Chapter 4

Affected Environment

The FAA (1050.1E) *Environmental Order* and *Airports* (5050.4B) requires the evaluation of the following resource categories:

- Air Quality
- Biotic Resources
- Compatible Land Use
- Construction *
- Department of Transportation Act, Section 4(f) Resources
- Federally listed Endangered and Threatened Species
- Energy Supplies, Natural Resources, and Sustainable Design
- Environmental Justice
- Farmlands
- Hazardous Materials
- Historical, Architectural, and Cultural Resources, including Native American and Tribal Resources
- Induced / Secondary Socioeconomic
- Light Emissions and Visual Effects
- Noise
- Social Impacts
- Solid Waste
- Water Quality
- Wetlands
- Cumulative Impacts *

For the purpose of this EA, three elements are not applicable: Coastal Resources, Floodplains, and Wild and Scenic Rivers.

- Coastal Resources laws pertain to marine coastal areas on the Atlantic, Pacific and Gulf coasts of the United States. The project site is outside of any areas regulated under shoreline or coastline laws.

- Floodplains *Executive Order 11988* directs Federal agencies to "take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains…" A review of on-line

* Construction and Cumulative Impacts are the result of selecting a build alternative and the impacts to these categories will be discussed in Chapter 5, *Environmental Consequences and Mitigation*.

Flood Insurance Rate Maps (Panel Number 160175 0001-0002), prepared by the Federal Emergency Management Administration, shows that the Airport is outside of any known area subject to flooding.

- The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287) was developed to protect certain free flowing rivers with outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Based on a review of the National Park Service website (http://www.rivers.gov/maps/conus-072.pdf), there are no rivers in the project vicinity designated as Wild and Scenic, or on the Candidate Rivers for Wild and Scenic listing.

No further discussion or analysis of these elements will be included in the EA.

