DRAFT PROGRAMMATIC ENVIRONMENTAL ASSESSMENT

USDA Farm Service Agency Tree Assistance Program

Fire Blight, Little Cherry Disease and Diseases Caused by X-Disease Phytoplasma

Washington State

Prepared By

United States Department of Agriculture Farm Service Agency

January 27, 2019

COVER SHEET

Proposed Action:	The United States Department of Agriculture (USDA) and Commodity Credit Corporation (CCC) have agreed to implement the Tree Assistance Program (TAP). USDA is provided the statutory authority by the provisions of the Food Security Act of 1985, as amended (16 U.S. Code 3830 et seq.), and the Regulations at 7 Code of Federal Regulations 1410. TAP provides financial assistance to eligible orchardists and nursery tree growers to replant or rehabilitate eligible trees, bushes, and vines lost by natural disasters. TAP is administered by the Farm Service Agency (FSA) of the U.S. Department of Agriculture (USDA).
Type of Document:	This is a Programmatic Environmental Assessment (PEA), specific to Washington state.
Lead Agency:	United States Department of Agriculture, Farm Service Agency
Cooperating Agencies:	N/A
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Comments:	This PEA has been prepared in accordance with the National Environmental Policy Act (NEPA) (PL 91-190); implementing regulations adopted by the Council on Environmental Quality (CEQ) (40 CFR 1500-1508); and FSA's implementing regulations Environmental Quality and Related Environmental Concerns – Compliance with NEPA (7 CFR 799). USDA/ Farm Service Agency Tree Assistance Program (TAP) **Comments** 11707 E. Sprague Ave. Suite 303 Spokane Valley, WA 99206 Attn: Stephanie Fisher

Figures

Tables

Table 1- Acronyms and Abbreviations

BMP	Best Management Practices
CAFO	Concentrated Animal Feeding Operation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CNMP	Certified Nutrient Management Plan
CWA	Clean Water Act
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FLP	Farm Loan Programs
FONSI	Finding of No Significant Impact
HEL	Highly Erodible Soil
HUC	Hydrologic Unit Code
MMP	Mortality Management Plan
N	Nitrogen
NEPA	National Environmental Policy Act
NH_3	Ammonia
NH_4	Ammonium
NHPA	National Historic Preservation Act
NMP	Nutrient Management Plan
NO_2	Nitrite
NO_3	Nitrate
NOI	Notice of Intent
NRCS	Natural Resource Conservation Service
NRPH	National Register of Historic Places
P	Phosphorus
pH	Chemical Symbol for acidity or alkalinity of an aqueous solution
PL	Public Law
SBA	Small Business Administration
SHPO	State Historic Preservation Officer
TCEQ	Texas Commission on Environmental Quality
TDML	Total daily maximum load
TSP	Technical service provider
TSSWCB	Texas State Soil and Water Conservation Board
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
N2O	Nitrous Oxide

LCD	Little Cherry Disease
PEA	Programmatic Environmental Assessment
NNL	National Natural Landmark
NRI	Nationwide Rivers Inventory

1.0 EXECUTIVE SUMMARY

This Programmatic Environmental Assessment (PEA) describes the potential environmental consequences resulting from the implementation of the Tree Assistance Program (TAP) for Fire blight, Little Cherry Disease and other diseases caused by X-disease phytoplasma in Washington State. TAP is administered by the Farm Service Agency (FSA) of the U.S. Department of Agriculture (USDA).

The environmental analysis process is designed to ensure the public is involved in the process and informed about the potential environmental effects of the proposed action, and to help decision makers take environmental factors into consideration when making decisions related to the proposed action.

TAP provides financial assistance to eligible orchardists and nursery tree growers to replant or rehabilitate eligible trees, bushes, and vines lost by natural disasters.

Fire blight is an important disease affecting pears and apples. Infections commonly occur during bloom or on late blooms during the three weeks following petal fall. Increased acreage of highly susceptible pear and apple varieties on highly susceptible rootstocks has increased the danger that infected blocks will suffer significant damage (DuPoint, 2019).

Little Cherry Disease (LCD) is a critical concern to sweet cherry producers in Washington. This disease is caused by little cherry virus 1(LChV1) infection, little cherry virus 2(LChV2) or the X-Disease Phytoplasma (Candidatus Phytoplasma pruni), and produces small, undersized cherries, with poor color development and flavor (Harper, 2019). Primary control measures rely on identification and removal of infected trees.

In Washington State the last major epidemic of LCD occurred in the late 1940s and into the 1950s, resulting in the removal of significant cherry tree acreage. The disease has again become prevalent in Washington orchards. Since 2010, LCD has spread and become a statewide problem, resulting in unpicked limbs/trees, tree removal, and even orchard removal (Harper, 2019).

Most proposed activities would occur on land previously disturbed by agriculture, where native vegetative communities have been removed. Temporary minor impacts to wildlife may occur if planting occurs in fields that have been left fallow where primary vegetative succession could support wildlife species. It is expected that these activities may affect but will not adversely affect threatened or endangered species. **Table 3 - Endangered Species Habitat and Agency Determination,** details the Agency determination regarding possible affects to threatened and endangered species. It is possible that the ground disturbing activities authorized by the TAP could impact cultural resources. However, most activity will be completed on land previously disturbed by agriculture and in many cases the removal of stands has occurred several times due to the normal mortality loss in previous years.

This Programmatic Environmental Assessment is only contemplating activities that occur on land that is currently in production or previously in production, where the level of disturbance does not affect previously undisturbed strata of soils. In instances where new soil is to be disturbed it will be necessary for the Agency to consider these operations on a case by case basis utilizing the site-specific Environmental Evaluation. This evaluation process includes collecting and documenting the data, consultation and permitting needed for FSA to ensure compliance with NEPA, the NHPA, the ESA, and other related laws, regulations, and EOs. The site-specific EE process follows guidance in FSA's Handbook on Environmental Quality Programs for State and County Offices (1-EQ). Several resources can only be evaluated on a site by site basis. For example, the EE requires that lands offered for enrollment in TAP are evaluated for the potential for the presence of or proximity to wetlands, floodplains, coastal zones, Wilderness Areas, etc. which can only be evaluated once these new lands are offered for enrollment.

It is expected that there would be both positive and temporary minor negative impacts associated with implementation of the proposed action. A summary of the potential impacts is discussed in chapter 2.

This PEA has been prepared by the USDAFSA in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations implementing NEPA, and 7 CFR 799 Environmental Quality and Related Environmental Concerns – Compliance with the National Environmental Policy Act.

1.1 Scope of this EA

This PEA is being prepared in response to an outbreak of four devastating diseases; Cherry Disease, X-Disease, Phytoplasma Disease, and Fire Blight in Washington state. The scope of this PEA is limited to Washington state and there is the potential of implications of the TAP program statewide. FSA is considering the environmental impacts of approving this program on a statewide basis. Specifically, FSA must determine whether to approve, disapprove or add additional conditions/mitigation to make the request acceptable.

CEQ regulations implementing NEPA require that alternatives considered by federal agencies "include the alternative of no action" as well as the preferred alternative (40 CFR 1502.14(d)).

This PEA serves as the means of assessing the impacts of a proposed action and alternatives before any commitment to a particular action is made by FSA. The PEA is not a justification of the decisions that are being made prior to completion of the NEPA analysis (40 C.F.R. 1502.2(g)). Federal agencies must not prejudice the selection of the proposed action (or alternatives) by committing resources prior to the NEPA decision.

1.2 Purpose and Need for Action

The purpose of the proposed action is to implement TAP within Washington state for plant diseases, which would provide financial assistance to producers who experienced losses of crops due to Fire blight, Little Cherry Disease and other diseases caused X-disease phytoplasma. TAP will provide reimbursement for the costs of certain activities associated with reestablishing lost crops. The TAP is needed to fulfill FSA's responsibility under the Agriculture Act of 2018.

The need for the Proposed Action is to provide disaster assistance to eligible orchardists and nursery tree growers to replant or rehabilitate trees, bushes, and vines that were lost because of an eligible natural disaster. The analysis in this PEA, which considers the environmental impacts of implementing (TAP is not expected to have significant impacts on the human or natural environment.

1.3 Decision to be Made

The USDA FSA must determine if there is a need:

- to implement the Tree Assistance Program in Washington State,
- to require mitigation, and
- to undertake an Environmental Impact Statement (EIS) to further analyze the effects the Tree Assistance Program

1.4 Regulatory Compliance

This PEA is prepared to satisfy the requirements of NEPA (Public Law 91-190, 42 United States Code 4321 et seq.); its implementing regulations (40 CFR 1500-1508); and FSA implementing regulations, *Environmental Quality and Related Environmental Concerns – Compliance with the National Environmental Policy Act* (7 CFR 799). The intent of NEPA is to protect, restore, and enhance the human environment through well informed Federal decisions. A variety of laws, regulations, and Executive Orders (EO) apply to actions undertaken by Federal agencies and form the basis of the analysis.

The applicants will be required to comply with all applicable Federal, State and local laws and regulations including:

- Clean Air Act, as amended (PL 88-206; 42 USC § 7401 et seq.)
- Clean Water Act, as amended (PL 107-303; 33 USC § 1251, et seq.)
- Endangered Species Act of 1973 (PL 93-205; 16 USC § 1531 et seq.)
- Executive Order 11988 Floodplain Management
- Executive Order 11990 Protection of Wetlands
- Executive Order 12898 Environmental Justice
- Section 106 of the National Historic Preservation Act of 1966 (PL 89-665; 80 Stat. 915; 16 USC
- 470 et seq.), as amended (implemented under regulations of the Advisory Council on Historic Preservation, 36 CFR Part 800)

1.4.1 Right to Farm

All fifty states have enacted right-to-farm laws that seek to protect qualifying farmers and ranchers from lawsuits filed by individuals who move into a rural area where normal farming operations exist, and who later use nuisance actions to attempt to stop those ongoing operations. Washington's Right to Farm Act, RCW 7.48.300 – .320, protects farming operations by codifying the common law "coming to the nuisance" defense.

A farmer who prevails in defending against a nuisance action may not only recover reasonable attorney's fees and costs, but also "actual damages," including lost revenue and the replacement value of any crops or livestock that were damaged or unable to be harvested or sold as a result of the lawsuit.

Additional information may be found at the following web address: *http://nationalaglawcenter.org/state-compilations/right-to-farm/*

1.5 Public Involvement and Consultation

This document was available for public review and comment from February 3rd, 2020 through March 5th, 2020 at 11707 E. Sprague Ave. Suite 303 Spokane Valley, WA 99206. A notice of the availability of the document was published in the following Statewide publications:

Columbia Basin Herald	The Oregonian
The Seattle Times	The Spokesman Review
The Wenatchee World	Tri-City Herald
Vancouver Sun	Yakima Herald-Republic

1.6 Organization of PEA

This PEA assesses the potential effects of the Proposed Action and the No Action Alternatives on environmental resources. Chapter 1.0 provides the executive summary, background information and the purpose and need of the Proposed Action. Chapter 2.0 describes the No Action Alternative and the Proposed Action. Chapter 3.0 describes the existing conditions (i.e., the baseline conditions against which potential impacts of the Proposed Action and alternatives are measured) for each of the potentially affected resources; the potential direct and indirect impacts on these resources; and any necessary mitigation measures required to ensure no significant impacts to resources occur. Chapter 4.0 describes cumulative impacts and irreversible and irretrievable resource commitments. Chapter 5.0 lists the preparers of this document and contains a list of the persons and agencies contacted during the preparation of this document and Chapter 6.0 contains references. The Appendix contains the supporting documentation referenced in the PEA.

2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 No Action Alternative

Under the No Action Alternative, the TAP would not be implemented. Producers who experienced losses that would have qualified for reimbursement of expenses through the TAP program would not receive financial assistance for reestablishing lost crops. This alternative does not satisfy the purpose and need of the proposed action and is carried forward to serve as a baseline against which the impacts of the proposed action can be measured.

In order to make the most accurate assessment of the impacts of the proposed action as is possible, this analysis assumes that it is unlikely that producers would not replant their lands in some agricultural commodity. In the absence of financial assistance from the TAP, it is assumed that producers would replant lands in either the same crop that was lost or one of the most commonly grown row crops in the state.

Table 2 – Most Commonly Planted Row Crops in Washington State

Crop	Harvested Acres
Wheat	4,330,000
Hay & Haylage	3,418,000
Chickpeas	189,300

(Service N. A., 2020)

2.2 Proposed Action Alternative

The proposed action would implement the TAP, which would allow producers who lost fruit trees to Fire Blight, Little Cherry Disease and other diseases caused by X-Disease Phytoplasma to apply for reimbursement of certain expenses related to reestablishing lost crops. Expenses that may be reimbursed under the TAP include: site preparation, including tree removal, clean-up, debris removal and tillage; chemicals and nutrients required to reestablish crop; seedlings or cuttings for replanting; replacement, rehabilitation, and pruning; and labor required for replanting.

Section 3.2 describes the existing conditions for resources carried forward for detailed analysis and the anticipated impacts to those resources resulting from the Proposed Action.

Table 3 – Resources Eliminated or Carried Forward for Detailed Analysis

Resource	Eliminated	Carried Forward
Wildlife and Habitat		x
Cultural Resources		x
Coastal Barriers	x	
Coastal Zones	x	
Wilderness Areas	x	
Wild and Scenic Rivers, NRI	x	
National Natural Landmarks	x	
Sole Source Aquifers		x
Floodplains	x	
Wetlands	x	
Soils	x	
Water Quality	x	
Air Quality	x	
Noise	x	
Important Land Resources	x	
Socioeconomics and Environmental Justice	x	

3. Existing Environment

3.1 Resources Eliminated from Detailed Analysis

CEQ regulations (40 CFR 1501.7(a)(3)) indicate that the lead agency should identify and eliminate from detailed study the issues that are not important or that have been covered by prior environmental review, narrowing the discussion of these issues in the document to a brief presentation of why they would not have a significant effect on the human or natural environment.

