Programmatic Environmental Assessment

Yakama Nation
Conservation Reserve Enhancement Program (CREP)

Farm Service Agency
United States Department of Agriculture

September 2005

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Cover Sheet

Mandated Action:

The U.S. Department of Agriculture, Commodity Credit Corporation (USDA/CCC) and the Yakama Nation (YN) have agreed to implement the YN Conservation Reserve Enhancement Program (CREP), a component of the national Conservation Reserve Program (CRP).

USDA is provided the statutory authority by the provisions of the Food Security Act of 1985, as amended (1985 Act) (16 U.S.C. 3830 et seq.), the 2002 Farm Bill (signed into law on May 13, 2002), and the regulations at 7 Code of Federal Regulations (CFR) 1410. In accordance with the 1985 Act and the recently enacted 2002 Farm Bill, USDA/CCC is authorized to enroll lands through December 31, 2007.

The Farm Service Agency (FSA) of USDA proposes to enter into a CREP agreement with the YN. CREP is a voluntary land conservation program for agricultural landowners.

Type of Document:

Programmatic Environmental Assessment

Lead Agency:

U.S. Department of Agriculture, Farm Service Agency

Cooperating Agencies:

U.S. Departments of Agriculture, Natural Resource Conservation Service (NRCS); Yakama Nation

For Further Information:

Melissa Cummins

Washington State Farm Service Agency
316 W. Boone Ave., Suite 568
Spokane, Washington 99201-2350
(509) 323-3021 Fax: (509) 323-3074

Melissa.cummins@wa.usda.gov

Comments:

This Final PEA was prepared in accordance with the United States Department of Agriculture FSA National Environmental Policy Act Implementation Procedures found in 7 CFR 799, as well as the National Environmental Policy Act of 1969, Public Law 91-190, 42 U.S.C. 4321-4347, 1 January 1970, as amended. A Notice of Availability is being published in the Federal Register concurrent with this Final PEA.

Any written comments regarding this assessment shall be submitted to:

Melissa Cummins
Washington State Farm Service Agency
316 W. Boone Ave., Suite 568
Spokane, Washington 99201-2350
(509) 323-3021 Fax: (509) 323-3074

Melissa.cummins@wa.usda.gov

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Executive Summary

Purpose of and Need for the Programmatic Environmental Assessment

The purpose of this Programmatic Environmental Assessment (PEA) is to provide to the general public an analysis of the environmental, social, and economic effects of implementing the Yakama Nation (YN) Conservation Reserve Enhancement Program (CREP). This PEA specifically addresses the consequences of implementing two alternatives: a no action alternative and a proposed action alternative.

The Farm Service Agency (FSA) has prepared this PEA in accordance with its National Environmental Policy Act Implementation regulations found in 7 CFR 799, as well as the National Environmental Policy Act of 1969, Public Law 91-190, 42 U.S.C. 4321-4347, 1 January 1970, as amended.

Purpose and Need for the Proposed Action

The purpose of the YN CREP is to enhance the water quality and quantity of Yakama Reservation (YR) by reducing the amount of nutrients, sediments, and chemical runoff from agriculture sources while increasing wildlife and wetland habit for birds, migrating waterfowl, and other aquatic organisms.

On the YR, nearly 20,000 acres of agricultural land lies fallow and has become weed-infested, causing multiple problems for the YN. The YN CREP targets 5,000 acres for implementation of approved FSA conservation practices (CPs) designed to improve the water quality of discharge from agricultural lands while enhancing wildlife and wetland habitat for game and non-game bird species and improving the habitat for aquatic species including important salmonid species. The primary goal of the YN CREP agreement is to provide an opportunity, through financial and technical assistance to eligible producers in the YR, to voluntarily establish wetland habitat, erosion controls, filter strips, buffers, wildlife habitat, grass waterways, and other approved practices that improve the water quality of agricultural runoff.

Description of Alternatives

The alternatives that will be discussed in the PEA include two possible actions: Alternative A (No Action)—Continue Current Agricultural Practices and Alternative B (Proposed Action)—Implement the YN CREP. No other alternatives are being developed at this time.

Alternative A (No Action)—Continue Current Agricultural Practices

Under Alternative A, current agricultural practices would continue and modes of agricultural production would remain as they have for decades. Land development, irrigation water use rates, and agricultural chemical application rates would most likely remain at current levels.

Alternative B (Proposed Action)— Implement the YN CREP

Alternative B is the preferred alternative and targets 5,000 acres for the installation and maintenance of selected CPs. Land placed under CREP contracts would be retired from crop production and irrigation for 10-15 years. CREP would provide the financial and technical assistance necessary to assist eligible farmers and ranchers on the YR by establishing CPs that would conserve soil and water; filter nutrients and pesticides; and enhance and restore wildlife habitat.

Alternative B would also include preparation of a Memorandum of Agreement (MOA) among the FSA, Washington State Historic Preservation Office (SHPO), Advisory Council on Historic Preservation and the YN regarding the treatment of cultural and historic resources on the YR. The agreement would stipulate responsibilities among the parties for reviewing CREP applications for site-specific cultural resource impacts.

A summary comparison of the two alternatives can be found in Tables 2.1 and 2.2 on pages 2-8 and 2-10, respectively.

How to Read this Programmatic Environmental Assessment

The PEA is organized into the following three chapters:

- Chapter 1, Purpose and Need for Action
- Chapter 2, Alternatives Including the Proposed Action
- Chapter 3, Affected Environment and Environmental Consequences

Chapter 1 is an introductory chapter that outlines the purpose and need for preparing a document of this type as well as the purpose and need for CREP. Chapter 1 also briefly introduces the resource issues and discusses the resource issues that were eliminated and the reasons they were eliminated from further analysis.

Chapter 2 describes the actions proposed in the PEA including the two alternatives described above. Alternatives are compared in summary tables in terms of their individual environmental impacts and their achievement of objectives.

Chapter 3 provides a general description of the resource area including a summary of the Yakima River basin, geology, climate, history of irrigation practices, and a profile of agricultural activities (baseline conditions). Following the background information is a more detailed analysis of each of the resources most likely to receive impacts from the alternatives including:

- Water Quality
- Groundwater and Drinking Water
- Wetlands
- Floodplains
- Protected/ Threatened and Endangered Species
- Cultural/Tribal Resources
- Human Health, Social, and Economic Issues

Each resource is discussed in a separate section which has combined the analyses of the Affected Environment (or Existing Conditions) and Environmental Consequences (Effects of Alternative A and B). Each section, in general, is organized as follows:

- Introduction
- Existing Conditions

- Effects of Alternative A
- Effects of Alternative B

How the Draft PEA was Prepared

This document was prepared with the cooperation of Tribal and Farm Service Agency personnel. The best available information was used in the development of this document with the majority of information being obtained from Federal, Tribal, and State agency reports. The majority of these reports came from the following agencies:

- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- USDA, National Agricultural Statistics Services
- USDA, Farm Service Agency
- Bureau of Reclamation
- U.S. Geologic Survey
- Yakama Nation

Public Comments

A Notice of Availability is being published in relevant newspapers concurrent with this PEA. Any written comments concerning this PEA should be submitted to:

Melissa Cummins

Washington State Farm Service Agency
316 W. Boone Ave., Suite 568
Spokane, Washington 99201-2350
(509) 323-3021 Fax: (509) 323-3074

Melissa.cummins@wa.usda.gov

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Acronyms and Abbreviations

2002 Farm Bill	Farm Security and Rural Investment Act of 2002, Public Law 107-121
ACHP	Advisory Council on Historic Preservation
AIRFA	American Indian Religious Freedom Act
ARPA	Archaeological Resources Protection Act
BA	Biological Assessment
BIA	Bureau of Indian Affairs
BOR	Bureau of Reclamation
BPA	Bonneville Power Administration
CATEX	Categorical Exclusion
CCC	Commodity Credit Corporation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CP	Conservation Practice
CREP	Conservation Reserve Enhancement Program
CRITFC	Columbia River Inter-Tribal Fish Commission
CRP	Conservation Reserve Program
CWA	Clean Water Act
CWS	Community Water System
DDE	1,1-Dichloro-2,2-bis(p-chlorophenyl) ethylene
DDT	Dichlordiphenyltrichloroethane
DWU	Drinking Water Unit
EA	Environmental Assessment
Ecology	Washington Department of Ecology
EE	Environmental Evaluation
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EQIP	Environmental Quality Incentive Program
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FOTG	Field Office Technical Guide
FPPA	Farmland Protection Policy Act
FRPP	Farm and Ranch Lands Protection Program
FSA	Farm Service Agency
FWS	U.S. Fish and Wildlife Service
HAL	Health Advisory Level
HEL	Highly Erodible Land
IHS	Indian Health Service
LESA	Land Evaluation and Site Assessment
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPL	Marginal Pastureland
MSFW	Migrant and Seasonal Farm Worker
NAGPRA	Native American Graves Protection and Repatriation Act
NAWQA	National Water-Quality Assessment Program
NECM	National Environmental Compliance Manager

NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRI	National Resources Inventory
PCSRF	Pacific Coastal Salmon Recovery Fund
PEA	Programmatic Environmental Assessment
PEIS	Programmatic Environmental Impact Statement
ROD	Record of Decision
SDWA	Safe Drinking Water Act
SHPO	State Historic Preservation Office
SFHA	Special Flood Hazard Area
SSA	Sole Source Aquifer
Swampbuster	Wetland Compliance Provisions
T&E	Threatened and Endangered
TCP	Traditional Cultural Property
THPO	Tribal Historic Preservation Office
TLIP	Tribal Land Incentive Program
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
WDOH	Washington Department of Health
WHIP	Wildlife Habitat Incentives Program
WIP	Wapato Irrigation Project
WRIA	Water Resource Inventory Area
WSRA	Wild and Scenic Rivers Act
YN	Yakama Nation
YNCRP	Yakama Nation Cultural Resources Program
YNLE	Yakama Nation Land Enterprise
YR	Yakama Reservation
YSPB	Yakima Subbasin Fish and Wildlife Planning Board

Chapter 1.0 Purpose of and Need for Action

1.1 Introduction

1.1.1 Conservation Reserve Enhancement Program Overview

The U.S. Department of Agriculture (USDA)/Commodity Credit Corporation (CCC) and the Yakama Nation (YN) propose to implement the YN Conservation Reserve Enhancement Program (CREP), administered by USDA's Farm Service Agency (FSA) to assist in the recovery of wildlife, fish, and cultural resources on the Yakama Reservation (YR) that have been lost within the Wapato Irrigation Project (WIP). The contract period for acres enrolled in the CREP will be for a minimum of 10 years and a maximum of 15 years, at the YN's discretion. This Agreement between YN and CCC is entered into by YN through Tribal Council Resolution.

The CREP is a component of FSA's Conservation Reserve Program (CRP), which targets the specific environmental needs of each State. The CRP was established under subtitle D of the Food Security Act of 1985. The purpose of CRP is to cost effectively assist owners and operators in conserving and improving soil, water, and wildlife resources on their farms and ranches. Highly erodible and other environmentally sensitive acreage, normally devoted to the production of agricultural commodities, is converted to a long term resource conservation cover. CRP participants enter into contracts for periods of 10 to 15 years in exchange for annual rental payments and cost-share assistance for installing certain conservation practices (CPs).

The initial goal of CRP was to reduce soil erosion on highly erodible cropland. Subsequent amendments of the CRP regulations have made certain cropland and pastureland eligible for CRP based on its benefits to water quality and wildlife habitat. The environmental impact of this program shift was studied in the 1996 Environmental Assessment (EA) for Selected Amendments of the CRP and the 2002 Programmatic Environmental Impact Statement (PEIS), and previous analysis referenced in that document. The Farm Security and Rural Investment Act of 2002 authorized CRP through 2007 and raised the overall enrollment cap to 39.2 million acres.

CREP is authorized pursuant to the 1996 Federal Agriculture Improvement and Reform Act. CREP agreements are done as partnerships between USDA, State and/or Tribal governments, other Federal and State agencies, environmental groups, wildlife groups, and other non-government organizations. This voluntary program uses financial incentives to encourage agricultural producers to enroll in contracts of 10 to 15 years in duration to remove lands from agricultural production and to install FSA-approved CPs. Through CREP, farmers can receive annual rental payments and cost-share assistance to establish long term, resource-conserving covers on eligible land. The two primary objectives of CREP are to:

- Coordinate Federal and non-Federal resources to address specific conservation objectives of a State or Tribal Government and the nation in a cost-effective manner.
- Improve water quality, erosion control, and wildlife habitat related to agricultural use in specific geographic areas.

CRP and CREP are administered by FSA in cooperation with the Natural Resource Conservation Service (NRCS). NRCS provides technical assistance such as developing conservation plans and assisting with site specific environmental evaluations (EE).

This Programmatic Environmental Assessment (PEA) has been conducted in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended 42 USC 4321 – 4347, the NEPA implementing regulations of the USDA, 7 CFR Part Ib, and the FSA NEPA implementation procedures found in 7 CFR Part 799. This PEA does not address individual site specific impacts.

1.1.2 Purpose of Using an Environmental Assessment to Analyze this Action

FSA's NEPA regulations classify the Agency's actions into levels of environmental review such as Categorical Exclusions (CATEXs), EAs, and Environmental Impact Statements (EISs). The National Historic Preservation Act (NHPA) compliance and other cultural resource considerations also are incorporated into FSA's NEPA process.

FSA is preparing this PEA to address the implementation of the CREP to comply with NEPA, Council on Environmental Quality (CEQ) Regulations, and 7 CFR 799: Environmental Quality and Related Environmental Concerns—Compliance with NEPA.

FSA has a framework in place to ensure NEPA compliance at the field level, where site specific EEs would be completed prior to implementing a CREP contract. The review would consist of completing a site specific EE, which would tier off of this PEA and the 2002 CRP PEIS.

A PEA allows FSA to reduce paperwork and identify potential impacts at the Tribal and State level so that the implementation personnel can be aware of them at a site-specific level. Regulations promulgated by the CEQ relevant to this project include:

Sec. 1500.4 Reducing paperwork.

(i) Using **program**, policy, or plan EISs and **tiering** from statements of broad scope to those of narrower scope, to eliminate repetitive discussions of the same issues (Secs. 1502.4 and 1502.20).

Sec. 1502.4 Major Federal actions requiring the preparation of EISs.

(b) EISs may be prepared, and are sometimes required, for **broad Federal actions** such as the adoption of new agency programs or regulations (Sec. 1508.18). Agencies shall prepare statements on broad actions so that they are relevant to policy and are timed to coincide with meaningful points in agency planning and decisionmaking.

> (c) When preparing statements on broad actions (including proposals by more than one agency), agencies may find it useful to evaluate the proposal(s) in one of the following ways:
>
> 1. Geographically, including actions occurring in the same general location, such as body of water, region, or metropolitan area.
>
> 2. Generically, including actions that have relevant similarities, such as common timing, impacts, alternatives, methods of implementation, media, or subject matter.
>
> 3. By stage of technological development including Federal or Federally assisted research, development or demonstration programs for new technologies, which, if applied, could significantly affect the quality of the human environment. Statements shall be prepared on such programs and shall be available before the program has reached a stage of investment or

commitment to implementation likely to determine subsequent development or restrict later alternatives.

FSA plans to use this PEA to address similar actions in the implementation of this program, and to tier to the PEIS that has been prepared for the CRP for whenever NEPA analysis is required.

1.2 Purpose of the Proposed Action

The purpose of the YN CREP is to assist in the recovery of wildlife, fish, and cultural resources on the YR that have been lost within the WIP (see Figure 1-1). Implementation of approved FSA CPs is designed to improve the water quality of discharge from agricultural lands while enhancing wildlife and wetland habitat for game and non-game bird species and improving the habitat for aquatic species including important salmonid species.

Figure 1-1. Location of Yakama Reservation and Wapato Irrigation Project.
Source: YN 2004a and YNLE 2004.

The primary goal of the YN CREP agreement is to provide an opportunity, through financial and technical assistance to eligible producers in the YR, to voluntary establish wetland habitat, erosion

controls, filter strips, buffers, wildlife habitat, grass waterways, and other approved practices that improve the water quality of agricultural runoff. In addition, implementing CREP could have the following benefits:

- Improve surface water quality and improve groundwater quality
- Enhance and conserve the diversity of wildlife including threatened and endangered (T&E) species
- Improve soil quality
- Improve wildlife and water based recreation such as fishing and hunting
- Decrease the cost of noxious weed and invasive species control
- Provide economic benefits to the producer

FSA's top priorities are the continued preservation of farmland, the establishment of soil and water conservation practices on active farmland, and the economic viability of the nation's farmers. CREP would allow farmers to use CPs to enhance water quality and receive payment for those efforts.

1.3 Need for the Proposed Action

WIP's original development incorporated a large amount of land that cannot be efficiently farmed. As a result, nearly 20,000 acres of WIP land is not cropped each year. This land becomes weed infested and causes multiple problems for the YN. Of special concern is the loss of wildlife habitat within WIP. Loss of habitat has reduced important game bird populations as well as non-game species. Impacts of reduced water quantity and quality to federally threatened steelhead can also be significant. Of State and national significance is the impact to habitat of the federally threatened steelhead. Steelhead and other salmonids are native to the Yakima River, Satus Creek, and Toppenish Creek. Over 60 percent of steelhead production in the Yakima River basin occurs on the YR. The YN CREP Agreement is designed to help alleviate some of these problems (Agreement 2004).

1.4 Objectives of the Yakama Nation CREP

In a general sense, the YN CREP would provide financial and technical assistance to eligible farmers/ranchers on the YR in order to implement FSA CPs. Specifically, the CREP program seeks to achieve, to the extent practicable, the following five objectives. Each objective is accompanied by an indicator to help in determining if the objective has been met.

Objective #1: Increase wildlife nesting, brood rearing, escape, and thermal cover on YR by establishing native plant species.

Indicators:

- Enrollment of up to 5,000 acres.
- Implementation of FSA CPs 2, 4D, 5A, 7, 8A, 12, 21, 22, 23, 29, and 30.

Objective #2: Provide increased instream flow into salmonid bearing waterways through elimination of irrigation application of the area enrolled for 15 years.

Indicators:

- Enrollment of up to 5,000 acres.
- Implementation of FSA CPs 2, 4D, 5A, 7, 8A, 12, 21, 22, 23, 29, and 30.

Objective #3: Reduce sediment and nutrient pollution of salmonid bearing waterways by elimination of weeds and establishment of native plant species on the area enrolled.

Indicators:

- Enrollment of up to 5,000 acres.
- Implementation of FSA CPs 2, 4D, 5A, 7, 8A, 12, 21, 22, 23, 29, and 30.

Objective #4: Reduce noxious weed seed sources on 5,000 acres reducing herbicide application.

Indicators:

- Enrollment of up to 5,000 acres.
- Implementation of FSA CPs 2, 4D, 5A, 7, 8A, 12, 21, 22, 23, 29, and 30.

Objective #5: Include all enrolled areas into the YN Public Hunting Program.

Indicators:

- Enrollment of up to 5,000 acres.
- Implementation of FSA CPs 2, 4D, 5A, 7, 8A, 12, 21, 22, 23, 29, and 30.

The project objectives would be reached through the implementation of 11 CPs, which are described in more detail in Section 2.2.2. The implementation of these practices throughout the 5,000 acres is expected to make a significant contribution to achieving the objectives of the CREP program. Appendix A of this PEA contains the full description and requirements of each practice from the FSA CRP Handbook.

1.5 Area covered by YN CREP

Mount Adams, the Klickitat River, and the Yakima River are among the defining features of the YR in south central Washington. The YR encompasses an area of about 1,400,000 acres, 800,000 acres of which are located within the Yakima River basin. Approximately 142,000 acres of land on the YR are irrigated through WIP facilities. The YN CREP seeks to enroll 5,000 acres located in Primary and Secondary Zones of WIP (see Figure 1-2). This targeted area occurs mainly in the valley between Toppenish and Ahtanum Ridges. A more detailed discussion of WIP is included in Section 3.2.

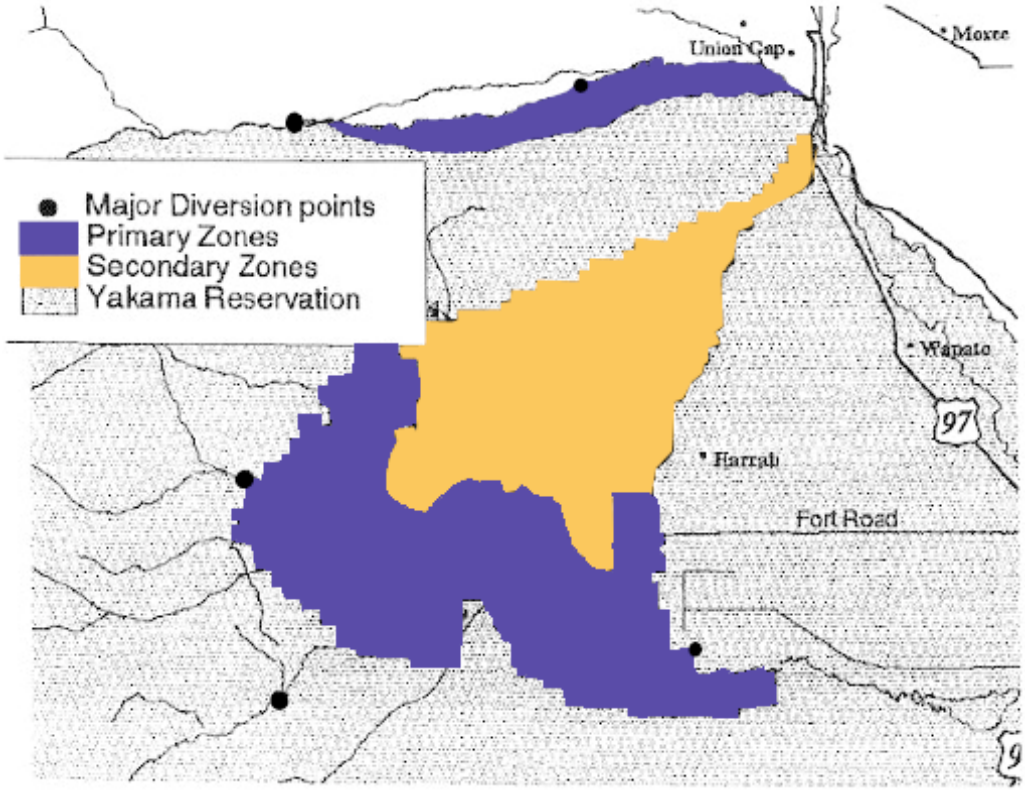

Figure 1-2. Location of Primary and Secondary Zones of the YN CREP.
Source: Agreement 2004.

In addition, the targeted area for CREP enrollment occurs in the open area of the YR. Within the YR there are three types of areas: open areas, allotment land, and closed areas. Open and closed areas refer to the accessibility of the lands to the general public: open areas are accessible to the general public, and in closed areas access is denied to the general public. Allotment land refers to land owned by individual Indians and either held in trust by the U.S. or subject to a statutory restriction on alienation (Schomaker 2004a).

1.6 Relevant Laws, Regulations, and Other Documents

CREP would need to be compliant with a wide range of statutes, regulations, and Executive Orders and this section includes a list of Federal and Tribal laws that may be applicable to CREP. A more detailed description of Federal laws and regulations is included in Appendix B.

It is anticipated that implementation of CREP would complement existing conservation programs and a description of existing Federal and State conservation programs is also included.

1.6.1 Federal Laws, Regulations, and Other Documents

- American Indian Religious Freedom Act of 1978
- Archaeological Resources Protection Act of 1979
- Clean Water Act of 1972

- Comprehensive State Groundwater Protection Program
- CRP Programmatic Environmental Impact Statement
- Endangered Species Act of 1973
- Farmland Protection Policy Act of 1981
- Federal Insecticide, Fungicide, and Rodenticide Act of 1947
- Food Security Act of 1985
- The Indian Environmental General Assistance Program Act of 1992
- National Environmental Policy Act of 1969 and Regulations
- National Historic Preservation Act of 1966 and Regulations
- The Native American Graves Protection and Repatriation Act
- Pacific Northwest Electric Power Planning and Conservation Act of 1980
- Safe Drinking Water Act of 1974
- Salmon Recovery Act
- Sustainable Fisheries Act of 1996
- Wild and Scenic Rivers Act of 1968
- Executive Order 11514: Protection and Enhancement of Environmental Quality
- Executive Order 11988: Floodplain Management—Floodplains and Wetlands
- Executive Order 11990: Protection of Wetlands
- Executive Order 12898: Environmental Justice for Minority and Low Income Populations
- Executive Order 13084: Consultation and Coordination with Indian Tribal Governments
- USDA Departmental Regulation 9500-3

1.6.2 Tribal Laws and Policies

- Yakama Indian Nation Waterfowl Management Plan
- Yakama Indian Nation Land and Natural Resources Policy Plan (T-92-87)
- Yakama Indian Nation Wildlife Mitigation Plan (T-24-91)
- Yakama Treaty of June 9, 1855
- Act of August 1, 1914 - Partial Provision of Irrigation Water Rights of YN
  November, 2002 3-5
- Act of July 1, 1940 - Ratification of Delivery of Additional Treaty Water for Wapato Indian Irrigation Project

1.6.3 Conservation Programs Available in Yakama Reservation

The YN CREP would serve to complement and enhance other conservation programs that are available to ranchers and farmers in the Yakama Reservation. A brief summary of conservation programs are included in this section.

The Conservation Reserve Program

CRP is administered by FSA and provides technical and financial assistance to producers to address the agricultural impacts on water quality and to maintain and improve wildlife habitat. CRP practices include establishing of filter strips, riparian buffers, and permanent wildlife habitats. This program provides the basis for the CREP.

The Environmental Quality Incentive Program

The Environmental Quality Incentive Program (EQIP) is administered by NRCS and provides technical, financial, and educational assistance to producers for CPs that address natural resource concerns, such as water quality. Practices under this program include integrated crop management, grazing land management, well sealing, erosion control systems, agri-chemical handling facilities, vegetative filter strips and riparian buffers, animal waste management facilities and irrigation systems.

Farm and Ranch Lands Protection Program

The Farm and Ranch Land Protection Program (FRPP) provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. USDA partners with State, Tribal, or local governments and non-governmental organizations work through existing programs to acquire conservation easements or other interests in land from landowners. USDA provides up to 50 percent of the fair market easement value.

Tribal Landowner Incentive Program

The Tribal Landowner Incentive Program (TLIP) is administered by the U.S. Fish and Wildlife Service (FWS) and is authorized by the Land and Water Conservation Fund Act of 1965. The purpose of the program is to establish or supplement existing programs that provide technical or financial assistance to Federally recognized Indian Tribes for the protection and management of habitat to benefit Federally listed, proposed, or candidate species, or other at-risk species.

YN was awarded grant money for the Shrub Steppe Assessment and Management Project. The objective of this project is to conduct vegetation sampling that will provide quantitative support to ongoing habitat assessment for four culturally and biologically significant species. The grant will also be used to construct grazing enclosures to monitor grazing effects by native ungulates, livestock, and wild horses (FWS 2005).

Tribal Wildlife Grants Program

The Tribal Wildlife Grants Program is administered by FWS and is authorized by the Land and Water Conservation Fund Act of 1965. Tribal wildlife grants are used for development and implementation of programs for the benefit of wildlife and their habitat, including species that are not hunted or fished.

YN recently received grant money for survey and groundwork that will aid in the development of a long term, comprehensive Forest and Range Wildlife Management Plan (FWS 2005).

The Wetlands Reserve Program

The Wetlands Reserve Program is an NRCS program designed to address the restoration of previously farmed wetlands. Easements are purchased for a 10-year, 30-year, or permanent duration.

Wildlife Habitat Incentives Program

The Wildlife Habitat Incentives Program (WHIP) is a voluntary program for people who want to develop and improve wildlife habitat primarily on private land. Through WHIP NRCS provides both technical assistance and up to 75 percent cost-share assistance to establish and improve fish and wildlife habitat. WHIP agreements between NRCS and the participant generally last from 5 to 10 years from the date the agreement is signed.

WHIP has proven to be a highly effective and widely accepted program across the country. By targeting wildlife habitat projects on all lands and aquatic areas, WHIP provides assistance to conservation-minded landowners who are unable to meet the specific eligibility requirements of other USDA conservation programs.

1.7 Decisions that Must be Made

The Secretary of Agriculture must decide whether to approve CREP for implementation by the YN.

