TO BE COMPLETED BY APPLICANT

EVALUATION FOR
AGENCY USE ONLY

Potholes Reservoir Supplemental Feed Route – Crab Creek Phase 2: Middle Crab Creek Habitat Enhancements and Recreational Trout Fishery

SEPA Environmental Checklist (WAC 197-11-960)

MAY 3, 2013
AUGUST 26, 2013

PREPARED FOR

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ENVIRONMENTAL CHECKLIST
WAC 197-11-960

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.
The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. Background

1. Name of Proposed Project

The Potholes Reservoir Supplemental Feed Route –Crab Creek Phase 2: Middle Crab Creek Habitat Enhancements and Recreational Trout Fishery

2. Name of Applicant

Charity N. Davidson, Washington State Department of Fish and Wildlife

3. Address and Phone Number of Applicant and Contact Person

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4. Date Checklist Prepared

May 3, 2013

5. Agency Requesting Checklist

Washington State Department of Fish and Wildlife

6. Proposed Timing or Schedule

A recreational trout fishery and several habitat enhancement projects within and adjacent to middle Crab Creek were initially evaluated in the Potholes Reservoir Supplemental Feed Route Project – Phase 2 - Crab Creek Route EA, SEPA Checklist, and MDNS (ESA Adolfson, May 14, 2009). Project elements are anticipated to be completed in phases to align with the feed route water release schedule and could occur as early as September 1st, 2013 and end as late as December 31st, 2015.

7. Plans for Future Additions, Expansion, or Further Activity Related to or Connected with this Proposal

No. The only future/further activity would be related to monitoring and adaptively managing the enhancements to provide the most benefit to fish and wildlife. However, WDFW staff may enhance lands adjacent to the project area in the future to improve habitat conditions for fish and wildlife in the Gloyd Seeps Wildlife Unit, Columbia Basin Wildlife Area.

8. Environmental Information that has been Prepared, or will be Prepared, Directly Related to this Proposal

The following is a list of documents that were used that are applicable to this document:

- Recreation Facility Design Guidelines. Bureau of Reclamation (September 2002).

- KWA Ecological Science Inc., 2004

- Potholes Reservoir Supplemental Feed Route Environmental Assessment and Finding of No Significant Impact, Bureau of Reclamation, Pacific Northwest Region, August 2007 (adopted as an addendum to the Final Programmatic Environmental Impact Statement for the Columbia River Water Management Program).

- Technical Memorandum Alternative A – Crab Creek Route. Potholes Reservoir Supplemental Feed Route Draft Environmental Assessment, Bureau of Reclamation, Pacific Northwest Region (April, 2007).

- Crab Creek Fish Barriers, CH2M Hill (July, 2008).

- Crab Creek Project, Potential Impact Areas. Memorandum to Derek Sandison, Washington State Department of Ecology from ESA Adolfson (May, 2009).

- Potholes Reservoir Supplemental Feed Route Project – Crab Creek Route. SEPA Checklist and Mitigated Determination of Nonsignificance, ESA Adolfson (May 14, 2009).

- Crab Creek Wildlife Enhancement Feasibility Study, ESA Adolfson.

- Supplemental Feed Route for Potholes Reservoir; Crab Creek Fish Barriers CH2MHill July 2008.

- Columbia Basin Wildlife Area Management Plan (WDFW, 2010).

- Priority Habitat Species Maps (WDFW, 2012).

- Middle Crab Creek – DRAFT Report (Geo-Marine, 2012).

9. Applications that are Pending for Governmental Approvals of other Proposals Directly Affecting the Property Covered by the Proposal

No known applications or proposals are pending.

10. Government Approvals or Permits that may be Required for the Proposal

- USCOE Nationwide Permit(s)
- WDFW Hydraulic Project Approval (HPA)
- Ecology Stormwater Construction Permit
- Grant County Shoreline Permit Exemption

11. Brief, Complete Description of the Proposal, Including the Proposed Uses and the Size of the Project and Site

WDFW, in partnership with Reclamation and OCR is proposing to construct habitat enhancements within and adjacent to middle Crab Creek and create a recreational trout fishery with public access (Figure 1) as described in the 2009 EA for the Feed Route Project (ESA Adolfson, May 14, 2009). The amount of feed

water delivered from Billy Clapp Lake to the Potholes Reservoir via middle Crab Creek will range from 100 cfs annually during the non-irrigation season to up to 650 cfs during the irrigation season (in high precipitation years) (Figure 2). However, 500 cfs will likely be the maximum amount of water running down middle Crab Creek during the irrigation season. During some years, operation of the Feed Route would be modified by releasing water during only a portion of the year. This would allow side channels and wetland/management cells to dry up periodically to assist WDFW with controlling invasive species of plants, fish, and amphibians.