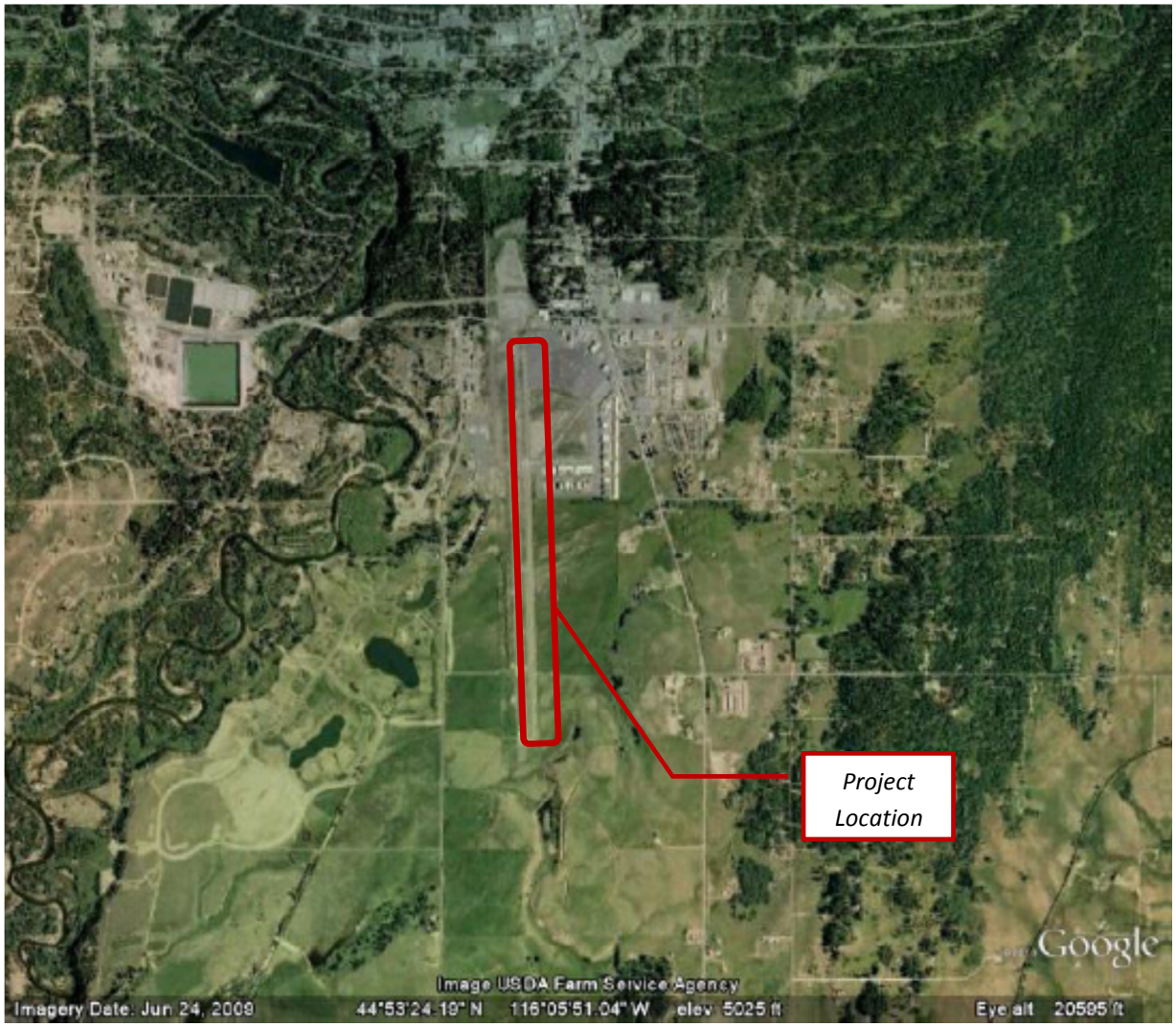
4.1 Airport Location and Study Area

The Airport is located in Valley County, Idaho approximately one mile south of downtown McCall along Highway 55. Valley County is in central Idaho, from Long Valley and McCall east to the Middle Fork of the Salmon River. The South Fork of the Salmon River divides the county in two and flows north toward the Salmon River. The Payette River drains southward in the western part of the county, through McCall.

The Airport is zoned as Airport in the McCall City Code. Existing land uses north of the Airport include Community Commercial, Civic, and Low Density Residential. To the east zoning is Community Commercial and Industrial. Southern zoning is Rural Residential (10 acres). While zoning to the west is a mix of Industrial, Civic, and Medium Density Residential.

Figure 4A, Vicinity Map, illustrates the Airport and the surrounding area. For most environmental elements, the study area includes areas that may be affected by ground disturbance. Environmental Justice and Social Impacts expanded the study area to ½ mile from the airport property. Section 4(f) analysis used a one-mile radius.

Figure 4A. Vicinity Map



WHPacific	McCall Municipal Airport City of McCall, Valley County, Idaho	Figure 4A

4.2 Air Quality

In accordance with the Clean Air Act Amendments of 1990, the Federal government cannot approve an action that is not supportive of the attainment and maintenance of National Ambient Air Quality Standards (NAAQS) conformity. Conformity is intended to ensure that the Federal government does not take, approve or support actions that are in any way inconsistent with a state's plan to attain and maintain the NAAQS for criteria pollutants. Conformity applies to areas designated as "maintenance" or "non-attainment" for any of the criteria pollutants. Six pollutants are typically monitored and regulated. These include carbon monoxide (CO), particulate matter

(PM), ozone, sulfur dioxide, lead and nitrogen oxide. Particulate matter is further monitored as to the size of particles. PM_{10} is the most critical, as it represents particles smaller than 10 microns, which are easily inhaled and can remain in the lungs**.**

Geographic areas are classified as "non-attainment" if standards for one of the monitored pollutants are violated. Areas classified as "attainment" are typically monitored for these standards, but no violations have occurred. Areas are "non-classified" if air quality is generally not a concern. The Airport is in a "non-classified" area.

4.3 Biotic Resources

Biotic resources include plant and animal communities in the project study area.