If the Secretary approves the YN CREP, FSA's National Environmental Compliance Manager (NECM) must determine if the selected alternative would, or would not be, a major Federal action significantly affecting the quality of the human environment. If the NECM determines that it would not significantly affect the quality of the human environment, then a Finding of No Significant Impact (FONSI) can be prepared and signed and the project can proceed.

1.8 Scoping and Resource Issues

This Section presents the record of planning and coordinating that occurred in conjunction with the planning of the YN CREP. Resource issues are presented and can be tracked to Section 2.3.2, Summary Comparison of the Effects of Alternatives A and B on the Resources and to related sections of Chapter 3, Affected Environment and Environmental Consequences.

1.8.1 Scoping

The development of the proposed CREP Cultural Resource Assessment included input from the YN's Cultural Resources Program (YNCRP), the YN's Division of Natural Resources Environmental Protection, and YN's Wildlife Biologist. Input was also received from the Bureau of Indian Affairs (BIA) -Yakama Agency and Washington State Historic Preservation Office (SHPO) (Schomaker 2004a).

Consultations with the YN and SHPO began on October 4, 2004. After consultation with YN and SHPO, the preliminary cultural resource assessment determined that the project is not exempt and the activities are undertakings. Consultation with SHPO is ongoing to ensure compliance with applicable laws (Schomaker 2004b).

A letter dated May 24, 2005 was sent to the FWS regarding concurrence on no impacts to T&E species. A copy of this letter can be found in Appendix E.

1.8.2 Relevant Resource Issues

The following resources may be affected by the YN CREP: surface water quality, drinking and groundwater quality, wetlands, floodplains, protected and threatened/endangered species, cultural/Tribal resources, and socioeconomics. Chapter 3 discusses each of the issues, along with four mandatory impact considerations, in detail. Affected resources issues are introduced below.

Issue #1: Water Quality susceptibility to agricultural practices

Water quality of streams, lakes, and reservoirs throughout the proposed CREP project area are impacted by agricultural practices. Agricultural chemicals such as sediments, nutrients, and pesticides are known to contaminate surface water in the project area. Reaches of Yakima River that border the YR have been listed on Washington State's 303(d) list of impaired waterbodies.

Current issues affecting surface water resources are discussed in Section 3.5.

Issue #2: Drinking Water/ Groundwater susceptibility to agricultural practices

Groundwater is the main source of drinking water to private and public water systems throughout the CREP project area and groundwater contamination from agricultural chemicals are of concern in the YR. The majority of private drinking wells in the project area are shallow (less than 100 feet deep) and are vulnerable to contamination from agricultural practices. Section 3.6 contains a more detailed analysis of issues surrounding drinking water and groundwater issues.

Issue #3: Wetlands susceptibility to agricultural practices

Wetlands throughout the Yakima River basin have been lost or degraded by a number of activities including: urban development, conversion to irrigated agricultural land, and the construction of dikes, levees, and dams. Specific agricultural activities such as filling and leveling of wetlands, groundwater withdrawals, and the development of irrigation systems have also led to wetland loss. WIP development channelized natural drainages into irrigation canals and ditches and reduced the quantity of water that supplies wetlands. Wetland loss has adversely impacted wildlife populations and water quality.

Section 3.7 contains a more detailed analysis of issues surrounding wetlands and wetland values.

Issue #4: Floodplains susceptibility to agricultural practices

Floodplain functions and values on the YR have been affected by channelization, water development, land development, and livestock grazing (DOE 1994). Prior to development and diking, the rivers and creeks on the YR flooded over a wide floodplain (NPCC 2004a). The floodplains of the Yakima River, the most populated area of the YR, have been affected by flooding events in the past and have been identified for potential 100-year or 500-year flood events in the future (FEMA 2004, Ecology 2004a).

The prevention of flooding in sensitive areas or using floodwater retention to mitigate nutrient and sediment inflows to watersheds should be addressed. Construction activities (e.g., constructed wetlands) have the potential to modify flowage and storage capacity and should be analyzed. Issues affecting floodplains are discussed in Section 3.8.

Issue #5: Protected Species/ Threatened and Endangered Species susceptibility to agricultural practices

Currently, YR is home to two federally listed T&E species (Section 3.9). Habitat degradation from human population growth, invasive species, and pollution continue to threaten current listed species

populations. Current trends and issues affecting critical habitat and T&E species are discussed in Section 3.9.

Issue #6: Cultural/Tribal Resources susceptibility to agricultural practices

Current agricultural practices in the CREP project area do not protect cultural/Tribal resources. Implementing Alternative B would require the active stewardship of cultural resources in the project area. Federal regulations require that cultural resources be identified and evaluated. These resources would then be managed to maximize their protection from adverse effects. For further discussion of cultural and Tribal resources, see Section 3.10.

Issue#7: Human Health, Social, and Economic Issues susceptibility to agricultural practices

Agriculture and other land-based occupations are an important part of the economy of the YR. Recreation and tourism also contribute revenue to the local economy. Up to 5,000 of the 142,000 acres (or less than one percent) of the WIP facilities are proposed for potential enrollment in the YN CREP. Current issues affecting human health, social, and economic concerns are discussed in Section 3.11.

1.8.3 Issues Eliminated from Further Consideration

Air Quality

As the CREP program would have no discernable effect on air quality of the YR, the topic was eliminated from further consideration as part of this PEA. While a negligible positive effect on air quality with the implementation of CREP CPs is possible, a thorough analysis of the topic is outside the scope of this PEA. On a broader level it is reasonable to assume that the proposed action would not result in impacts on the attainment, non-attainment, or maintenance status of any of YN's airsheds.

The unquantifiable nature of the impacts to air quality makes the topic difficult to address at a programmatic level as well. For example, the potential for extensive leveraged water quality improvements expected as part of CREP will be far greater than the potential for any minor changes to air quality. The probable water quality improvements are easily quantifiable using an existing monitoring system. The same cannot be said of the potential for inconsequential and localized changes in air quality. Also, the plants and tree selected for use with CREP CPs have been chosen for wildlife habitat and water filtering values, not air quality values.

Consideration of any potential impacts to air quality would take place in the EE that would be conducted prior to each CREP contract being completed. Actions would be taken to avoid any potential negative impacts but marginal localized improvements would be allowed.

Noise

After a careful analysis it was determined that there would be no impacts from noise as a result of CREP. Following the short-term construction noise, as the CPs are installed, there would be no continual impacts on the local soundscapes. With the permanent easements and long term nature of the CPs, which would result in decreased agricultural activities on CREP lands, noise levels can be expected to decrease slightly. As a result, FSA eliminated noise from further analysis as part of this PEA.

Hazardous and Toxic Materials

A site specific analysis for the presence of hazardous and toxic materials is necessary to determine the potential impacts as a result of the CREP program. The level of analysis necessary is not practicable to include as part of this PEA. As a result, if Alternative B (CREP Agreement) were implemented, evaluation of the enrolled acreage would occur, and contaminated sites would either be avoided or used in a way as to not further distribute or disturb hazardous or toxic items or sites. Impacts could occur if a hazardous or toxic site is undiscovered and then inadvertently disturbed. Actions would then be taken to mitigate any impact at that time. Otherwise, there would be little to no impact on hazardous waste sites. Therefore, this subject has been eliminated from further analysis as part of this PEA.

Wild and Scenic Rivers

A ten-mile reach of the Klickitat River has been designated under the Wild and Scenic Rivers Act. This reach of the Klickitat River supports one of the only two active Native American dip-net fishers in the Columbia River Basin (NPS 2004). While the designated reach of the Klickitat River is not located in the YR, headwaters of the Klickitat River are located in the YR. However, the area targeted for CREP enrollment is located outside the Klickitat River watershed, and CREP activities are not expected to have effects of consequence. This issue has been eliminated from further analysis.

Prime and Unique Farmlands

Prime farmland is of major importance in meeting the Nation's short and long range needs for food and fiber. The supply of prime farmland is limited, and the conversion of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, less productive, and not easily cultivated. The Farmland Protection Policy Act has established guidelines for important farmland that merits Federal protection (see Section 1.6.21). Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. In the irrigated area of the YR, there have been 55,910 acres of farmland designated as important farmland (see Figure 1-3) (USDA 2004). CREP is not expected to have effects of consequence to prime and unique farmland for a number of reasons. First, marginal farmland is being targeted for enrollment, and implementation of the FSA approved CPs would improve marginal land by reducing soil erosion and restoring vegetation. Additionally, any acres of important farmland that might be enrolled could easily be converted back to farmland in the event of an emergency. For the reasons stated above, this issue has been eliminated from further analysis.

Sole Source Aquifers

Sole source aquifers (SSAs) are protected under the Safe Drinking Water Act (SDWA). Special care must be taken to protect aquifers which the U.S. Environmental Protection Agency (EPA) has designated as SSAs. The EPA defines a SSA as one that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. To be designated a SSA, the area must not have an alternative drinking water source, which could supply all who depend on the aquifer for drinking water. There are no SSAs located within the project area. Therefore, SSAs were eliminated from detailed study in this PEA.

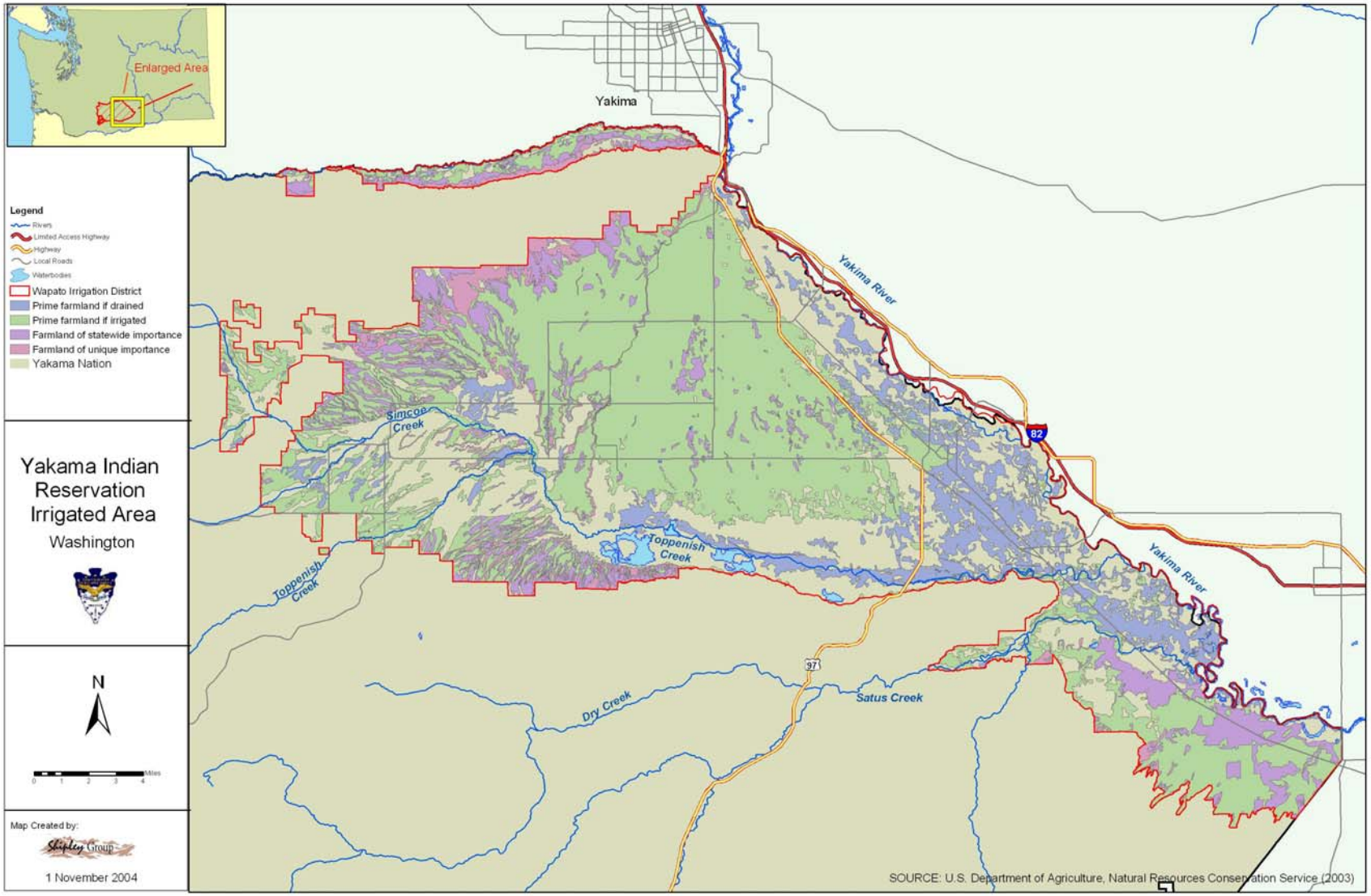

Figure 1-3. Prime farmland on Yakama Reservation.
Source: USDA 2004.

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Chapter 2.0 Alternatives Including the Proposed Action

2.1 Introduction

This chapter describes the actions proposed in the PEA, beginning with the No Action Alternative—Continue Current Agricultural Practices, and ending with the Action Alternative—Implement YN CREP. Alternatives will be compared in terms of their individual environmental impacts and their ability to achieve objectives listed in Section 1.4.

2.2 Description of Alternatives

2.2.1 Alternative A (No Action)—Continue Current Agricultural Practices

Alternative A would allow the continued degradation of agricultural land located within WIP boundaries. Over 20,000 acres of this land cannot be efficiently irrigated. Much of it is no longer cropped regularly and is vulnerable to weed infestation. Weed infestation causes a variety of problems including loss of wildlife habitat, increased use of pesticides on neighboring farmland, and increased soil erosion. Loss of habitat has led to decreased populations of game and non-game bird species (Agreement 2004).

Rill irrigation. Photo Courtesy of USGS.

Because of the arid and semi-arid climate of the region, agriculture is highly dependent on irrigation. Over the last 100 years, a water system has been developed to deliver water to cropland. Surface water is stored in reservoirs and released during the irrigation season to the Yakima River. Water is diverted from Yakima River and other major streams into canals that deliver water to agricultural land; diversions on the canals direct water into laterals that convey water to the fields. The drainage system transports irrigation runoff into natural and constructed channels that discharge into the Yakima River (Fuhrer et al. 2004).

Soil erosion and the use of agricultural chemicals like fertilizers and pesticides result in contaminant-laden runoff that impacts the quality of surface water and groundwater. Surface water diversions also result in altered instream flow of streams and rivers. Agricultural impacts to water quality and quantity can lead to decline in the habitats of threatened and native fish and other aquatic species (Agreement 2004).

With the selection of Alternative A, the benefits of implementing CREP would not be realized. There would not be the incentives to install FSA approved CPs such as filter strips, riparian buffers, wetland restoration, establishment of native grasses, and creation of permanent wildlife habitat. Water purification and enhancement of native ecosystems that result from CP implementation would not be funded, and agricultural practices would continue to degrade habitat and reduce water quality and

quantity. Water quality degradation leads to human health risks and negatively impacts the local economy. These negative impacts would remain and possibly worsen.

2.2.2 Alternative B (Proposed Action)—Implement the YN CREP

Implementation of the YN CREP would begin a 10-year enrollment period to target 5,000 acres for the installation and maintenance of selected CPs. The targeted acres are irrigated lands located along streams and rivers in the primary and secondary zones of WIP. Irrigation water normally applied to enrolled land would be left in the WIP distribution system and then return to local rivers for instream use. This water would not be used to irrigate other agricultural lands (Agreement 2004).

The YN CREP would provide the financial and technical assistance to eligible YN farmers and ranchers in voluntarily implementing CPs that establish native plant species, increase streamflow, reduce sedimentation, reduce noxious weed sources, and aid in the recovery of fish and wildlife on the YR. It would also help enhance the public hunting program on the YR. Alternative B would also have a positive impact to the local economy by providing rental money for less productive and marginal land.

Estimated USDA cost for the project is $1.2 million, and non-Federal costs are estimated at $0.3 million (FSA 2005).

The complexity of cultural resource issues on the YR presents a unique situation when implementing CREP on Tribal lands. There is a need to share information about cultural resources on the YR without releasing it to the public. YNCRP maintains historic and archaeological records. This information is not always made available to outside parties and is considered by the YN to be restricted and available only to YN cultural resources personnel. Alternative B includes the preparation of a Memorandum of Agreement (MOA) between Washington SHPO, YN, Advisory Council on Historic Preservation (ACHP), and FSA.

The MOA would consider direct, individual, and cumulative impacts to YR cultural resources. It would also consider physical impacts such as group diversity, but also visual, auditory, social, land use effects and impacts on cultural use of the environment. The MOA would state the roles and functions of FSA YN, ACHP, and SHPO. The proposed action would meet all regulatory requirements of FSA, SHPO, and all Tribal requirements. The MOA would stipulate planning and execution requirements to minimize adverse effects.

YN would have the authority make decisions concerning site-specific cultural resource assessments. YN could decide to evaluate cultural resources or not. Even if site-specific cultural resource assessments are not conducted, acres would still be eligible for CP enrollment.

Further discussion of the MOA is derived from the document *Preliminary Cultural Resource Management Assessment, Implementation of a Conservation Reserve Enhancement Program* (Schomaker 2004a). This document is included in its entirety in Appendix C.

Conservation Practices

Eleven CPs were selected as the best methods for achieving YN CREP objectives. Implementation of CPs enables landowners to productively use marginal lands, wetlands, or land located in floodplains. Detailed rental and incentive payments, cost share and maintenance payments, technical requirements, and operating procedures for each practice are outlined in the FSA Handbook, Exhibit 9, and are included in this PEA in Appendix A.

CPs must meet the minimum specifications outlined in the NRCS Field Office Technical Guide (FOTG) as well as all other applicable Federal, Tribal, and local requirements. NRCS or a third-party vendor would provide the technical assistance necessary for the implementation of the practices, such as how to construct the areas to most effectively achieve the goals of the CP. The formulation of these conservation options and their application to particular lands would be based on the consideration of landowner objectives, the suitability of a site for a practice, and the extent of the potential benefits expected from that practice.

This PEA briefly discusses the 11 CPs selected to be implemented on the YR: establishment of native grasses, permanent wildlife habitat, field windbreak establishment, erosion control structures, grass waterways, wildlife food plots, filter strips, riparian buffers, wetland restoration, marginal pastureland wildlife habitat, and marginal pastureland wetland buffer.

USDA FSA National Practice CP2 (Establishment of Permanent Native Grasses): This CP establishes a permanent stand of native grasses and forbs that help filter agricultural runoff, enhance wildlife habitat, and reduce soil loss from erosion.

USDA FSA National Practice CP4D (Permanent Wildlife Habitat—Noneasement): This CP creates permanent wildlife habitat cover enhancing environmental benefits for the wildlife of the designated or surrounding areas. Habitat components may include seeding (including shrubs and trees), establishing permanent water sources for wildlife, providing temporary cover, and the addition of minerals.

USDA FSA National Practice CP5A (Field Windbreak Establishment—Noneasement): Field windbreak establishment is designed to reduce cropland erosion on farms and ranches and enhance wildlife habitat in the designated area. Installation of this CP would reduce soil erosion from wind, protect plants from wind related damage, and alter the microenvironment for enhancing plant growth.

USDA FSA National Practice CP7 (Erosion Control Structures): Erosion control structures improve agricultural land by preventing overflow and by improving the use of drainage facilities. Erosion control structures are intended to prevent land and property damage and facilitate water storage and control in connection with wildlife and other developments. These structures also protect natural areas, scenic features, and archaeological sites from damage.

Grass waterway. Photo courtesy of USDA NRCS.

USDA FSA National Practice CP8A (Grass Waterways): In farm areas, small drainages through pastures and crop fields funnel runoff into receiving streams. Grass waterways are strips of grass seeded in areas of cropland where water concentrates or flows off a field. In these areas, grass waterways have been shown to be highly effective at removing or filtering pollutants. In most cases, lands are stabilized through minor earth moving, grading, and establishing grasses. The waterway is covered with an erosion control mat.

USDA FSA National Practice CP12 (Wildlife Food Plot): This practice is used to establish annual or perennial wildlife food plots that will enhance wildlife and wildlife habitat. This CP is designed to enhance environmental benefits and prevent recurring environmental degradation.

USDA FSA National Practice CP21 (Filter Strips): Filter strips are narrow bands of grass or other permanent vegetation used to reduce sediment, nutrients, pesticides, and other contaminants. Filter strips are located on cropland or degraded pastures immediately adjacent and parallel to streams, lakes, ponds, ditches, sinkholes, wetlands, or groundwater recharge areas.

USDA FSA National Practice CP22 (Riparian Buffer): Riparian buffers are strips of grass, trees, or shrubs established adjacent to streams, ditches, wetlands, or other water bodies. Riparian buffers reduce pollution and protect surface and subsurface water quality while enhancing the aquatic ecosystem.

USDA FSA National Practice CP23 (Wetland Restoration): This practice restores the functions and values of wetland ecosystems devoted to agricultural use. It demonstrates excellent phosphorus reduction efficiency and improves quality of downstream waters. For the purposes of this CREP, CP23 enrollment acreage considered as a buffer shall not exceed 2 to 1, upland buffer to wetland, ratio, except upon consultation and approval by the CREP review board.

USDA FSA National Practice CP29 (Marginal Pastureland Wildlife Habitat): The purpose of this practice is to remove nutrients, sediment, organic matter, pesticides, and other pollutants from surface runoff and subsurface flow through the processes of deposition, absorption, plant uptake, and denitrification. Wildlife habitat buffers reduce pollutants, protect surface and subsurface water quality, and enhance the ecosystem of the water body. The restoration of native plants assists in stabilizing stream backs, reduces flood damage impacts, and restores and enhances wildlife habitat.

USDA FSA National Practice CP30 (Marginal Pastureland Wetland Buffer): The purpose of this practice is to remove nutrients, sediment, organic matter, pesticides, and other pollutants from surface runoff and subsurface flow through the processes of deposition, absorption, plant uptake, and denitrification. The practice enhances and/or restores hydrology and plant communities associated with existing or degraded wetland complexes. The goal is to enhance water quality, reduce nutrient and pollutant levels, and improve wildlife habitat.

CREP Implementation

The coordinated effort of Federal and YN agencies is necessary for the successful implementation of the YN CREP. The source of the majority of this information is the Draft Agreement between the YN and the USDA/CCC dated January 7, 2004. The implementation process would include the following elements:

Enrollment in CREP

Any landowner within the boundaries of the YR that meet basic CREP eligibility requirements may submit offers for enrollment in the YN CREP. YN enrollments shall be accomplished by landowners voluntarily leasing their land to the YN for the period of the CREP contract. Enrollment in the program requires that CPs be maintained for a minimum of 10 years and a maximum of 15 years, at the YN's discretion. Enrollment in the YN CREP shall be based upon selection criteria provided as an amendment to FSA Handbook 2-CRP. However for the purposes of the YN CREP, normal CRP requirements for one-year ownership of land shall not apply to the extent consistent with the operation of the normal CRP continuous sign-up and allowed by law (Agreement 2004).

The YN CREP would seek to enroll 5,000 acres of eligible cropland or marginal pastureland (MPL) within the Primary and Secondary Zones of the WIP (see Figure 1-2). MPL may be enrolled, provided it is suitable for either practice CP2, CP22, CP29, or CP30, and provided that the practice is determined appropriate for water quality purposes. No lands may be enrolled under this program until the FSA's Deputy Administrator for Farm Programs concurs with a detailed YN Amendment to Handbook 2-CRP (Agreement 2004).

Payments in CREP

There are several types of payments that YN CREP participants would be eligible to receive (Agreement 2004):

Signing Incentive Payment— a one time payment for land enrolled in field windbreaks (CP5A), grass waterways (CP8A), filter strips (CP21) and riparian buffers (CP22).

Practice Incentive Payment— a one-time payment for field windbreaks (CP5A), grass waterways (CP8A), filter strips (CP21) and riparian buffers (CP22) equal to 40 percent of the eligible cost of the practice. This payment would be considered and treated as a rental payment for payment limitation purposes.

Annual Rental Payments— the annual payment would be comprised of three components: base soil rental rate, an incentive payment, and an annual maintenance payment.

The base soil rental rate will be determined using the following criteria:

- For cropland or MPL, which has an established irrigation system in place and has been irrigated at least 3 out of the last 10 years, the irrigated rental rate approved for the enrolled land would be used. The irrigation rates would be the same as those authorized for the CREP and CRP in Washington.
- For land that does not meet the definition of irrigated land as outlined above, the base soil rental rate would be calculated using the normal CRP weighted average soil rental rate for the three predominant soil types using the current posted applicable local soil rental rates.

As a part of the annual rental payment, an incentive payment would be made. This incentive payment is a percentage of the base CRP contract annual rental rate. The incentive payment would be made in the following amounts:

- For land to be established as field windbreaks (CP5A), grass waterways (CP8A), filter strips (CP21) and riparian buffers (CP22): 20 percent.
- For land to be established in all other practices: zero percent.

An annual maintenance payment would also be made in an amount consistent with applicable CRP regulations. Additionally, for wetland restoration under practice CP23, an incentive payment would be made equal to 25 percent. This incentive payment shall be in addition to the other payments described in this document.

Federal Agency Commitments

USDA and CCC agree to make the following commitments:

- Cost share with YN for 50 percent of the eligible reimbursable costs of all approved CPs.
- Pay all annual rental and incentive payments and determine the base soil rental rates.
- Administer contracts for lands approved under the CREP.
- Develop and approve conservation plans in conjunction with the YN for all enrolled lands.
- Conduct annual compliance reviews according to FSA Handbook 2-CRP to ensure compliance with the CRP contract.
- Provide technical assistance for the CREP program in general.
- Share appropriate data, in accord with procedures and restrictions and exemptions established under the Freedom of Information Act, Federal privacy laws and other applicable laws, with the YN to facilitate YN monitoring efforts.
- Permit successors-in-interest for enrolled lands to enroll in CRP agreements under this CREP in the same manner as allowed for under any other CRP contract.

YN Commitments

The YN would:

- Contribute not less than 20 percent of the overall annual in-kind and direct program costs. A budget and a report monitoring the YN's compliance with its 20 percent obligation would be established and maintained by the YN Wildlife Resource Management Program.
- Provide a Cover Establishment Incentive Payment equal to 100 percent of the CCC cost share payment.
- Be responsible for paying all costs associated with the annual monitoring program, assisting in developing all conservation plans, and implementing all CPs
- Seek land eligible and appropriate for enrollment in the CREP.
- Utilize the technical expertise of YN and BIA resource professionals to assist in the development of conservation plans for all contracts.
- Ensuring that appropriate WIP assessments are paid on land meeting the definition of irrigated land as outlined under Annual Rental Payments above.
- Use YN media resources, such as the Sin Wit Ki (a monthly publication focused on fisheries and wildlife issues of the YN), to publicize the CREP on the YR.
- Ensure that the CREP is coordinated with other agricultural and natural resource conservation programs at the YN level.
- By January 1st of each year, provide the FSA with a summary of the enrollment status of YN CREP and with a progress report concerning the fulfillment of the other commitments of this program.
- By January 1st of each year, submit information summarizing the YN's overall costs for the program.

- All enrolled lands would be either leased or owned by YN and accompanied by a farm plan stating that no irrigation will occur during the contract period.

2.2.3 Comparison of Alternatives

Implementing either alternative would have specific environmental implications for the YN's watersheds and the ability of this project to meet the project objectives outlined in Section 1.4. Tables 2-1 and 2-2 provide summary comparisons of the alternatives. To provide consistency, the following impact terminology will be used in the tables below and throughout the document.

Impact Categories

Environmental effects that may occur as a result of implementing one of the alternatives will be described in the succeeding resource sections in the following manner:

- **No Effect**—A change to a resource's condition, use, or value that is not measurable or perceptible.
- **Beneficial Effect**—An action that would improve the resource's condition, use, or value compared to its current condition, use, or value.
- **Minor Adverse Effect**—A measurable or perceptible, minor, localized degradation of a resource's condition, use, or value that is of little consequence.
- **Moderate Adverse Effect**—A localized degradation of a resource's condition, use, or value that is measurable and of consequence.
- **High Adverse Effect**—A measurable degradation of a resource's condition, use, or value that is large and/or widespread and could have permanent consequences for the resource.
- **Short-term Effect**—An effect that would result in the change of a resource's condition, use, or value lasting less than one year.
- **Long-term Effect**—An effect that would result in the change of a resource's condition, use, or value lasting more than one year and probably much longer.