3.1.1 Coastal Barrier

Effects to Coastal Barrier Resources System were eliminated from detailed analysis. Washington state does not have a designated Coastal Barrier Resource System. See Figure 1 - Map of U.S. Coastal Barrier Resources System**.**

3.1.2 Coastal Zone

The U.S. Congress recognized the importance of meeting the challenge of continued growth in the coastal zone by passing the Coastal Zone Management Act (CZMA) in 1972. This act, administered by NOAA, provides for the management of the nation's coastal resources. The goal is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

The CZMA requires Federal activities that are reasonably likely to affect use of lands or waters, or natural resources of the coastal zone to be consistent, to the maximum extent practicable, with the enforceable policies of the state's Coastal Zone Management Plan (CZMP). The Washington State Department of Ecology is responsible for the Coastal Zone Management Program in Washington State.

The CZMA of Washington State applies to the 15 coastal counties and extends from the shoreline seaward three nautical miles. Federal and tribal lands are excluded.

Impacts of Proposed Action

No significant impacts to coastal zone management are expected to occur. Dr. Scott Harper with the Department of Plant Pathology of Washington State University reported that the orchards experiencing the difficulties with the diseases considered in this PEA are predominantly on the east side of the state. Reestablishing crops may slightly increase agricultural chemical runoff; however, these chemicals would be used according to Environmental Protection Agency (EPA) regulations and the pesticide label. The chemicals that would be used would likely not vary much from what was used before the crop was lost. See Figure 2 - Coastal Zone Management Area of Washington State.

No Action Alternative

Potential impacts from an increase in agricultural chemical inputs to local water sources would be the same as those described for Alternative A. All agricultural chemicals must be used in accordance with their EPA regulations.

3.1.3 Wilderness Areas

The National Wilderness Preservation System is a network of over 109 million acres – more area than the state of California - of public land comprised of more than 760 wilderness areas administered for the American people by the federal government. They are final holdout refuges for a long list of rare, threatened, and endangered species, forced to the edges by modern development. They are the headwaters of critical, life-infusing rivers and streams. They are places where law mandates above all else that wildness be retained for our current generation, and those who will follow.

Impacts of Proposed Action

Effects to wilderness areas were eliminated from detailed analysis. Wilderness areas are located throughout the state. However, wilderness areas are located on public lands and the TAP Program is limited in its availability to producers using private lands. These TAP eligible lands may be adjacent to the wilderness areas and the wilderness lands could be subject to slightly more traffic on roads adjacent to the approved sites. This increase in traffic will occur whether or not FSA assist as the trees will be removed and replanted with or without government assistance. See Figure 3 - Wilderness Areas of Washington State.

No Action Alternative

Impacts to wilderness areas are expected to be the same under the no action alternative however without the federal funding provided by the TAP, activities would not be subject to any additional consideration.

3.1.4 Wild and Scenic Rivers/Nationwide Rivers Inventory

The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection.

The United States has more than 12,700 miles of protected rivers and streams. Washington is home to six official Wild & Scenic Rivers. Washington has approximately 70,439 miles of river, of which 197 miles are designated as wild & scenic. The rivers include the Illabot Creek, Klickitat River, Pratt River, Skagit River, Snoqualmie (Middle Fork) River, and White Salmon River. See Figure 4 – Wild and Scenic Rivers of Washington State**.**

The Nationwide Rivers Inventory (NRI) is a listing of more than 3,200 free-flowing river segments in the United States that are believed to possess one or more "outstandingly remarkable" natural or cultural values judged to be at least regionally significant. Hence, NRI river segments are potential candidates for inclusion in the National Wild and Scenic River System.

Under the Wild and Scenic Rivers Act section 5(d)(1) and related guidance, all federal agencies must seek to avoid or mitigate actions that would adversely affect NRI river segments. The NPS consults on projects potentially affecting NRI segments. See Figure 5 – Nationwide Rivers Inventory (NRI)

Impacts of Proposed Action

Most lands eligible for TAP are privately owned; therefore, there is limited potential for impacts to Wild and Scenic Rivers or NRI. The TAP program is limited in its funding possibilities. Essentially, the program will provide financial assistance to reestablish fruit trees on farms that had stands affected by a natural disaster. The program does not provide for construction and development of land. The projects that could be funded by TAP would not affect the free-flowing characteristics of a designated river or unreasonably diminish the scenic, recreational and fish and wildlife values present in the area. None of the PEA alternatives would affect flows in wild and scenic portions of rivers.

No Action Alternative

Impacts to Wild and Scenic Rivers or NRI are expected to remain the same under the no action alternative however without the federal funding provided by the TAP, activities would not be subject to any additional consideration.

3.1.5 National Natural Landmarks

The National Natural Landmarks Program recognizes and encourages the conservation of sites that contain outstanding biological and geological resources. Sites are designated by the Secretary of the Interior for their condition, illustrative character, rarity, diversity, and value to science and education. The National Park Service (NPS) administers the program and works cooperatively with landowners, managers and partners to promote conservation and appreciation of our nation's natural heritage.

There are 18 National Natural Landmark sites located within the state of Washington. Natural features represented include sea action forming a rocky shoreline, lava flows containing an unusually large number of fossil tree species, and the largest of several large water gaps through basalt anticlines. Sites range in size from 12 acres to nearly 65,000 acres and are owned by a variety of landowners including U.S. Fish and Wildlife Service (FWS), Bureau of Land Management (BLM), NPS, U.S. Army Corps of Engineers, Washington State Parks, Washington Department of Natural Resources, county parks, municipalities, and private individuals.

Impacts of Proposed Action

Effects to National Natural Landmarks were eliminated from detailed analysis. Land eligible for TAP have been in agricultural production. The TAP program is assisting the orchardist in returning to the preexisting conditions. In accordance with TAP guidelines, replanting will occur on the same farm as the lost stand. However, may be in a different location than the lost stand.

There will be no change to the viewshed character or use of the lands and no new farms will be included in this program. Therefore, there are no anticipated impacts to National Natural Landmarks. See Figure 6 - National Natural Landmarks Washington State.

No Action Alternative

Impacts to National Natural Landmarks are expected to be the same as existing conditions under the no action alternative; however, without the federal funding provided by the TAP, activities would not be subject to any additional consideration.

3.1.6 Floodplains

Floodplains are defined by the Federal Emergency Management Agency (FEMA) as those low-lying areas that are subject to inundation by a 100-year flood, which is a flood that has a one percent chance of being equaled or exceeded in any given year. EO 11988, Floodplain management, requires Federal agencies to avoid, to the extent possible, adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development.

Impacts of Proposed Action

Implementation of TAP would not have significant effects to floodplains within Washington State. Under this alternative, producers would be reimbursed for designated, approved costs associated with replanting commercial crops. If crops are established in a new field that lies within the 100-year floodplain, producers must review local flood maps and coordinate plans with their local county office to ensure that land modifications will not affect the floodplain. The TAP program does not provide reimbursement for construction of fencing or other structures such as windscreens, which would be regulated within a 100-year floodplain. TAP cannot be approved for practices that would drain or negatively affect the 100-year floodplain or quality of any wetlands, as defined in the NRCS Field Office Technical Guide without additional environmental compliance, including public notification for any anticipated adverse impacts to wetlands or the 100-year floodplain.

No Action Alternative

Under Alternative B, the no action alternative, the TAP would not be implemented, and producers would not receive financial assistance for reestablishing lost crops. It is assumed that producers would replant in the same commodity or one of the most commonly grown row crops in the state. Reestablishing crops in the same field would not have an effect on the floodplains in the area.

3.1.7 Wetlands

Wetlands are defined by Army Corps of Engineers (ACE) as those areas characterized by a prevalence of vegetation adapted to saturated soil conditions and that are identified based on specific soil, hydrology, and vegetation criteria defined by USACE (USACE 1987). The Clean Water Act (CWA) established a program to regulate the discharge of dredged or fill material into wetlands. The CWA further provides for regulations and procedures for the protection of wetlands and compensation for unavoidable impacts.

EO 11990, *Protection of Wetlands*, provides another layer of wetland protection. Its purpose is to "minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." To meet these objectives, the EO requires Federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. The EO applies to the acquisition, management, and disposition of Federal lands and facilities construction and improvement projects that are undertaken, financed or assisted by Federal agencies; any Federal activities and programs affecting land use including, but not limited to, water and related land resources planning, regulation, and licensing activities.

The 1985 Food Security Act has provisions to discourage the conversion of wetlands into cropland. The swampbuster provisions deny Federal farm program benefits to producers who convert or modify wetlands for agricultural purposes as defined in the Food Security Act of 1985, Title XII.

Impacts of Proposed Action

Implementation of TAP would not have significant effects on wetlands within Washington. This alternative would provide financial assistance to producers for replanting lost crops in a field previously used for agriculture. No wetlands would be filled to support this proposed action. Regulations for protecting water resources would minimize potential impacts to wetland areas from agricultural runoff. Since these areas were previously used for agriculture, replanting these areas is not expected to affect the nearby wetlands. In addition, producers applying for assistance under TAP must have implemented a conservation plan that complies with wetland conservation programs.

No Action Alternative

The No Action alternative, would not change the existing wetland areas. Replanting lost crops in the same commodity or in one of the commonly grown row crops would not damage or fill wetlands in the area. Producers would continue to adhere to regulations protecting water resources.

3.1.8 Soils

Soil is composed of minerals and organic matter formed from the weathering of bedrock and other parent materials, as well as decaying plant matter. Soils are described and classified in terms of their properties including color, texture, particle size, moisture, and chemistry. The national system of soil classification identifies sets of soil properties and groups them into 12 taxonomic orders, which are further divided into groups, families, and series (NRCS 2019a).

Soil functions include regulating water, sustaining plant and animal life, filtering pollutants, cycling nutrients, and supporting buildings and structures. The capacity of a given soil to provide these functions can be affected by erosion, the wearing away of soil by wind and water. The erosion potential of soils is directly related to soil type, presence and type of vegetation/ground cover, amount of existing disturbance, and weather conditions.

Impacts of Proposed Action

Implementation of TAP would not likely have significant impacts to soil resources within Washington. Since the areas where TAP practices could be implemented have been previously used for agricultural purposes, it is unlikely that they contain unique soil conditions. Activities for site preparation and debris removal may result in a slight increase in the amount of soil erosion and sedimentation in nearby water sources, however, this increase is expected to be minimal and temporary. Additionally, to qualify for TAP funding producers must have implemented conservation plans which ensure compliance with Highly Erodible Land Conservation (HELC).

No Action Alternative

Implementation of the No Action Alternative would not have significant impacts to soil resources within Washington. Potential impacts during site preparation and debris removal would be the same as those described for Alternative A.

3.1.9 Water Quality

Surface waters refer to rivers, streams, creeks, lakes, reservoirs, and other impoundments that support life through provision of water for drinking and other public uses, irrigation, and industry. Groundwater is water that flows underground and is stored in natural geologic formations called aquifers. For this analysis, surface water and groundwater are discussed generally. The principal law governing pollution of the nation's surface water resources is the CWA, which utilizes water quality standards, permitting requirements, and monitoring to protect water quality. EPA sets the standards for water pollution abatement for all waters of the U.S. under the CWA programs, but, in most cases, gives qualified states the authority to issue and enforce water quality certification permits.

Impacts of Proposed Action

Implementation of TAP would not have significant effects on groundwater resources in the TAP eligible areas. Although the proposed action could involve the addition of chemicals such as herbicides, pesticides, and insecticides, these areas were previously used for agriculture and these chemicals already exist within the environment. Likewise, the groundwater sources in these areas were previously used for irrigation. Therefore, replanting these areas would not significantly change the amount of water drawn from these aquifers. To fulfill the requirements of NEPA, this PEA will be coordinated with the appropriate EPA regions with sole source aquifers within the project area.

No Action Alternative

The no action alternative, would not have significant effects on groundwater or surface water resources in the TAP eligible areas. Like Alternative A, these areas were previously used for agriculture and potential effects from chemical inputs and irrigation would not change from replanting lost crops.

3.1.10 Air Quality

Any impacts to air quality in attainment areas would be considered significant if pollutant emissions associated with the proposed action: caused, or contributed to a violation of any national, state, or local ambient air quality standard; exposed sensitive receptors to substantially increased pollutant concentrations.

Impacts of Proposed Action

Implementation of Alternative A would result in replanting a TAP eligible crop on the field from which it was lost or another field in the same county. Activities that qualify for reimbursement that could have potential air quality effects include site preparation and debris removal. These activities could utilize tilling, controlled burning, and various diesel-powered vehicles and equipment.

Tilling would temporarily increase the particulate matter concentrations in the immediate area; however, this increase is not expected to be significant. Watering exposed soils during and after tilling would reduce the release of particulate matter. Machinery used for the proposed activity would be in good working order and maintained to ensure minimal air emissions. The amount of open burning that would take place in conjunction with site preparation and debris removal is not known. Burning could release PM10, PM2.5, CO, hydrocarbons and NO2 into the atmosphere (EPA 1992). The type and quantity of these pollutants would be determined by the type of vegetation being burned, the configuration of the burned material, and the weather conditions. It is not anticipated, however, that this burning would have a significant impact on the local air quality. Many states and local authorities, particularly those with counties in nonattainment for particulate matter or ozone, prohibit or restrict open burning and often require a permit. Producers that choose to use open burning for debris removal should consult with their local permitting agency to determine the open burning regulations for their county since these regulations can change each season. Often a permit from the local fire department may also be required.

Site preparation and debris removal could be done with various types of equipment that could include front-end loaders, backhoes, tractors, stump grinders, and skidders. Heavy diesel-powered equipment would release CO and PM. Proper and routine maintenance of the equipment reduces the harmful emissions. Like tilling and burning, impacts from the use of heavy equipment is expected to be temporary and minor and limited to the immediate construction area.

No Action Alternative

Under the no action alternative, it is assumed that the producer would replant lands in the same commodity that was lost or one of the most commonly grown row crops in the state. Replanting the lands would likely utilize similar site preparation and debris removal techniques as Alternative A. The potential impacts would be the same as those described for Alternative A.

3.1.11 Noise

Effects on noise were eliminated from detailed analysis. Implementing the Tree Assistance Program (TAP) would not permanently increase ambient noise levels at or adjacent to TAP lands. Noise from heavy equipment is common on agricultural lands that could be enrolled in TAP. The potential for increased noise levels associated with implementing the approved practices would be minor, temporary, and localized, and would cease once implementation of the approved practices were completed.

