

Application for an Individual Incidental Take Permit under the Endangered Species Act of 1973

March 2012

For the Puget Sound populations of:

Bocaccio (*Sebastes paucispinis*)

Canary Rockfish (*Sebastes pinniger*)

Yelloweye Rockfish (*Sebastes ruberrimus*)

Green Sturgeon (*Acipenser medirostris*)

Eulachon (*Thaleichthys pacificus*)

and

Chinook salmon (*Oncorhynchus tshawytscha*)

Philip Anderson

Director

Applicant/Permit Holder

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

600 Capital Way North

Olympia, Washington 98501

(360) 902-2234

FAX: (360) 902-2947

Philip.Anderson@dfw.wa.gov

Introduction

The Washington Department of Fish and Wildlife (WDFW) requests an Individual Incidental Take Permit (ITP) under Section 10 (a)(1)(B) of the Endangered Species Act (ESA) of 1973. The requested ITP will authorize the implementation of management measures to protect threatened and endangered species of rockfish, and threatened green sturgeon, Puget Sound Chinook salmon and eulachon in Puget Sound while allowing valuable commercial trawl fisheries for shrimp and recreational fisheries for bottomfish and other fish to operate within the affected area of Puget Sound. The fisheries will be authorized, monitored, and managed by the WDFW. The application requests approval for a 5-year time period (effective when the ITP is signed) and is accompanied by a Fishery Conservation Plan for the listed species (WDFW 2011a).

Background

On April 28, 2010, the National Marine Fisheries Service (NMFS) listed the Puget Sound/Georgia Basin Distinct Population Segments (DPSs) of yelloweye rockfish (*Sebastes ruberrimus*) and canary rockfish (*S. pinninger*) as Threatened, and bocaccio (*S. paucispinis*) as Endangered under the federal Endangered Species Act (16 USC 1531 *et seq.*). The southern DPS of eulachon (*Thaleichthys pacificus*) was listed as threatened under the ESA on May 17, 2010. The southern DPS of green sturgeon (*Acipenser medirostris*) was listed as threatened under ESA on June 2, 2010. The Puget Sound Chinook Evolutionary Significant Unit was reaffirmed as threatened on June 28, 2005 (70FR37160). Section 4 of the ESA prohibits the taking of any listed species and Section 10 describes a process to allow permitted takings of listed species for research purposes or takings incidental to other otherwise lawful activities. NMFS may issue a permit to allow otherwise prohibited takings of these species upon receipt of an application for a permit and an acceptable conservation plan for the impacted species. An opportunity for public review of the application and conservation plan prior to approval is required. This document is WDFW's application for a Section 10 (a)(1)(B) Incidental Take Permit. A Fishery Conservation Plan for the listed species has also been prepared and presented to the National Marine Fisheries Service (WDFW 2011a).

Area Included In the ITP Application

The National Marine Fisheries Service determined that the geographic area of the DPSs was identical for all three species of rockfish (Federal Register 2009). The area of the DPSs is comprised by the waters of the Strait of Georgia in British Columbia and the waters of Puget Sound including Hood Canal, the San Juan Islands, and portions of the Strait of Juan de Fuca

(Figure 1). The western boundary of the area of the DPSs was determined to be at the Victoria Sill near Port Angeles, although there was uncertainty about the exact definition of the western end (Drake et al. 2010). The green sturgeon and eulachon DPSs and the Puget Sound Chinook ESU are larger than the rockfish DPSs, but only areas inside the rockfish DPSs are addressed in this ITP application (an area where the DPSs/ESU of ESA-listed rockfish, green sturgeon, eulachon, and Puget Sound Chinook salmon overlap).

This application considers only the portion of the DPSs within the waters of the United States (i.e., the application excludes Canadian waters). Management areas used by WDFW approximate, but do not correspond exactly, with the definition of the western end of the DPSs (WDFW 2011a). Accordingly, for the purposes of this application, WDFW proposes to manage fisheries to the eastern end of Recreational Marine Catch Area 5 at Low Point (Figure 2) as a surrogate for the western end of the rockfish DPSs. This approach will approximate, but include all of the defined DPSs area and thus provide the required protection to the listed species of rockfish. This approach will also provide clarity of regulations to fishers by eliminating the need to introduce a new regulatory line that follows the Victoria Sill.

