Youngs Creek Hydroelectric Project FERC No. P-10359

WILDLIFE HABITAT MITIGATION PLAN License Article 403



November 1992 Amended September 2011

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APPENDICES

1.0 INTRODUCTION

Snoqualmie River Hydro (SRH) pursued the development of a small hydroelectric project on Youngs Creek (Project), a tributary to the Skykomish River in Snohomish County, Washington (Figure 1). A License Application for the project was filed with the Federal Energy Regulatory Commission (FERC) on 28 August 1990. A License was issued by the FERC on 5 May 1992. As part of the Order Issuing License, Article 403 directed that a final wildlife mitigation plan be prepared. The plan was submitted by SRH in response to Article 403.

In 2011, the Public Utility District No. 1 of Snohomish County (District), current owner of the Project, filed for an amendment to the 1992 Wildlife Habitat Mitigation Plan (WHMP or Plan). The amendment was approved by the FERC on September 8, 2011 (136 FERC ¶ 62,206). Consultation with the agencies and FERC are included in the Plan's appendices. This updated Plan encompasses the current Wildlife Habitat Mitigation Plan.

2.0 MITIGATION PROCESS

SRH used the U.S. Fish and Wildlife Service (USFWS) Mitigation Policy (Federal Register 46:15, pp. 7656 to 7663) as a guide throughout project identification, engineering and impact assessment. The Mitigation Policy will continue to serve as the standard through mitigation planning and construction. The two central aspects of the Mitigation Policy are: 1) the definition of mitigation and 2) the establishment of resource categories and mitigation goals. Both aspects were incorporated into SRH's mitigation approach.

2.1. Definition of Mitigation

The USFWS definition of mitigation includes: 1) avoidance of impacts, 2) minimization of impacts, 3) rectification of impacts by repairing or restoring the affected resource, 4) reduction or elimination of impacts over time and 5) compensation for impacts through replacement or substitution. Types of mitigation are listed in order of priority, with avoidance being the most desirable and compensation being considered only when the first four options are not available. Most projects involve a combination of two or more types of mitigation, and this is the case with the Youngs Creek Hydroelectric Project.

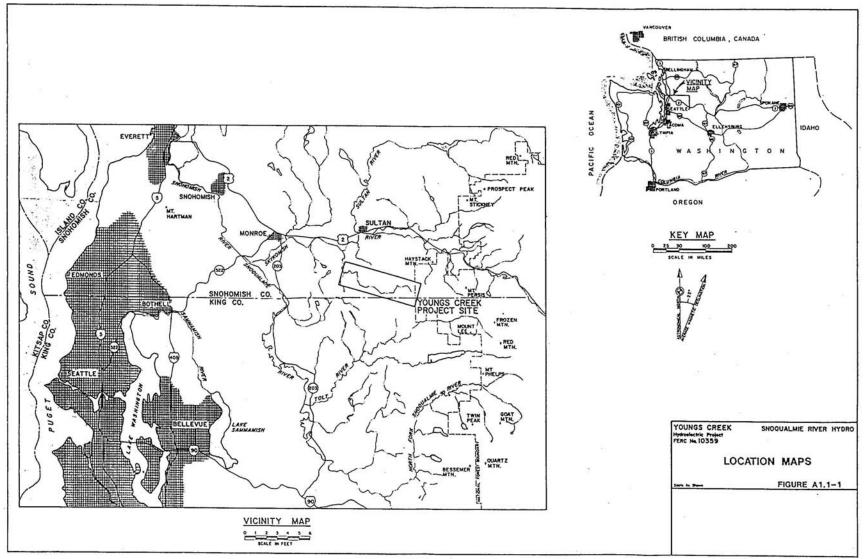


Figure 1. Youngs Creek Hydroelectric project area location.

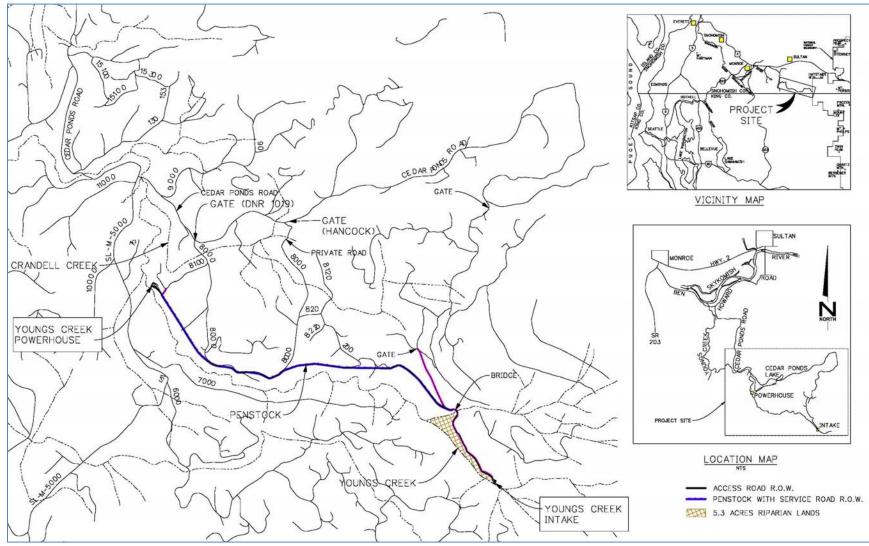


Figure 1B: Map Identifying Penstock and Access Road Right-of-Ways

2.1.1. Avoidance

The first phase of project development was the review of 48 potential hydro sites by a team of engineers, geologists and biologists. The team reviewed streams in the Skagit River and Skykomish River drainages on maps and aerial photos, and identified those with engineering and hydrologic potential. The team then visited each stream, taking note of physical and biological conditions. All fatal flaws and potential development obstacles were noted, including significant environmental concerns. Sites which could be accessed by anadromous fish were dismissed immediately. After the first field visit, the team biologist consulted with state and federal fisheries and wildlife biologists familiar with the area to identify known resource issues and determine study needs. During this first phase of project review, 27 project sites were eliminated for environmental concerns, leaving 21 projects that are currently under investigation for potential hydroelectric development. Most of the creeks lie within the Skagit River Drainage. Youngs Creek is geographically separated from the majority of the creeks under study and is treated independently in this mitigation plan.

2.1.2. Minimization

Whereas avoidance is accomplished through locational adjustment of the project, minimization is achieved through modifications to design and construction. Design modifications of the Youngs Creek Project included burial of approximately 13,950 feet of the penstock to eliminate barriers to animal movement (an additional 250 feet of the penstock will be above ground leading to and crossing a bridge) and design of overhead powerlines to meet Avian Power Line Interaction Committee guidelines (See the Youngs Creek Hydroelectric Project, FERC No. P-10359, Transmission Line Design Plan For Avian Protection, License Article 404, Amended 9/24/09). The penstock and access road will follow the alignment in Figure 1B to minimize the need for additional forest clearing. Construction modifications will include minimization of clearing for penstock burial and equipment lay-down consistent with FERC-approved construction plans. Strict control of litter and waste will be implemented throughout construction and operation of the project to prevent nuisance wildlife problems.

2.1.3. Rectification

After incorporating avoidance and minimization into siting and design, the project will have an initial terrestrial impact of approximately 20.4 acres. This estimate is based on clearings of 0.4 acre for the intake, 0.7 acre for the powerhouse, and 19.3 acres for road and penstock rights-of-way. The intake area, powerhouse site and access roads will result in permanent loss of wildlife habitat because they will be maintained as graveled surfaces, but the penstock route and portions of the access road right-of-way will be re-vegetated after project construction.

The entire Youngs Creek drainage basin is managed as private commercial timberland that is harvested every 40 to 45 years and re-planted. Existing trees in the project area are the first or second rotation to grow since initial logging. The timberland in the basin is best described in terms of the dynamic process of planting, thinning, fertilizing and harvesting rather than by any one condition the stand may pass through during the 45-year rotation (e.g. seedling/sapling, pole stage, etc.).

The penstock right-of-way (ROW) is 50 feet wide and approximately 2.6 miles long (see Figure 1B). A service road will be graded within the majority of the penstock ROW to facilitate security and maintenance visits (see Figure 1C). The typical width of this service road will be 12 feet plus maintained shoulders. The roadbed may be graveled to reduce erosion, and vegetation will not likely persist within this area. Vegetation may be allowed to grow, but will be maintained on the shoulders. Placing the service road on top of the buried penstock will reduce the amount of land disturbed by the Project and increase efficiency and safety of Project operation. Following construction, the penstock ROW will be seeded as described in Section 2.1.3, paragraph 4. To protect and preserve the integrity of the penstock, trees and other deep-rooted vegetation will not be allowed to grow within the 30-foot corridor centered over the pipeline. Except where occupied by the service road, this 30-foot corridor area will be allowed to revegetate with native or locally adapted (non-invasive), shallow-rooted shrubs, grasses and forbs. Vegetation will be maintained by mowing and other methods along the penstock ROW, and will provide a permanent and locally diverse habitat compared to the commercial forest lands that occupy most of the Youngs Creek watershed. Trees and other deep-rooted vegetation will be allowed to grow in the outer 10 feet of the penstock ROW, on both sides of the 30-foot corridor. Other enhancements within the penstock ROW will include visual barriers (e.g. rock or woody debris piles, clumps of shrubs) to provide additional habitat for small mammals and birds and reduce the line-of-sight, thereby providing a more secure area for foraging or browsing wildlife.