3.1.12 Important Land Resources

Effects on farmland, forest land and rangeland resources were eliminated from detailed analysis because the proposed action will not result in prime and/or important land being converted to a nonagricultural use.

3.1.13 Socioeconomic Impacts and Environmental Justice

No adverse impacts to population, housing, income, or employment in the region is anticipated to result from the Proposed Action as defined in Executive Order 12898, nor are disproportionate adverse impacts to minority or low-income populations anticipated. Therefore, socioeconomics and environmental justice are not carried forward for detailed analysis.

All of the programs offered through FSA for emergency or disaster assistance are voluntary and enrollment cannot be predicted. These programs provide additional money into local economies, and the potential cumulative effect could be a significant increase in economic spending in these rural areas. However, since no producer can receive duplicate payments for the same losses and there is typically a cap on the amount one producer can receive; the slight financial increase to the local economy would not be considered significant. It is likely that those producers requesting assistance are not generating the income they were before the loss. TAP and the other emergency programs allow these producers to continue farming practices.

3.2 Resources Considered with Detailed Analysis

This section describes the environment that would be affected by implementation of the alternatives described in Chapter 2. Aspects of the affected environment described in this section focus on the relevant major resources or issues. Under the no action alternative, the proposed action would not be implemented. The no action alternative would result in the continuation of the current land and resource uses in the project area. This alternative will not be evaluated further in this EA.

3.2.1 Wildlife and Habitat

Impacts to wildlife are considered significant if species or habitats of concern are adversely affected or disturbances reduce population, size, or distribution of wildlife or vegetation.

Species protected by the MBTA are not assessed here in accordance with the Department of Interior Solicitor's Opinion M-37050, *Incidental Take Prohibited Under the Migratory Bird Treaty Act*, issued December 22, 2017 which concludes that the MBTA's prohibition on take (defined as pursuing, hunting, taking, capturing, killing, or attempting to do the same) applies only to “direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests” and not to the losses incidental to otherwise lawful activities.

Impacts of Proposed Action

Implementation of TAP would not impact the native vegetation communities in any of the TAP qualified counties or states. All proposed activities would occur in fields previously used for agricultural production where native vegetative communities have been removed.

Similarly, the proposed activities are not expected to have a large-scale impact to native wildlife. It is anticipated that in most instances, TAP crops would be replanted on the same farm where losses occurred. Though active agricultural fields may provide a food source to some wildlife, they do not provide for the habitat requirements of species. In cases where TAP is implemented on fields that have not recently been cultivated and ecological succession (the natural establishment of grasses, forbs, and woody vegetation from native seed bank) has occurred, some impacts to wildlife species which have re-inhabited these areas could occur. These impacts are expected to be insignificant as impacted species would simply move into adjacent suitable habitats.

In instances where new land on the farm is to be disturbed it will be necessary for the Agency to consider these operations on a case by case basis utilizing the site-specific Environmental Evaluation. This evaluation process includes collecting and documenting the data, consultation and permitting needed for FSA to ensure compliance with NEPA and ESA, and other related laws, regulations, and EOs. The site-specific EE process follows guidance in FSA's Handbook on Environmental Quality Programs for State and County Offices (1-EQ).

It is possible agricultural fields where TAP activities would occur could be located near locations of threatened and endangered species or designated critical habitat. Activities conducted to reestablish crops, such as site preparation, debris removal, and chemical application, could create disturbances for protected species in the immediate vicinity.

The Agency pulled an IPaC report from Fish and Wild Life Service, See Appendix B Fish and Wildlife Service – IPAC Report and Species List, and requested a threatened and endangered species list from NOAA, Appendix C NOAA – Endangered Species List. These lists of species were reviewed in light of their location and habitat needs. Table 5 - Endangered Species Habitat and Agency Determination details the support for each determination regarding the species identified on the

No Action Alternative

Under the No Action alternative, there would be no change to the existing vegetation communities, wildlife, or threatened or endangered species within the TAP eligible area. Under this alternative, those fields that lost a crop due to Fire blight, Little Cherry Disease and other diseases caused by X-Disease Phytoplasma in Washington State would likely be replanted in the same commodity or one of the state's common crops. Since producers would not receive federal funding to reestablish crops on their lands, they would not be required to coordinate activities with U.S. Fish and Wildlife Service or NOAA.

3.2.2 Cultural Resources

Cultural resources consist of prehistoric and historic sites, structures, districts, artifacts, or any other physical evidence of human activities considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Cultural resources can be divided into three major categories: archaeological resources (prehistoric and historic), architectural resources, and traditional cultural properties. Archaeological resources are locations and objects from past human activities. Architectural resources are those standing structures that are usually over 50 years of age and are of significant historic or aesthetic importance Traditional cultural resources hold importance or significance to Native Americans or other ethnic groups in the persistence of traditional culture.

The significance of such resources relative to the American Indian Religious Freedom Act, the Archaeological Resources Protection Act, Native America Graves Protection and Repatriation Act, EO 13007, and/or eligibility for inclusion in the National Register of Historic Places (NRHP) is considered a part of the

NEPA process. The regulations and procedures in 36 CFR 800, which implements Section 106 of the National Historic Preservation Act, requires Federal agencies to consider the effects on cultural resources which have been determined to be historic properties, which are properties that are listed in or eligible for inclusion in the NRHP. Prior to approval of the proposed action, Section 106 requires that the Advisory Council on Historic Preservation (ACHP) be afforded the opportunity to comment.

Archaeological resources are widespread across Washington State and occur in a variety of environments, including rural, agricultural areas. Thousands of prehistoric and historic archaeological sites have been previously recorded in Washington State. As such, all TAP program areas may be considered likely to contain archaeological resources.

Historic architectural resources in rural agricultural areas may include homesteads, farm houses, barns, silos, and granaries on farm properties, as well as buildings and structures in surrounding communities. The latter may include churches, school houses, post offices, and courthouses, among other resources. Surrounding historic structures may also include bridges, water towers, and transportation networks, such as railroads.

A traditional cultural property is defined as a property that is eligible for inclusion in the NRHP because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. Traditional cultural properties may be difficult to recognize and may include a location of a traditional ceremonial location, a mountaintop, a lake, or a stretch of river, or culturally important neighborhood (U.S. Department of the Interior 1998). It is possible that traditional cultural properties are located in the proposed TAP program area.

Impacts of Proposed Action

It is possible that the ground disturbing activities authorized by the TAP could impact archaeological resources that may be historic properties. Where site preparation and planting activities do not disturb the soil beyond the depth of previous agricultural practices, it is unlikely that historic properties would be impacted. Consultation with the State Historic Preservation Officer (SHPO) and all appropriate tribes will take place for all planned TAP activities that have the potential to affect historic properties as per 36 CFR 800. If historic properties are encountered during the planning of ground disturbing activities, SHPO and all appropriate tribes would be notified to ensure compliance with 36 CFR 800.11 and RCW 27.53.060.

Implementation of the TAP is not expected to impact protected architectural resources or traditional cultural properties, since TAP funds cannot be used to alter structures. Consultation was offered to 35 tribes that are either resident to Washington or have indicated ancestral territory within the state and the State Historic Preservation Officer.

If unanticipated discoveries should occur, In accordance with RCW 27.53.060, Washington State FSA will cease all technical assistance and implementation of any practices upon the discovery of an archaeological resource or site, including but not limited to, objects that comprise the physical evidence of an indigenous and subsequent culture, material remains of past human life, monuments, symbols, tools, facilities, and technological by-products. FSA county field staff shall notify the SEC within 24 hours of a discovery. The SEC will provide notification to the SHPO office that an on-site evaluation is needed.

This Programmatic Environmental Assessment is only contemplating activities that occur on land that is currently in production or previously in production, where the level of disturbance does not affect previously undisturbed strata of soils. In instances where new soil is to be disturbed it will be necessary for the Agency to consider these operations on a case by case basis utilizing the site-specific Environmental Evaluation. This evaluation process includes collecting and documenting the data, consultation and permitting needed for FSA to ensure compliance with NEPA, the NHPA, the ESA, and other related laws, regulations, and EOs. The site-specific EE process follows guidance in FSA's Handbook on Environmental Quality Programs for State and County Offices (1-EQ). Several resources can only be evaluated on a site by site basis. For example, the EE requires that lands offered for enrollment in TAP are evaluated for the potential for the presence of or proximity to wetlands, floodplains, coastal zones, Wilderness Areas, etc. which can only be evaluated once these new lands are offered for enrollment.

Note: The landowner/applicant is responsible for obtaining any necessary or required permitting as determined by SHPO in order to proceed with technical or financial assistance from FSA.

If human remains are discovered during the planning or installation/construction of an undertaking, all activities which could damage the remains shall immediately cease and reasonable efforts will be made to protect the area from further disturbance. Additionally, the following actions will be taken in accordance with RCW 27.44 and RCW 68.50.645:

- The local law enforcement, county coroner and the SEC will be contacted by the FSA field staff immediately to report the presence and location of the remains, and to also determine whether the remains are part of an ongoing investigation;

- If the remains are not part of an ongoing police investigation (non-forensic) the SEC will notify the SHPO and any appropriate tribes;

- The state physical anthropologist will make an initial determination of the ethnicity of the remains;

- If the remains are of American Indian extraction and located on Federal or Tribal lands, FSA will follow the procedures outlined in Section 3 of the Native American Graves Protection and Repatriation Act (NAGPRA);

- If the remains are other than the above, FSA will follow the direction of the SHPO and local law enforcement.

3.2.3 Sole Source Aquifers

Groundwater refers to subsurface hydrologic resources that are used for domestic, agricultural, and industrial purposes. Groundwater is stored in natural geologic formations called aquifers. In areas with few or no alternative sources to the groundwater resource, an aquifer may be designated as a sole source aquifer by EPA, which requires EPA review of any proposed projects within the designated areas that are receiving Federal financial assistance (EPA 2006b).

There are many aquifers and groundwater sources in the proposed TAP project area. Those areas that rely on sole source aquifers must coordinate their activities with the appropriate region of the EPA. Sole source aquifers within Washington State have been designated in the counties listed in, Table 4 Sole Source Aquifers in Washington State.

Impacts of Proposed Action

Implementation of TAP would not have significant effects on groundwater resources in the TAP eligible areas. Although the proposed action would involve the addition of chemicals such as herbicides, pesticides, and insecticides, these areas were previously used for agriculture and these chemicals already exist within the environment and groundwater. Likewise, the groundwater sources in these areas were previously used for irrigation and replanting these areas would not significantly change the amount of water drawn from these aquifers. To fulfill the requirements of NEPA, this EA will be coordinated with the appropriate EPA regions with sole source aquifers within the project area.

4. CUMULATIVE IMPACTS

CEQ regulations stipulate that the cumulative effects analysis within a PEA should consider the potential environmental impacts resulting from "the incremental impacts of the action when added to other past, present and reasonably foreseeable actions regardless of what agency or person undertakes such other actions." CEQ guidance in Considering Cumulative Effects affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with the Proposed Action. The scope must consider geographic and temporal overlaps among the Proposed Action and other actions. It must also evaluate the nature of interactions among these actions.

Cumulative effects most likely arise when a relationship exists between a Proposed Action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with or in proximity to the Proposed Action would be expected to have more potential for a relationship than those more geographically separated. Similarly, actions that coincide, even partially, in time tend to have potential for cumulative effects.

In this PEA, the affected environment for cumulative impacts is where lands are eligible for enrollment in TAP. For the purposes of this analysis, the goals and plans of FSA programs designed to mitigate the risks of degradation of natural resources are the primary sources of information used in identifying past, present, and reasonably foreseeable actions.

4.1 Past, Present and Reasonably Foreseeable Actions

In addition to TAP, several other FSA programs provide financial assistance to tree crop producers in those areas eligible for enrollment in TAP. These programs are designed to provide financial assistance with the costs of production losses, clean-up, debris removal, and rehabilitation of the lost crops to natural disasters. Most programs establish a maximum amount a producer can receive, and they cannot receive duplicate federal program payments for the same losses. Emergency Assistance Programs offered by FSA include:

- Emergency Conservation Program (ECP)
- Noninsured Crop Disaster Assistance Program (NAP)
- Emergency Loan Program (ELP)

4.2 Cumulative Analysis

Some resources considered for detailed analysis above (in Section 3.2) could be directly or indirectly affected by the Proposed Action and therefore the Proposed Action could contribute to additive or interactive cumulative effects to these resources. For other resources, no such contributions to cumulative effects are anticipated because no direct or indirect impacts would occur based on program requirements. FSA's policies and regulations do not permit authorization, funding, or implementation of any proposal that is likely to jeopardize the continued existence of any species listed as endangered or threatened, or any proposal that is likely to destroy or adversely modify the habitats of listed species when such habitats have been determined critical to the species' existence.

4.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires that environmental analysis include identification of any irreversible and irretrievable commitments of resources which would be involved should an action be implemented. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the use of these resources has on future generations. Irreversible effects primarily result from the use or destruction of a specific resource that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action. Implementation of TAP in Washington State would result in no irreversible or irretrievable resource commitments.

