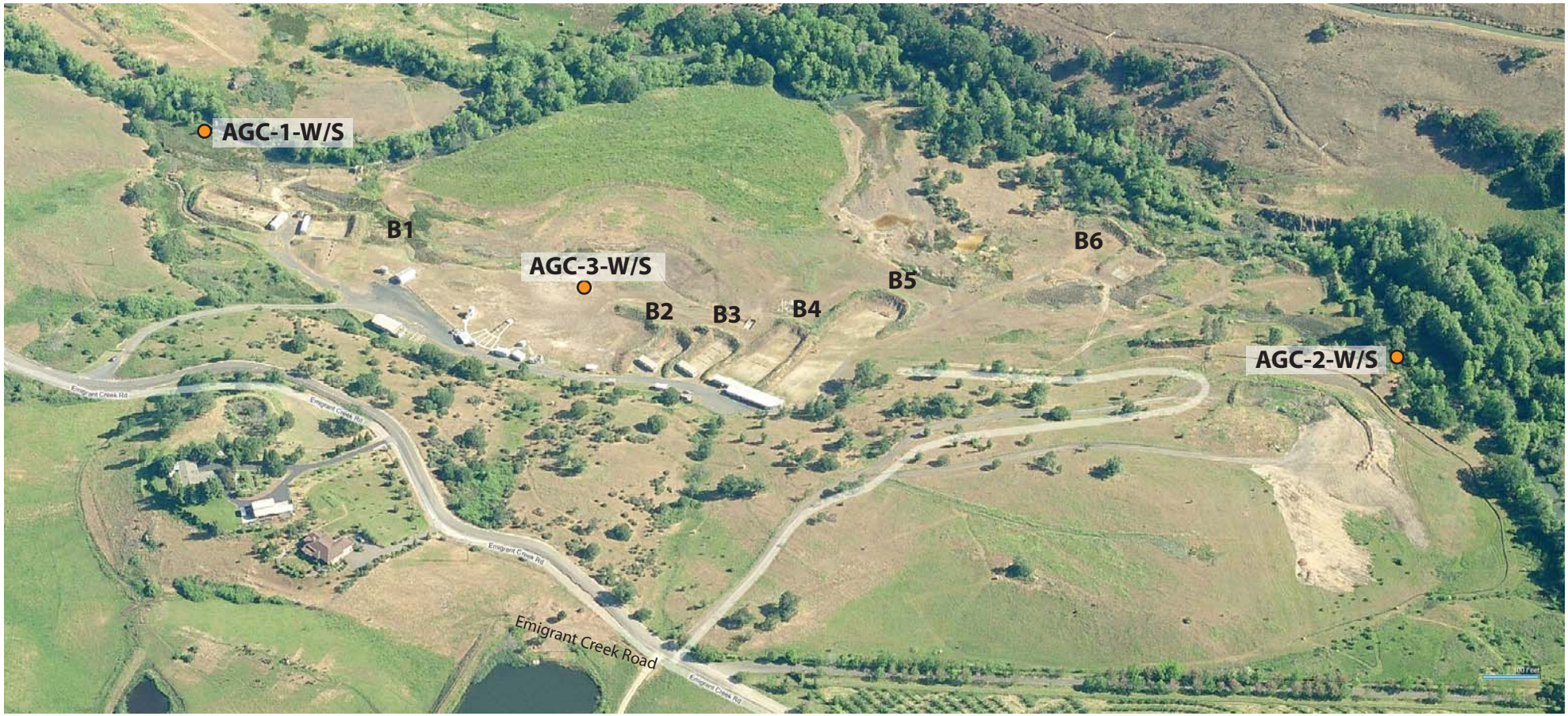


Figure 5. Preliminary Wetland Determination Map

NORTH



Brown AND Caldwell	DATE 2-16-10	SITE Ashland Gun Club - 555 Emigrant Creek Road, Ashland, Oregon	Figure 6
	PROJECT 137795.012	TITLE Sample Locations	

PHOTOS

Photo 1. Palustrine Emergent Wetland with Rushes and Slender Hair Grass

Photo 2. A View of Wetland B Bound to the West by Shooting Range Berms

Photo 3. Natural Lithia Springs Located within the Southeastern Section Of Wetland B

Photo 4. Palustrine Emergent Wetland with High Mineral Deposits from Lithia Springs

Photo 5. Overview of Wetland F, Looking Northeast, with Hydrophytic Vegetation is shown in the Photograph with Teasel, Cattails and Willow Species

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Photo 1. Palustrine emergent wetland with rushes and slender hair grass

Photo 2. A view of Wetland B bound to the west by shooting range berms

Photo 3. Natural Lithia Springs located within the southeastern section of Wetland B

Photo 4. Palustrine emergent wetland with high mineral deposits from Lithia Springs

Photo 5. Overview of Wetland F, looking northeast, with hydrophytic vegetation is shown in the photograph with teasel, cattails and willow species

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Table 1. Turnstone Team Members

Table 2. Avian Species Encountered Onsite

Table 3. Special Status Species

Table 4. Surface Water Samples Analytical Results and Level II Ecological Screening Levels

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Table 7. Skeet Range Soil Samples Analytical Results and Level II Ecological Screening Levels

Table 8. Soil Samples Analytical Results and EPA Toxicity Characteristic Regulatory Level

Table 9. Groundwater Sample Analytical Results and Level II Ecological Screening Levels

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Table 1. Turnstone Team Members	
Team Member	Specialization
Darren Bolen	Wildlife biologist
Wendy Beard	Wildlife biologist
Stephanie McDowell	Ecologist/wetland biologist
Rone Brewer	Ecologist/wetland biologist
Katie Arhangelsky	Botanist/wetland biologist

Table 2. Avian Species Encountered Onsite					
Species		Habitat used by Spp.			
English Name	Scientific Name	Wetland	Riparian	Oak Woodland	Disturbed non-native grasslands
Cooper's Hawk	*Accipiter cooperii*			■	■
Northern Harrier	*Circus cyaneus*			■	■
Red-tailed Hawk	*Buteo jamaicensis*			■	
Peregrine Falcon	*Falco peregrinus*		■	■	■
Turkey Vulture	*Cathartes aura*		■	■	■
American Kestrel	*Falco sparverius*		■		
Canada Goose	*Branta canadensis*	■			■
American Crow	*Corvus brachyrhynchos*			■	■
Red-winged Blackbird	*Agelaius phoeniceus*		■		
Brewer's Blackbird	*Euphagus cyanocephalus*	■	■		■
Mourning Dove	*Zenaida macroura*		■		■
Band-tailed Pigeon	*Patagioenas fasciata*		■	■	
California Quail	*Callipepla californica*			■	■
Western Scrub-Jay	*Aphelocoma californica*		■	■	■
European Starling	*Sturnus vulgaris*		■		■
Northern Flicker	*Colaptes auratus*		■	■	
Lewis's Woodpecker	*Melanerpes lewis*			■	■
Downy Woodpecker	*Picoides pubescens*		■	■	
Acorn Woodpecker	*Melanerpes formicivorus*		■	■	■
Hairy Woodpecker	*Picoides villosus*		■		
Belted Kingfisher	*Megaceryle alcyon*		■		
Western Meadowlark	*Sturnella neglecta*			■	
Black-headed Grosbeak	*Pheucticus melanocephalus*		■	■	

Table 2. Avian Species Encountered Onsite					
Species		Habitat used by Spp.			
English Name	Scientific Name	Wetland	Riparian	Oak Woodland	Disturbed non-native grasslands
Spotted Towhee	*Pipilo maculatus*		■		
Western Tanager	*Piranga ludoviciana*		■		
Lesser Goldfinch	*Spinus psaltria*		■	■	■
White-breasted Nuthatch	*Sitta carolinensis*		■	■	
Black Phoebe	*Sayornis nigricans*	■			
Killdeer	*Charadrius vociferus*	■			■
Cedar Waxwing	*Bombycilla cedrorum*			■	
Barn Swallow	*Hirundo rustica*	■		■	■
Violet-green Swallow	*Tachycineta thalassina*			■	■
Blue-gray Gnatcatcher	*Polioptila caerulea*			■	
Cassin's Finch	*Carpodacus cassinii*			■	
Vaux's Swift	*Chaetura vauxi*			■	
House Finch	*Carpodacus mexicanus*	■			■
Ash-throated flycatcher	*Myiarchus cinerascens*		■		
Golden-crowned Kinglet	*Regulus satrapa*		■		
Cassin's Vireo	*Vireo cassinii*		■	■	
American Goldfinch	*Spinus tristis*	■			
Oak Titmouse	*Baeolophus inornatus*			■	
Wilson's Warbler	*Wilsonia pusilla*		■		
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*		■	■	■
Black-capped Chickadee	*Poecile atricapillus*		■	■	
Bewick's Wren	*Thryomanes bewickii*			■	
Lazuli Bunting	*Passerina amoena*			■	
White-crowned Sparrow	*Zonotrichia leucophrys*				■
Bushtit	*Psaltriparus minimus*			■	
Western Wood-Pewee	*Contopus sordidulus*			■	
Anna's Hummingbird	*Calypte anna*		■	■	■

Table 3. Special Status Species				
Common Name	Scientific Name	Federal Status	State Status	Likelihood
Plants				
Gambel Milk-Vetch	*Astragalus gambelianus*		S1	High -- reported in the vicinity, and suitable habitat on project site
Howell's Camassia	*Camassia howelli*	SOC	C, S2	Moderate -- not reported in vicinity, but suitable habitat on project site
Coastal Lipfern	*Cheilanthes intertexta*		S2[1]	Low -- reported near Emigrant Lake, but no suitable habitat on project site
Clustered Lady's Slipper	*Cypripedium Fasciculatum*	SOC	C	Moderate -- reported in the vicinity, and marginal habitat on project site
Large-leaved Filaree	*Erodium macrophyllum*		2-ex	High -- reported in the vicinity, and suitable habitat on project site
Three-toothed Horkelia	*Horkella tridentate*		S1	Moderate -- reported in the vicinity, and marginal habitat on project site
White Meconella	*Meconella oregana*	SOC	C, S1	Moderate -- not reported in vicinity, but suitable habitat on project site
Douglas' Microseris	*Mircoseris douglasii*		2-ex	High -- reported in the vicinity, and suitable habitat on project site
So. Oregon Buttercup	*Ranunculus austro-oreganus*		C[2], S2	High -- reported at Emigrant Lake, and suitable habitat on site.
Redberry	*Rhamnus ilicifolia*		S1	Moderate -- reported in the vicinity and suitable habitat on project site
Birds				
Tricolored Blackbird	*Agelaius tricolor*	SOC	SP	Moderate -- not reported in vicinity, but suitable habitat on project site
Bufflehead	*Bucephale albeola*		SU	Moderate -- not reported in the vicinity but suitable habitat on project site
Pileated woodpecker	*Dryocopus pileatus*		SV	Low – not reported in the vicinity and lack of suitable habitat on project site
Little Willow Flycatcher	*Empidonax trailli brewsteri*		SV	Moderate -- not reported in vicinity, but suitable habitat on project site
Peregrine falcon	*Falco prergrinus*		SV	High -- observed during project surveys in riparian, Oak woodland, and disturbed non-native grasslands habitat
Bald Eagle	*Haliaeetus leucocephalus*	DL[3]	LT	Low – could be using Emigrant Lake, but no suitable habitat on project site
Lewis' Woodpecker	*Melanerpes lewis*	SOC	SC	High -- observed during project surveys in Oak habitat
White-breasted nuthatch	*Sitta carolinesis aculeata*		SV	Low – not reported in the vicinity and lack of suitable habitat on project site
Western Bluebird	*Sialia Mexicana*		SV	Moderate -- not reported in vicinity, but suitable habitat on project site
Northern Spotted Owl	*Strix occidentalis caurina*	LT	LT	Low -- reported in the vicinity, but no suitable habitat on project site

Table 3. Special Status Species				
Common Name	Scientific Name	Federal Status	State Status	Likelihood
Reptiles, Mollusks, and Amphibians				
Northwestern Pond Turtle	*Clemmys marmorata marmorata*	SOC	SC	High- reported within one mile of the site, suitable habitat on site.
Cal. Mountain Kingsnake	*Lampropeltis zonata*	SOC	SV	High- reported within five miles of the site, suitable habitat on site.
Common Kingsnake	*Lampropeltis getulus*	SOC	SV	Moderate -- not reported in vicinity, but suitable habitat on project site
Traveling Sideband Snail	*Monadenia fidelis celeuthia*		S1	High -- observed during project surveys
Horseshoe Vertigo	*Vertigo dalliana*		S1	High- reported within five miles of the site, suitable habitat on site.
Black Salamander	*Aneides flavipunctatus*		SP	High- reported within five miles of the site, and suitable habitat on site.
Northern red-legged frog	*Rana aurora*	SOC	SV	Low -- not reported in vicinity, but marginal habitat on project site
Foothills yellow-legged frog	*Rana boylii*	SOC	SV	High- reported within five miles of the site, and suitable habitat on site.
Spotted Frog	*Rana pretiosa*	C	SC	Moderate -- not reported in vicinity, but suitable habitat on project site
Fish and Mammals				
Pacific Pallid Bat	*Antrozous pallidus pacificus*	SOC	SV	Moderate -- reported in the vicinity, and suitable habitat adjacent to project site
Townsend's Big Eared Bat	*Corynorhinus townsendii*	SOC	SC	Moderate -- reported in the vicinity, and suitable habitat adjacent to project site
Long-eared Myotis	*Myotis evotis*	SOC	SU	Low -- not reported in the vicinity and no suitable habitat on project site
Fringed Myotis	*Myotis thysanodes*	SOC	SV	Low -- not reported in the vicinity and no suitable habitat on project site
Yuma Myotis	*Myotis yumanensis*	SOC		Low -- not reported in the vicinity and no suitable habitat on project site
Brazilian free-tailed bat	*Tadarida brasiliensis*		S4	Moderate -- reported in the vicinity, and suitable habitat adjacent to project site
Coho Salmon (So. Oregon/ No. California Coasts ESU)	*Oncorhynchus kisutch*	LT	SC	Moderate -- not reported in vicinity, but suitable habitat on project site
Steelhead (Klamath Mountains Province ESU, summer run)	*Oncorhynchus mykiss*		SV	High -- reported in Emigrant Creek in 2009

[1] *Heritage List Codes: 1= threatened or endangered throughout range, 2= threatened or endangered in Oregon but more common elsewhere, 3= Review list, 4= Watch list (currently stable), 2-ex= extirpated in Oregon. Heritage Rank Codes: S1= critically imperiled in Oregon, S2= imperiled in Oregon, S3= rare, threatened or uncommon in Oregon, S4= Not rare, apparently secure in Oregon.*

[2] *State Listed Species Status Codes: LT= Listed Threatened, C= Candidate for Listing as Threatened or Endangered, SC= Sensitive – Critical, SP= Sensitive-Peripheral, SV= Sensitive-Vulnerable, SU= Status Undetermined.*

[3] *Bald eagle in Oregon is federally Delisted – Taxon Recovered (DL)*

Table 4. Surface Water Samples Analytical Results and Level II Ecological Screening Levels

Sample ID		Downstream AGC-1-W	Upstream AGC-2-W	Oregon Department of Environmental Quality Level II Screening Level Values		
Collection Date	Units	1/11/2010	1/11/2010	Aquatic	Birds	Mammals
Metals						
Antimony	µg/L	<10	13.1	1,600	nl	1,000
Iron	µg/L	139	204	1,000	nl	nl
Volatile Organic Compounds		All ND	All ND			
ABN Full List		All ND	All ND			
Northwest TPH-Dx		All ND	All ND			

Acronyms/Abbreviations:

µg/L - micrograms per liter

nl - none listed

Table 5. Sediment Samples Analytical Results and Level II Ecological Screening Levels

Sample ID		Downstream AGC-1-S	Upstream AGC-2-S	Oregon Department of Environmental Quality		
				Default	Level II Screening Level Values	
Collection Date	Units	1/11/2010	1/11/2010	Background	Freshwater	Bioaccumulation
Metals						
Antimony	mg/kg	2.3	<2.4	<1	3	10
Arsenic	mg/kg	3.7	3.7	2	6	4
Chromium	mg/kg	14.3	12.9	1	37	4,200
Cobalt	mg/kg	10.1	8.5	nl	nl	nl
Copper	mg/kg	20.4	22.9	9	36	10
Iron	mg/kg	27,600	28,900	nl	nl	nl
Lead	mg/kg	5.2	3.8	nl	35	128
Nickel	mg/kg	10.3	7.8	5.5	18	316
Zinc	mg/kg	53.2	53.8	38	123	3
General Chemistry						
Moisture		19.8	24.8			
Volatile Organic Compounds		All ND	All ND			
ABN Full List		All ND	All ND			
Northwest TPH-Dx		All ND	All ND			
Northwest TPH-Gx		All ND	All ND			

Note:

Emigrant Creek is freshwater

Acronyms/Abbreviations:

mg/kg - milligrams per kilogram

nl - none listed

Table 6. Berm Soil Samples Analytical Results and Level II Ecological Screening Levels

Sample ID		B1-7-S	B3-12-S	B4-9-S	B5-9-S	B6-10-S	B5-9-S		Oregon Department of Environmental Quality								
Sample Depth		Surface	Surface	Surface	Surface	Surface	Surface	Maximum	Default	Level II Screening Level Values				Hazard Quotient			
Collection Date	Units	1/12/2010	1/12/2010	1/12/2010	1/12/2010	1/12/2010	1/12/2010	Concentraion	Background	Plants	Inverts	Birds	Mammals	Plants	Inverts	Birds	Mammals
Metals																	
Antimony	mg/kg	103	26	170	347	2,440	na	2,440	4	5	nl	nl	15	488	nl	nl	163
Arsenic	mg/kg	9.5	11.1	18.1	12.4	32.8	na	32.8	7	10	60	10	29	3	1	3	1
Chromium	mg/kg	18.9	30.3	18.6	27.9	19	na	30.3	42	1	0.4	4	410	Concentrations below background			
Cobalt	mg/kg	6.6	10.2	8.9	13.8	6.9	na	13.8	nl	20	1,000	nl	150	1	0.01	nl	0.09
Copper	mg/kg	195	192	589	658	192	na	658	36	100	50	190	390	7	13	3	2
Iron	mg/kg	15,400	26,000	20,400	24,000	15,700	na	26,000	nl	10	200	nl	nl	2,600	130	nl	nl
Lead	mg/kg	9,160	3,510	22,900	39,800	131,000	na	131,000	17	50	500	16	4,000	2,620	262	8,188	33
Nickel	mg/kg	9.5	15.2	16.6	73.7	10.7	na	73.7	38	30	200	320	625	2	0.4	0.2	0.1
Tin	mg/kg	269	<59	<61	119	89.6	na	269	nl	50	2,000	nl	nl	5	0.1	nl	nl
Zinc	mg/kg	38.3	66.4	106	97.6	37.4	na	106	86	50	200	60	20,000	2	0.5	2	0.005
General Chemistry																	
Moisture	percent	21.4	20.6	24.8	10.9	8.1	13.5	24.8	nl								
Polycyclic Aromatic Hydrocarbons (PAHs)																	
Benzo(a)anthracene	µg/kg	na	na	na	na	na	378	378	nl	nl	nl	nl	nl	nl	nl	nl	nl
Benzo(a)pyrene	µg/kg	na	na	na	na	na	587	587	nl	nl	nl	nl	125,000	nl	nl	nl	0.005
Benzo(b)fluoranthene	µg/kg	na	na	na	na	na	523	523	nl	nl	nl	nl	nl	nl	nl	nl	nl
Benzo(g,h,i)perylene	µg/kg	na	na	na	na	na	477	477	nl	nl	nl	nl	nl	nl	nl	nl	nl
Benzo(k)fluoranthene	µg/kg	na	na	na	na	na	450	450	nl	nl	nl	nl	nl	nl	nl	nl	nl
Chrysene	µg/kg	na	na	na	na	na	575	575	nl	nl	nl	nl	nl	nl	nl	nl	nl
Indeno(1,2,3-cd)pyrene	µg/kg	na	na	na	na	na	396	396	nl	nl	nl	nl	nl	nl	nl	nl	nl

Note:
Chromium evaluated as Chromium VI for mammanls as it is more stringent (Chromium III 3.4E+05, Chromium VI 410)

Acronyms/Abbreviations:
mg/kg - milligrams per kilogram
µg/kg - micrograms per kilogram
nl - none listed
na - not anlayzed

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Table 7. Skeet Range Soil Samples Analytical Results and Level II Ecological Screening Levels

Sample ID		AGC-3-S-1	AGC-3-S-2		Oregon Department of Environmental Quality								
Sample Depth		3"	1.5'	Maximum	Default	Level II Screening Level Values				Hazard Quotient			
Collection Date	Units	1/13/2010	1/13/2010	Concentration	Background	Plants	Inverts	Birds	Mammals	Plants	Inverts	Birds	Mammals
Metals													
Antimony	mg/kg	<2.4	2.8	2.8	4	5	nl	nl	15	Concentrations below background			
Arsenic	mg/kg	4.2	3.1	4.2	7	10	60	10	29	Concentrations below background			
Chromium	mg/kg	10.7	17.2	17.2	42	1	0.4	4	410	Concentrations below background			
Cobalt	mg/kg	7.4	7.5	7.5	nl	20	1,000	nl	150	0.4	0.008	nl	0.05
Copper	mg/kg	15.5	20.3	20.3	36	100	50	190	390	Concentrations below background			
Iron	mg/kg	30,100	30,200	30,200	nl	10	200	nl	nl	3,020	151	nl	nl
Lead	mg/kg	21.9	5.2	21.9	17	50	500	16	4,000	0.4	0.04	1	0.005
Nickel	mg/kg	7.4	7.1	7.4	38	30	200	320	625	Concentrations below background			
Zinc	mg/kg	46.9	55.2	55.2	86	50	200	60	20,000	Concentrations below background			
General Chemistry													
Moisture	percent	24.5	19	24.5	nl								
Polycyclic Aromatic Hydrocarbons (PAHs)													
Benzo(a)anthracene	µg/kg	46.2	<12	46.2	nl	nl	nl	nl	nl	nl	nl	nl	nl
Benzo(a)pyrene	µg/kg	65.2	<12	65.2	nl	nl	nl	nl	125,000	nl	nl	nl	0.0005
Benzo(b)fluoranthene	µg/kg	53.8	<12	53.8	nl	nl	nl	nl	nl	nl	nl	nl	nl
Benzo(g,h,i)perylene	µg/kg	54.6	<12	54.6	nl	nl	nl	nl	nl	nl	nl	nl	nl
Benzo(k)fluoranthene	µg/kg	53.3	<12	53.3	nl	nl	nl	nl	nl	nl	nl	nl	nl
Chrysene	µg/kg	55.1	<12	55.1	nl	nl	nl	nl	nl	nl	nl	nl	nl
Indeno(1,2,3-cd)pyrene	µg/kg	59	<12	59	nl	nl	nl	nl	nl	nl	nl	nl	nl

Note:

Chromium evaluated as Chromium VI for mammanls as it is more stringent (Chromium III 3.4E+05, Chromium VI 410)

Acronyms/Abbreviations:

mg/kg - milligrams per kilogram

µg/kg - micrograms per kilogram

nl - none listed

na - not anlayzed

Table 8. Soil Samples Analytical Results and EPA Toxicity Characteristic Regulatory Level								
Sample ID	EPA		B1-7-S	B3-12-S	B4-9-S	B5-9-S	B6-10-S	
Sample Depth	HW		Surface	Surface	Surface	Surface	Surface	
Collection Date	Number	Units	1/12/2010	1/12/2010	1/12/2010	1/12/2010	1/12/2010	EPA TCLP Limit
TCLP Leachate								
Lead	D008	mg/L	209	159	435	1,120	345	5

EPA TCLP Limit - Maximum Concentration of Contaminants for the Toxicity Characteristic Leaching Proceedure (TCLP)

Acronyms/Abbreviations:

mg/L - milligrams per liter

EPA - Environmental Protection Agency

EPA HW - Environmental Protection Agency hazardous waste

Table 9. Groundwater Sample Analytical Results and Level II Ecological Screening Levels

Sample ID		AGC-3W*	Oregon Department of Environmental Quality			
			Default	Level II Screening Level Values		
Collection Date	Units	1/13/2010	Background	Aquatic	Birds	Mammals
Metals						
Antimony	µg/L	45	<1	1,600	nl	1,000
Copper	µg/L	14	9	9	341,000	53,000
Nickel	µg/L	6	20	52	562,000	38,000
Zinc	µg/L	18.5	53	120	105,000	1,230,000

Note:

*Unfiltered groundwater sample from bottom of a trench

Groundwater is at 10-15 feet below ground surface

Acronyms/Abbreviations:

µg/L - micrograms per liter

nl - none listed

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APPENDIX A: ECOLOGICAL SCOPING CHECKLIST

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Appendix A: Ecological Scoping Checklist

Site Name	Ashland Gun Club
Date of Site Visit	08/2009
Site Location	Jackson County, Oregon
Site Visit Conducted by	Rone Brewer, Ecologist/Ecotoxicologist, Sound Ecological Endeavors Stephanie McDowell, Ecologist, Turnstone Environmental Consultants

Part ❶

CONTAMINANTS OF INTEREST **Types, Classes, Or Specific Hazardous Substances**[‡] **Known Or Suspected**	**Onsite**	**Adjacent to or** **in locality of the facility**[†]
Metals	Yes	?
SVOCs	Yes	?
VOCs	Yes	?
OCs	Yes	?
OPs	Yes	?
PCBs	?	?

[‡] As defined by OAR 340-122-115(34) [†] As defined by OAR 340-122-115(38)

Part ❷

OBSERVED IMPACTS ASSOCIATED WITH THE SITE	**Finding**

OBSERVED IMPACTS ASSOCIATED WITH THE SITE	**Finding**
Onsite vegetation (**N**one, **L**imited, **E**xtensive)	L
Vegetation in the locality of the site (**N**one, **L**imited, **E**xtensive)	L
Onsite wildlife such as macroinvertebrates, reptiles, amphibians, birds, mammals, other (**N**one, **L**imited, **E**xtensive)	N
Wildlife such as macroinvertebrates, reptiles, amphibians, birds, mammals, other in the locality of the site (**N**one, **L**imited, **E**xtensive)	N
Other readily observable impacts (**N**one, **D**iscuss below)	D
Discussion: Berms potentially built covering wetland areas.	

Part ❸

SPECIFIC EVALUATION OF ECOLOGICAL RECEPTORS / HABITAT	**Finding**
Terrestrial – Wooded	
Percentage of site that is wooded	9.4%
Dominant vegetation type (**E**vergreen, **D**eciduous, **M**ixed)	D
Prominent tree size at breast height, i.e., four feet (<6”, 6” to 12”, >12”)	6” to 12
Evidence / observation of wildlife (**Ma**croinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	Ma, B, M

SPECIFIC EVALUATION OF ECOLOGICAL RECEPTORS / HABITAT	Finding
Terrestrial – Natural Scrub/Shrub/Grasses	
Percentage of site that is scrub/shrub/Grass	29.4%
Dominant vegetation type (**Sc**rub, **Sh**rub, **G**rasses, **O**ther)	Sc, Sh, G
Prominent height of vegetation (<2', 2' to 5', >5')	2' to 5'
Density of vegetation (**D**ense, **P**atchy, **S**parse)	D
Evidence / observation of wildlife (**Ma**croinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	B,M
Terrestrial – Ruderal	
Percentage of site that is ruderal	59.2%
Dominant vegetation type (**L**andscaped, **A**griculture, **B**are ground)	B
Prominent height of vegetation (0', >0' to <2', 2' to 5', >5')	<2'
Density of vegetation (**D**ense, **P**atchy, **S**parse)	D
Evidence / observation of wildlife (**Ma**croinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	B, M
Aquatic – Non-flowing (lentic)	
Percentage of site that is covered by lakes or ponds	0%
Type of water bodies (**L**akes, **P**onds, **V**ernal pools, **I**mpoundments, **Lag**oon, **R**eservoir, **C**anal)	
Size (acres), average depth (feet), trophic status of water bodies	
Source water (**R**iver, **St**ream, **G**roundwater, **I**ndustrial discharge, **Su**rface water runoff)	
Water discharge point (**N**one, **R**iver, **St**ream, **G**roundwater, **W**etlands impoundment)	
Nature of bottom (**M**uddy, **R**ocky, **S**and, **C**oncrete, **O**ther)	
Vegetation present (**S**ubmerged, **E**mergent, **F**loating)	
Obvious wetlands present (**Y**es / **N**o)	

SPECIFIC EVALUATION OF ECOLOGICAL RECEPTORS / HABITAT	**Finding**
Evidence / observation of wildlife (**Ma**croinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	

Aquatic - Flowing (lotic)	
Percentage of site that is covered by rivers, streams (brooks, creeks), intermittent streams, dry wash, arroyo, ditches, or channel waterway	2%
Type of water bodies (**R**ivers, **S**treams, **I**ntermittent Streams, Dry **W**ash, **A**rroyo, **D**itches, **C**hannel waterway)	S, I
Size (acres), average depth (feet), approximate flow rate (cfs) of water bodies	Stream: 10 ft. wide, 2 ft deep, <10 cfs
Bank environment (cover: **V**egetated, **B**are / slope: **S**teep, **G**radual / height (in feet))	V / G 2’
Source water (**R**iver, **St**ream, **G**roundwater, **I**ndustrial discharge, **Su**rface water runoff)	G, Su, St
Tidal influence (**Y**es / **N**o)	N
Water discharge point (**N**one, **R**iver, **St**ream, **G**roundwater, **W**etlands impoundment)	Bear Creek
Nature of bottom (**M**uddy, **R**ocky, **S**and, **C**oncrete, **O**ther)	R, S, M
Vegetation present (**S**ubmerged, **E**mergent, **F**loating)	E
Obvious wetlands present (**Y**es / **N**o)	Y
Evidence / observation of wildlife (**Ma**croinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	Ma, B, M
Aquatic – Wetlands	
Obvious or designated wetlands present (**Y**es / **N**o)	Y

Wetlands suspected at site is/has (**A**djacent to water body, in **F**loodplain, **S**tanding water, **D**ark wet soils, **M**ud cracks, **D**ebris line, **W**ater marks)	A, F, S, D, M, D, W
Vegetation present (**S**ubmerged, **E**mergent, **S**crub/shrub, **W**ooded)	E
Size (acres) and depth (feet) of suspected wetlands	5.18 ac, 0.5 ft depth
Source water (**R**iver, **St**ream, **G**roundwater, **I**ndustrial discharge, **Su**rface water runoff)	G, S
Water discharge point (**N**one, **R**iver, **St**ream, **G**roundwater, **I**mpoundment)	S, G
Tidal influence (**Y**es / **N**o)	N
Evidence / observation of wildlife (**M**acroinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	M, B

*** P**: Photographic documentation of these features is highly recommended.

Part ❹

ECOLOGICALLY IMPORTANT SPECIES / HABITATS OBSERVED
No rare, threatened, or endangered species observed. Various "expected" plants, invertebrates, birds, amphibians, and mammals or their "sign" observed during the site visit.
No amphibians noted.

Attachment 2

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
Are hazardous substances present or potentially present in surface waters? **AND** **Are ecologically important species or habitats present?** **AND** **Could hazardous substances reach receptors via surface water?**	X X X		
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in surface waters. • Ability of hazardous substances to migrate to surface waters. • Terrestrial organisms may be dermally exposed to water-borne contaminants as a result of wading or swimming in contaminated waters. Aquatic receptors may be exposed through osmotic exchange, respiration or ventilation of surface waters. • Contaminants may be taken-up by terrestrial plants whose roots are in contact with surface waters. • Terrestrial receptors may ingest water-borne contaminants if contaminated surface waters are used as a drinking water source.			
Are hazardous substances present or potentially present in groundwater? **AND** **Are ecologically important species or habitats present?** **AND** **Could hazardous substances reach these receptors via groundwater?**	X X X		
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in groundwater. • Ability of hazardous substances to migrate to groundwater. • Potential for hazardous substances to migrate via groundwater and discharge into			

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
habitats and/or surface waters. • Contaminants may be taken-up by terrestrial and rooted aquatic plants whose roots are in contact with groundwater present within the root zone (~1m depth). • Terrestrial wildlife receptors generally will not contact groundwater unless it is discharged to the surface.			

"Y" = yes; "N" = No, "U" = Unknown (counts as a "Y")

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
Are hazardous substances present or potentially present in sediments? **AND** **Are ecologically important species or habitats present?** **AND** **Could hazardous substances reach these receptors via contact with sediments?**	X X X		
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in sediment. • Ability of hazardous substances to leach or erode from surface soils and be carried into sediment via surface runoff. • Potential for contaminated groundwater to upwell through, and deposit contaminants in, sediments. • If sediments are present in an area that is only periodically inundated with water, terrestrial species may be dermally exposed during dry periods. Aquatic receptors may be directly exposed to sediments or may be exposed through osmotic exchange, respiration or ventilation of sediment pore waters. • Terrestrial plants may be exposed to sediment in an area that is only periodically inundated with water. • If sediments are present in an area that is only periodically inundated with water, terrestrial species may have direct access to sediments for the purposes of incidental ingestion. Aquatic receptors may regularly or incidentally ingest sediment while foraging.			
Are hazardous substances present or potentially present in prey or food items of ecologically important receptors? **AND** **Are ecologically important species or habitats present?** **AND**	X X		

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
Could hazardous substances reach these receptors via consumption of food items?	X		
When answering the above questions, consider the following: • Higher trophic level terrestrial and aquatic consumers and predators may be exposed through consumption of contaminated food sources. • In general, organic contaminants with log K_{ow} > 3.5 may accumulate in terrestrial mammals and those with a log K_{ow} > 5 may accumulate in aquatic vertebrates.			

"Y" = yes; "N" = No, "U" = Unknown (counts as a "Y")

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
Are hazardous substances present or potentially present in surficial soils? **AND** **Are ecologically important species or habitats present?** **AND** **Could hazardous substances reach these receptors via incidental ingestion of or dermal contact with surficial soils?**	X X X		
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in surficial (~1m depth) soils. • Ability of hazardous substances to migrate to surficial soils. • Significant exposure via dermal contact would generally be limited to organic contaminants which are lipophilic and can cross epidermal barriers. • Exposure of terrestrial plants to contaminants present in particulates deposited on leaf and stem surfaces by rain striking contaminated soils (i.e., rain splash). • Contaminants in bulk soil may partition into soil solution, making them available to roots. • Incidental ingestion of contaminated soil could occur while animals grub for food			

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
resident in the soil, feed on plant matter covered with contaminated soil or while grooming themselves clean of soil.			
Are hazardous substances present or potentially present in subsurface soils? **AND** **Are ecologically important species or habitats present?** **AND** **Could hazardous substances reach these receptors via vapors or fugitive dust carried in surface air or confined in burrows?**	X	X X	
When answering the above questions, consider the following: • Volatility of the hazardous substance (volatile chemicals generally have Henry's Law constant > 10^{-5} atm-m^3/mol and molecular weight < 200 g/mol). • Exposure via inhalation is most important to organisms that burrow in contaminated soils, given the limited amounts of air present to dilute vapors and an absence of air movement to disperse gases. • Exposure via inhalation of fugitive dust is particularly applicable to ground-dwelling species that could be exposed to dust disturbed by their foraging or burrowing activities or by wind movement. • Foliar uptake of organic vapors would be limited to those contaminants with relatively high vapor pressures. • Exposure of terrestrial plants to contaminants present in particulates deposited on leaf and stem surfaces.			