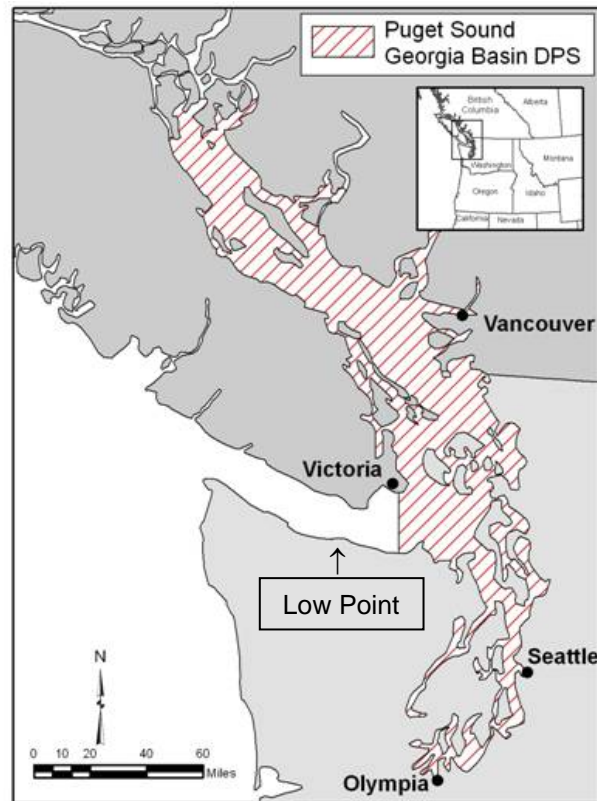


Figure 1. The area included in the definition of the Distinct Population Segments for three species of rockfish (Source: NMFS 2010).

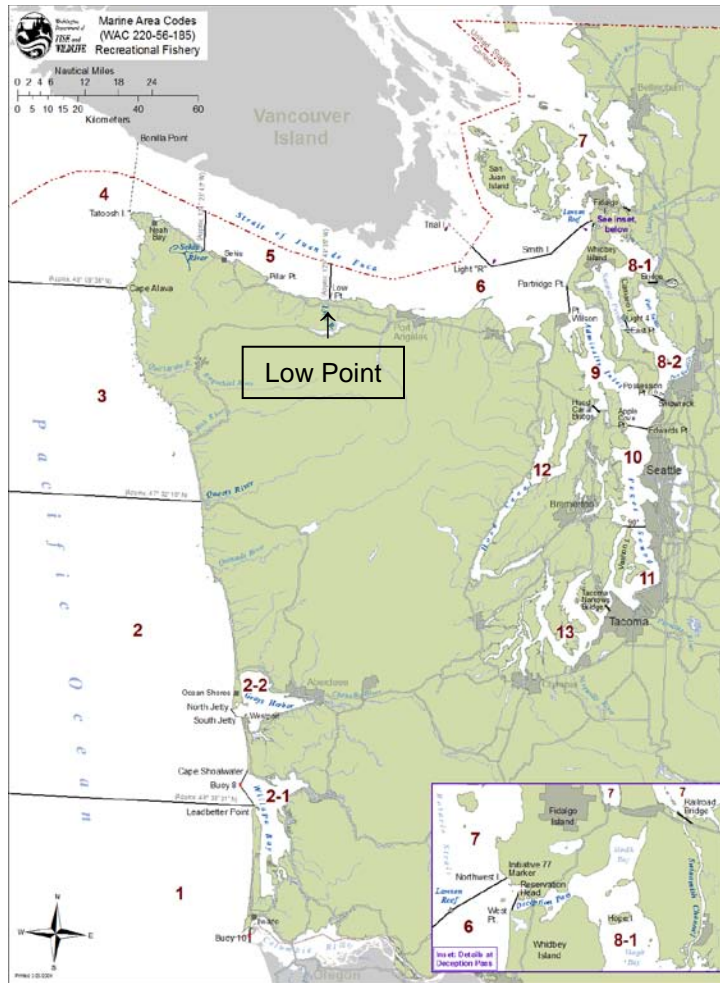


Figure 2. Recreational Marine Catch Areas.

Agency Authority

The Washington Legislature has delegated responsibility to manage fish and shellfish resources and recreational and commercial fisheries to the WDFW (Revised Code of Washington 77.04.012). The Legislature also requires WDFW to conduct research on the fish resources of Washington (RCW 77.04.120). WDFW has authority to enact regulations to conserve ESA-listed rockfish, Puget Sound Chinook, green sturgeon, and eulachon resources. This authority includes specifying the time, place, and manner by which these species protected and monitored within commercial and recreational fisheries. There are two types of rule making authority: emergency and permanent. An emergency rule is designed to deal with emerging, urgent situation. The Director has the authority to issue an emergency rule, and this can be done within a few hours or days. Emergency rules last a maximum of 120 days, but can be renewed for an additional 120 days under certain circumstances. A permanent rule is designed to deal with

foreseeable issues and has no set expiration date. Permanent rules are adopted by the Fish and Wildlife Commission and require a rule-making process that lasts at least 105 days.