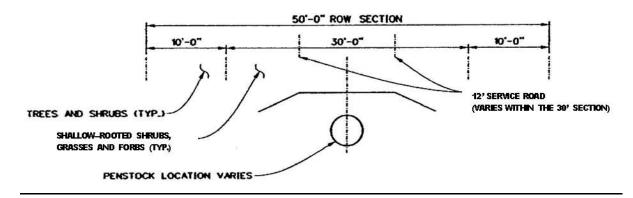


Figure 1C. Typical cross section of penstock ROW with service road, per FERC-approved construction drawing YCH-1116.

Portions of the access road right-of-way will be revegetated with low-growing grasses and forbs. This will not be in-kind replacement of the forest habitat that will be removed for construction, but it will be rectification of impacts to forest-dwelling species because the grasses and forbs will provide a stable source of forage not currently available in the forest. The narrow, linear nature of the road right-of-way will minimize the overall impact to forest-dwelling wildlife because it will result in a very narrow opening in the forest canopy (average width will be 45 feet). Restricting human access to the road (by installing gates) will minimize disturbance impacts and allow wildlife to use the right-of-way for travel and/or foraging. Other enhancements within the right-of-way (i.e., placement of nest boxes) will provide features not readily available within the

intensively managed forest and effectively eliminate negative impacts associated with the loss of the forest.

As described in the Erosion and Sediment Control Plan (E&SCP) accompanying the License Application, the primary method for revegetating disturbed soils will be reseeding with grasses and legumes (Table 1 and Table 2). Hydroseeding will be the preferred method of application, but hand broadcast seeding will be used wherever hydro seeding equipment cannot be used. The seed mix (Table 2) is currently required by Snohomish County in the Project's Critical Areas Study, and recommended and used by the Mt. Baker Ranger District on National Forest lands to stabilize skid trails, roads, etc. and should provide high quality forage for wildlife (particularly big game) within 1 year of planting.

Table 1. Erosion Control Seed Mix – long term maintenance areas/no deep rooted vegetation allowed

Seed variety		<u>% by weight</u>
Annual Ryegrass		25%
Perennial Ryegrass		25%
Creeping Red Fescue		20%
White Clover		15%
Chewings Fescue		15%
	TOTAL	100%
*Apply at a rate of 100 lbs/acre		*Must be certified as "free of noxious weeds"

Table 2. Erosion Control Seed Mix - natural revegetation/deep-rooted vegetation allowed

Seed variety	<u>% by weight</u>
Soft white winter wheat	53%
Slender wheatgrass	21%
Annual Ryegrass	21%
Austrian winter peas	5%
TOT	TAL 100%
*Apply at a rate of 95 lbs/acre	*Must be certified as "free of noxious weeds"

2.1.4. Reduction/Elimination Over Time

Elimination of impacts over time will largely involve maintenance of enhanced habitat features and control of human access to the project site. All new project roads will be gated to control public access, and seasonal restrictions will be placed on routine maintenance and repair (no limit on emergency repairs), as needed to protect sensitive wildlife resources.

2.1.5. Replacement

Approximately 3.7 acres of upland commercial forest (of this approximately 2.0 acres were typed as mature) and up to 1.1 acre of riparian habitat (including mixed deciduous forest) will not be replanted. These areas will be converted to permanent structures or graveled road surfaces with no habitat value other than providing travel corridors with palatable roadside forage. Permanently impacted habitats have been classified by the SRH according to the resource categories identified in the USFWS Mitigation Policy, and replacement ratios proposed are Consistent with mitigation goals for the various categories.

The bulk of project-related habitat impacts (both acreage permanently lost and acreage converted to alternate habitat types or restored to original condition) will occur on upland commercial forest in various stages of succession. A portion of the existing forest that will be impacted was originally identified as mature forest, but it would be more accurately defined as small sawtimber (Hall et. a1. 1985). The stand consists of naturally re-generated second-growth approximately 54 years old with an average diameter at breast height (dbh) of less than 21 inches.

For purposes of analysis, all successional stages (clearcut, mixed forest, young coniferous forest, mature coniferous forest) were combined into a single habitat type because of the temporary condition that they occupy within the dynamic forest rotation in the basin. All are managed for timber production and all are potentially harvestable within the next 45 years. SRH proposes that upland commercial forest is Resource Category 3, for which the mitigation goal is no net loss of overall habitat value, with minimization of in-kind habitat value loss. SRH proposes a maximum mitigation replacement ratio of 1:1 for upland commercial forest.

Riparian habitat (including mixed deciduous forest) of the type that will be impacted is abundant in the Pacific Northwest, but it is important to both aquatic and terrestrial organisms and considered more valuable habitat than upland commercial forest (Guenther and Kucera 1978). For this reason SRH proposed to classify it as Resource Category 2. The mitigation goal for Resource Category 2 is no-net loss of in-kind habitat value. SRH proposed a replacement ratio of 3:1 for enhancement or protection of existing riparian forest.

3.0 ELEMENTS OF THE MITIGATION PLAN

Article 403. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission for approval a wildlife mitigation plan. The plan shall provide for, at a minimum:

(a) revegetating all portions of the penstock right-of-way not contained within an access road right-of-way;

All portions of the penstock right-of-way outside of the access road right-of-way (11.6 acres) will be reseeded within 1 year of penstock burial (see Figure 1B). The seed mix shown in Tables 1 and 2 will be applied. Shallow-rooted native or locally adapted (non-invasive) shrubs and forbs will be allowed to naturally repopulate the penstock ROW, except within the approximately 12foot wide area maintained as service road. In most cases, the service road will be placed within the 30-foot strip over the penstock, precluding vegetative growth within the roadbed. However, in some areas, the road will meander to break up the line of sight created by the linear nature of the ROW. The outer 10 feet on either side of the 50-foot permanent ROW will be allowed to revegetate with native trees and shrubs, except where the location of the service road precludes vegetative growth (see Figure 1C). Along the penstock ROW, shrubs (and trees, where permitted) will be allowed to mature and form pockets or clumps which will help to conceal wildlife utilizing the right-of-way. The long-term presence of palatable herbaceous and shrubby plants on the right-of-way will provide an early successional habitat type that consistently provides open areas with forage, uncommon in the typically dense coniferous forest stands surrounding the project. Trees and deep-rooted vegetation will be removed or mowed on the 30-foot strip centered over the pipeline as needed.

A maximum distance of 500 feet between placements of woody debris/rock piles or other sight barriers will help to break up the line-of-sight along the penstock ROW. These barriers will be placed along the entire penstock ROW, unless topography prevents such installations or makes them unnecessary to break up the line-of-sight.

Noxious and invasive weed control will be performed as needed to comply with applicable noxious weed regulations. The District will prepare a noxious weed plan and implement it through the license period.

(b) revegetating the margins of the project access road right-of-way with herbaceous plants and shrubs that are palatable to black-tailed deer and other species common in the vicinity;

The narrow margins of the project access road ROW will be hydro-seeded within the first growing season after road construction (see Figure 1B). The seed mix shown in either Table 1 or Table 2 will be used, as appropriate. Disturbance will be minimal along the right-of-way (beyond the graded road surface and the penstock alignment) and forest understory shrubs and forbs will re-invade from seed and vegetative reproduction within the first few years after construction.

The seed mix listed in Table 1 utilizes lower-growing grasses and forbs in an effort to produce adequate ground cover for erosion control while providing habitat for small mammals and reducing maintenance costs by out-competing native trees and deep-rooted vegetation that would otherwise have to be mowed on a regular basis. This table may be updated by the District

based on changes in recommended management techniques for the given area and habitat; recommendations by WDFW, USFWS, Snohomish County, or other agencies with jurisdiction, or based on research.

Table 2 lists a seed mix that was developed by the U. S. Forest Service to use in revegetating abandoned roads, and is required for use by Snohomish County per the Project's Critical Area Study. This mix is intended to be more short-lived, thus providing forage and protection from erosion while allowing native vegetation to seed in. This seed mix will be used in areas where native vegetation, including trees, will be allowed to grow, primarily within the outer 10 feet along either side of the ROW and in critical areas identified in the Critical Area Study. This table may be updated based on changes in recommended management techniques for the given area and habitat; recommendations by WDFW, USFWS, Snohomish County, or other agencies with jurisdiction, or based on research.

(c) installing and maintaining gates at the entrance to the project access road;

New roads created specifically for access to the project site will be gated and kept locked at all times. Access will be provided only to the District and the landowner, for normal project maintenance and forest management activities.