2.2.4 Summary Comparison of Achievement of Project Objectives of Alternatives A and B

Table 2-1 provides a key part of the information needed by the Secretary of Agriculture and the public to make an informed, reasoned decision.

Table 2-1. Summary Comparison of Achievement of Project Objectives of Alternatives A and B.

Objectives	Indicators	Alternative A: No Action	Alternative B: Implement CREP
Objective #1: Increase wildlife nesting, brood rearing, escape, and thermal cover on YR by establishing native plant species.	Enrollment of up to 5,000 acres. Implementation of the 11 approved CPs.	Current agricultural practices would continue. The 5,000 acres of marginal cropland that would have been enrolled in CREP would remain in production or would remain weed-infested, preventing the establishment of native plants that improve wildlife habitat.	CREP implementation would improve and create habitat for a variety of species. Native plant species would provide nesting, brood rearing, escape, and thermal cover for wildlife. Protected riparian areas would improve aquatic habitat and provide corridors for terrestrial species.
Objective #2: Provide increased instream flow into salmonid bearing waterways through elimination of irrigation application of the area enrolled for 15 years.	Enrollment of up to 5,000 acres. Implementation of the 11 approved CPs.	Current agricultural practices would continue. Irrigation water use rates would most likely remain at present levels. Any increase in stream levels would need to come through other Tribal and Federal programs.	CREP would eliminate the need to irrigate 5,000 acres of cropland. Consumptive use of water on these acres would decrease, which would potentially increase instream flow in salmonid bearing waterways.
Objective #3: Reduce sediment and nutrient pollution of salmonid bearing waterways by elimination of weeds and establishment of native plant species on the area enrolled.	Enrollment of up to 5,000 acres. Implementation of the 11 approved CPs.	The 5,000 acres of cropland that would have been enrolled in CREP would remain in production or would remain fallow and weed-infested. Pesticides and fertilizers would continue to be applied to these lands and pollutant loads in agricultural runoff would most likely remain at current levels. Erosion from marginal cropland would continue to introduce sediment into agricultural runoff and pollute receiving waterbodies.	CREP implementation would retire 5,000 acres of irrigated and marginal cropland from active production. Installation of CPs on the 5,000 acres enrolled in CREP would restore native vegetative communities, decrease erosion from these acres, and result in a subsequent decrease in sediment loads entering receiving waterbodies. Application of herbicides and fertilizers would also decrease and reduce pollutant loads in YR water bodies. CPs such as filter strips and riparian buffers absorb and filter polluted runoff, which would improve the water quality of YR waterbodies.

Objectives	Indicators	Alternative A: No Action	Alternative B: Implement CREP
Objective #4: Reduce noxious weed seed sources on 5,000 acres, saving neighboring farms herbicide expenses.	Enrollment of up to 5,000 acres. Implementation of the 11 approved CPs.	Current agricultural practices would continue. The 5,000 acres of cropland that would have been enrolled in CREP would remain in production, preventing native plants from establishment. Land currently lying fallow would continue to encourage establishment of invasive species and noxious weeds. Neighboring farmland would continue to have herbicides applied to control unwanted species.	CREP will include 5,000 acres of marginal land. Crops and weeds prevent the establishment of native plant communities. Land currently lying fallow would be planted with native plants, discouraging the establishment of invasive species and noxious weeds and eliminating seed sources of noxious weeds.
Objective #5: Include all enrolled areas into the YN Public Hunting Program.	Enrollment of up to 5,000 acres. Implementation of the 11 approved CPs.	Current agricultural practices would continue. The 5,000 acres of cropland that would have been enrolled in CREP would remain in production, discouraging native wildlife populations from establishment by preventing native plant growth. These acres would not be enrolled in the YN Public Hunting Program and would not receive the protection afforded by this program.	CREP implementation would improve and create habitat for a variety of wildlife species. Protected riparian areas would improve aquatic habitat and provide corridors for terrestrial species. Inclusion in the YN Public Hunting Program would serve to provide additional protection to habitat important to native plant and animal species on the YR.

2.2.5 Relevant Resource Issues

Table 2-2 provides a key part of the information needed by the Secretary of Agriculture and the public to make an informed, reasoned decision.

Table 2-2. Summary Comparison of the Effects of Alternatives A and B on Resource Issues.

Issues	Alternative A: No Action	Alternative B: Implement CREP
Issue #1: Water Quality susceptibility to agricultural practices	Long term, moderate adverse effects—Surface water quality would continue to decline as agricultural runoff introduces contaminants in surface water. Any improvements in water quality would be dependent upon existing and proposed programs.	Long-term moderate to high beneficial effects—Removing land from cultivation would reduce nonpoint source pollutant loads that discharge into YR waters. Localized improvements to water quality would occur on the eastern side of the reservation where agricultural lands border the Yakima River. CREP implementation would reduce erosion and the application of nutrients, pesticides, and other agricultural chemicals. CP implementation would also slow the velocity of runoff, improving water quality by allowing pollutants in agricultural runoff to settle or infiltrate before the runoff is discharged into receiving waterbodies. Short-term minor adverse effects may occur during installation of CPs. Temporary measures to control invasive plants may require the use of pesticides and may result in a slight increase in pesticide loads in agricultural runoff. CP installation may also require earthmoving activities which have the potential of adding sediment into runoff. These effects are minor compared to the overall benefits of CREP and mitigation measures would be used to reduce any impacts from CP installation.
Issue #2: Drinking Water/ Groundwater susceptibility to agricultural practices	Long term, moderate adverse effects—Current agricultural practices would continue and groundwater and drinking water quality would continue to decline. Improvements to water quality would be dependent on existing programs.	Moderate to high beneficial long-term effects—Each CP improves surface water quality and potentially would improve the quality of water that recharges groundwater. The retirement of 5,000 acres of marginal farmland would result in fewer fertilizers and pesticides being applied on YR. Groundwater recharge from enrolled land is expected to be of higher quality than recharge from previously cropped or fallow land. Groundwater recharge would also increase through increased wetlands, which recharge water tables and aquifers.

Issue #3: Wetlands susceptibility to agricultural practices	Long term, moderate adverse effects—Wetland values would continue their slow decline. Wetlands that have been converted to farmland would remain in operation. Total wetland acres would likely be stable or slightly increased due to other wetland restoration activities occurring throughout the YR. Existing wetlands and ongoing wetland restoration projects would not benefit from the CPs. Noxious weed infestation would remain and likely worsen and water would continue to be used for purposes that would not achieve CREP Objectives.	Long term, moderate beneficial effects—Under Alternative B, marginal cropland would be removed from production and CPs installed including CP 23, wetland restoration. Each of the CPs benefits wetlands by reducing sediments, agricultural chemicals, and nutrients from farmland runoff. Other CPs offer filtering capacity, improving water quality within wetlands, encouraging native plant species, and increasing the wetland acreage. Additionally, CREP implementation would complement ongoing wetland restoration activities that are occurring throughout the YR. Minor short-term adverse effects may occur during installation of CP 23 wetland restoration. Installation practices may require earthmoving activities that would impact soils and potentially introduce sediments into runoff. Flooding of adjacent may also occur until the hydrology of the installation site is stabilized. These impacts would be minor compared to the overall benefits of CREP and would only last until the CP is permanently established (1-3 years).
Issue #4: Floodplains susceptibility to agricultural practices	Negligible effects —Floodplain functions and values would continue to decline as a result of effects by channelization, water development, land development, and livestock grazing	Long-term minor beneficial effects—Enrolled land in CPs would slow and filter stormwater runoff, decreasing the severity of flooding events and creating a more natural floodplain. Permanent easements would limit development within the floodplain, resulting in potential future benefits as these areas remain undeveloped and natural floodplain processes would continue.
Issue #5: Protected Species/ Threatened and Endangered Species susceptibility to agricultural practices	Long-term, minor adverse effects —Wildlife and habitat values would continue to decline from reduced water quality and quantity. Impacts to existing T&E species would continue as a result of agricultural practices such as pesticide use. Additionally, habitat values would continue to degrade, population growth would continue to crowd natural ecosystems, no additional habitat would be preserved as part of a permanent easement, invasive species would continue to invade large reaches of fallow farmland.	Long-term beneficial effects—CPs would improve habitat values. Improvements to water quality and quantity alone would have beneficial effects for all wildlife as well as potential increases in critical habitat for T&E species. Some CPs directly provide additional habitat and enhance adjacent aquatic habitat by cleaning water and cooling streams, provide for the permanent protection of additional open space, and enhance the potential for wildlife movement along the riparian corridor by buffering the connective habitat from adjacent land uses.

Issue #6: Cultural/Tribal Resources susceptibility to agricultural practices	Minor to moderate adverse effects—These include disturbance and destruction of prehistoric and historic sites and structures, either through ongoing land conversion for development or agricultural use. Sites and structures, if discovered on private land, may often not be reported to anyone. Although cultural discoveries on cropland may not be reported, resources would continue to be managed as YN cultural resources personnel become aware of cultural resources throughout YR.	Long-term moderate beneficial effects—The complexity of cultural resource issues on the YR presents a unique situation when implementing CREP on Tribal lands. The MOA between SHPO, YN, and USDA would ensure that cultural resources discovered on land disturbed for CP implementation would be evaluated by YNCRP personnel. Some of these cultural resources may not be evaluated and may be impacted by continuing agricultural practices and CREP practices.
Issue#7: Human Health, Social, and Economic Issues susceptibility to agricultural practices	Long term, minor adverse effect—No FSA actions are required or necessary to address existing or ongoing issues with environmental justice. Poor water quality and quantity could eventually lead to significant financial losses from recreation in this region of the State.	Long term, minor beneficial effects—By enrolling marginal, less productive agricultural lands, landowners should be able to reduce overall input costs for farming operations and maintain or increase production by being able to concentrate resources on the remaining farmland. Disproportionate effects on minority or underrepresented groups are unlikely. Farm worker health could improve with the decrease or elimination of pesticide application. Increased opportunities for hunting and fishing in these areas may lead to localized increases in the sale of hunting and fishing equipment, licenses, and/or other local resource-based recreation industries. Replenished water would increase opportunities for recreation on YR waterbodies.

Chapter 3.0 Affected Environment and Environmental Consequences

3.1 Introduction

The analyses of Affected Environment and Environmental Consequences have been combined in this section to simplify the document. Relevant resource issues related to the YN CREP are discussed below in Sections 3.5 through 3.11. This section will explore the environmental resources affected by the Alternative A: No Action Alternative – Continuation of Current Agricultural Practices and Alternative B: Proposed Action Alternative – Implementation of the YN CREP.

This chapter discusses the resources most likely to be impacted by the alternatives and compares the impacts of the alternatives on the resource issues. Resources discussed in this chapter are:

- Surface Water Quality (3.5)
- Groundwater and Drinking Water Quality (3.6)
- Wetlands (3.7)
- Floodplains (3.8)
- Protected Species and Threatened/Endangered Species (3.9)
- Cultural/Tribal Resources (3.10)
- Human Health, Social, and Economic Issues (3.11).

This chapter also discusses mandatory impact considerations including cumulative effects (3.12); unavoidable adverse impacts (3.13); relationship of short-term uses and long-term productivity (3.14); and irreversible and irretrievable commitments of resources (3.15).

The general nature of this PEA limits discussion of the resources to a wide scale. An in-depth, site-specific EE would be completed by FSA with assistance from NRCS for each farm contract upon completion of the conservation plan. As impacts become clear at each site, the appropriate steps would be taken to ensure compliance with NEPA, and related environmental and cultural resource laws and regulations.

3.2 General Description

For purposes of discussion and analyses, a general description of the Yakima River basin and of the WIP are included.

Yakima River Basin

The Yakima River drains 6,155 square miles of forest, rangeland, and agricultural land in south-central Washington. The river originates in the Cascade Range and flows 214 river miles southeastward to the Columbia River. The basin is bounded on the west by the Cascade Range, on the north by the Wenatchee Mountains, on the east by the Rattlesnake Hills, and on the south by the Horse Heaven Hills. The western part of the basin contains high peaks and deep valleys, and the central and eastern parts feature broad valleys and basalt ridges of the Columbia Plateau. Altitudes in the basin range from 8,184 feet in the Cascade Range to 340 feet at the confluence with the Columbia River (FWS 2002, Ebert and Embrey 2002, Fuhrer et al. 2004).

Land use and land cover in the Yakima River basin varies according to topography and climate. The western part of the basin is predominantly forested, whereas the eastern uplands are dominated by sagebrush and grasses. The lowlands in the central and eastern portions support the agricultural community (Fuhrer et al. 2004).

The entire basin lies within areas either ceded to the U.S. by the YN or areas reserved for their use. The YR encompasses an area of about 1,400,000 acres, about 800,000 acres of which are located within the Yakima River basin. The YN lands, located in the Lower Yakima River Subbasin, occupy about 42 percent of the Lower Yakima River Subbasin (Figure 3-1) (Ecology 1997).

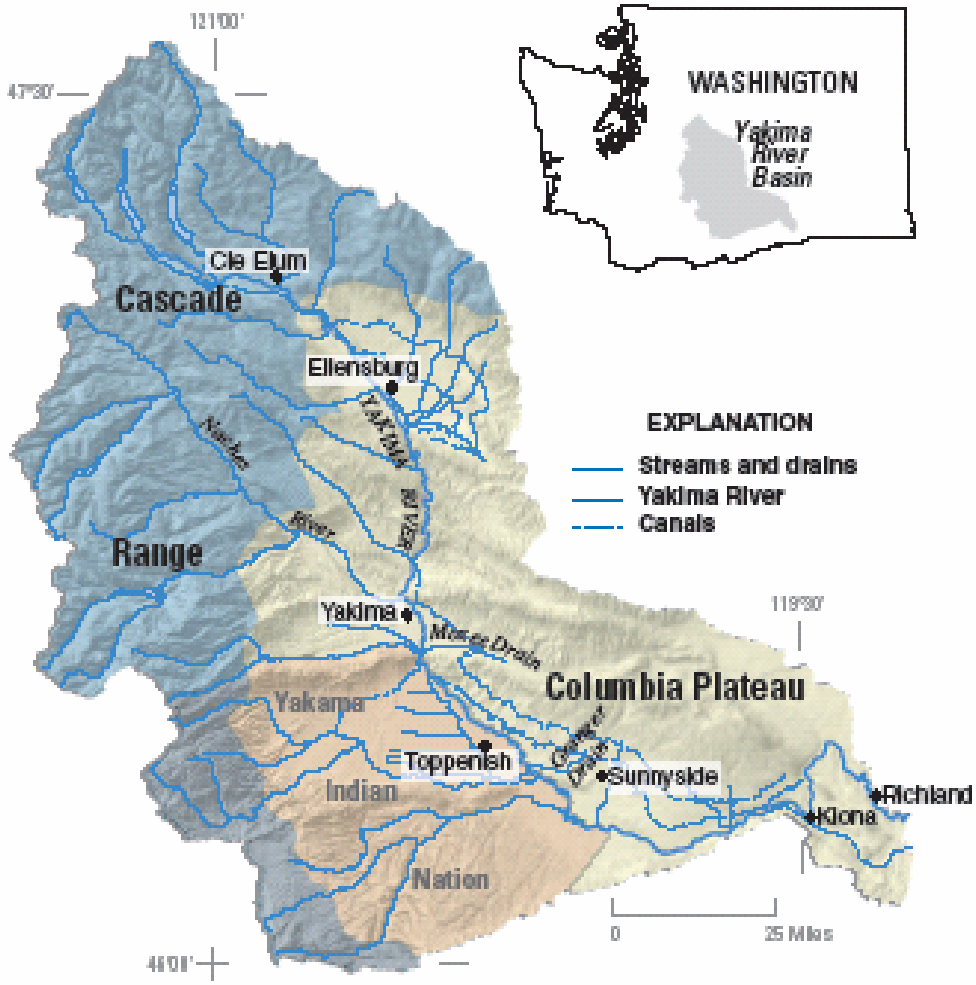


Figure 3-1. Location of Yakima River Basin in Washington State.
Source: Ebert and Embrey 2002.

Climate

The YR lies largely within the rain shadow of the Cascade Mountain Range. In the Lower Yakima River Subbasin, annual precipitation averages 6-10 inches. About 50 percent of the annual precipitation falls during the winter months as snow. Approximately five percent of annual precipitation is received as rain during the relatively wet months of August and September. Summers are typically hot and dry; winters are dry and cold (DOE 1994).

Geology

Geology of the larger Yakima River Basin is characterized by a series of long north-south facing ridges that extend eastward from the crest of the Cascade Mountains. The dominant structural feature in the YR interior is the east-west Toppenish uplift. The Toppenish uplift bisects the Reservation, creating north and south portions. Beginning at the Klickitat River, this uplift plunges eastward from an elevation of 5,000 to 1,500 feet and ends about 50 miles from the Yakima River. Between the Toppenish and Ahtanum uplifts lies the Toppenish structural basin. This 10-14 mile wide basin begins near the Klickitat River at an elevation of 4,500 feet, and stretches 40 miles east to the Yakima River at an elevation of 900 feet (DOE 1994).

Wapato Irrigation Project

The WIP is a division of the larger Yakima Project managed by the Bureau of Reclamation (BOR). The Yakima Project provides irrigation water for a comparatively narrow strip of fertile land that extends for 175 miles on both sides of the Yakima River in south-central Washington. WIP, which is operated by BIA, is located on the YR in the Lower Yakima River Subbasin. Approximately 142,000 acres of land on the YR are irrigated through WIP facilities (see Figure 1-1, Section 1.2). The primary water supply is diverted from the Yakima River at the Wapato Diversion Dam. Areas irrigated through WIP facilities are located in the lower elevations of the Ahtanum, Toppenish, and Satus Creek watersheds (DOI 2002, BOR 2004).

The Wapato Canal diversion on the Yakima River. Photo Courtesy of Ebert and Embrey 2002.

3.3 Agricultural Profile

The Yakima River basin lands are some of the most intensively irrigated in the U.S., with approximately 450,000 acres of irrigated cropland. The livelihood for many of the basin's 293,700 residents is based in some way on agriculture. The Kittitas Valley produces predominantly hay, cereal crops, and irrigated pasture, whereas the Mid and Lower Valleys produce fruits, vegetables, grapes, and other specialty crops, such as hops and mint (Figure 3-2) (Fuhrer et al. 2004).

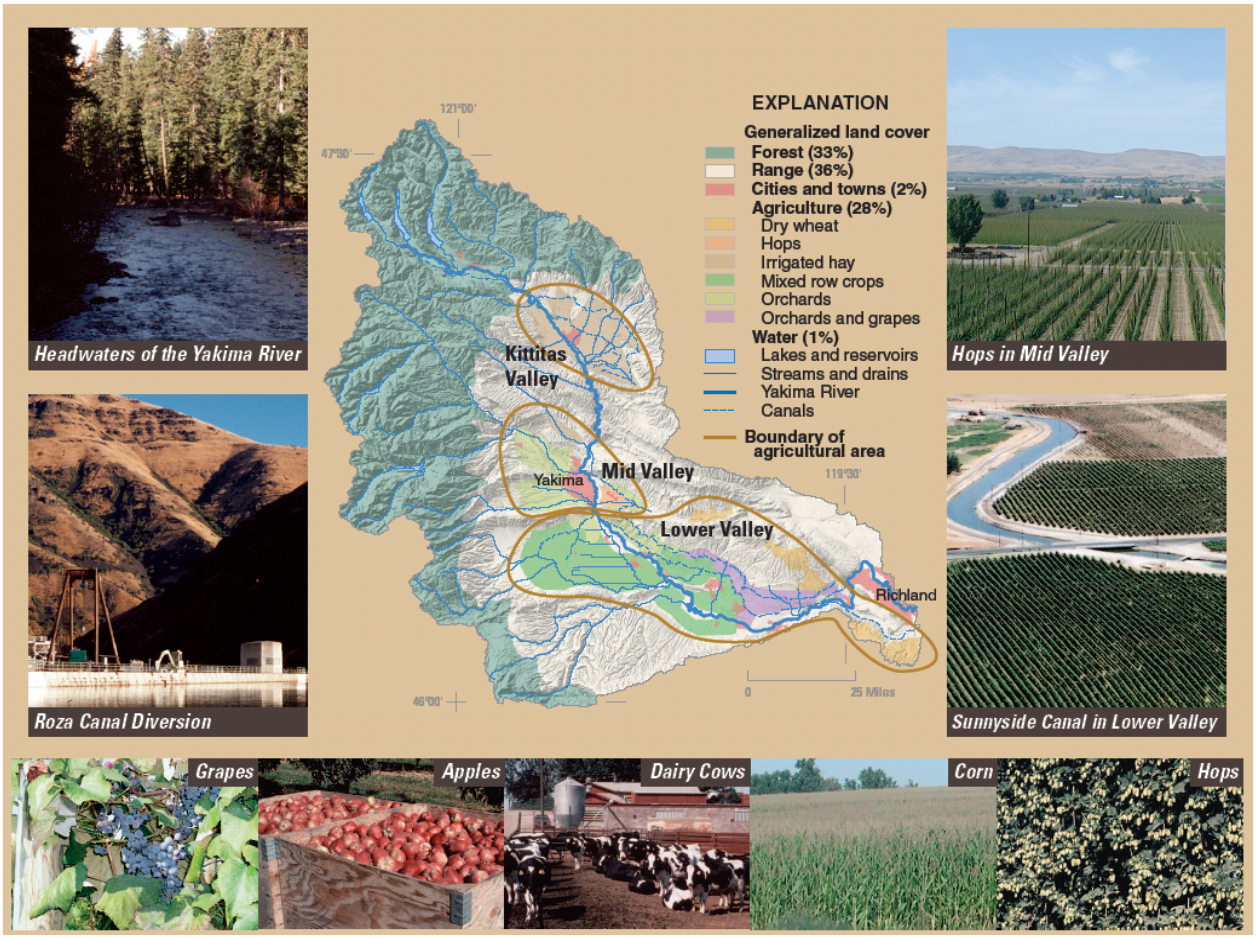


Figure 3-2. Agriculture in Yakima River Basin.
Source: Fuhrer et al. 2004.

YR is located in the Lower Valley and accounts for approximately half of the land area of Yakima County. Yakima County currently ranks first in Washington State for milk production. The county is also ranked first in the nation for the production of apples, mints and hops and fifth for total agricultural production (Fuhrer et al. 2004, BOR 2004).

The Yakama Nation Land Enterprise (YNLE) was created in 1950 primarily to purchase, consolidate, regulate, and develop land on behalf of the YN. In 1989, the YNLE recognized the need to utilize the land by developing orchards and other agricultural crops. Apples are the main orchard crop grown by the YNLE. The YNLE orchard operation has grown from 31 acres in 1989 to 1,138 acres in 1999. Besides apples, the Tribe is growing cherries, peaches, nectarines, pears, plums and apricots. Other agricultural crops include asparagus, Merlot grapes, sweet corn, wheat, and alfalfa. (YNLE 2004, Harvard 2004).

3.4 Leveraged Benefits

An understanding of the planned effect of the 5,000 acres proposed for the YN CREP is essential to the discussion of resource impacts. The reason for this discussion is that a one-to-one

comparison of acreage impacts is not a valid assumption for analysis due to the anticipated uses of the CREP acreage. The impacts of one acre added to CREP are not equal to only one acre of the watershed being benefited by the nutrient reduction or conversion to a wetland or riparian buffer strip. One acre of enrolled land can potentially have a positive impact on tens and hundreds of additional acres. For example, if five acres were enrolled in CREP and CP22 (riparian buffer) was implemented, the new buffer could intercept agricultural runoff from hundreds of acres and reduce nutrients, sediment, and pesticide loads significantly within the watershed. This relatively small footprint of CREP acreage can potentially have large benefits to the watershed downstream and large impacts on the YN CREP objectives.

Using a one-to-one comparison, up to 5,000 acres (3.5 percent) of a possible 142,000 irrigated acres in WIP would be allowed to enroll in CREP, or 0.35 percent of the approximate 1,377,034 acres of the YR.

Specific impacts and the degree to which the CPs can be effective would depend on site-specific analysis of each CREP enrollment. Acreage is limited for some of the CPs, yet the overall benefits are measured as impacts to larger acreage.

3.5 Surface Water Quality

The Clean Water Act (CWA) requires that the states report on the quality of water. Under Section 303(d) of the CWA, states are required to biennially develop a Water Quality Limited Segments List (commonly called a 303(d) List). This is a list of waterbodies that are not meeting State water quality standards. Section 303(d) requires a total maximum daily load (TMDL) for waters that do not meet State water quality standards. A TMDL is described as a "pollution budget" for a specific river, lake, or stream, and is an established wasteload allocation for point and non-point pollution sources.

Section 305(b) of the CWA requires States to develop a water quality report that provides information about water quality conditions, sources and causes of pollution, attainment of water quality standards, and designated use support.

Since the State of Washington does not have legal authority over Tribal waters, State water quality standards do not apply to waters of the YR, and waterbodies located within the YR are not included on the 303(d) list or in the 305(b) report. Furthermore, YR waterbodies are not classified by the State (Ecology 1997).

YN is currently in the process of establishing water quality standards for waters within the YR. To aid tribes in the process of developing water quality standards, EPA has published ambient water quality criteria recommendations for different ecoregions. Irrigated agricultural areas of the YR are located in Nutrient Ecoregion III (Xeric West), subecoregion 10 (Columbia Plateau) (EPA 2000). For the purpose of analysis and discussion, these criteria recommendations will be referenced.

3.5.1 Existing Conditions

YN is bordered by the Yakima River to the east, Ahtanum Creek on the north, and the Cascades Mountain Range to the west. Major streams and rivers within the YR include: Toppenish Creek, Satus Creek, Simcoe Creek, Dry Creek, Agency Creek and the Klickitat River. Major streams

and drains within WIP boundaries include: Toppenish Creek, East Toppenish Drain, Satus Creek, Marion Drain, and North Satus Drain. Of these streams, Toppenish Creek and Satus Creek are major tributaries to the Yakima River (Fuhrer et al. 2004).

Within the Yakima River basin, surface water uses include: irrigation, drinking water, wildlife and fisheries habitat, and recreation. Instream uses include: aquatic habitat and recreational uses such as boating, fishing, and swimming. Surface water is diverted in the basin for public drinking water supplies, industrial uses, and irrigation. Of these uses, irrigation accounts for more than 95 percent of surface water withdrawals in the Yakima River basin (Fuhrer et al. 2004).

Clean Water Act Sections 305(b) and 303(d)

Although waters of the YR are not included in the State of Washington's 303(d) list, reaches of Yakima River, which borders YR and receives water from streams of the YR, has been listed on the State's 1998 303(d) list (Ecology 2004). Listing of bordering reaches indicates that the water quality of the contributing YR streams is also potentially impaired.

Agricultural drain entering Yakima River. Photo courtesy of Ecology.

Reaches of Yakima River have been listed for pathogens, pesticides, altered instream flow, and metals. Toppenish and Satus Creek are major tributaries in the Lower Yakima River subbasin and affect the impaired reaches of the Yakima River. Agricultural drains located in WIP also discharge pollutants into Yakima River either directly or indirectly as they discharge into the tributaries of Yakima River. In 1997, the State of Washington established sediment and dichlordiphenyltrichloroethane (DDT) TMDLs for the Lower Yakima River. Although the TMDL is not applicable to YR, the State, in cooperation with YN, conducted water quality monitoring on tributaries in the YR to help quantify pollutant loads to the river. The results of this monitoring effort were included in the State's evaluation report for the TMDL. This information will be used in this section to help characterize the existing water quality conditions of streams and drains in YR (Ecology 1997).

National Water-Quality Assessment Program

In 1991, Congress began to appropriate funds for the United States Geological Survey (USGS) to conduct the National Water-Quality Assessment (NAWQA) Program. Since that time, NAWQA has evaluated the quality of streams, groundwater, and aquatic ecosystems in more than 50 major river basins and aquifer systems across the nation, referred to as Study Units. From 1999 to 2000, water quality data was collected from streams and rivers throughout the Yakima River basin. Sampling was conducted for streams and drains in the YR, including sites at East Toppenish Drain, Sub 35 Drain, South Drain, Marion Drain, Satus Creek and Toppenish Creek. Data from

the study were summarized in several reports, including an overall summary titled: *Water Quality in the Yakima River Basin, Washington, 1999–2000* (Fuhrer et al. 2004). Agricultural-related water quality parameters of this study include:

- Nutrients (phosphorus and nitrogen)
- Sediments
- Pesticides
- Bacteria
- Arsenic

Agricultural Impacts to Water Quality

Many of the contaminants found in the waterbodies of the YR and in Yakima River have a direct link to agricultural practices. Both Satus and Toppenish Creeks receive both surface and subsurface irrigation return flow containing agricultural contaminants. Other WIP drains that discharge contaminated irrigation and return flow directly into the Yakima River include: Marion Drain, Sub 35 Drain, South Drain, East Toppenish Drain, and Satus 303 Drain (Ecology 1997). A more detailed discussion about specific agricultural contaminants in YR surface water can be found below. The effects of nitrates and arsenic are discussed in more detail in Section 3.6.