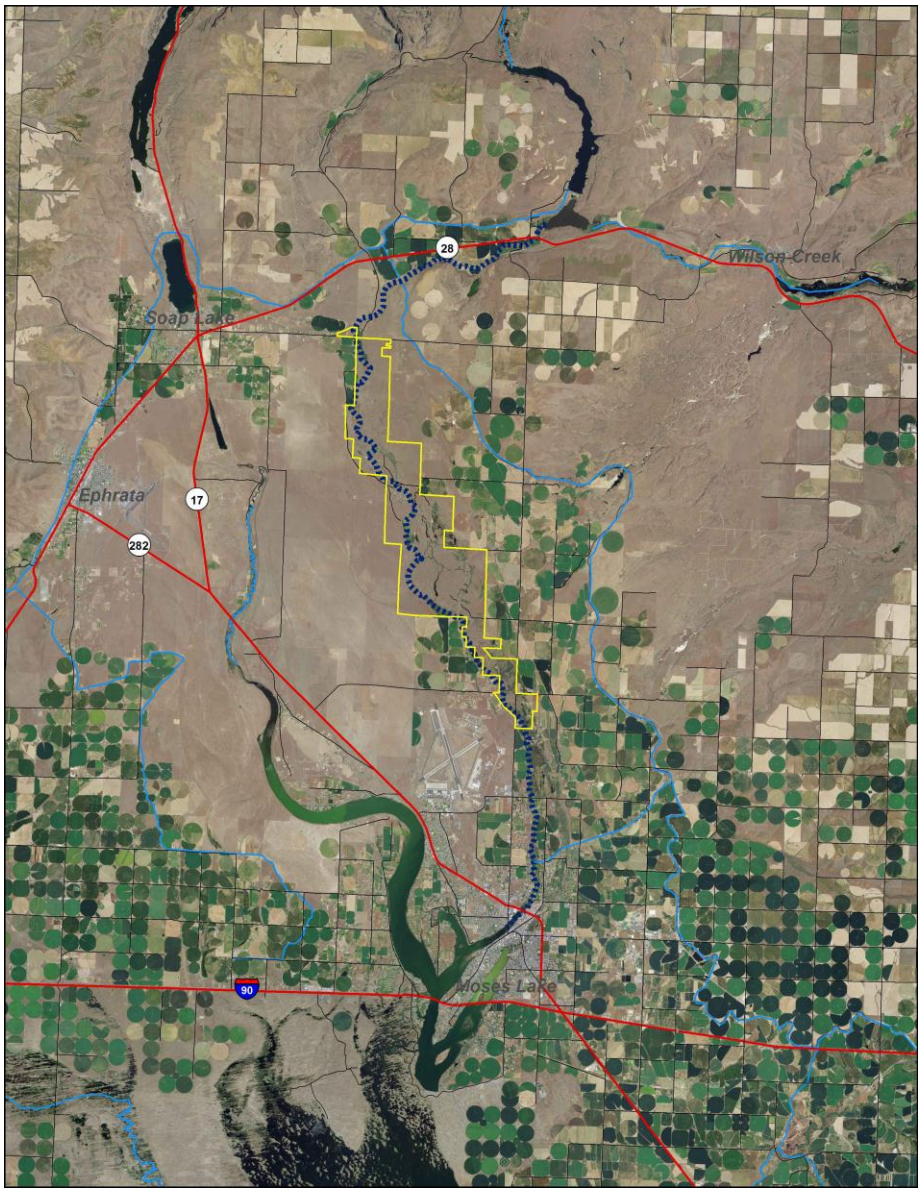

Figure 1. General location of enhancements, middle Crab Creek corridor, Grant County, WA.

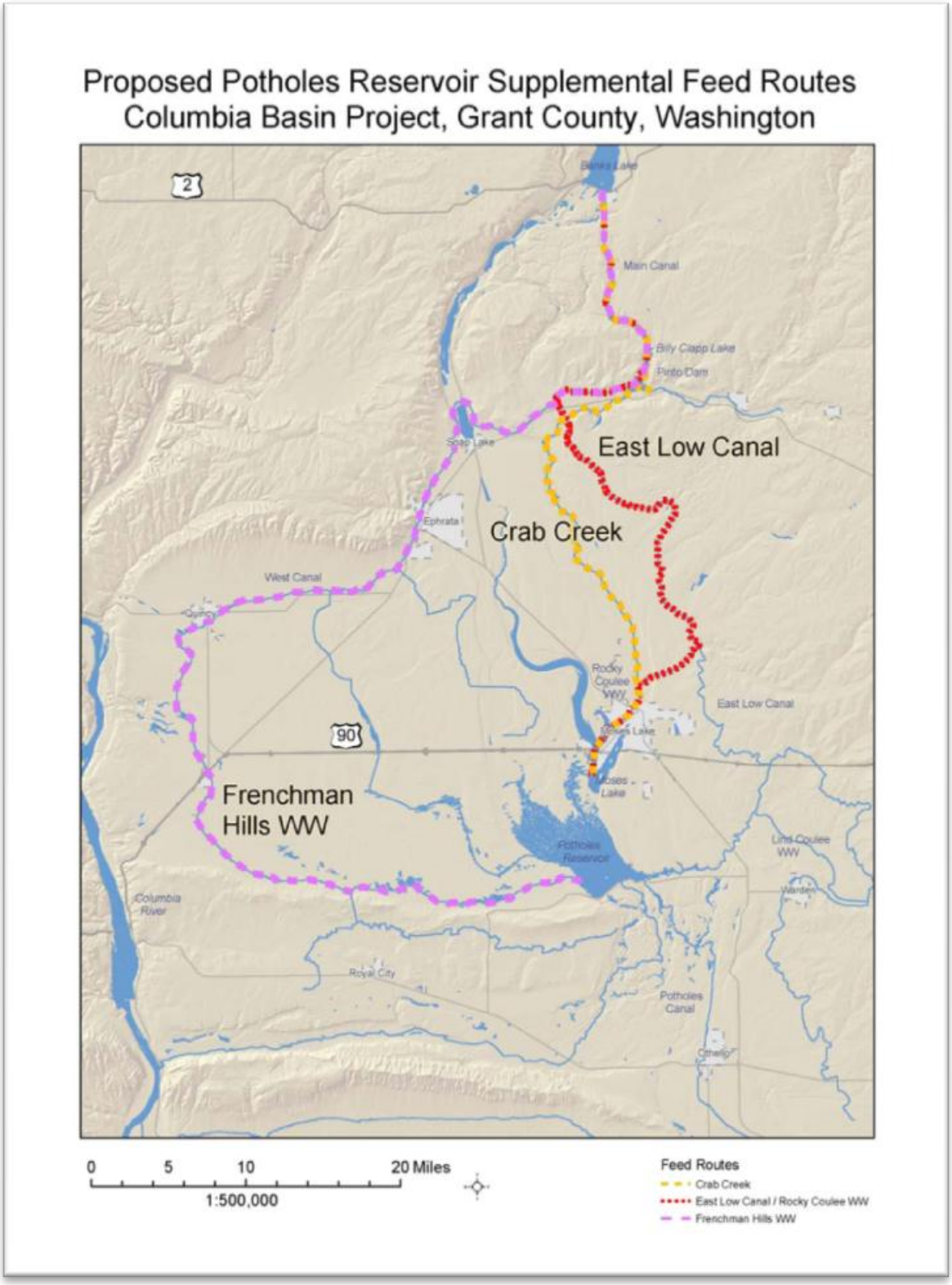

Figure 2. Phase 2 – Crab Creek, Supplemental Feed Route, Grant County.