(d) installing and maintaining nest boxes and perch poles along the project access roads and the penstock right-of-way;

The project access roads all cross managed upland coniferous forest, where regular harvesting will maintain even aged stands. Current state forest practices regulations require landowners to maintain snags and green trees during harvest to provide habitat for cavity nesters, but some stands still may not necessarily provide nesting conditions suitable for cavity nesting birds. All cavity nesting birds found in this area, except the pileated woodpecker, would be expected to fully utilize a stand that contained a minimum density of three snags per acre with a dbh of 18 inches or greater (Neitro et. al. 1985). If at any time during the license period, forest stands on or within 100 feet of the access road right of way or penstock ROW are found to contain three 18+ inch snags per acre, no additional nesting mitigation will be provided. This area could include the outer 10 feet of the penstock ROW, Project mitigation lands, or potentially neighboring lands. If the density of 18+ inch snags drops below three per acre at any time during the license period, or the District chooses not to survey the adjacent forest stands, nest boxes will be installed and maintained by the District following an adaptive management program. Up to 20 nest boxes targeting small native cavity nesting birds and mammals will be placed along the access roads and penstock ROW, in consultation with WDFW. The nest box program will be initiated within 1 year after Project construction is completed. Boxes will be checked every 2 weeks initially. If non native species inhabit boxes and need to be removed, or predation is a problem, boxes will be modified or moved to prevent use by non native species or predation. If boxes are being used by native species and use by non native species or predation is not an issue during the first 3 visits of the season, the boxes will be checked once per month through August.

Raptor perches will be visually monitored while conducting other activities on the tract. The immediate vicinity of the perch will also be inspected for signs of use, including pellets and whitewash.

By maintaining the penstock ROW as relatively open habitat, raptors and other birds of prey are expected to benefit from increased access to prey. To provide perching habitat, the District will also erect and maintain raptor perch poles along the penstock ROW at a rate of 2 per linear mile. Perch poles will be maintained until the surrounding trees are tall enough to provide natural perches.

(e) enhancing at least 3.3 acres of existing riparian areas in the project vicinity to replace the wildlife values lost as the result of project construction; (f) acquiring and preserving a stand of at least 2 acres of mature coniferous forest in the project vicinity;

SHR purchased 5.3 acres of existing forest that could otherwise be harvested after the completion of the project. These acres are adjacent to, but outside of, the existing riparian management zone along Youngs Creek (Figure 2). Current state regulations protect riparian forest habitat and leave few opportunities for enhancement within 75 feet of Youngs Creek, but the protection of upland forest adjacent to the riparian management zone will increase the overall size of the protected area and enhance the value of the riparian habitat to wildlife. This will not meet the classical definition of mature forest, but no true mature forest occurs within the project area. The forest will be protected from harvest for the 50 years and allowed to develop into mature forest. Intervention in the natural succession of the stand will take place only if the development of mature forest conditions can be accelerated without negatively impacting wildlife. Commercial thinning may meet this requirement. This approach was agreed upon during a field visit with representatives from the U.S. Fish and Wildlife Service and Washington Department of Wildlife as providing the most benefit for wildlife in this area.

(g) monitoring the effectiveness of the measures described in (a), (b), and (e) above, including steps to be taken in the event these measures are not effective, such as, but not necessarily limited to, modifying the measures or establishing or enhancing additional riparian forest areas;

All mitigation areas will be monitored to ensure the objectives of this plan are met. Monitoring will consist of periodic checks on vegetative conditions. Revegetated and reseeded areas will be checked annually during the life of the License (50 years) and observations will be included in an annual summary report to WDFW. Coverage of shrubs and grasses will be visually evaluated. If the estimation of coverage by bare ground or noxious weeds is more than 20 percent, maintenance activity such as reseeding/ replanting or weed control will occur. The access road or penstock route will be reseeded with the erosion-control seed mix from Tables 1 or 2, as appropriate.

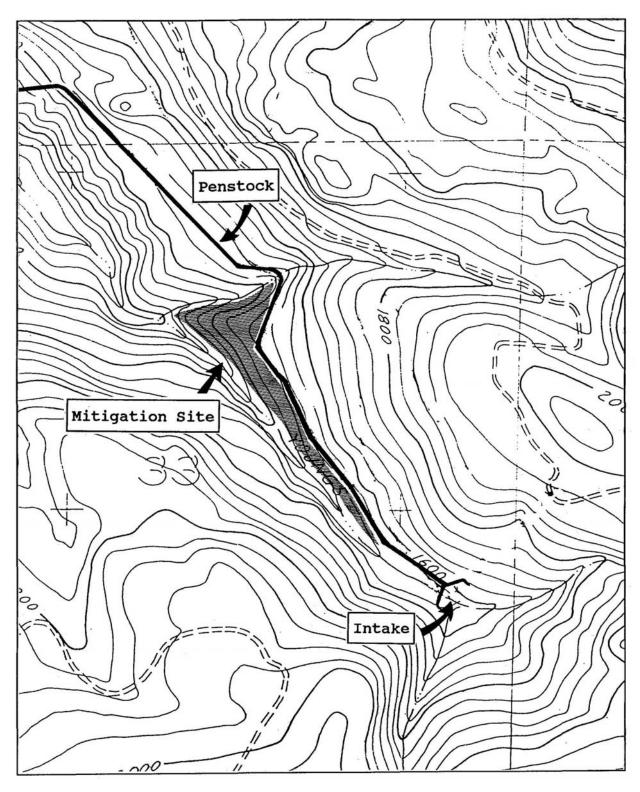


Figure 2. Location of lands wildlife mitigation lands purchased.

(h) provide recommendations to the agencies and the Commission for alternative wildlife mitigation measures, if monitoring indicates that the revegetation measures or the riparian forest establishment or enhancement is not successful; and

Monitoring of the riparian and upland forest mitigation areas will consist of periodic checks of the overstory vegetation. The District will provide a written report to the FERC every five years, and will provide a written summary report to WDFW and the USFWS annually. The first annual monitoring report shall be filed with the Washington Department of Fish and Wildlife by December 31, 2012, and then every year thereafter for the duration of the license. The first five-year summary report shall be filed with the Commission by December 31, 2017, and then every five years thereafter for the duration of the license. If necessary, the five-year reports shall include recommendations, subject to Commission approval, for further mitigation or monitoring. For reports filed with the Commission, the licensee shall allow a minimum of 30 days for the U.S. Fish and Wildlife Service and the Washington Department of Fish and Wildlife to comment prior to filing with the Commission. The licensee shall include with the five-year report any comments or recommendations received from those agencies. If the licensee does not agree with a recommendation, the report shall include the licensee's reasons, based on project-specific information.

Failure of revegetation efforts is highly unlikely given the rapid rate at which vegetation grows in western Washington. Should the revegetation efforts fail, the District will make recommendations to the FERC and the agencies for alternate measures.

(i) schedules for implementing the measures proposed in (a) through (f) above, for filing the results of the monitoring program, and for filing recommendations for alternative Wildlife mitigation

Reseeding of areas disturbed during construction will be completed within 1 year of Project completion.

Gates will be installed during construction, or immediately thereafter.

Nest boxes and raptor perch poles will be installed, where needed, within 1 year after the completion of Project construction. Additional nest boxes will be installed annually if warranted as described in Section 3.0(d).

The area purchased for riparian and upland forest mitigation has been identified as 5.3 acres bounded by the penstock, Youngs Creek, the intake structure and a side tributary entering Youngs Creek from the north (Figure 2). Purchase or lease of the mitigation lands will be completed within 1 year of the completion of project construction. Enhancement measures within the riparian and upland mitigation areas will be completed within 5 years of project construction, unless site specific conditions indicate better wildlife habitat can be produced by intervening at a later date.

Monitoring and reporting to the FERC and the wildlife agencies will occur as indicated above under 3.0(h).

4.0 CONSULTATION

The licensee shall prepare the plan after consultation with the Washington Department of Wildlife and the U.S. Fish and Wildlife Service. The licensee shall include with the plan documentation of consultation with the agencies before preparing the plan, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments and recommendations were accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The specifics of SRH's 1992 wildlife mitigation plan were discussed at a project site visit attended by representatives of SRH, the U.S. Fish and Wildlife Service and the Washington Department of Wildlife. All parties agreed to the specifics of the Plan. Minutes of the site visit are included as Appendix A to this Plan. Copies of this Plan were provided to both agencies on 6 November 1992, Appendix B. Comments received from the agencies are included in Appendix C. Responses to comments are provided in Appendix D. A copy of the 2011 Amendment request to the FERC is included in Appendix E. The FERC Order approving the amendment is included in Appendix F.

5.0 LITERATURE CITED

- Guenther, K. and T.E. Kucera. 1978. Wildlife of the Pacific Northwest. Occurrence and distribution by habitat, BLM District and National FOrest. USDA Forest Serv., Portland, OR 96p.
- Hall, F.C., L W.Brewer, J.F. Franklin and RL Werner. 1985. Plant communities and stand conditions. ' In: Brown, E.R (ed.) Management of Wildlife and Fish Habitats in Forests of Western Oregon and Washington. U.S.D.A Forest Service, Pac. N.W. Region, Portl~nd, Ore.
- Neitro, W.A, V.W. Brinkley, S.P. Cline, RW. Mannan, B.G. Marcot, D. Taylor, and F.F. Wagner. 1985. Snags (Wildlife Trees). In: Brown, E.R (ed.) Management of Wildlife and Fish Habitats in Forests of Western Oregon and Washington. U.S.D.A Forest Service, Pac. N.W. Region, Portland, Ore.

