

STATE OF OREGON
WATER RESOURCES DEPARTMENT
LICENSE FOR HYDROELECTRIC PROJECT 410
A MAJOR PROJECT OF
7143 THEORETICAL HORSEPOWER

WHEREAS, by act of the Legislature of the State of Oregon, ORS 543.010 to 543.620 and 543.990, as amended, hereinafter called the Hydroelectric Act, the Water Resources Director is authorized to issue licenses to acquire and hold the right to the use of the waters within the state, and for the construction, operation and maintenance of facilities for the generation and utilization of hydroelectric energy; and

WHEREAS, Frontier Technology, Inc., hereinafter called the licensee, a corporation organized under the laws of the State of Oregon and duly qualified to do business in Oregon, with its principal place of business at 3980 North Shasta Loop, Eugene, Oregon 97405, made application in due and proper form to the Director for license for a power project designated as Project 410 on the records of the Director and known as the Falls Creek Hydroelectric Project, and for authority to construct, maintain and operate in the County of Linn, State of Oregon certain project works, necessary or convenient for the development, transmission and utilization of hydroelectric energy, and for the use of the waters of Falls Creek tributary of the South Santiam River for generation of such electric energy; and

WHEREAS, this project is a major project for development of 7143 theoretical horsepower with proposed maximum installed plant capacity of 4.346 megawatts; the license has paid to the Director all fees required prior to issuance of a license in accordance with the provisions of the Hydroelectric Act and the rules and regulations of the Director; and no application for said project, or in conflict therewith, has been filed by any municipal corporation or public utility districts; and

WHEREAS, the licensee has filed maps, plans and specifications as required by ORS 543.290, and the Director finds the project will be well adapted to the utilization of the water power involved and hereby approves same; and

WHEREAS, the licensee on the 8th day of March, 1984, accepted in writing the terms and conditions of this license for Project 410;

NOW, THEREFORE, the Director hereby issues this license to the Licensee for the purpose of constructing, operating and maintaining the project works hereinafter described as necessary or convenient for the development, transmission and utilization of hydroelectric energy, and to appropriate, acquire and hold the right to use the waters of Falls Creek to the extent hereinafter set forth. This license is issued on condition that said licensee shall comply with all the terms and conditions of the Hydroelectric Act and Laws of Oregon relating thereto, with the Rules and Regulations of the Director pursuant thereto as fully set forth herein, and shall be subject also to the following express conditions, limitations and exceptions:

Article 1.

Definition of Project

The word "project" as used in this license means the complete unit, improvement, and development, including among other things, powerhouses, waterwheels, conduits or pipes, dams and appurtenant works and structures, storage, diverting or forebay reservoirs connected therewith, and primary lines transmitting power to the point of junction with a distributing system, or with any interconnected primary system, miscellaneous works and structures used in connection with said unit or any part thereof, right of way, lands, flowage rights and all other properties, rights and structures necessary or appropriate in the use, operation, and maintenance of any such unit.

Article 2.

Description of Project

A concise, general description of Project 410 is as follows:

The Falls Creek Hydroelectric Project will divert not to exceed 26.4 cubic feet per second of water utilizing a gross head of 2381 feet to develop 7143 theoretical horsepower. A rock and concrete dam 5.25 feet in height located in the NE 1/4 SE 1/4 Section 5, Township 14 South, Range 4 East, WM, will divert water through a 30-inch penstock reduced to 20-inch at the powerhouse located in the SW 1/4 NE 1/4 Section 32, Township 13 South, Range 4 East, WM. Water will be returned to the South Santiam River adjacent to the powerhouse. An impulse turbine driving a generator with a nameplate capacity of 4.0 megawatts will develop from 0.353 to 4.346 megawatts. Transmission lines from the project will join existing Pacific Power and Light facilities approximately 300 feet from the powerhouse. Eighteen miles of existing transmission line will be upgraded.

Exhibits

The location and character of the project are more specifically shown and described among the following exhibits filed to accompany the application and hereby made part of this license.

Initial Statement

Articles of Incorporation.
Resolution authorizing project.
Statement of Compliance with state, county and municipal regulations.
Copy of Corps of Engineers 404 Permit.