Project elements include:

1. *Stabilizing the banks of middle Crab Creek and planting riparian vegetation.*
   Description: This phase of the project includes the stabilization of up to 15 miles of stream bank by utilizing a "naturalized" engineered design that incorporates native, riparian vegetation (Appendix A). This enhancement is expected to reduce bank erosion, provide transitional habitat for wildlife, cover for fish, and increase aesthetic value. An additional ¼ mile of bank stabilization will occur downstream of the fish barrier/fishing pier and is expected to enhance riparian habitat.

2. *Constructing berms and swales to create/control wetlands for habitat.*
   Description: This phase of the project includes the construction of several berms and swales to control some of the approximate 900 acres of new wetlands that will be created from delivering feed water down middle Crab Creek to the Potholes Reservoir. Berms, swales, and water control structures will be used to create "habitat management" cells (Figure 3; Appendix B) to provide enhanced habitat opportunities for Northern leopard frogs, waterfowl, and recreation. This activity will be completed prior to the delivery of feed water down middle Crab Creek and mostly above the Ordinary High Water Mark (OHWM).

3. *Constructing a fish barrier and developing an ADA public access site for to provide recreational fishing opportunities.*
   Description: This phase of the project includes the construction of a fish barrier to prevent carp coming out of Brook Lake from entering middle Crab Creek, as well as prevent stocked trout from moving out of middle Crab Creek into Brook Lake. This phase also includes enhancing an existing gravel road and providing American Disabilities Act (ADA) public access with ADA accessible amenities (e.g. vault toilet). *The Recreation Facility Design Guidelines* (Reclamation, 2002) will be used to assure all amenities and access sites are designed and constructed to comply with local, state, and federal ADA laws. A fish barrier will be designed to provide an ADA complaint fishing platform (Appendix C). Improvements will be bake to a linear distance of approximately 300-400 yards within the middle Crab Creek channel prior to feed water being delivered from Billy Clapp Lake to Potholes Reservoir to avoid flooding the adjacent railroad and the future barrier/fishing platform due to creek elevation inconsistencies. In addition, large river cobble (middle Crab Creek parent material) will be used to armor the base of the west bank of the creek for stabilization and utilize finer sediments (sand) for construction of the base of the fish barrier/fishing pier.

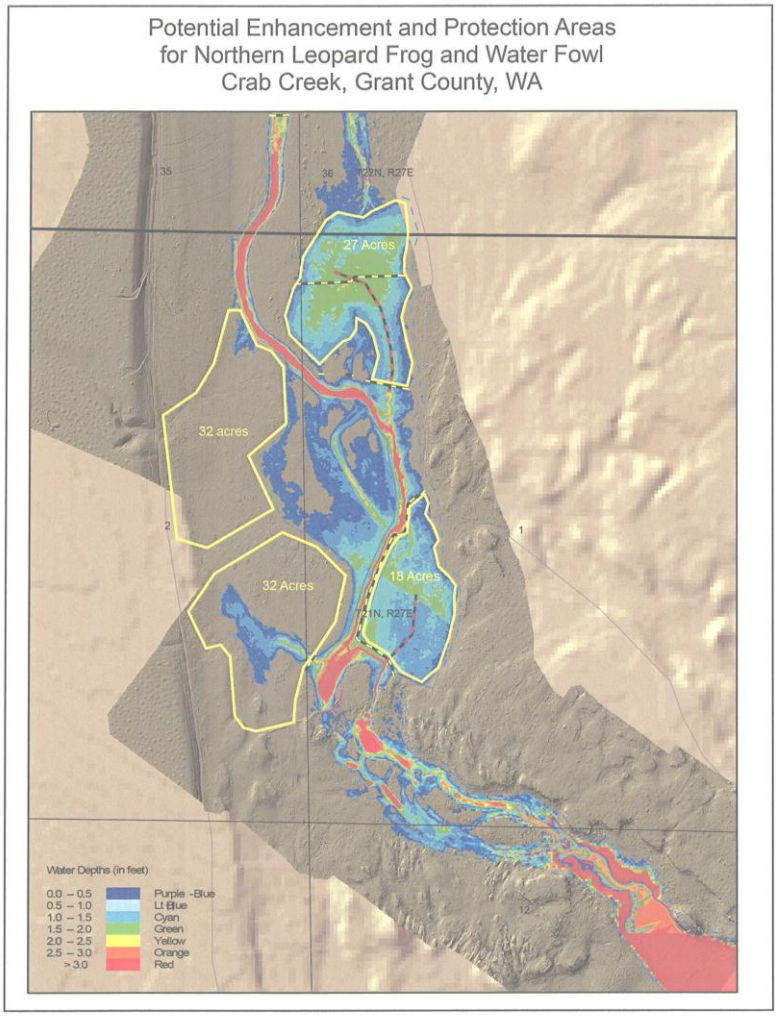

Figure 3. Wetland management cells, middle Crab Creek.