Fisheries

As part of the preparation of the ITP Application, the WDFW reviewed all of the fisheries occurring within the Puget Sound/Georgia Basin DPSs and concluded that eight fisheries within this area had the potential to take listed species of rockfish (WDFW 2011a). Three fisheries were judged to have a high risk of taking listed rockfish, two fisheries had a moderate risk and three fisheries had an unknown risk, but were currently authorized by regulation (but inactive with no participation). Two fisheries (shrimp trawl and recreational fishing for bottomfish and other fish) were judged to have a moderate, yet manageable risk to listed rockfish. Upon reviews of fishery records and the characteristics of each fishery, they were also determined to result in limited bycatch of Puget Sound Chinook salmon (both fisheries), green sturgeon and eulachon (shrimp trawl fishery). As a result of this review, WDFW had taken action on each of the fisheries. The actions taken have included closing fisheries with high potential to take rockfish, closing inactive fisheries as a precautionary measure, and including two fisheries in the Application for an ITP (Table 1). For the two fisheries included within the ITP, we have estimated annual takes of ESA-listed species, as well as developed enhanced monitoring plans for incidental bycatch. The fisheries closures were instituted by emergency rule on July 28, 2010 and made permanent in February 2011 (WDFW 2011a). This permit does not include the take of ESA-listed rockfishes by the low potential fisheries (listed in Appendix 2 in WDFW 2011a).

Landings and Value

The recreational fishery for bottomfish and other fish (besides salmon and halibut fisheries) and the commercial trawl fishery for shrimp are very different fisheries employing different types of fishing gear with different expectations of participants (WDFW 2011a has a detailed description of both fisheries). Because of the differences in the two fisheries, performance and value are measured in different ways. For recreational fishing, performance is measured in the number of fish landed and the value in expenditures (e.g., equipment, vessel fuel, hotel costs, etc.). For the shrimp trawl fishery, performance is measured in catch (pounds of shrimp) and value in the ex-vessel (as the catch is off-loaded) value in dollars (TCW Economics 2008). Because of changes in fishing opportunities, weather, and economic conditions, both the performance and value of these fisheries can change from year-to-year. To evaluate the production and value of these fisheries, WDFW used data from 2008 and 2009 to calculate annual average estimates. It should be noted, however, that the full economic value and activity of the commercial fisheries are not

represented by the ex-vessel value alone, and does not include the processing, distribution, and retail market portions of the economic sector.

Table 1. WDFW Action on Fisheries with Potential to Take ESA-listed Rockfishes in the Puget Sound DPSs (Source: WDFW 2011a).

FISHERY	RISK TO LISTED ROCKFISH SPECIES	STATUS	WDFW ACTION
Set net	High	Closed	Closed by permanent regulation February 2011
Set line	High	Closed	Closed by permanent regulation February 2011
Forage Fish Purse Seine	Unknown	Inactive	Herring purse seine limited entry and inactive; other forage fish, inactive
Bottom trawl	High	Closed	Closed by permanent regulation February 2011
Pelagic trawl	Unknown	Inactive	Closed by permanent regulation February 2011
Bottomfish pot	High	Inactive	Closed by permanent regulation February 2011
Shrimp trawl	Moderate	Active	Included in this ITP Application
Recreational fishing for bottomfish and other fish	Moderate	Active	Included in this ITP Application

Recreational fisheries for bottomfish and other fish- In 2008 and 2009, the recreational fishery averaged about 92,500 fishing trips with a catch of over 130,000 bottomfish annually. The economic value of this activity is approximately \$5.6 million annually (Table 2).

Shrimp fishery- The performance of the shrimp trawl fishery can vary widely from year-to-year. In recent years the annual catch has been about 400,000 pounds, worth \$142,000 (Table 3).

These two fisheries produce an average of \$5.7 million in value annually.

Table 2. Catch, Effort and Economic Value Associated with the Recreational Fishery for Bottomfish and Other Fish within the Puget Sound DPSs.

	2008	2009	2008-09 AVERAGE
CATCH (number of fish)	86,812	179,923	133,368
NUMBER OF ANGLER TRIPS	82,182	102,767	92,475
VALUE PER TRIP	*\$60	\$60	\$60
ECONOMIC VALUE	\$4,930,920	\$6,166,020	\$5,548,470

*Source: WDFW unpublished data, TCW 2008

Table 3. Catch and Economic Value Associated with the Trawl Fishery for Shrimp within the Puget Sound DPSs.

	2008	2009	2008-09 AVERAGE
CATCH (pounds of shrimp)	630,787	217,380	424,084
VALUE (ex-vessel)	\$216,065	\$69,620	\$142,842

Source: WDFW unpublished data

Research

WDFW conducts a variety of research projects within the area of the Puget Sound/Georgia Basin DPSs. These activities are described in detail in the Conservation Plan (WDFW 2011a). The results of these research activities are used to detect changes in fish abundance, set limits on catch, and are important in the management of fish resources, including rockfish. Past results of WDFW research activities were used by NMFS to evaluate the status of the three listed rockfish species (Federal Register 2009). Research activities are not proposed for coverage under section 10(a)(1)(B) of the ESA, but are mentioned here because they will nonetheless inform adaptive management within this ITP.