APPENDIX B: BIRD POINT COUNT DATA

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BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 2

DATE: 8/11/09 OBSERVER WLB START TIME 0700 END TIME 0703 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 58

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

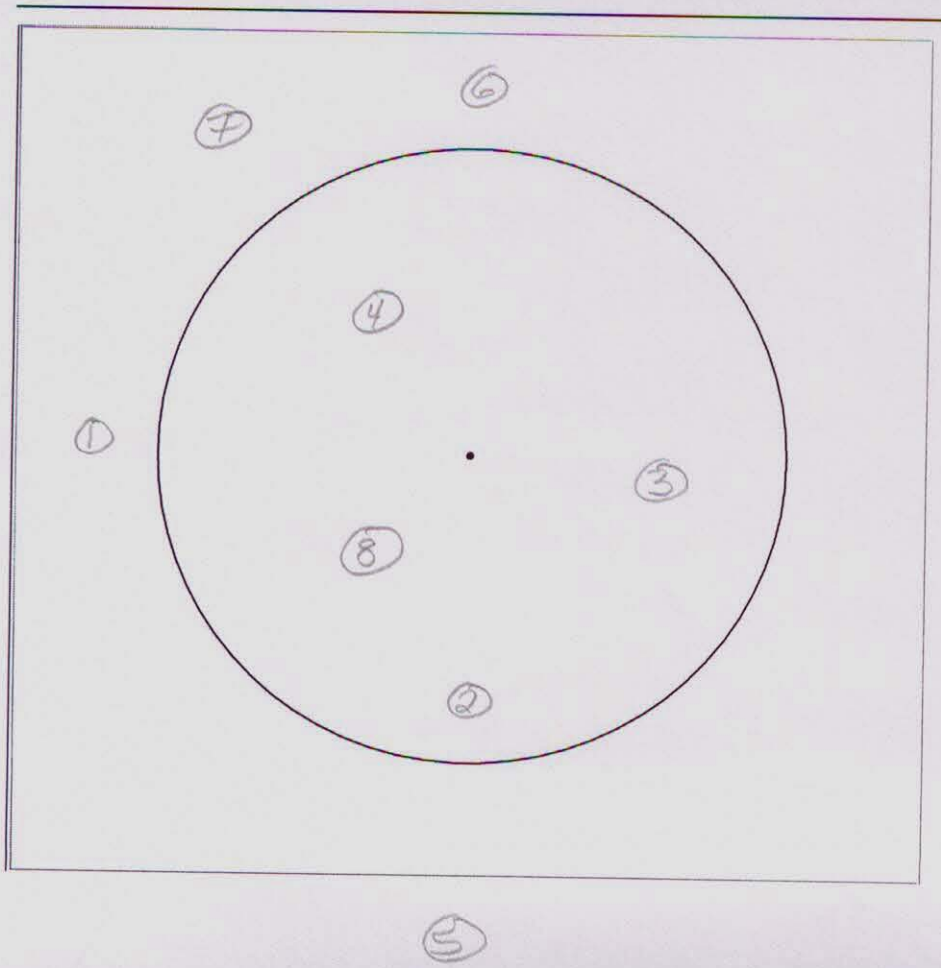
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WBNU	U	U	1	70 / 70	(PE) SO FL FO / GL HO AUD OT	5	5	5	W	Oak			
2	WESJ	-	-	1	40 / 40	PE SO FL HU / GL HO AUD OT	-	-	-	S	Rip	✓		
3	HOFI	U	6/3	F/M	30 / 30	(PE) SO FL HU / GL HO AUD OT	15	5	15	E	Dist			
4	WIWA	-	-	1	30 / 30	PE SO FL HU / GL HO AUD OT	-	-	-	NW	Rip	✓		
5	CAGO	-	-	3	200 / 200	PE SO FL HU / GL HO AUD OT	-	-	-	S	Dist	✓		
6	DOWO	-	-	1	80 / 80	PE SO FL HU / GL HO AUD OT	-	-	-	N	Rip	✓		
7	BCCH	U	U	3	70 / 70	(PE) SO FL HU / GL HO AUD OT	2	2	2	NW	Rip			
8	NRWS	U	U	2	20 / 20	PE SO (FL) HU / GL HO AUD OT	10	5	10	SW	Oak / Dist			
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 1

DATE: 8/11/09 OBSERVER WLB START TIME 0654 END TIME 0657 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 58

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

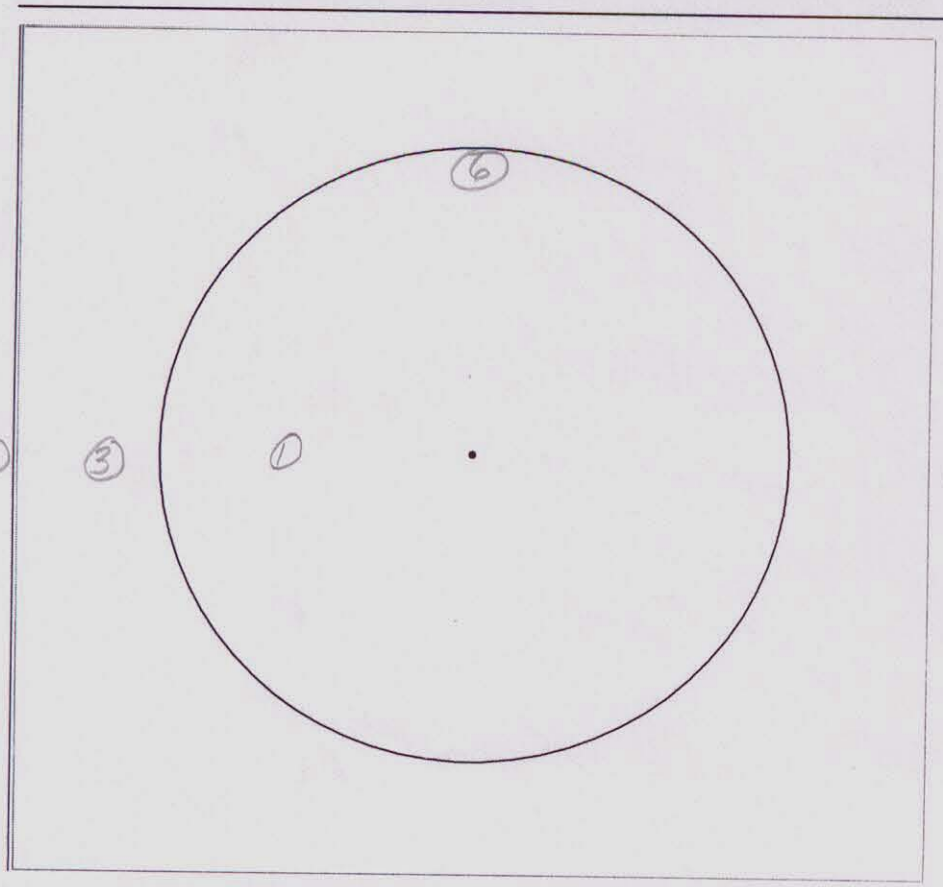
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer / 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	HOFI	U	F/M	10/10	30 / 30	(PE) SO (FL) FO / GL HO AUD OT	5	5	15	W	Dist			
2	RTHA	U	J	1	250 / 250	PE SO (FL) HU / GL HO AUD OT	5	5	15	W	Chap			
3	WEST	U	A	2	70 / 70	(PE) SO FL HU / GL HO AUD OT	5	5	5	W	Chap			
4	KILL	-	-	2	250 / 250	PE SO FL HU / GL HO AUD OT	-	-	-	E	Wetland	✓		
5	BARS	U	U	2	350 / 350	PE SO (FL) HU / GL HO AUD OT	5	1	10	SW	Dist			
6	BCCH	-	-	2	50 / 50	PE SO FL HU / GL HO (AUD) OT	-	-	-	N	Rip	✓		
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 3

DATE: 8/11/09 OBSERVER WLB START TIME 0706 END TIME 0709 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 58

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

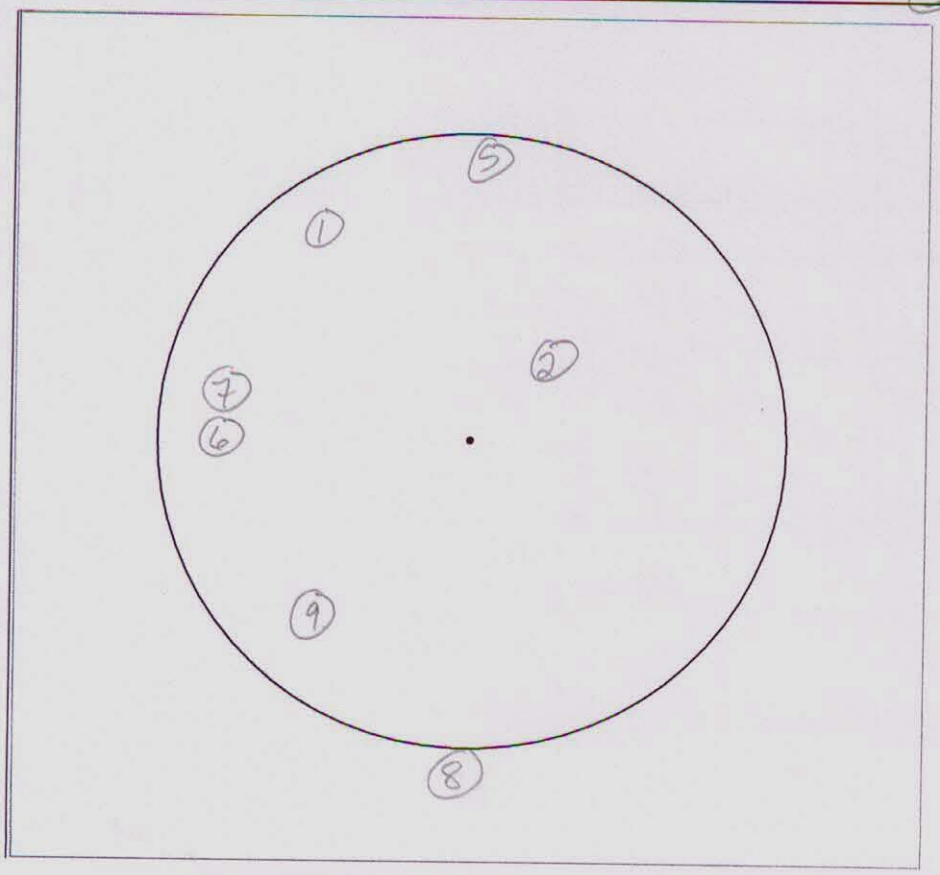
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer / 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	AAAA	U	U	2	40 / 40	PE SO FL FO / GL HO AUD OT	2	2	3	NW	Rip			
2	HOFI	F/M	U	3/1	20 / 20	PE SO FL HU / GL HO AUD OT	10	5	10	NE	Dist			
3	KILL	–	–	1	150 / 150	PE SO FL HU / GL HO AUD OT	–	–	–	NE	Dist/wetland	✓		
4	CAGO	–	–	4	300 / 300	PE SO FL HU / GL HO AUD OT	–	–	–	S	Dist	✓		
5	BRBL	M	A	1	50 / 50	PE SO FL HU / GL HO AUD OT	3	3	10	N	Rip/Dist			
6	BCCH	–	–	1	40 / 40	PE SO FL HU / GL HO AUD OT	–	–	–	W	Rip	✓		
7	HAWO	U	A	1	40 / 40	PE SO FL HU / GL HO AUD OT	1	1	5	W	Rip			
8	WBNU	–	–	1	60 / 60	PE SO FL HU / GL HO AUD OT	–	–	–	S	Rip	✓		
9	WESJ	–	–	1	40 / 40	PE SO FL HU / GL HO AUD OT	–	–	–	SW	Rip	✓		
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 4

DATE: 8/11/09 OBSERVER WLB START TIME 0715 END TIME 0718 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 58

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

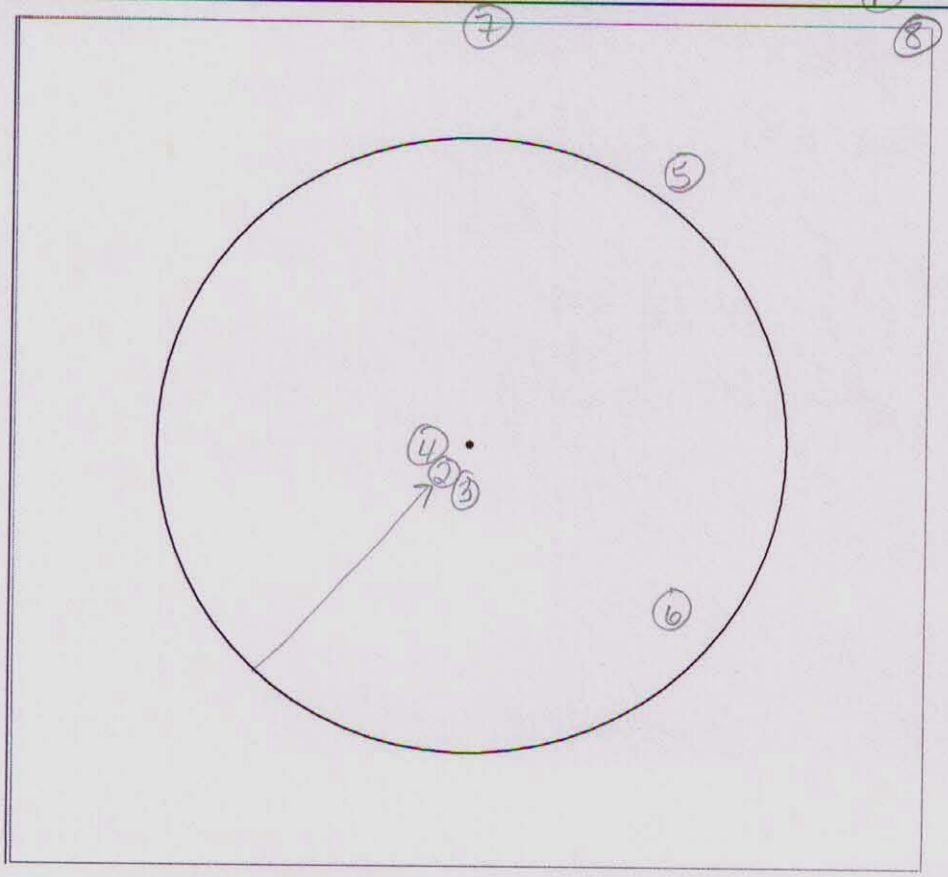
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	KILL	+	-	1	150 / 150	PE SO FL FO / GL HO AUD OT	-	-	-	NE	Dist	✓		
2	NRWS	U	U	8	50 / 10	PE SO FL HU / GL HO AUD OT	10	1	10	SW	Dist			
3	BARS	U	U	20	50 / 10	PE SO FL HU / GL HO AUD OT	5	1	10	SW	Dist			
4	VGSW	U	U	9	50 / 10	PE SO FL HU / GL HO AUD OT	8	1	10	SW	Dist			
5	BRBL	-	-	1	60 / 60	PE SO FL HU / GL HO AUD OT	-	-	-	NE	Rip	✓		
6	WEST	-	-	1	40 / 40	PE SO FL HU / GL HO AUD OT	-	-	-	SE	Dist/Shrub	✓		
7	DOWO	-	-	1	100 / 100	PE SO FL HU / GL HO AUD OT	-	-	-	N	Rip	✓		
8	WBNU	-	-	1	100 / 100	PE SO FL HU / GL HO AUD OT	-	-	-	NE	Rip	✓		
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 5

DATE: 8/11/09 OBSERVER WLB START TIME 0723 END TIME 0726 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 58

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

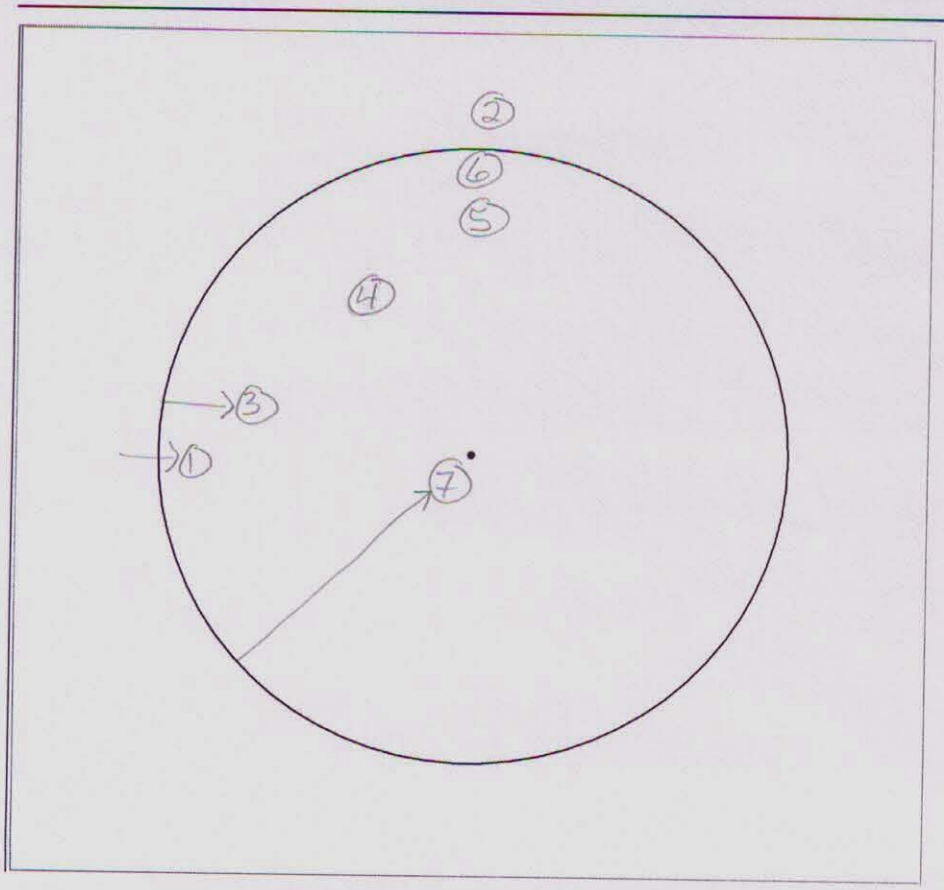
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer (1st/closest)	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	MODO	U	U	2	60 / 50	PE SO (FL) FO / GL HO AUD OT	10	10	15	W	Rip/Dist			
2	HOFI	U	U	15	90 / 80	(PE) SO FL HU / GL HO AUD OT	15	15	15	N	Dist			
3	AMCR	U	U	1	50 / 40	PE SO (FL) HU / GL HO AUD OT	15	10	15	W	Dist/oak			
4	BHGR	-	-	1	30 / 30	PE SO FL HU / GL HO AUD OT	-	-	-	NW	Rip	✓		
5	ACWO	U	U	2	40 / 40	PE SO (FL) HU / GL HO AUD OT	15	10	15	N	Dist			
6	LEGO	U	U	4	50 / 50	PE SO (FL) HU / GL HO AUD OT	15	15	20	N	Rip/Chap			
7	NRWS	U	U	1	50 / 10	PE SO (FL) HU / GL HO AUD OT	10	5	10	SW	Dist/Rip			
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 6

DATE: 8/11/09 OBSERVER WCB START TIME 0732 END TIME 0735 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 58

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

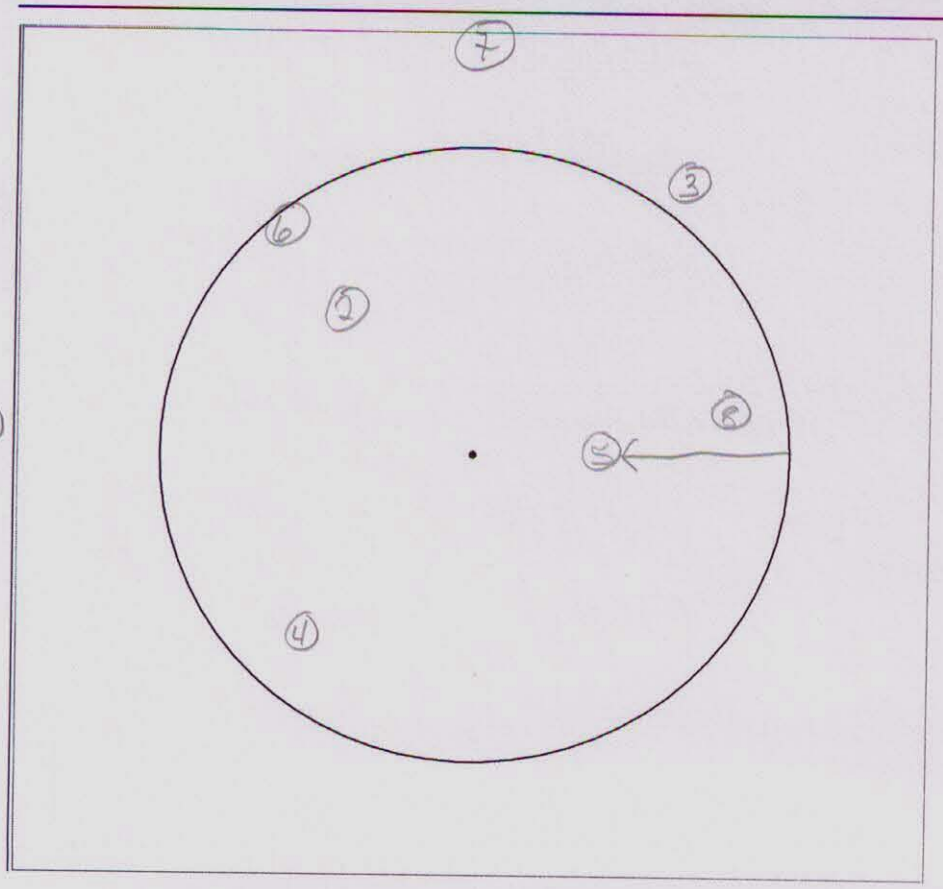
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer / 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	RTHA	U	J	1	250 / 250	PE SO FL FO / GL HO AUD OT	15	15	15	W	Dist (telephone pole)			
2	BEWR	—	—	1	30 / 30	PE SO FL HU / GL HO AUD OT	—	—	—	NW	Oak	✓		
3	ACWO	—	—	1	60 / 60	PE SO FL HU / GL HO AUD OT	—	—	—	NE	Oak	✓		
4	WESJ	—	—	1	40 / 40	PE SO FL HU / GL HO AUD OT	—	—	—	SW	Oak	✓		
5	NRWS	U	U	1	50 / 20	PE SO FL HU / GL HO AUD OT	10	10	20	E	Oak			
6	LABU	—	—	1	50 / 50	PE SO FL HU / GL HO AUD OT	—	—	—	NW	Oak	✓		
7	BRBL	—	—	1	100 / 100	PE SO FL HU / GL HO AUD OT	—	—	—	N	Dist	✓		
8	LEGO	U	U	1	40 / 40	PE SO FL HU / GL HO AUD OT	10	10	20	E	Oak			
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- • Observation Point
- ▭ 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 7

DATE: 8/11/09 OBSERVER WCB START TIME 0739 END TIME 0742 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 58

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

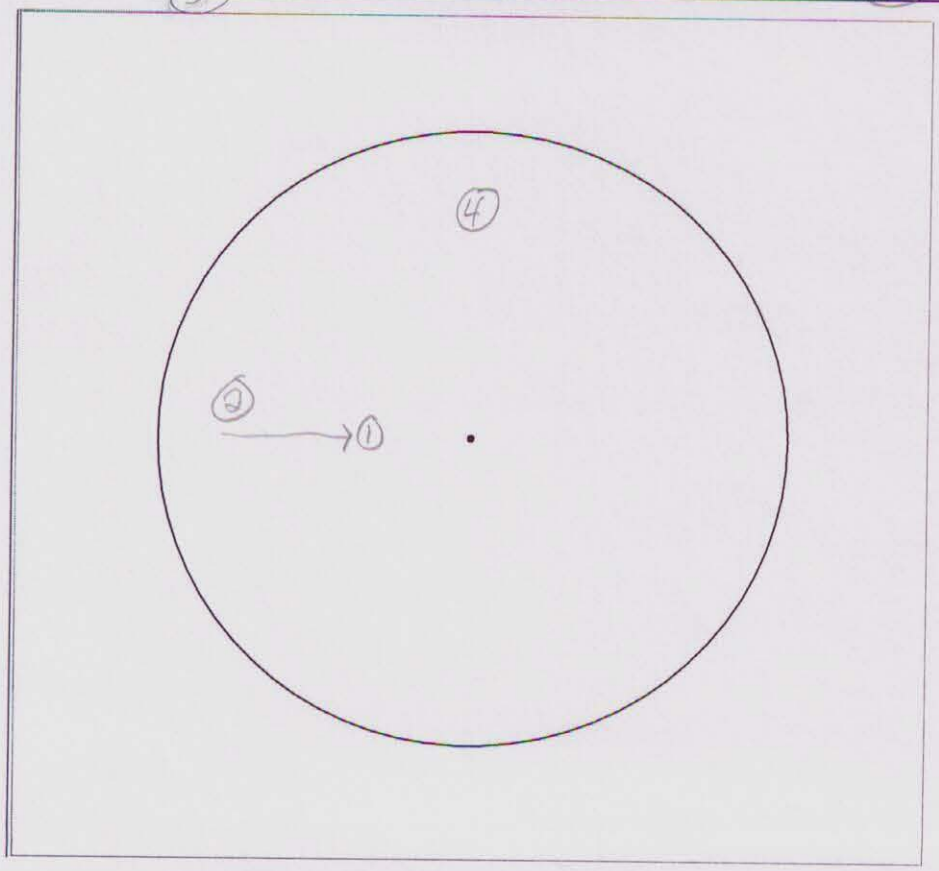
Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	NRWS	U	U	1	40 / 20	PE SO (FL) FO / GL HO AUD OT	10	5	10	W	Oak			
2	WESJ	–	–	1	40 / 40	PE SO FL HU / GL HO (AUD) OT	–	–	–	W	Oak	✓		
3	CAQU	–	–	1	150 / 150	PE SO FL HU / GL HO (AUD) OT	–	–	–	NW	Dist	✓		
4	ACWO	–	–	1	40 / 40	PE SO FL HU / GL HO (AUD) OT	–	–	–	N	Oak	✓		
5	CAGO	–	–	1	200 / 200	PE SO FL HU / GL HO (AUD) OT	–	–	–	S	Dist	✓		
6	LEGO	U	U	1	150 / 150	PE SO (FL) HU / GL HO AUD OT	15	10	15	NE	Oak			
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments

(3) (6)



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

• Observation Point

100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 8

DATE: 8/11/09 OBSERVER WLB START TIME 0751 END TIME 0754 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 62

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

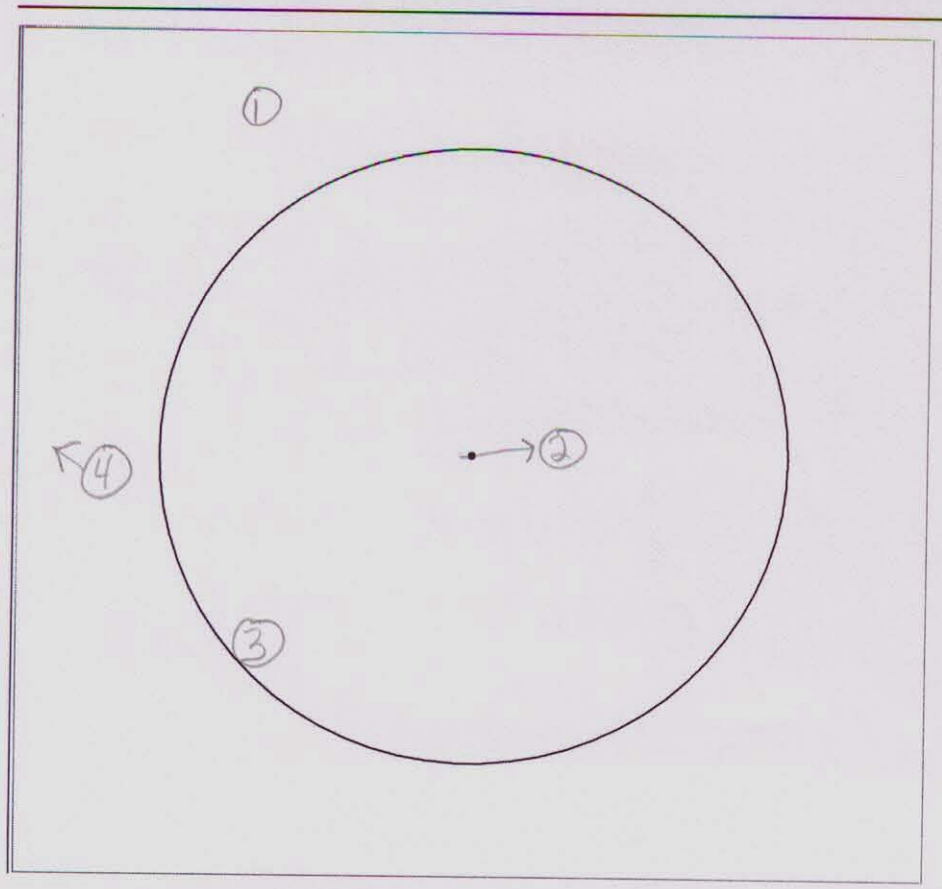
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	ACWO	U	U	1	70 / 70	PE SO (FL) FO / GL HO AUD OT	8	8	8	NW	Oak			
2	LEGO	U	U	3	0 / 0	PE SO (FL) HU / GL HO AUD OT	10	8	10	W	Oak			
3	WESJ	-	-	1	50 / 50	PE SO FL HU / GL HO (AUD) OT	-	-	-	SW	Oak	✓		
4	AAAA	U	U	1	70 / 70	PE SO (FL) HU / GL HO AUD OT	15	10	15	W	Dist/Oak			Possible LEWO
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 9

DATE: 8/11/09 OBSERVER WLB START TIME 0800 END TIME 0803 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 62

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

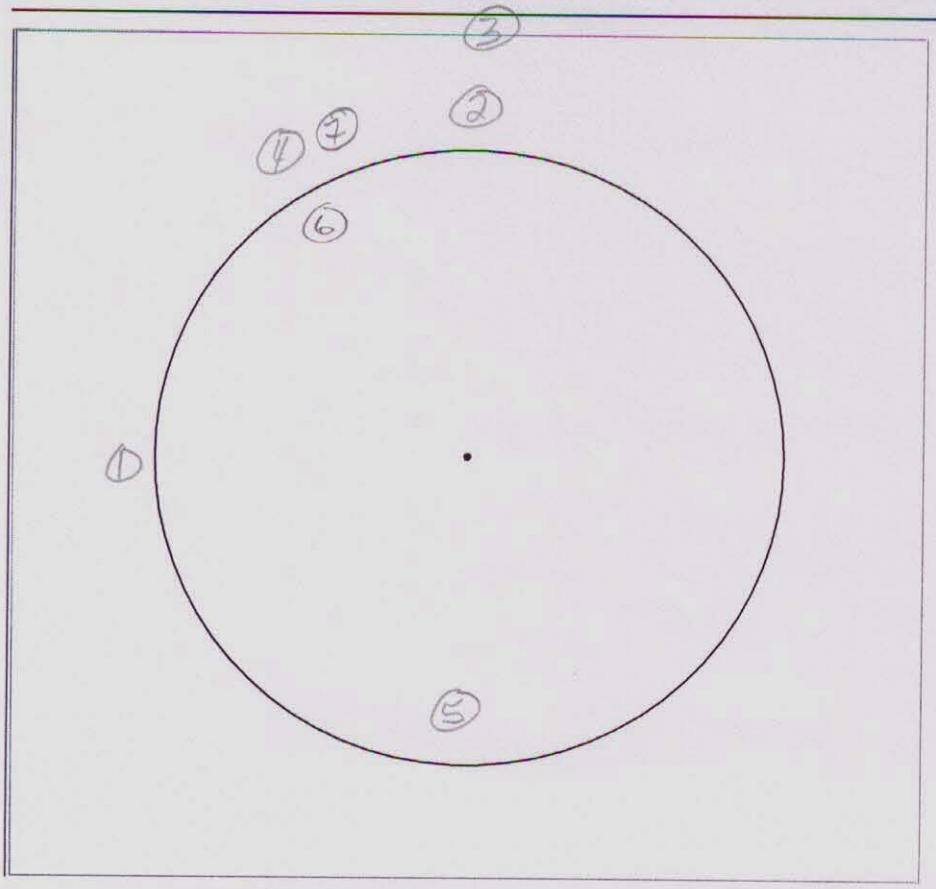
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WESJ	–	–	2	60 / 60	PE SO FL FO / GL HO AUD OT	–	–	–	W	Oak	✓		
2	LEGO	–	–	3	70 / 70	PE SO FL HU / GL HO AUD OT	–	–	–	N	Oak	✓		
3	KILL	–	–	2	100 / 100	PE SO FL HU / GL HO AUD OT	–	–	–	N	Dist	✓		
4	BCCH	U	U	2	60 / 60	PE SO FL HU / GL HO AUD OT	5	5	10	NW	Oak			
5	WBNU	–	–	1	40 / 40	PE SO FL HU / GL HO AUD OT	–	–	–	S	Oak	✓		
6	ACWO	–	–	2	40 / 40	PE SO FL HU / GL HO AUD OT	–	–	–	NW	Oak	✓		
7	OATI	–	–	1	60 / 60	PE SO FL HU / GL HO AUD OT	–	–	–	NW	Oak	✓		
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

DATE: 8/11/09 OBSERVER WCB START TIME 0811 END TIME 0814 ddSTATION 10

PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 64

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

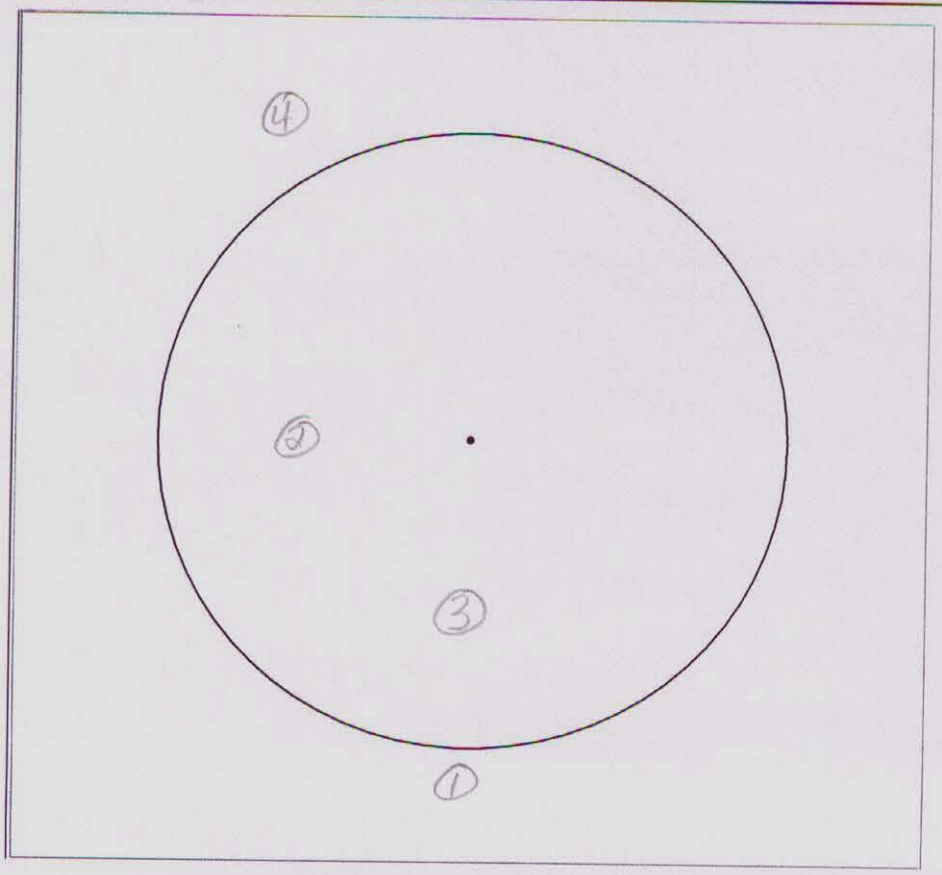
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer (1st/closest)	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WESJ	-	-	2	60 / 60	PE SO FL FO / GL HO AUD OT	-	-	-	S	Oak	✓		
2	LEGO	-	-	1	30 / 30	PE SO FL HU / GL HO AUD OT	-	-	-	W	Dist	✓		
3	ANHU	-	-	1	30 / 30	PE SO FL HU / GL HO AUD OT	-	-	-	S	Dist	✓		
4	UNBL	U	U	5	70 / 70	PE SO FL HU / GL HO AUD OT	15	15	20	NW	Dist			
5	BEKI	U	U	1	400 / 400	PE SO FL HU / GL HO AUD OT	10	5	10	NW	Rip			
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments (5)