Exhibit A

Description of location of project features.
Copy of USFS Special Use permit.

Exhibit B

Statement of nature and extent of proposed appropriation

Exhibit C		Construction schedule
Exhibit D		Statement of cost and ability to finance. Copy of power sales contract with Pacific Power and Light.
Exhibit E		Exhibit E from FERC exemption application. Copy of agreement with Department of Fish and Wildlife.
Exhibit F		Design drawings and specifications including:
Drawings	G-1 through 4	General drawings
Drawings	R-10 through 14	Road plans, profiles and details
Drawings	D-20 and 21	Diversion plans and details
Drawings	P-30 through 38	Penstock
Drawings	C-40 through 41	Powerhouse plans and details
Drawings	S-42 through 44	
Drawings	A-43 through 47	Mechanical plans and details
Drawings	M-50 and 51	Electrical diagrams, plans and details
Drawings	E-55 through 71	
Contract Document		

Article 3.

The licensee shall comply fully with the provisions of the order of the Water Policy Review Board dated May 23, 1983. The order provides that the agreement between the licensee and the Oregon Department of Fish and Wildlife, dated November 26, 1982, be made a condition of the license. Copies of the order and agreement are attached for reference.

Article 4.

The licensee shall furnish the Director with a monthly progress report of construction of Project 410. Included in this report shall be a statement of the claimed cost covering each of the accounts involved.

Article 5.

Period of License

This license is effective as of March 14, 1984, and shall terminate December 31, 2019.

Article 6.

Jurisdiction

In consideration of this license and the benefits and advantages accruing thereunder to the Licensee, it is expressly agreed by the Licensee that the entire project, project area and project works hereinafter designated and described whether or not on the lands of the United States, shall be subject to all provisions, terms and conditions of this license. Should the Licensee be prevented from compliance with any provisions of this license or of the Hydroelectric Act by the operation of any valid Federal law, or the lawful order, rule or regulation of any Federal governmental agency exercising exclusive jurisdiction in the premises, it shall not be deemed to be in default, or under any liability to the State of Oregon for failure to perform the same during the period of such disability.

Article 7.

Time limits for construction

The licensee shall begin construction of the project facilities within one year of the date of issuance of this license; shall complete construction of the project facilities within three years of the date of issuance of this license; and thereafter shall maintain the project facilities in good working order. If the licensee fails to begin or complete construction of the project facilities within the time limits fixed in this license or any lawful extension thereof; or if, after completing construction, fails to use or operate the project facilities for any period of five consecutive years, the Director shall, after due notice, terminate this license by written order. If at any time after two years of nonuse of water for this project, there shall be any conflicting application for or claim to use this water, then the licensee may be required by the Director to show cause why the conflicting application should not be granted and this license terminated.

Article 8.

Water Right Granted

Subject to the provisions of ARTICLE 3 and prior appropriations, this license grants the Licensee the right to use 26.4 cubic feet per second of water from Falls Creek for development of hydroelectric power.

The date of priority of this appropriation of water is August 24, 1982 for 16.5 cfs, October 28, 1982 for 3.5 cfs and April 29, 1983 for 6.4 cfs.

The right granted herein is expressly made inferior in right and subsequent in time to any appropriation of water from this source which may hereafter be made for domestic, municipal, irrigation, or any other beneficial consumptive use.

Article 9.

Period of Water Right

The right to the use of the waters in connection with the development of this project shall be vested with the Licensee during the time this license or any lawful renewal or extension thereof is in force.

Article 10

Annual License Fee

An annual license fee of \$1428.60 shall be paid by the licensee on or before January 1 of each calendar year for each calendar year from the first calendar year after the project is completed to 2019, inclusive, being 20 cents for each of the 7143 theoretical horsepower authorized herein for Project 410.

Should the terms and conditions of the license be extended at its expiration, the Licensee shall pay such annual fees as the Director or his successor having jurisdiction in the matter at the time, shall fix.