APPENDIX A

MEETING NOTES OF 4 NOVEMBER 1992 FIELD TOUR OF YOUNGS CREEK PROJECT

MEETING NOTES

DATE: 4 November 1992

LOCATION: Youngs Creek Hydro Project Field Tour

PURPOSE: Review Proposed Wildlife Habitat Mitigation Plan and Bald Eagle Protection Plan

ATTENDEES:

Mr. Lon Covin, Hydro West Mr. Scott Mahnken, HDR Engineering Mr. Mike Tehan, USFWS Mr. Gary Engman, WDW Mr. Tony Opperman, WDW Mr. Marty Vaughn, Beak Mr. Doug Woodworth, Beak

All parties met near Snoqualmie, Washington and traveled to the project site via the proposed south access route. While driving, we discussed a proposal to access the project along this route during the winter (1 November through 31 March) to avoid disturbing the bald eagle night roost north of the project site. All parties agreed this was a reasonable alternative to suspending all construction activity during the winter, as long as all other seasonal restrictions in the License (i.e., for erosion control) are adhered to. The south access route follows mainline logging roads the entire way and no sensitive environmental resources were observed during the site visit.

We next visited the powerhouse site, where we observed the forest habitat that will be removed for project construction. The powerhouse will be built on a terrace above Youngs Creek that now supports second-growth upland coniferous forest that is of commercial size. The timber is not riparian forest in an ecological sense, but it lies partially within the 100-foot Riparian Management Zone (RMZ) which is an administrative designation by the Washington Department of Natural Resources. Timber harvest can occur in the RMZ, but only in the form of selective cutting. Clearcutting is not allowed in the RMZ. Below the terrace, the project tailrace will pass through a narrow band of riparian forest before reaching the creek. The tailrace will be roughly 10 feet wide and 50 feet long, and will displace less than 0.02 acre of cottonwood and alder riparian forest. Above the powerhouse, the penstock will be placed mostly along existing roads or through recent clearcut. Scott provided a map overview of the penstock route.

We left the powerhouse area and drove to the upstream end of the penstock where it will pass through an area that is currently forested. We walked the proposed route upstream to within 2,000 feet of the intake to view the forest defined as mature coniferous forest in the License Application. The habitat is dense second-growth coniferous forest (mostly western hemlock) with an average diameter at breast height (dbh) of roughly 8 to 16 inches. It is more appropriately classified as small sawtimber coniferous forest. Most of the trees are at the lower end of the 8 to 16 inch size range, but one stand upstream of the proposed penstock bridge crossing is predominantly trees in the 12 to 16 inch dbh range. The larger trees are very uniform in size and canopy closure is 100 percent. Understory vegetation is completely lacking. It probably provides winter thermal cover for big game, but no browse. It is not optimal cover of the type typically associated with mature or old-growth coniferous forest.

After viewing the forest habitat along the penstock route, we discussed mitigation options. It was concluded that Hydro West would acquire a minimum of 5.3 acres of the existing second-growth forest between the penstock route and Youngs Creek and protect it from harvest for the life of the License. When selecting the 5.3 acres, Hydro West agreed to focus on areas with the greatest possible benefit to wildlife, such as habitat near but outside the RMZ where the landowner could legally clearcut in the near future. We tentatively agreed to consider a wedge-shaped parcel bounded by the penstock, the creek, the intake and the first tributary crossed by the penstock. Protection of this parcel would effectively enlarge the RMZ in that area and provide coniferous forest habitat for the next 50 years.

At the conclusion of the meeting it was agreed Beak would send copies of the final mitigation plan to Mike, Gary and Lon by Friday (6 November) for their review.

APPENDIX B

LETTERS TO AGENCIES



12931 N.E. 126th Place Kirkland, Washington 98034-7715 (206) 823-6919 • FAX (206) 820-9399

6 November 1992

Mr. Mike Tehan U.S. Fish and Wildlife Service 3704 Griffin Lane S.E., Suite 102 Olympia, Washington 98501-2192

Re: Youngs Creek Hydro Project; FERC Project No. 10359-003 Wildlife Mitigation Plan and Bald Eagle Protection Plan

Dear Mike:

Enclosed for your review and comment are the following documents prepared in support of the Youngs Creek Project::

- Final Wildlife Habitat Mitigation Plan (License Article 403)
- Final Bald Eagle Protection Plan (License Article 405)
- Minutes of our 4 November 1992 field visit

We have prepared both the wildlife plan and the bald eagle plan in accordance with the agreement reached between you and Hydro West on the 4 November field visit. I think you will find both meet your agency's needs. According to FERC guidelines, you are afforded 30 days to review both documents, but responses provided prior to 6 December will be greatly appreciated. Please don't hesitate to call if you have any questions.

Sincerely,

regles R. Woodwort

Douglas R. Woodworth Wildlife Biologist

c.c. Lon Covin

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beak consultants incorporated 12931 N.E. 126th Place Kirkland, Washington 98034-7715 (206) 823-6919 • FAX (206) 820-9399

6 November 1992

Mr. Gary Engman Washington Department of Wildlife 16018 Mill Creek Boulevard Mill Creek, Washington 98012

ay bodd , 1-06-92

Re: Youngs Creek Hydro Project; FERC Project No. 10359-003 Wildlife Mitigation Plan and Bald Eagle Protection Plan

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Sincerely,

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Douglas R. Woodworth Wildlife Biologist

c.c. Lon Covin Tony Opperman

APPENDIX C

AGENCY COMMENTS



United States Department of the Interior

CHRON

FISH AND WILDLIFE SERVICE Fish and Wildlife Enhancement 3704 Griffin Lane SE, Suite 102 Olympia, Washington 98501-2192 (206) 753-9440 FAX: (206) 753-9008

December 4, 1992

Lon G. Covin, Vice President Hydro West Group, Inc. 1422 130th Avenue NE Bellevue, Washington 98005

Re: Wildlife Habitat Mitigation Plan and Bald Eagle Protection Plan for the Youngs Creek Project, FERC 10359, Washington

Dear Mr. Covin:

My staff has reviewed the above-referenced wildlife habitat mitigation plan and bald eagle protection plan that you provided us on November 6, 1992. These plans were prepared following coordination with the Fish and Wildlife Service (Service) to comply with license articles 403 (wildlife mitigation) and 405 (bald eagle protection). Both plans are adequate to meet the stated protection and mitigation objectives, and are therefore acceptable to the Service.

We appreciate your continued coordination with the Service regarding fish and wildlife issues. Please contact Michael Tehan of my staff at the above letterhead/address if you have any questions or if we can be of further assistance.

Sincerely,

David C. Frederick Field Supervisor

mt/lk

c;

WDW, (Engman) Tulalip Tribe, (Somers) Beak Consultants, Inc., (Doug Woodworth) CURT SMITCH Director



STATE OF WASHINGTON

DEPARTMENT OF WILDLIFE

16018 Mill Creek Blvd., Mill Creek, WA 98012

Tel. (206) 775-1311

No.1

WDW

2

0N

MOM

December 10, 1992

Douglas R. Woodworth Wildlife Biologist Beak Consultants Incorporated 12931 N. E. 126th Place Kirkland, WA 98034-7715

Dear Mr. Woodworth:

Re: Youngs Creek Hydro Project; FERC Project 10359-003 Wildlife Mitigation Plan and Bald Eagle Protection Plan

In follow-up to our meeting and site visit on November 4, 1992 and our review of your meeting notes and revised plans dated November 1992, we have the following comments.

We agree that your plans and notes accurately reflect the general understandings and approach we decided on in the field on November 4, 1992. This is particularly in regard to the element to acquire and enhance at least 3.3 acres of riparian habitat and at least 2 acres of adjacent mature conifer habitat in the project vicinity. These lands may be purchased or otherwise secured provided the intent and purpose of this plan is fully achieved. However, it is our desire and recommendation that these habitats be secured in a manner that does not preclude continuation of this plan and preservation of habitat value into subsequent license terms.

Additionally, item (g) at page 10 indicates, among other things, that after two years areas with fewer than 250 trees per acre would receive supplemental planting. It should be clarified that this criterion may not be appropriate for the habitat preservation and enhancement outlined under item (e) where wildlife habitat value rather than timber management is the prime objective.

Also, while we do not believe it is appropriate to lump all successional stages into one habitat type as was described on page 6, we accept that in light of the particulars of this circumstance, the practical effect of a more accurate approach is small.

63 3

Mr. Woodworth December 8, 1992 Page 2

Thank you for the opportunity to provide comment.

Sincerely, R. Gary Engnan

Habitat Program Manager

cc: U. S. Fish and Wildlife Service (Tehan)
 Ted Muller
 Tony Oppermann
 Hal Beecher

APPENDIX D

RESPONSES TO AGENCY COMMENTS

Response to Washington Department of Wildlife Comments

- WDW No. 1: It is the intent of this plan that the acres described in items (e) and (f) will be protected for the entire life of the project, including any subsequent license terms.
- WDW No. 2: The 5.3 acres of land to be protected described in items (e) and (f) of the Mitigation Plan are currently timbered and not be planted. The supplemental planting discussed in item (g), page 10 of the mitigation plan, addresses only reclamation of sites disturbed during construction.