A *Biological Evaluation* was prepared by Tom Duebendorfer, PWS, and is included in Appendix E. The action area is considered to be the immediate vicinity of the proposed taxiway construction, as well as a "noise" area which extends approximately five miles in all directions.

The following sections provide a summary description of the principal vegetation communities and wildlife resources observed within the action area.

4.3.1 Vegetation Communities

Vegetation at the airport site would be considered "Non–native Herbaceous Habitat: Disturbed and Invasive Grass and Forbs". There are several ditches that contain wetland plant species (both native and non-native); however, the majority of the area proposed for the taxiway is highly grazed open "pasture". Dominant plant species in the ditches includes sedges (*Carex nebrascensis, C.* X *stipata, C. utriculata,* and *C.* spp.); rushes (*Juncus tenuis congesta, J. ensifolius,* and *J.* spp.); water hemlock (*Cicuta maculata*); canarygrass (*Phalaris arundinacea*); cattail (*Typha latifolia*); cudweed (*Gnaphalium* sp.).

The open field contains ruderal (or weedy) species including: orchardgrass (*Dactylis glomerata*), smooth brome (*Bromus inermis*), bluegrass (*Poa pratensis*), ox-eye daisy (*Chrysanthemum leucanthemum*), yarrow (*Achillea millefolium*), English daisy (*Bellis perennis*), dandelion (*Taraxacum officinale*), sheep sorrel (*Rumex acetosella*), bentgrass (*Agrostis stolonifera*), toadflax (*Linaria vulgaris*), red fescue (*Festuca rubra*), mullein (*Verbascum thapsus*), willow-leaf dock (*Rumex salicifolius*), thistle (*Cirsium vulgare*), quackgrass (*Elytrigia repens*), horseweed (*Conyza canadensis*), and cinquefoil (*Potentilla gracilis*). Most of these species are non-natives and typical of highly disturbed, grazed open fields and pastures.

The project area is underlain by soils of the Donnel sandy loam (a very deep, well-drained soil); Gestrin loam (very deep, moderately well-drained soil) ; and Melton loam (a very deep, poorly drained soil).

4.3.2 Wildlife Resources

State officials were contacted for a list of species potentially impacted by the project.

The United State Fish and Wildlife Service (FWS) species list for Valley County includes: gray wolf (experimental/non-essential), Northern Idaho ground squirrel; Canada lynx; bull trout, spring/summer chinook salmon; steelhead trout (all threatened [+ designated critical habitat for chinook and steelhead]); and yellow-billed cuckoo (candidate) (14420-2009-SL-0041). However, a project specific request resulted in the identification for potential impacts to only two species: bull trout and the Northern Idaho ground squirrel (NIDGS). Because modeled NIDGS habitat is present within the vicinity of the project area, field studies for its presence/absence were undertaken by Dr. Yensen (Department of Biology, The College of Idaho, Caldwell, Idaho) in June 2009, as reported in Appendix F**.**

The Idaho Department of Fish and Game provided a list of "Species of Greatest Conservation Need" that have been reported to occur within a 5 mile radius of the McCall airport. These species were: a spur-throat grasshopper, bald eagle, black-backed woodpecker, blue grosbeak, Columbia spotted frog, common loon, flammulated owl, Gillette's checkerspot, great gray owl, merlin, mountain quail, northern goshawk, pristine pyrg, pygmy nuthatch, shiny tightcoil, thinlip tightcoil, upland sandpiper, western toad, and white-headed woodpecker.

Review of the Migratory Bird Treaty Act of 1918, as amended, calls for a determination if there is potential for disturbance of bird nesting at the project site. Review of the project site, and the species listed above, show there is no potential for disturbance of nesting sites at the Airport.

A complete listing of all wildlife species observed on-site is included in Appendix E.

4.4 Compatible Land Use

As previously stated, the Airport is zoned as Airport in the McCall City Code. Existing land uses north of the Airport include Community Commercial, Civic, and Low Density Residential. To the east zoning is Community Commercial and Industrial. Southern zoning is Rural Residential (10 acres). While zoning to the west is a mix of Industrial, Civic, and Medium Density Residential.