Article 11

Depreciation

The amount of the annual charges for depreciation expenses to be included in the cost of operation shall be determined on a sinking fund basis computed by the use of service lives subject to approval of the Director; provided, that, for the purpose of depreciation, the services lives of the original units of property shall not exceed the unexpired period of this license; provided further, that the Director may upon further determination and in his discretion, extend the depreciation period of the original units of the project beyond the life of the license. In determining the amount of the annual charges for depreciation expenses to be included in the cost of operation prior to the time of final action of the Director in fixing the actual legitimate cost of the original project as provided for in ARTICLE 12 of the License, the original legitimate cost of the items in each account number as set forth in the "Initial Cost Statement" to be filed by the Licensee, as provided for in said Article, shall be used.

ARTICLE 12

Determination of cost of project

- (a) Initial Cost Statements: The Licensee shall file within one year after the time the project is ready for service, an initial statement, under oath, with one additional conformed copy thereof showing the amount claimed by the Licensee as the actual legitimate cost of the project, as defined in subsection 2 of ORS 543.010, on forms as prescribed or otherwise approved by the Director.

Similar statements with respect to net additions and betterments to the project shall be filed in the same manner before April 1 of each and every succeeding year during the term of this license or any lawful extension thereof, unless the Director shall otherwise direct.

- (b) Substance: Each statement so filed shall give full, adequate and complete information with respect to the cost of the project or additions and betterments thereto as the case may be. Any statement which does not contain sufficient information will be returned to the Licensee for such additional information as the Director may deem necessary.
- (c) Report on project: When a satisfactory statement shall have been filed with the Director, the Director's representatives will make an audit on the accounts, will analyze the books, cost records, engineering reports and other records supporting such statement or pertaining to the project, will inspect the project works, and will prepare a report setting forth their finding and recommendations with respect to the cost as claimed.
- (d) Service of Report: Copies of such report and of the final report provided for in subsection (g) of this ARTICLE 13, will be served by registered mail upon the Licensee at its principal place of business in Oregon and copies will be sent to such other parties as the Director may prescribe.
- (e) Time of Filing of Protest: Thirty days after service thereof will be allowed to the Licensee within which to file a protest to such report. If no protest is filed within the time allowed, the Director will issue such orders as may be appropriate. If a protest is filed, a hearing will be ordered, such hearing to be held within ninety days from filing of the protest with the Director.
- (f) Burden of Proof: The burden of proof to sustain each item of the statement of claimed costs as filed shall be upon the Licensee and only such items as are in the opinion of the Director supported by satisfactory proof may be entered in the project accounts of the Licensee.
- (g) Finding and Final Statement: Final action by the Director will be in the form of a finding and order entered in the records of the Water Resources Department and served upon the Licensee and such other parties as the Director may prescribe. The Licensee shall thereafter file a final statement, under oath, in duplicate, showing the net investment revised in conformity with the order of the Director, together with a statement showing that its records have been revised in conformity with such order.

ARTICLE 13

Reasonable Rate of Return

A reasonable rate of return on the net investment in the project shall be that established by The Public Utility Commissioner for Electric Utilities, subject to the approval of the Director.

ARTICLE 14

Amortization Reserve

Any earnings in excess of said reasonable rate of return shall be set up in a Miscellaneous Reserve Account, as a credit to the Amortization Reserve, pursuant to ORS 543.510 of the Hydroelectric Act, to be disposed of in accordance with order of the Director.

ARTICLE 15

Accounting

For the purpose of this license and the accounting to be followed by the Licensee, the Director adopts a system of accounts in conformity with the Uniform System of Accounts for class A and B Electric Utilities as established by the National Association of Regulatory Utility Commissioners and reserves the right to approve any revisions or modifications thereof.

ARTICLE 16

Bond of Licensee to Protect Laborers and Materialmen

Before entering into the construction of this project, the Licensee shall execute a bond as required by ORS 543.560 to be approved by the Director, and by the Attorney General of Oregon as to form, which bond shall be in addition to and not in lieu of any other liability of the Licensee principal.

IN TESTIMONY OF ACCEPTANCE of all terms and conditions of this license, ORS 543.010 to 543.620 and 543.990, and the rules and regulations of the Director pursuant thereto, the Licensee has affixed his signature this 8th day of March, 1984.