Nutrients

EPA's suggested nutrient criteria for aquatic life in the Columbia Plateau Ecoregion are 0.36 mg/L for total nitrogen (TN) and 0.03 mg/L for total phosphorus (TP). These suggested reference conditions can be applied to streams on the YR located within WIP boundaries. According to the NAWQA study, nitrate and orthophosphate were the dominant forms of nitrogen and phosphorus found in the Yakima River and its agricultural tributaries. These forms of nitrogen and phosphorus are highly water-soluble and are transported to streams and drains in irrigation runoff. After the irrigation season, they continue to enter streams and drains from groundwater discharges. The NAWQA study revealed that all of the tributaries in the YR had TP concentrations that were above 0.03 mg/L (see Figure 3-3). Of these tributaries, South Drain had the highest concentration of TP, and Marion Drain had the lowest concentration of TP (Fuhrer et al. 2004).

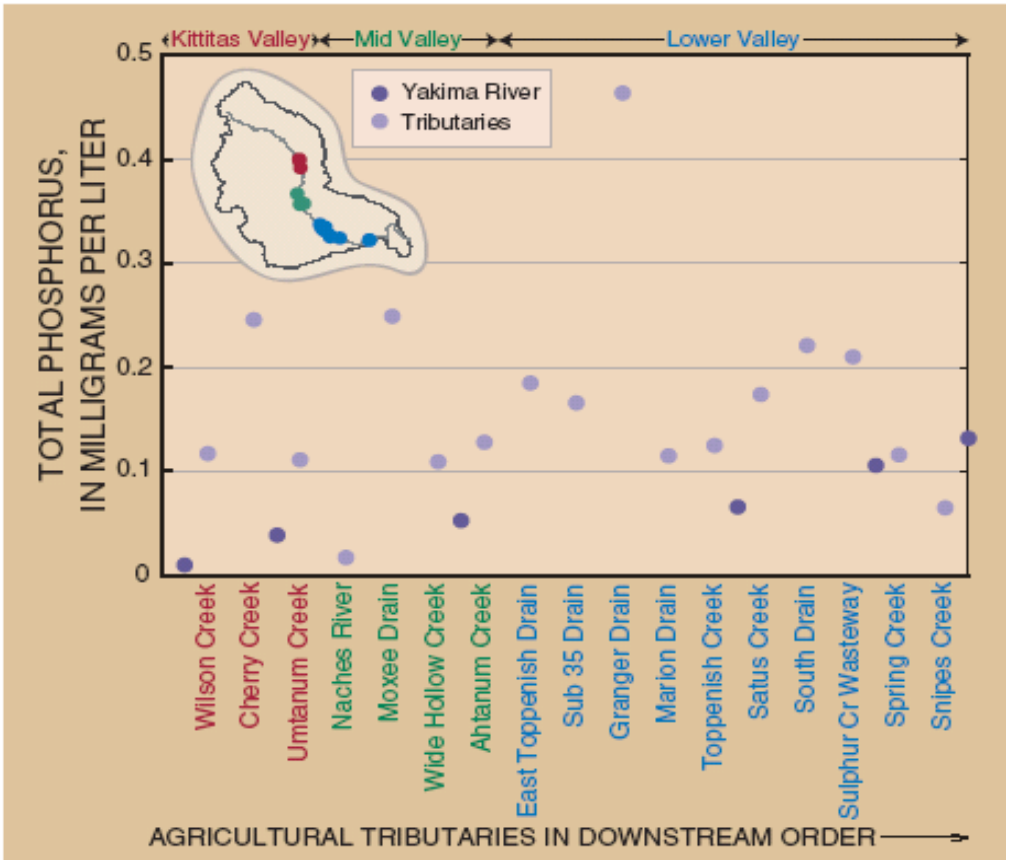


Figure 3-3. Total Phosphorus Concentrations in Yakima River Agricultural Tributaries. Tributaries Located in WIP Include: East Toppenish Drain, Sub 35 Drain, Marion Drain, Toppenish Creek, Satus Creek, and South Drain.
Source: Fuhrer et al. 2004.

Sediment

Significant suspended sediment loads have been associated with the discharge of agricultural return flows to the Yakima River during the irrigation season. The prevalence of suspended sediment from eroded farm soils has long been recognized as a problem in the tributaries and main stem of the Yakima River where furrow and flood irrigation are employed. In the lower basin, high sediment levels have been correlated with high levels of fecal coliform, which exceed water quality standards during the irrigation season (Ecology 1997, DO1 2002).

Additionally, suspended sediment has been correlated with the presence of DDT and DDT breakdown products in the main stem of the Yakima River and in some agricultural drains. 1,1-Dichloro-2,2-bis(p-chlorophenyl) ethylene (DDE), a breakdown product of DDT, has been detected in the South Drain, which is a WIP drain. Marion Drain has been identified as one of the worst sediment loading sources to the lower Yakima River (Ecology 1997, Ebert and Embrey 2002).

Pesticides

The NAWQA study also showed the presence of pesticides in the streams and drains located in WIP. Pesticides generally were detected more frequently and at higher concentrations during the irrigation season than during the non-irrigation season. Higher concentrations of pesticides during the irrigation season can be contributed to two factors (Fuhrer et al. 2004):

- more pesticides are applied during irrigation season and
- water is available to transport agricultural chemicals to streams, drains, and shallow groundwater.

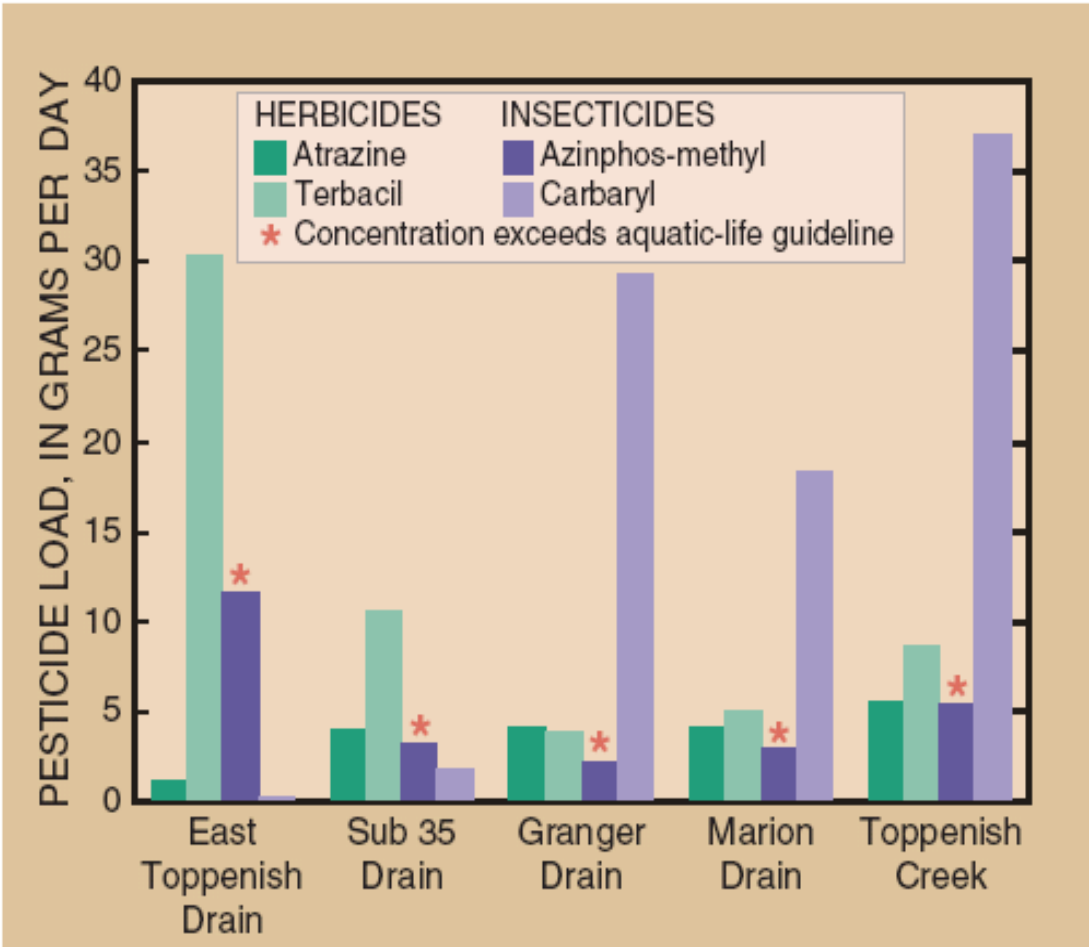


Figure 3-4. Pesticide Loads in Agricultural Tributaries in the Lower Yakima River Basin. Tributaries Located in WIP Include East Toppenish Drain, Sub 35 Drain, Marion Drain, and Toppenish Creek.
Source: Fuhrer et al. 2004.

Pesticide loads from agricultural tributaries in the Lower Valley were the highest in the basin. These high pesticide loads are attributed to agricultural return flows from orchards, vineyards, and rowed crops like hops, grains, and corn. Pesticide loads from YR agricultural tributaries can be seen in Figure 3-4. Additionally, Figure 3-4 indicates that pesticide concentrations in YR tributaries have exceeded suggested EPA aquatic life guidelines (Fuhrer et al. 2004). In 1999,

pesticides from agricultural use were detected in Toppenish Creek, East Toppenish Drain, Satus Creek below Dry Creek confluence, South Drain near Satus Creek, and Marion Drain (Ebert and Embrey 2002).

Bacteria

Health risks from bacteria are highest during the summer months when farmers and recreational users have more direct bodily contact with surface water and when more irrigation return flow is discharging into natural waterbodies. The EPA defines a recreational water quality criterion as a "quantifiable relationship between the density of an indicator in the water and the potential human-health risks involved in the water's recreational use." Both EPA and Washington State have established water quality criteria for fecal indicator bacteria (Morace and McKenzie 2002).

Although Washington State's water quality standards do not apply to Tribal waters. They are used here for comparison purposes only and the streams in YR are comparable to the State's Class A waterbodies. Water quality of Class A waterbodies is categorized as "excellent" and designated uses for Class A waterbodies include, but are not limited to primary contact recreation; domestic, industrial, and agricultural water supply; livestock watering; fish migration, rearing, spawning, and harvesting; and wildlife habitat. For Class A streams, the geometric mean for fecal coliform concentration is not to exceed 100 col/dL, and not more than 10 percent of the samples used to calculate the geometric mean are to exceed 200 col/dL (the 90^{th} percentile value) (Morace and McKenzie 2002).

For the NAWQA study, USGS sampled for bacteria at sites throughout the YR and results of the sampling show that the Class A 90^{th} percentile standard for fecal coliform bacteria was exceeded at sites located in both Satus and Toppenish Creek watersheds (Morace and McKenzie 2002). Results are summarized in Table 3-1 below.

Table 3-1. Summary of Fecal Coliform Concentrations In Waterbodies of the YR.

Site Name	Sample Date	Fecal Coliform Concentration, colonies per deciliter of water (col/dL)
East Toppenish Drain	August 3, 1999	840
Sub 35 Drain	August 3, 1999	350
Marion Drain	August 4, 1999	430
Toppenish Creek	August 4, 1999	450
Satus Creek at Satus	August 4, 1999	140
South Drain near Satus	August 4, 1999	720

Source: Morace and McKenzie 2002.

Trace Elements

With the exception of arsenic, concentrations of trace elements in the Yakima River Basin were small and not of concern to human or aquatic health. Although nearly all trace elements found in surface water are from natural sources, some can be introduced through human activities,

including agriculture. Concentrations of several trace elements including arsenic, uranium, manganese, and barium exhibited patterns that suggest agricultural activities are contributing trace elements to the surface waters of the Yakima River Basin. In general, trace element concentrations in the Yakima River were highest when the river was fed primarily by agricultural return flow. In agricultural drains, trace element concentrations were highest during the non-irrigation season when drains are fed by shallow groundwater. These higher concentrations during the non-irrigation season may be attributed to the leaching of agricultural chemicals into shallow groundwater that later discharge into surface water (Fuhrer et al. 2004, Hughes 2003). The trace elements arsenic, uranium, manganese, and barium are discussed in more detail below.

Arsenic

Arsenic concentrations in agricultural drains were highest when the drains were primarily fed by shallow groundwater; and in the Yakima River arsenic concentrations were highest when the river was fed primarily by agricultural return flow. In the CREP project area, the South Drain near Satus has been a major contributor of arsenic to the Yakima River main stem (Hughes 2003).

Arsenic can enter the environment through a variety of processes including applications of pesticides and fertilizers, the release of volcanic gases and geothermal water, and the weathering of arsenic minerals (Fuhrer et al 2004). Lead arsenate, an arsenic containing pesticide, has been used in the past to control codling moths in apple orchards in eastern Washington. These applications have contaminated underlying soils; leaching from these soils contribute arsenic to shallow groundwater and subsequently surface water.

Rill irrigation can transport dissolved trace elements and organic compounds to nearby waterbodies. Photo Courtesy of Hughes 2003.

Currently, commercial fertilizers containing phosphate are also a potential source of arsenic (Fuhrer et al. 2004). Phosphate fertilizers have been applied in the basin since the late 1940s. These fertilizers are derived from phosphatic rock that is enriched in arsenic and other trace elements. When phosphate fertilizers containing arsenic are applied to non-contaminated topsoils (in areas where lead-arsenate sprays have not historically been applied), arsenic is released in soluble form to surface water (Hughes 2003).

Arsenic is discussed more detail in Section 3.6 Groundwater and Drinking Water.

Uranium, Manganese, Barium

As with arsenic, dissolved uranium, manganese, and barium concentrations in agricultural drains were highest when the drains were fed primarily by shallow groundwater. and concentrations in the Yakima River were higher when the river was fed primarily by agricultural return flow (Hughes 2003). Since the source of barium is primarily natural and not related to agricultural use it is not discussed in further detail. Uranium and manganese may be linked to agricultural activities and are discussed below.

The source of dissolved uranium in surface water of the Yakima River Basin is currently unknown. However, in a recent study of irrigated lands in the western United States higher uranium concentrations were observed at surface water sites with agricultural return flow than at reference sites not receiving irrigation-return flow. This indicates that irrigation practices might contribute to increased uranium concentrations (Hughes 2003). Irrigation practices may elevate uranium concentrations through the leaching of uranium-bearing rock and soil and by the evaporative concentration of irrigation return flow (Hughes 2003).

Manganese is widely distributed in sediments, soils, and sedimentary and volcanic rocks, such as basalt, which provide a natural source of manganese through weathering processes. Elevated manganese concentrations may be present in surface water because of erosional processes that introduce sediment to agricultural and urban runoff. During the irrigation season, the lower Yakima River is a slow meandering river, the ideal environment for depositing sediment containing manganese (Hughes 2003). The presence of manganese in water may lead to the accumulation of microbial growths in the water supply system. The presence of manganese bacteria can concentrate manganese and give rise to taste, odor, and turbidity problems (Hughes 2003).

3.5.2 Effects of Alternative A (No Action) on Water Quality

Implementation of Alternative A would result in long term, moderate adverse effects to water quality. Surface water quality would continue to decline under Alternative A. Agricultural runoff introduces contaminants into surface water, and any improvements in water quality would be dependent upon existing and proposed programs outside of CREP.

Selection of Alternative A would not contribute to achieving any of the CREP Objectives listed in Section 1.4.

3.5.3 Effects of Alternative B (CREP Agreement) on Water Quality

Implementation of Alternative B would result in long-term moderate to high beneficial effects to water quality. Alternative B would result in significant localized improvements to water quality. These improvements would occur on the eastern side of the reservation, on agricultural lands bordering the Yakima River. Agricultural runoff in the Lower Yakima River basin would be filtered, improving the water quality in both the Yakima River and the Columbia River downstream.

CPs proposed under Alternative B are designed to have a direct or indirect effect on water quality. For example, CP8A (Grass Waterways) would reduce sediment loss and erosion and would absorb some agricultural chemicals and nutrients. CP21 (Filter Strips) are designed to

reduce the amount of sediment, nutrients, pesticides, and other contaminants in runoff. Filter strips slow the velocity of water, allowing the settlement of suspended soil particles, the infiltration of runoff and soluble pollutants, adsorption of pollutants on soil and plant surfaces, and the uptake of soluble pollutants by plants. CP22 (Riparian Buffers) removes nutrients, sediment, organic matter, pathogens, pesticides, and other pollutants from surface runoff and subsurface flow. Riparian buffers also create shade, which lowers water temperature and improves habitat for aquatic organisms. These buffers provide a source of detritus and large woody debris for aquatic organisms and help stabilize and restore damaged stream banks to reduce erosion.

Implementation of Alternative B would result in significant reductions in nonpoint pollution throughout the YN. Specifically, the implementation of the YN CREP is expected to result in a significant reduction in the amount of total phosphorous and total suspended solids that discharge into YR waters.

Activities associated with the implementation of CPs could potentially result in short-term, adverse impacts to surface water quality and quantity. These activities and their impacts are summarized below:

- Site preparation— CP establishment could require site preparation activities that would involve earth moving activities like building physical structures used for erosion control (e.g. dikes) and modifying soil surface for wetland restoration.
- Establishment of desirable plants—Until desired plants are established, acres enrolled in CREP may be irrigated or fertilized, potentially affecting water quantity and quality.
- Invasive species control—Methods used to control invasive species and noxious weeds throughout the life of the CREP may include the use of chemicals such as herbicides and/or physical methods such as burning, discing, and plowing.
- Maintenance of CPs—Maintaining CPs on enrolled CREP land may include moving soil to repair dikes or buffer strips, applying herbicides and/or pesticides to control invasive species, or irrigating land during critical growing periods of drought years.

A detailed conservation plan for each contract would be prepared and best management practices (BMPs) would be used to mitigate the impacts of implementing specific CPs. These impacts are expected to only last until the CP is permanently established and are minor compared to the overall long-term benefits of the CPs. These temporary impacts could be expected to last anywhere between one to three years

The beneficial impacts of the CPs discussed above would provide cumulative benefits, assisting in the achievement of Objective 3 (Section 1.4).

3.6 Groundwater and Drinking Water Resources

Under the reauthorized SWDA, tribes may apply for eligibility to receive primary enforcement authority (known as primacy) to administer the drinking water program, provided they meet the requirements of Sections 1413 and 1451 of the SDWA. As of 2001, only the Navajo Nation has received primacy for most public water systems on the Navajo Reservation, and EPA administers the drinking water program in the rest of Indian country. The YR is located in EPA's Region 10,

which covers the states of Washington, Oregon, Idaho, and Alaska and includes 38 Indian tribes and some 226 Alaska Native Villages (EPA 2004b).

Region 10's Drinking Water Unit (DWU) directly implements drinking water programs on Indian Lands including Public Water System Supervision, Corrosion Control, Underground Injection Control, and Wellhead Protection. Compliance assistance is available through technical assistance, on-site support, hands-on training, and coordination with Indian Health Service (IHS) resources (EPA 2004b).

The DWU responsibilities are essentially the same role that states play when they have assumed primacy for a program (accepted delegation), as well as performing in a Federal oversight role until such time as these programs may be delegated to the individual tribes. EPA sponsors a technical assistance program to help Tribal water operators and Tribal utility managers meet the requirements of the SDWA as they provide safe drinking water to their people. DWU works with the IHS, contractors, and the Native American Water Association to provide workshops, circuit rider assistance, apprenticeships, and other support to assist tribes in developing their own utility organizations, as a means to protect public health and the reservation environment. Monitoring results required of the approximately 115 public water systems that serve 38 tribes throughout the nation are tracked to facilitate compliance assistance and, when necessary, undertake formal enforcement actions to ensure compliance with SDWA requirements (EPA 2004b).

3.6.1 Existing Conditions

For Tribal water systems within Region 10, as of 2003, there were 100 active water systems serving a population of 62,260. Of these water systems, groundwater was the source for 91 systems and served a population of 40,455; surface water was the source for 9 systems and served a population of 21,805. Community water systems (CWSs) accounted for 77 of the 100 water systems located in Region 10 Tribal lands. In 2003, three of the CWSs reported health-based violations that affected a total population of 710 (EPA 2004c). Since EPA did not report on the location of these CWSs within Region 10, it is not known if these health-related violations affected drinking water on the YR.

The State of Washington has also reported on the drinking water conditions of the YR. In 1999, the Governor of Washington directed the Washington Department of Health (WDOH) and Department of Ecology (Ecology) to provide a summary report of statewide groundwater contamination. In this report, Ecology and WDOH listed 20 of the most critical, currently active sites in the State with endangered underground drinking water sources. YR was included on this list because of the large number of confirmed and suspected contaminated sites on the YR, which affected an estimated 5,000 to 10,000 individuals (Ecology 2000).

Many rural residents of the lower Yakima Valley rely on groundwater from private wells as their source of potable water. Owners of private wells, however, are not required by law to have their water regularly tested and little information is currently available on the quality of this water. The WDOH recommends that private wells be tested on a yearly basis for bacteria and every three years for nitrates. The costs of these tests can be prohibitive for many of the residents in the lower Yakima Valley, since over 48 percent of the residents are below poverty level. Without testing, users are unaware that they could be exposed to contaminants in their drinking water (Sell and Knutson 2002).

Impacts to Drinking Water

Since most of the drinking water in the rural areas of the Lower Yakima River subbasin (including the YR) comes from groundwater sources and many rural residents rely on shallow wells (100 feet or less), groundwater contamination from agricultural chemicals is an important human health issue. The State of Washington's 1999 report grouped groundwater contamination into two categories: area-wide contamination and localized contamination. Area-wide contamination occurs across entire regions of the State, whereas localized contamination is usually from chemicals such as pesticides and industrial solvents and is limited to a relatively small geographical area. Nitrates and arsenic are the State's most troublesome regional contaminants. They are found in various regions across the State and are typically widespread problems, not isolated to specific sites (Ecology 2000). There is evidence that suggests that shallow groundwater of the Lower Yakima River subbasin is contaminated by arsenic and nitrates.

Nitrates

Sources of nitrates in drinking water include fertilizers, animal manure piles, and septic systems. Nitrates usually affect shallow wells used by individual homes and very small public water systems. Health risks associated with elevated levels of nitrates are generally limited to infants less than one-year-old, and to some older individuals with diminished capability to secrete gastric acids. In these individuals, nitrates can decrease the oxygen-carrying capacity of the blood, which in severe cases can result in a rare condition called methemoglobinemia, which is also known as blue-baby syndrome (Ecology 2000).

Nitrate is highly water-soluble and readily leaches into shallow groundwater during the irrigation season. During the non-irrigation season, shallow groundwater discharges into streams and drains. Surface water quality of these streams and drains during the non-irrigation season can be used as an indicator of shallow groundwater quality. Seasonal patterns and median nitrate levels in surface water quality of the Yakima River Basin are very similar to those of the Central Columbia Plateau in Washington. Because of these similarities, water quality of the Central Columbia Plateau and Yakima River Basin are comparable (Fuhrer et al. 2004).

During the non-irrigation season, shallow groundwater in the Central Columbia Plateau had nitrate levels that exceeded the drinking water standard of 10 mg/L. This strongly suggests that shallow groundwater underlying some agricultural areas in the Yakima River basin also has elevated concentrations of nitrate. Since most private drinking water wells are in shallow groundwater, there is the possibility that these wells have nitrate concentrations that are above the drinking-water standard of 10 mg/L (Fuhrer et al. 2004).

Arsenic

Arsenic is a known human carcinogen, and the immediate health effects associated with high doses of arsenic are primarily abdominal pain and vomiting. Prolonged exposure can damage many parts of the body, including kidneys, blood vessels, nerves and skin. Cancers of the bladder, lung, liver, kidneys, and skin have been associated with ingesting arsenic (Ecology 2000). The EPA has established a Health Advisory Level (HAL) of 2 µg/L for arsenic. HALs are defined as the concentration of a contaminant in drinking water that is expected to cause adverse but noncarcinogenic effects over a lifetime of typical exposure. The typical exposure assumes that a 154-pound adult drinks about 0.5 gal of such water per day for 70 years (Hughes 2003).

Historic application of lead-arsenate sprays to orchards. Photo courtesy of USGS.

Agricultural sources of dissolved arsenic in surface water include the historic application of lead-arsenate pesticides to existing and former fruit orchards throughout the Yakima River basin. The practice of applying lead-arsenate sprays occurred over a period of 40 years and was discontinued with the introduction of DDT in 1947. Frequent application of lead-arsenate sprays resulted in substantial lead and arsenic accumulation in orchard topsoils. When phosphate fertilizers are applied to arsenic-contaminated soil, arsenic is released into solution. If sufficient water is available, the arsenic will leach downward and can eventually enter shallow groundwater. Because many rural residents rely on wells that are less than 100 feet deep for their drinking water, arsenic contamination of shallow groundwater is of particular concern in the rural areas of the Yakima River basin (Ecology 2000, Hughes 2003).

Arsenic was one of the parameters monitored during the 1999-2000 NAWQA study of the lower Yakima River basin (for more information about the NAWQA study see Section 3.5). In 1999, arsenic was detected in agricultural drains at elevated concentrations during the non-irrigation season. Since during the non-irrigation season, agricultural drains are fed mainly by shallow groundwater sources, the presence of arsenic in agricultural drains during the non-irrigation season suggests that arsenic is also present in shallow groundwater. Agricultural drains located in WIP with arsenic concentrations above detection levels (1.0 µg/L) include: Sub 35 Drain (1.3 µg/L), Marion Drain (1.4µg/L), Toppenish Creek near Granger (1.0 µg/L), and South Drain (5.3 µg/L). Water quality monitoring of Lower Yakima Valley wells have shown that arsenic concentrations in more than half of the 74 wells sampled exceeded 2 µg/L, the HAL for arsenic (Hughes 2003, Fuhrer et al. 2004).

3.6.2 Effects of Alternative A (No Action) on Groundwater and Drinking Water

Alternative A would result in long term, moderate adverse effects to groundwater and drinking water. Under Alternative A, current agricultural practices would continue and groundwater and drinking water quality would continue to decline. Improvements to water quality would be dependent on existing programs.

Current agricultural practices introduce pesticides and nutrients into groundwater recharge resulting in the contamination of groundwater quality. Current Federal laws prevent any major discharges that would significantly degrade a drinking water source. Still, the cumulative impacts of agricultural activities on the YR would have an ongoing adverse effect on drinking water. Many in the YR depend on private wells for drinking water, and since private drinking water systems are not as regulated or protected as public water systems, contamination of drinking water sources may go undetected and untreated.

Selection of Alternative A would not contribute to the achievement of any of the CREP Objectives cited in Section 1.4.

3.6.3 Effects of Alternative B (CREP Agreement) on Groundwater and Drinking Water

Implementation of Alternative B would result in moderate to high beneficial long term effects to groundwater and drinking water. Enrollment of land in FSA-approved CPs would result in benefits to groundwater quality and quantity.

Either indirectly or directly, each of the CPs improves surface water quality and potentially would improve the quality and quantity of water that recharges groundwater.

The retirement of 5,000 acres of marginal farmland would result in fewer fertilizers and pesticides being applied on YR, and groundwater recharge from land established in CPs is expected to be of higher quality than recharge from previously cropped or fallow land.

Groundwater recharge would also increase with the establishment of CP 23 (wetland restoration) and CP 8A (grass waterway). Wetlands are reservoirs for rainwater and runoff; as this water is released into the ground, it recharges water tables and aquifers.

For individual CREP contracts, FSA and NRCS would ensure through an EE that the practice(s) employed would not contaminate or contribute to the contamination of wellhead protection areas and to drinking water source areas.

The water purifying capabilities of the CPs would contribute to achievement of Objective 4 discussed in Section 1.4.