Adaptive Management Plan

The Adaptive Management Plan is detailed within the Fishery Conservation Plan (see WDFW 2011a). In summary, WDFW may implement and enforce additional management actions to manage fisheries that incidentally take covered ESA-listed fish, as necessary. Any additional changes or restrictions to fisheries covered in this ITP to reduce bycatch of covered species will be determined by WDFW, in consultation with NMFS. The estimated annual catch of ESA-listed rockfish can be quite variable and bycatch of eulachon in the shrimp trawl fishery is anticipated to be highly variable as well. In order to accommodate this variability we propose that the take of ESA-listed rockfish from recreation bottomfish fisheries and of ESA-listed rockfish and eulachon in commercial shrimp trawls be tracked on an annual and cumulative five-year basis. Annual take estimates would be provided as described above, but if the estimated annual take of fish combined from the two fisheries is exceeded, it would not result in loss of section 10(a)(1)(B) coverage (unless the take exceeded the five year estimate). If, on an annual basis through years one, two and three of the ITP, the combined annual take estimate by the two fisheries for any ESA-listed species is exceeded by 20 percent or more, we propose that an adaptive management trigger occur and WDFW and NOAA meet and discuss the possible need to implement fishery changes to reduce bycatch. If, by year three and four of the ITP it appears that the five-year cumulative take may be exceeded, WDFW and NOAA will discuss any necessary fishery changes to reduce this possibility Table 4.

Table 4. Adaptive Management Triggers

	Projected Annual Take for Rec. Bottom Fish and Shrimp Trawl	Year 1, 2 & 3 Adaptive Management Trigger	5-Year Cumulative Take Limit
Bocaccio	43 (5 from shrimp trawl)	50	210
Canary Rockfish	138 (10 from shrimp trawl)	166	690
Yelloweye Rockfish	152 (10 from shrimp trawl)	180	760
Eulachon	3,240 (all from shrimp trawl)	3,889	16,205

If deemed necessary, reducing takes (and gathering additional information) of covered species may consist of, but are not limited to, increased gear restrictions and bycatch reduction methods, area closures, or increased observer coverage, or discontinuation of a fishery. However, based on recent WDFW fishery management actions (see Management Measures section below), the likelihood of adopting any of these adaptive management provisions during the duration of this permit is expected to be relatively small.

WDFW, in consultation with NMFS, intends to utilize adaptive measures to accurately collect data through a monitoring program that is designed to have the flexibility to anticipate, respond, and adjust to current needs. This responsive, long-term, proactive approach will facilitate the protection and conservation of ESA-listed rockfish and other listed species within the Puget Sound/Georgia Basin.

If an ESA-listed rockfish is caught by a non-covered fishery, WDFW will conduct a review to determine if additional section 10(a)(1)(B) coverage for those fisheries is warranted.

Conservation Plan

WDFW has prepared an accompanying Fishery Conservation Plan (WDFW 2011a) that describes in detail the proposed covered fisheries that are anticipated to incidentally take some ESA-listed fish in addition to research activities and adaptive management provisions. WDFW assessed state-authorized recreational and commercial fisheries that occur within the DPSs for their relative risk of incidentally catching ESA-listed rockfish. Several fisheries have been closed that were either inactive or considered to exceed an acceptable risk threshold for ESA-listed rockfish. For those fisheries that have a risk of ESA-listed fish bycatch and are proposed for coverage under an ITP, the specific gears, locations and relative risks of bycatch are described in the Fishery Conservation Plan, as well as any management measures that have been

taken to reduce this risk, as applicable. Because eulachon have been observed in the commercial shrimp trawl fishery, this plan includes information for eulachon monitoring, take estimation, and coverage. In the WDFW Marine Fish Research Activities section we describe studies that will assess the assemblage and status of marine biota in the Puget Sound, as well as expected incidental bycatch of listed species associated with them. Finally, in the Annual Reporting and Adaptive Management Plan section we describe the synthesis of this information as well as coordination with NMFS.

For additional background regarding state conservation efforts for rockfish, in February 2011, WDFW completed a Puget Sound Rockfish Conservation Plan (PSRCP) (WDFW 2011b) which is intended to provide a basis to restore and protect populations of rockfish in Puget Sound while providing opportunities to view rockfish in the marine environment and, when appropriate, provide sustainable fishing opportunities. The PSRCP refers to elements of the Fishery Conservation Plan prepared for this ITP (such as fishery management, research, etc). However, actions within the FCP are stand-alone and this ITP application does not seek section 10(a)(1)(B) coverage for the implementation of the state PSRCP. Prior to adoption, the PSRCP underwent a lengthy period of public review, including seven formal meetings. The adopted plan contains the following eight different, but interlocking policy categories:

1. Natural Production
2. Habitat Protection and Restoration
3. Fishery Management
4. Ecosystem effects
5. Evaluation, Monitoring and Adaptive Management
6. Research
7. Outreach, Education and Ecotourism
8. Enhancement

We provide additional background on the PSRCP and its relationship to rockfish research, habitat conservation and Marine Protected Areas:

Research- WDFW commits to continuing and expanding its existing research program. Emphasis is placed on better estimating the numbers of listed species of rockfish present in the DPSs area, identifying key habitat areas of listed species, investigating rapid submergence to overcome the effects of barotrauma, and understanding limits to the production of the listed rockfish species. WDFW will continue to track the progress of on-going research of eulachon bycatch in shrimp fisheries along the Pacific Coast. Applicable methods to reduce bycatch in shrimp fisheries in the Puget Sound will be utilized as necessary.