Frontier Technology, Inc.
Gary P. Marcus, President

IN WITNESS HEREOF, the Director of the Water Resources Department of Oregon has signed his name at Salem, Oregon this 14th day of March, 1984.


William H. Young
Director

BEFORE THE WATER POLICY REVIEW BOARD

OF THE

STATE OF OREGON

In the Matter of the Referral of)
Hydroelectric License Application)
HE 410 involving use of water)
from Falls Creek in Linn County)
for Hydroelectric Power)
)

FINDINGS OF FACT,
CONCLUSION AND
ORDER

Frontier Technology, Inc., has submitted Hydroelectric License Application H.E. 410 for a hydroelectric project exceeding 100 theoretical horsepower.

The license application was referred to the Water Policy Review Board by the Director of the Water Resources Department under the provision of ORS 543.225.

A hearing on the matter was held in Sweet Home, Oregon, on December 10, 1982. The hearing record was reopened on May 13, 1983, to accept additional written information submitted by the applicant. As a result of said hearing, the Water Policy Review Board makes the following:

FINDINGS OF FACT

1. Hydroelectric License Application H.E. 410 for a hydroelectric project on Falls Creek in Linn County was submitted by Frontier Technology, Inc., of Eugene, Oregon.
2. Amendments to the application were submitted by the applicant subsequent to the hearing and accepted on May 13, 1983.
3. The amended application proposes to divert up to 26.4 cubic feet per second of water from Falls Creek to develop in excess of 100 theoretical horsepower.
4. The project will have a maximum capacity of 3.5 MW.
5. Average annual energy production is estimated to be 13,901,000 kilowatt hours of electricity.
6. Structural elements of the proposed project include a small diversion structure, a 8,750 foot long penstock, a powerhouse, turbine and generator.
7. The project will divert water from Falls Creek and will discharge water to the South Santiam River near river mile 57.5.

8. Falls Creek is a tributary to the South Santiam River at river mile 55.
9. Falls Creek contains numerous falls downstream from the proposed project diversion.
10. The falls prevent anadromous fish migration upstream into the project area.
11. The applicant has signed an agreement with the Department of Fish and Wildlife for the protection of fish life in Falls Creek.
12. Falls Creek provides habitat for resident trout throughout its length.
13. The agreement provides for the maintenance of a flow of one cubic foot per second past the point of diversion and screens at the project intake if determined necessary.
14. The project will have minimal impacts on wildlife.
15. The proposed project is located on forested land of moderate to steep gradient.
16. A 20 foot corridor will be cleared for the penstock.
17. The penstock will be buried in areas of lesser gradient and anchored to the ground surface in areas of steep gradient to minimize the potential for erosion.
18. Snags and trees outside the 20 foot corridor considered likely to fall on the penstock, will be cut.
19. The proposed powerhouse will be built on the south bank of the South Santiam River about 100 yards back from the waters edge.
20. The powerhouse will be constructed to blend with the natural surroundings and will be unnoticeable from the river or the campground on the opposite bank.
21. The project will discharge water to the South Santiam River at the powerhouse site.
22. The discharge channel will be designed to appear as a natural tributary to the South Santiam River.
23. The proposed project will not have significant impact on the aesthetics of the area.
24. The proposed project is entirely on U.S. Forest Service land.
25. The U.S. Forest Service manages the project area for timber resources.

26. The U.S. Forest Service has plans for timber sales in the project area in the next two to three years.
27. The applicant has applied to the U.S. Forest Service for a special use permit to construct the project.
28. A conditional use permit will not be required from Linn County.
29. The applicant has applied for the 401 and 404 permits for the project.
30. Linn County will require the applicant to obtain the necessary building permits.
31. The applicant proposes sale of the power to Pacific Power and Light Company.
32. About 300 feet of power line will be needed to connect the powerhouse with existing PP&L lines.
33. No contract for the sale of power has yet been signed.
34. The applicant proposes to finance the project through the Department of Energy, Small Energy Loan Program.
35. A loan has not yet been approved for the project by the Department of Energy.
36. The applicant also has access to private financing for the project.
37. The applicant estimates the project will cost up to \$3.8 million.
38. There are no streamflow records for Falls Creek.
39. Estimates and measurements of flow made by the applicant indicate sufficient flows to operate the project and meet the instream flows during most of the year.
40. There is existing access to the powerhouse site and to points along the penstock route.
41. Access will have to be developed to the diversion point.
42. Forest lands bordering the project area on the east are being considered by Congress as a wilderness area.
43. The proposed project is outside the proposed wilderness area.
44. There are no water rights of record and no known water uses on Falls Creek above or below the proposed diversion.