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 11

DATE: 8/11/09 OBSERVER WCB START TIME 0822 END TIME 0825 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 64

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WCSP	–	–	1	30 / 30	PE SO FL FO / GL HO AUD OT	–	–	–	SW	Dist	✓		
2	WESJ	U	A	4	50 / 50	PE SO FL HU / GL HO AUD OT	2	2	3	E	Oak			
3	DOWO	U	U	2	70 / 70	PE SO FL HU / GL HO AUD OT	10	5	10	NE	Oak			
4	WBNU	–	–	1	60 / 60	PE SO FL HU / GL HO AUD OT	–	–	–	S	Oak	✓		
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments

Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 12

DATE: 8/11/09 OBSERVER WLB START TIME 0829 END TIME 0832 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 64

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

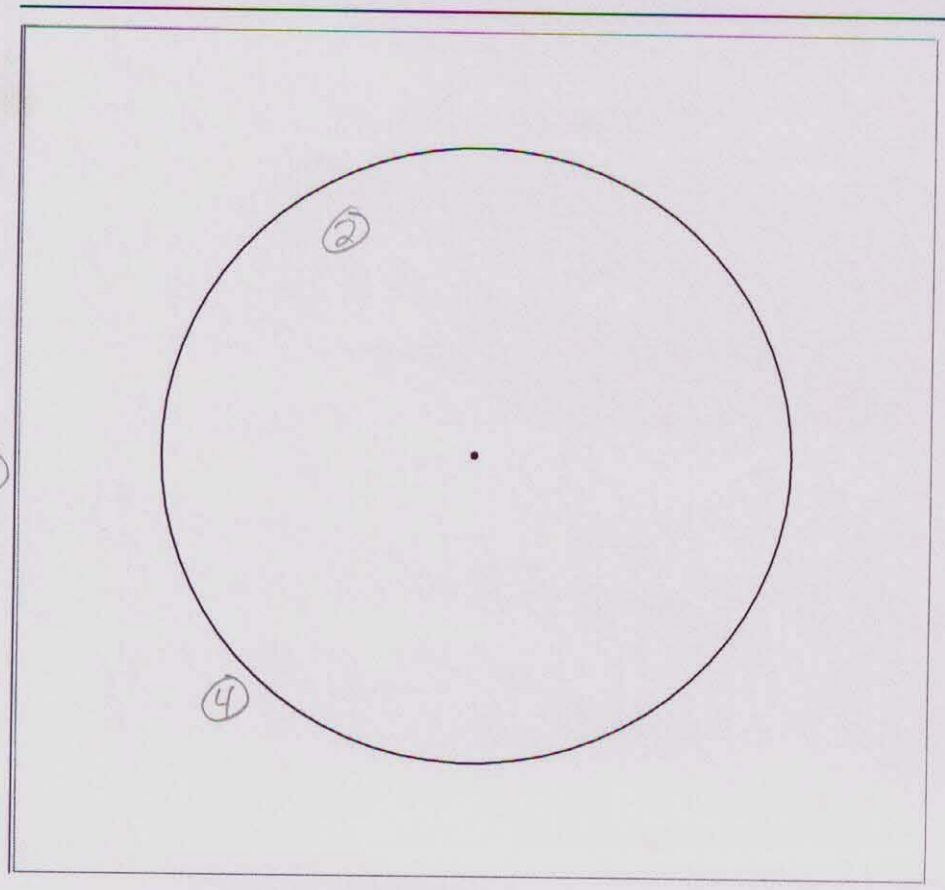
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	ACWO	—	—	1	150 / 150	PE SO FL FO / GL HO AUD OT	—	—	—	SW	Oak	✓		
2	WBNU	—	—	1	40 / 40	PE SO FL HU / GL HO AUD OT	—	—	—	NW	Rip	✓		
3	MODO	U	U	3	150 / 150	PE SO FL HU / GL HO AUD OT	5	5	5	W	Dist/Rip			
4	BARS	—	—	1	60 / 60	PE SO FL HU / GL HO AUD OT	—	—	—	SW	Dist	✓		
5					/	PE SO FL HU / GL HO AUD OT								
6					/	PE SO FL HU / GL HO AUD OT								
7					/	PE SO FL HU / GL HO AUD OT								
8					/	PE SO FL HU / GL HO AUD OT								
9					/	PE SO FL HU / GL HO AUD OT								
10					/	PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 13

DATE: 8/11/09 OBSERVER WLB START TIME 0835 END TIME 0835 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 62

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

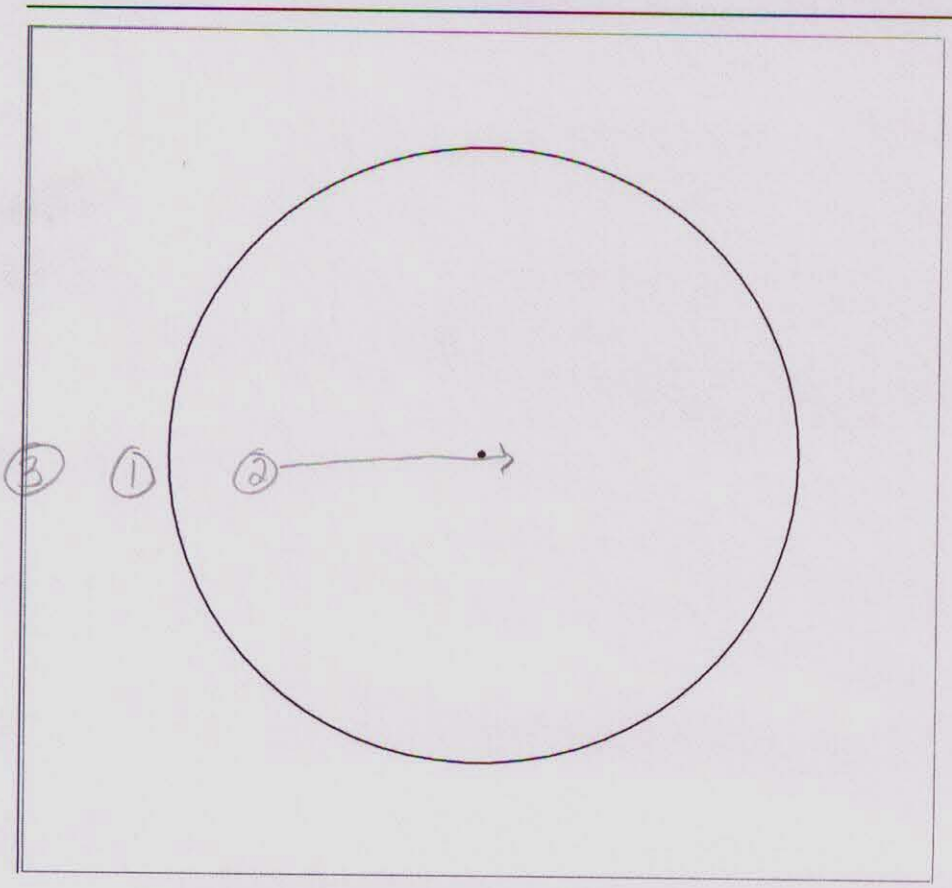
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	BUOR	M	A	1	60 / 60	PE SO (FL) FO / GL HO AUD OT	15	15	15	W	Dist/Rip			
2	EOST	U	U	1	30 / 0	PE SO (FL) HU / GL HO AUD OT	15	15	15	W	Dist/Rip			
3	WESJ	U	A	1	100 / 100	PE SO (FL) HU / GL HO AUD OT	5	0	5	W	Dist			
4						PE SO FL HU / GL HO AUD OT								
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 14

DATE: 8/11/09 OBSERVER WCB START TIME 0842 END TIME 0845 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 62

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

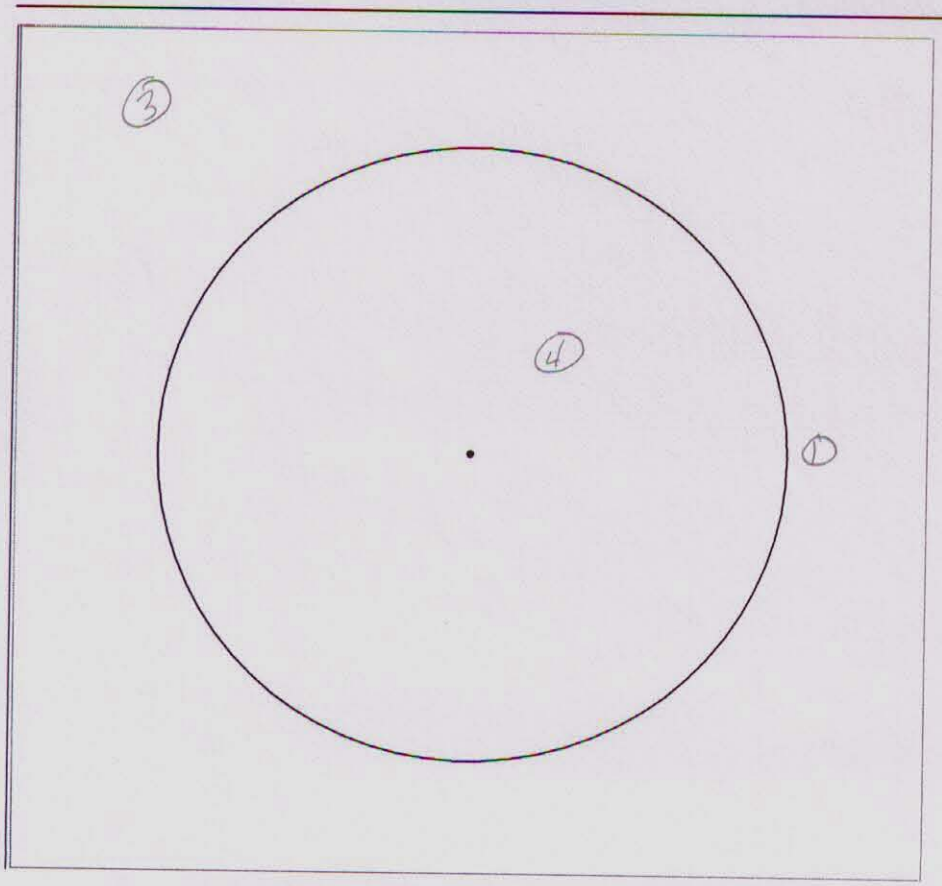
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WESJ	–	–	1	60 / 60	PE SO FL FO / GL HO AUD OT	–	–	–	E	Rip	✓		
2	TUVU	U	U	2	500 / 500	PE SO FL HU / GL HO AUD OT	15	15	20	SW	Dist/oak			
3	ACWO	–	–	1	80 / 80	PE SO FL HU / GL HO AUD OT	–	–	–	NW	Rip	✓		
4	WETA	F	A	1	20 / 20	PE SO FL HU / GL HO AUD OT	15	15	15	NE	Rip (Cottonwood)			
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 15

DATE: 8/11/09 OBSERVER WCB START TIME 0852 END TIME 0855 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 62

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

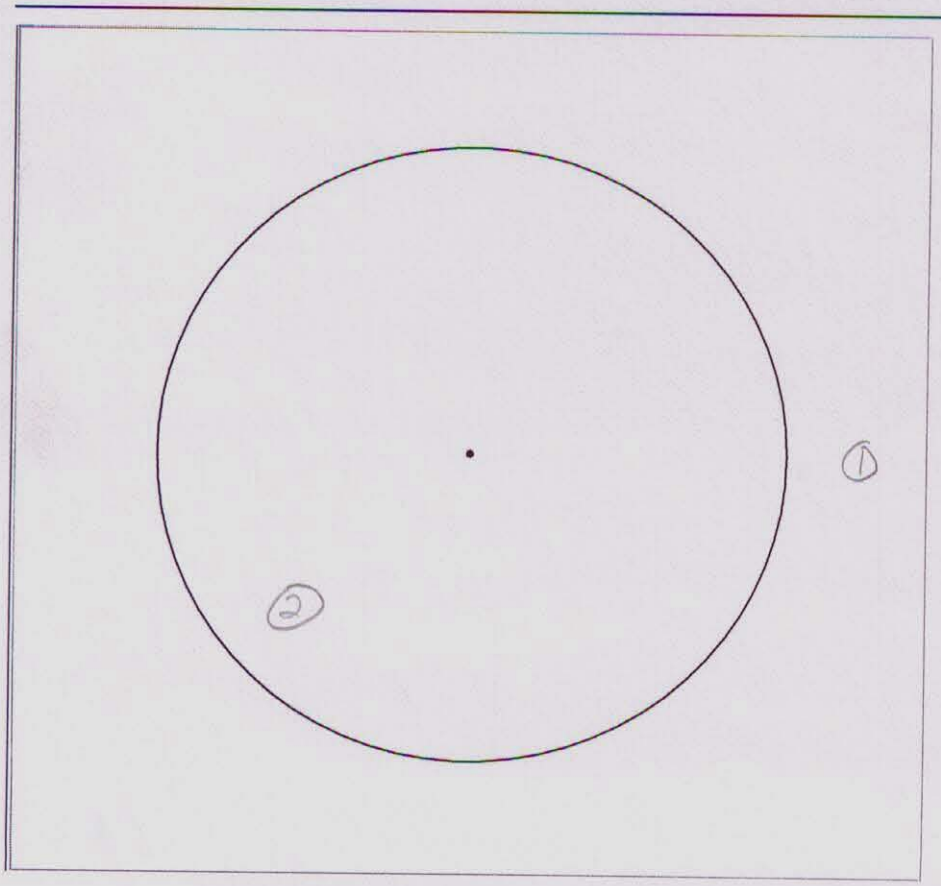
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WESJ	U	U	1	80 / 80	PE SO FL FO / GL HO AUD OT	15	15	15	E	Oak			
2	LEGO	-	-	3	40 / 40	PE SO FL HU / GL HO AUD OT	-	-	-	SW	Dist	✓		
3						PE SO FL HU / GL HO AUD OT								
4						PE SO FL HU / GL HO AUD OT								
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 16

DATE: 8/11/09 OBSERVER WLB START TIME 0954 END TIME 0957 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 72

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 6

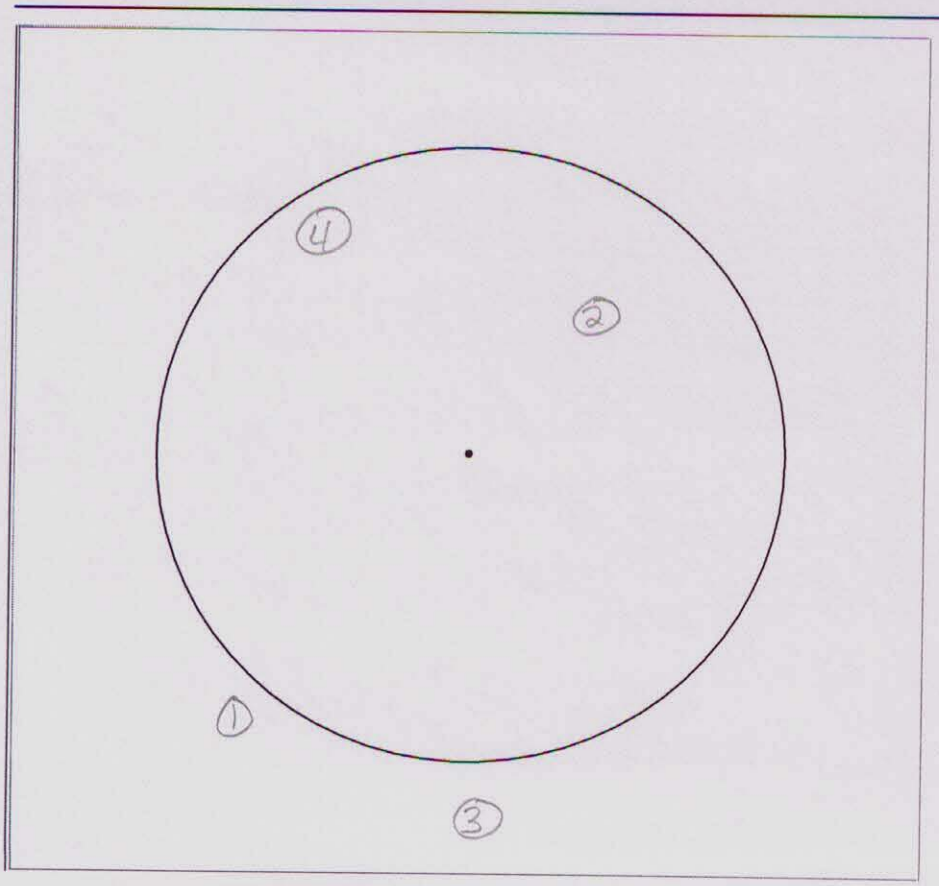
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	KILL	–	–	1	60 / 60	PE SO FL FO / GL HO AUD OT	–	–	–	SW	Dist	✓		
2	WESJ	–	–	1	30 / 30	PE SO FL HU / GL HO AUD OT	–	–	–	NE	Rip	✓		
3	NOHA	A	F	1	80 / 80	PE SO FL HU / GL HO AUD OT	40	40	60	S	Dist/oak			
4	BCCH	–	–	1	40 / 40	PE SO FL HU / GL HO AUD OT	–	–	–	NW	Rip	✓		
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 17

DATE: 8/11/09 OBSERVER WLB START TIME 0942 END TIME 0945 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 72

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

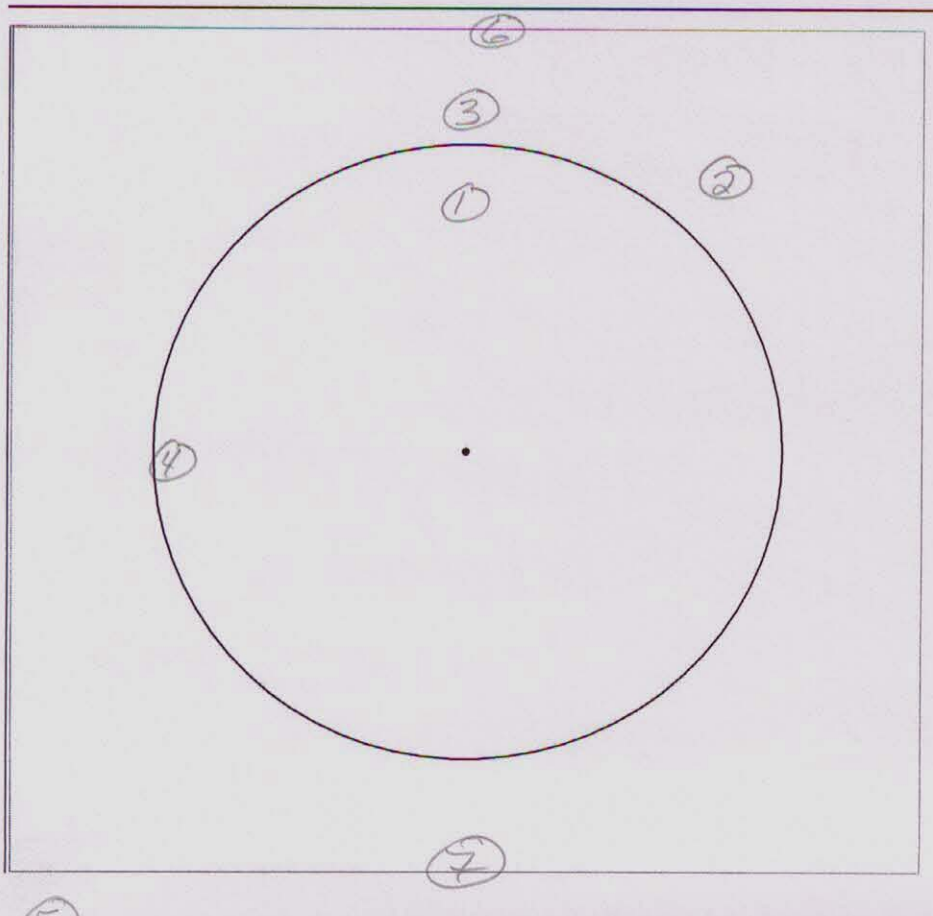
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	KILL	-	-	1	40 / 40	PE SO FL FO / GL HO AUD OT	-	-	-	N	Dist	✓		
2	WESJ	-	-	1	60 / 60	PE SO FL HU / GL HO AUD OT	-	-	-	NE	Rip	✓		
3	BCCH	-	-	1	60 / 60	PE SO FL HU / GL HO AUD OT	-	-	-	N	Rip	✓		
4	UNSW	U	U	4	50 / 50	PE SO FL HU / GL HO AUD OT	5	10	10	W	Dist			
5	TUVU	U	U	1	300 / 300	PE SO FL HU / GL HO AUD OT	50	50	60	SW	Dist/Oak			
6	DOWO	U	U	1	100 / 100	PE SO FL HU / GL HO AUD OT	5	5	5	N	Oak			
7	ACWO	-	-	1	100 / 100	PE SO FL HU / GL HO AUD OT	-	-	-	S	Oak	✓		
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- • Observation Point
- ▭ 100-m Buffer

BREEDING BIRD SURVEY **Ashland Gun Club** ddSTATION 18

DATE: 8/11/09 OBSERVER WKB START TIME 0934 END TIME 0937 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 78

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

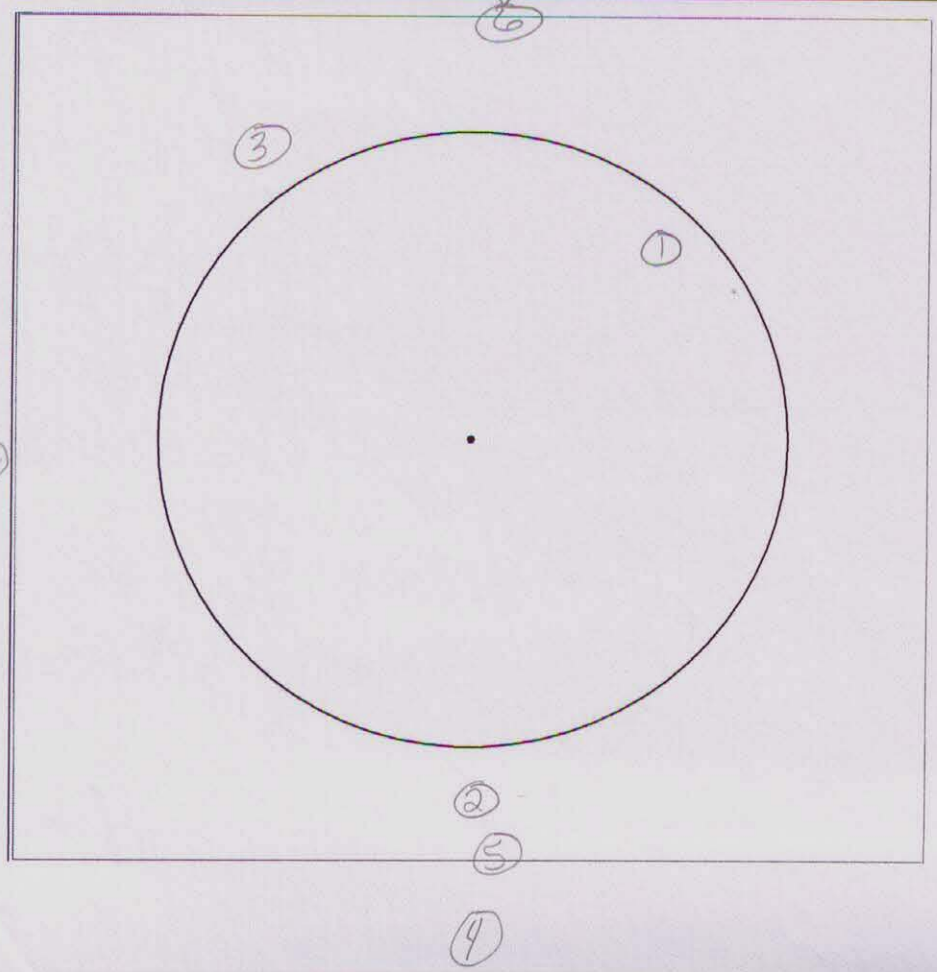
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	KILL	-	-	1	40/40	PE SO FL FO / GL HO AUD OT	-	-	-	NE	Dist	✓		
2	WESJ	U	U	3	70/70	PE SO FL HU / GL HO AUD OT	5	5	10	S	Oak			
3	BTPI	U	U	2	60/60	PE SO FL HU / GL HO AUD OT	10	5	10	NW	Oak			
4	ACWO	-	-	1	150/150	PE SO FL HU / GL HO AUD OT	-	-	-	S	Oak	✓		
5	BCCH	-	-	1	100/100	PE SO FL HU / GL HO AUD OT	-	-	-	S	Oak	✓		
6	RWBL	M	A	1	150/100	PE SO FL HU / GL HO AUD OT	5	5	5	N	Rip			
7	TUVU	U	U	1	150/150	PE SO FL HU / GL HO AUD OT	40	40	40	W	Dist/Rip			
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 19

DATE: 8/11/09 OBSERVER WCB START TIME 0927 END TIME 0930 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 80

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

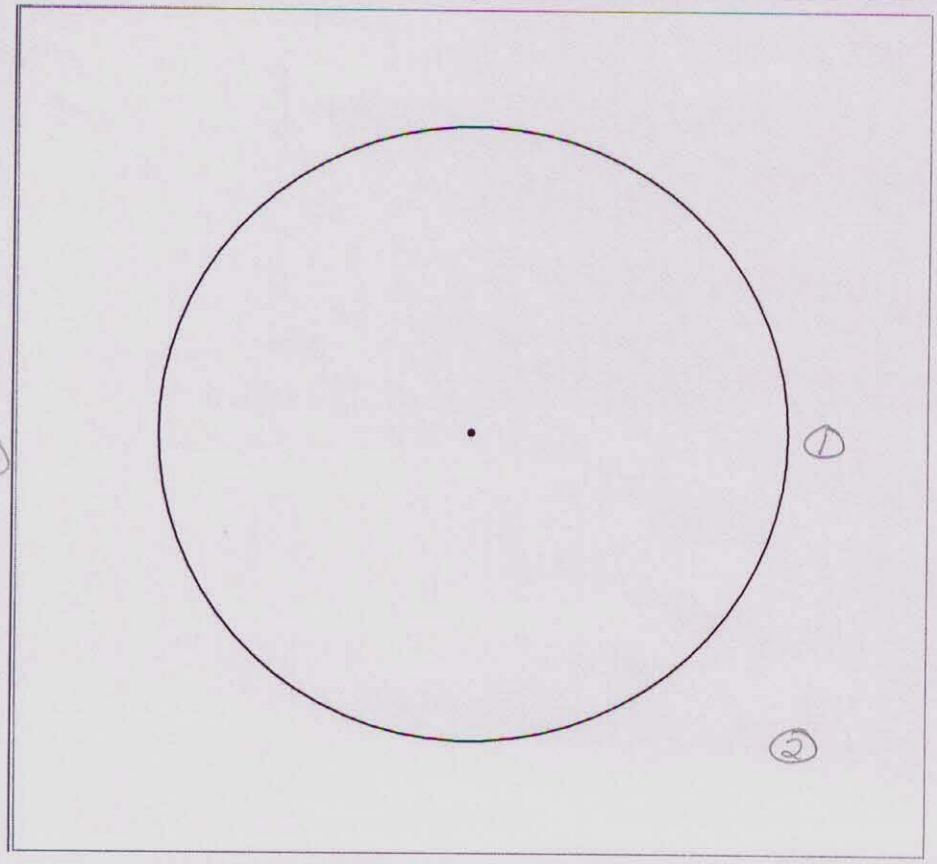
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	BRBL	-	-	5	60 / 60	PE SO FL FO / GL HO AUD OT	-	-	-	E	Dist	✓		
2	WEST	U	U	3	70 / 70	PE SO FL HU / GL HO AUD OT	3	2	10	SE	Oak			
3	TUVU	U	U	1	200 / 200	PE SO FL HU / GL HO AUD OT	60	60	60	W	Dist/Rip			
4	NOFL	-	-	1	150 / 150	PE SO FL HU / GL HO AUD OT	-	-	-	N	Rip	✓		
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments 4



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 20

DATE: 8/11/09 OBSERVER WLB START TIME 0921 END TIME 0924 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 80

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

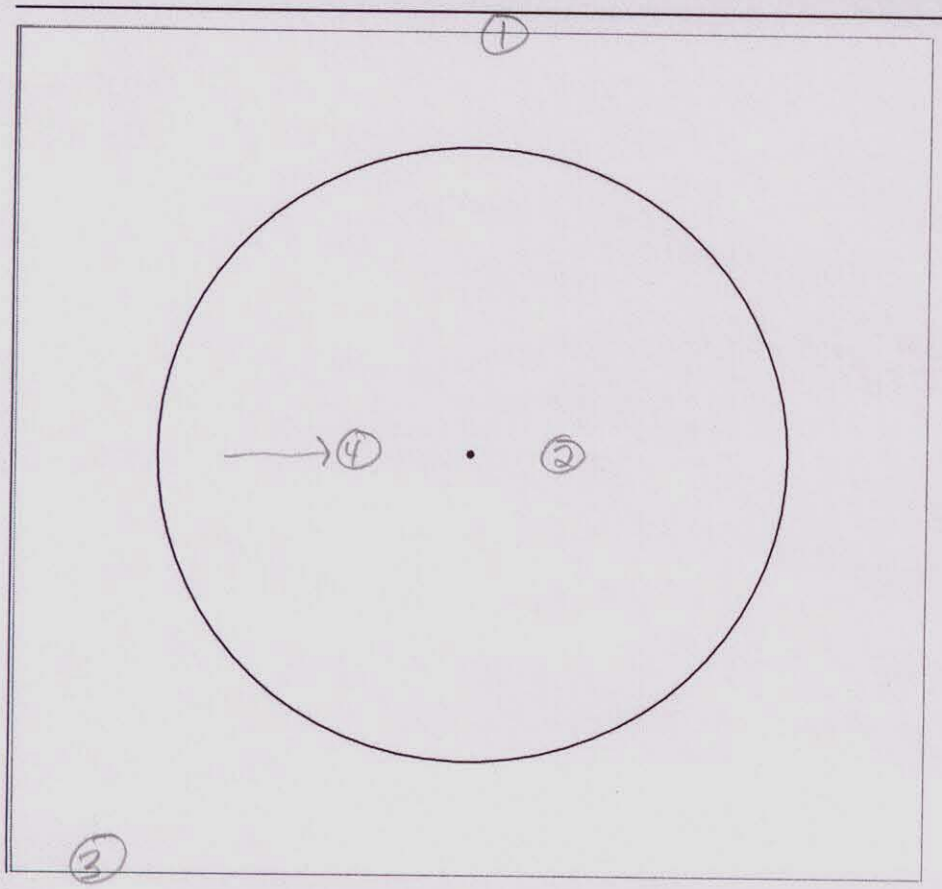
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	NOFL	–	–	1	100 / 100	PE SO FL FO / GL HO (AUD) OT	–	–	–	N	R:p	✓		
2	LEGO	U	U	2	20 / 20	PE SO (FL) HU / GL HO AUD OT	15	15	15	E	Dist			
3	JUVU	U	A	1	100 / 100	PE SO (FL) HU / GL HO AUD OT	10	10	20	SW	Dist/Oak			
4	NRWS	U	U	1	40 / 20	PE SO (FL) HU / GL HO AUD OT	10	10	20	W	Dist			
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 20

DATE: 8/12/09 OBSERVER WCB START TIME 0704 END TIME 0707 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 5 TEMP(°F) 60

WIND DIRECTION (CIRCLE ONE) N NE (E) SE S SW W NW n/a SPEED(MPH) Low: 0 High: 1

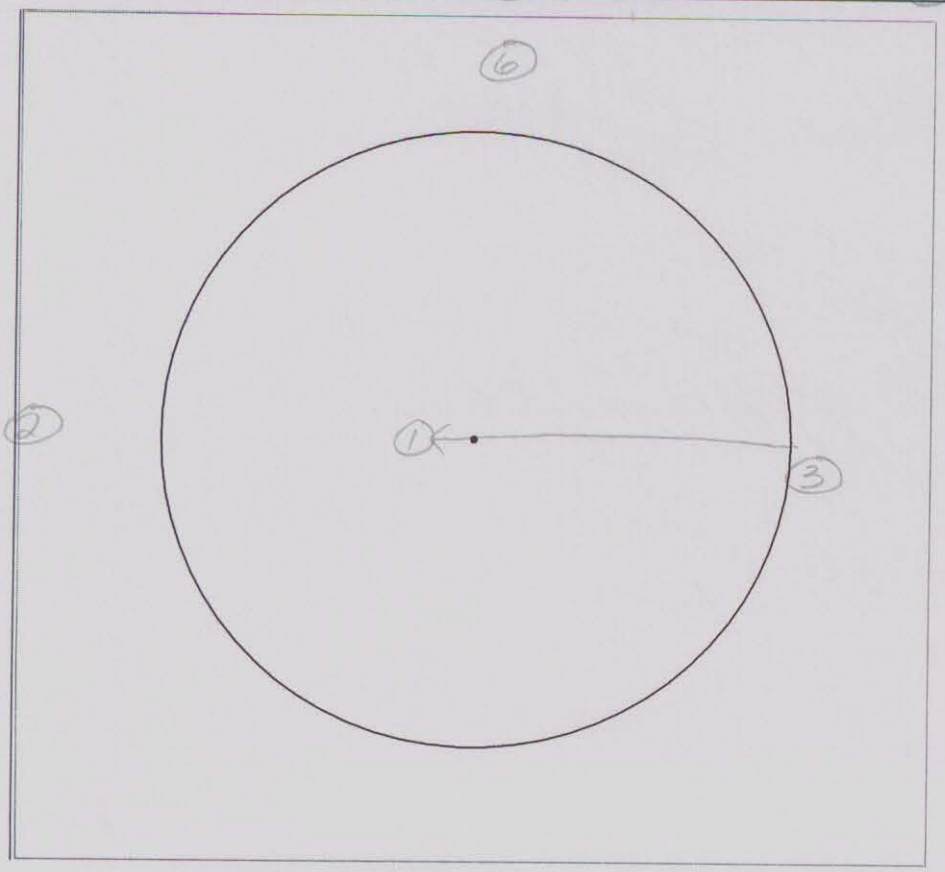
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	BRBL	M/F	A	2	50 / 0	PE SO (FL) FO / GL HO AUD OT	20	20	20	E	Dist/wetland			
2	HOFI	U	U	27	100 / 100	(PE) SO (FL) HU / GL HO AUD OT	15	15	25	W	Dist/wetland			
3	LEGO	–	–	1	60 / 60	PE SO FL HU / GL HO (AUD) OT	–	–	–	E	Dist	✓		
4	BEKI	U	U	2	250 / 250	PE SO (FL) HU / GL HO AUD OT	10	10	10	NE	Riparian			
5	NOFL	–	–	2	150 / 150	PE SO FL HU / GL HO (AUD) OT	–	–	–	N	Rip/Cont	✓		
6	ANHU	–	–	1	70 / 70	PE SO FL HU / GL HO (AUD) OT	–	–	–	N	Rip	✓		
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments (5) (4)