12. Location of the Proposal

The project is located in Grant County in eastern Washington State. The Potholes Reservoir Supplemental Feed Route, Crab Creek Feed, begins at Pinto Dam, just north of State Route 28 approximately 11.5 miles east of Soap Lake, Washington. From Pinto Dam, feed water would be released to Brook Lake, located immediately below the dam. Brook Lake discharges to Crab Creek, through which the feed water would travel until it discharges into Parker Horn at Moses Lake. Once in Moses Lake, the feed water would pass through the Moses Lake outlet into the Potholes Reservoir.

The project is located within: T20/R28/S23; T20/R28/S15; T20/R28/S15; T20/R28/S10; T20/R28/S09; T20/R28/S08 (Figure 4).

All activities will be located in the middle Crab Creek corridor and/or adjacent to the middle Crab Creek corridor below Brook Lake and above Moses Lake within the Columbia Basin Wildlife Area, Gloyd Seeps Unit (Figure1; Figure 5).

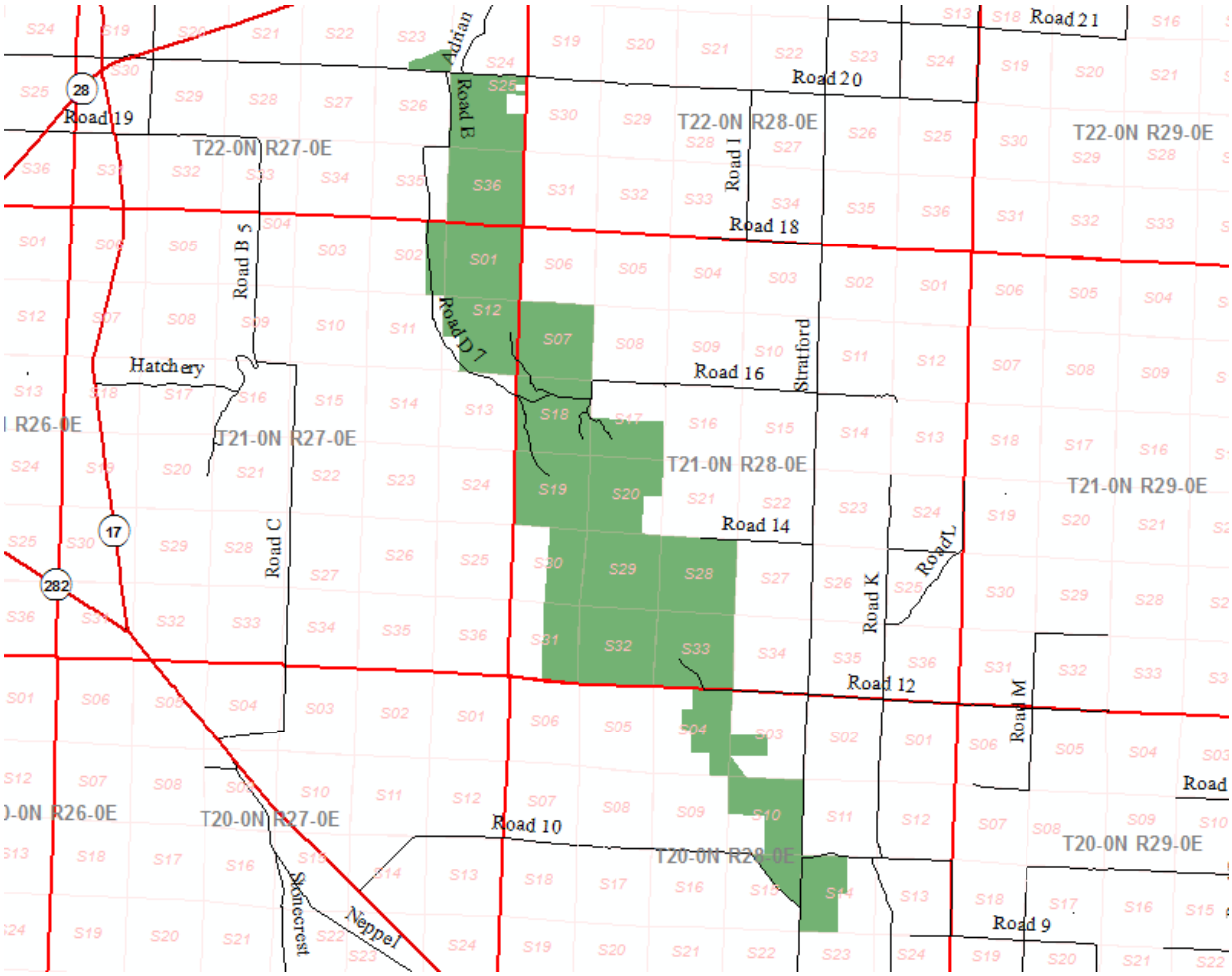

Figure 4. Township, Range, and Section – Location of Project.