APPENDIX E

PLAN AMENDMENT REQUEST TO FERC

UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

)

Public Utility District No. 1 of
Snohomish County, Washington))

Project No. 10359

APPLICATION FOR AMENDMENT OF LICENSE

I. INITIAL STATEMENT

(1) Pursuant to 18 C.F.R. Subpart L, Public Utility District No. 1 of Snohomish County, Washington ("District") hereby applies to the Federal Energy Regulatory Commission ("FERC" or "Commission") for an amendment of license for the Youngs Creek Hydroelectric Project, Project No. 10359 ("Project"). The proposed amendment is a non-capacity related amendment to approve certain changes to the current license's Wildlife Habitat Mitigation Plan ("WHMP" or "Plan"). These changes are necessitated by the many changes to the surrounding landscape, and changes to local land use and policies since the time the Project was originally licensed by the prior owner in 1992. Because of these changes over the past 18 years, the District is requesting to amend the FERC-approved WHMP to reflect current policies and conditions. Additionally, the requested amendment is to correct oversights in the original Plan to protect the penstock from damage.

The exact name, business address, and telephone number of the applicant are:
 Public Utility District No. 1 of Snohomish County, Washington
 2320 California Street
 PO Box 1107
 Everett, WA 98206-1107

Persons to contact on this matter are:

Kim D. Moore	J
Assistant General Manager	A
Generation, Water and Corporate Services	Ι
PO Box 1107	F
Everett, WA 98206-1107	E
(425) 783-8606	(
kdmoore@snopud.com	j

Jeff Kallstrom Associate General Counsel Legal & Regulatory Services PO Box 1107 Everett, WA 98206-1107 (425) 783-8250 jkallstrom@snopud.com

(3) The District is a municipality under the definition set forth in 16 U.S.C. § 796(7). The District is the sole licensee of the Project under an original license issued by the Commission on May 5, 1992. The current license expires on April 30, 2042. Pursuant to Article 403 of the license, a Wildlife Habitat Mitigation Plan, dated November 1992, was filed with the Commission for review and approval. The Wildlife Habitat Mitigation Plan was approved on May 6, 1993¹.

On October 7, 2008, the Commission issued an Order Approving Transfer of License from Snoqualmie River Hydro, Inc. to the District², and on February 12, 2009, issued an Order Granting Extension of Time extending the construction completion deadline to December 31, 2011. The District has been diligently constructing the Project from February 2010 to present and is scheduled to complete construction before the deadline.

(4) The District respectfully requests an amendment to the WHMP for the current license so that the District can proceed with post-construction efforts to revegetate impacted areas in a manner that protects the penstock route and uses updated methods that are consistent with the Critical Areas Study Plan. See Exhibit A. Failure to obtain the requested amendment will require the District to perform environmental measures

¹ 63 FERC 62,129

² 125 FERC ¶ 62,017

that are detrimental to the security of the penstock and inconsistent with Snohomish County regulations.

II. REQUESTED AMENDMENT

The 1992 FERC-approved WHMP calls for the reforestation of the buried penstock after construction, thereby creating a situation that could cause structural damage or failure of the penstock. If deep-rooted shrubs and trees are planted or allowed to grow above the penstock, their roots could surround the penstock, potentially cracking the structure and causing leaks/failure of the penstock. Additionally, thick overstory and understory vegetation would prevent visual inspection of the penstock. Mr. Patrick Regan, P.E., Regional Engineer for the Office of Energy Projects/Division of Dam Safety and Inspections/ Portland Regional Office, indicated that revegetation of the penstock route should be consistent with good engineering practices for allowing for inspections; trees planted over the penstock would not allow this to occur³. The penstock alignment needs to remain clear in order for leakages to be identified in a timely manner by Project operational staff.

When the original WHMP was written in 1992, adjacent forest land consisted primarily of mature second growth trees. Since that time, with the exception of the 5.3 acre parcel now owned by the District and set aside as a Critical Areas Protection Area, all of the land adjacent to the right-of-way has been logged and now consists primarily of sapling sized conifer stands. Since the penstock right-of-way no longer contains trees, the addition of nest boxes and perch poles as required in the proposed amendment would provide an element of habitat that is currently absent in the immediate area.

³ See Exhibit B for email from Portland Regional Office

By changing the type of vegetation replanted along the penstock route and providing additional habitat enhancements as described below, the Project facilities will be protected from damage by deep-rooted shrubs and trees while still providing quality habitat for terrestrial and avian species.

The portions of the WHMP proposed to be amended follow as Attachment 1; the complete 1992 WHMP is included as Attachment 2 for reference. The District proposes to eliminate the strikethrough language and add the language underlined in red to the WHMP as indicated in Exhibit A.

The proposed amendments require completion of ground-disturbing construction activities by September 2011, allowing the District to carry out the activities described above in an expedited manner.

In preparing this amendment application, the District has consulted with the primary participants in the original licensing process with an interest in the WHMP; these included the Washington State Department of Fish and Wildlife and U.S. Fish and Wildlife Service. Both entities have informed the District that they support the proposed amendment.⁴

⁴ See consultation documentation and support letters in Exhibit C.

IV. CONCLUSION

For the reasons stated above, the Commission should amend the Wildlife Habitat

Mitigation Plan for Project No. 10359 as specified herein.

Respectfully submitted,

Jeffrey R. Kallstrom, Associate General Counsel Public Utility District No. 1 of Snohomish County 2320 California Street PO Box 1107 Everett, WA 98206-1107 (425) 783-8250 jkallstrom@snopud.com

EXHIBIT A

TEXT OF PROPOSED AMENDMENT

Exhibit A: Portions of WHMP for Amendment

Insert the following Figure 1B after Figure 1:

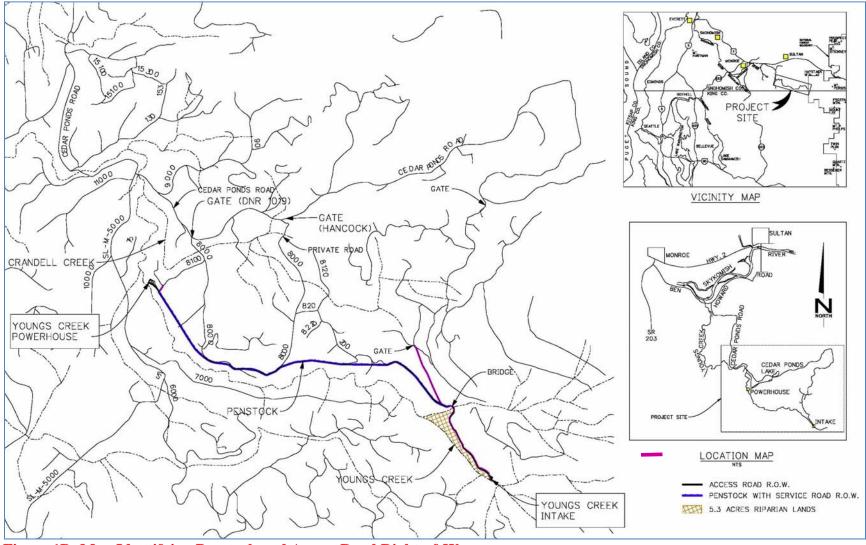


Figure 1B: Map Identifying Penstock and Access Road Right-of-Ways

Modify Section 2.1.2 paragraph 1 as follows:

Whereas avoidance is accomplished through locational adjustment of the project, minimization is achieved through modifications to design and construction. Design modifications of the Youngs Creek Project included burial of approximately 13,950 feet of the penstock to eliminate barriers to animal movement (an additional 250 feet of the penstock will be above ground leading to and crossing a bridge) and design of overhead powerlines to meet <u>Avian Power Line Interaction Committee guidelines (See the Youngs Creek Hydroelectric Project, FERC No. P-10359, Transmission Line Design Plan For Avian Protection, License Article 404, Amended 9/24/09). raptor protection standards. The penstock and access road will follow the alignment in Figure 1B existing logging roads and an abandoned railroad grade wherever possible to minimize the need for additional forest clearing. Construction modifications will include minimization of clearing for penstock burial and equipment lay-down consistent with FERC-approved construction plans. Strict control of litter and waste will be implemented throughout construction and operation of the project to prevent nuisance wildlife problems.</u>

Modify Section 2.1.3 paragraph 2 as follows:

Reforestation of the penstock right of way is considered total rectification because it represents an insignificant departure from the existing management of the upland forest in the project vicinity. The entire Youngs Creek drainage basin is managed as private commercial timberland that is harvested every 40 to 45 years and re-planted. Existing trees in the project area are the first or second rotation to grow since initial logging. The timberland in the basin is best described in terms of the dynamic process of planting, thinning, fertilizing and harvesting rather than by any one condition the stand may pass through during the 45-year rotation (e.g. seedling/sapling, pole stage, etc.). Removal of trees for penstock burial, followed by replanting with standard tree seedlings, will be indiscernible from existing forest management over the 45-year rotation. Re-forestation will involve Douglas fir seedlings planted at densities of up to 350 trees per acre and monitored to ensure success.

The penstock right-of-way (ROW) is 50 feet wide and approximately 2.6 miles long (see Figure 1B). A service road will be graded within the majority of the penstock ROW to facilitate security and maintenance visits (see Figure 1C). The typical width of this service road will be 12 feet plus maintained shoulders. The roadbed may be graveled to reduce erosion, and vegetation will not likely persist within this area. Vegetation may be allowed to grow, but will be maintained on the shoulders. Placing the service road on top of the buried penstock will reduce the amount of land disturbed by the Project and increase efficiency and safety of Project operation. Following construction, the penstock ROW will be seeded as described in Section 2.1.3, paragraph 4. To protect and preserve the integrity of the penstock, trees and other deep-rooted vegetation will not be allowed to grow within the 30-foot corridor area will be allowed to revegetate with native or locally adapted (non-invasive), shallow-rooted shrubs, grasses and forbs. Vegetation will be maintained by mowing and other methods along the penstock ROW, and will provide a permanent and locally diverse habitat compared to the commercial forest lands

that occupy most of the Youngs Creek watershed. Trees and other deep-rooted vegetation will be allowed to grow in the outer 10 feet of the penstock ROW, on both sides of the 30-foot corridor. Other enhancements within the penstock ROW will include visual barriers (e.g. rock or woody debris piles, clumps of shrubs) to provide additional habitat for small mammals and birds and reduce the line-of-sight, thereby providing a more secure area for foraging or browsing wildlife.