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- • Observation Point
- ▭ 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 1

DATE: 8/12/09 OBSERVER WCB START TIME 0915 END TIME 0918 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 70

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

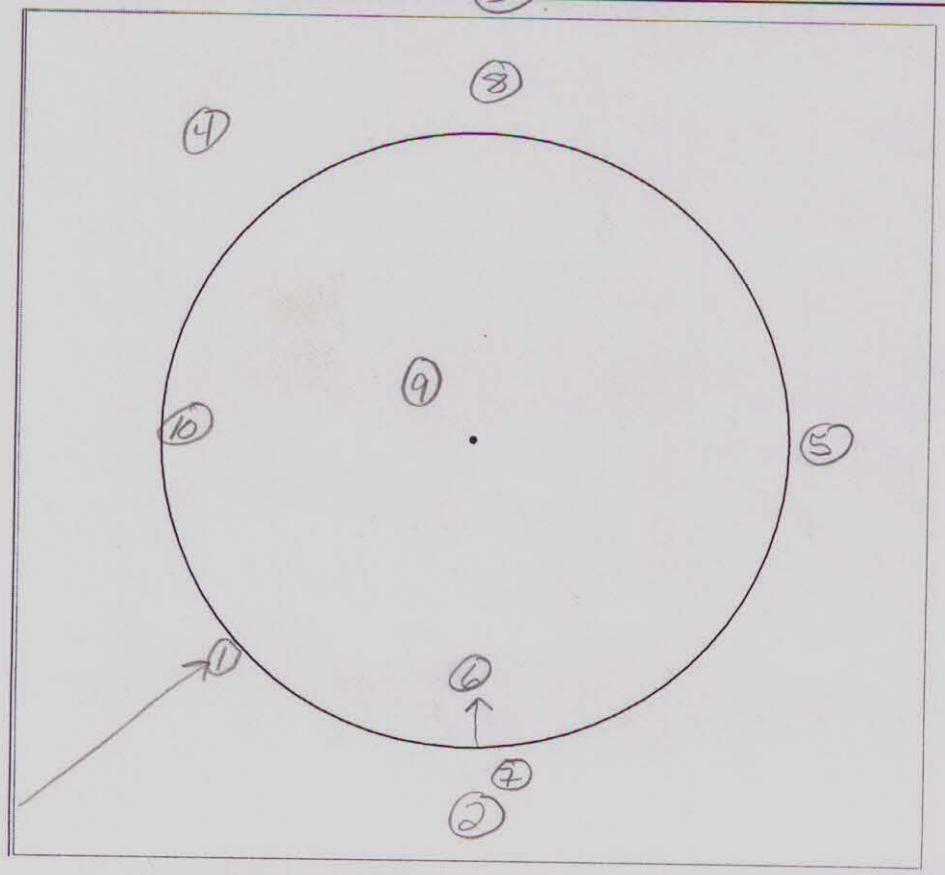
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	TUVU	U	A	1	100 / 50	PE SO FL FO / GL HO AUD OT	60	40	60	SE	Dist/Rip			
2	MODO	-	-	1	80 / 80	PE SO FL HU / GL HO AUD OT	-	-	-	S	Rip	✓		
3	BTPI	U	U	1	150 / 150	PE SO FL HU / GL HO AUD OT	20	20	20	N	Dist			
4	SPTO	-	-	1	70 / 70	PE SO FL HU / GL HO AUD OT	-	-	-	NW	Rip	✓		
5	BARS	-	-	1	60 / 60	PE SO FL HU / GL HO AUD OT	-	-	-	E	Dist/Rip	✓		
6	ACWO	U	A	2	50 / 40	PE SO FL HU / GL HO AUD OT	15	15	20	S	Dist/oak			
7	WESJ	-	-	1	70 / 70	PE SO FL HU / GL HO AUD OT	-	-	-	S	Rip	✓		
8	DOWO	-	-	1	70 / 70	PE SO FL HU / GL HO AUD OT	-	-	-	N	Rip	✓		
9	HOFI	M/F	A	1/3	10 / 10	PE SO FL HU / GL HO AUD OT	20	15	20	NW	Dist			
10	BCCH	-	-	1	50 / 50	PE SO FL HU / GL HO AUD OT	-	-	-	W	Rip	✓		

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 2

DATE: 8/12/09 OBSERVER WLB START TIME 0908 END TIME 0911 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 68

WIND DIRECTION (CIRCLE ONE) N NE E SE S (SW) W NW n/a SPEED(MPH) Low: 0 High: 2

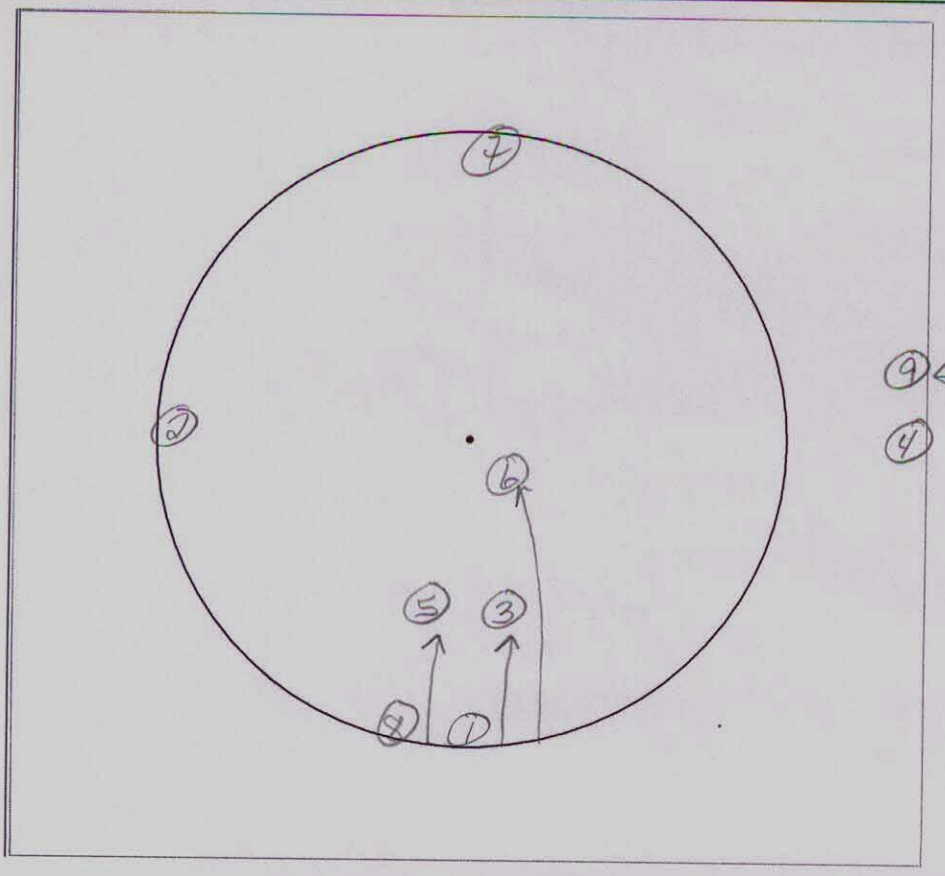
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer: 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WETA	-	-	1	50 / 50	PE SO FL FO / GL HO (AUD) OT	—	—	—	S	Rip	✓		
2	AAAA	-	-	1	50 / 50	PE SO FL HU / GL HO (AUD) OT	—	—	—	W	Rip	✓		Possibly Ash-throated Flycatcher
3	VGSW	U	U	1	50 / 30	PE SO (FL) HU / GL HO AUD OT	15	10	15	S	wetland			
4	ACWO	U	U	1	100 / 100	PE SO (FL) HU / GL HO AUD OT	15	15	15	E	Rip			
5	AEGO	U	U	3	50 / 30	PE SO (FL) HU / GL HO AUD OT	15	15	20	S	Rip/wetland			
6	BARS	U	A	1	50 / 10	PE SO (FL) HU / GL HO AUD OT	10	10	15	S	wetland			
7	BHGR	-	-	1	50 / 50	PE SO FL HU / GL HO (AUD) OT	—	—	-	N	Rip	✓		
8	WBNU	-	-	1	50 / 50	PE SO FL HU / GL HO (AUD) OT	—	—	-	S	Rip	✓		
9	TUVU	U	A	2	200 / 150	PE (SO) FL HU / GL HO AUD OT	40	40	50	E	Rip			
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 3

DATE: 8/12/09 OBSERVER WLB START TIME 0859 END TIME 0902 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 66

WIND DIRECTION (CIRCLE ONE) N NE E SE S (SW) W NW n/a SPEED(MPH) Low: 0 High: 2

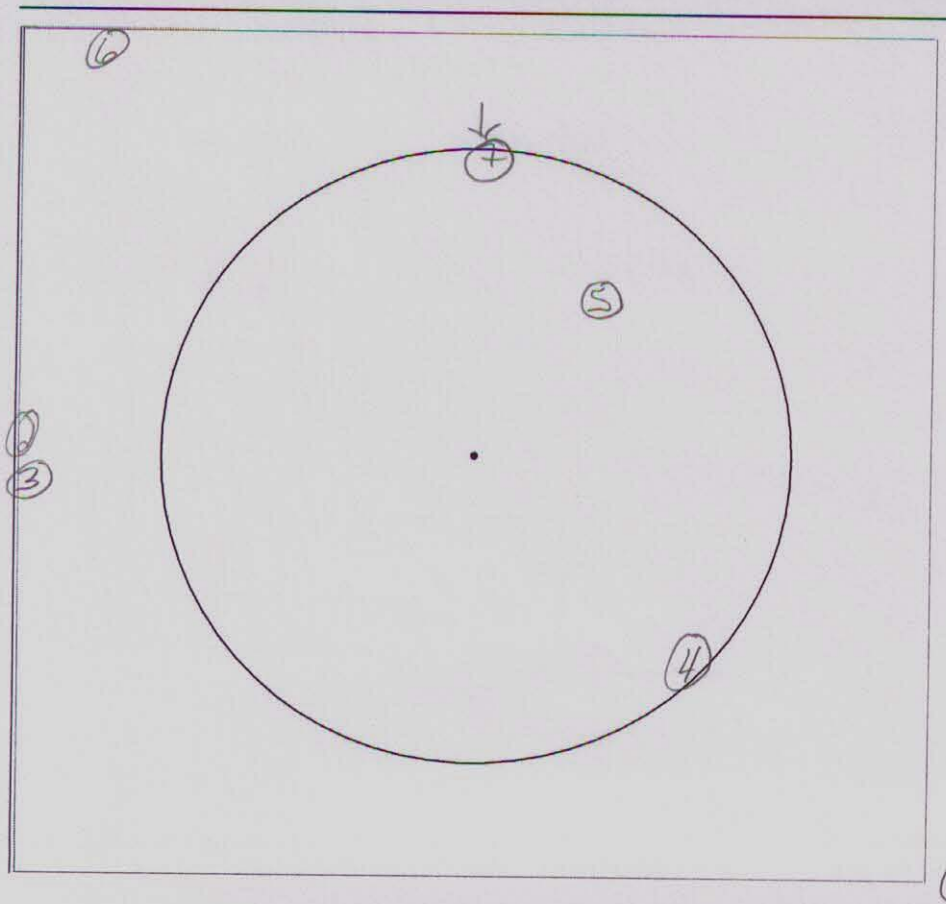
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	PAFA	U	U	1	200 / 200	PE SO (FL) FO / GL HO AUD OT	60	15	60	SE	Rip/Dst/oak			
2	TUVU	U	U	6	100 / 100	PE (SO) FL HU / GL HO AUD OT	60	30	60	W	Rip / Dist			
3	RTHA	U	A	2	100 / 100	PE (SO) FL HU / GL HO AUD OT	60	30	60	W	Rip / Dist			
4	MODO	–	–	1	50 / 50	PE SO FL HU / GL HO (AUD) OT	–	–	–	SE	Rip	✓		
5	BARS	–	–	1	30 / 30	PE SO FL HU / GL HO (AUD) OT	–	–	–	NE	Dist / Rip	✓		
6	AMKE	–	–	1	100 / 100	PE SO FL HU / GL HO AUD OT	–	–	–	NW	Rip	✓		
7	AAAA	U	U	2	60 / 50	(PE) SO (FL) HU / GL HO AUD OT	2	2	3	N	Rip			Possibly Ash-throated Flycatcher
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 4

DATE: 8/12/09 OBSERVER WLB START TIME 0849 END TIME 0852 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 5 TEMP(°F) 64

WIND DIRECTION (CIRCLE ONE) N NE E SE S (SW) W NW n/a SPEED(MPH) Low: 0 High: 2

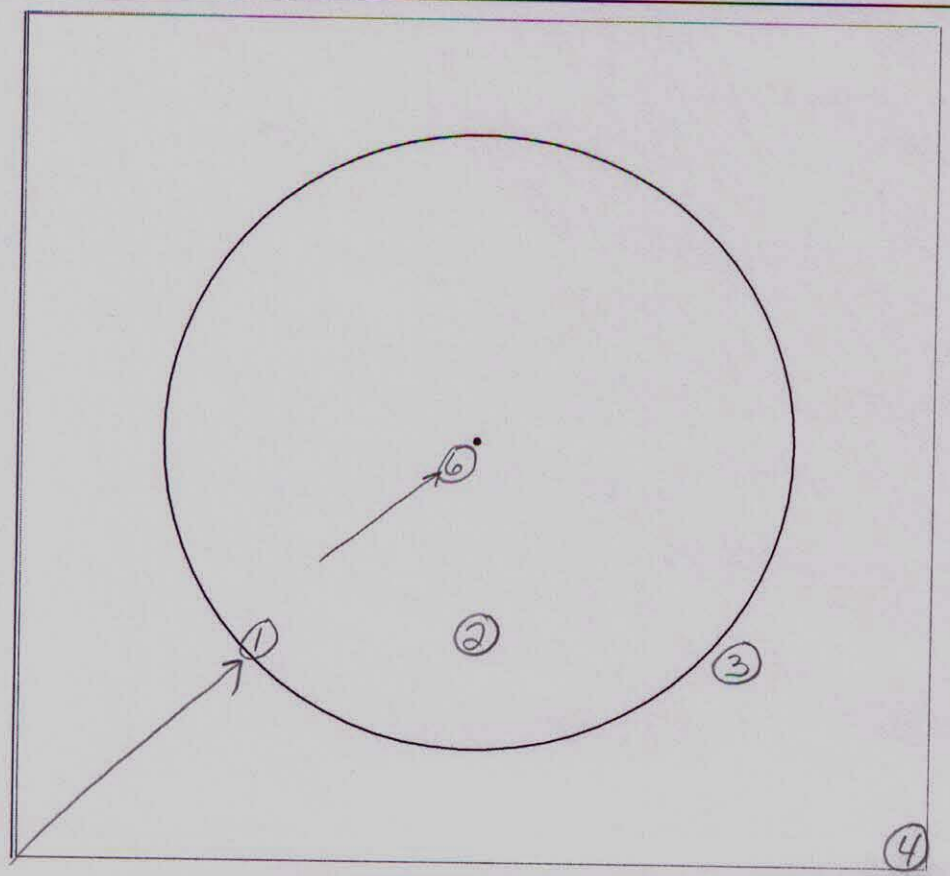
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	TUVU	U	A	3	100 / 50	PE (SO) FL FO / GL HO AUD OT	20	15	25	SW	Dist			
2	LEGO	–	–	1	30 / 30	PE SO FL HU / GL HO (AUD) OT	–	–	–	S	Dist	✓		
3	HOFI	U	U	2	60 / 60	PE SO (FL) HU / GL HO AUD OT	15	10	15	SE	Dist			
4	NOFL	–	–	1	100 / 100	PE SO FL HU / GL HO (AUD) OT	–	–	–	SE	Oak	✓		
5	TUVU	U	U	2	300 / 300	PE (SO) FL HU / GL HO AUD OT	60	40	60	SE	Dist			
6	BARS	U	A	1	30 / 5	PE SO (FL) HU / GL HO AUD OT	15	5	20	SW	Dist			
7	ACWO	U	U	1	300 / 300	(PE) SO (FL) HU / GL HO AUD OT	25	20	25	SE	Dist			
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

Observation Point

100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 5

DATE: 8/12/09 OBSERVER WLB START TIME 0838 END TIME 0841 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 62

WIND DIRECTION (CIRCLE ONE) N NE E SE S (SW) W NW n/a SPEED(MPH) Low: 0 High: 1

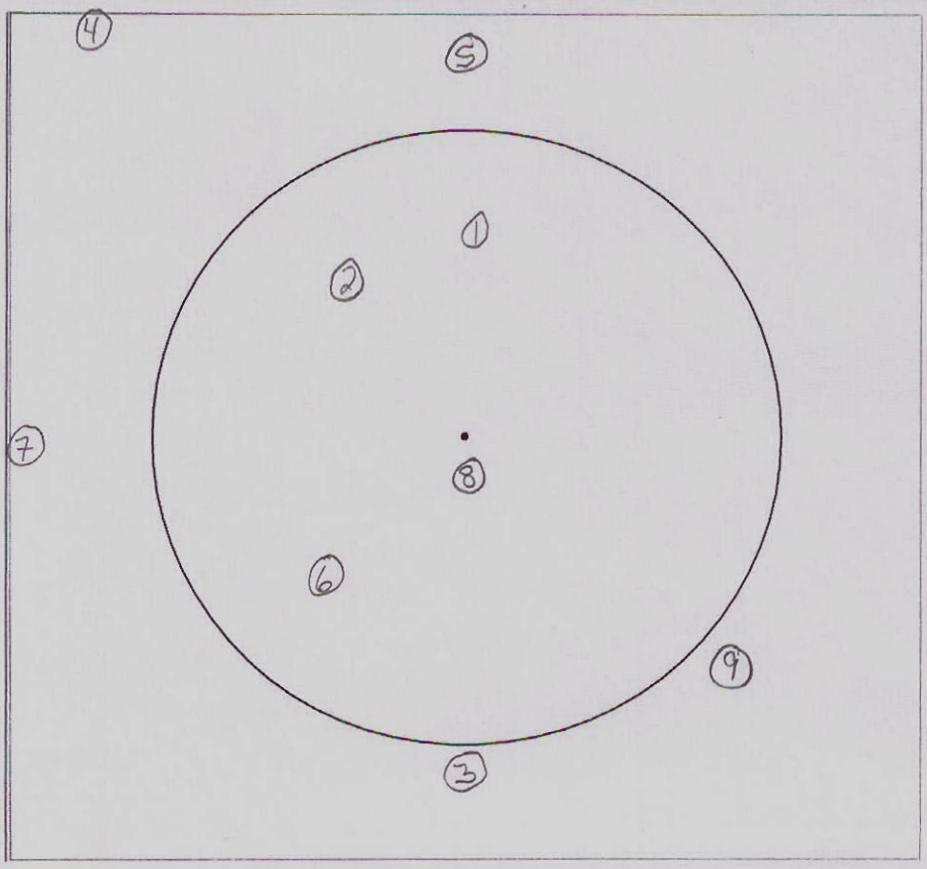
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WETA	–	–	1	30 / 30	PE SO FL FO / GL HO (AUD) OT	–	–	–	N	Rip	✓		
2	BCCH	–	–	1	30 / 30	PE SO FL HU / GL HO (AUD) OT	–	–	–	NW	Rip	✓		
3	BTPI	U	U	1	60 / 60	PE SO (FL) HU / GL HO AUD OT	10	10	15	S	Dist/oak			
4	CAQU	–	–	1	100 / 100	PE SO FL HU / GL HO (AUD) OT	–	–	–	NW	Rip	✓		
5	WEWP	–	–	1	80 / 80	PE SO FL HU / GL HO (AUD) OT	–	–	–	N	Rip	✓		
6	LEGO	–	–	1	30 / 30	PE SO FL HU / GL HO (AUD) OT	–	–	–	SW	Dist	✓		
7	UNSW	U	U	1	100 / 100	PE SO (FL) HU / GL HO AUD OT	20	15	20	W	oak			
8	SPTO	–	–	1	10 / 10	PE SO FL HU / GL HO (AUD) OT	–	–	–	S	Rip	✓		
9	ACWO	–	–	1	60 / 60	PE SO FL HU / GL HO (AUD) OT	–	–	–	SE	Oak	✓		
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 6

DATE: 8/12/09 OBSERVER WLB START TIME 0826 END TIME 0829 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 64

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

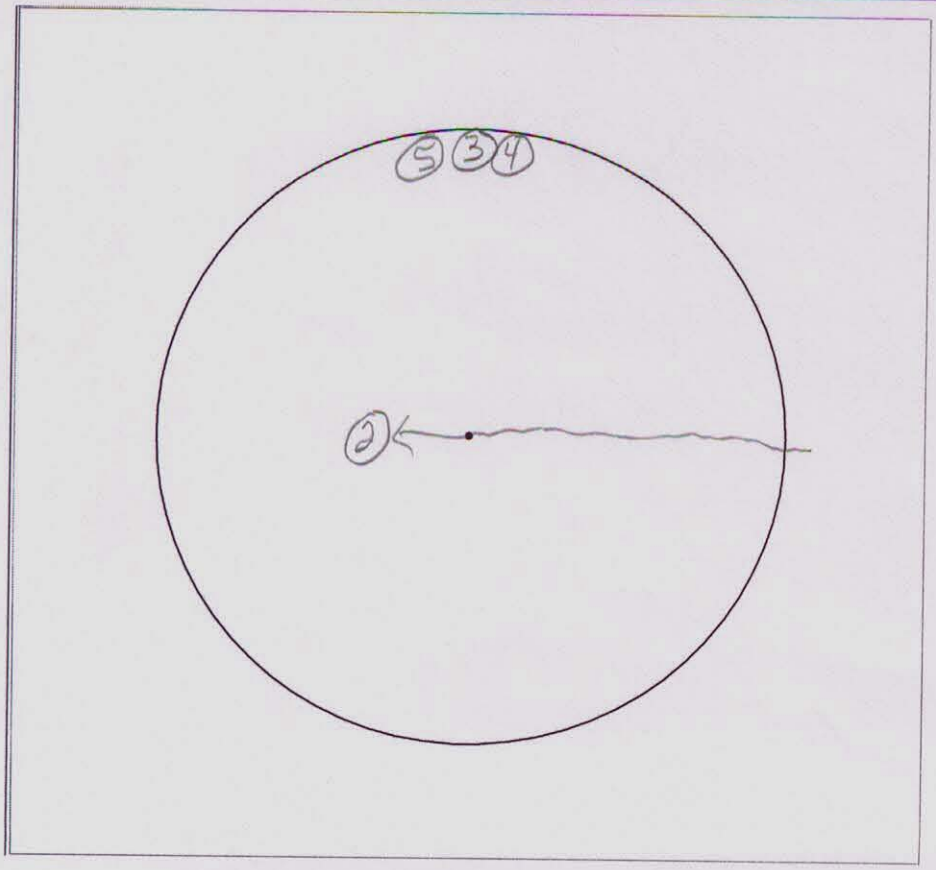
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer: 1st / closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	RTHA	U	A	1	200 / 200	PE (SO) FL FO; GL HO AUD OT	60	60	70	E	Dist oak			
2	VGSW	U	U	2	60 / 0	PE SO (FL) HU; GL HO AUD OT	10	10	20	E	oak			
3	BCCH	-	-	1	50 / 50	PE SO FL HU; GL HO (AUD) OT	-	-	-	N	oak	✓		
4	OATI	-	-	1	50 / 50	PE SO FL HU; GL HO (AUD) OT	-	-	-	N	oak	✓		
5	BOTI	-	-	3	50 / 50	PE SO FL HU; GL HO (AUD) OT	-	-	-	N	oak	✓		
6						PE SO FL HU; GL HO AUD OT								
7						PE SO FL HU; GL HO AUD OT								
8						PE SO FL HU; GL HO AUD OT								
9						PE SO FL HU; GL HO AUD OT								
10						PE SO FL HU; GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 7

DATE: 8/12/09 OBSERVER WLB START TIME 0819 END TIME 0822 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 64

WIND DIRECTION (CIRCLE ONE) N NE E SE (S) SW W NW n/a SPEED(MPH) Low: 0 High: 1

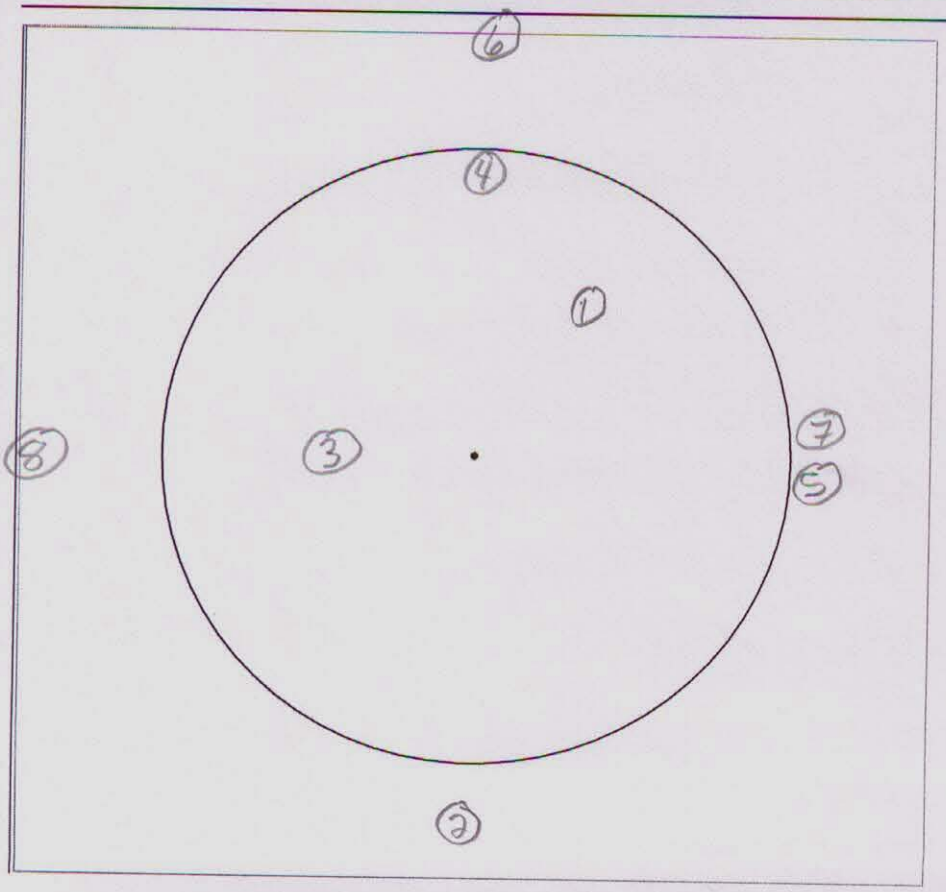
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	LEGO	–	–	4	30 / 30	PE SO FL FO / GL HO AUD OT	–	–	–	NE	Oak	✓		
2	BHGR	U	U	1	70 / 70	PE SO (FL) HU / GL HO AUD OT	10	10	10	S	oak			
3	ANHU	F	A	1	20 / 20	PE SO (FL) HU / GL HO AUD OT	2	2	3	W	oak			
4	BCCH	–	–	1	50 / 50	PE SO FL HU / GL HO AUD OT	–	–	–	N	oak	✓		
5	ACWO	U	U	1	60 / 60	PE SO (FL) HU / GL HO AUD OT	10	10	10	E	oak			
6	NOFL	–	–	1	100 / 100	PE SO FL HU / GL HO (AUD) OT	–	–	–	N	oak	✓		
7	VGSW	U	U	2	60 / 60	PE SO (FL) HU / GL HO AUD OT	15	10	15	E	oak			
8	CAVI	–	–	1	100 / 100	PE SO FL HU / GL HO (AUD) OT	–	–	–	W	oak	✓		
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

• Observation Point

100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 8

DATE: 8/12/09 OBSERVER WLB START TIME 0812 END TIME 0815 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 64

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

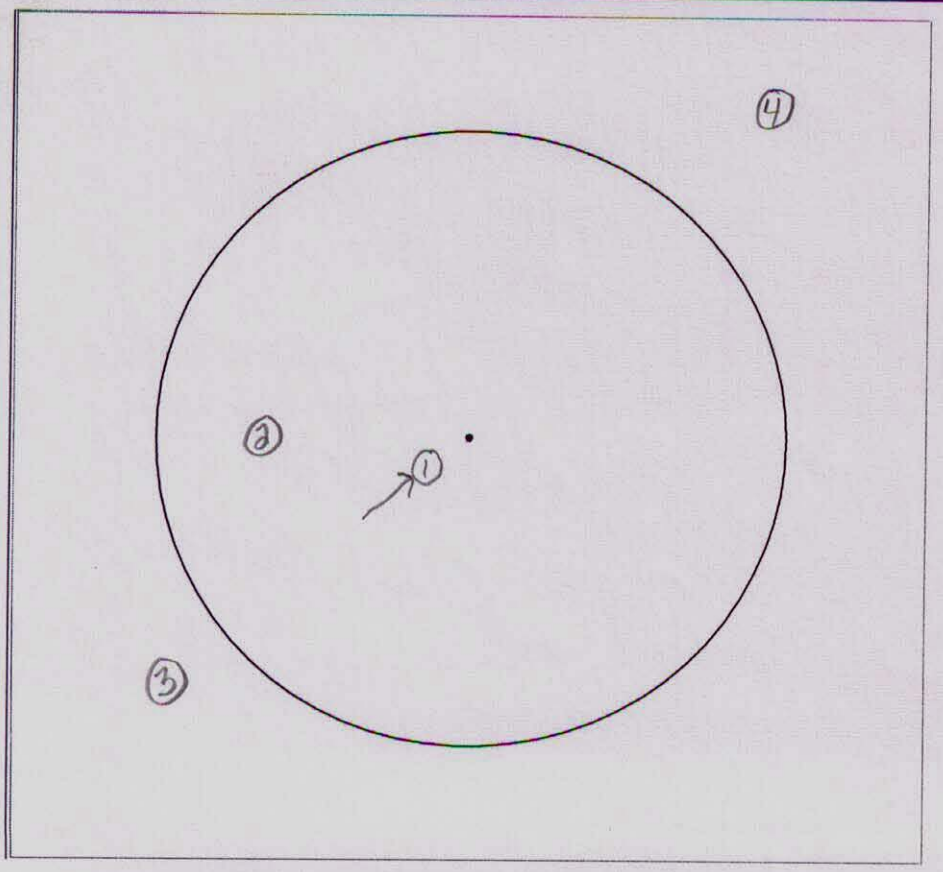
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WESJ	U	A	2	20 / 10	(PE) SO FL FO / GL HO AUD OT	5	3	5	SW	oak			
2	BARS	-	-	1	30 / 30	PE SO FL HU / GL HO (AUD) OT	-	-	-	W	oak	✓		
3	YGSW	U	U	2	60 / 60	PE SO (FL) HU / GL HO AUD OT	15	10	15	SW	oak			
4	BHGR	-	-	1	70 / 70	PE SO FL HU / GL HO (AUD) OT	-	-	-	NE	Rip	✓		
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 9

DATE: 8/12/09 OBSERVER WLB START TIME 0804 END TIME 0807 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 62

WIND DIRECTION (CIRCLE ONE) N (NE) E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 1

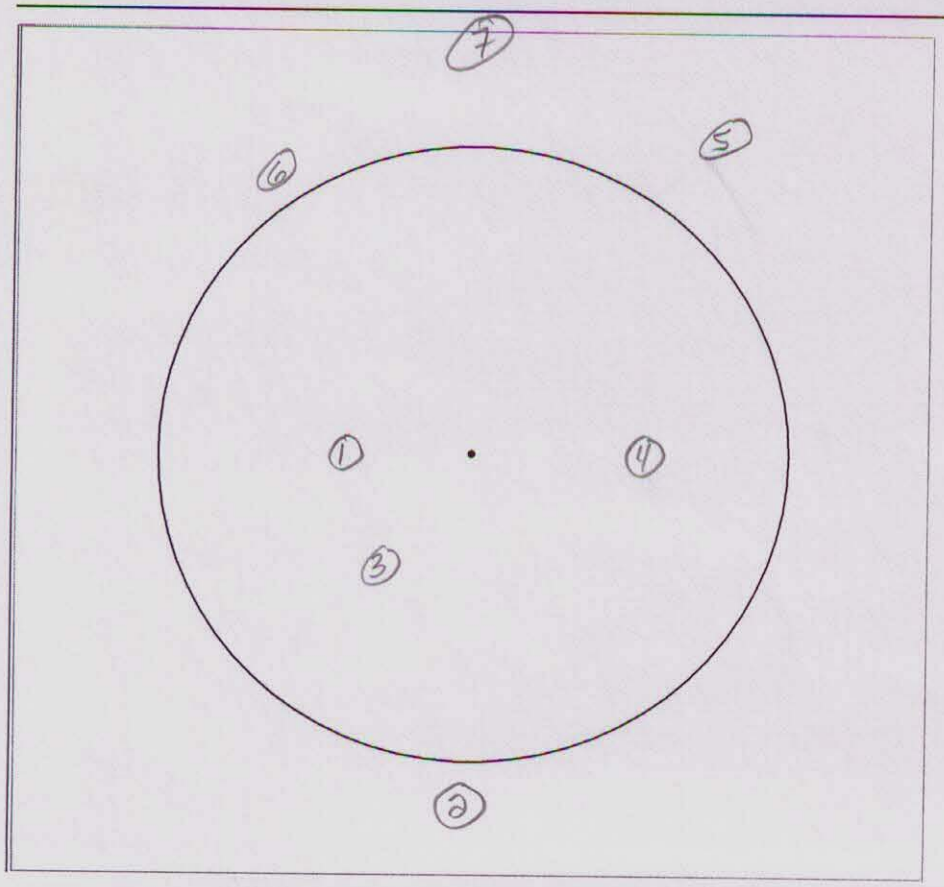
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	BCCH	-	-	1	20/20	PE SO FL FO / GL HO (AUD) OT	-	-	-	W	oak	✓		
2	WEST	-	-	1	70/70	PE SO FL HU / GL HO (AUD) OT	-	-	-	S	oak	✓		
3	BGNA	-	-	1	20/20	PE SO FL HU / GL HO (AUD) OT	-	-	-	SW	oak	✓		
4	LEGO	-	-	1	30/30	PE SO FL HU / GL HO (AUD) OT	-	-	-	E	oak	✓		
5	WBNU	U	U	1	70/70	PE SO FL HU / GL HO (AUD) OT	15	10	15	NE	oak			
6	ACWO	U	U	1	60/60	(PE) SO (FL) HU / GL HO (AUD) OT	15	10	15	NW	oak			
7	NOFL	-	-	1	100/100	PE SO FL HU / GL HO (AUD) OT	-	-	-	N	oak	✓		
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- • Observation Point
- ▭ 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 10

DATE: 8/12/09 OBSERVER WLB START TIME 0757 END TIME 0800 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 62