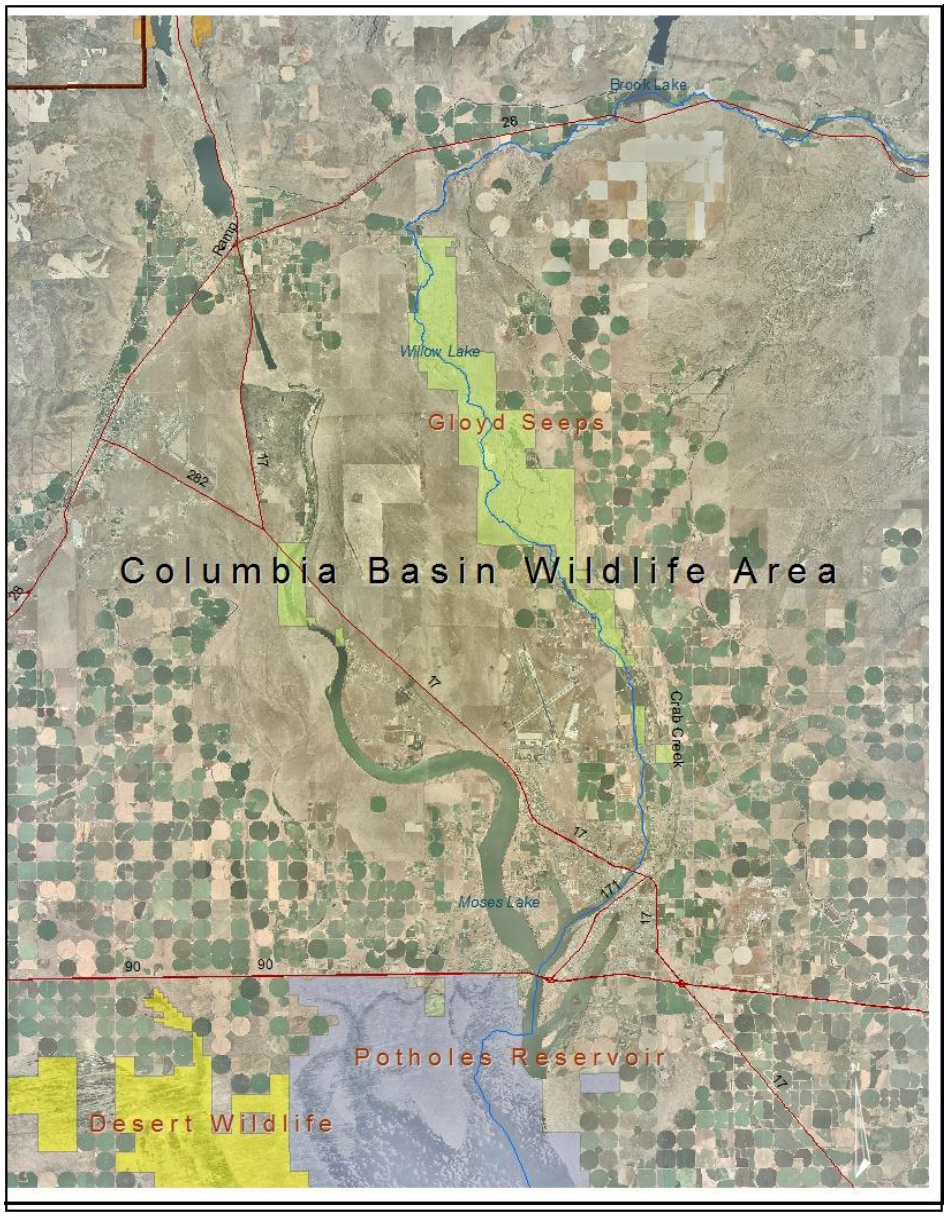

Figure 5. Habitat enhancements are located in the Columbia Basin Wildlife Area, Gloyd Seeps Unit.

B. Environmental Elements

1. Earth

a. **General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other . . . . .**
The topography along middle Crab Creek is generally flat with a gentle slope south. However, banks targeted for stabilization vary but are generally slightly sloped.

b. **What is the steepest slope on the site (approximate percent slope)?**
Sloped topography is generally found within the Ordinary High Water Mark (OHWM) of middle Crab Creek; slopes are not steep (approximate percent slope = 10%).

c. **What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.**
A query of soil maps (NRCS, 2012) identified the following dominant soil type within the project area: Malaga-Sandy-Stony-Loam.

d. **Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**
Some shoreline bank erosion caused by floods, wind, and some farming/grazing activities currently exists.

e. **Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.**
When possible, all fill material will be from WDFW/Reclamation owned lands that are of low habitat value, are presently disturbed, and are of the same parent material.

Purpose, type, and approximate quantities of fill/grading by project element include:

- *Stabilizing the banks of middle Crab Creek and planting riparian vegetation* (Appendix A; Figure 4). This activity will not require any fill but stabilizing the bank may require grading contours to accommodate riparian plantings and avoid future bank erosion. Grading will be used within a relatively small portion (i.e. <0.5 mile stretch) of the middle Crab Creek channel.

- *Constructing berms and swales to create/control wetlands for habitat* (Appendix B; Figures 11; 12; 13): This element will require fill material from on-site and potentially rock fill from a local quarry site to construct the berms and swales. The approximate quantity of fill is 7,000 cubic yards. Berms and swales are located outside the OHWM of middle Crab Creek. Some grading will be necessary; graded materials will be used to construct the berms/swales when appropriate. The approximate quantity of fill required ranges from 12,000 – 18,000 cubic yards. Concrete will also be used to construct new water control structures and rehabilitate an existing water control structure.

- *Constructing a fish barrier and developing a public access site for enhanced fishing opportunities* (Appendix C; Figure 14): Approximately, 16,000 sq. feet will need to be cleared and graded to provide access, parking, and a vault toilet; the existing road will require some regrading; the road is approximately 850 feet long and the parking area will be approximately 10,000 sq ft. The fish barrier will be approximately 150 feet long and will be constructed to accommodate a 75 foot long, ADA compliant fishing platform. See Appendix D, CH2M Hill, 2008 for fish barrier design details. Grading will occur downstream of the proposed fish barrier to reduce flooding from creek elevation inconsistencies and to stabilize the west bank. No material will be brought to the site; only grading would occur.