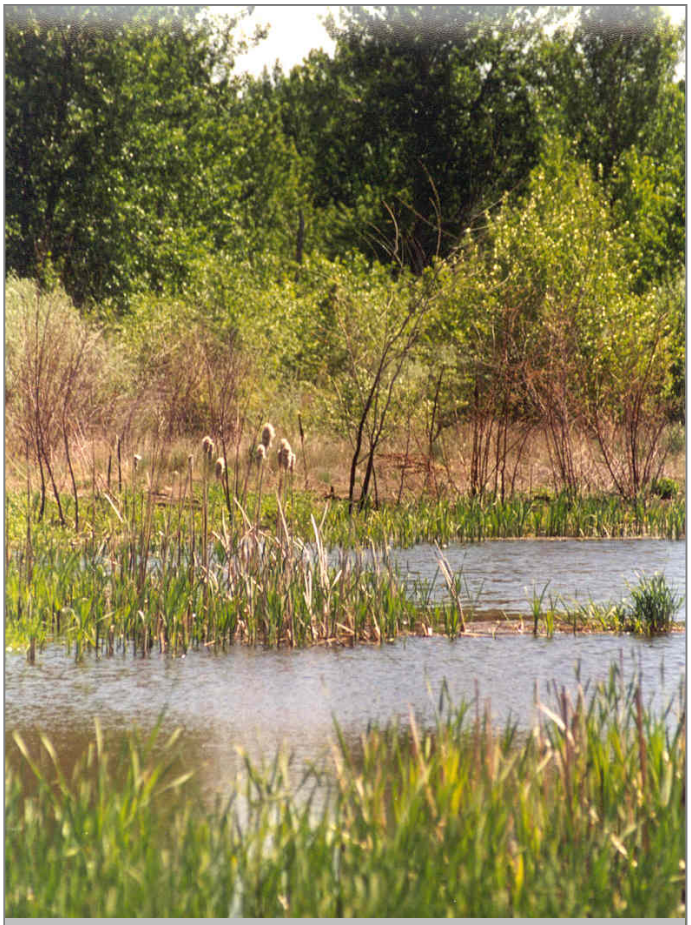
3.7 Wetlands

Section (a) (16) of the Food Security Act, Public Law 99-198, December 23, 1985, defines a wetland as:

> land that has a predominance of hydric soils and that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.

Several statutes and EOs exist that govern FSA program actions in relation to wetlands including:

- EO 11990, Protection of Wetlands
- CWA
- Food Security Act, Title XII



Wetlands in Satus Creek watershed. Photo Courtesy of Yakama Nation Wildlife.

Benefits of Wetlands

Wetlands are some of the most productive and dynamic habitats in the world. The physical, chemical, and biological interactions within wetlands are often referred to as wetland functions. These functions include surface and subsurface water storage, nutrient cycling, particulate removal, maintenance of plant and animal communities, water filtration or purification, and groundwater recharge. Similarly, the characteristics of wetlands that are beneficial to society are called wetland values. Some examples of wetland values include reduced damage from flooding, water quality improvement, and fish and wildlife habitat enhancement.

It is important to maintain and restore wetland functions and values because wetlands contribute to the overall health of the environment. Some basic wetland functions and their associated values are listed below (USDA 2002):

- **Surface water storage:** This function helps reduce flooding by temporarily storing water, allowing it to soak into the ground or evaporate. Water quality is also improved by removing nutrients, pesticides, and bacteria from surface waters as they are absorbed by plants, animals, and chemical processes within the wetland.

- **Subsurface water storage:** Wetlands are reservoirs for rainwater and runoff. As this water is released into the ground, it recharges water tables and aquifers and extends the period of stream flows in many parts of the U.S.
- **Nutrient cycling:** Wetlands enhance the decomposition of organic matter, incorporating nutrients back into the food chain.
- **Retention of particles:** By filtering out sediments and particles suspended in runoff water, wetlands help prevent lakes, reservoirs, and other resources from being affected by downstream sediment loading.
- **Maintenance of plant and animal communities:** Both coastal and inland wetlands provide breeding, nesting, and feeding habitat for millions of waterfowl, birds, fish, and other wildlife.
- **Values to Society:** There are a number of other values society receives from wetlands. Some of these values include providing sites for hunting, fishing, trapping, photography, outdoor classrooms or environmental education, and the enjoyment of open spaces.

3.7.1 Existing Conditions

As a trend, the State of Washington has seen a decline of wetlands of about 30 percent; only 940,000 acres remain from approximately 1,350,000 original acres. The loss of inland wetlands in Washington has been estimated at 25 percent (DOI 2002).

Wetlands in the Yakima River basin are located along major streams and rivers, especially along the Kittitas Valley, the lower Yakima River floodplain, and Toppenish and Satus Creeks. Wetlands throughout the Yakima River basin have been lost or degraded by a number of activities including: urban development, conversion to irrigated agricultural land, and the construction of dikes, levees, and dams. Specific agricultural activities that have led to wetland loss include filling and leveling of wetlands, groundwater withdrawals, and the development of irrigation systems. WIP development channelized natural drainages into irrigation canals and ditches and reduced the quantity of water that supplies wetlands. Riparian wetlands are lost when floodplain habitat is converted to residential development, irrigated agriculture, pasture, or gravel mining (YN 2002, DOI 2002, NPCC 2004a).

Wetlands in Yakama Reservation. Photo Courtesy of Yakama Nation Wildlife.

Prior to development and diking, the Yakima River, Satus Creek and Toppenish Creek flooded over a wide floodplain, providing ample amounts of clean water to Satus Creek and the nearby wetland habitat. It is hypothesized that these wetlands recharged groundwater during the snow melt runoff floods, provided the source via hyporheic flow, of cold water that allowed the Yakima River basin to support large numbers of salmonids even during the warm months. The hyporheic flow and side channels provided cold-water refugia for fish passage, spawning, and rearing up and downstream (YN 2002).

In addition to direct wetland loss, ongoing agricultural activities continue to threaten wetlands. Intense agriculture activities that result in wetland degradation include increased use of agricultural chemicals, buffer removal, and feedlots and dairy operations in or near wetlands. Overgrazing by livestock also threatens remaining wetlands; along most stream reaches in the YR, heavy grazing occurs during spring and summer months. Continuing threats to Satus Creek wetlands include (YN 2004b):

- Overgrazing
- Intensive adverse agricultural practices (including increased chemical uses, buffer removal, feedlots, and dairy operations in and near wetlands)
- Erosion
- High water temperature
- Poor water quality of irrigation return flow
- Exotic species (e.g. carp and purple loosestrife)
- Dessication
- Recent changes in older irrigation systems have reduced associated wetlands (e.g. lining canals and changing from open waterways to piped and pressurized systems).

Along most of these stream reaches, remaining areas are heavily grazed during spring and summer months, further decreasing their potential as wildlife habitat (DOI 2002).

Restoration Efforts

There are several ongoing wetland restoration projects in the YR. A wetland restoration project was implemented by YN in 1994 and encompasses 14,812 acres within the YR (1.1 percent of the YR). Efforts have been made to protect some remaining wetlands including Sunnyside Wildlife Area, Toppenish National Wildlife Refuge, Yakima Greenway, and several other units (YN 2005a).

A cooperative effort to restore wetlands has also been undertaken by Ducks Unlimited (DU) and the YN. The goal of the project is to restore or enhance wetlands to provide for the needs of all wildlife that use them, including steelhead. Toppenish Creek is a tributary to the Yakima River and contains the most vital steelhead production habitat in that river system (DU 2004).

Several projects were completed in low-lying sloughs and oxbows near the Yakima River and Toppenish Creek, including the Lower Satus, Wanity Slough, and the Zimmerman Ranch projects. Juvenile steelhead depend on these wetlands during their downstream migration to the Pacific Ocean. These wetlands also provide excellent nesting and rearing habitat for mallard, teal, Canada geese, osprey and great blue herons. This area contains the highest density of nesting wood ducks in the State of Washington (DU 2004).

The Campbell Road project was recently completed by DU in consultation with YN biologists. The YN and NRCS spent $65,000 to remove levees along Toppenish Creek to restore its floodplain. Several wetlands were created when sloughs and oxbows were reconnected with the main channel, and dikes were installed to deliver water to the floodplain during high flows (DU 2004). The Campbell Road project is enabling woody riparian vegetation to reestablish along Toppenish Creek. The project improved and created habitat for wildlife and will eventually

become a riparian forest of cottonwood and willow trees in fully functioning condition (DU 2004).

3.7.2 Effects of Alternative A (No Action) on Wetlands

Implementation of Alternative A would result in long term, moderate adverse effects to wetland values. With the selection of the No Action Alternative, wetland values (e.g., vegetation, water quality, and habitat) would continue their slow decline. Wetlands that have been converted to farmland would remain in production. Given ongoing Federal involvement, total wetland acres would likely be stable or slightly reduced under No Action because Section 404 of CWA and other Federal laws are very restrictive in allowing draining or conversion of existing wetlands for other uses.

Current wetland restoration projects would continue to conserve and restore wetlands in the YR and its vicinity. Without the implementation of the YN CREP, existing wetlands and ongoing wetland restoration projects would not benefit from the CPs of the CREP. Noxious weed infestation would remain and likely worsen, and water would continue to be used for purposes that would not achieve CREP Objectives.

Alternative A would not achieve any of the CREP Objectives listed in Section 1.4.

3.7.3 Effects of Alternative B (CREP Agreement) on Wetlands

Implementation of Alternative B would result in long term, moderate beneficial effects to wetlands. Under Alternative B, marginal cropland would be removed from production and CPs installed including CP 23 wetland restoration.

With the implementation of CREP CPs, agricultural runoff would not have the same impact on wetlands as it has in the past. Each of the CPs discussed in Section 2.2.2 would result in beneficial impacts to YN's wetlands by reducing sediments, agricultural chemicals, and nutrients from livestock and agricultural runoff. CPs, such as grassed waterways and filter strips, also offer tremendous filtering capacity that would improve water quality within wetlands, encouraging native plant species and increasing the wetland acreage on YR. Another direct effect of Alternative B would be the restoration of old and creation of new wildlife habitat for riparian species. Water that is not used for irrigation would remain in the streams and rivers.

Additionally, CREP implementation would complement ongoing wetland restoration activities that are occurring throughout the YR.

CP installation of wetlands may result in short term minor adverse impacts to adjacent land. Until wetland vegetation is permanently established and until the hydrology of restored wetlands is stabilized, flooding of wetlands may also result in flooding of adjacent land. In addition wetland restoration might require earth moving activities and soil disturbance. These activities have the potential to introduce sediments into nearby waterbodies. However a detailed conservation plan would be in effect that would include mitigation measures such as BMPs to minimize these effects and control runoff from any implementation sites. Effects of wetland installation are expected to only last until the CP is permanently established (1-3 years) and they are minor compared to the overall long term benefits of the CP.

The impacts of all CPs would be positive for wetlands and would contribute to achieving four CREP Objectives discussed in Section 1.4.

3.8 Floodplains

All Federal actions must meet the requirements of EO 11988, Floodplain Management. The purpose of the EO is to avoid incompatible development. It states, in part, that:

> "Each agency shall provide leadership and shall 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 in carrying out its responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; (2) providing federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities."

In accordance with the EO, as part of the EE completed for each contract, and prior to any action, Federal Emergency Management Agency (FEMA) floodplain maps would be reviewed to determine if the proposed action is located in or would affect a 100 or 500-year floodplain. Soil survey maps, aerial photography, and topographical maps should be used where no FEMA maps are available. FSA would complete surveys in areas where no flood hazard or flood elevation data are available and the amount of Federal investment in the proposed action is significant if the action could create a significant adverse effect on a floodplain.

3.8.1 Existing Conditions

Prior to development and diking, the Yakima River, Satus Creek and Toppenish Creek, flooded over a wide floodplain. Floodplain functions and values have been affected by channelization, water development, land development, and livestock grazing (DOE 1994). Channel confinement by levees, bridges, and roads leads to altered floodplain functions and habitat loss (NPCC 2004a).

Floodplains in Yakama Reservation. Photo Courtesy of Yakama Nation Wildlife.

Development within floodplains alters floodplain functions and can lead to increased flooding. FEMA has mapped Special Flood Hazard Areas in the YR. FEMA Q3 digital maps are available for the Lower Yakima Water Resource Inventory Area (WRIA) #37. These maps show Special Flood Hazard Areas (SFHAs) in the YR for 100-year flood events and for 500-year flood events. The majority of the SFHAs on YR are located in the floodplains of the Yakima River; the most populated areas within YR (Toppenish, Wapato, and Harrah cities) are also located in SFHAs. Floodplain maps indicate that all three of these cities

have SFHAs and are potentially subject to flood events. National flood insurance loss statistics show that from January 1978 through December 2003, the communities of Toppenish and Wapato received payments from the National Flood Insurance Program, indicating that these communities have been affected by flooding events in the past (Table 3-2) (FEMA 2004, Ecology 2004a).

Table 3-2. National Flood Insurance Loss Statistics from January 1, 1978 through December 31, 2003.

Community Name	Total Number of Losses	Total Payments
Toppenish, WA	8	$43,550
Wapato, WA	8	$30,433

Adapted from: FEMA 2004.

3.8.2 Effects of Alternative A (No Action) on Floodplains

Implementation of Alternative A would result in negligible effects to floodplains. Floodplain areas would not change, and stream profiles (a major factor in the determination of floodplain areas) would not change based on Federal actions. Not implementing the proposed action would prevent or reduce the creation of wetlands or the restoration of vegetation, both of which have beneficial effects on floodplain conditions, especially the ability of floodplains to store floodwaters. The impacts of channelization and land development would continue to affect the functions and values of the floodplains of the YR.

Under No Action, new construction of facilities would not occur with Federal financial assistance, unless a Federal agency makes a finding that no practicable alternative exists for such new construction and the adverse effects could be successfully mitigated. Even with such a finding, construction within a floodplain is usually coordinated with the Corps of Engineers and local flood management authorities.

Alternative A would not contribute to the achievement any of the objectives listed in Section 1.4.

3.8.3 Effects of Alternative B (CREP Agreement) on Floodplains

Implementation of Alternative B would result in minor beneficial effects to floodplains. Many of the FSA approved CPs would result in more natural stream profiles and enhance floodplain values. Specific CPs that would result in enhanced floodplain values include wetland restoration, riparian buffers, and filter strips. These activities both slow and filter stormwater runoff resulting in less severe flooding events and a more natural floodplain.

Permanent easements, implemented as part of Alternative B, would limit development within the floodplain. This would result in potential future benefits as these areas remain undeveloped and natural floodplain processes would continue.

While the majority of CPs allowed under CREP would not have an adverse effect on floodplains, there are some CP installation practices that can be considered construction projects. Those

practices that involve construction activities, substantial earth movement, diking, or other means of altering the flowage area, would need to be reviewed and appropriate public notice provided. In all appropriate instances, applicable development permits would be obtained from local authorities prior to construction activities within a floodplain.

CREP funds would be authorized for structures within the existing floodplain to restore and improve floodplain values. Analysis of the impact on floodplains, per EO 11988, would require the structures to be able to withstand 100-year flood events and remain functioning.

The impacts of all CPs would be positive for floodplains and would contribute to achieving all the CREP Objectives discussed in Section 1.4.

3.9 Protected Species / Threatened and Endangered Species

3.9.1 Introduction

ESA was enacted to protect T&E species and to provide a means to conserve their habitats. All Federal agencies are required to implement ESA by ensuring that Federal actions do not jeopardize the continued existence of listed species.

ESA defines an endangered species as one that is in danger of extinction throughout all or a significant portion of its range. Threatened means a species is likely to become endangered within the foreseeable future. T&E designations may be applied to all species of plants and animals, except pest insects. A species may be threatened at the State level, but that same designation does not automatically apply nationwide, as species numbers may be greater in other states.

FWS and National Marine Fisheries Service (NMFS) are mandated the responsibility of ensuring that other agencies plan or modify Federal projects so that they will have minimal impact on listed species and their habitats. Section 7 of the ESA requires that project areas must be checked against FWS and Tribal listings of critical habitat and T&E species. FSA ensures that all CREP contracts meet this requirement by including T&E species in its site-specific EE.

Section 7 of the ESA, called “Interagency Cooperation,” is the mechanism by which Federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species.

Under Section 7, consultation with FWS is initiated when any action the agency carries out, funds, or authorizes may affect a T&E species. This process usually begins as an informal consultation. In the early stages of project planning, a Federal agency approaches FWS and requests informal consultation. Discussions between the two agencies may include what types of listed species may occur in the proposed action area and what effect the proposed action may have on those species.

If the Federal agency, after discussions with FWS, determines that the proposed action is not likely to affect any listed species in the project area, and if FWS concurs, the informal consultation is complete and the proposed project moves ahead. If it appears that the agency’s action may affect a listed species, that agency may then prepare a biological assessment (BA) to assist in its determination of the project’s effect on a species.

When a Federal agency determines, through a BA or other review, that its action is likely to adversely affect a listed species, the agency submits a request to FWS for formal consultation. During formal consultation, the Service and the agency share information about the proposed project and the species likely to be affected. Formal consultation may last up to 90 days, after which FWS would prepare a biological opinion on whether the proposed activity would jeopardize the continued existence of a listed species. The Service has 45 days after completion of formal consultation to write the opinion.

In making a determination on whether an action will result in jeopardy, FWS begins by looking at the current status of the species, or "baseline." Added to the baseline are the various effects – direct, indirect, interrelated, and interdependent – of the proposed Federal action. The Service also examines the cumulative effects of other non-Federal actions that may occur in the action area, including State, Tribal, local, or private activities that are reasonably certain to occur in the project area (FWS 2005).

The ESA also requires the delineation of the "critical habitat" of sensitive species. Critical habitat is defined by the ESA as areas that are "essential" to the conservation of listed species. Private, city, Tribal, and State lands are generally not affected by critical habitat until the property owner needs a Federal permit or requests Federal funding.

YN Wildlife Management

The YN is co-manager of fish and wildlife in Yakima River basin. The YN is responsible for protecting and enhancing treaty fish, wildlife and other natural resources for present and future generations (NPCC 2004a).

The 14 tribes and bands that compose the YN ceded over 10 million acres, including the Yakima basin, in the June 9, 1855 treaty with the U.S. Today the Tribe's reservation is 1,377,034 acres, most of it within the Yakima basin. The reservation and ceded lands still contain much of the traditional natural resources upon which the Yakama people depend for subsistence and spiritual and cultural sustenance. They are many and include salmon, deer, elk, huckleberries, tule, cous, and other roots and medicinal plants along with the most sacred resource, water. In the treaty, the Tribe reserved rights and responsibilities involving these resources. The treaty's Article 3 states (NPCC 2004a):

> The exclusive right of taking fish in all the streams, where running through or bordering said reservation, is further secured to said confederated bands and tribes of Indians, as also the right of taking fish at all usual and accustomed places, in common with the citizens of the Territory, and of erecting temporary buildings for curing them; together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land.

As a result of these treaty-reserved rights, the Tribe retains substantial governmental authority over activities that affect hunting and fishing. In the 1969 *Sohappy v. Smith/U.S. v. Oregon* decision and the 1974 *U.S. v. Washington (or Boldt)* decision, the Federal courts reaffirmed treaty provisions. These decisions entitle the Tribe to one half of the harvestable fish that pass through usual and accustomed Tribal fishing grounds. U.S. v. Washington rulings include hatchery-bred fish as part of the harvestable population, and provide for the protection of the fishery from environmental degradation. The court-ordered U.S. v. Oregon Columbia River Management Plan, sets harvest, escapement, and production goals pertaining to Indian and non-Indian allocation of anadromous fish resources (CRITFC 2005).

The YN Tribal government enacts fishing, hunting, and other regulations affecting its members under provisions of the Yakima Nation Law and Order Code. Within the reservation, the Tribe adopted the Yakama Nation Natural Resources Policy Plan (1994) to guide the management of cultural, water, wildlife, fisheries, rangeland, timber, agricultural, and recreational resources. Comprehensive, ecosystem-based restoration is occurring on the reservation under the guidance of this plan. The YN provides small game hunting and fishing opportunities for reservation visitors. Within the basin, the YN reviews proposed management on public lands, makes recommendations for fish and wildlife protection, and establishes and monitors livestock grazing leases on Tribal allotments (NPCC 2004a).

A multi-tribe plan based on Tribal culture and sovereignty as well as science, Wy-Kan-Ush-Mi Wa-Kish-Wit (Spirit of the Salmon), makes institutional and technical recommendations for Columbia Basin salmon restoration. The plan calls for instream flow restoration, enforcement of water quality standards and supplementation of threatened salmon runs to harvestable levels, among other measures (CRITFC 2004).

In 1977, the four Columbia River treaty tribes formed the Columbia River Inter-Tribal Fish Commission (CRITFC) to provide fisheries coordination, technical assistance, and protection of treaty fishing rights. The Columbia River treaty tribes, individually and acting through the CRITFC, work to restore healthy, sustainable salmon populations and other fishes throughout the Columbia River Basin (CRITFC 2004).

3.9.2 Existing Conditions

The Yakima Subbasin Fish and Wildlife Planning Board (YSPB) identifies "focal" species as indicators of ecological health in the 2004 Yakima Subbasin Plan (NPCC 2004a, b). A focal species has special ecological, cultural or legal status and is used to evaluate the health of the ecosystem and the effectiveness of management actions. Criteria used in selecting focal species include, in order of priority:

a) Designation as endangered or threatened under ESA,
b) Ecological significance
c) Cultural significance, and
d) Local significance.

Six fish species and 11 wildlife species were chosen as focal species in the Yakima River basin (NPCC 2004a).

Vegetation

Protected Vegetation

YN does not maintain a formal list of T&E vegetation occurring on YR. Large-scale efforts have been and continue to be made to restore native vegetation throughout YR.

Within the Yakima River basin, there are 67 rare plants and 52 rare or high-quality plant communities. Approximately 8 percent of the rare plant communities are associated with grassland habitat, 28 percent with shrub steppe habitat, 56 percent with upland forest habitat, and 8 percent with riparian habitat (NPCC 2004a).

Common Vegetation Types on YR

Vegetation across the Yakima River basin is a mix of forest, grassland (shrub/steppe), and cropland (Figure 3-5). In general, the western portion of YR is forested with a mixture of species, such as grand fir, Douglas fir, lodgepole pine, ponderosa pine, and Western larch. Along the eastern edge of the forested zone, where precipitation has decreased, a band of Oregon white oak is found intermingled with ponderosa pine and Douglas fir. As precipitation and elevation decrease, the forested areas meld into shrub/steppe, which occupies the eastern half of YR. The shrub/steppe areas of the valley floors have been converted to cropland (NPCC 2004a).

Approximately 30 percent of **ponderosa pine and oak stands** in the Yakima basin have been converted to mixed conifer forests. Altered fire regimes and logging have reduced the quality and quantity of oak woodlands. Today, the absence of large trees and dead standing snags in pine and oak forests has limited populations of the species that rely on these old-growth forest conditions. White-headed and Lewis' woodpeckers rely on the large diameter snags for nesting. Along with the western gray squirrel, these birds rely on older well established stands of pine and oak trees for forage (NPCC 2004a).

In the Yakima River basin, maps indicate there has been a 25 percent reduction in **shrub steppe** habitat. Much of what remains of intact shrub steppe and grassland is degraded. The most significant cause of loss of this habitat is the creation of the Yakima Basin Irrigation Projects, including the WIP on YR, which led to large-scale conversion to agriculture (NPCC 2004a).

In the Yakima basin, floodplain loss has been estimated at 95 percent in the Upper Wapato Reach. The most profound alteration of **riparian** habitat occurred with the development of irrigated agriculture, similar to shrub steppe. This development has altered the river's historic hydrography and, along with road and levee development and land conversion, has resulted in the river's separation from its historical floodplain. Cottonwood forests have been reduced in extent and quality. The loss and fragmentation of large diameter cottonwood forests has significantly decreased habitat availability to birds and other wildlife dependant on this important tree species (NPCC 2004a).

Invasive Species

Non-native weed species are those species that easily invade farmland, decrease forest productivity, and alter ecosystems by out-competing native vegetation. Non-native weeds are commonly annual and perennial forbs. In the Yakima River basin, non-native weed species are ox-eye daisy, purple loosestrife, orange hawkweed, diffuse and spotted knapweed, yellow star-thistle, yellow toadflax, rush skeleton weed, and Canada thistle (DOI 2002).

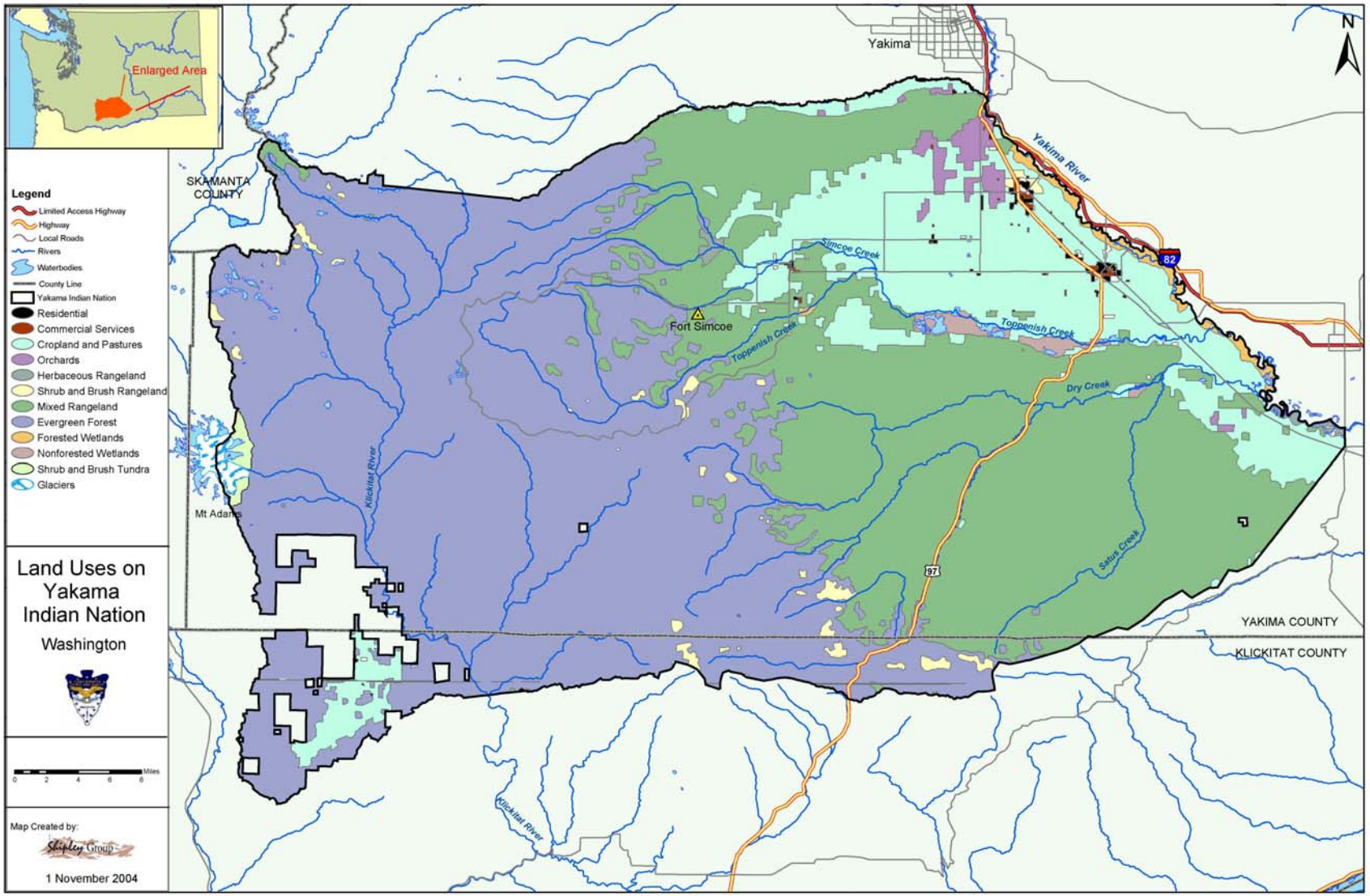


Figure 3-5. Land Uses and Habitat Types on Yakama Reservation.
Data Source: UW 2004.

Wildlife

Protected Wildlife Species

YN does not maintain a formal Tribal list of T&E wildlife species occurring on YR. However, currently, YN is home to two federally protected species: the bald eagle (*Haliaeetus leucocephalus*) and the Middle Columbia River steelhead (*Oncorhynchus mykiss*) (Hames 2005). Both species are considered threatened under ESA, and steelhead have critical habitat designated adjacent to YR on the Yakima River (NMFS and FWS 2000). Discussion of these two species and impacts, as well as information on other species that occur on or near YR is included below. The YSPB identified 11 focal species that occur in the Yakima River basin (Table 3-3).