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

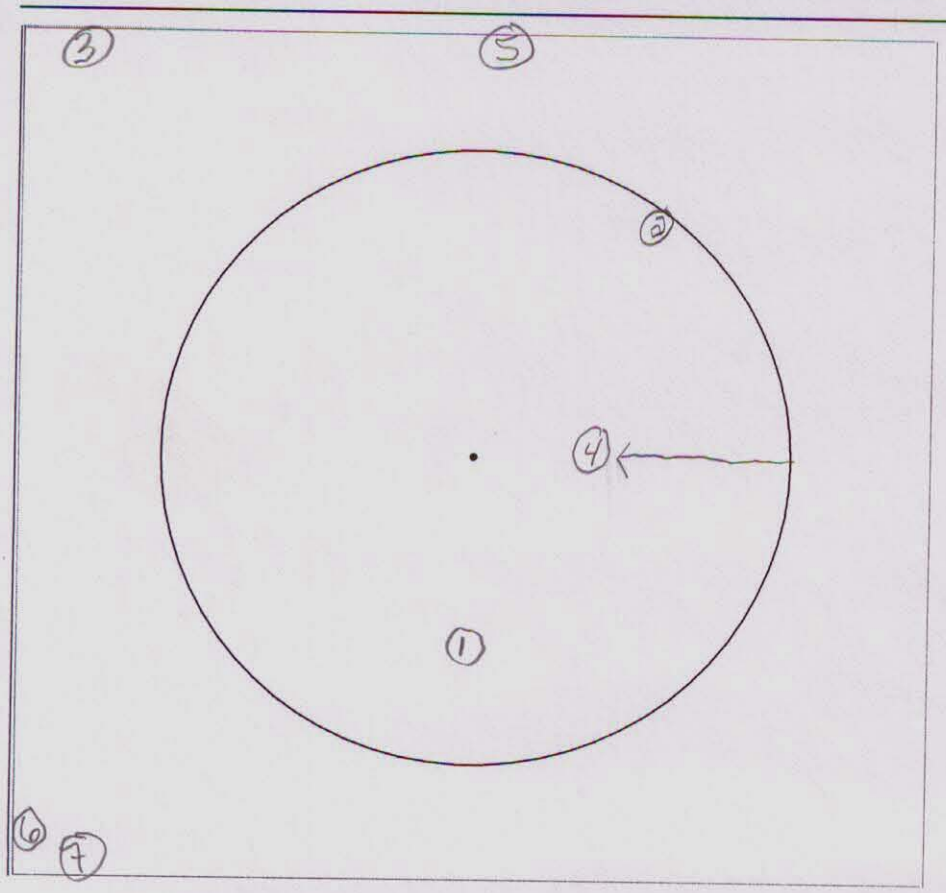
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WESJ	-	-	1	30 / 30	PE SO FL FO / GL HO (AUD) OT	-	-	-	S	oak	✓		
2	LEGO	-	-	1	50 / 50	PE SO FL HU / GL HO (AUD) OT	-	-	-	NE	oak	✓		
3	CAFI	-	-	1	100 / 100	PE SO FL HU / GL HO (AUD) OT	-	-	-	NW	oak	✓		
4	VASW	-	-	1	50 / 20	PE SO (FL) HU / GL HO AUD OT	-	-	-	E	oak	✓		
5	BEKI	-	-	1	300 / 300	PE SO FL HU / GL HO (AUD) OT	-	-	-	N	Rip	✓		
6	ACWO	U	U	3	100 / 100	(PE) SO (FL) HU / GL HO (AUD) OT	20	20	20	SW	oak/chap			on telephone pole
7	BTPI	U	U	5	100 / 100	PE SO (FL) HU / GL HO (AUD) OT	15	15	15	SW	oak/chap			
8					/	PE SO FL HU / GL HO AUD OT								
9					/	PE SO FL HU / GL HO AUD OT								
10					/	PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 11

DATE: 8/12/09 OBSERVER WLB START TIME 0749 END TIME 0752 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 62

WIND DIRECTION (CIRCLE ONE) N NE (E) SE S SW W NW n/a SPEED(MPH) Low: 0 High: 1

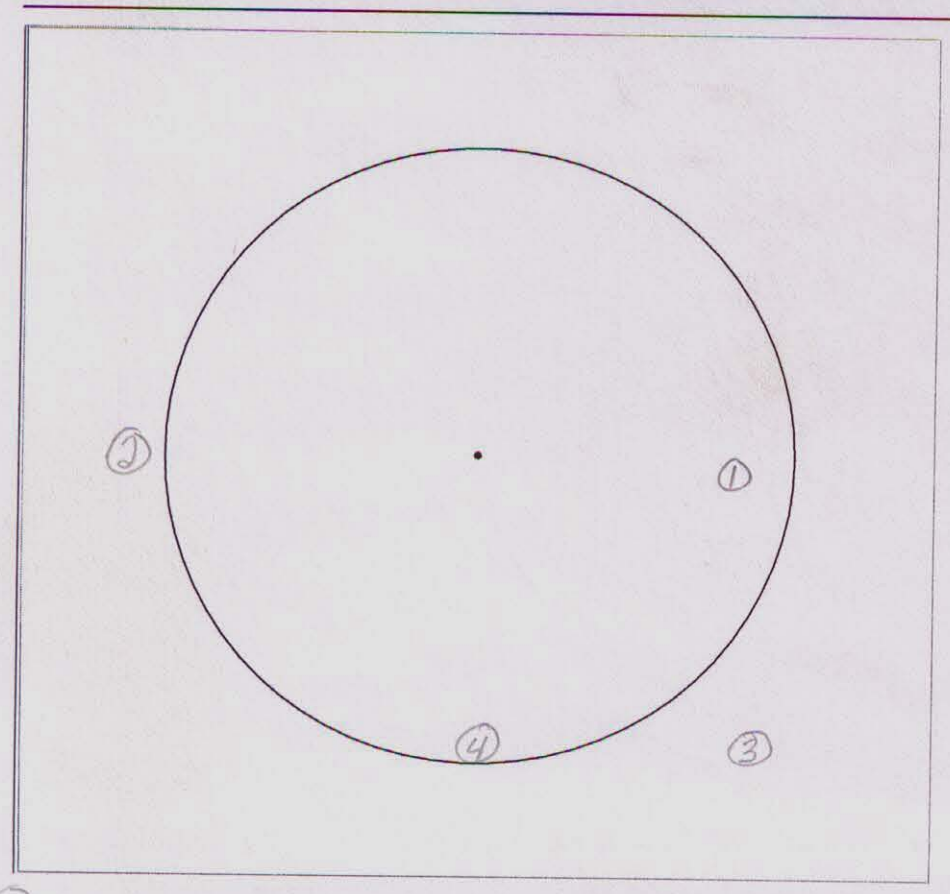
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WESJ	-	-	1	40 / 40	PE SO FL FO / GL HO (AUD) OT	-	-	-	E	Oak	✓		
2	LEGO	U	U	2	60 / 60	PE SO (FL) HU / GL HO AUD OT	10	10	15	W	Oak			
3	WBNU	-	-	1	70 / 70	PE SO FL HU / GL HO (AUD) OT	-	-	-	SE	Oak	✓		
4	VGSW	U	U	2	50 / 50	PE SO (FL) HU / GL HO AUD OT	10	10	20	S	Oak			
5	ACWO	-	-	1	200 / 200	PE SO FL HU / GL HO (AUD) OT	-	-	-	SW	Oak	✓		
6	RTHA	-	-	1	200 / 200	PE SO FL HU / GL HO (AUD) OT	-	-	-	E	Oak	✓		
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

DATE: 8/12/09 OBSERVER WCB START TIME 0743 END TIME 0746 ddSTATION 12

PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 60

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 0

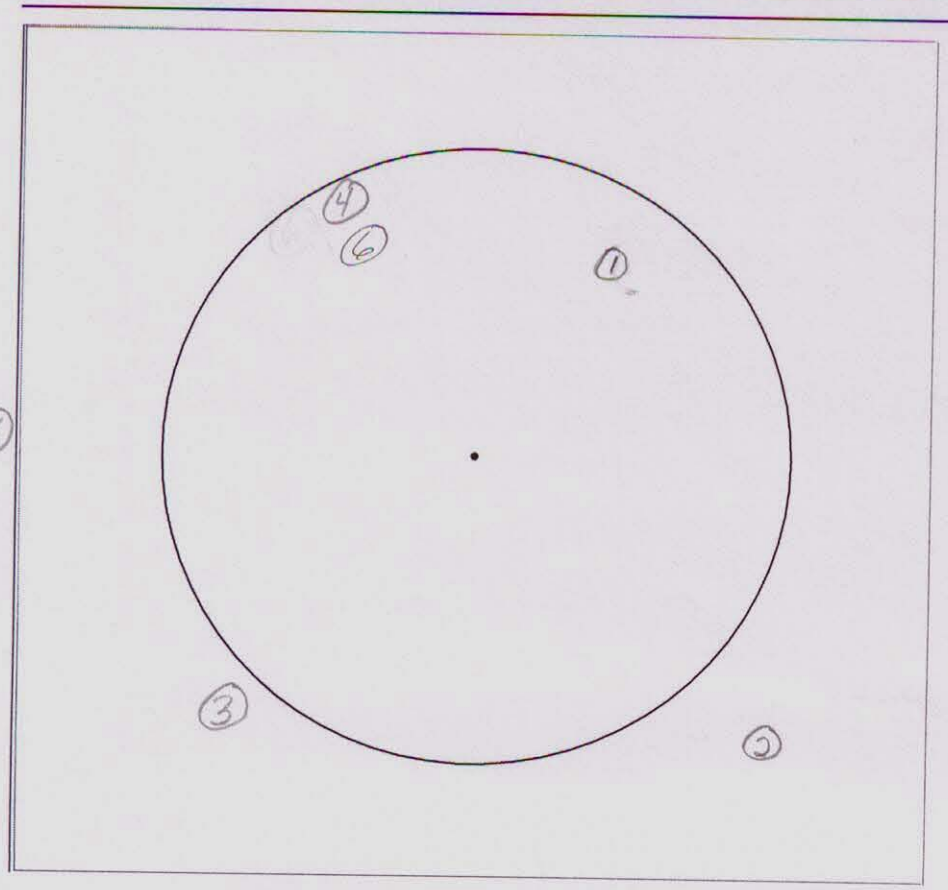
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	BHGR	–	–	1	40 / 40	PE SO FL FO / GL HO AUD OT	–	–	–	NE	Rip	✓		
2	WESJ	–	–	2	70 / 70	PE SO FL HU / GL HO AUD OT	–	–	–	SE	Rip/oak	✓		
3	LEGO	–	–	1	60 / 60	PE SO FL HU / GL HO AUD OT	–	–	–	SW	Oak	✓		
4	WBNU	–	–	1	30 / 30	PE SO FL HU / GL HO AUD OT	–	–	–	NW	Rip	✓		
5	CAGO	–	–	1	200 / 200	PE SO FL HU / GL HO AUD OT	–	–	–	W	Dist	✓		
6	WETA	–	–	1	40 / 40	PE SO FL HU / GL HO AUD OT	–	–	–	NW	Rip	✓		
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 13

DATE: 8/12/09 OBSERVER LXB START TIME 0736 END TIME 0739 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 57

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

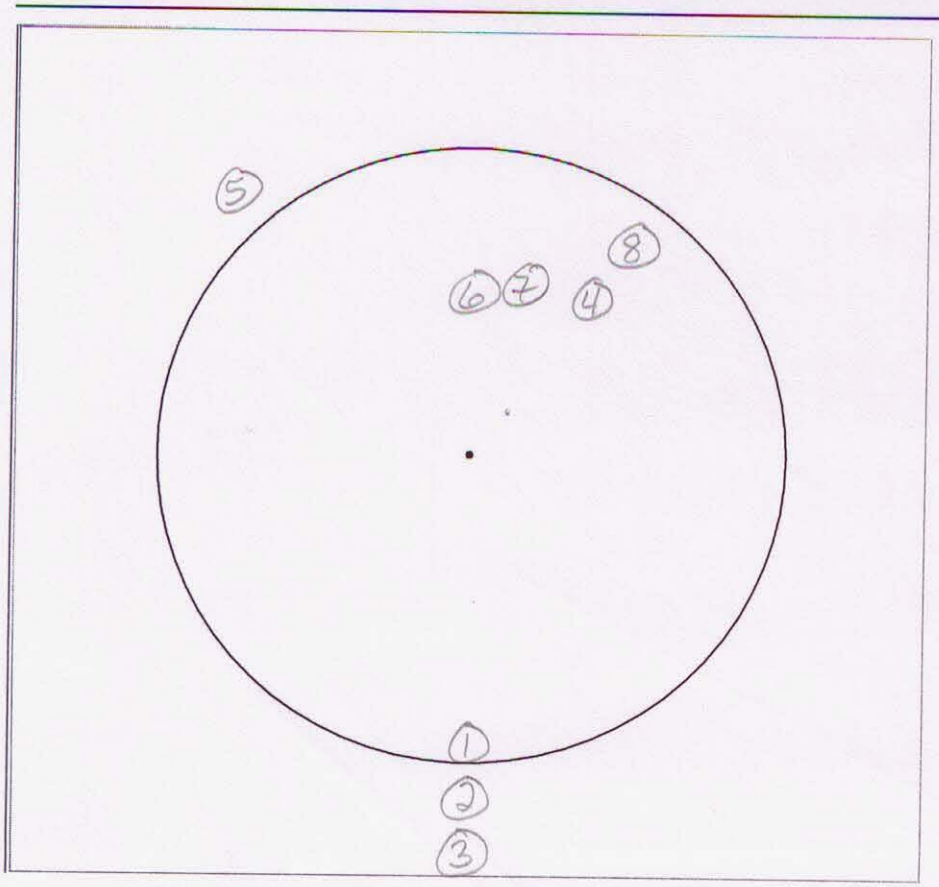
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	AAAA	—	—	1	50 / 50	PE SO FL FO / GL HO AUD OT	—	—	—	S	Shrubs	✓		
2	LEGO	—	—	2	60 / 60	PE SO FL HU / GL HO AUD OT	—	—	—	S	Oak	✓		
3	WESJ	U	A	1	80 / 80	PE SO (FL) HU / GL HO AUD OT	3	3	4	S	Oak/chap			
4	BHGR	—	—	1	30 / 30	PE SO FL HU / GL HO AUD OT	—	—	—	NE	Rip	✓		
5	CAVI	—	—	1	60 / 60	PE SO FL HU / GL HO AUD OT	—	—	—	NW	Rip	✓		
6	WETA	—	—	1	30 / 30	PE SO FL HU / GL HO AUD OT	—	—	—	N	Rip	✓		
7	GCKI	—	—	1	30 / 30	PE SO FL HU / GL HO AUD OT	—	—	—	N	Rip	✓		
8	WBNU	—	—	1	40 / 40	PE SO FL HU / GL HO AUD OT	—	—	—	NE	Rip	✓		
9					/	PE SO FL HU / GL HO AUD OT								
10					/	PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY **Ashland Gun Club** ddSTATION 14

DATE: 8/12/09 OBSERVER WLB START TIME 0728 END TIME 0731 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 57

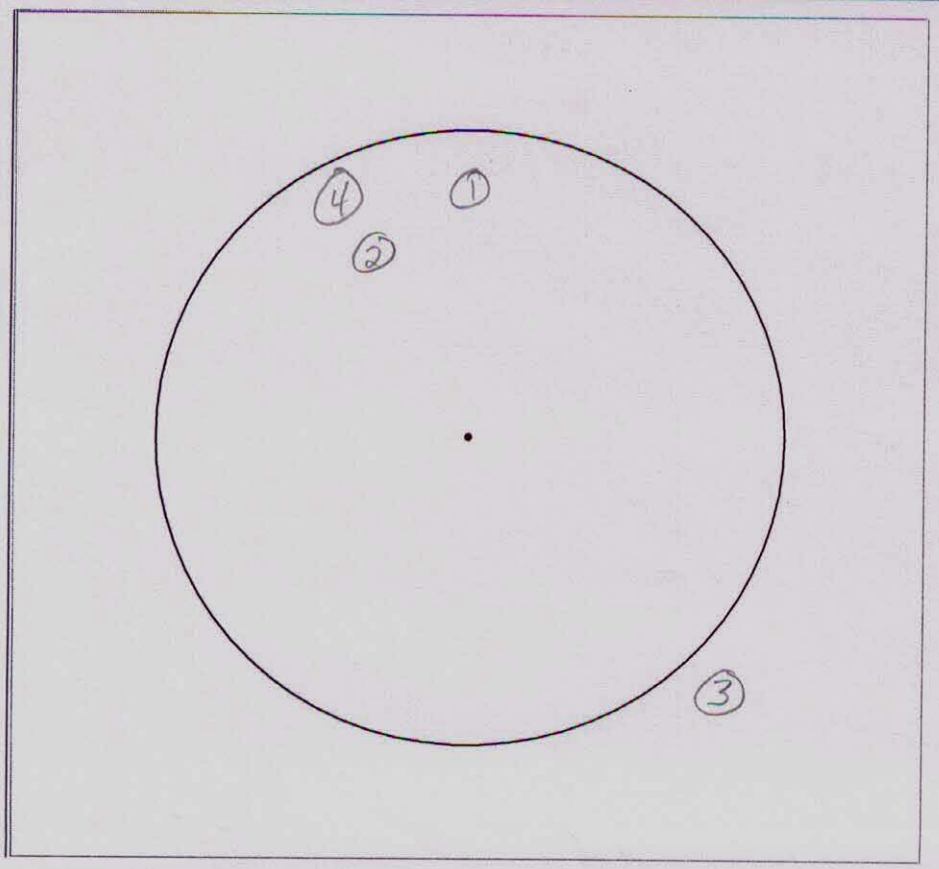
WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	DOWO	—	—	1	40 / 40	PE SO FL FO / GL HO (AUD) OT	—	—	—	N	Rip	✓		
2	BCCH	—	—	2	30 / 30	PE SO FL HU / GL HO (AUD) OT	—	—	—	NW	Rip	✓		
3	WESJ	—	—	1	60 / 60	PE SO FL HU / GL HO (AUD) OT	—	—	—	SE	Shrub	✓		
4	WBNU	—	—	1	40 / 40	PE SO FL HU / GL HO (AUD) OT	—	—	—	NW	Rip	✓		
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other [b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

• Observation Point

100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 15

DATE: 8/12/09 OBSERVER WCB START TIME 0720 END TIME 0723 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 5 TEMP(°F) 57

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

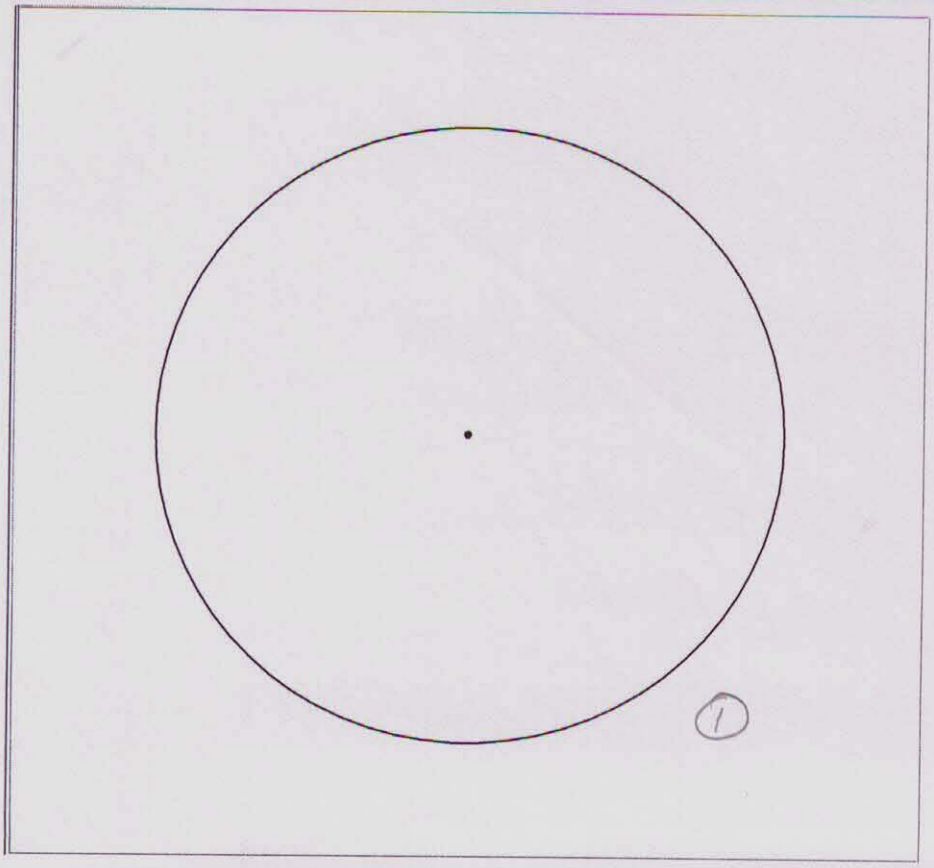
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	LEGO	–	–	4	60 / 60	PE SO FL FO / GL HO (AUD) OT	–	–	–	SE	Dist	✓		
2						PE SO FL HU / GL HO AUD OT								
3						PE SO FL HU / GL HO AUD OT								
4						PE SO FL HU / GL HO AUD OT								
5						PE SO FL HU / GL HO AUD OT								
6						PE SO FL HU / GL HO AUD OT								
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 16

DATE: 8/12/09 OBSERVER WLB START TIME 0627 END TIME 0630 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 5 TEMP(°F) 57

WIND DIRECTION (CIRCLE ONE) N NE (E) SE S SW W NW n/a SPEED(MPH) Low: 0 High: 1

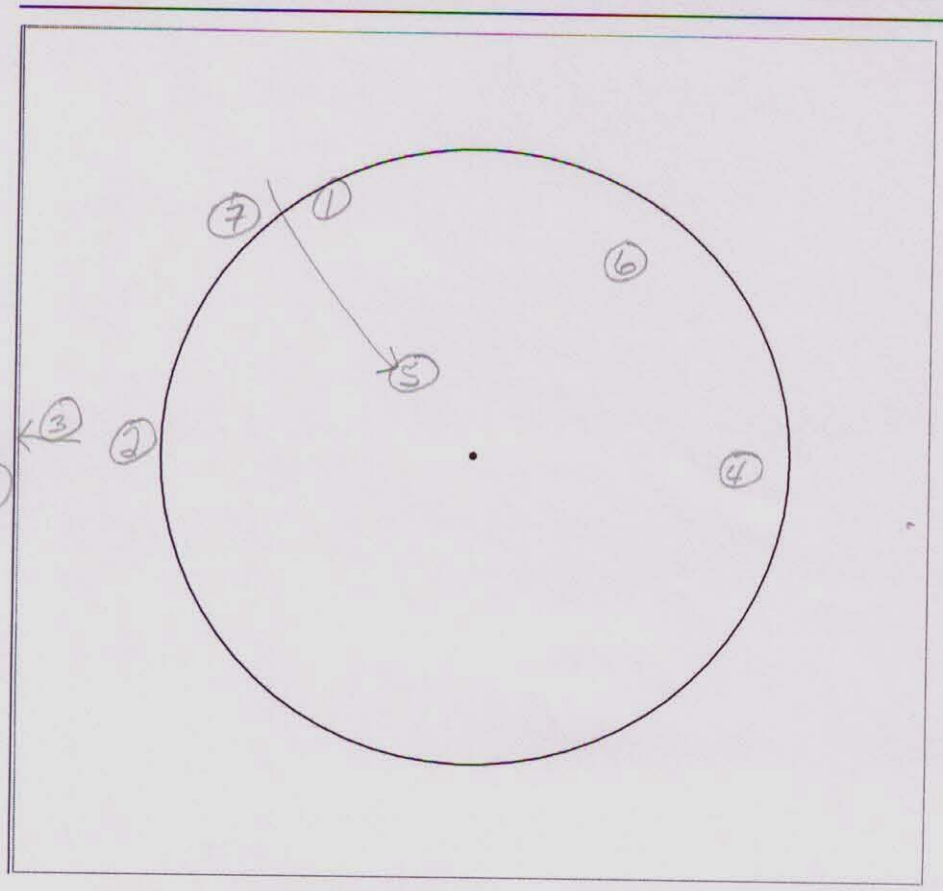
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	BTPI	u	u	3	50 / 50	(PE) SO FL FO / GL HO AUD OT	10	10	10	NW	oak			
2	KILL	-	-	1	60 / 60	PE SO FL HU / GL HO (AUD) OT	-	-	-	W	Dist/wetland	✓		
3	UNBL	u	u	50	70 / 100	PE SO (FL) HU / GL HO AUD OT	15	15	20	W	Dist/wetland			
4	WESJ	-	-	1	40 / 40	PE SO FL HU / GL HO AUD OT	-	-	-	E	R.P	✓		
5	AMGO	u	u	3	20 / 60	PE SO (FL) HU / GL HO AUD OT	20	15	20	NW	Dist/wetland			
6	BRBL	-	-	1	40 / 40	PE SO FL HU / GL HO (AUD) OT	-	-	-	NE	R.P	✓		
7	NOFL	-	-	1	60 / 60	PE SO FL HU / GL HO AUD OT	-	-	-	NW	R.P	✓		
8	CAGO	u	u	38	250 / 250	PE SO (FL) HU / GL HO AUD OT	20	20	20	W	Dist/wetland			
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 17

DATE: 8/12/09 OBSERVER WLB START TIME 0640 END TIME 0643 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 0 TEMP(°F) 60

WIND DIRECTION (CIRCLE ONE) N NE (E) SE S SW W NW n/a SPEED(MPH) Low: 1 High: 2

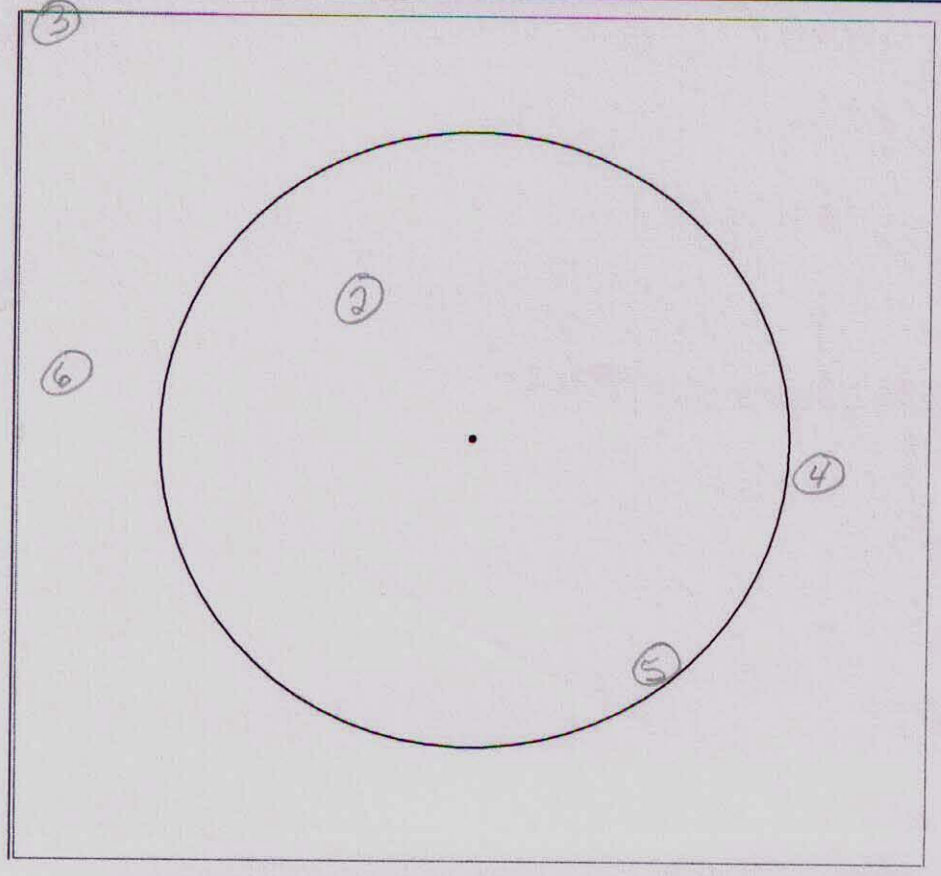
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	CAGO	–	–	1	150 / 150	PE SO FL FO / GL HO (AUD) OT	–	–	–	NW	Dist	✓		
2	ANHU	–	–	1	30 / 30	PE SO FL HU / GL HO (AUD) OT	–	–	–	NW	Rip	✓		
3	NOFL	–	–	1	100 / 100	PE SO FL HU / GL HO (AUD) OT	–	–	–	NW	Con.F	✓		
4	WESJ	–	–	3	60 / 60	PE SO FL HU / GL HO (AUD) OT	–	–	–	E	Rip	✓		
5	LEGO	–	–	2	50 / 50	PE SO FL HU / GL HO (AUD) OT	–	–	–	SE	Dist/Wetland	✓		
6	BHGR	F	A	1	80 / 80	PE SO (FL) HU / GL HO AUD OT	20	20	20	W	Oak/Chap			
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments (1)



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- • Observation Point
- ▭ 100-m Buffer

BREEDING BIRD SURVEY

Ashland Gun Club

ddSTATION 18

DATE: 8/12/09 OBSERVER WLB START TIME 0648 END TIME 0651 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) good fair poor CLOUD COVER(%) 0 TEMP(°F) 57

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW n/a SPEED(MPH) Low: 0 High: 1

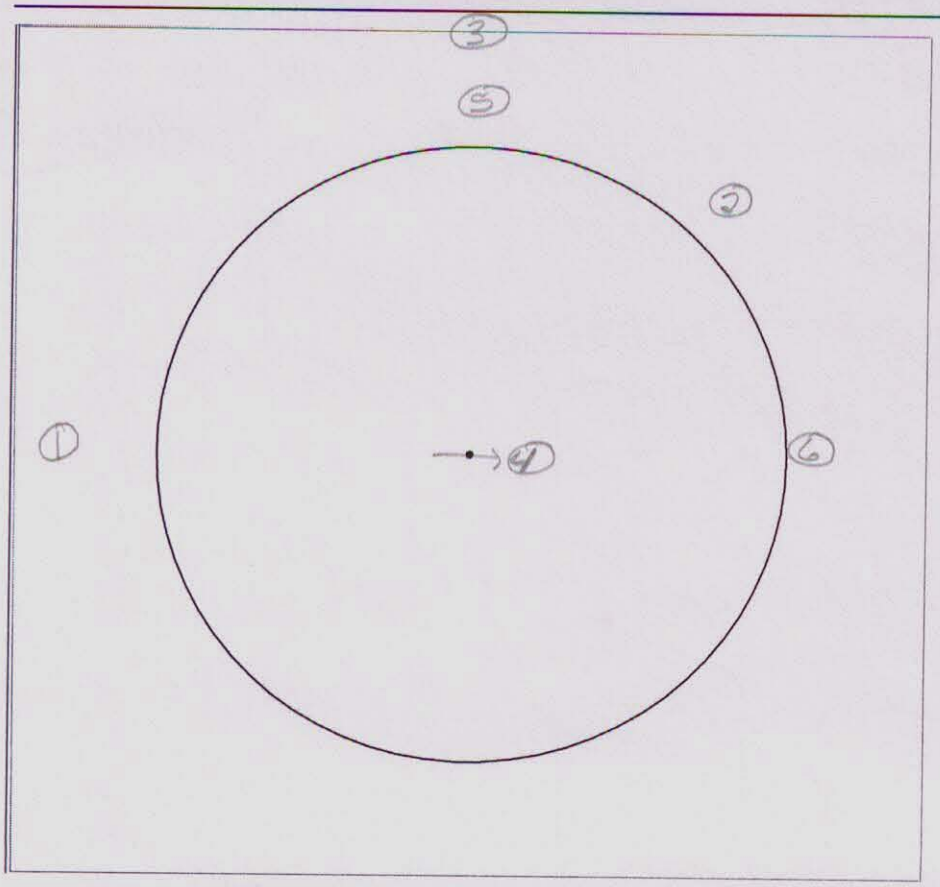
PRECIPITATION (CIRCLE ONE) none light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	BTPI	U	A/U	6/11	80 / 80	PE SO FL FO / GL HO AUD OT	10	5	10	W	oak/riparian			
2	WESJ	–	–	2	60 / 60	PE SO FL HU / GL HO AUD OT	–	–	–	NE	Rip	✓		
3	DOWO	–	–	1	100 / 100	PE SO FL HU / GL HO AUD OT	–	–	–	N	Rip	✓		
4	BARS	U	U	1	10 / 0	PE SO FL HU / GL HO AUD OT	20	15	20	W	Dist/wetland			
5	BHGR	–	–	1	70 / 70	PE SO FL HU / GL HO AUD OT	–	–	–	N	Rip	✓		
6	LEGO	–	–	2	60 / 60	PE SO FL HU / GL HO AUD OT	–	–	–	E	Dist/Conf.	✓		
7						PE SO FL HU / GL HO AUD OT								
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

BREEDING BIRD SURVEY — **Ashland Gun Club** — ddSTATION 19

DATE: 8/12/09 OBSERVER WCB START TIME 0657 END TIME 0700 PAGE 1 OF 1

WEATHER: VISIBILITY (CIRCLE ONE) (good) fair poor CLOUD COVER(%) 5 TEMP(°F) 58

WIND DIRECTION (CIRCLE ONE) N NE E SE S SW W NW (n/a) SPEED(MPH) Low: 0 High: 0

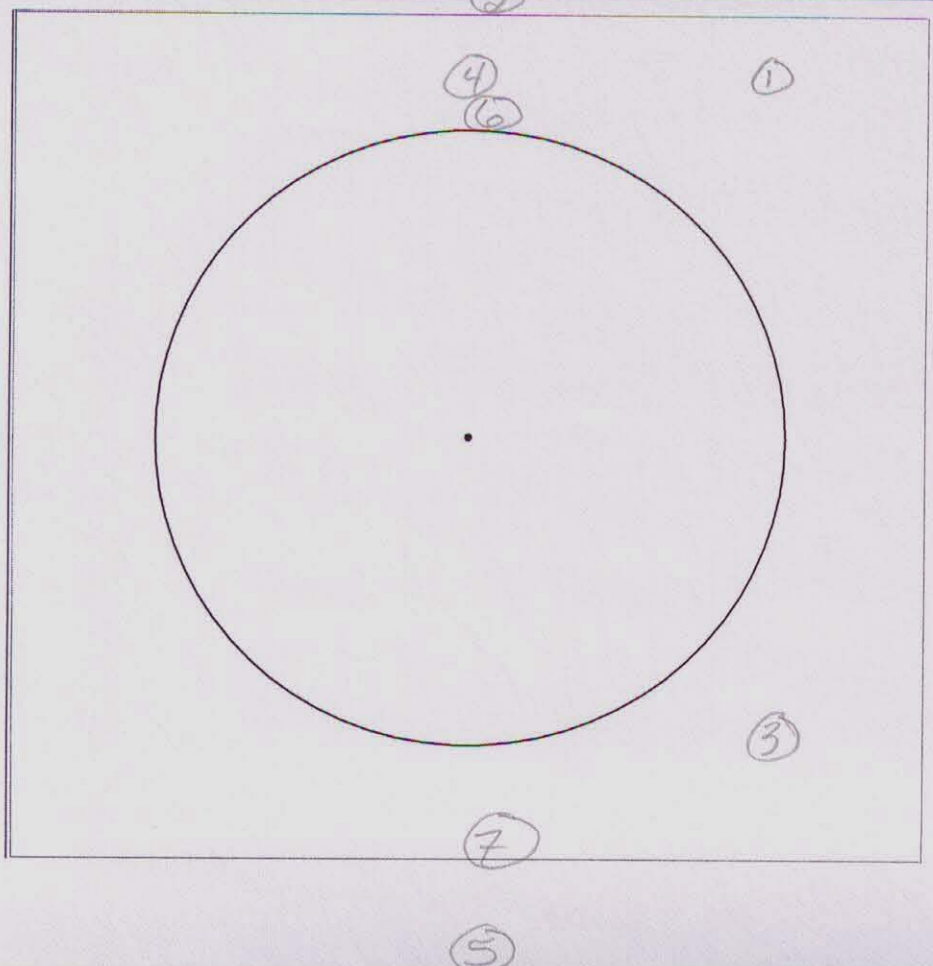
PRECIPITATION (CIRCLE ONE) (none) light rain rain light snow snow sleet hail other

Obs No.	Species	Sex	Age	# Inds.	Dist. (m) from observer 1st/closest	Activity[a]	Flight Characteristics: 1ST Height (m)	Lowest (m)	Highest (m)	Dir.	Habitat	A[b]	10 min. Incr.	NOTES
1	WESJ	–	–	3	80 / 80	PE SO FL FO / GL HO AUD OT	–	–	–	NE	Rip	✓		
2	NOFL	–	–	1	150 / 150	PE SO FL HU / GL HO AUD OT	–	–	–	N	Rip/Cont	✓		
3	LEGO	–	–	3	70 / 70	PE SO FL HU / GL HO AUD OT	–	–	–	SE	Dist/Cont	✓		
4	BHGR	–	–	1	70 / 70	PE SO FL HU / GL HO AUD OT	–	–	–	N	Rip	✓		
5	CAGO	–	–	4	300 / 300	PE SO FL HU / GL HO AUD OT	–	–	–	S	Dist	✓		
6	ANHU	–	–	1	60 / 60	PE SO FL HU / GL HO AUD OT	–	–	–	N	Rip	✓		
7	ACWO	–	–	1	100 / 100	PE SO FL HU / GL HO AUD OT	–	–	–	S	Oak	✓		
8						PE SO FL HU / GL HO AUD OT								
9						PE SO FL HU / GL HO AUD OT								
10						PE SO FL HU / GL HO AUD OT								

[a] PE-perched, SO-soaring, FL-flapping, FO-foraging, GL-gliding, HO-hovering, AUD-singing, OT-other

[b] check if Auditory only

Comments



Big Game Observations			
Obs. no.	Species	No. of Ind.	Distance from (m) observer

Legend

- Observation Point
- 100-m Buffer

APPENDIX C: NATURAL HERITAGE DATABASE SEARCH RESULTS

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13774S0003 11

OREGON NATURAL HERITAGE INFORMATION CENTER

OSU Oregon State University

Institute for Natural Resources
1322 SE Morrison Street
Portland, Oregon 97214-2423
503.731.3070
http://oregonstate.edu/ornhic

Wednesday, July 08, 2009

Ericka Gelsey
Brown and Caldwell
201 N. Civic Drive, Suite 115
Walnut Creek, CA 94596

Dear Ms. Gelsey:

Thank you for requesting information from the Oregon Natural Heritage Information Center (ORNHIC). We have conducted a data system search for rare, threatened and endangered plant and animal records for your The Ashland Gun Club Project at just east of the Ashland Municipal Airport at approximately 42.189 lat, -122.639 long.