Any excavated material not used in construction of the habitat enhancement features will be used to diversify habitat within wetland basins by creating islands. Islands will enhance nesting habitat for waterfowl, provide breeding habitat for Northern leopard frogs by creating additional shallow wetland edge habitat, and enhance hunting opportunities for waterfowl hunters; islands would be very small (~1/10 - 1/4 acre).

f. **Could erosion occur as a result of clearing, construction, or use? If so, generally describe.**

Yes. Erosion from wind may occur in areas where vegetation has been removed and/or altered to accommodate vehicle /equipment access and staging areas. Contractors will be responsible for avoiding and/or reducing soils erosion from wind by implementing applicable Best Management Practices (BMPs) such as wetting soils, covering loose soil, and replanting disturbed areas with native vegetation.

g. **About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**
Concrete structures associated with the new water control structures, the rehabilitated water control structure, fish exclusion barriers, and the public access site will all contribute to impervious surfaces. It is expected that less than 1-5% of the total site area will be covered with impervious surfaces after project construction.

h. **Proposed measures to reduce or control erosion, or other impacts to the earth, if any:**
As mentioned previously, contractors will be responsible for deploying BMPs to reduce or control erosion in uplands and below the OHWM. WDFW will assure that staging areas are located in areas previously disturbed to avoid impacts to existing habitat. In addition, WDFW staff will be on-site during construction to assure appropriate erosion control methods are being executed. As mentioned previously, the purpose of this project is to reduce and/or control erosion using riparian plantings and engineered bank stabilization techniques.

2. Air

a. **What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.**
It is expected that machines used to bring in crews, equipment, plants, and bank stabilization supplies will release CO^2 emissions into the air; however the levels would be minimal. Dust will be controlled through BMPs to avoid undo wind latent sediment.

b. **Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**
None are expected.

c. **Proposed measures to reduce or control emissions or other impacts to air, if any:**
The following is a brief list of expected BMPs that will be implemented by the contractor:

- Avoid clearing vegetation
- Use water to wet down dry, exposed soils
- Wash vehicles when necessary to avoid transferring soil materials to roads and/or other locations
- Vehicles/pumps/equipment, etc. will be turned off when not in use
- Replant disturbed areas with native vegetation in consultation with WDFWstaff.

3. Water

a. Surface

1) **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Yes. Middle Crab Creek is an intermittent creek, however once the Feed Route Phase 2 is implemented, middle Crab Creek will be perennial. It is anticipated that 100 cfs would be running through middle Crab Creek, to Moses Lake, and ending at the Potholes Reservoir all year around but will ramp up to a maximum of 650 cfs during the irrigation season (spring); however 500 cfs is a more likely flow regime during the irrigation season.

2) **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**
Yes. The project proposed will enhance habitat at and below the OHWM to provide transitional habitat for wildlife, reduce erosion, stabilize banks, and provide a recreational trout fishery. It is anticipated that 50% of the project will be conducted over, in, or adjacent to (within 200 feet) of middle Crab Creek (Appendix A; Appendix C; Appendix D).

3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**
It is not anticipated that any fill or dredge material would be placed in or removed from surface water or wetlands. Water control structures, berms and swales will be constructed prior to feed water being delivered. The existing water control structure that will be rehabilitated is within an existing irrigation delivery ditch. Concrete will be used to construct the fish barrier/fishing platform at the public access site (Appendix D).

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**
The proposed project will be designed to benefit from the water that will be conveyed down middle Crab Creek within the "normal" operations of the Feed Route Project. Feed water is expected to create an estimated 904 acres of new wetlands on the Columbia Basin Wildlife Area, Gloyd Seeps Unit. Some of the feed water will be diverted into the wetland cells (Figure 3) via water control structures to enhance habitat for Northern leopard frogs, waterfowl, vegetation success, and weed control. There are no new water withdrawals required for the enhancements.

Reclamation's modeling (2009), illustrates the approximate elevation in which lands will be inundated (annual, baseflow of 100 cfs to high, flood flows at 650 cfs).

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**
Bank stabilization and the construction of the fish barrier/fishing platform are within the 100-year floodplain. Both of these project elements are within the OHWM of middle Crab Creek.

6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge**.
The water control structures, berms, and the public access site will be constructed above the OHWM; water won't be delivered to wetland management cells until berms/water control structures are in place. It is anticipated that the creation of a riparian zone will reduce discharge of eroded materials into middle Crab Creek overtime; there will be no waste water generated from this project. It is anticipated that a minimal amount of soil will be discharged into middle Crab Creek as a result of planting trees/ stabilizing the bank.

Any discharge from cleaning equipment or reducing/controlling upland erosion will not be discharged to surface waters. Equipment will be staged in upland areas that do not slope toward surface waters.

b. Ground

1) **Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.**
No.

2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**
N/A.

c. Water runoff (including stormwater)

1) **Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**
During riparian planting efforts, equipment will be staged in uplands, on flat terrain, to prevent any runoff from entering middle Crab Creek. It is expected that a minimal amount of water will runoff into the middle Crab Creek corridor as a result of using a water truck, hand pump, water jet, etc. to plant and water new riparian plantings until the Feed Route water can support growth. Please note: Feed water may not be flowing in middle Crab Creek when bank stabilization/riparian plantings will be occurring or flow will be minimal (~100 cfs); BMP's will be deployed to avoid runoff.

2) **Could waste materials enter ground or surface waters? If so, generally describe.**
It is not anticipated that a large amount of waste material will enter ground or surface waters of the state because water will either not be flowing in middle Crab Creek or will be minimal (100cfs) during bank stabilization. In addition, the CBP area is described as "semi-arid" and only receives about 13.1 cm of precipitation annually. Deployment of BMP's will reduce the likelihood that waste materials from equipment, supplies, crew, and soil disturbance will enter the creek bed.

3) **Proposed measures to reduce or control surface, ground, and runoff water impacts, if any.**
It is unlikely that waste materials would enter into middle Crab Creek. Large construction activities will be completed prior to the delivery of feed water. BMP's will be deployed for all activities.