Table 3-3. Focal Species that Occur in the Yakima River Basin.

Common Name	Habitat	Federal Status*	Native Species	Partners in Flight**	Game Species
Western Toad	Montane Coniferous Wetlands	SC	Yes	No	No
Sandhill Crane			Yes	No	No
White-headed Woodpecker	Ponderosa Pine/Oregon White Oak		Yes	Yes	No
Lewis' woodpecker			Yes	Yes	No
Western Gray Squirrel		SC	Yes	No	No
Mule Deer	Interior (Eastside) Grassland Shrub Steppe		Yes	No	Yes
Sage Grouse		C	Yes	No	No
Brewer's Sparrow			Yes	Yes	No
Yellow Warbler	Eastside (Interior) Riparian Wetland		Yes	No	No
Mallard			Yes	No	Yes
American Beaver	Numerous Habitats		Yes	No	Yes

*C = Candiate; SC = Species of Concern; T = Threatened; E = Endangered
** Partners in Flight is an international coalition of government agencies, conservation groups, academic institutions, private organizations, and citizens dedicated to the long-term maintenance of healthy populations of native landbirds (ORWAPIF 2005).
Source: NPCC 2004a.

Mammals

Ninety-eight large and small mammals are found in the Yakima River basin. Several species of big game inhabit the Yakima River basin, including black bear, black-tailed deer, mule deer, Rocky Mountain elk, bighorn sheep, mountain goats, and cougar. A small number of mountain goats are found at high elevations along the western fringe of the basin (NPCC 2004a).

Bird Species

Passerine birds, raptors, waterfowl, and uplands birds are found in various habitats across the Yakima River basin and account for 247 of the subbasin wildlife species. Some bird species, such as the ring-necked pheasant, California quail, black-billed magpie, American crow, common raven, western meadow lark, horned lark, and American kestrel are year-round residents, while others, including the rough-leg hawk, snow bunting, and varied thrush are migratory, and are only present during the winter. Many other migrant species of birds are present in the Basin during the spring and summer nesting season, including osprey, turkey vulture, common nighthawk, long-billed curlew, and common poor-will. The subbasin is

an important nesting area for many neo-tropical species, including western and eastern king bird, evening grosbeak, lazuli bunting, and spotted towhee (NPCC 2004a).

In addition to providing habitat for those species that are permanent or seasonal residents, the Basin is an important component of the migratory route for many species that traverse the Yakima River basin during the spring and fall migratory period. The Yakima basin is a component of the Pacific Flyway. A considerable number of passerine species pass through the Yakima basin on their travels to and from nesting areas in Canada and Alaska, including several species of warblers, flycatchers, and finches (NPCC 2004a).

Sandhill Crane. Photo Courtesy of Littlefield and Ivey, 2002.

Many waterfowl species inhabit the Yakima basin during the spring and summer including a significant portion of all wood ducks hatched in the State, as well as mallards, Canada geese, and other duck species. While wintering populations of waterfowl in the Basin have decreased over the past 30 years, the Basin still plays host to many thousands of duck and geese each winter, including mallards, Canada geese, green-wing teal, northern pintail, and other species. Wintering waterfowl are concentrated in the Lower Yakima Basin on the Toppenish creek and the Yakima River floodplain. From these concentration areas, waterfowl feed in many agricultural areas throughout the Lower Yakima Valley (NPCC 2004a).

On Tribal lands, the YN has listed the greater sandhill crane as a sensitive species in the Yakama Indian Reservation Forest Management Plan, and it is considered a species of cultural importance (WDFW 2002).

Fish Species

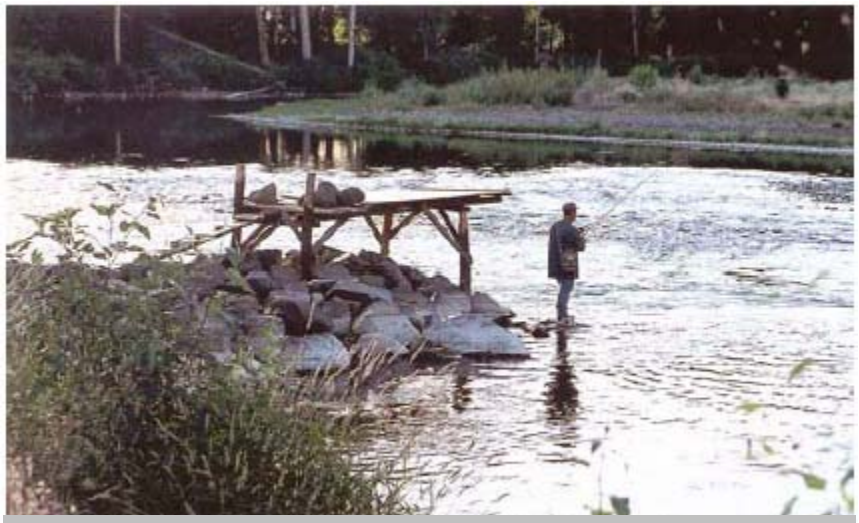
The YSPB identified six fish species as focal species for the Yakima basin. Currently bull trout do no occur in the YR (Hames 2005). These species are identified in Table 3-4 (NPCC 2004b).

Table 3-4. Fish Focal Species and Their Selection.

Criteria	Bull trout	Steelhead/ Rainbow trout	Spring Chinook	Fall Chinook	Sockeye	Pacific Lamprey
ESA Status	Threatened	Threatened	None	None	None*	None
Has Ecological Significance	Yes	Yes	Yes	Yes	Yes	Yes
Has Cultural Significance		Yes	Yes	Yes	Yes	Yes
Anadromous and/or Resident	R	A and R	A	A	A	A
* Sockeye were extirpated from the Yakima basin ca 1920						

Source: NPCC 2004b.

Steelhead (T&E) Steelhead once spawned broadly throughout the Yakima basin. Most adult steelhead return to and spawn in Satus (47 percent) and Toppenish (11 percent) Creeks and the Naches River basin (32 percent). The remaining fish spawn in Marion Drain (2 percent), the Yakima River below Roza Dam (4 percent) and the upper Yakima River basin (4 percent) (Hockersmith et al. 1995, DOI 2002).



Fishing in the Lower Yakima River Basin. Photo Courtesy of USGS.

Satus Creek and its tributaries are the most significant remaining natural production areas for the declining population of Yakima River steelhead. The Satus Creek summer steelhead run has accounted for as much as half the production in the Yakima River basin in recent years. This population has suffered a serious decline since monitoring began in 1988. This trend is unlikely to reverse itself soon, judging by the low outmigrations of summer steelhead smolts from the Yakima basin in recent years. Poor smolt production also indicates that spawning and rearing conditions are limiting steelhead populations. Management of this watershed has profound implications for the Satus Creek steelhead run and, in turn, for the entire Yakima basin. Satus Creek, contained entirely within the YR, is the most productive steelhead stream in Yakima basin, in recent years accounting for more than one-third of returning adults. The Satus watershed, comprising approximately 10% of the Yakima basin, is largely undeveloped and has no irrigation diversions (YN 2004b).

Critical habitat for Yakima River steelhead was proposed in 1999 (65 Fed. Reg. 5740; 1999) and finalized in 2000 (65 Fed. Reg. 7775; 2000). It is designated to include all river reaches accessible to listed steelhead in Columbia River tributaries including the Yakima River. YR is excluded from this designation, but critical habitat exists adjacent to Indian lands (NMFS and FWS 2000).

Salmon Columbia River salmon stocks are extremely important for cultural Tribal ceremonies, subsistence, and commercial fisheries in-river. Historically, average annual runs of salmon stocks returning to the Columbia River watershed above the Bonneville Dam were estimated to have been in the range of 5 to 11 million fish. Due to overfishing in the lower river and the ocean, the loss and destruction of critical habitat, and the construction of hydroelectric dams, salmon runs returning to the Columbia River have declined by over 90 percent (CRITFC 2004).

The fish and wildlife scientific staff of the Nez Perce, Umatilla, Warm Springs, and Yakama tribes, along with CRITFC, developed a salmon restoration plan called Wy-Kan-Ush-Mi Wa-Kish-Wit (Spirit of the Salmon). Blending up-to-date science with the wisdom and history of the Tribes, Wy-Kan-Ush-Mi Wa-Kish-Wit is designed to restore fisheries in the Columbia River Basin so that the tribes can meaningfully exercise treaty rights reserved under the treaties with the U.S. in 1855 (CRITFC 2004).

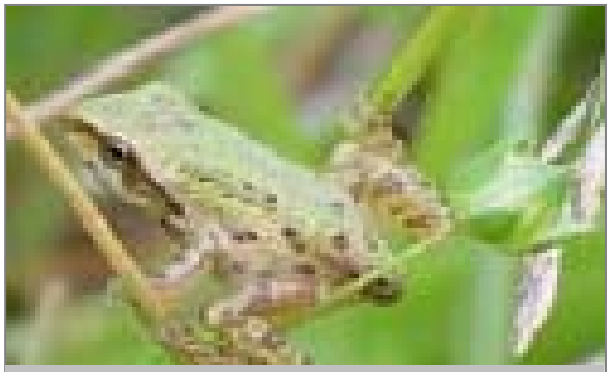
CRITFC, on behalf of the four treaty tribes, signed a Memorandum of Understanding (MOU) with the NMFS in June 2000 on how the tribes would implement the Pacific Coastal Salmon Recovery Fund

(PCSRF) program. Specifically, this MOU addresses how the PCSRF funds awarded to CRITFC will be distributed to eligible Tribal salmon recovery activities and projects in the Columbia River Basin (CRITFC 2004).

Reptiles and Amphibians

The Yakima basin supports 22 reptiles such as the western rattlesnake and 23 amphibians such as the Cascades frog. Little is known, however, of the distribution, abundance, and life histories of reptiles and amphibians in the basin (NPCC 2004a).

The Yakama Nation Wildlife Resource Management Program recently developed an Amphibian Field Guide, which lists and describes five species of frogs/toads and five species of salamanders that potentially occur on YR. Species confirmed to exist on YR include: western toad, tailed frog, Cascades frog, pacific tree frog, rough-skinned newt, long-toed salamander, and the northwestern salamander (YN 2005b).



Pacific tree frog. Photo Courtesy of YNW.

Threats to Wildlife and Wildlife Habitat

Agriculture is thought to affect the survival of 380 species listed by the Federal government as threatened or endangered in the continental U.S. (ERS 2000). Based on a 1997 Risk Assessment produced for FSA, the percentage of T&E species affected by agricultural development range from amphibians (most affected) to mammals (least affected), with the most frequent cause of habitat loss or alteration leading to classification as threatened or endangered being agricultural development (USDA 2003).

The Yakima River basin's population is projected to increase by about 45 percent by 2020. Most of the growth is anticipated to occur in the cities and communities along the river corridor and floodplains, from the city of Cle Elum downstream to the confluence with the Columbia River. Projected population growth in the basin will continue to put pressure on natural resources that provide habitat for fish and wildlife. Conversion of land and water resources to uses such as housing, roads, agriculture, industry, commercial development, recreation, energy, and related infrastructure means increased pressure on fish and wildlife habitat (NPCC 2004a).

Increased demand for resources in the future will make responsible wildlife management on YR even more important. Although much of the growth may not take place on YR, a unique opportunity exists for YN to restore and protect large areas of wildlife habitat on YR.

3.9.3 Effects of Alternative A (No Action) on Protected Species / Threatened and Endangered Species

Under the No Action Alternative, long-term, minor adverse effects would continue. New T&E listings would continue as newly jeopardized species are identified. These new listings and declining habitat conditions of currently listed species suggest that overall impacts on T&E species reflect a slow decline as human actions conflict with and adversely affect both species and their habitat.

Under Alternative A, the following negative impacts would occur:

- Habitat values would continue to degrade
- Population growth would continue to crowd natural ecosystems
- Pollution levels in agricultural runoff would remain high
- No additional habitat would be preserved as part of a permanent easement
- Invasive species would continue to invade large reaches of fallow farmland.

Restoration programs and partnerships would continue to be implemented on YR. However, wildlife, terrestrial habitat, and aquatic habitat values in YN would not benefit from the leveraged effects of the habitat restoration and watershed improvement CPs funded by CREP. These values may continue to decline.

3.9.4 Effects of Alternative B (CREP Agreement) on Wildlife

Implementation of Alternative B would result in long-term beneficial effects to wildlife on YR. Filtering provided by all the CPs would contribute to cleaner water entering various water bodies used by wildlife and provide additional wildlife habitat in some places. These effects would vary according to the wildlife's proximity to CPs, their ability to use CPs as new habitat, and their reliance on clean water. Some minimal and localized negative impacts may occur to wildlife habitat during installation of the CPs through temporary displacement; however, since Alternative B would only temporarily affect previously cropped land and the resulting CPs would provide better habitat, these impacts would be minimal.

Improvements to water quality alone would have beneficial effects for all wildlife as well as potential increases in critical habitat. Alternative B would provide additional habitat, water filtration, and permanent easements, all of which would not happen under Alternative A.

As part of the CREP enrollment process, a contract involving appropriate CPs would be developed for each individual site. Each contract would have a site specific EE completed by FSA to determine if any threatened or endangered species are present and would be potentially affected by the proposed action. If so, consultation with the FWS would be initiated. In addition, any CREP activity that may result in the disturbance of non-cropped areas adjacent to a proposed project site would be coordinated with FWS.

Implementing Alternative B would help slow the decline of wildlife habitat in YR. Implementation would not only directly provide additional habitat and enhance adjacent aquatic habitat by cleaning water and cooling streams, it would also provide for the permanent protection of additional open space, adding the 5,000 acres to current restoration acreage. Implementation of Alternative B would also enhance the potential for wildlife movement along the riparian corridor by buffering the connective habitat from adjacent land uses.

In general terms, direct benefits to wildlife would occur by implementing any of the CPs and concurrent activities. Most of the CPs would provide or restore wildlife habitat.

- CP4D—Permanent wildlife habitat cover establishes permanent water sources for wildlife, temporary cover, and mineral supplements.
- CP8A—Grass waterways provide cover for small birds and animals and also provide important habitat for grassland nesting birds.

- CP12—Wildlife food plots establish annual or perennial wildlife food plots that will enhance wildlife and wildlife habitat.
- CP21—Filter strips provide valuable wildlife habitat including excellent winter cover, nectar and pollen for pollinating insects, and forage for grazing wild animals.
- CP22—Riparian buffers create shade to lower water temperature improving habitat for aquatic organisms. They also provide a source of detritus and large woody debris for aquatic organisms.
- CP29—Marginal pastureland wildlife habitat reduces pollutants and protects surface and subsurface water quality. The restoration of native plants assists in stabilizing stream backs, reduces flood damage impacts, and restores and enhances wildlife habitat.

While improving the condition of wildlife habitat is not a primary goal of the CREP program, fulfilling the objectives listed in Section 1.4 would have the additional benefit of enhancing wildlife populations in the YR.

3.10 Cultural/Tribal Resources

The majority of the information included in Section 3.10 summarizes the Preliminary Cultural Resource Management Assessment that was prepared for the YN CREP. The complete document is included in Appendix C.

3.10.1 Introduction

"Cultural resources," are defined in regulatory terms as "prehistoric" and historic sites and ethnography. Cultural resources and the laws that govern them that apply to the YN CREP include:

- Subsistence, religious, medicinal, esthetic, and spiritual values ascribed by the YN to the natural and built environment (NEPA, EO 12898)
- Social institutions linked to the environment (NEPA, EO 12898)
- Historic properties (NHPA, other Federal, State, Tribal and local laws)
- Native American graves and cultural items (NAGPRA, State and Tribal laws)
- Native American religious practices and spiritual places (American Indian Religious Freedom Act [AIRFA])
- Archaeological Sites (ARPA, NHPA)

The YN CREP is not considered exempt from the NHPA and has been determined to be a Federal undertaking that must comply with the regulations of the NHPA.

3.10.2 Existing Conditions

Yakama Nation Cultural Resource Program

The YNCRP manages a variety of cultural and archaeological resources on YR. The following resources are listed in order of management priority:

1. Yakama Nation, Tribe and its people
2. Traditional Cultural Significance, sacred values
3. Archaeology

The first priority of the YNCRP is to preserve those resources that pertain to traditional subsistence, sacred ceremonial or religious or other cultural meaning for contemporary Native Americans. These resources are important because they enable Yakama to live a traditional lifestyle and preserve their heritage.

Also of special concern in the YR are traditional cultural properties (TCPs). The National Park Service (NPS) developed the concept of TCPs as a means to identify and protect places and objects that have special cultural significance to American Indians and other ethnic groups. NPS defines traditional as "beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice."

A TCP is eligible for inclusion on the National Register of Historic Places (NRHP) because of its association with cultural practices and beliefs. TCP sites that are eligible for inclusion on the NRHP are:

- Rooted in the history of a community and
- Important in maintaining traditional beliefs and practices.

An important distinction between TCPs and other historic properties is the determination of their significance. Cultural resource professionals alone cannot determine the significance of a TCP to the community; this determination must be based on community perceptions of the value of the TCP. Additionally, the significance of historic properties must be evaluated from the perspective the Indians themselves.

The YNCRP maintains archaeological and historic records that identify the locations of TCPs. This information is not always made available to outside parties and is restricted and only available to YN's cultural resource personnel.

Archaeological and historic properties with traditional religious and cultural importance are essential to maintaining cultural integrity of the YN. They include properties that are historic and contemporary cultural use sites, associated with materials, traditional foods and other natural resources. Even if a site is considered exempt from TCP or NRHP registration, it still must be evaluated for significance by YNCRP.

There are three area types on YR. These include open areas, allotment land, and closed areas where general public access is denied. The YN CREP would be implemented in the open area of the reservation.

YN Cultural Perspectives

To the Yakama, canyons are important resource strips that connect landscapes and provide natural shelter from the elements. The Yakama made canyons their homes and work places, which is evidenced by remnants of houses, tools, ritualistic items, and Indians themselves. Many animals and plant species are

regarded as sacred by the Yakama. Water is also an essential part of the Yakama's traditional Indian heritage (Schomaker 2004a).

Talus slopes contain rock features, including small depressions, or stone pits, and rock walls. Yakama elders know about the stone pits - - recalling their use as storage places, as ambush places for animals and enemies, and as windbreaks while watching for animals or travelers. Steep, colluvial slopes contain plants like bitterroot, Lomatium, arrowleaf balsamroot, currants, and a variety of traditional foods and medicines. Discarded tools left on these slopes attest to Yakama use of these plants. Quarries where stone tool materials could be sought are common in Canyon-Plateau and Canyon-Ridge landform regions. Rock shelters were used by the Indians to camp, store food and valuables, and bury their dead; some are covered with paintings and carvings (Schomaker 2004a).

3.10.3 The Effects of Alternative A on Cultural/Tribal Resources.

Minor to moderate adverse impacts on cultural resources would continue to occur on YR. These include disturbance and destruction of prehistoric and historic sites and structures, either through ongoing land conversion for development or agricultural use. Sites and structures, if discovered on private land, may often not be reported to anyone. In some instances, destruction of a site or structure may occur before a professional is able to assess its significance. On Federal land or for actions with Federal involvement cultural resources reviews must be completed before the Federal agency can implement, fund, or permit a proposed action.

Cultural resources may exist on land that has been converted to cropland. Ongoing activity from agriculture and YR restoration activities may uncover resources. Although cultural discoveries on cropland may not be reported, resources would continue to be managed as YNCRP personnel become aware of cultural resources throughout YR.

3.10.4 The Effects of Alternative B on Cultural/Tribal Resources.

The complexity of cultural resource issues on the YR presents a unique situation when implementing CREP on Tribal lands. There is a need to share information about cultural resources on the YR without releasing it to the public. YN's CRP maintains historic and archaeological records. This information is not always made available to outside parties and is considered by YN to be restricted and available only to YN cultural resources personnel.

To address this concern, an MOA would be developed among FSA, Washington SHPO, Advisory Council on Historic Preservation (ACHP) and the YN. The MOA would consider direct, indirect, and cumulative impacts to YR cultural resources from CREP activities. It would consider physical impacts such as group diversity, but also visual, auditory, social, land use effects, and impacts on cultural use of the environment. The MOA would state the roles and functions of FSA, YN, ACHP and SHPO. The proposed action would meet all regulatory requirements of FSA, SHPO and all Tribal requirements. The MOA would stipulate planning and execution requirements to minimize negative impacts.

YN would have the authority make decisions concerning site specific cultural resource assessments. YN could decide the level of cultural resource evaluation on a site specific basis. Even if site specific cultural resource assessments are not conducted, acres would still be eligible for CP enrollment.

Implementation of Alternative B would result in long-term, moderate beneficial impacts to YR cultural resources.

3.11 Human Health, Social, and Economic Issues

3.11.1 Introduction

NEPA, and its implementing regulations and guidelines, requires consideration of the socioeconomic impacts of Federal actions in preparation of environmental documents. Section 1508.8 of the CEQ's "Regulations for Implementing NEPA" states that:

> Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.
>
> Effects and impacts as used in these regulations are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect would be beneficial.

This PEA will present regional and local information on the socioeconomic conditions in YN that are relevant to the implementation of CREP and the potential impacts of the proposed project on these conditions.

3.11.2 Existing Conditions

Agriculture and other land-based occupations are an important part of the economy of the YR and Off-Reservation Trust Land geographical area. In the 2000 Census, the highest percentage (22.9) of the labor force reported employment in the category including agriculture, forestry, fishing and hunting, and mining (USCB 2004). Another study identified 23.2 percent of those employed worked in manufacturing occupations which are often tied to agricultural processing (YN and PacificCorp 2001). In 2002, market value of agricultural production in Yakima County was $843 million (DOI 2002).

The YN and its members own the majority of irrigated and irrigable land on YR and the Nation manages its land through a Tribal enterprise, growing and marketing apples and other fruit and vegetables (DOI 2002). As of 1995, the reservation had 142,000 acres of irrigated land producing alfalfa hay, wheat, sugar beets, hops, grapes, apples, asparagus, spearmint, sweet corn, and grain corn (EDA 2005).

In addition to agriculture, recreation and tourism contribute revenue to the local economy that could be impacted by CREP implementation. While precise numbers are not available for the Yakima River basin, revenue from recreational activities is thought to be considerable. In 2001, nearly three million Washington residents and nonresidents 16 years old and older fished, hunted, or wildlife watched in the State, with 2.5 million participated in wildlife-watching activities, including observing, feeding, and photographing wildlife. State residents and nonresidents spent $2.4 billion on wildlife recreation in Washington (FWS et al. 2001). Additionally, boating, hiking, and camping generate economic activity in the area (NPCC 2004a). Specifically on the YR, the Yakama Nation Resort RV Park receives over 7,000 campers annually (Harvard 2002).

3.11.3 Environmental Justice

All Federal programs, including CREP, must comply with EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. The EO, issued February 11, 1994, requires each Federal agency to make environmental justice a part of its mission. Agencies are to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. The EO details that all people, regardless of race, color, national origin, or income, receive the following treatment:

Minority Farm Labor in Washington. Photo Courtesy of Washington State Employment Security.

- Are provided with fair treatment and meaningful involvement with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies
- Have the opportunity to express comments or concerns before decisions are rendered on the Federal programs, policies, procedures, or activities affecting them
- Share in the benefits of, are not excluded from, and are not adversely or disproportionately affected by Federal programs, procedures, policies, or activities

The President issued a Memorandum to the heads of all departments and agencies to underscore that certain provisions of the existing civil rights and environmental laws (Title VI of the Civil Rights Act, of 1964, NEPA, the Clean Air Act, and the Freedom of Information Act), the Government in the Sunshine Act, and the Emergency Planning and Community Right-to-Know Act, help ensure that all persons in the community live in a safe and healthy environment.

Environmental justice considerations ensure that all populations are provided the opportunity to comment on issues before decisions are rendered. Environmental justice allows all people to share in the benefits of, and not be excluded from or affected in a disproportionately high and adverse manner by, government programs and activities affecting human health or the environment. Departmental Regulation 5600-2, issued December 15, 1997, provides direction to agencies for integrating environmental justice considerations into USDA programs and activities in compliance with EO 12898.

Minority Populations

Among the persons living on the YR, Tribal members are in the minority. In 2000, 23.3 percent of the total population of the YR and Reservation Trust Lands of identified themselves as Native American. Other racial minority groups comprise more than 43 percent of the total population (see Figure 3-6) (USCB 2004). Some of the non-Indian residents live on or have developed business enterprises on

allotted lands that were purchased from Indian owners in the earlier part of the century (YN and PacifiCorp 2001).

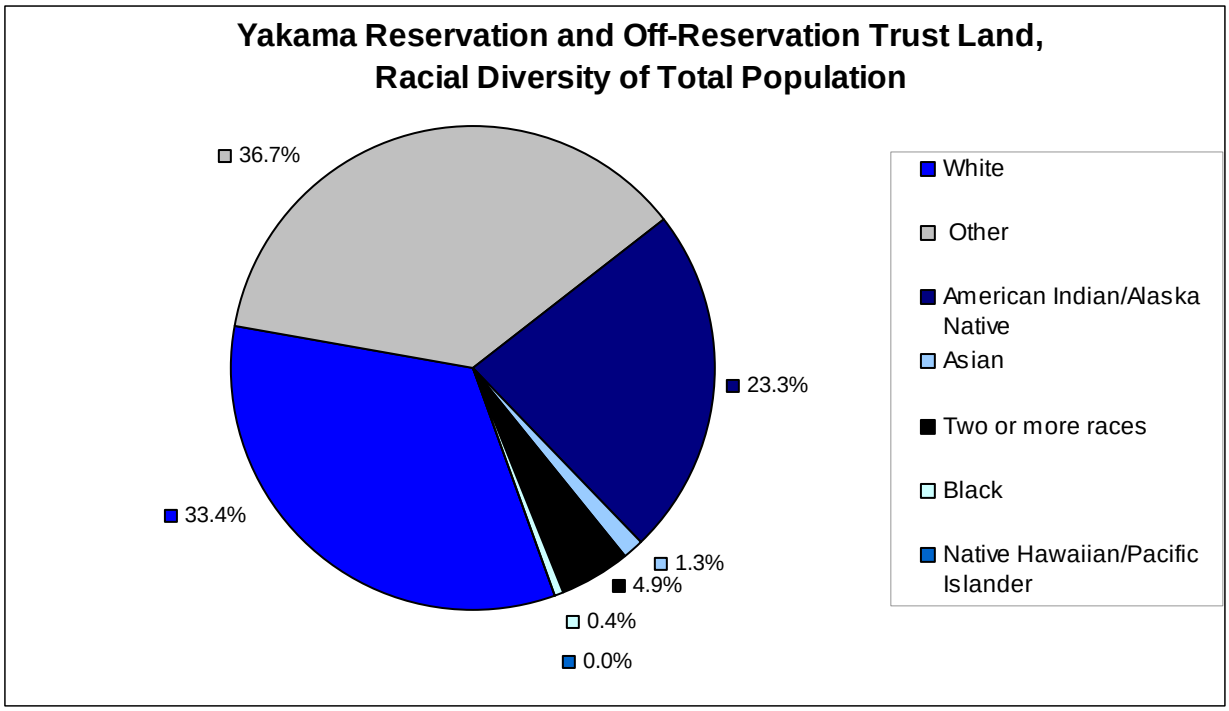


Figure 3-6. Racial diversity of the Yakama Reservation population.
Source: USCB 2004.

Because information on minority farm operators for the YR is not available, information for Yakima County is included for reference. Throughout the county, the majority of farm operators are white, with Spanish/Hispanic/Latino and American Indian/Alaskan Native as the next largest populations. Table 3-5 is a summary of farm operator racial characteristics for Yakima County.

Table 3-5. Summary of Farm Operators in Yakima County.

Racial Group	Number of Farm Operators
White	5,206
Spanish/Hispanic/Latino or Other	576
American Indian/Alaska Native	182
Asian	71
Black	10
Native Hawaiian/Pacific Islander	5
Two or more races	43

Source: NASS 2005.