Habitat Restoration- WDFW will continue its program of habitat conservation through avoiding habitat disruption, restoring degraded habitat, and mitigating for unavoidable habitat loss. Rockfish habitat is degraded by fishing nets that have been lost or discarded at sea. This derelict gear can take listed rockfish species within the DPSs (<http://www.derelictgear.org/>). In restoring rockfish habitat and in conjunction with other agencies and organizations, WDFW will continue identifying derelict fishing nets, minimizing the accrual of new derelict gear, and supporting the removal of derelict gear. The removal of derelict gear is not a covered activity within this ITP because it is typically wholly or partially federally funded (and thus not eligible for section 10 coverage).

Marine Protected Areas- Marine Protected Areas (MPAs) are legally defined areas that restrict or eliminate fishing within their boundaries. The newly adopted PSRCP (WDFW 2011b) calls for the establishment of a scientifically-based network of no-take marine reserves and rockfish conservation areas within Puget Sound. The intent of these MPAs is to protect rockfish habitat, to reduce fishing mortality, and to provide research opportunities. The plan does not specify the number or size of MPAs. The establishment of MPAs would not be a covered activity within this ITP, but could be part of a separate ESA section 10 or 4(d) process with NOAA in the future.

Management Measures to Reduce Take

Fisheries Regulation

The WDFW will use its regulatory authority to implement measures to minimize adverse interactions of listed rockfish species. Stricter regulations have been applied to both recreational and commercial fisheries in 2010.

Recreational Fisheries- Two significant regulations were enacted in 2010. Effective May 1, 2010, the retention of rockfish of any species was prohibited in any recreational fishery. Additionally, recreational fishing for bottomfish (including rockfish but not halibut) was prohibited in waters deeper than 120 feet. These restrictions were enacted by permanent rule and, like all other fishing regulations, will remain in effect for the duration of section 10(a)(1)(B) ITP coverage. In addition, rules limiting recreational anglers to two barbless hooks have been in place for several years, and reduce potential injury to ESA-listed rockfish and Chinook salmon that are incidentally caught by anglers targeting bottomfish and other fish. Hood Canal has also been closed to any bottom fishing for several years.

Commercial fisheries- Several commercial fisheries were closed in the DPSs by emergency rule on July 28, 2010. These fisheries were closed due to their potential to catch listed species of rockfish. The closed fisheries included bottomfish trawl, dogfish set net, dogfish set line, bottomfish pot, scallop trawl, and baitfish purse seine. WDFW's Fish and Wildlife Commission permanently closed all of these fisheries except forage fish purse seine and closed the pelagic trawl fishery in February 2011 (effective April 23, 2011). The Commission passed a rule to

require a WDFW permit for those fishing for shrimp with a beam trawl that stipulates the conditions of an observer monitoring program and other restrictions to protect listed rockfish (and other listed species). The Commission also implemented a permanent rule prohibiting the retention of any species of rockfish caught in any commercial fishery within the DPSs area.

Education- WDFW commits to a series of efforts to educate participants in the recreational and commercial fisheries of the value of listed rockfish and the importance of avoiding any takes.

For the recreational fishery, WDFW will utilize a variety of methods to disseminate the information. There are a large number of recreational anglers with varied levels of experience. WDFW has already used the agency web site and the annual sportfishing rules pamphlet for posting this information. Information will include publicizing the nature and need for restrictions to protect rockfish and methods to improve an angler's ability to identify released catch.

For the commercial fishery, this education will consist of personal contacts with participants. There are a small number of participants, all of whom are experienced fishers, and personal contact is the best way to disseminate information.

Steps To Monitor and Minimize Impacts

Monitoring- As part of this Application, WDFW commits to monitoring the covered recreational bottomfish and commercial shrimp trawl fisheries within the Marine Catch Areas of Puget Sound within the rockfish DPSs (Figure 2, above). The specific methodologies for this monitoring are detailed in the accompanying Fishery Conservation Plan (WDFW 2011a). For the recreational bottom fish fishery, no rockfish may be legally retained by any fishery within the DPSs, thus monitoring will focus on estimating the number and species of rockfish caught and released at sea. Similarly, monitoring will focus on the catch of Puget Sound Chinook released by anglers targeting bottomfish.

For commercial fisheries (i.e., the shrimp trawl fishery), this monitoring will consist of placing a trained observer on board fishing vessels to observe the fishing operations. The observer will be randomly deployed on not less than 10% of all fishing trips. The observer will document the number and species of fish (with an emphasis on ESA-listed fish) caught and obtain biological information (length and material for genetic studies). WDFW will use the monitoring results to estimate total take of covered species and conduct adaptive management to ensure that the permitted level of take is not exceeded.