Noise contours were produced for the 2007 Master Plan, which showed the 65 dBA DNL contour line extends outside the Airport to the north, south, and west (see **Appendix I**). In reviewing available mapping, it does not appear the contour line extends to areas zoned incompatible with airport uses.

4.5 Department of Transportation Act, Section 4(f) Resources

The Federal statute that governs impacts in this category is commonly known as the Department of Transportation (DOT) Act, Section 4(f) provisions. Section 4(f) of the DOT Act, which is codified and renumbered as section 303(c) of 49 U.S.C., provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance or land from an historic site of national, State, or local significance as determined by the officials having jurisdiction thereof – unless there is no feasible and prudent

alternative to the use of such land and such program, and the project includes all possible planning to minimize harm resulting from the use.

A review of maps of Valley County and McCall show several potential resources north of the Airport: City Parks (Chipmunk, Legacy and Rotary) and the Ponderosa State Park.

4.6 Federally Listed Endangered and Threatened Species

Section 7(a)(2) of the Endangered Species Act (ESA) requires that federal agencies contact the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) prior to any construction activity to determine if any proposed or listed Threatened and Endangered (T&E) species may be in a construction project area. If the USFWS or NMFS determines that T&E species under their respective jurisdictions may be affected, a Biological Assessment (BA) must be prepared. If species are not present or a Biological Evaluation shows no effect, no BA is needed. Federal officials were contacted for a list of species potentially impacted by the project. The United State Fish and Wildlife Service (FWS) species list for Valley County includes: gray wolf (experimental/non-essential), Northern Idaho ground squirrel; Canada lynx; bull trout, spring/summer chinook salmon; steelhead trout (all threatened [+ designated critical habitat for chinook and steelhead]); and yellow-billed cuckoo (candidate) (14420-2009-SL-0041). However, a project specific request resulted in the identification for potential impacts to only two species: bull trout and the Northern Idaho ground squirrel (NIDGS). Because modeled NIDGS habitat is present within the vicinity of the project area, field studies for its presence/absence were undertaken by Dr. Yensen (Department of Biology, The College of Idaho, Caldwell, Idaho) in June 2009, as reported in Appendix F**.**

4.7 Energy Supplies, Natural Resources, and Sustainable Design

Executive Order 13123, *Greening the Government through Efficient Energy Management,* encourages each Federal agency to expand the use of renewable energy within its facilities and in its activities. The Order also requires each Federal agency to reduce petroleum use, total energy use and associated air emissions and water consumption in its facilities. FAA Order 1050.1E, Appendix A also states: "It is also the policy of FAA to encourage the development of facilities that exemplify the highest standards of design, including principles of sustainability. All elements of the transportation system should be designed with a view to their aesthetic impact, conservation of resources such as energy, pollution prevention, harmonization with the community environment, and sensitivity to the concerns of the travelling public."

Currently, electrical energy is used to power navigation aids, airport lighting and airport buildings. Petroleum fuels are used to power aircraft, maintenance vehicles, and other equipment, such as generators and maintenance equipment powered by these fuels. Rock resources, in the form of sand and aggregate, will be used in creating the fill and paving the taxiway.

Other natural resources affected by the airport are described in the sections above discussing water quality, wetlands, biotic communities and threatened and endangered species.

4.8 Environmental Justice

In recent years, concern about environmental impacts on particular populations has been growing; this type of impact is referred to as environmental justice. Low income and minority communities, for example, may bear a disproportionately high risk to human health and the environment from pollution and other effects of specific types of development or facilities. Children are also more sensitive to certain types of impacts that may alter physical development or impact schools or other concentrations of children. Executive Order 12898 *(Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*) and Executive Order 13045 *(Protection of Children from Environmental Health and Safety Risks)* provide the basis for this analysis.

The land uses around the Airport consist of commercial, industrial, residential (rural, low and medium density), and civic. Within the project area, including the DNL 65 contour described below in section 4.14, there are no concentrations of minority or low-income populations or places where children congregate (e.g. schools, recreation centers or day care centers).