Migrant Farm Labor

A migrant farm worker is defined as a person who moves from outside or within the State to perform agricultural labor. A seasonal farm worker is defined as a person who has permanent housing in the State and lives and works there throughout the year. Because of its seasonal nature, the labor intensive agriculture of the Yakima River basin (such as tree fruits, cherries, and asparagus) is highly dependent on

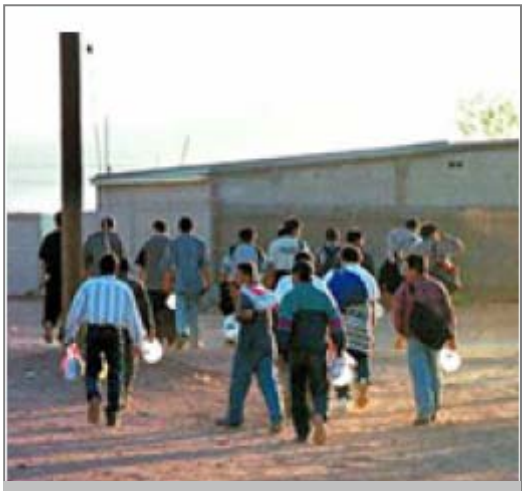
Migrant and Seasonal Farm Workers (MSFW). In Washington State, most seasonal workers are immigrants from Mexico. The Washington State Employment Security reported that in 2002, there was an average of 8,925 seasonal employees in the area including Yakima and Klickitat counties (Jaksich 2003). In 2004, agricultural producers in Yakima and Klickitat counties employed 28 percent of the State's seasonal workers (Wines and Anderson 2004).

Additional information on MSFW was collected for the 2002 Census of Agriculture. Farm operators were asked whether any hired or contract workers were migrant workers, defined as "a farm worker whose employment required travel that prevented the migrant worker from returning to his/her permanent place of residence the same day." For this study, 821 farm operators in Yakima County reported employing migrant farm labor and one farm reported using migrant farm labor on a contract basis. The 2002 Census of Agriculture did not report the number of workers on those farms (NASS 2005).

Farm Worker Health

Migrant farm jobs are physically and emotionally demanding with hazardous working conditions from exposure to chemicals to risks for injury from accidents. Skin, eye, and respiratory problems are common occurrences. Additional occupational health hazards of farm work include tuberculosis, diabetes, and cancer (NCFH 2005). All these conditions that require frequent medical treatment are difficult to treat due to the mobility of the population. Yet many migrant workers are fearful of the farmer causing them to lose their jobs, and therefore do not ask for the needed medical attention (Kossek et al. 2005).

EPA estimates that 300,000 farm workers in the U.S. suffer acute pesticide poisoning each year. Many of these workers do not seek treatment, or are misdiagnosed because symptoms can mimic a viral infection (NCFH 2005). Pesticide exposure can occur from a number of sources such as contaminated soil, dust, work clothing, water, and food, or through pesticide drift--the deposition of a pesticide off its target. Because of the nature of agriculture and the proximity of homes to the fields, family members could be exposed to hazardous chemicals through pesticide drift. Agricultural workers can inadvertently expose family members to hazardous materials by carrying materials home from work on their clothes, skin, hair, and tools, and in their vehicles (McCauley et al. 2000).



Migrant and Season Farm Workers in Washington. Photo Courtesy of Washington State Employment Security.

Many migrants' lack of education and economic desperation can also contribute to health concerns. For example, Washington State study of 460 hired farm workers found that 89 percent did not know the name of a single pesticide to which they had been exposed, and 76 percent had not received any information on appropriate protective measures (NCFH 2005).

In addition to physical health issues, migrant farm working families have psychological and social concerns. The challenges present in their daily lives pose serious structural constraints to cultural assimilation and the family's ability to manage stress and improve long term overall social and economic well-being (Kossek et al. 2005).

Poverty

Despite the health concerns, the biggest constraint facing MSFWs is extreme poverty, with household incomes often far below U.S. Federal poverty guidelines. National data shows that one half of all farm-working families earn less than $10,000 per year. This income is well below the 2002 U.S. poverty guidelines for a family of four of $18,100 (Kossek et al. 2005).

Unemployment and poverty rates are high on the YR where few economic opportunities exist. According to a 1997 BIA labor force report, the estimated unemployment rate among the people of the YN was 83 percent. This same report found that among individuals who worked, 28 percent had incomes that were below the poverty level. In total, 42.8 percent of YN families are living in poverty. In 1990, the Bureau of the Census estimated that average annual income of Tribal members on the YR was $5,700 per person. Using a three percent cost-of-living adjustment, the average annual income for the year 2000 was $7,660, approximately one-third of the average of the surrounding six-counties and the of the State of Washington (YN and PacifiCorp 2001).

Pay Rates

Pay rates vary whether the worker is paid an hourly wage or piece rate. Federal laws require that workers earn a minimum wage of $5.15 per hour. Workers by piece rate can earn more money based upon their individual productivity.

For the agricultural area including Yakima and Klickitat counties, Washington State Employment Security estimated 12,259 regular hired farm workers. Primary agricultural activities were apple pruning, apple miscellaneous work, apple warehouse work and grapes pruning. The weighted seasonal wage for hourly paid farm workers during the pay period in December 2004 averaged $7.43 per hour. Hourly wages ranged $7.16 for miscellaneous vegetables worker, cherry pruner, grapes worker, nursery worker, nursery weeder, and wheat tractor operator to $12.00 for alfalfa vehicle operator. Typical piece rates were $0.16 to $0.28½ per tree for grapes pruning and $.50 to $3.00 per tree for apple pruning. Housing was limited and workers provided their own transportation (Wines and Anderson 2004).

Average annual earnings in agriculture tend to be below that of most other industries in the State. In 2002, the earnings of all agricultural workers in Washington averaged $16,791. This was 43.8 percent of the statewide average for all workers covered for unemployment insurance of $38, 252. The main reason for this disparity is that most farm workers, especially the seasonal ones, do not work the entire year. Many of these covered seasonal employees do not even work the 680 hours needed to be eligible for the Unemployment Insurance program (Jaksich 2003).

3.11.4 The Effects of Alternative A (No Action) on Health, Social, and Economic Issues

Implementation of Alternative A would result in long term, minor to moderate adverse effects to the socioeconomics of the area. Under Alternative A, agricultural practices would continue as they have in the past. The degradation of water quality that currently results from agricultural practices would continue to impact the outdoor recreation industry. Alternative A would not result in any water quality improvements, unless existing programs (see Section 1.6.3) are greatly expanded.

Implementation of Alternative A would likely have the following effects:

- The total amount of agricultural production on YR would continue to respond to market forces and the economy of Washington State and the YR.

- Since much of the land eligible for CREP is currently not farmed, landowners would continue to not receive economic returns from their land. The rental rates and land values of YR acreage would continue to be affected by development values and population density.
- The total number of YR farms would continue to respond to market forces and the economy of Washington State and the YR.
- Agriculture would continue to contribute roughly the same value to the overall economy.
- Any trends or cycles evident in the labor market would continue and provide the same number of jobs, with fluctuations due to market conditions.
- Alternative A would not offer mechanisms to improve the water quality of the YR. Because of the income provided by tourism, recreation, fishing, boating, and other water-related businesses, this continued degradation has the potential to negatively impact existing and future growth in the recreation and tourism sector.
- Alternative A offers no additional land preservation than the current programs offer. This may result in continued land use changes in the area (i.e., agricultural land conversion) and the socioeconomic impacts associated with these changes would continue.
- Any ongoing environmental justice compliance problems are likely to continue under the No Action alternative. Exposure to pesticides and other harmful chemicals by farm workers and their families will continue to occur at current levels.
- Under this alternative, there would be no CREP funds available for any producers (including minorities). No FSA actions are required or necessary under the No Action alternative to address existing or ongoing issues with environmental justice.

The No Action Alternative would not meet any of the CREP objectives outlined in Section 1.4.

3.11.5 The Effects of Alternative B (CREP Agreement) on Health, Social, and Economic Issues

Implementation of Alternative B would result in long term minor beneficial effects to the reservation's economy, though the ultimate effects would be minimal. YN CREP proposes the potential enrollment of up to 5,000 acres on the YR, or 0.35 percent of the entire reservation. Implementation of Alternative B would result in general improvement to the water quality of the region. The degradation of water quality that currently results from agricultural practices, leading to ancillary impact to wetlands, wildlife, and tourism, would decline as a result of implementing CREP.

Application for the CREP would require the completion of an EE by FSA and NRCS. Environmental justice issues would be addressed on the EE. If the proposed action is found to cause any adverse human health or environmental effects to minority or low-income communities, a discussion of the negative impacts must be attached (USDA 2001).

Implementation of Alternative B would likely have the following effects:

- If CREP was intensively implemented in a small geographic region, it could create a localized and artificial shift in rental rates and land values. CREP contains safeguards to prevent this from happening. In addition, the acres enrolled in CREP would likely be spread across the proposed project area, since participating landowners typically enroll partial farms or fields.

CREP could also create a situation where land enrolled in CREP has a greater value than surrounding lands. This is unlikely to happen as income earned through CREP would remain less than the average development value of nearby land. CREP-enrolled lands are also lands that are marginally productive agricultural lands that are non-developable so there is no opportunity cost to enrollees. All of these factors would limit the acres of cropland taken out of production in a given area and, consequently, the local economic impact due to implementation of CREP would be minimal to non-existent. These rental rates and land values of the YR acreage would continue to be affected by development values and population density and would not be impacted by the Alternative B.

- Alternative B would not result in changes to total number of ranches and farms on the YR. The 25 percent acreage cap on CREP and the practice of participating landowners to enroll partial farms or fields means that entire ranches and farms would not be enrolled in CREP. Farms and ranches would continue to respond to market forces and the economy of the State and not be impacted by Alternative B.
- CREP implementation would not substantially impact the region's economy. Agriculture would continue to contribute roughly the same value to the overall economy. The YR economy would continue to be affected by market forces and would not be impacted by Alternative B. However, CREP enrolled lands could mildly improve the local economy by providing residual income to enrollees for land that was previously not generating revenue.
- Any trends or cycles evident in the labor market would continue and provide the same number of jobs, with fluctuations due to market conditions. CREP enrollments would be spread across the reservation and have only little to no effects to agricultural labor markets.
- Because much of the land targeted for CREP enrollment is not currently in production, implementation of Alternative B would not markedly reduce the total agricultural acreage or production in the region. By planting permanent native grasses (CP2) on these marginal acres, landowners may be able to reduce the overall input costs of farming operations, and in some cases, actually maintain or increase production by being able to concentrate resources on the remaining farmland. These two factors would likely result in minimal to no effect in the region's economy. There would likely be no displacement of MSFW. Agricultural production would continue to respond to market forces and the economy of Washington State and the YR and not be significantly impacted by Alternative B.
- With the establishment of native plant communities on enrolled CREP land, noxious weeds and other invasive plant species and their seeds would likely be decreased on neighboring farmland. This reduction would result in less herbicides purchased, reducing the overall input costs to farming operations in the area. These values, if they occur, would not have a significant impact across the State.
- There is a possibility for a slight beneficial effect to farm incomes from the steady and guaranteed receipt of CREP funds by enrolled producers from land that was previously not in production or producing little income. These values, if they occur, would not have a significant impact across YR.
- With the addition of filter strips, buffers, native grasses, and wetlands, wildlife habitat would be improved and expanded. This has the potential to increase opportunities for non-consumptive wildlife recreation and hunting and fishing in these areas and may lead to localized increases in the sale of equipment and licenses.

- With the addition of filter strips, buffers, and wetlands, water quality will improve and less contamination will result in the shallow wells that provide drinking water. This improvement may decrease water treatment costs for the YN.

- Local resource-based recreation industries (e.g. boating, hunting) may also be affected by implementation of CPs, which are designed to decrease water use in the project area. Water conservation practices could potentially increase streamflow water levels within the project area. Increased streamflow, especially after drought recovery, could potentially restore recreational opportunities to normal conditions. Additional benefits to recreation based industries may occur with the additional acres added to the YN Public Hunting Program. These additional acres will enhance hunting based recreation and may serve to attract more recreation consumers to the region. Recovery of economic losses and a small boost in recreation-based revenue may occur..

- Alternative B offers an additional land preservation program to the State's producers, the benefits of which can be added to those provided by the current programs. This may slow the future rate of large-scale land use changes in the State (i.e., agricultural land conversion) and the socioeconomic impacts associated with these changes.

  Another potential effect is the financial incentive for producers to maintain open space, which may help enhance the value and desirability of surrounding residential and commercial land.

- Disproportionate effects on minority or underrepresented groups are unlikely. Sign-up would be monitored annually and barriers to enrollment would be identified using a non-user survey.

- Because of the decrease of harmful chemicals applied to CREP-enrolled land, human exposure to these chemicals will likely decrease. Therefore, the health of farm workers (including MSFWs) and their families could marginally improve.

Alternative B would assist the YN in its efforts to meet the CREP objectives outlined in Section 1.4.

3.12 Cumulative Effects

3.12.1 Alternative A (No Action)

Existing programs (see Section 1.5.16) would strive to collectively have a positive impact on the water resources in YR and the ancillary benefits that come from clean water. However, without CREP, a powerful tool in improving water quality, the current iterations of these programs would continue to be only as effective as they have in the past at improving statewide water quality. Implementation of Alternative A would result the continuation of current observable trends in nonpoint source pollution and resource degradation and the cumulative effects that accompany these problems.

3.12.2 Alternative B (CREP Agreement)

Working in conjunction with existing Tribal programs (see Section 1.5.16), CREP implementation would contribute to the cumulative improvement of the water quality of waterbodies in the YR. Likewise, the enhancement of wildlife habitat across CREP project area would add to resources of the YR and provide additional protection for listed Federal species. Wetlands, groundwater, fisheries, wildlife, cultural resources, etc. would all benefit from the cumulative effects of protection and enhancement that CREP would provide. CREP is designed to augment and enhance conservation of resources and to promote water quality improvement. It would work in conjunction with other conservation efforts being

implemented at both the Tribal and Federal level and result in statewide cumulative improvements to YR's natural conditions.

Additionally, CREP would have a cumulative impact on the local economy. Land enrolled in CREP would be included into the YN Public Hunting Program, providing more recreational opportunities and attracting more users to the area. Recreational use of land enrolled in CREP would generate more income for the YN through additional hunting license sales. Local business such as the Yakama Nation RV park, local sporting goods stores, and food service vendors would also benefit from additional recreational users in the region.

3.13 Unavoidable Adverse Impacts

The following sections describe those effects which are adverse and cannot be avoided without mitigation.

3.13.1 Alternative A (No Action)

Under Alternative A, nonpoint source pollution attributed to agriculture can be expected to continue at roughly the current rates. Continued agricultural practices would likely contribute to long-term water quality degradation in the Toppenish and Satus Creek watersheds and the Yakima River basin. There is the probability of increased seasonal erosion accompanied by increased sedimentation in regional streams immediately following harvests. Nutrients, sediments, pesticides, and waterborne pathogens would continue to impact downstream ecosystems and human populations.

3.13.2 Alternative B (CREP Agreement)

Alternative B would reduce the likelihood of all of the unavoidable adverse impacts listed under Alternative A above. Implementation of the CREP CPs and YN's additional concurrent activities would reduce nonpoint source pollution produced by agriculture, contribute to long-term water quality improvement in the YR, decrease the adverse impacts associated with seasonal erosion and sedimentation, reduce nutrient and pesticide loading, and result in fewer waterborne pathogens in pastureland runoff from entering receiving waterbodies. All of these improvements would lessen impacts to downstream ecosystems and human populations

3.14 Relationship of Short Term Uses and Long Term Productivity

3.14.1 Alternative A (No Action)

This alternative would maximize the short term uses of the environment, but would not enhance the long-term productivity of eligible lands and the cleanliness of YR's natural environment. Marginal croplands and pasturelands that might otherwise be enrolled in CREP would stay in production and efforts to increase the short term productivity of these lands (by applying additional fertilizer and pesticides) may cause further degradation to water quality and other resources.

3.14.2 Alternative B (CREP Agreement)

Under Alternative B, the short-term uses of the human environment would be maximized and long-term productivity would be simultaneously enhanced. Marginal croplands would be enrolled in CREP and would provide leveraged benefits to other lands and waterbodies in affected watersheds. Resources used to sustain the marginal lands would be diverted to help maximize the productivity of prime croplands. Potential overuse of fertilizers to increase productivity on marginal lands would be reduced.

3.15 Irreversible and Irretrievable Commitments of Resources

3.15.1 Alternative A (No Action)

Irreversible and irretrievable commitments of resources include fuel and time spent conducting agricultural practices. Under Alternative A, inefficient production on marginal land would continue to waste resources that could have been better used on different farmland. The irreversible loss of soil resources from YR agricultural lands would continue at the current, or perhaps accelerated, rates due to splash, rill, and streambank erosion.

3.15.2 Alternative B (CREP Agreement)

As with Alternative A, the irreversible and irretrievable commitments of resources including fuel and time spent conducting agricultural practices would continue, though perhaps at a decreased rate as inefficient production on marginal land decreases. Agricultural soil loss would likely continue, but at a much reduced rate as appropriate CPs are implemented.

Chapter 4.0 List of Preparers

This table identifies by name, education, and years experience those who contributed as part of the interdisciplinary team.

Table 4-1. List of Preparers

Name	Area of Expertise	Education	Experience
James Fortner, FSA	Environmental Compliance Manager	BS	20 years
Kathleen Schamel, FSA	Federal Preservation Officer	MA	19 years
Kelson Forsgren, The Shipley Group, Inc.	NEPA Project Manager	MS	12 years
Suzy Hill, The Shipley Group, Inc.	Environmental Analyst, Technical Writer	MA	3 years
Kim Richardson Barker, The Shipley Group, Inc.	Environmental Writer/Editor	MS	2 years
Joe Schomaker, Schomaker Natural Resources Consulting	Cultural Resources, Tribal Consultation	BA	20 years

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Chapter 5.0 List of Agencies and Persons Consulted and/or Provided Copies of This Environmental Assessment

List of agencies and persons consulted during the course of the analysis:

- Yakama Nation
- Yakama Nation Cultural Resources Program
- Yakama Nation Division of Natural Resources Environmental Protection
- Yakama Nation Wildlife, Tracy Hames, Wildlife Biologist
- Washington State Historic Preservation Office, State Archaeologist
- U.S. Fish and Wildlife Service

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Appendix A: FSA Handbook CPs

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Appendix B: Relevant Laws, Regulations, and Other Documents

American Indian Religious Freedom Act of 1978

American Indian Religious Freedom Act of 1978 (AIRFA) defines the special status of sacred places, artifacts, plants and animals of Indian people and guarantees access to sacred sites, including cemeteries required in their religion and the freedom to use in the practice of their religions sacred natural species and resources even though these resources may no longer be under their control. AIRFA requires agencies to consider the effects of their actions on traditional religious practices.

Archaeological Resources Protection Act of 1979

Archaeological Resources Protection Act of 1979 (ARPA) and its 1988 amendments contain improved protection measures for archaeological resources on Federal and Indian lands including provisions for felony level penalties for those convicted of serious violations, as well as civil penalties and forfeiture of vehicles and equipment. ARPA also establishes new procedures for Federal land managers to issue permits for authorized excavation and removal of archaeological resources. Uniform regulations (Protection of Archaeological Resources, 43 CFR Part 7) implementing provisions of ARPA have been developed. These regulations establish uniform definitions, standards, and procedures to be followed by all Federal land managers in providing protection for archaeological resources, located on public lands and Indian lands of the U.S. (http://homer.ornl.gov/oepa/guidance/cultural/archeo.pdf).

Clean Water Act of 1972

The Clean Water Act (CWA) was passed in 1972, with a goal to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The Act contains a number of provisions that affect agriculture:

Clean Lakes Program is authorized by Section 314 of the CWA. It authorizes the U.S. Environmental Protection Agency (EPA) grants to States for lake classification surveys, diagnostic/feasibility studies, and for projects to restore and protect lakes.

Nonpoint Source Pollution Program is established by Section 319 of the CWA. It requires States and U.S. territories to identify navigable waters that cannot attain water quality standards without reducing nonpoint source pollution, and then develop management plans to reduce such nonpoint source pollution.

National Pollutant Discharge Elimination System Permit Program is established by Section 402 of the CWA. This program controls point source discharge from treatment plants and industrial facilities (including large animal and poultry confinement operations).

Dredge and Fill Permit Program was established by Section 404 of the CWA. Administered by the U.S. Army Corps of Engineers, it regulates dredging, filling, and other alterations of waters and wetlands jointly with EPA, including wetlands owned by farmers. Under administrative agreement, NRCS has authority to make wetland determinations pertaining to agricultural land.

Comprehensive State Groundwater Protection Program

The Comprehensive State Groundwater Protection Program was initiated by EPA in 1991. It coordinates the operation of all Federal, State, Tribal, and local programs that address groundwater quality. States have the primary role in designing and implementing the program based on distinctive local needs and conditions.

CRP Programmatic Environmental Impact Statement

The Federal Register dated April 24, 2002 announced the Notice of Intent of FSA to prepare a PEIS for the CRP and its counterpart the CREP. The Final PEIS was published in January 2003 and provides FSA decision makers with programmatic level analyses that provides context for State and Tribal specific EAs. The Record of Decision (ROD) was published in the Federal Register on May 8, 2003 (68 FR 24847-24854).

Endangered Species Act of 1973

The ESA was enacted to conserve threatened or endangered species and the critical habitats in which they exist. When a species is designated as threatened with extinction, a recovery plan that includes restrictions on cropping practices, water use, and pesticide use is developed to protect the species from further population declines.

Farmland Protection Policy Act of 1981

The aim of the Farmland Protection Policy Act (FPPA) is to minimize Federal programs (including technical or financial assistance) contribution to the conversion of important farmland to non-agricultural uses. The act seeks to encourage alternative, if possible, that would lessen the adverse effects to important farmlands. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

NRCS uses a land evaluation and site assessment (LESA) system to establish a farmland conversion impact rating score on proposed sites of Federally funded and assisted projects. This score is used as an indicator for the project sponsor to consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level. The assessment is completed on form AD-1006, Farmland Conversion Impact Rating.

Federal Insecticide, Fungicide, and Rodenticide Act of 1947

The Federal Insecticide, Fungicide, and Rodenticide Act provides the legal basis under which pesticides are regulated. A pesticide can be restricted or banned if it poses unacceptable risks to human health or the environment. The re-registration process, mandated in 1988 for all active ingredients then on the market, has resulted in manufacturers dropping many less profitable products rather than paying the registration fees.

Food Security Act of 1985

FSA is authorized under this Act, as amended, and 7 CFR 1410 to institute the actions contemplated in this PEA (i.e. the proposed implementation of CREP). The FSA is authorized to enroll land into CREP through December 2007. Sections 1230, 1234, 1242 of the Act and 7 CFR 1410.50 authorize FSA to enter into agreements with states to use the CRP in a cost-effective manner to further specific conservation and environmental objectives of a given state and the nation. The following provisions are especially applicable to the implementation of CREP:

> Highly Erodible Land Conservation Compliance Provisions require that producers of agriculture commodities must protect all cropland classified as being highly erodible land (HEL) from excessive erosion. The provisions were amended in the 1990, 1996, and 2002 Farm Bills. The purpose of these provisions is to remove the incentive to produce annually tilled agricultural commodity crops on HEL unless it is protected from excessive soil erosion.
>
> Wetland Conservation Provisions (Swampbuster) help preserve the environmental functions and values of wetlands, including flood control, sediment control, groundwater recharge, water quality, wildlife habitat, recreation, and aesthetics. The 1996 Farm Bill modified Swampbuster to give USDA participants greater flexibility to comply with wetland conservation requirements and to make wetlands more valuable and functional. The 2002 Farm Bill changed the other Swampbuster provisions, including those associated with wetland determinations, mitigation (offsetting losses), "Minimal Effect" determinations, abandonment, and program eligibility.

The Indian Environmental General Assistance Program Act of 1992

The Indian Environmental General Assistance Program provides financial assistance to Indian Tribal governments and intertribal consortia to develop and administer environmental regulatory and multimedia programs on Indian lands. The primary purpose of these grants is to support the development of elements of a core environmental program, such as providing for Tribal capacity building to ensure an environmental presence for identifying programs and projects; fostering compliance with Federal environmental statutes by developing appropriate Tribal environmental programs, ordinances, and services; and establishing a communications capability to work with Federal, State, local, and other Tribal environmental officials.

National Environmental Policy Act of 1969 and Regulations

NEPA is intended to help Federal officials make decisions that are based on consideration of the environmental consequences of their actions, and to take actions that protect, restore, and enhance the environment. NEPA mandates that the FSA consider and document the impacts that major projects and programs will have on the environment.

CEQ Implementation Regulations

The NEPA implementation regulations found at 40 CFR 1500.

American Indians were legally incorporated into the environmental impact assessment process through the CEQ regulation updating the NEPA of 1969 that appeared on November 29, 1978 in the Federal Register (vol. 43 No 230: 44978-56007). According to Section 55989, Indian Tribes (Federally recognized reservations) should have early knowledge of projects, be invited to participate in the formulation of issues in the research itself, and be invited to comment on drafts of reports before they

become available during the public comment period. The AIRFA defines the special status of sacred places, artifacts, plants and animals of Indian people and guarantees access to sacred sites, including cemeteries required in their religion and the freedom to use in the practice of their religions sacred natural species and resources even though these resources may no longer be under their control.

National Historic Preservation Act of 1966 and Regulations

The NHPA as amended (16 USC 470, P.L. 95-515), establishes Federal protection of historic properties and their values in cooperation with other nations and with State and local governments. Amendments designated the State Historic Preservation Office (SHPO) or the Tribal Historic Preservation Office (THPO) as the party responsible for administering programs in States or reservations.

In 1992, amendments to the NHPA allowed Federally recognized Indian tribes to take on more formal responsibility for the preservation of significant historic properties on Tribal lands. Specifically, Section 101(d)(2) allows tribes to assume any or all of the functions of a State Historic Preservation Officer with respect to Tribal land. The decision to participate or not participate in the program rests with the Tribe.

The Act also created the Advisory Council on Historic Preservation (ACHP). Federal agencies are required to consider the effects of their undertakings on historic resources, and to give the SHPO/THPO and, if necessary, the ACHP a reasonable opportunity to comment on those undertakings.

NHPA Implementation Regulations

NHPA implementation regulations are found at 36 CFR 800, Protection of Historic Properties. This regulation, governing compliance with Section 106 of NHPA must be followed in planning any agency activity and in the ongoing management of agency resources.

The Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) requires Federal agencies and Federally assisted museums to return "Native American cultural items" to the Federally recognized Indian Tribes or Native Hawaiian groups with which they are associated. Regulations established by the National Park Service (NPS) are at 43 CFR 10.

Pacific Northwest Electric Power Planning and Conservation Act of 1980

Under provisions of the Pacific Northwest Electric Power Planning and Conservation Act of 1980 Bonneville Power Administration (BPA) has the authority and obligation to fund wildlife mitigation activities consistent with the Northwest Power Planning Council's Fish and Wildlife Program. The initial phase of mitigation planning for wildlife habitat losses was submitted to the Council for amendment into the Fish and Wildlife Program in 1989. The Fish and Wildlife Program includes a process for review of habitat losses and design of mitigation plans for each of the Federal hydro projects in the Columbia River Basin. Figure 1-3 shows the location of ongoing BPA projects within the YR.

Safe Drinking Water Act of 1974

The Safe Drinking Water Act (SDWA) requires EPA to set standards for drinking water quality and requirements for water treatment of public water systems. It also requires

States to establish a wellhead protection program to protect public water system wells from contamination by chemicals such as pesticides, nutrients, and other agricultural contaminants.

Salmon Recovery Act

The Salmon Recovery Act (Chapter 75.46 RCW) is also known as SB 5595. The intent of this legislation is to address salmonid habitat restoration in a coordinated manner and to develop a structure that allows for the coordinated delivery of Federal, State, Tribal, and local assistance to communities for habitat projects.

Sustainable Fisheries Act of 1996

The Sustainable Fisheries Act amended the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) to establish new requirements for essential fish habitat (EFH) descriptions in Federal fishery management plans, it also requires Federal agencies to consult with National Marine Fisheries Service (NMFS) on activities that may adversely affect EFH. Under the Magnuson-Stevens Act, NMFS must be consulted by any Federal agency undertaking, permitting, or funding activities that may adversely affect EFH, regardless of its location.