4. Plants

a. Check or circle types of vegetation found on the site

_____ deciduous tree: alder, maple, aspen, other

_____ evergreen tree: fir, cedar, pine, other

_____ shrubs

_____ grass

_____ pasture
_____ crop or grain
_____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
_____ water plants: water lily, eelgrass, milfoil, other
_____ other types of vegetation

Historically, the native vegetation along middle Crab Creek was shrub-steppe and dominated by perennial grasses, sagebrush, rabbit brush, bitterbrush, grease wood, and spiny hopsage (KWA Ecological Science Inc., 2004). The dominant grasses are currently native bunchgrasses and non-native brome. However, most the vegetation in the enhancement project area has been degraded over time from agriculture, grazing, invasive plants (e.g. reed canarygrass, Russian knapweed, Russian olive, purpose loosestrife, dalmation toadflax, dodder, and common reed), and disturbance from road construction and unauthorized, off-road vehicles. In addition, lack of sufficient water in the project area reduced the quality/quantity of the riparian zone along middle Crab Creek.

b. What kind and amount of vegetation will be removed or altered?
It is anticipated that minimal, if any, native vegetation will be removed or altered. Habitat enhancement elements include planting native vegetation to support the integrity of the berms/swales, using riparian vegetation for bank stabilization, and enhanced habitat opportunities for wildlife.

Construction equipment and supplies will be staged in disturbed areas and in consultation with WDFW staff.

c. List threatened or endangered species known to be on or near the site:
There are no, known threatened or endangered plant species on or near the site. However, the projects will be designed to enhance habitat opportunities for Northern leopard frogs, a state endangered species.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any :
The purpose of the project is to enhance the site using native plants, creating riparian habitat for wildlife, and to stabilize the banks of middle Crab Creek. In addition, areas will be managed by WDFW staff to ensure riparian planting efforts are successful, weeds are managed, and to adapt management strategies as the landscape responds to changes in hydrology.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site.

Birds: hawk, heron, eagle, songbirds, other:

- Waterfowl include: Canada goose, mallard, scaup, northern pintail, gadwall, American wigeon, northern shoveler, redhead, canvasback, bufflehead, Tundra swan, Ring-necked Duck, and blue-winged, cinnamon, and green-winged teal.
- Game birds include: Ring-necked pheasant, gray partridge, and California quail.
- Shorebirds include: killdeer, lesser and greater yellowlegs, dunlin, dowitcher, small sandpipers, American avocet, and the Black-necked stilt.

- Others include: Great blue heron, loggerhead shrike, American white pelican, red-winged blackbird, yellow-headed blackbirds, western meadowlark, horned lark, song sparrow, sora, viriginia rail, and marsh wren.

Mammals: deer, bear, elk, beaver, other:

- Coyote, mule deer, muskrats, beaver, shrew, and mice.

Fish: bass, salmon, trout, herring, shellfish, other:

Currently, middle Crab Creek is intermittent. During a test run of the feed route, millions of carp skeletons were observed by WDFW staff in the bed of Crab Creek.

b. List any threatened or endangered species known to be on or near the site.

There are no, known threatened or endangered species known to be on or near the site. However, a query of WDFWs Priority Habitat Species database revealed the following species status records for state endangered in the middle Crab Creek project area (Table 1).

Table 1. Priority habitat and species records for the middle Crab Creek enhancement area.

Species	Observation Year	Observation Type	State Status	Priority
American White Pelican	Multiple Records (1980s-1990s)	Regular small concentrations and individual occurrences	Endangered	Yes
Northern leopard frog[1]	1999	Individual occurrences	Endangered	Yes

c. Is the site part of a migration route? If so, explain.

Yes. This site is included in a waterfowl migration and staging area. Annually, the area hosts several hundred thousand dabbling ducks and approximately 50,000 diving ducks and Canada geese.

d. Proposed measures to preserve or enhance wildlife, if any:

As mentioned previously, the purpose of this project is to enhance habitat for fish and wildlife; water will provide perennial flow in an area deprived flow; with the exception of flood events.

6. Energy and Natural Resources

a. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc**.

Gas powered augers may be used to dig holes for riparian plantings. If water is to be pumped to the banks to facilitate plant growth until feed water flows down middle Crab Creek, a gas powered generator may need to be used. There are no other energy needs known at this time.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

N/A

[1] Enhancing habitat for Northern leopard frogs is a major objective of the habitat enhancements proposed in middle Crab Creek.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
This project does not include any energy conservation features.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.
There is potential that equipment could leak oil, gas, or other toxic fluids into the middle Crab Creek corridor or within upland staging areas. During bank stabilization/planting efforts, a spill kit will be on-site in the event a spill/leak occurs. Crews will be required to clean equipment (gas powered augers, etc.) prior to use to reduce the likelihood that pollutants from entering the corridor. This project requires very little use of materials that would cause any environmental health hazards; there is no hazardous waste production that will occur.

1) Describe special emergency services that might be required.
None know.

2) Proposed measures to reduce or control environmental health hazards, if any:
Equipment will be cleaned and checked for leaks prior to use. The contractors will be required to have a spill kit on site.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
N/A. The project is located within a Columbia Basin Wildlife Area, Gloyd Seeps Unit.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.
Noise will be generated from several vehicles driving to the site and the use of gas powered augers and generators. The project area is located within the Gloyd Seeps Unit and noise is not expected to be heard by residents, however recreators in the area may be able to hear some noise.

Noise levels are expected to be minimal, short-term, and within the hours of 6am-7pm.

3) Proposed measures to reduce or control noise impacts, if any:
WDFW will reduce noise impacts to wildlife by avoiding working near important breeding areas during breeding and nesting seasons.

9. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?
The project is located on the Columbia Basin Wildlife Area, Gloyd Seeps Unit. The current use of adjacent properties are irrigated agricultural lands, open space, and a mix of light residential.

b. Has the site been used for agriculture? If so, describe.

- Block 40 Unit 178, Section 10; Township 20 N; Range 28 E, approximately 54 acres, last commercial crop was grown in 1986 as a sharecrop, grain crops were grown for wildlife habitat, 48 acres were enrolled into the Conservation Reserve Program in 1992, expired 2012.