5. CONSULTATION, COORDINATION, PREPARERS

List of Preparers	
Name and Title	**Education and Experience**
Stephanie Fisher State Environmental Coordinator- Washington State	• Washington State Environmental Coordinator 3 years • 3 Years of experience preparing environmental documents for USDA
Dwaine Schettler TAP Program Specialist Washington State Farm Service Agency	• GIS Specialist • Policy Guidance
Jason E. McMillin, Natural Resource Specialist/Regional State Environmental Coordinator- FPAC-BC Environmental Activities Division	• MS Agriculture Economics, Texas A & M University • BS Agriculture Business & Management, Texas State University • 18 years of experience preparing environmental documents for USDA

Persons and Agencies Contacted	
Name and Title	**Affiliation**
Allyson Brooks, Ph.D.	SHPO, Department of Archaeology & Historic Preservation
Jill Wagner	Tribal Historic Preservation Officer- Coeur D'Alene Tribe
Velma Kate Valdez	Tribal Historic Preservation Officer- Confederated Tribes and Bands of the Yakama Nation
Deloris Pigsley	Tribal Chairperson- Confederated Tribes of Siletz Indians of Oregon
Don Secena	Tribal Chairperson- Confederated Tribes of the Chehalis Reservation
Guy Moura	Tribal Historic Preservation Officer- Confederated Tribes of the Colville Reservation
David Harrelson	Tribal Historic Preservation Officer- Confederated Tribes of the Grand Ronde Community of Oregon
Carey Miller	Tribal Historic Preservation Officer- Confederated Tribes of the Umatilla Indian Reservation
Austin Greene	Tribal Chairman- Confederated Tribes of the Warm Springs Reservation of Oregon
William Iyall	Tribal Chairman- Cowlitz Indian Tribe
Maria Lopez	Tribal Chairperson- Hoh Indian Tribe

Persons and Agencies Contacted	
Name and Title	**Affiliation**
Ron Allen	Tribal Chairman- Jamestown S'Klallam Tribe
Glen Nenema	Tribal Chairman- Kalispel Indian Community of the Kalispel Reservation
Frances Charles	Tribal Chairperson- Lower Elwha Tribal Community
Lena Tso	Tribal Historic Preservation Officer- Lummi Tribe of the Lummi Reservation
Janine Ledford	Tribal Historic Preservation Officer- Makah Indian Tribe of the Makah Indian Reservation
Virginia Cross	Tribal Chairperson- Muckleshoot Indian Tribe
Patrick Baird	Tribal Historic Preservation Officer- Nez Perce Tribe
Jackie Wall	Tribal Historic Preservation Officer- Nisqually Indian Tribe
George Swanaset	Tribal Historic Preservation Officer- Nooksack Indian Tribe
Josh Wisniewski	Tribal Historic Preservation Officer- Port Gamble S'Klallam Tribe
Bill Sterud	Tribal Chairman- Puyallup Tribe of the Puyallup Reservation
Naomi Jacobson	Tribal Chairperson- Quileute Tribe of the Quileute Reservation
Leilani Chubby	Tribal Historic Preservation Officer- Quinault Indian Nation
Thomas Wooten	Tribal Chairman- Samish Indian Nation
Ben Joseph	Tribal Historic Preservation Officer- Sauk-Suiattle Indian Tribe
Doug Davis	Tribal Chairman- Shoalwater Bay Indian Tribe of the Shoalwater Bay Indian Reservation
Kris Miller	Tribal Historic Preservation Officer- Skokomish Indian Tribe
Carolyn Lubenau	Tribal Chairwoman- Snoqualmie Indian Tribe
Randy Abrahamson	Tribal Historic Preservation Officer- Spokane Tribe of the Spokane Reservation
Rhonda Foster	Tribal Historic Preservation Officer- Squaxin Island Tribe of the Squaxin Island Reservation
Kerry Lyste	Tribal Historic Preservation Officer- Stillaguamish Tribe of Indians of Washington
Dennis E. Lewarch	Tribal Historic Preservation Officer- Suquamish Indian Tribe of the Port Madison Reservation
Josephine Peters	Tribal Historic Preservation Officer- Swinomish Indian Tribal Community
Richard Young	Tribal Historic Preservation Officer- Tulalip Tribes of Washington
Jennifer Washington	Tribal Chairperson- Upper Skagit Indian Tribe
Larry Salata	US Fish & Wildlife Service
Soni Sejal	Environmental Protection Agency (EPA) – Sole Source Aquifers

Persons and Agencies Contacted	
Name and Title	**Affiliation**
Dale Bambrick	National Marine Fisheries Service- Columbia Basin Branch Chief
USDA/FSA Producers	Potential TAP Participants

5.1.1 Agency Consultation

USDA undertook the following efforts and research to aid in determining the potential impacts of the proposed action:

- Researched the U.S. Fish and Wildlife Service (USFWS) - Information, Planning, and Conservation System (IPaC) about the project's potential to affect federally listed species and has completed a biological field review relative to the potential species presence as required by the Endangered Species Act of 1973. Consultation with Fish and Wildlife Service was initiated with a Determination of **"**May Affect but not likely to Adversely affect**" -** Awaiting response
- Consulted with the State Historic Preservation Officer (SHPO) to ensure the requirements of 54 U.S.C. 306108 (Commonly known as Section 106 of the National Historic Preservation Act) were properly addressed. - Awaiting response
- Consulted with the Tribal Historic Preservation Officers (THPO) of 35 tribes that have interest in the identified county, to ensure the requirements with Native American Graves Protection and Repatriation Act (NAGPRA). - Awaiting response
- The Environmental Protection Agency (EPA) was consulted regarding Sole Source Aquifers. - Awaiting response

6. References

Department of Ecology State of Washington. (2020, January 14). Retrieved from Washington Coastal Zone Management: https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Coastal-zone-management

DuPoint, T. (2019, February). *Washington State University-Tree Fruit.* Retrieved from Fire Blight: http://treefruit.wsu.edu/crop-protection/disease-management/fire-blight/

Explore Washington's Wilderness Areas. (2020, January 13). Retrieved from Washington Wild: https://wawild.org/explore-washingtons-wilderness-areas/

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Harper, S. (2019, May). *Little Cherry Virus.* Retrieved from Washington State University Tree Fruit: http://treefruit.wsu.edu/crop-protection/disease-management/little-cherry-disease/

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National Wild and Scenic Rivers System- Washington State. (2020, January 15). Retrieved from National Wild and Scenic Rivers System: https://www.rivers.gov/washington.php

Appendix A Fish and Wildlife Service – IPAC Report and Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington Fish And Wildlife Office
510 Desmond Drive Se, Suite 102
Lacey, WA 98503-1263
Phone: (360) 753-9440 Fax: (360) 753-9405
http://www.fws.gov/wafwo/

In Reply Refer To: January 27, 2020
Consultation Code: 01EWFW00-2020-SLI-0126
Event Code: 01EWFW00-2020-E-00989
Project Name: 2019 TAP Environmental Assessment

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated and proposed critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. The species list is currently compiled at the county level. Additional information is available from the Washington Department of Fish and Wildlife, Priority Habitats and Species website: http://wdfw.wa.gov/mapping/phs/ or at our office website: http://www.fws.gov/wafwo/species_new.html. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Appendix B NOAA – Endangered Species List

USDA United States Department of Agriculture | Farm Production and Conservation | Farm Service Agency | Washington State Farm Service Agency 316 W. Boone Ave. Suite 568 Spokane, WA 99201-2350

10/21/2019

NOAA Fisheries
1315 East-West Highway
Silver Spring, MD 20910

RE: Species List Request

To whom it may concern:

The USDA, Farm Service Agency (FSA) is completing an Environmental Assessment (EA) of implementing the Tree Assistance Program (TAP) within Washington State for Little Cherry Disease and Fire Blight, which have severely affected Washington's orchards.

In considering FSA's responsibilities pursuant to Section 7 of the Endangered Species Act, we are requesting a species list for all of Washington State in effort to identify and assess potential impacts in regard to implementing FSA's TAP program.

If you have any questions or concerns about this request or the TAP program, please contact Stephanie Fisher at 509-323-3002 or via e-mail at stephanie.fisher@usda.gov .

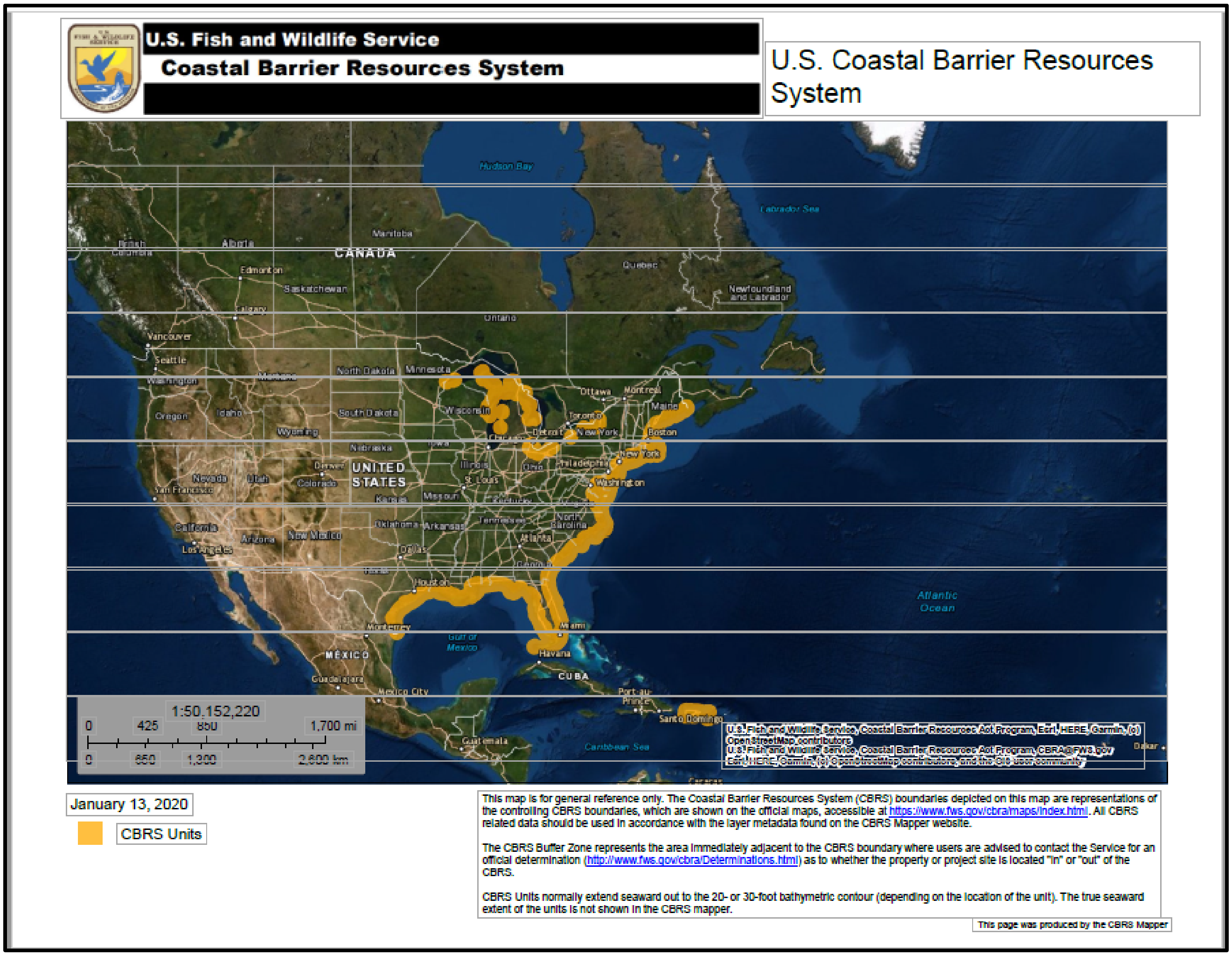
ADDRESS TO WHICH SPECIES LIST SHOULD BE SENT:
Farm Service Agency
Stephanie Fisher, State Environmental Coordinator
316 W. Boone Avenue, Suite 568
Spokane, WA 99201-2350
Stephanie.fisher@wa.usda.gov

Sincerely,

Stephanie L. Fisher
State Environmental Coordinator
Washington State Farm Service Agency

USDA is an equal opportunity provider, employer, and lender

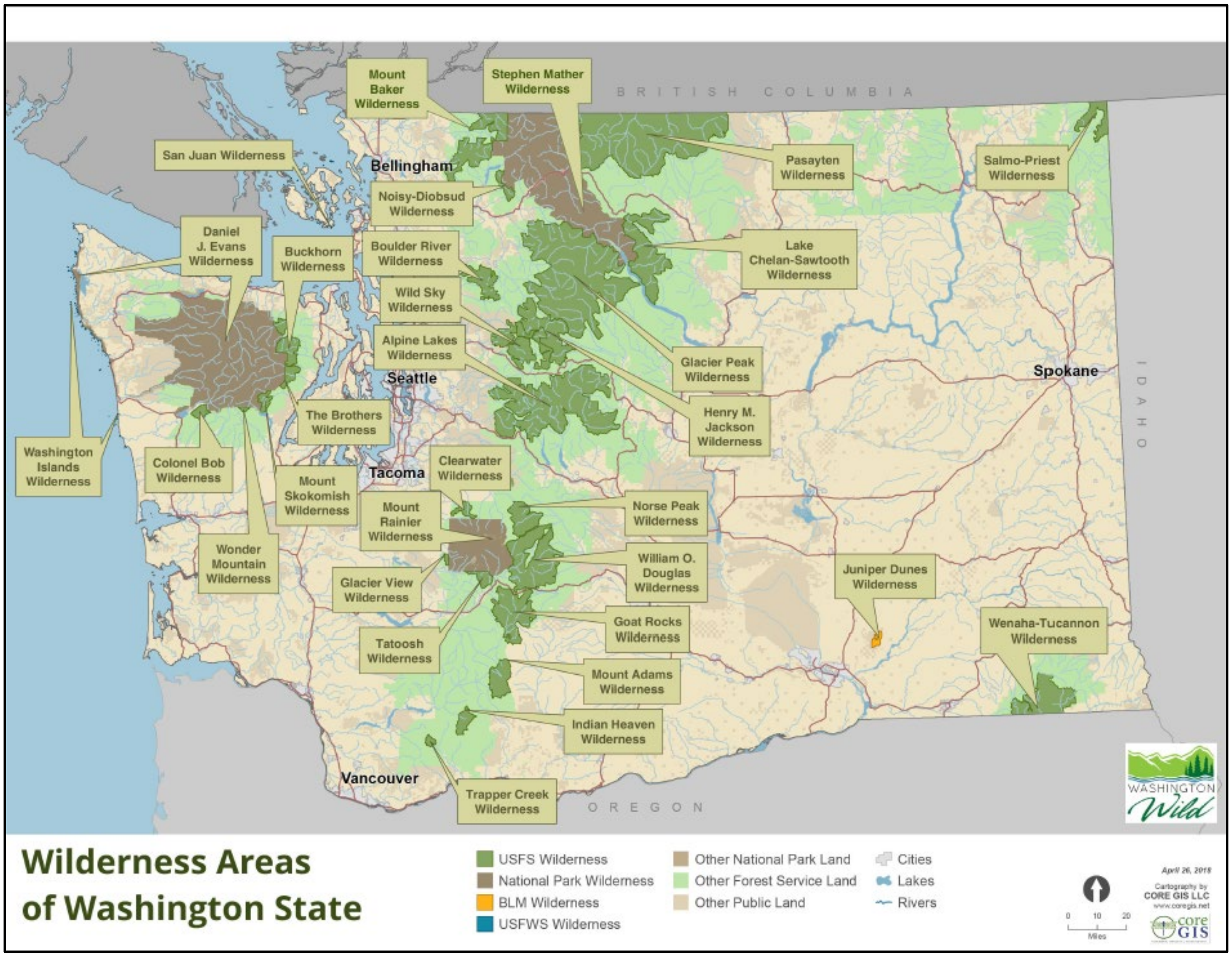
Figure 1-Map of U.S. Coastal Barrier Resources System