For recreational fisheries, the monitoring will consist of interviewing anglers after they have completed their fishing trip. The interview will ask anglers about the number and species of rockfish and Chinook salmon released. Results will be used to estimate total take of listed rockfish and Chinook salmon by species (WDFW 2011a). Due to the nature of the recreational fishery and the data analysis requirements, WDFW does not anticipate in-season fishing changes, except in the most unusual circumstances. WDFW intends to review the monitoring results and

produce annual changes in regulations to ensure that the permitted take is not exceeded during the duration of the ITP. Any such changes will occur only following consultation with NMFS. Illegal catches of listed species may occur, and WDFW will use these opportunities to collect fin clips and other biological samples from illegally harvested fish.

Authorized Incidental Takes

The WDFW believes that recent measures taken to reduce the take of rockfish by recreational fisheries will greatly reduce the take of any of the three listed species of rockfish (WDFW 2011a has details). As described in the FCP (WDFW 2011a) and summarized in Table 5, acceptance of this Application would result in an estimated annual take (lethal and non-lethal) of 43 bocaccio, 138 canary rockfish, 152 yelloweye rockfish 3,240 eulachon and 92 Puget Sound Chinook (92 hatchery origin and 0 natural origin).

Compliance

The WDFW Enforcement Program will be responsible for enforcing regulations and permit requirements under the ITP permit. This Program has a Marine Enforcement Division which consists of one Captain, five detectives, four sergeants, and 17 enforcement officers. This Division has the capacity to utilize motor vehicles, boats, and aircraft to enforce regulations and permit requirements. Regulations to protect and monitor covered ESA-listed species have been in effect since 2010 (prohibition on targeted rockfish fishing, retention of rockfish, fishing deeper than 120 feet), and 2011 (observers on shrimp trawl fisheries). Other regulations that protect covered ESA-listed rockfish and Puget Sound Chinook, such as prohibitions on barbed hooks, have been in effect for many years. As such, the WDFW Enforcement Program has experience enforcing these protective regulations, and recreational anglers and shrimp trawl fishermen are aware of these protective regulations.

Table 5. Anticipated Annual Takes for ESA-listed Rockfish, Chinook salmon, and Eulachon by the Commercial Shrimp Trawl and Recreational Fisheries for Bottomfish and Other Fish within Puget Sound DPSs.

Species	Recreational		Shrimp Trawl		Annual Takes		5-Year Takes	
	Nonlethal	Lethal	Nonlethal	Lethal	Nonlethal	Lethal	Nonlethal	Lethal
Bocaccio, adult	26	12	0	5	26	17	130	85
Bocaccio, juvenile	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above
Canary Rockfish adult	81	47	0	10	81	57	405	285

Canary Rockfish juvenile	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above
Yelloweye Rockfish adult	87	55	0	10	87	65	435	325
Yelloweye Rockfish, juvenile	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above
Eulachon, adult	0	0	0	3,240		3,240	0	16,200
Eulachon, juvenile	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above
PS Chinook * Adult Hatchery	30	12	0	50	30	62	150	310
PS Chinook juvenile* Hatchery	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above	Included Above
PS Chinook* Adult natural	0	0	0	0	0	0	0	0
PS Chinook* Juvenile natural	Included above	Included above	Included above	Included above	Included above	Included above	Included above	Included above
Southern DPS Green Sturgeon	0	0	1	1	1	1	5	5
* Number of Puget Sound Chinook in the recreational columns are estimated based on 2008-2010 creel data. These numbers assume a 20% sample rate and a 20% mortality rate for released Chinook.								

Funding

WDFW is committed to funding all components of this ITP. Most of the management measures to reduce and monitor incidental takes are part of existing WDFW programs and have already been implemented. These include fishery regulations changes and closures, described above, that are have already modified. Thus no additional expenses are expected to occur from these regulation changes and fishery closures. The shrimp trawl fishery observer program is paid for by the fishermen, and thus incur no additional costs to WDFW. WDFW will continue to require the shrimp trawl fishery to support required observer coverage for the term of the ITP. Monitoring of recreationally-caught bottomfish in the Puget Sound is part of a larger marine fish catch estimation program, using telephone surveys and field-based intercept surveys. This

program has been in place for several years and will remain for the duration of the ITP. The WDFW funds are allocated on a biennial basis and cannot be guaranteed in future years. During every budget cycle WDFW must evaluate funding levels and how they relate to meeting the requirements of the ITP. Monitoring fisheries and providing compliance will be the most costly components of this ITP. If future funding becomes insufficient to maintain the program, WDFW will seek additional funding sources or reevaluate the program, understanding that ITP coverage will cease if WDFW discontinues implementing its provisions.