4.9 Farmlands

Certain types of soils are considered prime farmland because of their drainage, mineral, and other characteristics. If these characteristics are degraded, the soilsmay not qualify as prime or unique. The proposed areas for development are currently in airport use or do not meet the definition of prime or unique farm soil based on a review of the Natural Resources Conservation Service on-line soil database map (*http://websoilsurvey.nrcs.usda.gov*). The project area is underlain by soils of the Donnel sandy loam (a very deep, well-drained soil); Gestrin loam (very deep, moderately well-drained soil); and Melton loam (a very deep, poorly drained soil).

4.10 Hazardous Materials

Four primary laws have been passed governing the handling and disposal of hazardous materials, chemicals, substances and wastes. The two statutes of most importance to the FAA for the NEPA analysis are the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended. RCRA governs the generation, treatment, storage and disposal of hazardous wastes. CERCLA provides for consultation with natural resources trustees and cleanup of any release of hazardous substances, excluding petroleum, into the environment.

The Airport currently generates solid waste associated with aircraft use and the operation of a fixed base operator.

Based on discussion with the airport personnel, there is no history of spills or dumping on the site. There is no reason to believe the ground is contaminated by hazardous material. If odor or visual clues are identified during construction, work will be halted and an assessment of the contamination and remediation requirements will be prepared.

4.11 Historical, Architectural, and Cultural Resources, including Native American and Tribal Resources

A cultural resource inventory (Appendix G) was prepared by SWCA Environmental that included a records review, pedestrian survey and subsurface probing for the proposed improvements was completed. The study concluded that the project area has been severely impacted by previous disturbances, including impacts from airport-related construction, grazing and irrigation. The historic-period cultural resources that were identified are in accordance with SWCA's expectations for the site and will not be affected by the proposed action.

4.12 Induced / Secondary Socioeconomic

Major development proposals often involve the potential for induced or secondary impacts on surrounding communities. Examples include shifts in patterns of population movement and growth; public service demands; and changes in business and economic activity to the extent influenced by the airport development. Induced impacts are normally not significant except when there are also significant impacts in other categories.

4.13 Light Emissions and Visual Effects

Airport improvements may create impacts due to light emissions or visual impacts. These include increased visibility of airport lighting from off-site viewpoints and the potential to impact people or properties. The EA must consider the extent to which any lighting associated with the proposed action will create an annoyance among people in the airport vicinity or interfere with their normal activities.

Visual or aesthetic impacts are more subjective. Analysis of these impacts may include the extent that the proposed action contrasts with the existing environment and whether another agency considers the contrast objectionable.

The FAA regulates lighting that is used on an airport for navigation and directional information. There are also recommendations for minimization of light and glare that could affect a pilot's ability to see or understand airport lighting.

The Airport currently has medium-intensity runway lighting and runway end identifier lights. The Airport is also equipped with a rotating beacon, a lighted windsock and precision approach path indicators. The lighting may be visible at night from adjacent home sites. Beyond the properties adjacent to the airport, on-airport lighting is mostly contained on-site and does not spillover into the surrounding community. The beacon may be visible within a mile of the Airport.

4.14 Noise

For aviation noise analysis, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities must be established in terms of yearly day/night average sound level (DNL) as FAA's primary metric.

As shown in the 2007 Master Plan (and Appendix I), the 65 dBA DNL contour line extends outside the airport to the north, south, and west in areas compatible with airport operations. Over the 5-year planning period, the noise contours were projected to increase slightly in all directions as operations increased. Also considered in the noise contour preparation was the proposed runway extension. As previously stated, the runway extension has not been justified at this time. As such, the extension of the future noise contour to the south is likely overstated in the mapping.

4.15 Social Impacts

FAA must evaluate proposed airport development actions to determine if they would cause social impacts. This evaluation should include effects on health and safety risks to children, and socioeconomic impacts. Socioeconomic impacts include moving homes and businesses; dividing or disrupting established communities; changing surface transportation patterns; disrupting orderly, planned development; or creating a notable change in employment.