(Fish and Wildlife Service, 2020)

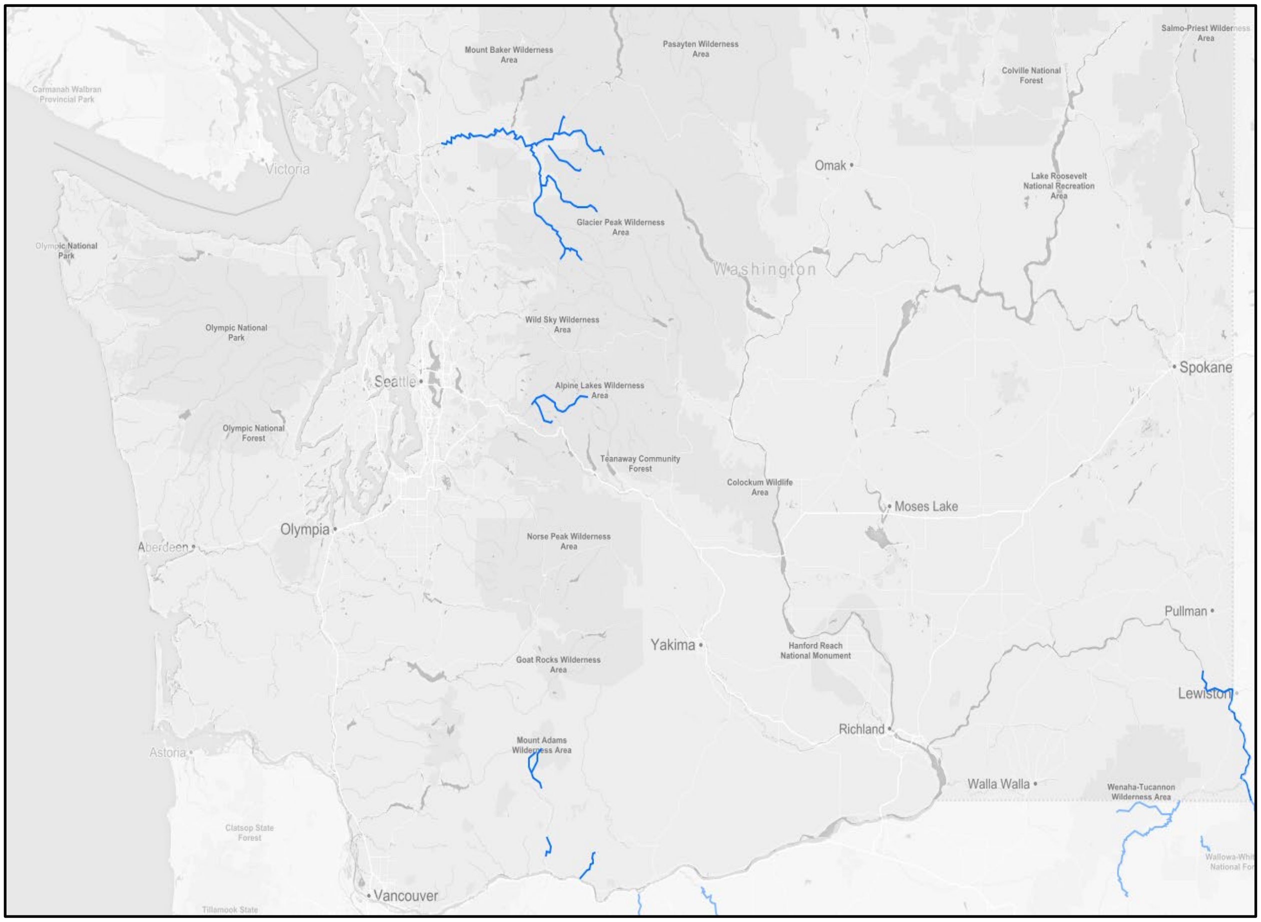
Figure 2- Coastal Zone Management Area of Washington State

Figure 3- Wilderness Areas of Washington State



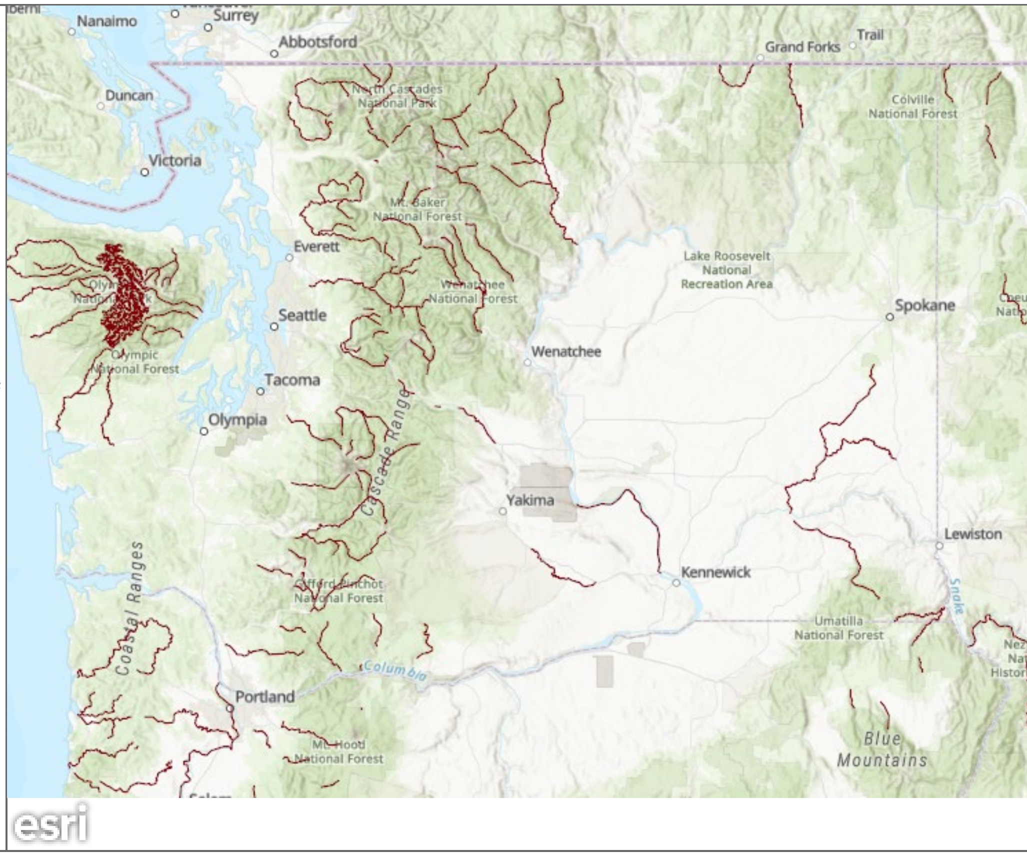
(Explore Washington's Wilderness Areas, 2020)

Figure 4 – Wild and Scenic Rivers of Washington State



(National Wild and Scenic Rivers System- Washington State, 2020)

Figure 5 – Nationwide Rivers Inventory (NRI)

Nationwide Rivers Inventory Official	

The Nationwide Rivers Inventory (NRI) is a listing of more than 3,200 free-flowing river segments in the United States that are believed to possess one or more "outstandingly remarkable" natural or cultural values. (Service, 2020)

Figure 6 - National Natural Landmarks Washington State

There are 18 National Natural Landmark (NNL) sites located within the state of Washington. Natural features represented include an outstanding exhibit of sea action in sculpturing a rocky shoreline, lava flows containing an unusually large number of fossil tree species, and the largest of several large water gaps through basalt anticlines. Seventeen of the sites received the NNL designation over the course of two decades from 1965 to 1986. Kahlotus Ridgetop, the 18th and most recent NNL site in the state, was designated in June 2011. Sites range in size from 12 acres to nearly 65,000 acres and are owned by a variety of landowners including U.S. Fish and Wildlife Service, Bureau of Land Management, National Park Service, U.S. Army Corps of Engineers, Washington State Parks, Washington Department of Natural Resources, county parks, municipalities, and private individuals.

Below is a **map of sites in Washington**.

National Natural Landmark sites are located in the following counties: **Adams**, **Asotin**, **Benton**, **Clallam**, **Douglas**, **Franklin**, **Grant**, **Kittitas**, **Okanogan**, **Pierce**, **Thurston**, **Walla Walla**, and **Whitman**.

Please remember, National Natural Landmarks (NNLs) are not national parks. NNL status does not indicate public ownership, and many sites are not open for visitation. (National Natural Landmarks by state-Washington, 2020)

Table 4 Sole Source Aquifers in Washington State

Sole Source Aquifers in Washington State		
County	**EPA Region**	**Sole Source Aquifer**
Asotin	10	Lewiston Basin
Clark	10	Troutdale
Cowlitz	10	Troutdale
Garfield	10	Lewiston Basin
Island	10	Whidbey Island Camano Island
King	10	Bainbridge Island Cedar Valley Cross Valley Marrowstone Island Vashon-Maury Island
Kittitas	10	Cedar Valley
Lincoln	10	Spokane Valley – Rathdrum Prairie
Pend Orielle	10	Spokane Valley – Rathdrum Prairie
Pierce	10	Central Pierce

Table 5 - Endangered Species Habitat and Agency Determination

Species	Status	Counties	Habitat	Agency Determination/Rational
Mammals				
Canada Lynx *canadensis*	T (CH)	Asotin, Chelan, Columbia, Ferry, Garfield, King, Kittitas, Klickitat, Lewis, Okanogan, Pend Orielle, Pierce, Skagit, Skamania, Snohomish, Spokane, Stevens, Walla Walla, Whatcom, Yakima	Lynx habitat can generally be described as moist boreal forests that have cold, snowy winters and a high-density snowshoe hare prey base. The predominant vegetation of boreal forest is conifer trees, primarily species of spruce (Picea spp.) and fir (Abies spp.). In the contiguous United States, the boreal forest type transitions to deciduous temperate forest in the Northeast and Great Lakes, and to subalpine forest in the west. In mountainous areas, the boreal forests that lynx use are characterized by scattered moist forest types with high hare densities in a matrix of other habitats (e.g., hardwoods, dry forest, non-forest) with low hare densities. In these areas, lynx incorporate the matrix habitat (non-boreal forest habitat elements) into their home ranges and use it for traveling between patches of boreal forest that support high hare densities where most foraging occurs.	**Not likely to adversely affect**/ Most lynx habitat in the Lower 48 States occurs on public (National Forest, National Park, and Bureau of Land Management) lands, except in the Northeast, where most is on private timber lands. Because lynx are so rare in the contiguous U.S. and difficult to monitor intensively over time, reliable estimates are not available for all regions, and the size of the total Lower-48 population is unknown but likely small. The TAP program is restricted to current orchards and no new farms are contemplated. This habitat is very different from the habitat requirements of the Canada Lynx. The probability of the Canada Lynx being located in an existing orchard is discountable and if a Canada Lynx were to wander into this area it would simply be chased off by virtue of the human and mechanical activity. Therefore, the impact is insignificant.

Species	Status	Counties	Habitat	Agency Determination/Rational
Columbia Basin Pygmy Rabbit *Brachylagus idahoensis*	E	Adams, Benton, Douglas, Franklin, Grant, Lincoln	Pygmy rabbits are typically found in areas that include tall, dense stands of sagebrush (*Artemisia spp.*) which they are highly dependent on to provide both food and shelter throughout the year. During the winter months their diet consists primarily of sagebrush, while in in the summer and spring their diets become more varied, with the addition of grasses, particularly native bunchgrasses to the sagebrush. This species digs its own burrows, which are typically found in deep, loose soils. However, pygmy rabbits occasionally do make use of burrows abandoned by other species, such as the yellow-bellied marmot.	**Not likely to adversely affect**/ Range / Habitat: Lives in southwestern Montana; northeastern California; southern Idaho; central and northern parts of Nevada; central and eastern parts of Oregon; northwest Utah; and southeastern Washington. The Pygmy Rabbit is typically found in areas of tall, dense sagebrush cover. They are highly dependent on sagebrush to provide both food and shelter throughout the year. Sage brush makes up 99% of their winter diet. The TAP program is restricted to current orchards with highly modified landscape and no new farms are being contemplated. This habitat is very different from the habitat requirements of the Pygmy Rabbit. The probability of the Pygmy Rabbit being located in an existing orchard (no sage brush in orchards) is discountable and if a Pygmy Rabbit were to wonder into this area it would simply be chased off by virtue of the human and mechanical activity. Therefore, the impacts of the TAP program are insignificant and a determination of "not likely to adversely affect" was made.

Species	Status	Counties	Habitat	Agency Determination/Rational
Columbian White-tailed Deer *Odocoileus virginianus leucurus*	T	Clark, Cowlitz, Pacific, Skamania, Wahkiakum	Prefers wet prairie and lightly wooded bottomlands or "tidelands" along streams and rivers; woodlands are particularly attractive when interspersed with grasslands and pastures.	**Not likely to adversely affect**/ No Critical Habitat Designated for this species. Columbian White-tailed deer are closely associated with riparian (riverside) habitats in both the Lower Columbia River and Douglas County populations. The deer found on islands in the Columbia River use "tidal spruce" habitats characterized by densely forested swamps covered with tall shrubs and scattered spruce, alder, cottonwood and willows. The TAP program is restricted to current orchards and no new farms are being contemplated. This habitat is modified, and the native vegetation is removed making it very different from the habitat requirements of the Columbian White-tailed Deer. The probability of the Columbian White-Tailed Deer being located in an existing orchard is discountable and if a Columbian White-Tailed Deer were to wonder into this area it would simply be chased off by virtue of the human and mechanical activity. Therefore, the impacts of the TAP program are insignificant and a determination of "not likely to adversely affect" was made.