Reporting and Coordination

WDFW will produce one or more reports containing results of monitoring and new research results annually by the end of January following the year of the activities conducted under the authority of the ITP. For example, the report for 2012 will be available by the end of March 2013.

WDFW will coordinate with NMFS as needed. WDFW anticipates the coordination will occur annually at a minimum. Planned coordination meetings will be held during the spring months of each year. This coordination will include estimates of retained catch by all fisheries, estimates of discarded catch for selected fisheries, results of scientific studies, and coordination of planned activities. Additional coordination may occur on an *ad-hoc* basis.

The purpose of annual coordination is to assess any new information about the yelloweye rockfish, canary rockfish, and bocaccio status. Updated by-catch numbers will also be assessed relative to the information described above. In addition, each agency will discuss future research efforts to better-understand stock status and recovery actions that would benefit each species.

Anticipated Impact on Covered Species

Impacts to listed rockfish from incidental capture in the recreational bottomfish fishery and commercial shrimp trawl range from non-lethal injury to death from barotrauma. Although recreational and commercial fishers are required by state law to return all rockfish species to the water, the mortality rate of released rockfish may be high, particularly fish that are brought up from deeper than 60 feet (Jarvis and Lowe 2008, Parker et al. 2006, Palsson et al. 2009). When rockfish are brought from depths greater than 60 feet, rapid decompression causes over-inflation and/or rupture of the swim bladder (termed barotrauma) which can result in multiple direct injuries. In addition, these injuries cause various levels of disorientation among rockfish species which can result in fish remaining at the surface for various periods after they are released (Hanna and Matteson 2007). Rockfish at the surface are susceptible to predation by birds, sharks or marine mammals, damage from solar radiation, and gas embolisms (Palsson et al. 2009). These factors, separately or in combination, often result in death.

Non-lethal harm to individual rockfish, and Chinook salmon from the recreational bottomfish fishery would include hook impalement, soft-tissue damage, de-scaling and regurgitation of stomach contents. Harm to individual ESA-listed rockfish, Chinook salmon, eulachon and green sturgeon in the shrimp trawl fishery include injury through force trauma or suffocation, depending upon the total catch, and if they are caught early or late within a tow event. In limited cases individual fish can recover fairly rapidly and be released alive. However, it is anticipated that all eulachon and Chinook salmon caught in the shrimp trawl fishery will be mortalities.

From a species-perspective, recent actions by WDFW are anticipated to reduce fisheries impacts on listed rockfish species population viability within the DPSs. WDFW actions include ending all directed fishing for rockfish within the DPSs, closure of commercial fisheries that pose a high risk to rockfish, depth restrictions to recreational fishing, improved fishery monitoring programs, and adoption of a comprehensive management plan for rockfish in Puget Sound. The greatest impact will occur in the recreational fishery. Maximum annual encounters of canary rockfish in this fishery in recent years has been 387 fish (WDFW 2011a). If this application is accepted, the expected outcomes of the new fishery restrictions will result in a maximum annual take of 128 canary rockfish. We anticipate the maximum annual take of yelloweye rockfish in this fishery will be 142 fish compared with a maximum of 566 encounters prior to the new rule adoption.

Anticipated Impact on Habitat

The fisheries and research covered within this ITP application are not expected to meaningfully alter benthic habitats of the Puget Sound/Georgia Basin. Recreational fishing gear used by anglers targeting bottomfish is occasionally lost among rocky habitats. This gear would not likely continue to ‘fish’ as derelict fishing nets do, and would not appreciably alter habitat structure or function.

Commercial fishing for shrimp uses trawling gear that fishes on or near the bottom. Shrimp trawl gear can drag along the bottom and likely results in localized turbidity and indentations within soft-bottomed benthic habitats. Bottom structure may also be altered as commercial shrimp fishermen use gear in cobble habitats, with smaller rocks potentially moved as the gear contacts the bottom. Since this gear is typically not used within or near steep and complex areas used by rockfish, effects to habitats of ESA-listed rockfish would be expected to be minimal. Lost trawl gear is quite rare (Good et al. 2010), but any lost trawl nets occurring in the shrimp-trawl fisheries will be documented for subsequent removal efforts.

Alternatives Considered

WDFW considered, but ultimately rejected, an alternative action to close recreational bottom fishing and commercial shrimp fisheries in the rockfish DPSs and not apply for an ITP. While these alternatives would provide protection to the listed species of rockfish, Chinook salmon, green sturgeon and eulachon, it was determined that closure of the fisheries would cause undue economic harm to the citizens of Washington and further constrain the harvest of local seafood.

WDFW also considered and rejected an alternative action to maintain commercial and recreational fisheries as in the past and attempt to reduce the impact on ESA-listed species through public education and outreach. The alternative would have encouraged fishers to avoid fishing in areas of rockfish habitat and to employ fishing methods to reduce incidental catch of listed species (e.g., choice of bait, fishing depth), but was rejected as the benefits to listed rockfish would be uncertain, and there would be no practical method to enforce the provisions of this approach. It was also rejected because education and outreach efforts to reduce eulachon or Puget Sound Chinook salmon bycatch in the commercial shrimp trawl fishery would be unlikely to result in tangible bycatch reductions.