Forty-three (43) records total were noted within a two-mile radius of your project site and are included on the enclosed computer printouts.

Please remember that the lack of rare element information from a given area does not mean that there are no significant elements there, only that there is no information known to us from the site. To assure that there are no important elements present, you should inventory the site, at the appropriate season.

This data is confidential and for the specific purposes of your project and is **not to be distributed**. Please also note that as our database is continually updated, the data in this report should be considered current for one year from the date it was generated and should not be cited after **July 2010**.

Please forward the included invoice to the appropriate party in your organization.

If you need additional information or have any questions, please do not hesitate to contact me.

Sincerely,

Lindsey Koepke

Lindsey Koepke
Assistant Information Manager
lindsey.koepke@oregonstate.edu
503.731.3070 x104

encl.: **invoice (H-070809-LAK1)**
computer printouts and data key

Scientific Name: ***Actinemys marmorata marmorata***
Common Name: **Northern Pacific pond turtle**

EO NUM: 14
EO ID: 24373

Federal Status: SOC GRANK: G3G4T3Q NHP List: 2
State Status: SC SRANK: S2 HP Track: Y
Category: Vertebrate Animal
ELCODE: ARAAD02031

Confirmed: First Obs: 1982 Last Obs: 1984-04-14 EO Rank: H - Historical

Directions: 2mi E. of Ashland on Jim Miller Ranch, pond by Emigrant Creek.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM	PRIVATE	1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S002E	07		42122-B6	Ashland	
039S001E	12				

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

24373 Point [Areal - Estimated (400 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type:
Minimum Elev.(m): 610
EO Data: 1984: 6 adult turtles observed at 15:30 hrs on a warm, sunny day. 1982: 12 adults observed in pond at 11:30 hrs. on partly cloudy day.
EO Comments: small pond near creek
Protection:
Management:
General:

Scientific Name: ***Actinemys marmorata marmorata***
Common Name: **Northern Pacific pond turtle**

EO NUM: 42
EO ID: 3588

Federal Status: SOC GRANK: G3G4T3Q NHP List: 2
State Status: SC SRANK: S2 HP Track: Y
Category: Vertebrate Animal
ELCODE: ARAAD02031

Confirmed: First Obs: 1969 Last Obs: 1995-05-23 EO Rank: E - Verified extant (viability not assessed)

Directions: EMIGRANT LAKE, SE OF ASHLAND

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM	BUREAU OF RECREATION	1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S002E	33		42122-B5	Emigrant Lake	
039S002E	28				
039S002E	34				
039S002E	32				
039S002E	20				
039S002E	28				
039S002E	29				

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

3588 Polygon [Areal - Delimited (8 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type:
Minimum Elev.(m): 640
EO Data: 1995: 12 OBSERVED, 10 TRAPPED (3 JUVENILES, 4 ADULT FEMALES, 3 ADULT MALES). 1969: 1 ADULT OBSERVED ON A LOG AT THE END OF THE LAKE.
EO Comments: RESERVOIR
Protection:
Management: EMIGRANT LAKE COUNTY RECREATION AREA, MANAGED BY JACKSON COUNTY PARKS. IRRIGATION, RECREATION & WILDLIFE. NEW MANAGEMENT PLAN ADOPTED FOR 1995.
General: MONITORING SITE FROM MOUTH OF EMMIGRANT CK 1525M INTO LAKE

Scientific Name: ***Aneides flavipunctatus***
Common Name: **Black salamander**

EO NUM: 8
EO ID: 1446

Federal Status: GRANK: G4 NHP List: 2
State Status: SV SRANK: S2 HP Track: Y
Category: Vertebrate Animal
ELCODE: AAAAD01030

Confirmed: First Obs: 1984 Last Obs: 1984-04-06 EO Rank: H? - Possibly historical

Directions: NORTHEASTERN SIDE OF EMIGRANT RESERVOIR, A SHORT DISTANCE SOUTH OF THE DAM. 1.5 MILES NNE OF KLAMATH JUNCTION.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S002E	20		42122-B5	Emigrant Lake	

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations
1446 Point [Areal - Estimated (50 m)]

Feature ID	Date	Source Observation data
1446	1984-04-06	4 adults found short distance from the dam.

Occurence Data
EO Type:
Minimum Elev.(m): 671
EO Data: 3 ADULTS AND 1 JUVENILE. SITE CONSTITUTES A SMALL RANGE EXTENSION EASTWARD TO LESS MOUNTAINOUS AREA.
EO Comments: ROCKY SLOPE WITH SCATTERED OAK, PINE, MADRONE AND MANZANITA.FOUND UNDER DAMP ROCKS
Protection:
Management:
General: ST. JOHN, A.D. 1984 FOLLOW-UP INVENTORY. THE HERPETOLOGY OF JACKSON AND JOSEPHINE COUNTIES.

Scientific Name: ***Antrozous pallidus***
Common Name: **Pallid bat**

EO NUM: 22
EO ID: 2436

Federal Status: SOC GRANK: G5 NHP List: 2
State Status: SV SRANK: S2 HP Track: Y
Category: Vertebrate Animal
ELCODE: AMACC10010

Confirmed: First Obs: 1982-06 Last Obs: 1982-06 EO Rank: H - Historical

Directions: CORP'S BARN, 250 NEIL CREEK RD, SE OF ASHLAND.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S002E	30		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations
2436 Point [Areal - Estimated (200 m)]

Feature ID	Date	Source Observation data

Occurence Data
EO Type:
Minimum Elev.(m): 651
EO Data: 1982: ROOST OCCUPIED BY ANTROZOUS PALLIDUS DURING SURVEY.
EO Comments: ROOST IN WOODEN BARN
Protection:
Management:
General:

Scientific Name: ***Astragalus gambellanus***
Common Name: **Gambel milk-vetch**

EO NUM: 2
EO ID: 12201

Federal Status: GRANK: G5 NHP List: 2
State Status: SRANK: S1 HP Track: Y
Category: Vascular Plant
ELCODE: PDFAB0F3L0

Confirmed: First Obs: 1993-05-11 Last Obs: 1993-05-11 EO Rank: E - Verified extant (viability not assessed)

Directions: GAERKY CREEK. ON POMPADOUR DRIVE THERE IS A GATE & RD AT POINT WHERE POWERLINE ALMOST CROSSES RD (ON A CURVE). WALK UP THIS DIRT RD OVER LOW SADDLE & E TOWARD HAY BARN. POP IS ABOVE RD 3/4 WAY TO BARN.

County Name: Jackson | Ecoregion: KM | Owner Name/Type: PRIVATE | Watershed: 1710030801 - BEAR CREEK

Town-Range: 038S001E | Sec: 36 | Note: | QuadCode: 42122-B6 | QuadName: Ashland | Managed Area Name:

Source Feature [Uncertainty Type (Distance)] Use Class: 12201 Polygon [Areal - Delimited (8 m)]

Annual Observations: • 1993 - 1000

Feature ID | Date | Source Observation data

Occurence Data

EO Type:

EO Data: 1000+ PLANTS, 2+ ACRE AREA.

Minimum Elev.(m): 732

EO Comments: DRY, GRAVELLY GROUND W/SHORT GRASSES & SPARSE VEGETATION. ALSO IN DISTURBED (GRADED) GROUND. GRAVELLY CLAY LOAM, LOWER SLOPE, PLANAR MICROTOP. 5% SHRUB COVER, 60% HERBACEOUS COVER. ASSOC SPECIES: BRTE, BRMO, CESO, POBU, SHERARDIA, LOTUS CORNICULATUS.

Protection:

Management:

General: 1993 PG& T INVENTORY PLANT SIGHTING REPORT, RICHARD BROCK REPORTER. PROBABLY EXTENDS UPSLOPE QUITE A WAYS.

Scientific Name: ***Cheilanthes intertexta***
Common Name: **Coastal lipfern**

EO NUM: 3
EO ID: 19573

Federal Status: | GRANK: G5 | NHP List: 2
State Status: | SRANK: S1 | HP Track: Y

Category: Vascular Plant
ELCODE: PPADI090D0

Confirmed: | First Obs: 1989 | Last Obs: 1989-03-16 | EO Rank:

Directions: N END EMIGRANT LAKE

County Name: Jackson | Ecoregion: KM | Owner Name/Type: | Watershed: 1710030801 - BEAR CREEK

Town-Range: 039S002E | Sec: 20 | Note: | QuadCode: 42122-B5 | QuadName: Emigrant Lake | Managed Area Name:

Source Feature [Uncertainty Type (Distance)] Use Class:
19573 Polygon [Areal - Delimited (8 m)]
28666 Polygon [Areal - Delimited (8 m)]

Annual Observations:

Feature ID | Date | Source Observation data

Occurence Data

EO Type:

EO Data: ABOUT 18 POPULATIONS, HEALTHY, IN ISOLATED CLUMPS.

Minimum Elev.(m): 792

EO Comments: IN CREVICES OF SW FACING ROCK BLUFFS

Protection:

Management:

General: 1989 MAP, LANG, FRANK. COLLECTION MADE, FROND ONLY, FAL1606 (SOC)

Scientific Name: ***Contia tenuis***
Common Name: **Sharptail snake**

EO NUM: 36
EO ID: 3248

Federal Status: | GRANK: G5 | NHP List:
State Status: | SRANK: S4 | HP Track: N

Category: Vertebrate Animal
ELCODE: ARADB09010

Confirmed: | First Obs: 1967 | Last Obs: 1968 | EO Rank:

Directions: ASHLAND, 2 MI S ON NEIL CREEK RD FROM HWY 66

County Name: Jackson | Ecoregion: KM | Owner Name/Type: | Watershed: 1710030801 - BEAR CREEK

Town-Range: 039S001E | Sec: 13 | Note: | QuadCode: 42122-B6 | QuadName: Ashland | Managed Area Name:

Source Feature [Uncertainty Type (Distance)] Use Class
3248 Point [Areal - Estimated (1500 m)]

Annual Observations

Feature ID Date Source Observation data

Occurence Data
EO Type:
Minimum Elev.(m): 732
EO Data: LAIS OBSERVED MANY ADULTS DURING THE SPRING OF 1967 & 1968
EO Comments: FOUND UNDER LEAVES & BOARDS NEAR IRRIGATION DITCH ABOUT 100 FT TO THE E OF THE RD
Protection:
Management:
General:

Scientific Name: ***Corynorhinus townsendii***
Common Name: **Townsend's big-eared bat**

EO NUM: 215
EO ID: 26301
Federal Status: SOC GRANK: G4 NHP List: 2
State Status: SC SRANK: S2 HP Track: Y
Category: Vertebrate Animal
ELCODE: AMACC08010
Confirmed: First Obs: 1959-05-01 Last Obs: 1959-05-01 EO Rank: H - Historical
Directions: Sensitive Data - contact ORNHIC for more information

County Name: Jackson
Ecoregion: KM
Owner Name/Type:
Watershed: 1710030801 - BEAR CREEK

Town-Range Sec Note
039S001E
039S001E
039S001E
039S001E
039S001E
039S001E
039S001E
039S001E
039S001E

Managed Area Name:

Source Feature [Uncertainty Type (Distance)] Use Class
42389 Point [Areal - Estimated (1500 m)]

Annual Observations

Feature ID Date Source Observation data

Occurence Data
EO Type:
Minimum Elev.(m):
EO Data: Sensitive Data - contact ORNHIC for more information
EO Comments:
Protection:
Management:
General: SOU specimen #101. Exact location not specified, location given as Ashland.

Scientific Name: ***Cypripedium fasciculatum***
Common Name: **Clustered lady's-slipper**

EO NUM: 37
EO ID: 3226
Federal Status: SOC GRANK: G4 NHP List: 2
State Status: C SRANK: S3 HP Track: Y
Category: Vascular Plant
ELCODE: PMORC0Q060
Confirmed: First Obs: 1988 Last Obs: 1988-06-17 EO Rank:
Directions: TOLMAN CREEK, S OF ASHLAND. AS ABOVE, FROM TURNOUT ON ROAD 2080 FOLLOW YELLOW/BLACK STRIPED FLAGGING TO MIDSLOPE.

County Name: Jackson
Ecoregion: KM
Owner Name/Type: FEDERAL
Watershed: 1710030801 - BEAR CREEK

Town-Range Sec Note
039S001E 27

QuadCode QuadName
42122-B6 Ashland

Managed Area Name:
ROGUE RIVER NATIONAL FOREST
ASHLAND RANGER DISTRICT

Source Feature [Uncertainty Type (Distance)] Use Class
3226 Point [Areal - Estimated (50 m)]

Annual Observations

Feature ID Date Source Observation data

Occurence Data

EO Type:
EO Data: 5 INDIVIDUALS IN 2x2 M. 40% VEG., 60% FLOWERING
EO Comments: SIDE RIDGE. UNDER PRE-COMMERCIAL THINNED PSME POLES 14'x 14' SPACING. ASPECT NNE, 50% SLOPE. W/PSME & SCRUB ARME/SYAL, HODI, PAMY
Protection:
Management:
General: 1988 FS SIGHTING REPORT, KEIR, ANDY

Minimum Elev.(m): 1006

Scientific Name: ***Erodium macrophyllum***
Common Name: **Large-leaved filaree**

EO NUM: 1
EO ID: 8465

Federal Status: GRANK: G3 NHP List: 2-ex
State Status: SRANK: SH HP Track: Y
Confirmed: First Obs: 1887-05 Last Obs: 1889-04-15 EO Rank: H - Historical
Directions: NEAR ASHLAND

Category: Vascular Plant
ELCODE: PDGER01070

County Name	Ecoregion	Owner Name/Type
Jackson	KM	

Watershed
1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName
039S001E	04		42122-B6	Ashland
039S001E	06			
038S001E	34			
039S001E	27			
039S001E	29			
039S001E	23			
039S001E	21			
039S001E	19			
039S001E	14			
039S001E	16			
039S001E	12			
039S001E	10			
039S001E	08			
039S001E	01			
039S001E	03			
039S001E	02			
039S001E	07			
039S001E	09			
039S001E	11			
039S001E	18			
039S001E	17			
039S001E	15			
039S001E	13			
039S001E	20			
039S001E	22			
038S001E	32			
039S001E	28			
038S001E	33			
038S001E	35			
039S001E	05			

Managed Area Name

Source Feature [Uncertainty Type (Distance)] Use Class
8465 Point [Areal - Estimated (4000 m)]

Annual Observations

Feature ID Date Source Observation data

Occurence Data

EO Type:
EO Data:
Minimum Elev.(m):
EO Comments:
Protection:
Management:
General: HERBARIUM COLLECTIONS: HOWELL, 1340, 4-15-1889, ORE. HOWELL, S.N., MAY 1887, ORE.

Scientific Name: ***Horkelia tridentata ssp. tridentata***
Common Name: **Three-toothed horkelia**

EO NUM: 3
EO ID: 1167

Federal Status: GRANK: G4G5T4? NHP List: 2
State Status: SRANK: S1 HP Track: Y
Category: Vascular Plant
ELCODE: PDROS0W0F2

Confirmed: First Obs: 1996-05-16 Last Obs: 1996-05-16 EO Rank:
Directions: TOLMAN CREEK ROAD. ABOUT 1/3 MILE BACK DOWN TOLMAN CR. RD. FROM EPSTEIN'S DRIVEWAY. NEAR WHERE SECTIONS 22, 23, 26, AND 27 MEET.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM	PRIVATE	1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	22		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class
1167 Point [Areal - Estimated (50 m)]

Annual Observations

Feature ID Date Source Observation data

Occurence Data

EO Type:
EO Data: 10 INDIVIDUALS ESTIMATED IN 0.1 ACRES.
Minimum Elev.(m): 933
EO Comments: SUNNY ROADBANK AND SMALL ADJACENT OPENING IN BRUSH. DECOMPOSED GRANITE SUBSTRATE.
Protection:
Management:
General: 1996 FS SIGHTING REPORT; WAYNE ROLLE.

Scientific Name: ***Horkelia tridentata ssp. tridentata***
Common Name: **Three-toothed horkelia**

EO NUM: 6
EO ID: 12461

Federal Status: GRANK: G4G5T4? NHP List: 2
State Status: SRANK: S1 HP Track: Y
Category: Vascular Plant
ELCODE: PDROS0W0F2

Confirmed: First Obs: 1996-05-16 Last Obs: 1996-07 EO Rank:
Directions: SW OF HAMILTON & TOLMAN CREEKS. 2 SITES. 1) ASHLAND WATERSHED E OF REEDER RESERVOIR. 2) ON UPPER ROADBANK & SLOPE ABOVE TOLMAN CREEK RD. JUST INSIDE FS BOUNDARY, ~1/4 MI N OF FIRST CONCRETE APRON CREEK CROSSING AFTER ENTERING FS LAND. ALSO FOUND INTERMITT

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM	FEDERAL	1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	21		42122-B6	Ashland	ROGUE RIVER NATIONAL FOREST
039S001E	27				ASHLAND RANGER DISTRICT
039S001E	28				

Source Feature [Uncertainty Type (Distance)]	Use Class		Annual Observations
12461	Polygon	[Areal - Delimited (8 m)]	
27330	Polygon	[Areal - Delimited (8 m)]	
27331	Polygon	[Areal - Delimited (8 m)]	
27332	Polygon	[Areal - Delimited (8 m)]	
27333	Polygon	[Areal - Delimited (8 m)]	
27334	Polygon	[Areal - Delimited (8 m)]	
27335	Polygon	[Areal - Delimited (8 m)]	
27336	Polygon	[Areal - Delimited (8 m)]	
27337	Polygon	[Areal - Delimited (8 m)]	
27338	Polygon	[Areal - Delimited (8 m)]	
27339	Polygon	[Areal - Delimited (8 m)]	
27340	Polygon	[Areal - Delimited (8 m)]	
27341	Polygon	[Areal - Delimited (8 m)]	

Feature ID Date Source Observation data

Occurence Data

EO Type: Minimum Elev.(m): 930

EO Data: 1) ~2000 PLANTS; ~10 ACRE AREA. 2) ~600 PLANTS; IN BUD & FLOWERING; 2 ACRE AREA.

EO Comments: 1) SHADED FUEL BREAKS WHICH ARE THINNED AND BURNED AREAS, USUALLY ON RIDGES, TO PREVENT WILDFIRE SPREAD & ALSO NATURAL OPENINGS IN WOODS, BRUSH & ROADSIDE; RIDGES & SLOPES; SOIL: DECOMPOSED GRANITE; ASSOC SPECIES: PONDEROSA PINE, MADRONE, DOUGLAS FIR, NATIVE GRASSES & FORBS, INTRODUCED ANNUAL GRASSES, MANZANITA & DEERBRUSH. 2)SUNNY ROAD BANK & OPENINGS IN WOODS & BRUSH ON THE SLOPE ABOVE, AND IN SUNNY PARTS OF THE SHADED FUEL BREAK; BROAD SLOPING RIDGE; CONVEX MICROTOP; SOIL: DECOMPOSED GRANITE; ASSOC SPECIES: PINUS PONDEROSA, PSEUDOTSUGA, MADRONE, ARCTOSTAPHYLOS VISCIDA, CEANOTHUS INTEGERRIMUS, FESTUCA IDAHOENSIS, LUPINE, MADIA.

Protection:

Management:

General: 1996 FS PLANT SIGHTING REPORTS; WAYNE ROLLE REPORTER. AT LEAST SEVERAL SUB POPS INCLUDED. THE MAJORITY OF THESE ARE IN THE SHADED FUEL BREAKS. THESE WERE CONSTRUCTED IN AREAS WHERE THE HORKELIA WOULD OCCUR NATURALLY & ARE PROBABLY HELPING PROVIDE HABITAT. NATURAL OPENINGS ALMOST GONE AS A RESULT OF FIRE EXCLUSION.

Scientific Name: ***Lampropeltis zonata*** EO NUM: 11

Common Name: **California mountain kingsnake** EO ID: 14082

Federal Status: SOC GRANK: G4G5 NHP List: 4 Category: Vertebrate Animal

State Status: SV SRANK: S4 HP Track: N ELCODE: ARADB19060

Confirmed: First Obs: 1982 Last Obs: 1982-05-07 EO Rank:

Directions: NE EDGE OF EMIGRANT RESERVOIR, APPROXIMATELY 1.5 MILES NNE OF KLAMATH JUNCTION

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S002E	20		42122-B5	Emigrant Lake	

Source Feature [Uncertainty Type (Distance)]	Use Class		Annual Observations
14082	Point	[Areal - Estimated (50 m)]	

Feature ID Date Source Observation data

Occurence Data

EO Type: Minimum Elev.(m): 671

EO Data: ONE JUVENILE TAKEN FROM BENEATH ROCK BY DOUG KNUTSEN OF ASHLAND; SOUTH SLOPE OF HILL ABOVE RESERVOIR. BLACK SALAMANDERS (ANEIDES FLAVIPUNCTATUS) ALSO KNOW FROM AREA.

EO Comments: OPEN, ROCKY AREA WITH SCATTERED OAK, PINE, MADRONE AND MANZANITA

Protection:

Management:

General: 1984 FOLLOW UP INVENTORY: THE HERPTOLOGY OF JACKSON AND JOSEPHINE COUNTIES BY A.D. ST. JOHN

Scientific Name: ***Lampropeltis zonata***
Common Name: **California mountain kingsnake**

EO NUM: 13
EO ID: 10674

Federal Status: SOC GRANK: G4G5 NHP List: 4
State Status: SV SRANK: S4 HP Track: N
Confirmed: First Obs: 1984 Last Obs: 1984-04-14 EO Rank:
Directions: SOUTH SLOPE OF POMPADOUR BLUFF, 2.5 MILES EAST OF ASHLAND.

Category: Vertebrate Animal
ELCODE: ARADB19060

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	01		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations
10674 Point [Areal - Estimated (50 m)]

Feature ID Date Source Observation data

Occurence Data
EO Type:
Minimum Elev.(m): 671
EO Data: ONE JUVENILE FOUND UNDER ROCK ON SOUTH SLOPE OF POMPADOUR BLUFF. 5PM ON WARM, SUNNY DAY.
EO Comments: OUTCROP OF ROCKS ABOVE IRRIGATION DITCH IN OPEN GRASSY AREA WITH SCATTERED OAK AND MANZANITA
Protection:
Management:
General: A.D. ST. JOHN. 1984 FOLLOW-UP INVENTORY: THE HERPETOLOGY OF JACKSON AND JOSEPHINE COUNTIES

Scientific Name: ***Lampropeltis zonata***
Common Name: **California mountain kingsnake**

EO NUM: 15
EO ID: 13250

Federal Status: SOC GRANK: G4G5 NHP List: 4
State Status: SV SRANK: S4 HP Track: N
Confirmed: First Obs: 1982 Last Obs: 1982-06-03 EO Rank:
Directions: 2 MILES EAST OF ASHLAND ON THE JIM MILLER RANCH.

Category: Vertebrate Animal
ELCODE: ARADB19060

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S002E	07		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations
13250 Point [Areal - Estimated (1500 m)]

Feature ID Date Source Observation data

Occurence Data
EO Type:
Minimum Elev.(m): 610
EO Data: 38 INCH ADULT FOUND CROSSING DRIVEWAY INTO THE JIM MILLER RANCH AT 1:30PM ON WARM, SEMI-CLOUDY DAY.
EO Comments: OPEN, ROCKY SLOPE BY A QUARRY ABOVE LANE; SCATTERED OAK, PINE, JUNIPER, MADRONE, MANZANITA AND PRICKLY PEAR CACTUS.
Protection:
Management:
General: 1984 FOLLOW-UP INVENTORY. THE HERPETOLOGY OF JACKSON AND JOSEPHINE COUNTIES, BY A.D. ST. JOHN

Scientific Name: ***Melanerpes lewis***
Common Name: **Lewis's woodpecker**

EO NUM: 24
EO ID: 12009

Federal Status: SOC GRANK: G4 NHP List: 2
State Status: SC SRANK: S2S3B HP Track: Y
Confirmed: First Obs: 1984 Last Obs: 1985-03-31 EO Rank: H - Historical
Directions: EMIGRANT LAKE

Category: Vertebrate Animal
ELCODE: ABNYF04010

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S002E	20		42122-B5	Emigrant Lake	

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

12009 Point [Areal - Estimated (1500 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type:

Minimum Elev.(m): 663

EO Data: ROGUE VALLEY AUDUBON REPORTED 2 BIRDS ON 9-29-84 & 2 BIRDS ON 10-14-84 IN THE EMIGRANT LAKE AREA. A BLM EMPLOYEE REPORTED 6 BIRDS ALONG THE N END OF THE LAKE ON 3-3-85

EO Comments:

Protection:

Management:

General: APPEARS TO BE WINTERING AREA, NESTING NOT DOCUMENTED

Scientific Name: ***Melanerpes lewis***
Common Name: **Lewis's woodpecker**

EO NUM: 29
EO ID: 8068

Federal Status: SOC GRANK: G4 NHP List: 2 Category: Vertebrate Animal
State Status: SC SRANK: S2S3B HP Track: Y ELCODE: ABNYF04010
Confirmed: First Obs: 1984 Last Obs: 1984-10-24 EO Rank: H - Historical

Directions: DEAD INDIAN RD; APPROX 1 MI N OF THE ASHLAND AIRPORT WHERE THE POWER LINE CROSSES THE ROAD

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	12		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

8068 Point [Areal - Estimated (1500 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type:

Minimum Elev.(m): 610

EO Data: 25 LEWIS' WOODPECKERS OBSERVED ON 10-24-84 DURING A ROGUE VALLEY AUDUBON FIELD TRIP. GOOD-SIZED WINTERING POPULATION

EO Comments:

Protection:

Management:

General:

Scientific Name: ***Microseris douglasii ssp. douglasii***
Common Name: **Douglas' microseris**

EO NUM: 1
EO ID: 5744

Federal Status: GRANK: G4T4 NHP List: 2-ex Category: Vascular Plant
State Status: SRANK: SH HP Track: Y ELCODE: PDAST6E061
Confirmed: First Obs: 1889 Last Obs: 1889-04 EO Rank: H - Historical

Directions: ON HIGH LANDS OPPOSITE ASHLAND.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
038S001E	26		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

5744 Point [Areal - Estimated (8050 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type: Minimum Elev.(m): -339

EO Data: HERBARIUM COLLECTION: T. HOWELL, #1376, 4-1889, WTU.

EO Comments:

Protection:

Management:

General: HERBARIUM COLLECTION.

Scientific Name: ***Monadenia fidelis celeuthia*** EO NUM: 2

Common Name: **Traveling sideband (snail)** EO ID: 10009

Federal Status: GRANK: G4G5T1 NHP List: 1 Category: Invertebrate Animal

State Status: SRANK: S1 HP Track: Y ELCODE: IMGASC7035

Confirmed: First Obs: 1998-10-26 Last Obs: 1998-10-26 EO Rank: E - Verified extant (viability not assessed)

Directions: ON NW CORNER OF A BUTTE E OF ASHLAND MUNICIPAL AIRPORT, AT ABOUT MILEPOST 0.7 ON S SIDE OF DEAD INDIAN MEMORIAL RD (CO RD 722), 0.1 MI S OF EMIGRANT CREEK BRIDGE.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM	PRIVATE	1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	12		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

10009 Point [Areal - Estimated (50 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type: Minimum Elev.(m): 610

EO Data: 1998: 1 INDIVIDUAL (LIVE)

EO Comments: MIXED FORET ON STEEP SLOPE

Protection:

Management:

General: FREST SITE NUMBER: 3921

Scientific Name: ***Monadenia fidelis celeuthia*** EO NUM: 3

Common Name: **Traveling sideband (snail)** EO ID: 91

Federal Status: GRANK: G4G5T1 NHP List: 1 Category: Invertebrate Animal

State Status: SRANK: S1 HP Track: Y ELCODE: IMGASC7035

Confirmed: First Obs: 1998-10-26 Last Obs: 1998-10-26 EO Rank: E - Verified extant (viability not assessed)

Directions: QUARRY ON DEAD INDIAN MEMORIAL RD (JACKSON CO RD 722), AT MILE 3.1, NW SIDE, OPPOSITE SIDE OF WALKER CREEK FROM MIDDLE RIDGE.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM	PRIVATE	1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S002E	05		42122-B5	Emigrant Lake	

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

91 Point [Areal - Estimated (50 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type: Minimum Elev.(m): 591

EO Data: 1998: SPECIES PRESENT

EO Comments: BASALT TALUS & ROCK OUTCROP PARTLY QUARRIED.

Protection:

Management:
General: FREsT SITE NUMBER: 3922

Scientific Name: ***Myotis thysanodes***
Common Name: **Fringed myotis**

EO NUM: 95
EO ID: 26431
Category: Vertebrate Animal
ELCODE: AMACC01090

Federal Status: SOC GRANK: G4G5 NHP List: 2
State Status: SV SRANK: S2 HP Track: Y
Confirmed: First Obs: 1997-08-27 Last Obs: 1997-08-27 EO Rank:
Directions: Sensitive Data - contact ORNHIC for more information

County Name	Ecoregion	Owner Name/Type
Jackson	KM	USFS

Watershed
1710030801 - BEAR CREEK

Town-Range Sec Note
039S001E

Managed Area Name
ROGUE RIVER NATIONAL FOREST
ASHLAND RANGER DISTRICT

Source Feature [Uncertainty Type (Distance)] Use Class
42632 Point [Areal - Estimated (400 m)]

Annual Observations

Feature ID Date Source Observation data

Occurence Data
EO Type:
EO Data: Sensitive Data - contact ORNHIC for more information
Minimum Elev.(m): 1250
EO Comments: The opening of the mine is concreted and partially blocked by an old wooden door. Mine extends ~300 ft and splits into 3 shafts. Area is mixed coniferous and madrone w/many snags. Associated w/Myotis californicus and M. spp.
Protection:
Management:
General:

Scientific Name: ***Oncorhynchus kisutch pop. 2***
Common Name: **Coho salmon (Southern Oregon/Northern California Coasts ESU)**

EO NUM: 57
EO ID: 1864
Category: Vertebrate Animal
ELCODE: AFCHA02032

Federal Status: LT GRANK: G4T2Q NHP List: 1
State Status: SV SRANK: S2 HP Track: Y
Confirmed: First Obs: 1998-PRE Last Obs: 1998-PRE EO Rank:
Directions: BEAR CREEK & TRIBUTARIES

County Name	Ecoregion	Owner Name/Type
Jackson	KM	

Watershed
17100308 - Middle Rogue

Town-Range Sec Note

QuadCode	QuadName
42122-B6	Ashland
42122-B7	Talent
42122-C7	Medford East
42122-C8	Medford West
42122-D8	Sams Valley

Managed Area Name

Source Feature [Uncertainty Type (Distance)] Use Class
Data currently not available.

Annual Observations

Feature ID Date Source Observation data

Occurence Data
EO Type: SPAWNING & REARING - fish
EO Data: ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE. ODFW SALMONID DISTRIBUTION DOCUMENTATION 1998: BEAR CREEK. 1996: BEAR CREEK.
Minimum Elev.(m):
EO Comments:
Protection:
Management:

General: DOCUMENTATION INFORMATION USED IN THIS EOR WAS DERIVED FROM THE ODFW SALMONID DISTRIBUTION DOCUMENTATION DIGITAL DATABASE DISTRIBUTED IN 2001. DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 2001. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF COHO IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.

Scientific Name: ***Oncorhynchus mykiss pop. 24***
Common Name: **Steelhead (Klamath Mountains Province ESU, summer run)**

EO NUM: 37
EO ID: 20355
Category: Vertebrate Animal
ELCODE: AFCHA02094

Federal Status:
State Status: SV
GRANK: G5T2T3Q
SRANK: S2S3
NHP List: 2
HP Track: Y
Confirmed:
First Obs: 1998-PRE
Last Obs: 1998-PRE
EO Rank:
Directions: ROGUE RIVER AND TRIBUTARIES

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		17100308 - Middle Rogue
Josephine			

Town-Range	Sec	Note	QuadCode	QuadName
			42122-B6	Ashland
			42122-B7	Talent
			42122-C7	Medford East
			42122-C8	Medford West
			42122-D8	Sams Valley
			42123-D1	Gold Hill
			42123-D2	Rogue River
			42123-D3	Grants Pass
			42123-D4	Wilderville
			42123-E1	McConville Peak
			42123-E2	Wimer

Managed Area Name

Source Feature [Uncertainty Type (Distance)] Use Class
Data currently not available.

Annual Observations

Feature ID	Date	Source Observation data

Occurence Data

EO Type: REARING & MIGRATION - fish
Minimum Elev.(m):
EO Data: SUMMER RUN. ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE. ODFW SALMONID DISTRIBUTION DOCUMENTATION 1998: ROGUE RIVER, BEAR CREEK. 1996: BEAR CREEK.
EO Comments:
Protection:
Management:
General: DOCUMENTATION INFORMATION USED IN THIS EOR WAS DERIVED FROM THE ODFW SALMONID DISTRIBUTION DOCUMENTATION DIGITAL DATABASE DISTRIBUTED IN 2001. DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 2001. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF STEELHEAD IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.

Scientific Name: ***Oncorhynchus mykiss pop. 24***
Common Name: **Steelhead (Klamath Mountains Province ESU, summer run)**

EO NUM: 71
EO ID: 20734
Category: Vertebrate Animal
ELCODE: AFCHA02094

Federal Status:
State Status: SV
GRANK: G5T2T3Q
SRANK: S2S3
NHP List: 2
HP Track: Y
Confirmed:
First Obs: 2001-PRE
Last Obs: 2009
EO Rank: E - Verified extant (viability not assessed)
Directions: NEIL CREEK AND TRIBUTARIES

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName
039S002E	30		42122-A6	Mount Ashland
039S002E	19		42122-B6	Ashland
039S001E	13			
039S001E	11			

Managed Area Name

040S002E	06
039S002E	31
040S001E	01
040S001E	12
039S001E	12
039S001E	24
039S001E	25

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

Data currently not available.