Species	Status	Counties	Habitat	Agency Determination/Rational
Gray Wolf *Canis lupus*	E	Adams, Asotin, Benton, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Lincoln, Okanogan, Pend Orielle, Spokane, Stevens, Walla Walla, Whitman	No particular habitat preference. Dens are most commonly located witin 50 km of northern tree line, which resulted in maximal availability of caribou during the denning and pup rearing period.	**May Affect but not likely to adversely affect**/ No Critical Habitat Designated for this species. The gray wolf lives today in a diverse range of environments, including tundra, mountain areas, woodlands, forests, grasslands and deserts. An estimated 5,000 gray wolves inhabit the lower 48 states, more in Idaho, Michigan, Minnesota, Montana, Wisconsin and Wyoming. Wolves are carnivores—they prefer to eat large hoofed mammals such as deer, elk, bison, and moose. They also hunt smaller mammals such as beavers, rodents, and hares. The TAP program is restricted to current orchards and no new farms are being contemplated. The probability of the grey wolf being located in an existing orchard, which would be devoid of their preferred diet, is discountable and if a grey wolf were to wonder into this area it would simply be chased off by virtue of the human and mechanical activity. Therefore, the impacts of the TAP program are insignificant and a determination of "not likely to adversely affect" was made.

Species	Status	Counties	Habitat	Agency Determination/Rational
Grizzly Bear *Ursus arctos horribilis*	T		Now found mostly in arctic tundra, alpine tundra, and subalpine mountain forests. Once found in a wide variety of habitats including: open prairie, brushlands, riparian woodlands, and semidesert scrub. Ranges widely at the landscape level. Most populations require huge areas of suitable habitat. Common only where food is abundant and concentrated (e.g., salmon runs, caribou calving grounds). Typically digs own hibernation den, usually on steep northern slope where snow accumulates.	**Not likely to adversely affect**/ No Critical Habitat Designated for this species. Prime grizzly bear habitat features a diversity of plants, which provides bears with a varied food supply of plants, insects, and animals. Today, grizzly bears are only found in large tracts of relatively undisturbed land, and a clear relationship exists between the loss of grizzly bears and the destruction or fragmentation of their habitat. Bear researchers agree that the most crucial element in grizzly bear recovery is to secure adequate habitat. The TAP program is restricted to current orchards and no new farms are being contemplated. The probability of the grizzly bear being located in an existing orchard, which would be devoid of their preferred diet, is discountable and if a grizzly bear were to wander into this area it would simply be chased off by virtue of the human and mechanical activity. Therefore, the impacts of the TAP program are insignificant and a determination of "not likely to adversely affect" was made.

Species	Status	Counties	Habitat	Agency Determination/Rational
Olympia Pocket Gopher *Thomomys Mazama pugetensis*	T (CH)	Grays Harbor, Lewis, Pierce, Thurston	Olympia pocket gophers live in well-drained, easily-crumbled soil, which describes many of the prairie soils that were deposited in Thurston and Pierce Counties after the last glacial retreat, 10,000 to 12,000 years ago. Pocket gophers don't use soils that have a high clay content, which is difficult for them to dig through and may not be as permeable to water, which may make it too wet for them to live in. Mazama pocket gophers also avoid extremely sandy soils that won't hold the shape of a tunnel. Everywhere the Olympia pocket gophers occur, they occupy prairie-like habitat—areas that are relatively open, with short-statured vegetation and few woody plants.	**No Effect**/ The Olympia, Roy Prairie, Tenino, and Yelm pocket gophers are regionally endemic subspecies of the Mazama pocket gopher found only in the State of Washington. The Olympia, Tenino, and Yelm pocket gophers are only found in Thurston County and the Roy Prairie pocket gopher is only found in Pierce County. Olympia, Roy Prairie, Tenino, and Yelm pocket gophers live in well-drained, easily-crumbled soil, which describes many of the prairie soils that were deposited in Thurston and Pierce Counties after the last glacial retreat, 10,000 to 12,000 years ago. Pocket gophers don't use soils that have a high clay content, which is difficult for them to dig through and may not be as permeable to water, which may make it too wet for them to live in. Olympia, Roy Prairie, Tenino, and Yelm pocket gophers occupy prairie-like habitat—areas that are relatively open, with short statured vegetation and few woody plants. The TAP program is restricted to current orchards and no new farms are being contemplated. Good characteristics for orchard soils are loam or sandy loam soil that have enough water holding capacity so that trees won't dry out between irrigation sets are ideal. Due in part to the limited location of the species, soil habitat requirements and the preference of the species to avoid woody plants and moisture, a determination of "No Effect" was made for these species.

Species	Status	Counties	Habitat	Agency Determination/Rational
Roy Prairie Pocket Gopher *Thomomys mazama glacialis*	T	Pierce, Thurston	Roy Prairie pocket gophers live in well-drained, easily-crumbled soil, which describes many of the prairie soils that were deposited in Thurston and Pierce Counties after the last glacial retreat, 10,000 to 12,000 years ago. Pocket gophers don't use soils that have a high clay content, which is difficult for them to dig through and may not be as permeable to water, which may make it too wet for them to live in. Mazama pocket gophers also avoid extremely sandy soils that won't hold the shape of a tunnel. Everywhere the Roy Prairie pocket gophers occur, they occupy prairie-like habitat—areas that are relatively open, with short-statured vegetation and few woody plants.	**No Effect**/ The Olympia, Roy Prairie, Tenino, and Yelm pocket gophers are regionally endemic subspecies of the Mazama pocket gopher found only in the State of Washington. The Olympia, Tenino, and Yelm pocket gophers are only found in Thurston County and the Roy Prairie pocket gopher is only found in Pierce County. Olympia, Roy Prairie, Tenino, and Yelm pocket gophers live in well-drained, easily-crumbled soil, which describes many of the prairie soils that were deposited in Thurston and Pierce Counties after the last glacial retreat, 10,000 to 12,000 years ago. Pocket gophers don't use soils that have a high clay content, which is difficult for them to dig through and may not be as permeable to water, which may make it too wet for them to live in. Olympia, Roy Prairie, Tenino, and Yelm pocket gophers occupy prairie-like habitat—areas that are relatively open, with short statured vegetation and few woody plants. The TAP program is restricted to current orchards and no new farms are being contemplated. Good characteristics for orchard soils are loam or sandy loam soil that have enough water holding capacity so that trees won't dry out between irrigation sets are ideal. Due in part to the limited location of the species, soil habitat requirements and the preference of the species to avoid woody plants and moisture, a determination of "No Effect" was made for these species.

Species	Status	Counties	Habitat	Agency Determination/Rational
Tenino Pocket Gopher *Thomomys Mazama tumuli*	T (CH)	Grays Harbor, Lewis, Pierce, Thurston	Tenino pocket gophers live in well-drained, easily-crumbled soil, which describes many of the prairie soils that were deposited in Thurston and Pierce Counties after the last glacial retreat, 10,000 to 12,000 years ago. Pocket gophers don't use soils that have a high clay content, which is difficult for them to dig through and may not be as permeable to water, which may make it too wet for them to live in. Mazama pocket gophers also avoid extremely sandy soils that won't hold the shape of a tunnel. Everywhere the Tenino pocket gophers occur, they occupy prairie-like habitat—areas that are relatively open, with short-statured vegetation and few woody plants.	**No Effect**/ The Olympia, Roy Prairie, Tenino, and Yelm pocket gophers are regionally endemic subspecies of the Mazama pocket gopher found only in the State of Washington. The Olympia, Tenino, and Yelm pocket gophers are only found in Thurston County and the Roy Prairie pocket gopher is only found in Pierce County. Olympia, Roy Prairie, Tenino, and Yelm pocket gophers live in well-drained, easily-crumbled soil, which describes many of the prairie soils that were deposited in Thurston and Pierce Counties after the last glacial retreat, 10,000 to 12,000 years ago. Pocket gophers don't use soils that have a high clay content, which is difficult for them to dig through and may not be as permeable to water, which may make it too wet for them to live in. Olympia, Roy Prairie, Tenino, and Yelm pocket gophers occupy prairie-like habitat—areas that are relatively open, with short statured vegetation and few woody plants. The TAP program is restricted to current orchards and no new farms are being contemplated. Good characteristics for orchard soils are loam or sandy loam soil that have enough water holding capacity so that trees won't dry out between irrigation sets are ideal. Due in part to the limited location of the species, soil habitat requirements and the preference of the species to avoid woody plants and moisture, a determination of "No Effect" was made for these species.

Species	Status	Counties	Habitat	Agency Determination/Rational
Woodland Caribou *Rangifer tarandus caribou*	E (CH)	Pend Oreille	Woodland caribou favor large tracts of mature to old forests and forested peatlands containing lichens, which provide the primary winter food source.	**No Effect**/ All caribou in the world are one species (Rangifer tarandus). There are five recognized subspecies of caribou in North America. Woodland caribou (Rangifer tarandus caribou) are the southernmost subspecies in North America, historically ranging throughout most of southern Canada and portions of the United States. Currently, Southern Mountain Caribou are the only distinct population of woodland caribou to occasionally occur in the continental United States in extreme north east Washington and northern Idaho. They inhabit high elevation, forested areas with deep snowfall and steep, mountainous terrain. During the winter, they feed solely on lichen growing from certain forest trees. The action area for the proposed project (TAP) is made up entirely of current orchards and no new farms are being contemplated. This habitat is inconsistent with the needs of the Woodland Caribou. Therefore, a determination of "No effect" was made for this species, their habitats, or proposed or designated critical habitat.
Yelm Pocket Gopher *Thomomys Mazama yelmensis*	T (CH)	Grays Harbor, Lewis, Pierce, Thurston	Yelm pocket gophers live in well-drained, easily-crumbled soil, which describes many of the prairie soils that were deposited in Thurston and Pierce Counties after the last glacial retreat, 10,000 to 12,000 years ago. Pocket gophers don't use soils that have a high clay content, which is difficult for them to dig through and may not	**No Effect**/ The Olympia, Roy Prairie, Tenino, and Yelm pocket gophers are regionally endemic subspecies of the Mazama pocket gopher found only in the State of Washington. The Olympia, Tenino, and Yelm pocket gophers are only found in Thurston County and the Roy Prairie pocket gopher is only found in Pierce County. Olympia, Roy Prairie, Tenino, and Yelm pocket gophers live in well-drained,

Species	Status	Counties	Habitat	Agency Determination/Rational
			be as permeable to water, which may make it too wet for them to live in. Mazama pocket gophers also avoid extremely sandy soils that won't hold the shape of a tunnel. Everywhere the Yelm pocket gophers occur, they occupy prairie-like habitat—areas that are relatively open, with short-statured vegetation and few woody plants.	easily-crumbled soil, which describes many of the prairie soils that were deposited in Thurston and Pierce Counties after the last glacial retreat, 10,000 to 12,000 years ago. Pocket gophers don't use soils that have a high clay content, which is difficult for them to dig through and may not be as permeable to water, which may make it too wet for them to live in. Olympia, Roy Prairie, Tenino, and Yelm pocket gophers occupy prairie-like habitat—areas that are relatively open, with short statured vegetation and few woody plants. The TAP program is restricted to current orchards and no new farms are being contemplated. Good characteristics for orchard soils are loam or sandy loam soil that have enough water holding capacity so that trees won't dry out between irrigation sets are ideal. Due in part to the limited location of the species, soil habitat requirements and the preference of the species to avoid woody plants and moisture, a determination of "No Effect" was made for these species.

Species	Status	Counties	Habitat	Agency Determination/Rational
Birds				
Marbled Murrelet *Brachyramphus marmoratus*	T (CH)	Benton, Chelan, Clallam, Clark, Cowlitz, Douglas, Grant, Grays Harbor, Island, Jefferson, King, Kitsap, Kittitas, Klickitat, Lewis, Mason, Okanogan, Pacific, Pierce, San Juan, Skagit, Skamania, Snohomish, Thurston, Wahkiakum, Whatcom, Yakima	Coastal areas, mainly in salt water within 2 km of shore, including bays and sounds; not uncommon up to 5 km offshore; occasionally also on rivers and lakes usually within 20 km of ocean (but up to 75 km), especially during breeding season.	**No Effec**t/ Marbled murrelets nest inland in forests that are generally characterized by large trees with large branches or deformities for use as nest platforms. Murrelets nest in stands varying in size from several acres to thousands of acres. However, larger, unfragmented stands of old growth appear to be the highest quality habitat. Nesting stands are dominated by mixed conifer in Oregon and Washington and by old-growth redwoods in California. Marbled murrelets are usually found within 5 miles (8 kilometers) from shore and in water less than 60 meters deep. In general, birds occur closer to shore in exposed coastal areas and farther offshore in protected coastal areas. The action area for the proposed project (TAP) is made up entirely of current orchards and no new farms are being contemplated. This habitat is inconsistent with the needs of the Marbled Murretess. The existing orchards in Washington State are predominately located on the Eastern 1/2 of the state away from the coastal areas. Based upon the habitat requirements (oldgrowth large trees) and general range of the species, a determination of "No effect" was made for this species, their habitats, proposed or designated critical habitat.