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, defines the risks to children's safety that are attributable to products or substances that the child is likely to touch or ingest. Examples include the air we breathe, the food we eat, the water we drink or for recreation, and the soil we use to grow food. Environmental documents should assess project-related impacts with the potential to have a disproportionate effect on children's environmental health or safety.

The principal impacts to consider are associated with relocating or disrupting a residential or business community, transportation capability, planned development or employment. Environmental documents should provide information on the individuals and families (e.g., numbers and characteristics) an action would displace and the effects of that displacement on the neighborhood; information on the capability of the neighborhood to provide adequate relocation housing for the families the action would displace; the businesses an action would displace and the effects of moving the businesses to other areas; and information on areas' abilities to provide replacement or new buildings or other features associated with the affected businesses.

Thresholds of significance include

- Extensive relocation, but sufficient replacement housing is unavailable.
- Extensive relocation of community businesses that would cause severe economic hardship for affected communities.

- Disruption of local traffic patterns that substantially reduce the Levels of Service of roads serving the airport and its surrounding communities.
- A substantial loss in community tax base.
- For Children's Health & Safety Risks: An action causing disproportionate health and safety risks to children may indicate a significant impact.

The residential community surrounding the Airport is primarily large-lot residential and is located north and west of the Airport. No environmental justice or children's populations are present in the area being discussed.

4.16 Solid Waste

Construction, renovation or demolition of most airside projects produces debris (e.g., dirt, concrete, asphalt) that must be properly disposed of or recycled. In addition, new or renovated terminal, hangar or maintenance facilities may involve construction, renovation or demolition that produces other types of solid waste (bricks, steel, wood, gypsum, glass). Finally, projects that increase capacity at an airport may increase the production of waste materials from additional aircraft maintenance and food waste from additional pilots and passengers using the airport

There is no threshold of significance for solid waste. The impacts of a project would be considered significant if the solid waste generated by the project would exceed available landfill or incineration capacities or require extraordinary effort to meet applicable solid waste permit conditions or regulations, or if Local, State, or Federal agencies determine that substantial unresolved solid waste issues are associated with the project.

Currently, the Airport generates solid waste from the existing FBO and from aircraft using the Airport. The quantity generated is minimal, and is picked up as part of a regular garbage collection cycle.

4.17 Water Quality

Water quality is generally governed under the provisions of the federal Water Pollution Control Act, as amended by the Clean Water Act and other amendments. As a part of complying with the federal law, the US Army Corps of Engineers maintains a listing of water bodies and impediments to meeting water quality standards for each body. These standards are typically thresholds for presence of a particular element (such as dissolved oxygen or bacteria), or general conditions such as temperature or artificial stream banks.

For airports, the primary water quality effect is caused by the amount of new runoff generated by creation of impervious surfaces. There is also some potential for impacts to water temperature, oil or fuel spillage, and de-icing chemicals to affect water quality. Operators at the Airport occasionally use de-icing chemicals. Oil and fuel are used in airport maintenance and operations, as well as aircraft operations. The City and FBO operator maintain a set of procedures to be followed in the event of a spill, to prevent contaminants from entering the

local waters. Incidental fuel or oil that collects on hard surfaces is removed from runoff as it is conveyed through drainage swales.

Stormwater currently infiltrates or drains into unnamed streams and ultimately into the Payette River. The new stormwater will be treated in additional swales and either infiltrate or be transported by a modified outfall system.

The City would need to obtain a 1200-C permit for construction activities.

4.18 Wetlands

A delineation of wetlands and other waters at the project area was prepared after site visits on October 6-8, 2009 (see Appendix D). The field investigation identified seven areas that met wetland criteria in the study area, a reach of a small channelized intermittent stream, four non-wetland drainage ditches, and a non-wetland snow storage basin, totaling approximately 229,850 square feet (5.27 acres). See **Table 4A** for a summary of wetlands and waters in the study area. The wetland areas and boundaries and sample plot locations are shown on **Figure 4B**. Features are numbered from south to north, starting on Figure 4B, Sheet 4.