Wild and Scenic Rivers Act of 1968

The purpose of the Wild and Scenic Rivers Act (WSRA) is to preserve the free-flowing state of rivers that are listed in the National Wild and Scenic Rivers System or under study because of their outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Rivers in the System are classified as wild river areas, scenic river areas, or recreational river areas. The WSRA establishes requirements applicable to water resource projects and protects both the river, or river segments, and the land immediately surrounding them. Section 7 of the WSRA specifically prohibits Federal agencies from providing assistance for the construction of any water resources projects that would adversely affect Wild and Scenic Rivers.

Section 5 (d) of WSRA requires the NPS to compile and maintain a Nationwide Rivers Inventory, a register of river segments that potentially qualify as national wild, scenic or recreational river areas. A river segment may be listed on the Natural Resources Inventory (NRI) if it is free flowing and has one or more "outstandingly remarkable values." All agencies are required to consult with the NPS prior to taking actions that could effectively foreclose wild, scenic or recreational status for rivers on the NRI.

Executive Order 11514: Protection and Enhancement of Environmental Quality

This Executive Order (EO) directed the Federal Government to provide leadership in protecting and enhancing the quality of the Nation's environment to sustain and enrich human life. Federal agencies were directed to initiate measures needed to direct their policies, plans and programs so as to meet national environmental goals. In order to achieve these goals agencies were directed to:

- Monitor, evaluate, and control on a continuing basis their activities so as to protect and enhance the quality of the environment;
- Encourage timely public information processes to foster understanding of Federal plans and programs with environmental impact;
- Insure that information regarding existing or potential environmental issues be shared and coordinated with other; and

- Comply with the regulations issued by the CEQ.

Executive Order 11988: Floodplain Management—Floodplains and Wetlands

This EO restricts Federal support of development in floodplains by mandating the preparation of EISs for projects in a floodplain, requiring Federal projects in a floodplain to meet National Flood Insurance Program standards, and requiring agencies to inform all participants of the dangers involved in floodplain activities.

Executive Order 11990: Protection of Wetlands

The EO restricts Federal support of development in wetlands and outlines the use of the NEPA process in determining whether building in a wetland is necessary.

Executive Order 12898: Environmental Justice for Minority and Low Income Populations

EO 12898 directs Federal agencies "to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States." Each Federal agency must make achieving environmental justice one of their goals, particularly when such analysis is required by NEPA. The EO and guidance emphasize the importance of NEPA's public participation process, directing each Federal agency to provide opportunities for community input in the NEPA process by providing access to public documents and providing notices and hearings.

Executive Order 13084, Consultation and Coordination With Indian Tribal Governments

EO 13084 restates the unique legal relationship the U.S. has with Indian Tribal Governments as set forth in the Constitution of the U.S., treaties, statutes, Executive Orders and court decisions. EO 13084 also maintains that the U.S. continues to work with Indian Tribes on a government-to-government basis to address issues concerning Indian Tribal Self-Government, trust resources, and Indian Tribal treaty and other rights. Further, it charges the Federal agencies with responsibility to have an effective process to permit elected officials and other representatives of Indian Tribal Governments to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities. Each agency is also charged with reviewing the processes under which Indian Tribal Governments apply for waivers of statutory and regulatory requirements and take appropriate steps to streamline those processes to the extent practicable and permitted by law.

USDA Departmental Regulation 9500-3

Section 1540 (c) of the Farmland Protection Policy Act and DR 9500-3 established four general categories of farmlands meriting Federal protection. They are cumulatively referred to as "important farmland." Important farmland categories are:

- Prime
- Unique
- Farmland of statewide importance

- Farmland of local importance

DR 9500-3 also made it USDA policy to promote land use objectives responsive to current and long-term economic, social, and environmental needs.

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Appendix C: Cultural Resources Management Assessment

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Preliminary Cultural Resource Management Assessment

The US Department of Agriculture Commodity Credit Corporation

The Yakama Nation Concerning the Implementation of a Conservation Reserve Enhancement Program

November 30, 2004

Revision 1

Prepared by: Joseph E. Schomaker,

Stropes & Schomaker
Natural Resources Consulting
2741 Blue Rock Road
Cincinnati OH 45239

Phone: (513) 923-1935

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Concerning the Implementation of a Conservation Reserve Enhancement Program

Summary

The Proposed Action recommends that a Memorandum of Agreement be developed between the U.S. Department of Agriculture (USDA), Yakama Nation and the Washington State Historic Preservation Office. Because of the complexity of cultural resources on the Yakama Nation's Reservation, "Traditional Cultural Properties" a multidisciplinary approach will be needed to meet all regulatory and Tribal requirements. While the Conservation Reserve Enhancement Program will have a positive effect on socioeconomics, it also may have an adverse effect on cultural and traditional properties. These impacts may affect the cultural use of the environmental lifeways, religious practices and other cultural institutions. There is a need to share information about cultural resources on the Yakama Nations Reservation without releasing it to the public. Some information is considered by the Yakama Nation to be restricted and only available to the Yakama Nation's Cultural Resource personnel. A Memorandum of Agreement would be developed, stipulating what would be done at subsequent phases in planning and execution to minimize the impacts, including refining knowledge of such impacts and how to mitigate them.

▪Cultural Resource Management Assessment

1.0 Purpose and Need

The Commodity Credit Corporation (CCC) of the United States Department of Agriculture (USDA) and the Yakama Nation (YN) are implementing a Conservation Reserve Enhancement Program (CREP) to assist in the recovery of wildlife, fish and cultural resources on the Yakama Reservation (YR) that have been lost within the Wapato Irrigation Project (WIP).

Within the Wapato Irrigation Project (WIP) large amounts of land cannot be efficiently farmed and as a result has become weed-infested and causes problems for the Yakama Nation (YN). A loss of wildlife habitat within the Wapato Irrigation Project has resulted in a reduction in gamebird and non-game species. The impacts of reduced water quantity and quality are impacting the federally threatened steelhead salmon production.

It is the intent of USDA-CCC and the YN that this CREP will address the following objectives. *(Quoted verbatim from agreement between the Commodity Credit Corporation of the United States Department of Agriculture and the Yakama Nation, Conservation Reserve Enhancement Program.)*

1. Increase wildlife nesting, broad rearing, escape, and thermal cover on YR by establishing native plant species.
2. Provide increased in-stream flow into salmonid bearing waterways through elimination of irrigation application of the area enrolled for 15 years.
3. Reduction of sediments and nutrient pollution of salmonid bearing waterways by elimination of weeds and establishment of native plant species on the area enrolled.
4. Reduction of noxious weed sources on 5,000 acres saving neighboring farms herbicide expenses.
5. Inclusion of all enrolled area into the YN Public Hunting Program.

2.0 Background – Yakama Nation

The Confederated Tribes and Bands of the Yakama Nation are descendants of 14 tribes and bands that are federally recognized under the Treaty of 1855. The bands and tribes in the Yakama confederation are the Kah-milt-pah, Klickitat, Klinquit, Kow-was-say-ee, Li-ay-was, Oche-chotes, Palouse, Pisquose, Se-ap-cat, Shyiks, Skinpoah, Wenatshapam, Wishram and Yakama.

Representative of the 14 bands and tribes make up the Yakama Tribal Council. General council includes all Tribal members over 18 years of age. The tribe uses an interdisciplinary and sustainable approach to care for the land and natural resources.

The reservation is located in south central Washington, along the eastern slopes of the Cascade Mountain Range. The reservation consists of one million three hundred seventy-seven thousand thirty-four acres (1,377,034).

2.1 Cultural Resource Methodology

The National Historic Preservation Act of 1966 requires Federal agencies involved in undertakings or actions to take active stewardship responsibility for cultural resources under its jurisdiction. Implenting regulations require that significant resources – those eligible for listing in the National Register of Historic Places - be identified and evaluated. Those properties determined eligible for listing in the National Register are then managed to maximize their protection from the adverse effects of Federal undertakings.

2.2 Perspectives on Resource Protection

American Indians were legally incorporated into the environmental impact assessment process through the Council on Environmental Quality (CEQ) regulation updating the National Environmental Policy Act (NEPA) of 1969 that appeared on November 29, 1978 in the Federal Register (vol. 43 No 230: 44978-56007). According to Section 55989, Indian Tribes (federally recognized reservations) should have early knowledge of projects, be invited to participate in the formulation of issues in the research itself, and be invited to comment on drafts of reports before they become available during the public comment period. The American Indian Religious Freedom Act of 1978 (92 Stat, 469; PL 95 – 341) defines the special status of sacred places, artifacts, plants and animals of Indian people and guarantees access to sacred sites, including cemeteries required in their religion and the freedom to use in the practice of their religions sacred natural species and resources even though these resources may no longer be under their control.

2.3 Traditional Cultural Properties (TCP)

The National Park Service (NPS) developed the concept of traditional cultural property(TCP) as a means to identify and protect places and objects that have special cultural significance to American Indians and other ethnic groups and published in National Register Bulletin 38- *Guidelines for Evaluating and Documenting Traditional Cultural Properties*. A TCP is a property or a place that is eligible for inclusion on the National Register of Historic Places because of its association with cultural practices and beliefs. Although the TCP concept has been effective in protecting small places of extreme cultural significance, it may not be the best way to conceptualize and protect Indian cultural resources. The concept of cultural landscapes more accurately reflects how Indians organize cultural resources. Bulletin 38 provides a mechanism for recognizing and evaluating TCPs and defines "traditional" as referring to "beliefs customs and practices of a living community of people that have been passed down through the generation, usually orally or through practice." TCP is a property with significance to a community derived from the role the property plays in a community's historically rooted beliefs, customs and practices. Some examples of an eligible inclusion on the National Register of Historic Places because of its association with cultural practices and beliefs are:

- Rooted in the history of a community
- Are important to maintaining the traditional beliefs and practices.

The fundamental difference between TCPs and other kinds of historic properties is that cultural

resource professionals cannot solely determine their significance. Determination of significance of TCPs must be based on the perceptions of the community that values them.

2.4 Tribal Perspectives on Traditional Cultural Properties

An example of how the Indians look at sacred geography can be seen in a study of the Yakama (Vebelacker 1984: 104-105). To the Yakama, canyons are resource strips that lace together the desert landscapes with water, trees, shrubs, and grasses providing shade in summer and protection from icy winds in the winter. Canyons bring things together, a marriage of desert roots, ocean fish and forest and shrubs. It is a small wonder that the Yakama made these places their homes and work places. Similarly breaks, slopes, and bottoms bring together deer, elk, bear, sage hen, birds, oak, serviceberry, chokecherry, elder berry, bariant, desert roots, and man. Canyon bottoms are a major connecting point in the lives of animals as different as steelhead and badger, eagle and freshwater mussel. It is a connection that the Yakama knew well since in canyon bottoms we find evidence of their houses, tools and features used for catching, processing, storing, and consuming animals and plants as well as places of spiritual importance and the remains of the Indians themselves. Canyon slopes are places where fish and aquatic animals were taken and contain springs, focal points of camping and working and resources such as sage hens, horses, deer, rabbit, currents, sericeberry, elderberry, chokecherry and other foods and medicines. The Yakama used springs and water from the earth's breast is essential to traditional Indian heritage (Vebelacker 1984:105).

2.5 Sacred Resources

Sacred resources are those resources that apply to traditional sites, places or objects that Native American tribes or their members perceive as having religious significance.

2.6 Traditional Cultural Value

A traditional cultural value means the contribution made by an historical property to an ongoing society or cultural value that has historical depth and non-traditional cultural value is a cultural value that lacks such depth. There are several kinds of historic values including architectural, associative, use, information, and cultural. Associative value is the importance of a property as a reminder of an event, person, process or trend affecting the history of the world, the nation, or a region, a community, or a group. Cultural value is the contribution made by an historic property to an ongoing society or cultural system.

2.7 Traditional Cultural Significance

Traditional cultural significance is one kind of cultural significance that may make a property eligible for inclusion in the National Register of Historic Places. Traditional refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices.

3.0 Proposed Action *(Quoted Verbatim from the CREP)*

A. The YN CREP will seek to enroll 5,000 acres of eligible cropland or M-P-L (MPD) within the Primary and Secondary Zones of the WIP.

B. For purposes of the YN CREP, land that is determined as MPL may be offered as either practice CP2, CP22 or CP30 provided the land and precise are determined suitable for water quality proposes.

C. Cropland or M-P-L, which has an established irrigation system in place and has been irrigated at least 3 out of the last 10 years will be eligible for the irrigated rental rate approved for the enrolled land. The irrigation rate will be the same as those authorized for the CREP and CRP in Washington.

D. Irrigation water normally applied to land enrolled in CREP shall be left in the WIP distribution system and allowed to return to local rivers for in-stream use, This water shall not be used on other agricultural land.

E. Land that meets the eligibility criteria set in this agreement and in Farm Service Agency (FSA) Handbook 2-CRP procedures may be considered for enrollment under this CREP. Selection criteria will be provided as an amendment to the FSA Handbook 2-CRP and will be reviewed annually by a YN CREP Technical Work Group with the intent of maximizing environmental benefits and minimizing negative impacts on tenants. The makeup of the Technical Work Group shall be determined by the YN and Washington State FSA Committee (STC), and shall include at a minimum a representative of the YN and FSA, and two agricultural producers, one each appointed by the YN and FSA.

F. Enrollment in the YN CREP shall be based upon selection criteria provided as an amendment to FSA Handbook 2-CRP. The list of offers proposed for enrollment based on their ranking shall be reviewed and approved by the Washington State FSA Committee at their next scheduled meeting before contracts are developed by the Yakima Nation FSA Committee.

G. The eligible polices for the YN CREP will be:

- CP2 (Establishment of Permanent Native Grasses)
- CP4D (Permanent Wildlife Habitat)
- CP5A (Field Wind Break Establishment)
- CP7 (Erosion Control Structure)
- CP8A (Grass Waterways)
- CP12 (Wildlife Food Plots)
- CP21 (Filter Strips)
- CP22 (Riparian Buffer)
- CP23 (Wetland Restoration)
- CP29 (Marginal Pastureland Wildlife Habitat)
- CP30 (Marginal Pastureland Wetland Buffer)

H. All installed practices must be consistent with applicable USDA Natural Resources Conservation Service (NRCS) Field Office Technical Guides (FOTG) and USDA FSA Handbook 2-CRP. Modifications to the FOTG adopted subsequent to the date purposes of this Agreement in a cost-effective manner.

I. In determining CCC's share of the cost of practice establishment, CCC shall use the appropriate CRP procedures. Approved conservation plans shall be consistent with applicable CRP statutes and regulations and such cost shares shall be subject to normal limits as stated in program rules.

J. No lands may be enrolled under this program until the USDA's Deputy Administrator for Farm Programs concurs with a detailed YN Amendment to Handbook 2-CRP, which will provide a description of this program and applicable practices.

K. The contract period for acres enrolled in the CREP under any of the practices listed in IV.D above shall be for a minimum of 10 years and a maximum of 15 years, at the YN's discretion.

L. For the purposes of this CREP, CP23 enrollment acreage considered as buffer shall not exceed 2 to 1, upland buffer to wetland, ratio, except upon consultation and approval by a review board (members to be determined by the FSA and the YN). Handbook 2-CRP rules otherwise apply.

M. For purposed of the YN CREP, normal CRP requirements for one-year ownership of land shall not apply to the extent consistent with the operation of the normal CRP continuous sign-up and allowed by law.

N. CRP contracts executed under this Agreement will be administered in accordance with, and subject to, the CRP regulations at 7 CFR part 1410, and the provisions of this Agreement. In the event of conflict, the CRP regulations will be controlling.

O. For purposed of the YN CREP, normal CRP requirements for one-year ownership of land shall not apply to the extent consistent with the operation of the normal CRP continuous sign-up and as allowed by law.

4.0 Public Involvement

The development of the proposed CREP Cultural Resource Assessment included input from the Yakama Nation's Cultural Resources Program, the Yakama Nations Division of Natural Resources Environmental Protection,
and the Wildlife Resources Archaeologist Management. Also input was received from Bureau of Indian Affairs -Yakama Agency and Washington State Historic Preservation Office.

4.1 Yakama Nation Cultural Resource Program

The following are specific recommendations from the YN Cultural Resource Program. Listed in order of importance-

1. Nation, Tribe and its people
2. Traditional Cultural Significance, sacred values
3. Archaeology

Historic properties with traditional religious and cultural importance are essential to maintaining cultural integrity of the Nation. They include properties that are historic and contemporary cultural use site, associated with materials, traditional foods and other natural resources.

The Yakama's cultural resources program maintains the archaeological and historic records.

These records identify the locations of TCPs. This information is not always made available to outside parties. The information is considered by the Yakama Nation to be restricted and only available to the Yakama Nation's cultural resource personnel.

The Yakama cultural resources staff identified one other issue. It appears that the land in the CREP will be in the open area of the reservation. On the reservation there are three types of areas, open areas, allotment land and closed areas where general public access is denied.

4.2 SHPO

State Historic Preservation Office consultation is ongoing to ensure compliance with applicable laws.

5.0 Alternatives

The descriptions of alternatives are based on best information available at the time of writing. These alternatives were developed through evaluation of the comments provided by the Yakama Nation interdisciplinary team and Washington State Historic Preservation Office. The best available science and information are applied to describe the alternatives.

5.1 Alternatives to the Proposed Action

Each alternative was evaluated relative to the following criteria:

- The alternative should not result in significant negative impact to sacred property of traditional cultural value and property of traditional cultural significance.
- The alternative must meet all statutory and regulatory compliance.
- The alternatives must be acceptable to FSA and YN.

Table A provides a summary of the evaluation of alternatives.

Table A.

Summary of Alternatives Evaluated
Cultural Resource Management

	Historic Preservation Requirements	Socioeconomic	Yakama Nations Requirements	Environmental
No Action	-	+	-	-
Enhanced Alternatives	+	+	-	O
Proposed Action	+	+	+	+

KEY

" + " = Positive Impact
" – " = Negative Impact
" O " = No Impact

5.2 No Action Alternative

Under the No Action Alternative the CREP will have a positive impact on the socioeconomy of the Yakama Nation. The project may have effects on the area's unique characteristics such as TCPs. Appropriate scoping, identification of historic properties, and assessment of effects upon them would not be considered.

The no action alternative will have and effect on:

- Subsistence, religious, medicinal, esthetic, and spiritual values ascribed by the YN to the natural and built environment (NEPA, EO 12898)
- Social institutions linked to the environment (NEPA, EO 12898)
- Historic properties (NHPA, other Federal, state, Tribal and local laws)
- Native American graves and cultural items (NAGPRA, state and Tribal laws)
- Native American religious practices and spiritual places (AIRFA)
- Archaeological Sites (Archaeological Resources Protection Act [ARPA], NHPA)

The no action alternative does not satisfy regulatory requirements or the YN Tribal requirements. It would have negative impacts on all cultural resources in the Conservation Reserve Enhancement Program.

5.3 Enhanced Alternative

Under the Enhanced Alternative, professional Cultural Resource personnel from USDA would evaluate all areas, with coordination from the YN Cultural Resource Personnel. Land meeting eligibility criteria for enrollment in the CREP would be evaluated under Section 106 of the NHPA.

Coordination for the YN cultural resources would be needed to identify potential impacts to:

** Subsistence, religious, medical, esthetic spiritual, social institution linked to the environment, Native American Graves Protection and Repatriation Act and YN Spiritual and gathering places.

This alternative would require full coordination from USDA and the YN cultural resources. This alternative may be cost-prohibitive due to the large tracts of land being enrolled in the programs at different times of the year. This alternative would result in compliance with all applicable cultural resource law.

5.4 Proposed Action

In consultation with representatives of the Yakama Nation and Washington State Historic Preservation Office, investigation reveal that the proposed actions will have an effect a cultural resources. Because of the complexity of cultural resources on the YN reservation it was suggested that a joint effort would be needed to consider the unique characteristics. There are several commitments and considerations that should be factored into the preservation of cultural resources in the project area.

The Yakama's cultural resources program maintains the archaeological and historic record that identifies the location of TCPs. This information is considered by the Yakama Nation to be restricted and only available to the Yakama Nation's cultural resource personnel. The utilization of a multidisciplinary team of specialists will be needed to bring the expertise necessary in the planning, surveying and decision making.

The proposed action recommends a Memorandum of Agreement (MOA) be developed under Section 106 of the National Historic Preservation Act. The MOA will consider all types of cultural resource impacts, direct, individual and cumulative. It will also consider physical impacts such as group diversity but also visual, auditory, social, land use effects and impacts on cultural use of the environment. The MOA will also state the roles and function of FSA, YN, ACHP and the SHPO. The proposed Action will meet all regulatory requirements of FSA, SHPO and all Tribal requirements.

List of Acronyms

AIRFA - American Indian Religious Freedom Act

CCC – Commodity Credit Corporation

CEQ - Council on Environmental Quality

CREP- Conservation Reserve Enhancement Program

FSA- Farm Service Agency

MOA - Memorandum of Agreement

NAGPRA- Native American Graves Protection and Repatriation Act

NEPA – National Environmental Policy Act

NHPA – National Historic Preservation Act

NPS – National Park Service

SHPO - State Historic Preservation Office

STC – Washington State FSA Committee

TCP - Traditional Cultural Properties

USDA – United States Department of Agriculture

WIP - Wapato Irrigation Project

YN – Yakama Nation

YR - Yakama Reservation

References

Draft Agreement between the US Department of Agriculture Commodity Credit Corporation and The Yakama Nation Concerning the Implement of a Conservation Reserve Enhancement Program (January 2004)

Ethnographic/Contact Period of the Hanford Site, Washington, JC Bord, with the assistance of R. McClintock, Richland, Washington

Yakama Nation Museum, Newsletter Topperish, Washington, Revised 1997

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Appendix D: Glossary

Airshed: A geographic area or region defined by settlement patterns or topography that shares the same air mass and results in discrete atmospheric conditions.

Aquifer: A geologic formation that is water bearing. A geological formation or structure that stores and/or transmits water, such as to wells and springs. Use of the term is usually restricted to those water-bearing formations capable of yielding water in sufficient quantity to constitute a usable supply for people's uses.

Categorical Exclusions: An agency-defined category of actions that do not individually or cumulatively have a significant effect on the human environment and have been found to have no such effect in procedures adopted by the agency pursuant to NEPA. Projects qualifying for a "categorical exclusion" are not required to undergo additional NEPA analysis or documentation.

Conservation Practices: A series of NRCS approved agricultural practices and management techniques designed to control nonpoint pollution.

Environmental Assessment: A concise public document, prepared in compliance with NEPA, that briefly discusses the purpose and need for an action, alternatives to such action, and provides sufficient evidence and analysis of impacts to determine whether to prepare an environmental impact statement or finding of no significant impact (FONSI).

Environmental Impact Statement: A detailed written statement required by section 102(2)(C) of NEPA, analyzing the environmental impacts of a proposed action, adverse effects of the project that cannot be avoided, alternative courses of action, short-term uses of the environment versus the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitment of resources. A *programmatic* EIS or EA: covers general matters in broader terms and analyzes conceptual or planning alternatives. In such cases, at least one more level of site-specific NEPA analysis is necessary before implementation can proceed.

Erosion: A geomorphic process that describes the wearing away of the land surface by wind, water, ice or other geologic agents. Erosion occurs naturally from weather or runoff but is often intensified by human land use practices.

Eutrophication: The natural and artificial addition of nitrogen and phosphorous (nutrients) to bodies of water, increasing algal growth. As the algae die, the decomposing microorganisms consume dissolved oxygen in the water, reducing the amount available to fish and other aquatic organisms. Ultimately, this can result in a dead lake or pond: a system where no larger aquatic organisms can survive.

Exotic species: A species occurring in an area outside of its historically known natural range as a result of intentional or accidental dispersal by human activities. Also known as an *introduced species*.

Groundwater: The supply of fresh water found beneath the Earth's surface, usually in aquifers, which supply wells and springs. Because ground water is a major source of drinking water, there is growing concern over contamination from leaching agricultural or industrial pollutants or leaking underground storage tanks.

Hydric soils: Soil that, in its undrained state, is flooded long enough during a growing season to develop anaerobic (lacking air – saturated) conditions that support the growth and regeneration of hydrophytic vegetation.

Hydrophytic vegetation: Plants specialized to grow in water or in soil too waterlogged for most plants to survive.

Listed species: Under the ESA, or similar State statute, those species officially designated as threatened or endangered through all or a significant portion of their range. See also: *Threatened and endangered species*.

Nonpoint source (pollution): Cause of water pollution that is not associated with point (fixed) sources. Nonpoint sources include runoff from agricultural, urban, construction, and mining sites, as well as septic systems and landfills.

Nutrients: Chemical compounds in a usable form and have nutritive value for plants and/or animals.

Recharging groundwater: Refers to water entering and replenishing an underground aquifer through faults, fractures, or direct absorption.

Riparian: Refers to a stream and all the vegetation on its banks.

Sediment loading: Describes the excessive inputs of sediment into a waterbody.

Siltation: The deposition of finely divided soil and rock particles upon the bottom of stream and river beds and reservoirs.

Soundscape: The natural sound environment of a place. Also, the amalgam of natural ambient sounds created by more or less continuous processes in the natural environment.

Stormwater runoff: Water from precipitation that runs straight off the ground without first soaking into it. It does not infiltrate into the ground or evaporate due to impervious land surfaces, but instead flows onto adjacent land or water areas.

Threatened and endangered species: Under the Endangered Species Act (ESA), those species officially designated by the National Marine Fisheries Service or U.S. Fish and Wildlife Service as being in danger of extinction (i.e., endangered) or likely to become endangered (i.e., threatened) within the foreseeable future through all or a significant portion of their range. Threatened and endangered species are protected by law. See also: *Listed species*.

Traditional Cultural Properties: Places that are eligible for inclusion in the National Register of Historic Places because of their "association with cultural practices or beliefs of a living community that are rooted in that community's history and are important in maintaining the continuing cultural identity of the community."

Undertakings: a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval.

Watershed: 1.) Describes a cohesive, hydrologically-linked landscape that is drained by a waterway leading to a lake or reservoir. 2.) A geographic area delineated by its peaks and ridgelines, which divide surface water flow into two or more directions.

Appendix E: Scoping/Consultation Letters

FWS_letter.pdf [see hard copy insert]

United States Department of Agriculture

Farm Service Agency

WA State FSA Office
316 W. Boone Ave.
Suite 568
Spokane, WA
99201-2350

Telephone:
(509) 323-3000

Fax: (509) 323-3074

May 24, 2005

Regional Director's Office
Eastside Federal Complex
911 NE 11TH AVE
Portland, OR 97232-4181

Attention: Endangered Species Division

RE: Proposed Yakama Conservation Reserve Enhancement Program (CREP) Agreement

Dear Sir or Madam:

The Farm Service Agency and the Yakama Nation are in the process of entering into a CREP Agreement. A copy of the Agreement is attached for your review. Additionally, FSA has completed an Environmental Assessment of the project.

You may access a copy of the EA at the following web-site: http://www.fsa.usda.gov/dafp/cepd/epb/assessments.htm . Section 3.9 of the EA discusses Threatened and Endangered Species. While we are not initiating formal consultation under Section 7 at this time, we would like comments regarding the proposed CREP Agreement. The discussion in the EA basically includes recognition that increased demands on resources due to population growth in the Yakama basin makes responsible wildlife management on the Yakama Reservation even more important. The study concludes by indicating the CREP program would present an opportunity to protect and restore large area of wildlife habitat.

The practices planned in the project include; 1) creating riparian buffers. The resulting shade will lower water temperatures and improve habitat for aquatic organisms. They also provide a source of debtritus and large woody debris for aquatic organisms. 2) marginal pastureland wildlife habitat creation. This will reduce pollutants and protect surface and subsurface water quality. The restoration

4) establishing grass waterways provides cover and habitat for small birds and animals, 5) establishment of foot wildlife food plots will enhance habitat and 6) establishment of filter strips will provide winter cover, nectar and pollen for pollinating insects and forage for grazing wild animals.

While improving the condition of wildlife habitat is not a primary goal of the CREP program, this project has the potential to affect very positively habitat for 6 fish and 11 wildlife species identified as focal species in the Yakima River Basin.

At this point, we want to bring your Agency into the discussion and determine whether you will require a separate biological opinion given the information already contained in the EA.

Please review the EA at the link above and provide this office with your comments within 30 days. Should you have any questions regarding the specifics of the CREP project itself, please contact FSA Conservation Specialist Rod Hamilton at (509) 323-3015. If you have questions regarding the NEPA process, please contact me at (509) 323-3021.

Sincerely,

Melissa J. Cummins
Farm Loan Specialist/State Environmental Coordinator

cc: Brian Miller – Yakima SC
DD II-Nordstrom