Feature ID Date Source Observation data

Occurence Data

EO Type: SPAWNING & REARING - fish Minimum Elev.(m):

EO Data: 2009: Classified as spawning by ODFW. Undocumented fish observation.
SUMMER RUN. ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE. ODFW SALMONID DISTRIBUTION DOCUMENTATION 1999: NEIL CREEK. 1998: NEIL CREEK. 1994: NEIL CREEK.

EO Comments:

Protection:

Management:

General: DOCUMENTATION INFORMATION USED IN THIS EOR WAS DERIVED FROM THE ODFW SALMONID DISTRIBUTION DOCUMENTATION DIGITAL DATABASE DISTRIBUTED IN 2001. DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 2001. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF STEELHEAD IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.

Scientific Name: ***Oncorhynchus mykiss pop. 24***

Common Name: **Steelhead (Klamath Mountains Province ESU, summer run)**

EO NUM: 72

EO ID: 19210

Federal Status: GRANK: G5T2T3Q NHP List: 2 Category: Vertebrate Animal

State Status: SV SRANK: S2S3 HP Track: Y ELCODE: AFCHA02094

Confirmed: First Obs: 1998-PRE Last Obs: 2009 EO Rank: E - Verified extant (viability not assessed)

Directions: EMIGRANT CREEK AND TRIBUTARIES

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S002E	05		42122-B5	Emigrant Lake	
038S002E	34		42122-B6	Ashland	
038S002E	32				
038S002E	28				
039S002E	17				
039S002E	08				
039S001E	12				
039S002E	07				
039S002E	18				
039S002E	20				
038S002E	27				
038S002E	33				
039S002E	06				

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

Data currently not available.

Feature ID Date Source Observation data

Occurence Data

EO Type: SPAWNING & REARING - fish Minimum Elev.(m):

EO Data: 2009: Classified as spawning by ODFW. Undocumented fish observation.
SUMMER RUN. ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE. ODFW SALMONID DISTRIBUTION DOCUMENTATION 1998: EMIGRANT CREEK. 1997: WALKER CREEK #2. 1953: WALKER CREEK #2.

EO Comments:

Protection:

Management:

General: DOCUMENTATION INFORMATION USED IN THIS EOR WAS DERIVED FROM THE ODFW SALMONID DISTRIBUTION DOCUMENTATION DIGITAL DATABASE DISTRIBUTED IN 2001. DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 2001. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF STEELHEAD IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT.

Scientific Name: ***Oncorhynchus mykiss pop. 24*** EO NUM: 144

Common Name: **Steelhead (Klamath Mountains Province ESU, summer run)** EO ID: 31215

Federal Status: GRANK: G5T2T3Q NHP List: 2 Category: Vertebrate Animal

State Status: SV SRANK: S2S3 HP Track: Y ELCODE: AFCHA02094

Confirmed: First Obs: 2009-pre Last Obs: 2009 EO Rank: E - Verified extant (viability not assessed)

Directions: Kitchen Creek, at confluence with Bear Creek. Segment extends approximately 1 mile.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	03		42122-B6	Ashland	
039S001E	04				

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

Data currently not available.

Feature ID Date Source Observation data

Occurence Data

EO Type: Minimum Elev.(m):

EO Data: 2009: Classified as spawning by ODFW. Undocumented fish observation.

EO Comments:

Protection:

Management:

General: Distribution information used in this EOR was derived from ODFW 1:24,000 scale geographic resources data produced and distributed in 2009. Use type was determined by ODFW and other natural resources agency field staff based on survey data, supporting documentation, and the best professional judgement of the field biologists. Unless otherwise noted, the presence of steelhead in described areas should be considered undocumented but as having a potential of being present.

Scientific Name: ***Oncorhynchus mykiss pop. 24*** EO NUM: 145

Common Name: **Steelhead (Klamath Mountains Province ESU, summer run)** EO ID: 31216

Federal Status: GRANK: G5T2T3Q NHP List: 2 Category: Vertebrate Animal

State Status: SV SRANK: S2S3 HP Track: Y ELCODE: AFCHA02094

Confirmed: First Obs: 2009-pre Last Obs: 2009 EO Rank: E - Verified extant (viability not assessed)

Directions: Gaerky Creek, at confluence with Bear Creek. Segment extends approximately .25 miles.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	10		42122-B6	Ashland	
039S001E	03				

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

Data currently not available.

Feature ID Date Source Observation data

Occurence Data

EO Type: Minimum Elev.(m):

EO Data: 2009: Classified as spawning by ODFW.

EO Comments:

Protection:

Management:

General: Distribution information used in this EOR was derived from ODFW 1:24,000 scale geographic resources data produced and distributed in 2009. Use type was determined by ODFW and other natural resources agency field staff based on survey data, supporting documentation, and the best professional judgement of the field biologists. Unless otherwise noted, the presence of steelhead in described areas should be considered undocumented but as having a potential of being present.

Scientific Name: ***Oncorhynchus mykiss pop. 24***
Common Name: **Steelhead (Klamath Mountains Province ESU, summer run)**

EO NUM: 146
EO ID: 31217

Federal Status: GRANK: G5T2T3Q NHP List: 2
State Status: SV SRANK: S2S3 HP Track: Y
Category: Vertebrate Animal
ELCODE: AFCHA02094
Confirmed: First Obs: 2009-pre Last Obs: 2009 EO Rank: E - Verified extant (viability not assessed)

Directions: Hamilton Creek, at confluence with Bear Creek. Segment extends approximately .15 miles.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	11		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class
Data currently not available.

Annual Observations

Feature ID Date Source Observation data

Occurence Data

EO Type:
EO Data: 2009: Classified as spawning by ODFW.
EO Comments:
Protection:
Management:

Minimum Elev.(m):

General: Distribution information used in this EOR was derived from ODFW 1:24,000 scale geographic resources data produced and distributed in 2009. Use type was determined by ODFW and other natural resources agency field staff based on survey data, supporting documentation, and the best professional judgement of the field biologists. Unless otherwise noted, the presence of steelhead in described areas should be considered undocumented but as having a potential of being present.

Scientific Name: ***Oncorhynchus mykiss pop. 24***
Common Name: **Steelhead (Klamath Mountains Province ESU, summer run)**

EO NUM: 147
EO ID: 31218

Federal Status: GRANK: G5T2T3Q NHP List: 2
State Status: SV SRANK: S2S3 HP Track: Y
Category: Vertebrate Animal
ELCODE: AFCHA02094
Confirmed: First Obs: 2009-pre Last Obs: 2009 EO Rank: E - Verified extant (viability not assessed)

Directions: Trib to Bear Creek, .2 miles west of confluence of Bear Creek and Neil Creek. Segment extends approximately .2 miles.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	11		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class
Data currently not available.

Annual Observations

Feature ID Date Source Observation data

Occurence Data

EO Type:
EO Data: 2009: Classified as spawning by ODFW.
EO Comments:
Protection:
Management:

Minimum Elev.(m):

General: Distribution information used in this EOR was derived from ODFW 1:24,000 scale geographic resources data produced and distributed in 2009. Use type was determined by ODFW and other natural resources agency field staff based on survey data, supporting documentation, and the best professional judgement of the field biologists. Unless otherwise noted, the presence of steelhead in described areas should be considered undocumented but as having a potential of being present.

Scientific Name: ***Oncorhynchus mykiss pop. 25***
Common Name: **Steelhead (Klamath Mountains Province ESU, winter run)**

EO NUM: 15
EO ID: 22956

Federal Status: GRANK: G5T3Q NHP List: 2 Category: Vertebrate Animal
State Status: SRANK: S2S3 HP Track: Y ELCODE: AFCHA02095
Confirmed: First Obs: 1952 Last Obs: 2009 EO Rank: E - Verified extant (viability not assessed)
Directions: ROGUE RIVER & TRIBUTARIES

County Name	Ecoregion	Owner Name/Type
Jackson	KM	
Josephine		

Watershed
1710030801 - BEAR CREEK
1710030802 - ROGUE RIVER-GOLD HILL
1710030803 - EVANS CREEK
1710030804 - ROGUE RIVER-GRANTS PASS
1710031001 - ROGUE RIVER-REC SECTION

Town-Range	Sec	Note	QuadCode	QuadName
036S004W	04		42122-B6	Ashland
035S002W	33		42122-B7	Talent
035S002W	31		42122-C7	Medford East
035S003W	33		42122-C8	Medford West
035S004W	34		42122-D7	Eagle Point
033S002W	05		42122-D8	Sams Valley
035S002W	27		42122-E8	Boswell Mountain
035S003W	25		42122-F8	Cleveland Ridge
035S002W	23		42123-C1	Mount Isabelle
035S003W	24		42123-C2	Applegate
035S002W	15		42123-D1	Gold Hill
035S003W	13		42123-D2	Rogue River
035S004W	16		42123-D3	Grants Pass
035S003W	07		42123-D4	Wilderville
035S004W	11		42123-E1	McConville Peak
035S004W	09		42123-E2	Wimer
033S004W	01		42123-F1	Skeleton Mountain
035S003W	04		42123-F2	King Mountain
035S003W	06			
035S004W	04			
034S003W	34			
034S004W	33			
034S004W	32			
034S003W	25			
034S004W	27			
034S004W	29			
034S002W	20			
034S003W	23			
034S004W	22			
034S002W	18			
034S004W	14			
034S002W	09			
034S003W	10			
034S002W	04			
034S003W	04			
034S004W	03			
033S003W	34			
033S003W	31			
033S002W	28			
033S003W	27			
039S001E	12			
039S001E	10			
039S001E	04			

Managed Area Name

038S001E	32
038S001E	30
033S003W	30
038S001W	23
038S001W	15
038S001W	09
038S001W	05
037S001W	29
037S001W	30
037S004W	27
037S002W	24
037S004W	24
037S002W	13
033S004W	26
037S003W	18
037S004W	14
037S002W	12
037S003W	11
037S003W	07
033S002W	20
037S002W	02
037S003W	04
037S004W	03
036S002W	35
036S003W	35
036S003W	33
036S004W	34
036S002W	27
036S003W	26
036S003W	28
033S003W	21
036S004W	27
036S005W	28
036S006W	25
036S002W	22
036S002W	20
036S002W	19
036S003W	21
036S003W	19
036S004W	22
036S004W	20
033S004W	24
036S005W	23
036S005W	21
036S005W	19
036S006W	23
036S006W	21
036S006W	20
036S006W	19
036S002W	14
036S002W	16
036S002W	18
033S003W	15
036S003W	16
036S004W	13
036S004W	15
036S005W	15
036S005W	18
036S006W	14
036S002W	12
036S003W	12
036S003W	10
036S004W	12
033S002W	08

036S005W	07
036S002W	05
036S003W	01
036S003W	05
036S004W	03
033S003W	07
036S004W	01
036S003W	04
036S002W	06
036S002W	04
036S004W	09
036S004W	10
036S003W	08
036S003W	11
036S002W	09
036S006W	15
033S003W	18
036S005W	16
036S004W	16
036S004W	14
036S003W	17
036S003W	15
036S003W	13
036S002W	17
036S002W	15
036S002W	13
036S001W	18
033S002W	17
036S006W	22
036S006W	24
036S005W	20
036S005W	22
036S005W	24
036S004W	19
036S004W	21
036S004W	24
036S003W	20
036S003W	22
033S003W	19
036S002W	21
036S002W	23
036S005W	29
036S004W	30
036S004W	26
036S004W	25
036S003W	27
036S002W	28
036S004W	31
036S004W	35
033S003W	22
036S002W	34
037S004W	04
037S004W	02
037S003W	02
037S004W	11
037S004W	12
037S003W	09
037S002W	11
037S004W	15
037S004W	13
037S003W	16
037S004W	22
037S003W	19
037S001W	19

037S004W	25
033S004W	25
037S001W	32
038S001W	04
038S001W	10
038S001W	14
038S001W	24
038S001W	25
038S001E	31
038S001E	33
039S001E	03
039S001E	11
033S003W	28
033S002W	29
033S004W	35
033S003W	33
033S003W	32
033S002W	33
034S004W	02
034S003W	03
034S004W	10
034S004W	15
034S003W	15
034S002W	16
034S003W	22
034S003W	24
034S002W	19
034S002W	21
034S004W	28
034S003W	26
034S002W	29
034S004W	34
034S003W	35
035S004W	01
035S003W	05
035S003W	03
035S004W	08
035S004W	10
035S004W	12
035S002W	10
035S004W	15
033S003W	06
035S004W	21
035S002W	22
035S004W	28
035S002W	30
035S002W	26
035S004W	33
035S003W	32
035S003W	36
035S002W	32
035S002W	34

Source Feature [Uncertainty Type (Distance)] Use Class

Annual Observations

Data currently not available.

Feature ID Date Source Observation data

Occurence Data

EO Type: SPAWNING & REARING - fish

Minimum Elev.(m):

EO Data: 2009: Classified as spawning by ODFW. 2001: WINTER RUN. ODFW DISTRIBUTION MAPS USED TO CREATE THE 1:24,000 COVERAGE. ODFW SALMONID DISTRIBUTION DOCUMENTATION 1999: ROGUE RIVER, W. FK. EVANS CREEK, COLD CREEK. 1998: ROCK CREEK, BEAR CREEK. 1997: COLD CREEK. 1996: BEAR CREEK, W. FK. EVANS CREEK. 1992: W. FK. EVANS CREEK, QUEENS BRANCH. 1972: FOOTS CREEK. 1970: QUEENS BRANCH, PLEASANT CREEK. 1954: EVANS CREEK. 1952: EVANS CREEK, E. FK. EVANS CREEK, PLEASANT CREEK. 1950: BEAR CREEK.

EO Comments:

Protection:

Management:

General: DOCUMENTATION INFORMATION USED IN THIS EOR WAS DERIVED FROM THE ODFW SALMONID DISTRIBUTION DOCUMENTATION DIGITAL DATABASE DISTRIBUTED IN 2001. DISTRIBUTION INFORMATION USED IN THIS EOR WAS DERIVED FROM ODFW GEOGRAPHIC RESOURCES DATA PRODUCED AND DISTRIBUTED IN 2001. UNLESS SPECIFIC DATA EXISTS IN THE DATA FIELD, THE INFORMATION PRESENTED IN THIS EOR REPRESENTS THE "BEST PROFESSIONAL JUDGMENT" BY ODFW'S DISTRICT FISHERIES BIOLOGIST; THE PRESENCE OF STEELHEAD IN DESCRIBED AREAS SHOULD BE CONSIDERED UNDOCUMENTED BUT AS HAVING A POTENTIAL OF BEING PRESENT. Updated with 2009 ODFW data.

Scientific Name: ***Rana boylii*** EO NUM: 414

Common Name: **Foothill yellow-legged frog** EO ID: 25822

Federal Status: SOC GRANK: G3 NHP List: 2 Category: Vertebrate Animal

State Status: SC/SV SRANK: S2S3 HP Track: Y ELCODE: AAABH01050

Confirmed: First Obs: 1970-05-21 Last Obs: 1970-05-21 EO Rank: H - Historical

Directions: Bear Creek near Ashland

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	10		42122-B6	Ashland	
039S001E	03				
039S001E	04				
039S001E	11				

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

41402 Line [Negligible (8 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type:

EO Data: 1970: 1 specimen collected.

Minimum Elev.(m): 683

EO Comments:

Protection:

Management:

General:

Scientific Name: ***Rana boylii*** EO NUM: 417

Common Name: **Foothill yellow-legged frog** EO ID: 25825

Federal Status: SOC GRANK: G3 NHP List: 2 Category: Vertebrate Animal

State Status: SC/SV SRANK: S2S3 HP Track: Y ELCODE: AAABH01050

Confirmed: First Obs: 1971-05-10 Last Obs: 1971-05-10 EO Rank: H - Historical

Directions: Hamilton Creek, junction of Hwy 66 and Faith Ave.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	23		42122-B6	Ashland	
039S001E	14				
039S001E	11				

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

41406 Line [Negligible (8 m)]

Feature ID Date Source Observation data

Occurence Data
EO Type:
EO Data: 1971: 1 specimen collected.
EO Comments:
Protection:
Management:
General:

Minimum Elev.(m): 622

Scientific Name: ***Rana boylii***
Common Name: **Foothill yellow-legged frog**

EO NUM: 418
EO ID: 25826

Federal Status: SOC GRANK: G3 NHP List: 2
State Status: SC/SV SRANK: S2S3 HP Track: Y
Confirmed: First Obs: 1971-11-07 Last Obs: 1971-11-07 EO Rank: H - Historical
Directions: Gaerky Creek, NE Ashland, 0.5mi NW of Scenic Hills Cemetary.

Category: Vertebrate Animal
ELCODE: AAABH01050

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	10		42122-B6	Ashland	
039S001E	03				
039S001E	02				

Source Feature [Uncertainty Type (Distance)] Use Class
41407 Line [Negligible (8 m)]
41408 Line [Negligible (8 m)]

Annual Observations

Feature ID Date Source Observation data

Occurence Data
EO Type:
EO Data: 1971: 1 specimen collected.
EO Comments:
Protection:
Management:
General:

Minimum Elev.(m): 588

Scientific Name: ***Ranunculus austrooreganus***
Common Name: **Southern Oregon buttercup**

EO NUM: 3
EO ID: 8505

Federal Status: GRANK: G2 NHP List: 1
State Status: C SRANK: S2 HP Track: Y
Confirmed: Y First Obs: 1948-05-22 Last Obs: 1992-SPR EO Rank: A? - Possibly excellent estimated viability
Directions: EMIGRANT CREEK RESERVOIR

Category: Vascular Plant
ELCODE: PDRAN0L0E0

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM	LOCAL	1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S002E	29		42122-B5	Emigrant Lake	
039S002E	28				
039S002E	20				
039S002E	21				
039S002E	30				

Source Feature [Uncertainty Type (Distance)]	Use Class	Annual Observations
8505	Polygon [Areal - Delimited (8 m)]	
25868	Polygon [Areal - Delimited (8 m)]	
25869	Polygon [Areal - Delimited (8 m)]	
25870	Polygon [Areal - Delimited (8 m)]	
25871	Polygon [Areal - Delimited (8 m)]	
25872	Polygon [Areal - Delimited (8 m)]	
25873	Polygon [Areal - Delimited (8 m)]	
25874	Polygon [Areal - Delimited (8 m)]	
25875	Polygon [Areal - Delimited (8 m)]	
25876	Polygon [Areal - Delimited (8 m)]	
25877	Polygon [Areal - Delimited (8 m)]	
25878	Polygon [Areal - Delimited (8 m)]	

Feature ID Date Source Observation data

Occurence Data

EO Type:

Minimum Elev.(m): -339

EO Data: 1992: NO SPECIFIC POPULATION NUMBERS GIVEN [BUT SHOULD BE LARGE NUMBER]

EO Comments: 1992: E-FACING SLOPES AND FLATTER AREAS IN SOMEWHAT UNDISTURBED OREGON WHITE OAK WOODLANDS. OCCASSIONALLY FOUND IN OPEN GRASSLANDS AND AROUND ISOLATED OAK TREES. APPEARS TO COPE WITH LIGHT RECREATION AND GRAZING.1948: DAMP GROUND

Protection: THREAT: CATTLE LOAFING (TRAMPLING), ORV

Management:

General: MAP AND LETTER FROM FRANK LANG, 1992. ALSO NOTED IN 1982 RARE PLANT LISTING FOR THAT AREA BY JOAN SEEVERS. PECK COLLECTION.

Scientific Name: ***Ranunculus austrooreganus***
Common Name: **Southern Oregon buttercup**

EO NUM: 29
EO ID: 7656

Federal Status:
State Status: C
Confirmed:

GRANK: G2
SRANK: S2
First Obs: 1993 Last Obs: 1993

NHP List: 1
HP Track: Y

Category: Vascular Plant
ELCODE: PDRAN0L0E0

EO Rank: B - Good estimated viability

Directions: SE OF KITCHEN CREEK

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
038S001E	35		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)]	Use Class	Annual Observations
7656	Polygon [Areal - Delimited (8 m)]	

Feature ID Date Source Observation data

Occurence Data

EO Type:

Minimum Elev.(m): 683

EO Data: 500+ PLANTS IN 5 ACRES.

EO Comments: SMALL QUGA STAND WITH TYPICAL HERB LAYER; RAAU SPARSE THROUGHOUT STAND

Protection:

Management:

General: 1993 PGT POWER LINE SURVEY

Scientific Name: ***Ranunculus austrooreganus***
Common Name: **Southern Oregon buttercup**

EO NUM: 30
EO ID: 7657

Federal Status:
State Status: C
Confirmed:

GRANK: G2
SRANK: S2
First Obs: 1993 Last Obs: 1993

NHP List: 1
HP Track: Y

Category: Vascular Plant
ELCODE: PDRAN0L0E0

EO Rank: A - Excellent estimated viability

Directions: GAERKY CREEK.

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
038S001E	35		42122-B6	Ashland	
038S001E	36				

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

7657 Polygon [Areal - Delimited (8 m)]

25900 Polygon [Areal - Delimited (8 m)]

25901 Polygon [Areal - Delimited (8 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type:

Minimum Elev.(m): 732

EO Data: THREE SUBPOPS FOR A TOTAL OF 1700 PLANTS, AS FOLLOWS: SITE #11: 600 IN 1/2 ACRE, #12: 100 IN 50 FT BANK ACROSS POWELINE R/W, #13: 1000 PLANTS (300 IN R/W) IN 10 ACRES.

EO Comments: OPEN GRASS WITH FEID, STLE, AND CATO. ALSO FOUND IN QUGA WITH LITTLE RHDI.

Protection:

Management:

General: 1993 PGT POWER LINE SURVEY

Scientific Name: ***Ranunculus austrooreganus***

Common Name: **Southern Oregon buttercup**

EO NUM: 31

EO ID: 11626

Federal Status: GRANK: G2 NHP List: 1 Category: Vascular Plant

State Status: C SRANK: S2 HP Track: Y ELCODE: PDRAN0L0E0

Confirmed: First Obs: 1993 Last Obs: 1993 EO Rank: C - Fair estimated viability

Directions: WALKER CREEK

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
038S002E	31		42122-B5	Emigrant Lake	

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

11626 Polygon [Areal - Delimited (8 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type:

Minimum Elev.(m):

EO Data: 300 PLANTS IN 6000 SQ. FT.

EO Comments: EDGE OF TYPICAL OAK WOODLAND

Protection:

Management:

General: 1993 PGT POWER LINE SURVEY

Scientific Name: ***Ranunculus austrooreganus***

Common Name: **Southern Oregon buttercup**

EO NUM: 32

EO ID: 2353

Federal Status: GRANK: G2 NHP List: 1 Category: Vascular Plant

State Status: C SRANK: S2 HP Track: Y ELCODE: PDRAN0L0E0

Confirmed: First Obs: 1993 Last Obs: 1993 EO Rank: A - Excellent estimated viability

Directions: WALKER CREEK/SALT RIDGE

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
038S002E	32		42122-B5	Emigrant Lake	

038S002E 33
038S002E 28
038S002E 27

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

2353 Polygon [Areal - Delimited (8 m)]
25902 Polygon [Areal - Delimited (8 m)]
25903 Polygon [Areal - Delimited (8 m)]
25904 Polygon [Areal - Delimited (8 m)]
25905 Polygon [Areal - Delimited (8 m)]
25906 Polygon [Areal - Delimited (8 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type:
Minimum Elev.(m): 744
EO Data: SIX SUBPOPS FOR A TOTAL OF 31,700+ PLANTS, AS FOLLOWS: SITE #15: 500 PLANTS IN 2 ACRES, #16: 10,000+ IN 10+ ACRES, #17: 10,000+ IN 25+ ACRES, #18: 200 PLANTS IN 1600 SQ. FT, #19: 1000+ PLANTS IN 5+ ACRES, #20: 10,000 PLANTS IN 40+ ACRES.
EO Comments: QUGA STANDS AND OPEN GRASSY AREAS.
Protection:
Management:
General: 1993 PGT POWER LINE SURVEY

Scientific Name: ***Rhamnus ilicifolia***
Common Name: **Redberry**

EO NUM: 1
EO ID: 14884

Federal Status: GRANK: G5 NHP List: 2 Category: Vascular Plant
State Status: SRANK: S1 HP Track: Y ELCODE: PDRHA0C062
Confirmed: First Obs: Last Obs: EO Rank:
Directions: JIM MILLER RANCH BY DEAD INDIAN RD

County Name: Jackson — Ecoregion: KM — Owner Name/Type: PRIVATE — Watershed: 1710030801 - BEAR CREEK
Town-Range: 039S001E — Sec: 01 — Note: — QuadCode: 42122-B6 — QuadName: Ashland — Managed Area Name:

Source Feature [Uncertainty Type (Distance)] Use Class — Annual Observations

14884 Point [Areal - Estimated (400 m)]

Feature ID Date Source Observation data

Occurence Data

EO Type:
Minimum Elev.(m): 610
EO Data: HERBARIUM COLLECTION: SESOCK, OSC
EO Comments:
Protection:
Management:
General:

Scientific Name: ***Strix occidentalis caurina***
Common Name: **Northern spotted owl**

EO NUM: 2,712
EO ID: 6629

Federal Status: LT GRANK: G3T3 NHP List: 1 Category: Vertebrate Animal
State Status: LT SRANK: S3 HP Track: Y ELCODE: ABNSB12011
Confirmed: First Obs: 1985 Last Obs: 1993 EO Rank: H - Historical
Directions: BOISE

County Name: Jackson — Ecoregion: KM — Owner Name/Type: FEDERAL — Watershed: 1710030801 - BEAR CREEK
Town-Range: — Sec: — Note: — QuadCode: — QuadName: — Managed Area Name:

039S001E	26	42122-B6 Ashland	ROGUE RIVER NATIONAL FOREST
039S001E	27		ASHLAND RANGER DISTRICT
039S001E	35		
039S001E	34		

Source Feature [Uncertainty Type (Distance)] Use Class
6629 Point [Areal - Estimated (400 m)]

Annual Observations
- 1993 - 0 OWLS SEEN
- 1991 - 2 OWLS SEEN 1 PAIR
- 1989 - 2 OWLS SEEN 1 PAIR
- 1985 - 1 OWL SEEN, SEX UNKNOWN

Feature ID Date Source Observation data

Occurence Data
EO Type:
EO Data: SPOTTED OWL HABITAT AREA.
EO Comments:
Protection:
Management:
General:

Minimum Elev.(m): 1097

Scientific Name: ***Tadarida brasiliensis***
Common Name: **Brazilian free-tailed bat**

EO NUM: 5
EO ID: 1789

Federal Status: GRANK: G5 NHP List: 4
State Status: SRANK: S4 HP Track: N
Confirmed: First Obs: 1954 Last Obs: 1988-09-21 EO Rank:
Directions: ASHLAND

Category: Vertebrate Animal
ELCODE: AMACD01010

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM		1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	09		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class
1789 Point [Areal - Estimated (4000 m)]

Annual Observations

Feature ID Date Source Observation data

Occurence Data
EO Type:
EO Data: 2 MALES & 1 FEMALE COLLECTED BY S.G. JEWETT ON 2-6-54 - PSMNH COLLECTION #7708-7710. 1 FEMALE COLLECTED BY P.M. LAISON 2-12-71 - PSMNH COLLECTION #24243. FOUR ADDITIONAL COLLECTIONS FROM 1973 TO 1988 IN THE CITY OF ASHLAND ARE HOUSED IN THE SOUTHERN OREGON STATE COLLEGE MUSEUM.
EO Comments: HABITAT NOT SPECIFIED
Protection:
Management:
General:

Minimum Elev.(m): 610

Scientific Name: ***Tadarida brasiliensis***
Common Name: **Brazilian free-tailed bat**

EO NUM: 6
EO ID: 11121

Federal Status: GRANK: G5 NHP List: 4
State Status: SRANK: S4 HP Track: N
Confirmed: First Obs: 1960 Last Obs: 1989-04-12 EO Rank:
Directions: SOUTHERN OREGON STATE COLLEGE CAMPUS: SCHNEIDER MUSEUM. STUDENT UNION, CHURCHILL HALL, GYMNASIUM, FOREST HALL, CLASSROOMS.

Category: Vertebrate Animal
ELCODE: AMACD01010

County Name	Ecoregion	Owner Name/Type	Watershed
Jackson	KM	STATE	1710030801 - BEAR CREEK

Town-Range	Sec	Note	QuadCode	QuadName	Managed Area Name
039S001E	16		42122-B6	Ashland	

Source Feature [Uncertainty Type (Distance)] Use Class
11121 Point [Areal - Estimated (400 m)]

Annual Observations

Feature ID Date Source Observation data

Occurence Data
EO Type:
EO Data: NUMEROUS SPECIMENS COLLECTED FROM 1960 TO 1989 AND HOUSED AT THE SOUTHERN OREGON STATE COLLEGE MUSEUM.
EO Comments:
Protection:
Management:
General:

Minimum Elev.(m): 652

Scientific Name: ***Vertigo dalliana***
Common Name: **Horseshoe vertigo**

EO NUM: 2
EO ID: 27086
Federal Status:
State Status:
Confirmed:
GRANK: G1
SRANK: S1
First Obs: 1998-10-26 Last Obs: 1998-10-26
NHP List: 1
HP Track: Y
EO Rank:
Category: Invertebrate Animal
ELCODE: IMGAS20130

Directions: Quarry at Dead Indian Memorial Rd. at milepoint 3.1 on NW side; opposite of Walker Creek from Middle Ridge.

County Name: Jackson
Ecoregion: KM
Owner Name/Type:
Watershed: 1710030801 - BEAR CREEK
Town-Range: 039S002E
Sec: 05
Note:
QuadCode: 42122-B5
QuadName: Emigrant Lake
Managed Area Name:

Source Feature [Uncertainty Type (Distance)] Use Class
43919 Point [Areal - Estimated (50 m)]

Annual Observations

Feature ID Date Source Observation data

Occurence Data
EO Type:
EO Data: 1998: species reported.
EO Comments: Basalt talus and rock outcrop, partly quarried.
Protection:
Management:
General: Frest site 3922

Minimum Elev.(m): 591

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43 records total

Key to Oregon Natural Heritage Information Center Data

Field Name	Description
Scientific Name	The scientific name of the species.
Common Name	The common name of the species.
Category	Value that indicates the broad biological category for each species.
ELCODE	Unique NatureServe code for identifying this element. 1st and 2nd byte (PD=Plant dict, PM=Plant monocot, PG=Plant gymnosperm, PP=Plant pteridophyte, AA=amphibian, AB=bird, AF=fish, AM=mammal, AR=reptile, I=invertebrate. 3rd-5th byte (family abbreviation). 6th-7th (genus code). 8th-9th (species). 10th (tie breaker).
Federal Status	US Fish and Wildlife Service or NOAA Fisheries status. **LE**=listed endangered, **LT**=listed threatened, **PE** or **PT**=proposed endangered or threatened, **C**=candidate for listing with enough information available for listing, **SOC** or **SC**=species of concern, **PS**:*xx*=partial status for species.
State Status	For animals, Oregon Department of Fish and Wildlife status; **LE**=listed endangered, **PE**=proposed endangered, **PT**=proposed threatened, **SC** or **C**=sensitive-critical, **SV** or **V**=sensitive-vulnerable, **SP** or **P**=sensitive-peripheral, **SU** or **U**=sensitive-undetermined status. For plants, Oregon Department of Agriculture status; **LE**=listed endangered, **LT**=listed threatened, **C**=candidate.
GRANK/SRANK	ORNHIC participates in an international system for ranking rare, threatened and endangered species throughout the world. The system was developed by The Nature Conservancy and is now maintained by NatureServe in cooperation with Heritage Programs or Conservation Data Centers (CDCs) in all 50 states, in 4 Canadian provinces, and in 13 Latin American countries. The ranking is a 1-5 scale, primarily based on the number of known occurrences, but also including threats, sensitivity, area occupied, and other biological factors. In this book, the ranks occupy two lines. The top line is the Global Rank and begins with a "G". If the taxon has a trinomial (a subspecies, variety or recognized race), this is followed by a "T" rank indicator. A "Q" at the end of this line indicates the taxon has taxonomic questions. The second line is the State Rank and begins with the letter "S". The ranks are summarized as follows: **1** = Critically imperiled because of extreme rarity or because it is somehow especially vulnerable to extinction or extirpation, typically with 5 or fewer occurrences; **2** = Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (extirpation), typically with 6-20 occurrences; **3** = Rare, uncommon or threatened, but not immediately imperiled, typically with 21-100 occurrences; **4** = Not rare and apparently secure, but with cause for long-term concern, usually with more than 100 occurrences; **5** = Demonstrably widespread, abundant, and secure; **H** = Historical Occurrence, formerly part of the native biota with the implied expectation that it may be rediscovered; **X** = Presumed extirpated or extinct; **U** = Unknown rank; **?** = Not yet ranked, or assigned rank is uncertain.
NHP list	All rare species in Oregon are assigned a list number of 1, 2, 3 or 4, where **1**=threatened or endangered throughout range, **2**=threatened or endangered in Oregon but more common elsewhere, **3**=Review List (more information is needed), **4**=Watch List (currently stable). A null value indicates the species is not currently on our rare species list.
HP Track	We currently obtain and computerize locational information for only those elements marked with **Y**(es). Those species marked with **N**(o) or **W**(atch) have incomplete data as we do not actively track them at this time.
EO NUM	The number of the Element Occurrence (EO) for this species. An element occurrence is an area of land or water where the species is or was known to occur and has conservation value. EOs are the main tracking unit for Heritage Programs.
EO ID	Unique identifier for the Element Occurrence (EO). Unique for each occurrence in the database.
First_obs	First reported sighting date for this occurrence in the form YYYY-MM-DD.
Last_obs	Last reported sighting date, usually in the form YYYY-MM-DD.

Key to Oregon Natural Heritage Information Center Data

Field Name	Description
Confirmed	Indication of whether taxonomic identification of the Element represented by this occurrence has been confirmed by a reliable individual. Blank=unknown, assumed to be correctly identified. Y=Yes, confident identification. ?=identification questions.
EO Rank	ORNHIC's determination of the viability of the occurrence.
Directions	Site name and/or directions to site.
County	County name(s) in which EO is mapped.
Ecoregion	Physiographic Province in which EO is mapped: **CR**=Coast Range, **WV**=Willamette Valley, **KM**=Klamath Mountains, **WC**=West slope and crest of the Cascades, **EC**=East slope of the Cascades, **BM**=Ochoco, Blue and Wallowa Mts., **BR**=Basin and Range, **CB**=Columbia Basin, **SP**=Snake River Plains.
Town-Range, Sec, and Note	United States rectangular land survey (also known as the Public Land Survey System) legal township, range, and section descriptions in which the EO is mapped. Township first (4 bytes), range second (4 bytes). For example: 004S029E = Township 4S, Range 29E. All locations are with reference to the Willamette Meridian. Fractional ranges or townships are indicated in the Note field.
Quadcode	USGS code for the USGS topographic quadrangle map(s) where the record is mapped.
Quadname	Name of the USGS topographic quadrangle map(s) where the record is mapped.
Watershed	Watershed(s), identified according to the U.S. Geological Survey (USGS) Hydrologic Unit Map 10-digit code, within which the Element Occurrence is located.
Owner Name/Type	Federal, State, Private, etc.
Managed Area Name	BLM District, USFS Forest, Private Preserve
Annual Observation	Summary of yearly observation.
Source Feature	A Source Feature is the initial translation of a discrete unit of observation data as a spatial feature. Creation of a Source Feature requires an interpretive process. The likely location and extent of an observation is determined through consideration of the amount and direction of any variability between the recorded and actual locations of the observation data. In most cases, the Source Feature is delineated to encompass locational uncertainty. A Source Feature can be a point, line, or polygon. The type of Source Feature developed depends on both the preceding conceptual feature type and the locational uncertainty associated with the feature.
Feature ID	Unique identifier for source feature.
Obs Date	Date of source feature observation.
Source Observation Data	Observations specific to the source feature.