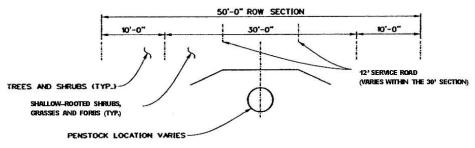


Figure 1C. Typical cross section of penstock ROW with service road, per FERCapproved construction drawing YCH-1116.

Modify Section 2.1.3 paragraph 4 as follows:

As described in the Erosion and Sediment Control Plan (E&SCP) accompanying the License Application, the primary method for revegetating disturbed soils will be reseeding with grasses and legumes (Table 1 and Table 2). Hydroseeding will be the preferred method of application, but hand broadcast seeding will be used wherever hydro seeding equipment cannot be used. The seed mix (Table 2) is currently required by Snohomish County in the Project's Critical Areas Study, and recommended and used by the Mt. Baker Ranger District on National Forest lands to stabilize skid trails, roads, etc. and should provide high quality forage for wildlife (particularly big game) within 1 year of planting (Table 1).

Replace Table 1:

Table 1. Erosion contr	rol seed mix.	
Seed Variety Percent	by Weight	
Trifolium repens	(White dutch clover pre-inoculated)	<u> </u>
Lolium perenne	(Perennial ryegrass)	25%
Phleum pretense	-(Timothy)	25%
Lotus comiculatus	(Birdsfoot trefoil)	<u> </u>
Dactylis glomerata	(Orchardgrass)	20%
	-	TOTAL 100 %

Table 1. Erosion Control Seed Mix – long term maintenance areas/no deep rooted		
vegetation allowed		
Seed variety	<u>% by weight</u>	
Annual Ryegrass	<u>25%</u>	
Perennial Ryegrass	<u>25%</u>	
Creeping Red Fescue	<u>20%</u>	
White Clover	<u>15%</u>	

Chewings Fescue	<u>15%</u>
TOTAL	<u>100%</u>
*Apply at a rate of 100 lbs/acre	*Must be certified as "free of noxious weeds"

Add Table 2:

Table 2. Erosion Control Seed Mix – natural revegetation/deep-rooted vegetation allowed		
<u>Seed variety</u>	<u>% by weight</u>	
Soft white winter wheat	<u>53%</u>	
Slender wheatgrass	<u>21%</u>	
Annual Ryegrass	<u>21%</u>	
Austrian winter peas	<u> 5% </u>	
TOTAL	<u>100%</u>	
*Apply at a rate of 95 lbs/acre	*Must be certified as "free of noxious weeds"	

Modify Section 3.0 (a) revegetating all portions of the penstock right-of-way not contained within an access road right-of-way with sufficient densities of trees as follows:

All portions of the penstock right-of-way outside of the access road right-of-way (11.6 acres) will be re-planted reseeded within 1 year of penstock burial (see Figure 1B). Douglas-fir seedlings will be planted at a maximum density of 350 trees per acre and checked 2 years after planting to ensure success. All areas with seedling survival less than 250 trees per acre will receive supplemental planting to reach 250 trees per acre. To facilitate revegetation, existing forest topsoil will be stored on site during penstock burial and replaced afterward. Seeds and vegetative structures of shrubs and forbs retained in the topsoil should facilitate the development of a new forest understory, but the The seed mix shown in Tables 1 and 2 will be applied if localized areas of surface erosion are detected during post-planting monitoring. Shallow-rooted native or locally adapted (noninvasive) shrubs and forbs will be allowed to naturally repopulate the penstock ROW, except within the approximately 12-foot wide area maintained as service road. In most cases, the service road will be placed within the 30-foot strip over the penstock, precluding vegetative growth within the roadbed. However, in some areas, the road will meander to break up the line of sight created by the linear nature of the ROW. The outer 10 feet on either side of the 50-foot permanent ROW will be allowed to revegetate with native trees and shrubs, except where the location of the service road precludes vegetative growth (see Figure 1C). Along the penstock ROW, shrubs (and trees, where permitted) will be allowed to mature and form pockets or clumps which will help to conceal wildlife utilizing the right-of-way. The long-term presence of palatable herbaceous and shrubby plants on the right-of-way will provide an early successional habitat type that consistently provides open areas with forage, uncommon in the typically dense coniferous forest stands surrounding the project. Trees and deep-rooted vegetation will be removed or mowed on the 30-foot strip centered over the pipeline as needed.

A maximum distance of 500 feet between placements of woody debris/rock piles or other sight barriers will help to break up the line-of-sight along the penstock ROW. These barriers will be placed along the entire penstock ROW, unless topography prevents such installations or makes them unnecessary to break up the line-of-sight.

Noxious and invasive weed control will be performed as needed to comply with applicable noxious weed regulations. The District will prepare a noxious weed plan and implement it through the license period.

Modify Section 3.0 (b) revegetating the margins of the project access road right-of-way with herbaceous plants and shrubs that are palatable to black-tailed deer and other species common in the vicinity as follows:

The narrow margins of the project access road ROW will be hydro-seeded within the first growing season after road construction (see Figure 1B). The seed mix shown in either Table 1 or Table 2 will be used, as appropriate. Disturbance will be minimal along the right-of-way (beyond the graded road surface and the penstock alignment) and forest understory shrubs and forbs will re-invade from seed and vegetative reproduction within the first few years after construction.

The seed mix listed in Table 1 utilizes lower-growing grasses and forbs in an effort to produce adequate ground cover for erosion control while providing habitat for small mammals and reducing maintenance costs by out-competing native trees and deep-rooted vegetation that would otherwise have to be mowed on a regular basis. This table may be updated by the District based on changes in recommended management techniques for the given area and habitat; recommendations by WDFW, USFWS, Snohomish County, or other agencies with jurisdiction, or based on research.

Table 2 lists a seed mix that was developed by the U. S. Forest Service to use in revegetating abandoned roads, and is required for use by Snohomish County per the Project's Critical Area Study. This mix is intended to be more short-lived, thus providing forage and protection from erosion while allowing native vegetation to seed in. This seed mix will be used in areas where native vegetation, including trees, will be allowed to grow, primarily within the outer 10 feet along either side of the ROW and in critical areas identified in the Critical Area Study. This table may be updated based on changes in recommended management techniques for the given area and habitat; recommendations by WDFW, USFWS, Snohomish County, or other agencies with jurisdiction, or based on research.

Modify Section 3.0 (d) installing and maintaining nest boxes and perch poles along the project access roads <u>and the penstock right-of-way</u> as follows:

The project access roads all cross managed upland coniferous forest, where regular harvesting will maintain even aged stands. Current state forest practices regulations require landowners to maintain snags and green trees during harvest to provide habitat for

cavity nesters, but some stands still may not necessarily provide nesting conditions suitable for cavity nesting birds. All cavity nesting birds found in this area, except the pileated woodpecker, would be expected to fully utilize a stand that contained a minimum density of three snags per acre with a dbh of 18 inches or greater (Neitro et. al. 1985). If at any time during the license period, forest stands on or within 100 feet of the access road right of way or penstock ROW are found to contain three 18+ inch snags per acre, no additional nesting mitigation will be provided. This area could include the outer 10 feet of the penstock ROW, Project mitigation lands, or potentially neighboring lands. If the density of 18+ inch snags drops below three per acre at any time during the license period, or the District chooses not to survey the adjacent forest stands, nest boxes will be installed and maintained by the District following an adaptive management program. SRH. Nest boxes will be of a variety of sizes to accommodate all cavity nesting birds and mammals likely to use the area. Up to 20 nest boxes targeting small native cavity nesting birds and mammals will be placed along the access roads and penstock ROW, in consultation with WDFW. The nest box program will be initiated within 1 year after Project construction is completed. Boxes will be checked every 2 weeks initially. If non native species inhabit boxes and need to be removed, or predation is a problem, boxes will be modified or moved to prevent use by non native species or predation. If boxes are being used by native species and use by non native species or predation is not an issue during the first 3 visits of the season, the boxes will be checked once per month through August.

Raptor perches will be visually monitored while conducting other activities on the tract. The immediate vicinity of the perch will also be inspected for signs of use, including pellets and whitewash.

By maintaining the penstock ROW as relatively open habitat, raptors and other birds of prey are expected to benefit from increased access to prey. To provide perching habitat, the District will also erect and maintain raptor perch poles along the penstock ROW at a rate of 2 per linear mile. Perch poles will be maintained until the surrounding trees are tall enough to provide natural perches.