Outreach

WDFW has increased its education outreach activities throughout Puget Sound. Outreach is a major policy component of the Puget Sound Rockfish Conservation Plan adopted in 2011. The intent of the outreach activities is to better inform the fishing stakeholders, non-consumptive users of rockfish, and the general public about the ESA process and the need to protect and conserve listed species. This outreach is being conducted via the agency web page, the annual WDFW Sportfishing Rules pamphlet, by mail, and in person.

Summary of Application

This Application for an Incidental Take Permit commits the Washington Department of Fish and Wildlife to the following actions:

1. Prohibit the retention of any of the three listed species of rockfish (or any rockfish species) by recreational or commercial fisheries in the entire portion of the DPSs within the waters under our management. Prohibit recreational fishing for bottomfish in waters deeper than 120 feet.
2. Prohibit fisheries with an unacceptable risk of incidental take of one or more of the listed species of rockfish.

3. Monitor recreational bottomfish fisheries with a moderate to low risk of incidental take of one or more of the listed species of rockfish, Puget Sound Chinook salmon.
4. Monitor shrimp trawl bycatch through an on-board observer program.
5. Identify, protect and restore habitat of the listed species of covered species.
6. Conduct public education efforts to inform the fishing public of the need to avoid takes of the listed species and methods to reduce the take.
7. Conduct research on the habitat requirements, abundance and threats to the listed species, with an emphasis on rockfish.
8. Practice adaptive management to ensure that conservation goals are attained.
9. Work closely with officials of NMFS and annually report on the results of the implementation of this Plan.
10. Develop and implement a comprehensive plan for the conservation of all rockfish species in Puget Sound.

Application

The Washington Department of Fish and Wildlife (600 Capitol Way N., Olympia, Washington 98501-1091) makes this application for an Individual Incidental Take Permit under Section 10 (a)(1)(B) of the Endangered Species Act. The application is to authorize implementation of management measures and research activities for the protection of threatened and endangered species of rockfish, Chinook salmon, green sturgeon and eulachon in Puget Sound while allowing certain fisheries to continue to operate. WDFW requests that the ITP be valid for a period of 5 years upon its issuance.

Literature Cited

- Federal Register 2009. Endangered and threatened wildlife and plants: proposed Endangered, Threatened, and Not Warranted status for distinct population segments of rockfish in Puget Sound. Vol. 74 No. 77 pp 18516-18542. Published April 23, 2009
- Hannah, R.W., and K.M. Matteson. 2007. Behavior of nine species of Pacific rockfish after hook-and line capture, recompression, and release. Transactions of the American Fisheries Society 136: 24-33.

- Good, T.P., June, J.A, Etnier, M. A, and G. Broadhurst. 2010. Derelict fishing nets in Puget Sound and the Northwest Straits: Patterns and threats to marine fauna. *Marine Pollution Bulletin* 60 (2010) 39-50
- NMFS (National Marine Fisheries Service). 2010. Biological opinion on the impacts of programs administered by the Bureau of Indian Affairs that support Puget Sound Tribal salmon fisheries and salmon fishing activities authorized by the U.S. Fish and Wildlife Service in Puget Sound from May 1-July 31 2010 on the Puget Sound Chinook Salmon Evolutionarily Significant Unit and the Puget Sound steelhead Distinct Population Segment (DPS) and Conference Opinion on the same actions for the Puget Sound/Georgia Basin rockfish DPS's listed under the Endangered Species Act and Magnuson-Stevens Act Essential Fish Habitat Consultation. May 5, 2010, 74 p.
- Palsson, W. A., T. S. Tsou, G. G. Bargmann, R. M. Buckley, J. E. West, M. L. Mills, Y. W. Cheng, and R. E. Pacunski. 2009. The biology and assessment of Rockfishes in Puget Sound. Washington Department of Fish and Wildlife Report, FPT-09-04.
- Parker, S. J., H. I. McElderry, P. S. Rankin, and R. W. Hannah. 2006. Buoyancy Regulation and Barotrauma in Two Species of Nearshore Rockfish. *Transactions of the American Fisheries Society* 135:1213-1223.
- TCW Economics 2008. Economic analysis of the non-treaty commercial and recreational fisheries in Washington State. December 2008. Sacramento CA, 36 p.
- WDFW (Washington Department of Fish and Wildlife) 2011a. Conservation Plan for ESA listed species of rockfish in Puget Sound. Washington Department of Fish and Wildlife, Olympia, WA, 73 pp.
- WDFW (Washington Department of Fish and Wildlife) 2011b. Puget Sound Rockfish Conservation Plan. Policies, Strategies and Actions. Washington Department of Fish and Wildlife, Olympia, WA.