- Sharecrops: Two currently active, Section 25; Township 22 N; Range 27 E, approximately 41 acres and Section 26; Township 22 N; Range 27 E, approximately 15 acres.

- Several grain crop food plots were grown throughout the Gloyd Seeps over several years, including on the Spud Field and Flood Flat.

c. Describe any structures on the site.
There is an existing water control structure within the project footprint. This structure will be upgraded to assist with managing the enhancements. In addition, there is an old Homestead located on the property that will not be disturbed. There are two concrete abutments located at the fish barrier site that will be filled due to safety (see 13. Historic and Cultural Preservation; Geo-Marine, 2012).

d. Will any structures be demolished? If so, what
No.

e. What is the current zoning classification of the site?
"*Irrigate*d" is the current zoning classification for the banks stabilization work and constructed wetlands. "*Rangeland*" is the current zoning classification at the new, public access site.

f. What is the current comprehensive plan designation of the site?
The current comprehensive plan designation for the site(s) is *Agricultural Service Center* and *Rangeland*.

g. If applicable, what is the current shoreline master program designation of the site?
Bank stabilization, the fish barrier/fishing platform, and some water control structures will be located within a Shoreline Management Act jurisdictional water body, as well as within 200 feet of the OHWM. Grant County's Shoreline Master Program designates the site as dryland, irrigation, and rangeland.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
No. However, the bank stabilization work and the constructed wetlands locations are within priority habitat for waterfowl.

i. Approximately how many people would reside or work in the completed project
None.

j. Approximately how many people would the completed project displace?
None.

k. Proposed measures to avoid or reduce displacement impacts, if any:
N/A

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
WDFWs mission is "To preserve, protect and perpetuate fish, wildlife and ecosystems while providing sustainable fish and wildlife recreation and commercial opportunities. This project was designed to fulfill that mission, to comply and meet shoreline protection/enhancement objectives within Grant County's Shoreline Management Program, and is within Reclamation's intent to operate its projects for multiple purposes including habitat and recreation.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
N/A.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
N/A.

c. Proposed measures to reduce or control housing impacts, if any:
N/A.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?
The tallest structure will be the water control structures; total height for instream structures will be 8' -10' approximately. Height above ground will be much less. It is anticipated that the berms/wetlands will provide enhanced aesthetics.

b. What views in the immediate vicinity would be altered or obstructed?
It is anticipated that views will be enhanced by those people visiting the Gloyd Seeps Unit and fishing public access site; there are no residential/commercial buildings in the area so views will not be altered or obstructed.

c. Proposed measures to reduce or control aesthetic impacts, if any:
This project is expected to increase aesthetics of the area, therefore measures to reduce or control aesthetic impacts are not proposed.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
There may be some glare from construction equipment during daylight hours.

b. Could light or glare from the finished project be a safety hazard or interfere with views?
No.

c. What existing off-site sources of light or glare may affect your proposal?
N/A.

d. Proposed measures to reduce or control light and glare impacts, if any:
None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
The Gloyd Seeps Unit currently provides designated recreational opportunities in and around the project footprint including wildlife viewing, hiking, and bird hunting. There are no recreational opportunities currently located at the proposed fish barrier/ public access site.

b. Would the proposed project displace any existing recreational uses? If so, describe.
No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
One major objective of this project is to enhance habitat for waterfowl and increase wildlife viewing and hunting opportunities. Currently a trout fishery does not exist in middle Crab Creek. Developing an ADA compliant access site and stocking trout will provide new, recreational opportunities for fishing in Grant County.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
Yes. A Draft Cultural Resources Survey Report titled Middle Crab Creek, Cultural Resources Survey: Grant County, Washington (2012) was submitted by Geo-Marine under contract with Reclamation.

The cultural resource survey covered all phases of the habitat enhancements, fish barrier, and public access site. However, due to the complexity of the projects and the sensitivity of the area, consultation amongst Reclamation, WDFW, Indian Tribes, and DAHP is on-going. If any of the habitat elements/recreational trout fishery is located in uninventoried areas, inventory would be conducted prior to any ground disturbing activities.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
A total of 29 sites were identified by Geo-Marine within 2010 to 2012 (Geo-Marine, 2012). "Sixteen of these sites were previously documented and 13 were newly recorded. Of the sites recorded, seven are recommended as eligible for listing in the National Register of Historic Places and three are recommended for additional work to determine if they are eligible for listing in the National Register of Historic Places. The other 19 sites are recommended as not eligible for inclusion in the National Historic Places" (Geo-Marine, 2012).

c. Proposed measures to reduce or control impacts, if any:
All activities will be designed/placed in a manner to avoid adverse impacts to cultural resources. In the event that impacts to cultural resources cannot be avoided, Reclamation will consult with Indian Tribes and DAHP to identify appropriate "next steps". In addition, a Cultural Resource Management Plan will be developed by Reclamation to protect and preserve historic and cultural resources within the project footprint.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
The fish barrier/public access site will be accessed from Rd. 16 or Rd. 20 via an existing access road/old railroad bed.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
No. The nearest transit stop is approximately 9 miles away and located Ephrata, WA.

c. How many parking spaces would the completed project have? How many would the project eliminate?
N/A.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
No.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
It is unknown how many vehicular trips per day would be generated by the complete project but an increase (compared to existing) in the number of recreators visiting the new wetland complexes and fishing access site in middle Crab Creek is expected to increase. WDFW is on contract to write an adaptive management plan for the project enhancements; an increase in recreational users would serve as a metric to assess use. Currently, peak volumes occur during the hunting season (September through January). The number of vehicles per day is expected to increase slightly upon project completion.

g. Proposed measures to reduce or control transportation impacts, if any:
None.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

N/A.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

N/A.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: .....

Date Submitted: .....02/21/13.....