Modify Section 3.0 (g) monitoring the effectiveness of the measures described in (a), (b), and (e) above, including steps to be taken in the event these measures are not effective, such as, but not necessarily limited to, modifying the measures or establishing or enhancing additional riparian forest areas as follows:

All mitigation areas will be monitored to ensure the objectives of this plan are met. Monitoring will consist of periodic checks on vegetative conditions. <u>Reforested</u> <u>Revegetated</u> and reseeded areas will be checked annually during the first 2 years, and every 5 years thereafter for the life of the License (50 years) and observations will be included in an annual summary report to WDFW. Densities of trees and cCoverage of shrubs and grasses will be determined visually evaluated. If the estimation of coverage by bare ground or noxious weeds is more than 20 percent, maintenance activity such as reseeding/replanting or weed control will occur. Areas with fewer than 250 trees/acre at 2 years after planting will receive supplemental planting. Any areas of exposed soil along tThe access road or penstock route will be reseeded with the erosion-control seed mix <u>from Tables 1 or 2, as appropriate</u>. After the fifth year, there will be no need to check the status of the seedlings, but ground cover will be monitored visually for the life of the License. Monitoring will not include counts or checks for animal use or presence, as animal responses to mitigation at this small scale cannot be predicted, and accurate counts cannot be made on such narrow, linear parcels.

Modify Section 3.0 (h) provide recommendations to the agencies and the Commission for alternative wildlife mitigation measures, if monitoring indicates that the revegetation measures or the riparian forest establishment or enhancement is not successful as follows:

Monitoring of the riparian and upland forest mitigation areas will consist of periodic checks of the overstory vegetation. <u>SRH The District</u> will <u>provide a written</u> report to the FERC <u>every five years, and will provide a written summary report to the WDFW</u> and the USFWS <u>every year annually. for the first 5 years</u>. Failure of revegetation efforts is highly unlikely given the rapid rate at which trees grow vegetation grows in western Washington. Should the revegetation efforts fail, <u>SRH the District</u> will make recommendations to the FERC and the agencies for alternate measures.

Modify Section 3.0 (i) schedules for implementing the measures proposed in (a) through (f) above, for filing the results of the monitoring program, and for filing recommendations for alternative Wildlife mitigation as follows:

(i) First paragraph:

Revegetation (reforestation and reseeding) <u>Reseeding</u> of areas disturbed during construction will be completed within <u>2 years 1 year</u> of Project completion.

(i) Third paragraph:

Nest boxes <u>and raptor perch poles</u> will be installed, where needed, within 1 year after the completion of Project construction. <u>Additional nest boxes will be installed annually if</u> <u>warranted as described in Section 3.0 (d).</u>

EXHIBIT B

LETTER FROM PORTLAND REGIONAL OFFICE

To: Subject: Presler, Dawn FW: Subject: Response to inquiry regarding planting trees on the penstock right-of-way at the Youngs Creek Project, FERC No. 10359

From: Patrick Regan [mailto:Patrick.Regan@ferc.gov]
Sent: Monday, May 16, 2011 11:34 AM
To: Meaker, Bruce
Cc: Moore, Kim; Spahr, Scott; Miles, Danny; Kathleen Clarkson
Subject: Subject: Response to inquiry regarding planting trees on the penstock right-of-way at the Youngs Creek
Project, FERC No. 10359

Dear Mr. Meaker,

This is in response to your inquiry about planting trees on the penstock right-of-way on the Youngs Creek Project, FERC No. 10359. The vegetation along the right-of-way should be controlled to allow for visual inspection and monitoring of the penstock route in accordance with good engineering practices. Trees should not be planted as they will prevent visual inspection and obscure the detection of potential leaks or other signs of instability.

Patrick J. Regan, P.E.

Regional Engineer

Federal Energy Regulatory Commission

Office of Energy Projects

Division of Dam Safety and Inspections

Portland Regional Office

805 SW Broadway, Suite 550

Portland, OR 97205

Office 503-552-2741

FAX 503-552-2799

e-mail <u>Patrick.Regan@ferc.gov</u>

EXHIBIT C

AGENCY CONSULTATION DOCUMENTATION

Presler, Dawn

From:Tim_Romanski@fws.govSent:Friday, November 05, 2010 11:25 AMTo:Presler, DawnSubject:Re: FW: Youngs Creek Hydro (P-10359) - WHMP amendment neededAttachments:Youngs Creek.pdf

That was easy.

Tim Romanski Fish and Wildlife Biologist U.S. Fish and Wildlife Service Washington Fish and Wildlife Office Division of Conservation and Hydropower Planning 510 Desmond Drive SE, Lacey, WA 98503 360.753.5823 (phone) 360.753.9518 (fax)

"Presler, Dawn" <DJPresler@SNOPUD.com>

11/05/2010 10:32 AM

To "'Tim_Romanski@fws.gov'" <<u>Tim_Romanski@fws.gov</u>> cc Subject FW: Youngs Creek Hydro (P-10359) - WHMP amendment needed

Hi Tim,

Kim said that I should resend the Youngs Creek draft WHMP Amendment to you again, along with a blank concurrence letter. Please see attached.

Dawn

From: Presler, Dawn
Sent: Tuesday, October 19, 2010 12:11 PM
To: 'Applegate, Brock A (DFW)'; 'Tim_Romanski@fws.gov'
Cc: Schutt, Mike; Bedrossian, Karen
Subject: Youngs Creek Hydro (P-10359) - WHMP amendment needed

Dear Tim and Brock,

Attached is an electronic copy of a letter I put in the mail to the both of you today. The attached letter is to seek your input on a needed amendment to the the Youngs Creek Hydro Project's Wildlife Mitigation Habitat Plan in order to protect the penstock from damage. A letter of concurrence/comments would be appreciated <u>by November 30, 2010</u>. Feel free to contact us if you would like to discuss in-person.

Thanks!

Dawn Presler

TO: Dawn Presler, E1 Snohomish County PUD No. 1 (District) PO Box 1107 Everett, WA 98206-1107 DJPresler@snopud.com

Re: Youngs Creek Hydroelectric Project (FERC No. P-10359) – Wildlife Habitat Mitigation Plan (WHMP) Amendment

I concur with the proposed WHMP amendment provided by the District on October 19, 2010, for review and comment by the US Fish and Wildlife Service and Washington Department of Fish and Wildlife.

_ I do not concur with the proposed WHMP amendment and provide the following comments:

m -om en

Signature:

Tim Romanski, US Fish & Wildlife Service

Date:

Presler, Dawn

From: Sent:	Applegate, Brock A (DFW) [Brock.Applegate@dfw.wa.gov] Thursday, July 07, 2011 4:19 PM
То:	Bedrossian, Karen
Cc:	Moore, Kim; Binkley, Keith; Presler, Dawn; Milner, Ruth L (DFW)
Subject:	FW: Youngs Creek Hydro - WHMP Amendment Request to FERC
Attachments:	20110707 WHMP Amendment Final.pdf

Hi Karen, WDFW concurs with the amendments as written in the attached final draft of the Youngs Creek Wildlife Habitat Management Plan (WHMP). Thanks for working with us on the amendments to the WHMP and we look forward for working together with you on the Nest Box Program mentioned in the plan.

Sincerely, Brock

Brock Applegate Renewable Energy Mitigation Biologist Washington Department of Fish and Wildlife P.O. Box 1100 111 Sherman St. (physical address) La Conner, WA 98257-9612

(360) 466-4345 x254 (360) 789-0578 (cell) (360) 466-0515 (fax)

From: Bedrossian, Karen [mailto:KLBedrossian@snopud.com]
Sent: Thursday, July 07, 2011 3:39 PM
To: Moore, Kim; Applegate, Brock A (DFW)
Cc: Presler, Dawn; Binkley, Keith
Subject: RE: YC - WHMP Amendment Request to FERC

Hi Brock,

Attached are the proposed amendments to the Youngs Creek WHMP with the changes you requested this last time highlighted in yellow. We will remove the remaining yellow and send this off to FERC next week along with the consultation emails and other appropriate attachments to assist FERC with their review.

I left messages for you on both of your phones. Call me if you have any questions or proposed changes so that we can get this wrapped up.

Send us a concurrence email if you concur with the amendments as written.

Thanks very much,

Karen

Karen Bedrossian Senior Environmental Coordinator Snohomish County PUD 425 783-1774 From: Moore, Kim
Sent: Wednesday, June 29, 2011 7:56 AM
To: 'Applegate, Brock A (DFW)'
Cc: Presler, Dawn; Bedrossian, Karen; Binkley, Keith
Subject: RE: YC - WHMP Amendment Request to FERC

Brock the language you suggest below would work for me and will ask Karen to make those edits and send you a revised WHMP next week. If you could work on it next week it would be appreciated. Have a good long weekend.

From: Applegate, Brock A (DFW) [mailto:Brock.Applegate@dfw.wa.gov]
Sent: Tuesday, June 28, 2011 11:15 PM
To: Moore, Kim
Cc: Presler, Dawn
Subject: RE: YC - WHMP Amendment Request to FERC

Hi Kim, I will be out the next two days. If you need this before July 1, please call my cell. Karen misunderstood what I was saying about the amount of boxes. We agreed to "punt" per say and work out the number of boxes that would be initially put out later. It should say something about WDFW and SnoPUD will work out an agreement for up to 20 boxes... and maybe put a due date on it so we have to get it done. If you can change that, it would be much appreciated. Otherwise, I can talk more on Friday.