Based on conversations with Greg Martinez (pers. comm., October 7, 2008), the Corps of Engineers takes jurisdiction over any wetlands or waters that are connected to the North Fork of the Payette River. The intermittent stream and non-wetland drainage ditches (except Area 12), irrespective of whether an Ordinary High Water line is visible, are normally considered jurisdictional, and are classified as "tributaries". Any areas that meet wetland criteria and are connected to the river by tributaries are considered jurisdictional "adjacent wetlands" or "abutting wetlands". According to Greg, the Corps may in some circumstances determine that duration of flow is insufficient for a channel to be considered a tributary, but the default assumption is that all connected channels are "tributaries" and are under Corps jurisdiction.

The snow storage basin (Area 11) and its associated drainage ditch (Area 12) are not connected to the river, and are considered "isolated" by the Corps, and not under their jurisdiction.

Please refer to Appendix D for the full delineation report.

Table 4A. Wetlands and Waters in Study Area

Resource	Description	Area (sq. ft.)	Cowardin Class
Area 1: Drainage Ditch Wetland	Constructed airport drainage ditch. Drains under runway. Perennial shallow inundation or saturation. Sedges, rushes and grasses.	12,205	PEM1H (Permanently inundated/ saturated)
Area 2: Irrigation Ditch and Associated Wetlands	Linear ditch opening into saturated pasture area, extending into airport property. Drains around end of runway. Native and introduced grasses, sedges	12,534	PEM1C (Seasonally saturated)
Area 3: Pasture Wetland and Irrigation Ditch Wetlands	Saturated area in pasture, extending into airport property, associated with irrigation ditch. Native and introduced grasses, sedges	28,078	PEM1C (Seasonally saturated)
Area 4: Pasture Wetland	Saturated area in pasture, extending into airport property, associated with irrigation ditch. Willow, native and introduced grasses, sedges	7,017	PEM1C (Seasonally saturated)
Areas 5A and 5B: Irrigation Ditch Wetlands	Linear irrigation ditches. Native and introduced grasses, sedges	2,439 (5A) 1,411 (5B)	PEM1C (Seasonally saturated)
Area 6A: Drainage Ditch Wetland	Constructed airport drainage ditch. Drains under runway. Seasonal shallow inundation or saturation. Sedges, rushes and grasses.	9,843	PEM1C (Seasonally saturated)
Area 6B: Drainage Ditch (Non-Wetland Water)	Constructed airport drainage ditch, continuation of Area 6A, drier. Short duration inundation and saturation. Grasses and forbs.	9,495	N/A
Area 7: Irrigation Ditch Wetland	Linear irrigation ditch. Drains under runway. Native and introduced grasses, sedges	2,835	PEM1C (Seasonally saturated)
Area 8: Drainage Ditch Wetland	Constructed airport drainage ditch. Seasonally inundated or saturated during high flows in intermittent stream (Area 9).	6,050	PEM1C (Seasonally saturated)
Area 9: Intermittent Stream (Water)	Channelized natural stream, intermittent flow. Drains under runway. Channel is cobble and gravel, sparsely vegetated.	2,352	R4 (Riverine intermittent)
Area 10: Drainage Ditch (Non-Wetland Water)	Constructed airport drainage ditch. Seasonally saturated during rain, snowmelt. Connects to Area 9.	4,314	N/A
Area 11: Snow Storage/Detention Basin (Isolated Non-Wetland Water) *	Excavated basin for snow storage and stormwater detention, discharges from two culverts. Standpipe controls outflow. Drains to swale between taxiway and runway, and infiltrates into ground. No connection to natural drainage system. Sparsely vegetated.	128,242 *	N/A
Area 12: Drainage Ditch (Isolated Non-Wetland Water) *	Constructed airport drainage ditch. Connects to Area 11. Sparsely vegetated.	3,035 *	N/A
TOTALS Jurisdictional: Non-Jurisdictional:		98,573 s.f. 131,277 s.f.	

**Isolated and Non-jurisdictional (see Appendix D for more information)*