Species	Status	Counties	Habitat	Agency Determination/Rational
Northern Spotted Owl *Strix occidentalis caurina*	T (CH)	Chelan, Clallam, Clark, Cowlitz, Grays Harbor, Island, Jefferson, King, Kitsap, Kittitas, Klickitat, Lewis, Mason, Okanogan, Pacific, Pierce, San Juan, Skagit, Skamania, Snohomish, Thurston, Wahkiakum, Whatcom, Yakima	Moderate to high canopy closure; a multilayered, multispecies canopy dominated by large overstory trees; a high incidence of large trees with large cavities, broken tops, and other indications of decadence; numerous large snags; heavy accumulations of logs and other woody debris on the forest floor; and considerable open space within and beneath the canopy." Generally these conditions are found in old growth (at least 150-200 years old), but sometimes they occur in younger forests that include patches of older growth.	**No Effec**t/ Northern spotted owls live in forests characterized by dense canopy closure of mature and old-growth trees, abundant logs, standing snags, and live trees with broken tops. Although they are known to nest, roost, and feed in a wide variety of habitat types, spotted owls prefer older forest stands with variety: multi-layered canopies of several tree species of varying size and age, both standing and fallen dead trees, and open space among the lower branches to allow flight under the canopy. Typically, forests do not attain these characteristics until they are at least 150 to 200 years old. The action area for the proposed project (TAP) is made up entirely of current orchards and no new farms are being contemplated. This habitat is inconsistent with the needs of the Northern Spotted owl. The existing orchards in Washington State are predominately located on the Eastern 1/2 of the state. Based upon the habitat requirements, a determination of "No effect" was made for this species, their habitats, proposed or designated critical habitat.
Short-tailed Albatross *Phoebastria (=Diomedea) albatrus*	E	Clallam, Grays Harbor, Jefferson, Pacific, San Juan	This is a pelagic bird that often occurs in regions of high marine productivity. It nests on the ground on small oceanic islands; on volcanic ash slopes with sparse vegetation, formerly on level open areas adjacent to tall clumps of the grass.	**No Affec**t/ Short-tailed albatross breed in colonies on remote, windswept islands. Their diet includes squid, flying fish eggs, and other items that are available at or near the surface of the ocean. The action area for the proposed project (TAP) is made up entirely of current orchards and no new farms are being contemplated. This habitat is inconsistent with the needs of Short-tailed albatross. The

Species	Status	Counties	Habitat	Agency Determination/Rational
				existing orchards in Washington State are predominately located on the Eastern 1/2 of the state. Based upon the habitat requirements and general range of the species, a determination of "No effect" was made for this species.
Streaked Horned Lark *Eremophila alpestris strigata*	T (CH)	Clallam, Clark, Cowlitz, Grays Harbor, Island, Jefferson, King, Kitsap, Lewis, Mason, Pacific, Pierce, San Juan, Skagit, Skamania, Snohomish, Thurston, Wahkiakum, Whatcom	Streaked Horned Larks live in prairie and open coastal habitat.	**No Effec**t/ Horned larks are birds of wide-open spaces with no trees and few or no shrubs. The streaked horned lark nests on the ground in sparsely vegetated sites dominated by grasses and forbs. Historically this type of habitat was found in prairies in western Oregon and Washington, in dune habitats along the coast of Washington, on the sandy beaches and spits along the Columbia and Willamette Rivers, and in grasslands, estuaries, and sandy beaches in British Columbia. Today the streaked horned lark nests in a broad range of habitats, including native prairies, coastal dunes, fallow and active agricultural fields, wetland mudflats, sparsely-vegetated edges of grass fields, recently planted Christmas tree farms with extensive bare ground, moderately- to heavily-grazed pastures, gravel roads or gravel shoulders of lightly-traveled roads, airports, and dredge deposition sites in the lower Columbia River. Wintering streaked horned larks use habitats that are very similar to breeding habitats. The action area for the proposed project TAP is made up entirely of current orchards and no new farms are being contemplated. This habitat is inconsistent with the needs of

Species	Status	Counties	Habitat	Agency Determination/Rational
				Horned larks. The existing orchards in Washington State are predominately located on the Eastern 1/2 of the state. Based upon the habitat requirements and general range of the species, a determination of "No effect" was made for this species, their habitats, proposed or designated critical habitat.
Western Snowy Plover *Charadrius nivosus nivous*	T (CH)	Grays Harbor, Pacific	Barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat, levees and flats at salt-evaporation ponds, river bars, along alkaline or saline lakes, reservoirs, and ponds. Nests are a natural or scraped depression on dry ground usually lined with pebbles, shell fragments, fish bones, mud chips, vegetation fragments, or invertebrate skeletons.	**No Effect**/ The Pacific coast population of western snowy plovers breeds on coastal beaches and dry salt pans from southern Washington to southern Baja California, Mexico. Plovers lay their eggs in shallow depressions in sandy and salty areas with little vegetation or driftwood. The action area for the proposed project (TAP) is made up entirely of current orchards and no new farms are being contemplated. The existing orchards in Washington State are predominately located on the Eastern 1/2 of the state. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. Based upon the habitat requirements, a determination of "No effect" was made for this species, their habitats, proposed or designated critical habitat.

Species	Status	Counties	Habitat	Agency Determination/Rational
Yellow-billed Cuckoo *Coccyzus americanus*	T	Adams, Asotin, Benton, Chelan, Clallam, Clark, Columbia, Cowlitz, Douglas, Ferry, Franklin, Garfield, Grant, Grays Harbor, Island, Jefferson, King, Kitsap, Kittitas, Klickitat, Lewis, Lincoln, Mason, Okanogan, Pacific, Pend Orielle, Pierce, San Juan, Skagit, Skamania, Snohomish, Spokane, Stevens, Thurston, Wahkiakum, Walla Walla, Whatcom, Whitman, Yakima	Wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. In the Midwest, look for cuckoos in shrublands of mixed willow and dogwood, and in dense stands of small trees such as American elm. In the central and eastern U.S., Yellow-billed Cuckoos nest in oaks, beech, hawthorn, and ash. In the West, nests are often placed in willows along streams and rivers, with nearby cottonwoods serving as foraging sites.	**Not likely to adversely affect**/ Western yellow-billed cuckoos breed in large blocks of riparian habitats (particularly woodlands with cottonwoods and willows). Dense understory foliage appears to be an important factor in nest site selection. Yellow-bill cuckoos use a variety of riparian habitats. Cottonwood and willow trees are an important foraging habitat in areas where the species has been studied in California. The action area for the proposed project (TAP) is made up entirely of current orchards and no new farms are being contemplated. This habitat is inconsistent with the needs of Western yellow-billed cuckoos. The existing orchards in Washington State are predominately located on the Eastern 1/2 of the state. The provability of the Western yellow-billed cuckoos being located in an existing orchard is discountable and if a western yellow-billed cuckoo were to wonder into this area it would simply be chased off by virtue of the human and mechanical activity. Therefore, the impacts are insignificant and a determination of "not likely to adversely affect was made.
Amphibians				

Species	Status	Counties	Habitat	Agency Determination/Rational
Oregon Spotted Frog *Rana pretiosa*	T (CH)	Clark, Grays Harbor, King, Klickitat, Lewis, Pacific, Pierce, Skagit, Skamania, Snohomish, Thurston, Whatcom, Yakima	The Oregon spotted frog is highly aquatic and generally avoids dry uplands. It is rarely found far from permanent quiet water. Usually it occurs in vegetated shallows or among grasses or sedges along the margins of streams, lakes, ponds (including those behind beaver dams), oxbows, springs, and marshes.	**No Effect**/ Range/Habitat: Predominately found in or near perennial water bodies and the species avoids dry uplands. Washington State Orchards do not occur in these types of habitats. In addition to lack of habitat, the Washington State Shoreline Management Act (SMA) also restricts development and chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. For these reasons, we determine that the TAP program will have "no effect" on the listed species, their habitats, or proposed or designated critical habitat.
Fishes				
Bull Trout *Salvelinus confluentus*	T (CH)		Must have cold water to survive, so they are seldom found in waters where temperatures exceed 59 to 64 degrees (F). They also require stable stream channels, clean spawning and rearing gravel, complex and diverse cover, and unblocked migratory corridors. Resident bull trout spend their entire lives in the same stream/creek. Migratory bull trout move to larger bodies of water to overwinter and then migrate back to smaller waters to reproduce. An anadromous form of bull trout also exists in the Coastal-Puget Sound population, which spawns in rivers and streams but rears young in the ocean.	**Not likely to adversely affect/** Range/Habitat: Fresh water species. The action area for the proposed project (TAP) is made up entirely of current orchards and no new farms are being contemplated. This habitat is inconsistent with the needs of the Bull Trout. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Bull Trout being located in or near an existing orchard is discountable as no work occurs in any creek or

Species	Status	Counties	Habitat	Agency Determination/Rational
				stream channel. Therefore, impacts will be insignificant and a determination of "not likely to adversely affect" was made.
Insects				
Oregon Silverspot Butterfly *Speyeria zerene Hippolyta*	T		Open coastal grasslands, including salt spray meadows, behind dunes, and a few subalpine grasslands in coastal mountains. Important features include an abundance of the larval foodplant, *Viola adunca*, and adequate nectar from late July through September.	**Not likely to adversely affect/** Range/Habitat: Lives in coastal areas and requires sufficient food sources. The action area for the proposed project (TAP) is made up entirely of current orchards and no new farms arebeing contemplated. The existing orchards in Washington State are predominately located on the Eastern 1/2 of the state. As such, the probability of the Oregon Silverspot Butterfly occurring within an existing orchard is discountable. Therefore, impacts will be insignificant and a determination of "not likely to adversely affect" was made.
Taylor's (=whulge) Checkerspot *Euphydryas editha taylori*	E (CH)	Clallam, Island, Pierce, Skagit, Thurston	Dry prairies or prairie-like native grassland in Puget Sound, Willamette portions of range, maritime meadows.	**Not likely to adversely affect/** Range/Habitat: Lives in coastal areas and requires sufficient food sources. The action area for the proposed project (TAP) is made up entirely of current orchards and no new farms are being contemplated. The existing orchards in Washington State are predominately located on the Eastern 1/2 of the state. As such, the probability of the Taylor's (=whulge) Checkerspot Butterfly occuring within an existing orchard is discountable. Therefore, impacts will be insignificant and a determination of "not likely to adversely affect" was made.

Species	Status	Counties	Habitat	Agency Determination/Rational
Flowering Plants				
Bradshaw's Desert-parsley *Lomatium bradshawii*	E	Clark	Wet prairie habitats including Deschampsia caespitosa Valley Prairie (DECA Valley Prairie). Open, clay soil bottomland with seasonal standing water.	**No effect/** Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Bradshaw's Desert-parsley being located within an existing orchard is discountable. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Golden Paintbrush *Castilleja levisecta*	T	Clallam, Clark, Cowlitz, Grays Harbor, Island, Jefferson, Lewis, Pierce, San Juan, Skagit, Snohomish, Thurston, Whatcom	Open grasslands at elevations below 100 m. Often on glacial outwash or deposits. Low intensity fires may be important in maintaining the native grassland habitat of this species.	**No effect/** Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Kincaid's Lupine being located within an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Kincaid's Lupine *Lupinus sulphureus ssp. Kincaidii*	T (CH)	Lewis	Habitat is upland prairie remnants and ecotones between grassland and forest.	**No effect/** Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Kincaid's Lupine being located within an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.

Species	Status	Counties	Habitat	Agency Determination/Rational
Marsh Sandwort *Arenaria paludicola*	E	Pierce	Freshwater marshes from close to sea level to 450 m elevation. Plants have been found in areas with shallow standing water and with no standing water. Substrates are saturated, acidic, organic bog soils.	**No effect**/ Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Marsh Sandwort being located within an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Nelson's Checker-mallow *Sidalcea nelsoniana*	T	Cowlitz, Lewis	Moist meadows with surface water or saturated upper soils into early summer. Sites generally dominated by perennial herbs and rhizomatous, perennial grasses; deciduous and coniferous trees and shrubs. May occur along permanent or intermittent streams, near seeps, springs, or small drainages.	**No effect**/ Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Nelson's Checker-Mallow being located within an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Showy Stickseed *Hackelia venusta*	E	Chelan, King	Grows in openings of ponderosa pine (*Pinus ponderosa*) and Douglas-fir (*Pseudotsuga menziesii*) forests on loose, well-drained, granitic rocky or sandy soils. It is found on unstable talus slopes, and ledges or cracks on cliff faces at lower elevations (470-820 meters or 1550-2700 feet).	**No effect**/ Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Showy Stickseed being located within an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Spalding's Catchfly *Silene spaldingii*	T	Adams, Asotin, Columbia, Ferry, Garfield, Grant, Lincoln, Okanogan, Spokane,	Predominantly in the Pacific Northwest bunchgrass grasslands and sagebrush-steppe, and occasionally in open-canopy pine stands.	**No effect**/ Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Spalding's Catchfly being located within an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the

Species	Status	Counties	Habitat	Agency Determination/Rational
		Stevens, Whitman		species and a determination of "no effect" was made.
Umtanum Desert Buckwheat *Eriogonum codium*	T (CH)	Benton, Yakima	Restricted to a particular basalt flow, growing on flat or gently sloping areas near the top of the steep basalt cliffs. 335-390 m.	**No effect**/ Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Umtanum Desert Buckwheat being located within an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Ute Ladies'-tresses *Spiranthes diluvialis*	T	Chelan, Douglas, Okanogan	Primarily from moist meadows associated with perennial stream terraces, floodplains, and oxbows at elevations between 4300-6850 feet. Can also be found in seasonally flooded river terraces, sub-irrigated or spring-fed abandoned stream channels and valleys, lakeshores, along irrigation canals, berms, levees, irrigated meadows, excavated gravel pits, roadside barrow pits, reservoirs, and other human-modified wetlands. Within Washington can be found within 720-1830 feet. Over one-third of all known Ute ladies-tresses populations are found on alluvial banks, point bars, floodplains, or ox-bows	**No effect**/ Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Ute Ladies'-tresses being located within an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.