Key to Oregon Natural Heritage Information Center Data

Field Name	Description
Uncertainty Type (Distance)	The recorded location of an observation of an Element may vary from its true location due to many factors, including the level of expertise of the data collector, differences in survey techniques and equipment used, and the amount and type of information obtained. This inaccuracy is characterized as locational uncertainty, and is assessed for Source Feature(s) based on the uncertainty associated with the underlying information on the location of the observation. Four categories of locational uncertainty have been identified, as follows: Negligible uncertainty is less than or equal to 6.25 meters in any dimension. Source Features with negligible uncertainty are based on a comprehensive field survey with high quality mapping and a high degree of certainty. Linear uncertainty is greater than 6.25 meters, and varies along an axis (e.g., a path, stream, ridgeline). The true location of an observation with linear uncertainty may be visualized as effectively sliding along a line that delineates the uncertainty. Areal delimited uncertainty is greater than 6.25 meters, and varies in more than one dimension. The true location of an observation can be visualized as floating within an area with a boundary that can be specifically delimited. Boundaries can be defined using roads, bodies of water, etc. Areal estimated uncertainty is greater than 6.25 meters, and varies in more than one dimension. A boundary cannot be specifically delimited based on the observation information, i.e., the actual extent is unknown. The true location of the observation can be visualized as floating within an area for which boundaries cannot be specifically delimited. Source Features with areal estimated uncertainty require that the user specify an estimated uncertainty distance to be used for buffering the feature to incorporate the locational uncertainty.
Use Class	How the source feature is used by migratory species (e.g. breeding, maternity colony, hibernaculum).
EO Type	For animals, type of occurrence, e.g. roost, nest, spawning.
EO Data	Summary of species and population biology for the EO – may include number observed, number of sites, reproduction data, assessment of viability, etc.
EO Comments	Habitat information, e.g. aspect, slope, soils, associated species, community type.
Minimum Elevation	Minimum elevation of the area covered by the range of the taxon, in meters. Negative numbers or blank=not determined.
Protection	Comments on protectibility and threats.
Management	Comments on how the site is managed.
General	Miscellaneous comments.

APPENDIX D: WETLAND DETERMINATION DATA

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SOIL

Sampling Point: DP-F2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-13	10yr 3/3	100					loam	rocky soil

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Refusal at 13".

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): >13"

Water Table Present? Yes _____ No X Depth (inches): >13"

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): >13"

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Very dry.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Ashland Gun Club City/County: Ashland/Jackson Sampling Date: 8/11/09

Applicant/Owner: City of Ashland State: OR Sampling Point: DP-A1

Investigator(s): R. Brewer Section, Township, Range: sec. 12, T39S, R1E

Landform (hillslope, terrace, etc.): Base of hill/slope Local relief (concave, convex, none): concave Slope (%): ~1

Subregion (LRR): A Lat: 122° 38' 33.6" Long: 42° 11' 14.0" Datum: NAD83

Soil Map Unit Name: Camas-Newberg-Evans complex 0-3% slopes NWI classification: ~

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

See DP-F1 for upland plot.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1. NONE			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10m diam)			
1. Salix jeyersana	30	*	FACW
2. Rosa eglantaria	30	*	FACW
3. Dipsacus fullanum	30	*	FACW
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 10m d.)			
1. Juncus balticus	80	*	FACW
2. Poa annua	20	*	FAC
3. Holcua lanatus	10		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. NONE			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Grasses in slightly drier areas. Other areas of wetland have cattails and blackberries.

SOIL

Sampling Point: DP-A1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-9"	7.5YR 2.5/1	100					G. loam	
9"-18	7.5YR 4/1	100					G. loam	
18"→	7.5YR 6/1	100					G. loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): -

Water Table Present? Yes X No ___ Depth (inches): 10"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 3"

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface water nearby.

Sat. layered in more gravelly soil.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Ashland Gun Club City/County: Ashland/Jackson Sampling Date: 8/10/09

Applicant/Owner: City of Ashland State: OR Sampling Point: DP-B1

Investigator(s): S. McDowell Section, Township, Range: sec. 7, T39S, R2E

Landform (hillslope, terrace, etc.): Bottom of slope Local relief (concave, convex, none): concave Slope (%): 000

Subregion (LRR): A Lat: 122deg., 38'7.7" Long: 42° 11' 16.9" Datum: NAD83

Soil Map Unit Name: Brader-Debenger Loam 1-15% slopes NWI classification: --

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 300m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tricocarpa	8	Y	FAC
2. fraxinus latifolia	3	Y	FACW
3.			
4.			
	11	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. NONE			
2.			
3.			
4.			
5.			
	____	= Total Cover	
Herb Stratum (Plot size: ____)			
1. juncus balticus	99	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	99	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1. NONE			
2.			
	____	= Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Wetland Non-Vascular Plants[1]

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: DP - B1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10 YR 3/4	100	-	-	-	-	loam	
2-16	10 YR 2/2	93	7.5 YR 5/6	7	C	M	loam	medium to coarse

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

Poorly drained area in an alluvial fan.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): >16"

Water Table Present? Yes ____ No X Depth (inches): >16"

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 10"

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetlands has a natural spring percolating near center.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Ashland Gun Club City/County: Ashland/Jackson Sampling Date: 8/11/09

Applicant/Owner: City of Ashland State: OR Sampling Point: DP-B2

Investigator(s): S. McDowell Section, Township, Range: sec. 7, T39S, R2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 01%

Subregion (LRR): A Lat: 122° 38' 11.3" Long: 42° 11' 17.8" Datum: NAD83

Soil Map Unit Name: Camas - Newburg - Evans Complex 0-3% NWI classification: -

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. NONE	0		
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10m²)			
1.	0		
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Juncus balticus	10	Yes	FACW
2. Typha latifolius	45	Yes	OBL
3. Deschempsia elongata	8	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	63 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. NONE			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 35%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: DP-B2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	Gley 1 4-10y	100					s. loam	smells sulphuric
3-6	Gley 1 3-10y	100					s. loam	
6-10	Gley 1 6-10y	100					sand	mineral smell

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- X Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: N/A

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- X Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 0.3

Water Table Present? Yes X No ___ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Ashland Gun Club City/County: Ashland/Jackson Sampling Date: 8/11/09

Applicant/Owner: City of Ashland State: OR Sampling Point: DP-C1

Investigator(s): R. Brewer Section, Township, Range: sec. 7, T39S, R2E

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): 1-5

Subregion (LRR): A Lat: 122° 38' 3.4" Long: 42° 11' 9.3" Datum: NAD83

Soil Map Unit Name: Brader-Debanger NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1. NONE			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10m diam.)			
1. Rosa eglantaria	10		FACW
2. Dipsacus fullonum	90	*	FAC
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. NONE			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	____ = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. NONE			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Wetland Non-Vascular Plants[1]

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: DP-C1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8"	7.5YR 2.5/1	100					G. loam	
8"→	7/5YR 2.5/1	98	7/5YR 5/6	~2	RM	M	G. loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- X Drainage Patterns (B10)
- X Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 18"

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soil moist to surface.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Ashland Gun Club City/County: Ashland/Jackson Sampling Date: 8/12/09

Applicant/Owner: City of Ashland State: OR Sampling Point: DP-C2

Investigator(s): R. Brewer Section, Township, Range: sec. 7, T39S, R2E

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): 1-5

Subregion (LRR): A Lat: 122° 38' 6.1" Long: 42° 11' 8.6" Datum: NAD83

Soil Map Unit Name: Brader-Debenger Loams, 1 to 15% slops NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:

Wetland hydrology did not meet criteria; however, site visited in August. Veg did not meet prevalence index, not a wetland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. NONE			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10m radius)			
1. Dipsacus fullonum	5	Y	FAC
2. Rosa eglantaria	5	Y	FACW
3. Centaurba solstitialis	5	Y	UPL
4.			
5.			
	15 = Total Cover		
Herb Stratum (Plot size: 10m radius)			
1. Poa pratense	10	N	FAC
2. Taeniatherym caput-medusae	75	Y	UPL
3. Phleum pratense	30	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	115 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. NONE			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 5	x 2 = 10
FAC species 45	x 3 = 135
FACU species ____	x 4 = ____
UPL species 80	x 5 = 400
Column Totals: 130 (A)	545 (B)

Prevalence Index = B/A = 4.2

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

Did not meet prevalence index.

SOIL

Sampling Point: DP-C2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
D-13"	7.5YR 2.5/1	100	-	-			G. loam	
13" →	7/5YR 2.5/1	99	7.5YR 5/6	~1	RM	M	G. loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

May be native soil color or fill?

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): >18"

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Source of water on surrounding wetland is irrigation runoff from adjacent property.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Ashland Gun Club City/County: Ashland/Jackson Sampling Date: 8/11/09

Applicant/Owner: City of Ashland State: OR Sampling Point: DP-D1

Investigator(s): S. McDowell Section, Township, Range: sec. 7, T39S, R2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 000

Subregion (LRR): A Lat: 122° 38' 16.6" Long: 42° 11' 18.9" Datum: NAD83

Soil Map Unit Name: Camas-Newburg-Evans complex 0-3% slopes NWI classification: -

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:

Wetland is located downslope of Lithia Springs with heavy mineral deposits.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1. NONE			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. NONE			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 1m²)			
1. Juncus boltica	60	Yes	FACW
2. Deschempsia elongata	8		FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	68 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. NONE			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 32

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Wetland Non-Vascular Plants[1]

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: DP-D1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	5y 6-2	100					sandy loa	
73	rock	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: N/A

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

Refusal at 3" due to large immovable rocks.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- X Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 2

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 0

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Downslope of Lithia Springs and in alluvial fan. Emigrant Creek once flowed through area.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Ashland Gun Club City/County: Ashland/Jackson Sampling Date: 8/11/09

Applicant/Owner: City of Ashland State: OR Sampling Point: DP-F1

Investigator(s): R. Brewer Section, Township, Range: sec. 12, T39S, R1E

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): ~5

Subregion (LRR): A Lat: 122° 38' 37.8" Long: 42° 11' 17.4 Datum: NAD83

Soil Map Unit Name: Darrow silty clay loam 5-20% slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X No ____	
Wetland Hydrology Present?	Yes X No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. NONE			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10m diam.)			
1. Dipsacus fullonum	40	*	FAC
2. Typha latifolia	50	*	OBL
3. Salix geyeriana	10		FACW
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: 10m diam.)			
1. Eleocharis acicularis	45	*	OBL
2. Holcus lanatus	20	*	FAC
3. Veronica	10		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	____ = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1. NONE			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Wetland Non-Vascular Plants[1]

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: DP-F1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	2.5Y 2.5/1	95	2.5YR 5/8	~5	RM	M	G.sil loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

In higher areas soil is same - w/mottles - but very dry now.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 1-3

Water Table Present? Yes X No ____ Depth (inches): 6" +

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): _____

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Veg. suggests seeps along hillside during spring.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Ashland Gun Club City/County: Ashland/Jackson Sampling Date: 8/12/09

Applicant/Owner: City of Ashland State: OR Sampling Point: DP-F2

Investigator(s): R. Brewer Section, Township, Range: sec. 7, T39S, R2E

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): convex Slope (%): ~5

Subregion (LRR): A Lat: 122° 38' 37.9" Long: 42° 11' 18.7" Datum: NAD83

Soil Map Unit Name: slope NWI classification: ~

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks:

Grazed field.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. NONE			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. NONE			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 10m diam.)			
1. Centaurea solstitialis	40	Y	UPL
2. Poa sp.	30	Y	FAC
3. Holeas lanatus	20	Y	FAC
4. Antennaria	60	Y	UPL
5. Centaurea diffusa	40	Y	UPL
6. Cichorium intybus	10	N	UPL
7.			
8.			
9.			
10.			
11.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. NONE			
2.			
	_____ = Total Cover		
% Bare Ground in Herb Stratum _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 50	x 3 =	150
FACU species	x 4 =	
UPL species 140	x 5 =	700
Column Totals: 190 (A)		850 (B)

Prevalence Index = B/A = >4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

Pasture / grazed / weedy.

APPENDIX E: FIELD DATA SHEETS AND FIELD NOTES

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BROWN AND CALDWELL

H&S Plan Acknowledgement Form

Instructions: Complete this form immediately prior to project start or as new personnel join the project.

Name of Project/Site: Ashland Gun Club	**Project No:** 137745
Project/Site Location: Lithia Springs Property	
Employee Performing Briefing: (Print and Sign): SALLY MILLS	**Date:** 1.11.10

Employee Acknowledgement:

The following signatures indicate that these personnel have read and/or been briefed on this Health and Safety (H&S) Plan and understand the potential hazards/controls for the work to be performed.

Important Notice to Subcontractor(s):

Subcontractors are responsible for developing, maintaining, and implementing their own health and safety programs, policies, procedures and equipment as necessary to protect their workers, and others, from their activities. Subcontractors shall operate equipment in accordance with their standard operating procedures as well as manufacturer's specifications. Any project monitoring activities conducted by BC at the Site shall not in any way relieve subcontractors of their critical obligation to monitor their operations and employees for the determination of exposure to hazards that may be present at the Site and to provide required guidance and protection. If requested, subcontractors will provide BC with a copy of their own H&S Plan for this project or other health and safety program documents for review.

BC's Health and Safety Plan has been prepared specifically for this project and is intended to address health and safety issues solely with respect to the activities of BC's own employees at the site. A copy of BC's H&S Plan may be provided to subcontractors in an effort to help them identify expected conditions at the site and general site hazards. The subcontractor shall remain responsible for identifying and evaluating hazards at the site as they pertain to their activities and for taking appropriate precautions. For example, BC's H&S Plan does not address specific hazards associated with tasks and equipment that are particular to the subcontractor's scope of work and site activities. (e.g., operation of a drill rig, excavator, crane or other equipment). Subcontractors are not to rely on BC's H&S Plan to identify all hazards that may be present at the Site. Subcontractor personnel are expected to comply fully with subcontractor's Health and Safety Plan and to observe the minimum safety guidelines applicable to their activities which may be identified in the BC H&S Plan. Failure to do so may result in the removal of the subcontractor or any of the subcontractor's workers from the job site.

Print	Sign	Date	Print	Sign	Date
SALLY MILLS		1.12.10			
Jason Grant		1/12/10			

BROWN AND CALDWELL

Daily Tailgate Meeting Form

Name of Project/Site: Ashland Gun Club	Project No: 137745
Project/Site Location: Lithia Springs Property	
Employee Completing Form: (Print and Sign): Sally Mills	Date: 1.11.10

Employee Acknowledgement:

The following signatures indicate that these personnel have read and/or been briefed on this Health and Safety (H&S) Plan and understand the potential hazards/controls for the work to be performed.

Important Notice to Subcontractor(s):

Subcontractors are responsible for developing, maintaining, and implementing their own health and safety programs, policies, procedures and equipment as necessary to protect their workers, and others, from their activities. Subcontractors shall operate equipment in accordance with their standard operating procedures as well as manufacturer's specifications. Any project monitoring activities conducted by BC at the Site shall not in any way relieve subcontractors of their critical obligation to monitor their operations and employees for the determination of exposure to hazards that may be present at the Site and to provide required guidance and protection. If requested, subcontractors will provide BC with a copy of their own H&S Plan for this project or other health and safety program documents for review.

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Print	Sign	Date	Print	Sign	Date
SALLY MILLS		1.11.10			
Jason Grant		1/11/10			
DAN GUNTER		1-13-10			
Michael Morrison		1-13-10			

Plan of the Day

(Describe the activities that are planned to be performed today)

Perform Ecological Risk Assessment II field sampling

Potential Hazards and Topics Discussed

(Describe the potential hazards and controls that may be associated with planned activities)

☐ Electrical ☒ Chemical ☒ Biological ☐ Physical ☐ Other (specify):

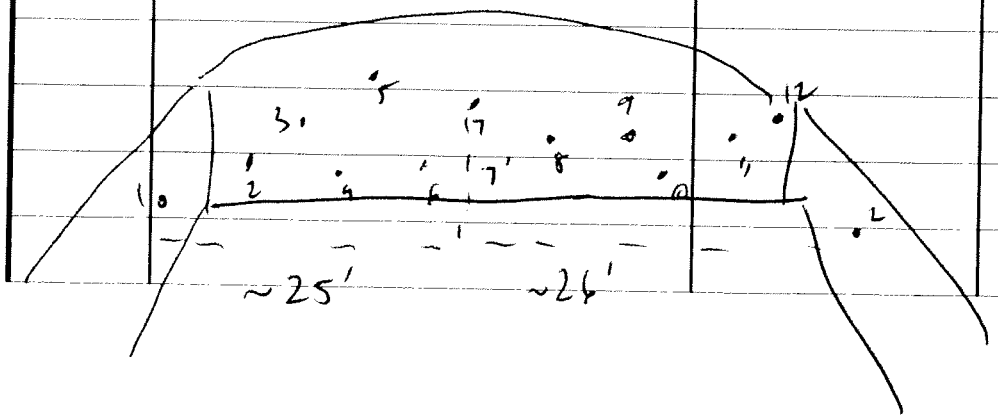
Weather (cold, wet), acid preservative, animals, slips, trips, falls, heavy equipment

XRF Soil Sampling

Analytical Results for LEAD

mg/kg or ppm

DATE	LOCATION	SAMPLE ID	FIELD ANALYSIS
4/12/10	Berm 1	B1-1	16
		B1-2	56
		B1-3	3,095
		B1-4	3,911
		B1-5	3055
		B1-6	3,583
		B1-7	4,483 ★4
		B1-8	~~3~~ 5,111
		B1-9	2,877
		B1-10	2,068
		B1-11	2,381
		B1-12	1,217

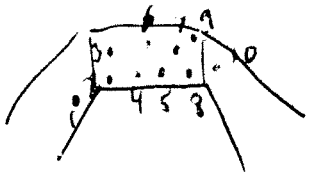


XRF Soil Sampling

Analytical Results for LEAD

mg/kg or ppm

DATE	LOCATION	SAMPLE ID	FIELD ANALYSIS
1/12/10	Berm 2	B2 - 1	Pb: 374 Fe: 37,567
	Background	Back - 1	Pb: 15 Fe: 28,042
	Berm 2	B2 - 2	Pb: 632
	"	B2 - 3	2153
		B2 - 4	2136
		B2 - 5	2363
		B2 - 6	3150 *
		B2 - 7	1435
		B2 - 8	3057
		B2 - 9	1011
		B2 - 10	175

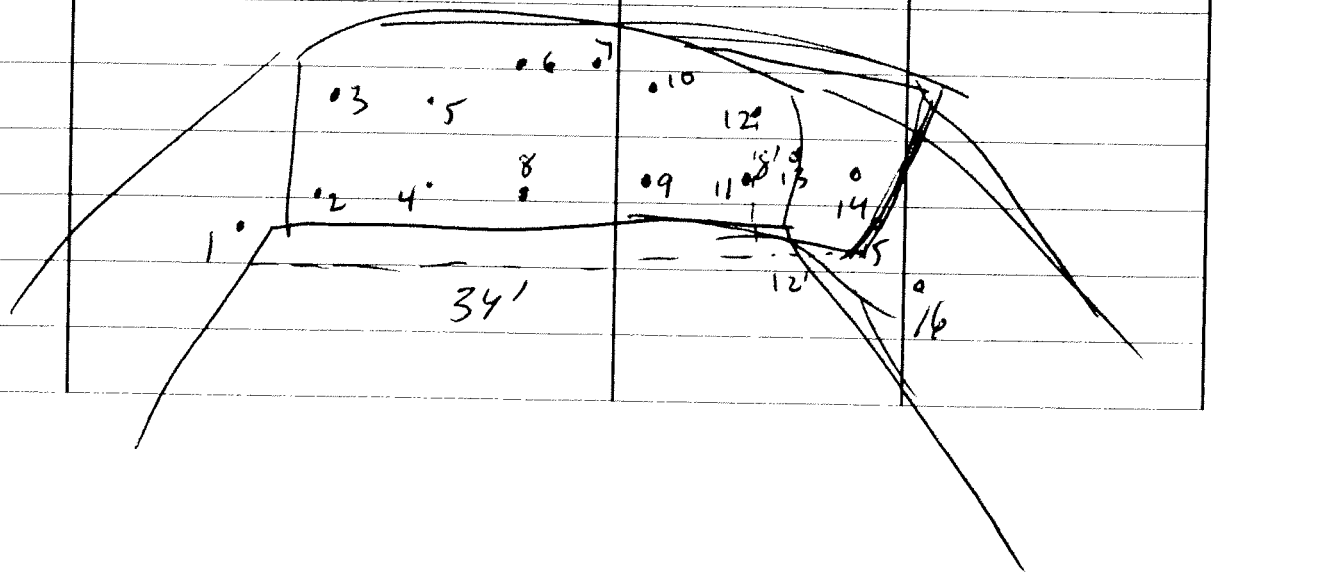


XRF Soil Sampling

Analytical Results for LEAD

mg/kg or ppm

DATE	LOCATION	SAMPLE ID	FIELD ANALYSIS
1/12/10	Berm 3	B3-1	73
		B3-2	402
		B3-3	1823
		B3-4	1871
		B3-5	1177
		B3-6	1842
		B3-7	3269
		B3-8	2530
		B3-9	3410
		B3-10	3312
		B3-11	3432
		B3-12	4005 ★ 5
		B3-13	2079
		B3-14	2234
		B3-15	1108
		B3-16	142

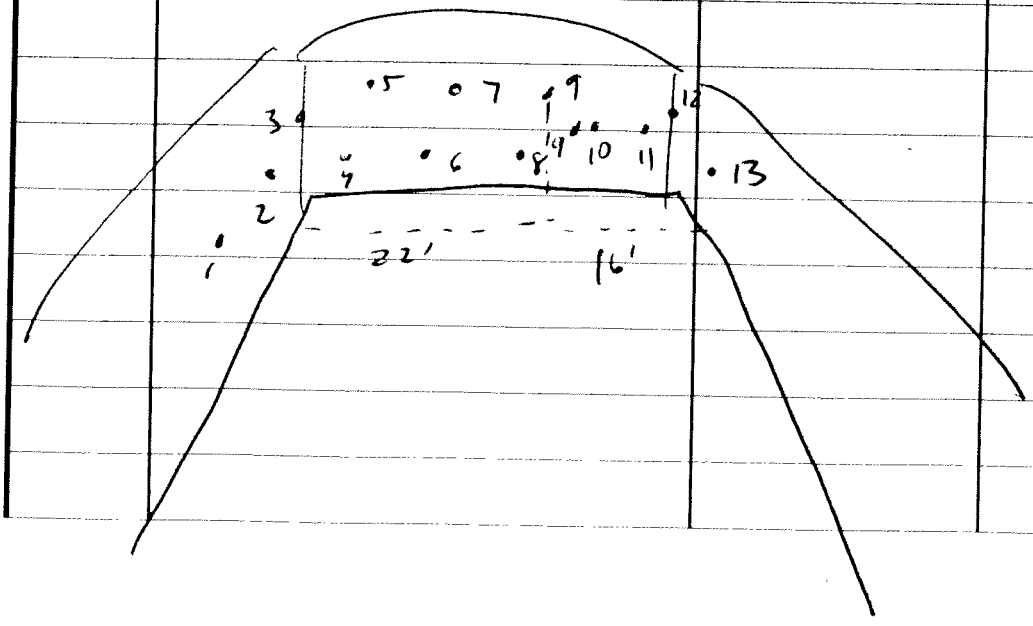


XRF Soil Sampling

Analytical Results for LEAD

mg/kg or ppm

DATE	LOCATION	SAMPLE ID	FIELD ANALYSIS
1/12/10	Berm 4	B4-1	639
		B4-2	2566
		B4-3	9,561
		B4-4	11,029
		B4-5	8,943
		B4-6	10,788
		B4-7	9,302
		B4-8	10,864
		B4-9	11,044 ★ 2
		B4-10	7,638
		B4-11	6,694
		B4-12	5,863
		B4-13	900

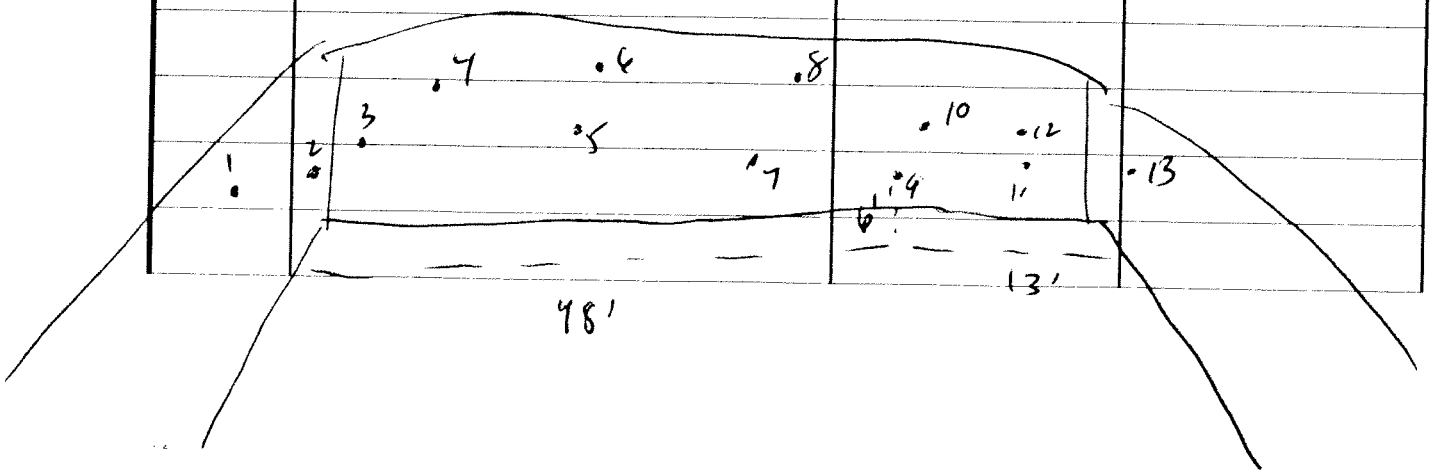


XRF Soil Sampling

Analytical Results for LEAD

mg/kg or ppm

DATE	LOCATION	SAMPLE ID	FIELD ANALYSIS
1/12/10	Berm 5	B5-1	4,121
		B5-2	1177
		B5-3	8,460
		B5-4	6,378
		B5-5	Co:101 6,056
		B5-6	6,661
		B5-7	13,252
		B5-8	11,551
		B5-9	14,695
		B5-10	12,579
		B5-11	8437
		B5-12	9,063
		B5-13	4,789

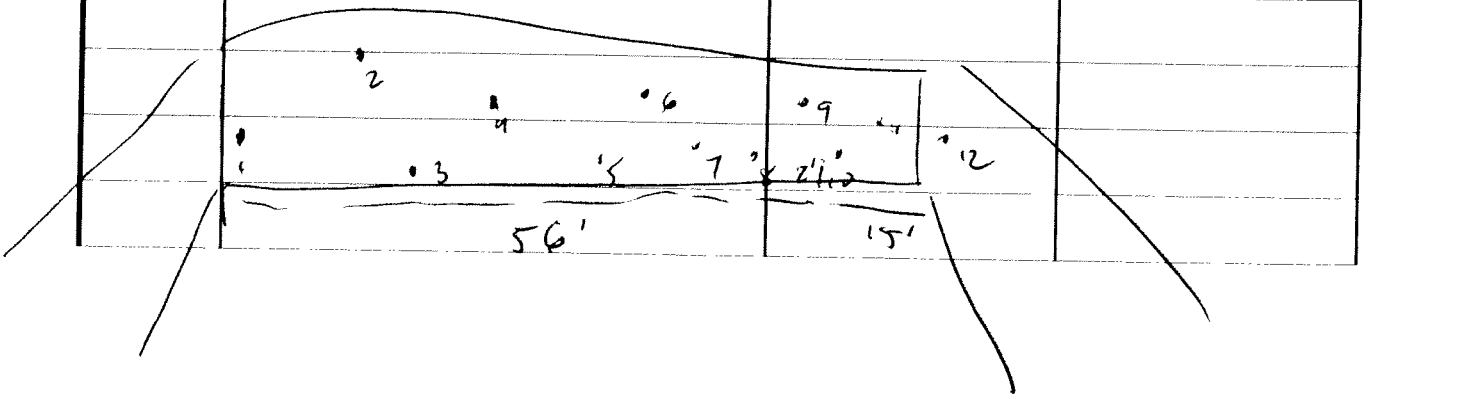


XRF Soil Sampling

Analytical Results for LEAD

mg/kg or ppm

DATE	LOCATION	SAMPLE ID	FIELD ANALYSIS
1/12/10	Berm 6	B6-1	158
		B6-2	451
		B6-3	435
		B6-4	1,608
		B6-5	2042
		B6-6	4805
		B6-7	4562
		B6-8	4,776
		B6-9	4,421
		B6-10	7,361
		B6-11	2,601
		B6-12	3,983

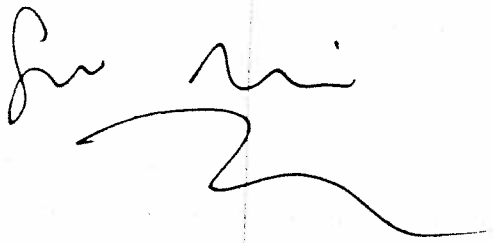


Ashland Gun Club 1.11.10
137745

1300 BC (Sally, Mike & Jason Grant) on site
Perform site walk & test XRF.
1515 Sample AGC-1-N
1520 Sample AGC-1-S
Sample AGC-2-N
Sample AGC-2-S
1630 BC offsite

Ashland Gun Club 1.12.10
137745

0800 BC onsite.
0815 Fill out paperwork / @ Berm 2
0930 Move to Berm 3
1015 Move to Berm 4
1115 @ Berm 5
1215 @ Berm 6
1300 BC offsite to lunch
1345 BC back onsite
1400 @ Berm 1
1445 Sample B1-7-S
1500 Sample B3-12-S
1515 Sample B7-9-S
1536 Sample B5-9-S
1545 Sample B6-10-S
1615 BC offsite to meet Eity excavator @ 8 am per phone conv. w/ Mike M.



Ashland Gun Club Date 1/13/10

Project Client 137745

0800 BC onsite
Backhoe onsite.
Wait for operator.
0815 Ashland operator onsite
Wait for Water dept & cont.
0930 Can't find "bat"
found it
0945 Operator Scraper Clay
Pigeons off ground around
trenching area
Operator Scrapes to 3'
1000 BC Sample AGC-3-S-1
1015 Sample AGC-3-S-2
1045 Hit GW @ ~ 15' wait to clear.
1100 Sample AGC-3-W
1115 Operator fill in trench w/out
putting dirt in it.
1130 BC offsite.

BROWN AND CALDWELL

CHAIN OF CUSTODY RECORD

COC No. _____

2701 Prospect Park Dr.
Rancho Cordova, CA 95670
916-444-0123 FAX 916-635-8805

9665 Chesapeake Dr. / Suite 201
San Diego, CA 92123
858-514-8822 / FAX 858-514-8833

201 N. Civic Dr. / Suite 115
Walnut Creek, CA 94596
925-937-9010 / FAX 925-937-9026

400 Exchange . Suite 100
Irvine, CA 92602
714-730-7600 · FAX 714-734-0940

PROJECT NAME:

PROJECT NUMBER:

LABORATORY NAME & ADDRESS:

LINE NO.	SAMPLE – I.D.	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	FIELD FILTERED	QC - REQ	TAT	SAMPLING METHOD	DEPTH (FT.) BEGIN ---- END	PID READING (ppm)
01														----	
02														----	
03														----	
04														----	
05														----	
06					1		—	S	PAHs by 8270					----	
07					2		—	S	PAHs by 8270, Metals (Pb only)					----	
08									"					----	
09									"					----	
10														----	

COLLECTED & RELEASED BY	DATE	TIME	COOLER I.D.:			COMMENTS (see note on back):
RECEIVED BY:	DATE	TIME	RELINQUISHED BY:	DATE	TIME	
RECORD RETURNED BY:	DATE	TIME				
COURIER:			SHIPPING NUMBER:			

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BROWN AND CALDWELL

CHAIN OF CUSTODY RECORD

COC No. _____

❑ 2701 Prospect Park Dr.
Rancho Cordova, CA 95670
916-444-0123 FAX 916-635-8805

❑ 9665 Chesapeake Dr. / Suite 201
San Diego, CA 92123
858-514-8822 / FAX 858-514-8833

☒ 201 N. Civic Dr. / Suite 115
Walnut Creek, CA 94596
925-937-9010 / FAX 925-937-9026

❑ 400 Exchange / Suite 100
Irvine, CA 92602
714-730-7600 / FAX 714-734-0940

PROJECT NAME: Ashland Golf Club

PROJECT NUMBER: 17745

LABORATORY NAME & ADDRESS: AccuTest

LINE NO.	SAMPLE – I.D.	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	FIELD FILTERED	QC - REQ	TAT	SAMPLING METHOD	DEPTH (FT.) BEGIN ---- END	PID READING (ppm)
01	AGC-2-W	11/10	1515		11	VOAs, O&G, Amber	HCl	W	VOCs, SVOCs, Metals (see list) NAPHTHA, MNAPHTHA			Normal		----	
02	AGC-2-S	"	"		3	Jars	Ice	S	"			"		----	
03	AGC-4-W	"	1550		11	VOA, Amber	HCl	W	"			"		----	
04	AGC-2-S	↓	"		3	Jars	Ice	S	↓			↓	↓	----	
05														----	
06														----	
07														----	
08														----	
09														----	
10														----	

COLLECTED & RELEASED BY:	DATE 11/12/03	TIME 1555	COOLER I.D.:			COMMENTS (see note on back):
RECEIVED BY:	DATE 11/12/03	TIME 2:55	RELINQUISHED BY:	DATE / /	TIME :	Metals list
						email JGrant@brwncald.com
RECORD RETURNED BY:	DATE / /	TIME :				
COURIER:			SHIPPING NUMBER:			

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CHAIN OF CUSTODY RECORD

COC No. _____

❑ 2701 Prospect Park Dr.
Rancho Cordova, CA 95670
916-444-0123 FAX 916-635-8805

❑ 9665 Chesapeake Dr. / Suite 201
San Diego, CA 92123
858-514-8822 / FAX 858-514-8833

❑ 201 N. Civic Dr. / Suite 115
Walnut Creek, CA 94596
925-937-9010 / FAX 925-937-9026

❑ 400 Exchange / Suite 100
Irvine, CA 92602
714-730-7600 / FAX 714-734-0940

PROJECT NAME: [illegible]

PROJECT NUMBER: 137745

LABORATORY NAME & ADDRESS: [illegible]

LINE NO.	SAMPLE – I.D.	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	FIELD FILTERED	QC - REQ	TAT	SAMPLING METHOD	DEPTH (FT.) BEGIN ---- END	PID READING (ppm)
01	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	—	W	[illegible]			STD		----	
02														----	
03														----	
04														----	
05														----	
06														----	
07														----	
08														----	
09														----	
10														----	

COLLECTED & RELEASED BY	DATE / /	TIME :	COOLER I.D.:			COMMENTS (see note on back):
RECEIVED BY:	DATE / /	TIME :	RELINQUISHED BY:	DATE / /	TIME :	[illegible]
RECORD RETURNED BY:	DATE / /	TIME :				
COURIER:			SHIPPING NUMBER:			

DISTRIBUTION: WHITE-PROJECT FILE • CANARY-LAB RECEIPT • PINK-DATA MANAGEMENT • GOLDENROD-FIELD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

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