Sorry about the misunderstanding.

Sincerely, Brock

Brock Applegate Renewable Energy Mitigation Biologist Washington Department of Fish and Wildlife P.O. Box 1100 111 Sherman St. (physical address) La Conner, WA 98257-9612

(360) 466-4345 x254 (360) 789-0578 (cell) (360) 466-0515 (fax)

From: Moore, Kim [mailto:KDMoore@SNOPUD.com] Sent: Monday, June 27, 2011 2:56 PM To: Applegate, Brock A (DFW) Cc: Binkley, Keith; Presler, Dawn; Bedrossian, Karen Subject: FW: YC - WHMP Amendment Request to FERC Importance: High

Brock thanks for working with us on this WHMP amendment for Youngs Creek. Appreciate your efforts to get a document that both parties can live with and we look forward to working with you in the future. If you have any questions please feel free to call Karen at 425-783-1774 or myself.

Kim D. Moore, PE Assistant General Manager, Generation and Water Resources Snohomish County PUD 425-783-8606 work 425-530-6936 cell <u>kdmoore@snopud.com</u>

CERTIFICATE OF SERVICE

I hereby certify that I have this day served via e-mail or via the U.S. Postal Service a copy of the foregoing filing upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with Rule 2010 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission.

Dated this 21st day of July, 2011 at Everett, Washington.

Lay. Finner

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APPENDIX F

FERC ORDER APPROVING PLAN AMENDMENT

136 FERC ¶ 62,206 UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

Public Utility District No.1 of Snohomish County, WA. Project No. 10359-004

ORDER APPROVING MODIFICATIONS TO WILDLIFE HABITAT MITIGATION PLAN PURSUANT TO ARTICLE 403

(Issued September 8, 2011)

1. On July 21, 2011, Public Utility District No. 1 of Snohomish County, Washington (licensee) filed an application to amend the approved Wildlife Habitat Mitigation Plan (plan) pursuant to article 403 of the license for the Youngs Creek Hydroelectric Project No. 10359.¹ The 7.5-megawatt (MW) project is located on Youngs Creek in Snohomish County, Washington.

BACKGROUND

2. Pursuant to article 403 of the license issued on May 5, 1992, the licensee was required to file a wildlife mitigation plan with the Commission for approval. The plan had to include provisions for revegetating the penstock right-of-way with trees, revegetating the margins of the project access road with plants and shrubs palatable to black-tailed deer and other common species in the project vicinity, providing gates at the entrance of access roads, enhancing existing riparian areas in the project vicinity, acquiring and preserving mature coniferous forest in the project vicinity, monitoring these mitigation measures, providing recommendations in the event these measures are not successful, and developing schedules for implementation of the measures. The licensee had to prepare the plan after consultation with the Washington Department of Fish and Wildlife (WDFW) and the U.S. Fish and Wildlife Service (FWS) and include documentation of the consultation with their submittal. The licensee submitted the plan on December 17, 1992, with a supplemental letter filed April 7, 1993.

3. The Commission approved and modified the plan by an order issued May 12, 1993.² The Commission set specific submittal dates for the monitoring reports and

² Order Approving and Modifying Wildlife Habitat Mitigation Plan issued May, 1993 (63 FERC \P 62,129).

¹ Order Issuing License (Major Project) issued May 5, 1992 (59 FERC ¶ 62,124).

required evidence of consultation with FWS and WDFW to be included with the report submittals. In addition, the licensee was required to file a revised exhibit G within one year of the order date showing an acquired 5.3-acre mitigation parcel within the project's boundaries.

4. On October 7, 2008, the Commission issued an Order Approving Transfer of License from Snoqualmie River Hydro, Inc. to the current licensee, PUD District #1 of Snohomish County, Washington.³ The project had not yet been constructed. On February 12, 2009, the Commission issued an Order Granting Extension of Time to the current licensee that extended the construction completion date to December 31, 2011. The licensee began construction of the project in February 2010 and is scheduled to complete construction before the deadline.

PROPOSED AMENDMENT

5. The licensee has proposed changes to the approved wildlife habitat mitigation plan. The approved plan calls for planting the penstock right-of-way with a sufficient density of trees. The licensee states that trees or other deep-rooted vegetation if planted and allowed to grow in the penstock right-of-way present safety concerns since the roots have the potential to surround the penstock and could crack the structure leading to leaks and failure of the penstock. Planting deep-rooted trees and shrubs would also impair future safety inspections since the trees would prevent easy visual inspection of the rightof-way.

6. The overall right-of-way is approximately 50 feet wide and 2.6 miles long, with the middle 30 feet designated for the penstock right-of-way. The licensee proposes to align a service road within the majority of the penstock right-of-way to facilitate security and maintenance visits. The service road would have a typical width of 12 feet, plus maintained shoulders, and would be located approximately in the center of the penstock right-of-way. Following construction, the licensee proposes to seed the overall right-of-way and would not allow trees or other deep-rooted vegetation to grow within the 30-foot corridor centered over the penstock pipeline. Except where occupied by the service road, this 30-foot corridor would be allowed to revegetate with native or locally adapted, shallow-rooted shrubs, grasses, and forbs. Vegetation within the shoulders of the service road along the penstock right-of-way would be maintained by mowing and other methods. Trees and other deep-rooted vegetation would be allowed to grow in the outer 10 feet of the penstock right-of-way.

 $^{^3}$ Order Approving Transfer of License issued October 7, 2008. (125 FERC \P 62,017

7. The licensee is also proposing changes to the erosion control seed mixes previously approved for application after penstock installation and roadway completion. The licensee was required to use herbaceous plants and shrubs that are palatable to blacktailed deer and other species common in the project vicinity. The licensee proposed two different mixes, one of which is a mix developed by the U.S. Forest Service (USFS) to use in revegetating abandoned roads and is required for use by Snohomish County per the project's Critical Area Study.

8. When the original plan was written in 1992, forest lands located adjacent to the penstock right-of-way were populated with mature second growth trees. Since that time, most of those lands have been logged and now contain mostly sapling sized conifer stands. Becaues the land adjacent to the penstock right-of-way no longer contains large trees, the licensee has proposed installing up to 20 nest boxes within one year after project construction for nesting birds and mammals along the access road and penstock right-of-way. The licensee also proposes to install perch poles for raptors at a rate of two per linear mile.

9. In addition, the licensee proposes changes to the monitoring methods and reporting requirements for the plan. Since the areas above the penstock would not be reforested but reseeded, monitoring methods would now use visual estimate of percent areal cover, rather than a per stem density count. In addition, the licensee would now conduct observations of the reseeded and revegetated areas annually for the life of the license and would include them in their annual report to WDFW. Previously, the licensee was to conduct inspection annually during the first two years and then every five years thereafter. The licensee would provide an annual report to WDFW and a summary report every five years to the Commission. The first annual report should be filed with the WDFW by December 31; 2012; and the first five-year summary report should be filed with the Commission by December 31, 2017. Any failed efforts would involve reseeding only and will not include reforestation, as was stated in the 1992 plan. Nest boxes and raptor perch poles will be installed annually as warranted and in consultation with WDFW.

AGENCY CONSULTATION

10. The licensee coordinated with WDFW during development of the proposed amendment and sought input from the agencies. The licensee provided the final amendment language to WDFW and FWS on October 19, 2010, and asked for their approval. The FWS concurred with the proposed amendment on November 5, 2010, and WDFW provided their approval in an email on July 7, 2011, after the licensee incorporated changes requested by the WDFW.

DISCUSSION

11. The original Wildlife Habitat Mitigation Plan was approved almost two decades ago. Since that time, the project has switched owners and construction has commenced. Conditions at the project site, as well as regulations and requirements, have changed since 1992. The licensee has proposed changes to the revegetation requirements that will ultimately lead to improved conditions for safety inspections, damage prevention for the penstocks, and enhanced wildlife habitat in the project area. The licensee satisfied the consultation requirements and worked with the FWS and WDFW to secure their approval. Based on these approvals, and in light of the improved safety, the proposed amendment should be approved.

The Director orders:

(A) Public Utility District No. 1 of Snohomish County, Washington's proposed amendment, filed July 21, 2011, pursuant to article 403 of the license and the Wildlife Habitat Mitigation Plan, for the Youngs Creek Hydroelectric Project, is approved as modified in paragraph (B).

(B) The first annual monitoring report shall be filed with the Washington Department of Fish and Wildlife by December 31, 2012, and then every year thereafter for the duration of the license. The first five-year summary report shall be filed with the Commission by December 31, 2017, and then every five years thereafter for the duration of the license. If necessary, the five-year reports shall include recommendations, subject to Commission approval, for further mitigation or monitoring. For reports filed with the Commission, the licensee shall allow a minimum of 30 days for the U.S. Fish and Wildlife Service and the Washington Department of Fish and Wildlife to comment prior to filing with the Commission. The licensee shall include with the five-year report any comments or recommendations received from those agencies. If the licensee does not agree with a recommendation. The Commission reserves the right to make changes to the plan or to require further mitigation or monitoring.

(C) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 8251 (2006), and the Commission's regulations at 18 C.F.R. § 385.713 (2011). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this

order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Steve Hocking Chief, Environmental Review Branch Division of Hydropower Administration and Compliance

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Document Content(s)
P-10359-0041.DOC1-5