Species	Status	Counties	Habitat	Agency Determination/Rational
			associated with perennial streams.	
Water Howellia *Howellia aquatilis*	T	Adams, Clark, Grays Harbor, Lewis, Lincoln, Pacific, Pierce, Spokane, Stevens, Thurston, Whitman	Habitat is found in areas that were once associated with glacial potholes and former river oxbows that flood in the spring, but usually dry at least partially by late summer. It is often found in shallow water (1-2 meters) and on the edges of deep ponds that are partially surrounded by deciduous trees such as black cottonwood and aspen.	**No effect**/ Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Water Howellia being located within an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Wenatchee Mountains Checkermallow *Sidalcea oregana var. calva*	E (CH)	Chelan, Kittitas	Moist meadows with surface water or saturated upper soils into early summer. Sites generally dominated by perennial herbs and rhizomatous, perennial grasses; deciduous and coniferous trees and shrubs. May occur along permanent or intermittent streams, near seeps, springs, or small drainages.	No effect/ Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the Wenatchee Mountains Checkermallow being located within an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
White Bluffs Bladderpod *Physaria douglasii ssp. Tuplashensis*	T (CH)	Franklin, Grant	A dry, barren, vertical exposure of caliche (a hard, highly alkaline, highly calcalcareous substrate) capping a bluff.	**No effect/** Orchards within Washington State occur on highly disturbed soils that are maintained by tillage and chemical control. As such, the probability of the White Bluffs Bladderpod being located within

Species	Status	Counties	Habitat	Agency Determination/Rational
				an existing orchard is unlikely. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Marine Species (National Marine Fisheries)				
Leatherback Sea Turtle *Dermochelys coriacea*	E (CH)		Marine; open ocean, often near edge of continental shelf; also seas, gulfs, bays, and estuaries. Mainly pelagic, seldom approaching land except for nesting.	**No effect**/ Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Leatherback Sea Turtle being located in or near an existing orchard and no work will occur near the oceanfront. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Green Sea Turtle *Chelonia mydas*	E		Feeding occurs in shallow, low-energy waters with abundant submerged vegetation, and also in convergence zones in the open ocean. Migrations may traverse open seas. Adults are tropical in distribution, whereas juveniles range into temperate waters. Hatchlings often float in masses of marine macroalgae (e.g., *Sargassum*) in convergence zones. Coral reefs and rocky outcrops near feeding pastures often are used as resting areas. Basking on beaches occurs in some areas.	**No effect**/ Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Green Sea Turtle being located in or near an existing orchard and no work will occur near the oceanfront. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.

Species	Status	Counties	Habitat	Agency Determination/Rational
Olive Ridley Sea Turtle *Lepidochelys olivacea*	E		Habitat includes tropical and subtropical waters, ranging from protected, shallow, marine and estuarine waters, including bays and lagoons, to offshore areas well beyond the continental shelf. Nesting occurs on upper beaches.	**No effect/** Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Olive Ridley Sea Turtle being located in or near an existing orchard and no work will occur near the oceanfront. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Loggerhead Sea Turtle *Caretta caretta*	T		Open sea to more than 500 miles from shore, mostly over continental shelf, and in bays, estuaries, lagoons, creeks, and mouths of rivers; mainly warm temperate and subtropical regions not far from shorelines. Adults occupy various habitats, from turbid bays to clear waters of reefs. Subadults occur mainly in nearshore and estuarine waters. Hatchlings move directly to sea after hatching, often float in masses of sea plants (Sargassum).	No effect/ Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Loggerhead Sea Turtle being located in or near an existing orchard and no work will occur near the oceanfront. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Bocaccio *Sebastes paucispinis*	E (CH)		Adults often occur in rocky areas, at depths of 12-481 m (most abundant at 50-251 m); larvae and small juveniles are pelagic and commonly occur in the upper 90 m of the water column; juveniles sometimes form dense schools under drifting kelp mats.	No effect/ Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Bocaccio being located in or near an existing orchard and no work will occur near the oceanfront. Therefore, it

Species	Status	Counties	Habitat	Agency Determination/Rational
				has been determined that there will be no impact to the species and a determination of "no effect" was made.
Yelloweye Rockfish *Sebastes ruberrimus*	T (CH)		Yelloweye are found along the western coast of North America from the Aleutian Islands to the Baja Peninsula. Adults are often solitary and inhabit steep rocky areas with nooks and crannies that they can seek shelter in. Usually found near the bottom, yelloweye rarely venture far from shelter. They are most commonly found between 300 ft and 600 ft but have been found in water as shallow as 48 ft and as deep as 1,800 ft.	**No effect/** Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms are being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Yelloweye Rockfish being located in or near an existing orchard and no work will occur near the oceanfront. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Eulachon (Columbia River Smelt) *Thaleichthys pacificus*	T (CH)		Nearshore ocean bottom, coastal inlets. Adults live at moderate sea depths (commonly 20-200 m but have been recorded as deep as 625 m) in echo-sounding layer not far from shore; young apparently occur in deeper water. Spawns in coastal freshwater streams over bottoms of silt, sand, gravel, cobble or detritus but apparently prefer bar and riffle habitat containing sand or pea-gravel, seldom more than a few miles inland. Presence of spring freshets is a factor common to nearly all spawning streams or rivers; typically characteristic of rivers that drain large snowpacks or glaciers.	**Not likely to adversely affect/** Range/Habitat: Marine salt water species that spawns within freshwater rivers. The TAP program is restricted to current orchards with no new farms are being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Eulachon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers.

Species	Status	Counties	Habitat	Agency Determination/Rational
				Therefore, impacts will be insignificant.
Green Sturgeon *Acipenser medirostris*	T (CH)		Green sturgeons spend most of their lives in coastal marine waters, estuaries, and the lower reaches of large rivers. They ascend rivers to spawn, but specific spawning and rearing habitats are poorly known.	**Not likely to adversely affect/** Range/Habitat: Marine salt water species that spawns within freshwater rivers. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Green Sturgeon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Blue Whale			Mainly pelagic; generally prefers cold waters and open seas, but young are born in warmer waters of lower latitudes.	**No effect/** Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. The probability of the Blue Whale being located

Species	Status	Counties	Habitat	Agency Determination/Rational
				in or near an existing orchard is discountable as no work occur near the oceanfront. Therefore, it has been determined that there will be no impact to this species.
Fin Whale			Pelagic; usually found in largest numbers 25 miles or more from shore. In the western Atlantic, occurs mainly over continental shelf in summer, in water 50-100 fathoms deep (Katona et al. 1983). Young are born in the warmer waters of the lower latitudes.	**No effect/** Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Fin Whale being located in or near an existing orchard and no work will occur near the oceanfront. Therefore, it has been determined that there will be no effect "to this species.
Oceanic Whitetip Shark				**No effect/** Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Oceanic Whitetip Shark being located in or near an existing orchard and no work will occur near the oceanfront. Therefore, it has been determined that there will be no effect "to this species.
Central America Humpback Whale	E (CH)		Habitat includes the open ocean and coastal waters, sometimes including inshore areas such as bays. Summer distribution is in temperate and subpolar waters. In winter, most humpbacks are in tropical/subtropical waters near islands or coasts.	**No effect/** Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Central America Humpback Whale being located in or near an existing orchard and no work will occur near the

Species	Status	Counties	Habitat	Agency Determination/Rational
				oceanfront. Therefore, it has been determined that there will be no effect" to this species.
Mexico Humpback Whale	T (CH)		Habitat includes the open ocean and coastal waters, sometimes including inshore areas such as bays. Summer distribution is in temperate and subpolar waters. In winter, most humpbacks are in tropical/subtropical waters near islands or coasts.	**No effect/** Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Mexico Humpback Whale being located in or near an existing orchard and no work occur near the oceanfront. Therefore, it has been determined that there will be no effect" to this species.
Sei Whales			Generally in deep water; along edge of continental shelf and in open ocean.	**No effect/** Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Sei Whale being located in or near an existing orchard and no work will occur near the oceanfront. Therefore, it has been determined that there will be no effect" to this species.
Southern Resident Killer Whales	(CH)		Mainly in coastal waters, but may occur anywhere in all oceans and major seas at any time of year.	**No effect/** Range/Habitat: Marine salt water species. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Southern Resident Killer Whale being located in or near an existing

Species	Status	Counties	Habitat	Agency Determination/Rational
				orchard and no work will occur near the oceanfront. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Sperm Whales			Pelagic, prefers deep water, sometimes around islands or in shallow shelf waters. Tend to occur in highest densities near productive waters, and often near steep drop-offs or strong oceanographic features, e.g. edges of continental shelves, large islands, and offshore banks and over submarine trenches and canyons. Females generally restricted to waters with surface temperatures warmer than about 15 degrees C and rarely found in waters less than 1000 m deep. Males, although primarily found in deep water, are sometimes found in waters 200 to 1000 m deep.	**No effect**/ Range/Habitat: Marine salt water species that is rarely found in waters less than 3000 feet. The TAP program is restricted to current orchards with no new farms being contemplated. All chemical applications will be done in accordance with EPA label regulations. There is no possibility of the Sperm Whale being located in or near an existing orchard and no work will occur near the oceanfront. Therefore, it has been determined that there will be no impact to the species and a determination of "no effect" was made.
Hood Canal Summer-run Chum Salmon	T (CH)		Freshwater.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application

Species	Status	Counties	Habitat	Agency Determination/Rational
				methods and rates. The probability of the Hood Canal Chum Salmon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Ozette Lake Sockeye Salmon	T (CH)		Freshwater.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Ozette Lake Sockeye Salmon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Puget Sound Chinook Salmon	T (CH)		Freshwater.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within

Species	Status	Counties	Habitat	Agency Determination/Rational
				200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Puget Sound Chinook Salmon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Puget Sound Steelhead	T (CH)		Capable of surviving in a wide range of temperature conditions. Does best where dissolved oxygen concentration is at least 7 ppm. Anadromous populations occur in coastal rivers. Resident populations now inhabit small headwater streams, large rivers, lakes, or reservoirs; often in cool clear lakes and cool swift streams with silt-free substrate. In streams, deep low velocity pools are important wintering habitats.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Puget Sound Steelhead being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.

Species	Status	Counties	Habitat	Agency Determination/Rational
Middle Columbia River Steelhead	T (CH)		Steelhead typically spend two years in fresh water, migrate to marine waters, where they spend 2-3 years, then return to natal stream to spawn. Most middle Columbia River steelhead smolt at two years and spend 1-2 years in salt water prior to re-entering fresh water, where they remain up to a year before spawning; within this ESU, the Klickitat River is unusual in producing both summer and winter steelhead, and the summer steelhead are dominated by fishes that spend two years in salt water, whereas in most other rivers in this region fishes that spend one year in salt water are about as common as those that spend two years.	**May affect but not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Middle Columbia River Steelhead being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Snake River Fall-run Chinook Salmon	T (CH)		Nonspawning habitat: mainly oceanic. Spawns in freshwater steams. Fry remain in spawning gravel for about 30 days. Juveniles occur in streams and use vegetation, large organic material, and boulders for cover. Most spawning occurs at temperatures of 40-55 F in gravel riffles in cool, clear, main streams, typically at the tail end of a pool (beginning of riffle), where the female forms a redd, or nest, in the gravel.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Snake River Fall-run Chinook Salmon being located in or near an existing orchard is discountable as no

Species	Status	Counties	Habitat	Agency Determination/Rational
				work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Snake River Spring/Summer-run Chinook Salmon	T (CH)		Freshwater/Coastal	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Snake River Spring/summer-run Chinook Salmon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.

Species	Status	Counties	Habitat	Agency Determination/Rational
Snake River Sockeye Salmon	E (CH)		Adults are oceanic, except during migrations and spawning. Normally smolts spend first two years in freshwater, then migrate to ocean where they spend two more years before returning to spawn; however, time spent in the different habitats is variable. Juveniles occupy lakes prior to migration to ocean. Spawns generally in cool, clear, silt-free, inlet or outlet streams of lakes or sometimes near shoals along beaches of lake.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Snake River Sockeye Salmon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Snake River Steelhead	T (CH)		Steelhead typically spend two years in fresh water, migrate to marine waters, where they spend 2-3 years, then return to natal stream to spawn. Some Snake River basin steelhead spend one year in salt water whereas others spend two years.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Snake River Steelhead being located in or near an existing orchard is discountable as no work occurs

Species	Status	Counties	Habitat	Agency Determination/Rational
				near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Upper Columbia River Spring-run Chinook Salmon	E (CH)		Freshwater.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Upper Columbia River Spring-run Chinook Salmon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.

Species	Status	Counties	Habitat	Agency Determination/Rational
Upper Columbia River Steelhead	T (CH)		Steelhead typically spend two years in fresh water, migrate to marine waters, where they spend 2-3 years, then return to natal stream to spawn. Steelhead from the Wenatchee and Entiat rivers return to fresh water after one year in salt water, whereas most Methow River steelhead spend two years in salt water.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Upper Columbia River Steelhead being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Columbia River Chum Salmon	T (CH)		Spawns in upwelling water that is significantly warmer than the surrounding river water.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Columbia River Chum Salmon being located in or near an existing orchard is discountable as no work occurs

Species	Status	Counties	Habitat	Agency Determination/Rational
				near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Lower Columbia River Chinook Salmon	T (CH)		Freshwater.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Lower Columbia River Chinook Salmon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.

Species	Status	Counties	Habitat	Agency Determination/Rational
Lower Columbia River Coho Salmon	T (CH)		Bay/sound, Lagoon, River mouth/tidal river, big to medium size river, creek, High gradient, Low gradient, Moderate gradient, Pool, Riffle.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Lower Columbia River Coho Salmon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Lower Columbia River Steelhead	T (CH)		Bay/sound, Lagoon, River mouth/tidal river, big to medium size river, creek, High gradient, Low gradient, Moderate gradient, Pool, Riffle.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Lower Columbia River Steelhead being located in or near an existing

Species	Status	Counties	Habitat	Agency Determination/Rational
				orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Upper Willamette River Chinook Salmon	T (CH)		Freshwater.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Upper Willamette River Chinook Salmon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.

Species	Status	Counties	Habitat	Agency Determination/Rational
Upper Willamette River Steelhead	T (CH)		Freshwater.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Lower Upper Willamette River Steelhead being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Lower Columbia River Steelhead	T (CH)		Bay/sound, Lagoon, River mouth/tidal river, big to medium size river, creek, High gradient, Low gradient, Moderate gradient, Pool, Riffle.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Lower Columbia River Steelhead being located in or near an existing orchard is discountable as no

Species	Status	Counties	Habitat	Agency Determination/Rational
				work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.
Upper Willamette River Chinook Salmon	T (CH)		Freshwater.	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Upper Willamette River Chinook Salmon being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.

Species	Status	Counties	Habitat	Agency Determination/Rational
Upper Willamette River Steelhead	**T (CH)**		**Freshwater.**	**Not likely to adversely affect/** Range/Habitat: Freshwater species that migrates to coastal waters. The TAP program is restricted to current orchards with no new farms being contemplated and no work will occur within any rivers. The Washington State Shoreline Management Act (SMA) also restricts development or chemical applications within 200 feet of shorelines covered under the SMA. All chemical applications will be done in accordance with EPA label regulations and should not vary greatly from current application methods and rates. The probability of the Upper Willamette River Steelhead being located in or near an existing orchard is discountable as no work occurs near the oceanfront or within the rivers. Therefore, impacts will be insignificant.