45. Power development is an allowed use in the Water Resources Program for the Middle Willamette Basin.

OFFICIAL NOTICE

The Water Policy Review Board has taken official notice of the records of the Water Resources Department pertaining to water use permits on Falls Creek in the project vicinity.

ULTIMATE FINDINGS

ORS 543.225 (3a through 3g) directs the Water Policy Review Board in its determination of impacts on the public interest from hydroelectric projects.

1. The proposed use is non-consumptive and will divert water from a stream where no known use is being made of the water and will discharge the water into a river that has substantial environmental, aesthetic and recreation value. The proposed project will significantly alter the water volume in Falls Creek below the proposed diversion. The 2.35 mile reach of Falls Creek below the proposed diversion, however, has an extreme gradient, numerous falls, and is generally inaccessible. It provides negligible opportunities for development for most beneficial uses. Protection of fish in the affected reach is addressed under the agreement with the Department of Fish and Wildlife.
2. The proposed project will be the only economic development of the waters of Falls Creek. The applicant has attempted to maximize the economic return on the development of the site through project sizing.
3. The proposed project will have no apparent effects on drainage, sanitation or flood control.
4. There are no flow records available for Falls Creek. Estimates made by the applicant based on hydrologic analysis of nearby gaged drainages, indicate sufficient water to operate the proposed project except during summer low flow periods.
5. There is no evidence in the record that the proposed use is a wasteful, uneconomic, impracticable, or unreasonable use of the waters involved.
6. There are no water rights of record and no known water uses on Falls Creek above or below the proposed project diversion. The project will have no negative impacts on water rights or water uses associated with the South Santiam River into which the proposed project will discharge.
7. Power development is a classified use in the Middle Willamette Basin Program. No special restrictions or limitations on power development apply to the stream proposed for development.

CONCLUSION

The applicant proposes a hydroelectric project on Falls Creek, an undeveloped stream in Linn County. The stream has some fish, recreation and aesthetic value. Existing and potential use of the stream, however, is limited because of its topography, inaccessability and proximity to the South Santiam River. The applicant has incorporated design measures to minimize impacts on the fish, aesthetic and environmental values. Conditions on the proposed use for the protection of fish life and potential future beneficial water uses are necessary to insure the proposed project will not impair or be detrimental to the public interest.

ORDER

It is hereby ordered that Hydroelectric License Application H.E. 410 for a hydroelectric project on Falls Creek be and hereby is approved with the following condition.

1. The agreement between the Department of Fish and Wildlife and Frontier Technology, Inc., dated November 26, 1982, be attached to and made a part of any license issued under H.E. 410.

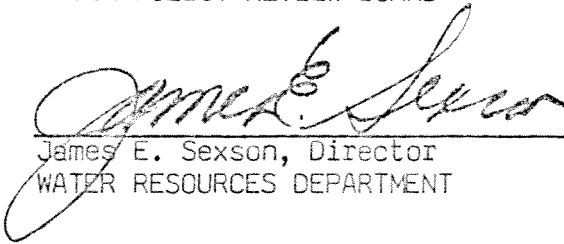
It is further ordered that prior to the issuance of a license on Hydroelectric License Application H.E. 410, the applicant shall provide to the Director of the Water Resources Department, documentation that the applicant has or can obtain:

1. The necessary 401, 404 and special use permits required for the project.
2. An agreement or contract for the sale of project power.

It is further ordered that the application be returned to the Director of the Water Resources Department for such further proceedings as may be required by statute.

Dated May 23, 1983

WATER POLICY REVIEW BOARD


James E. Sexson, Director
WATER RESOURCES DEPARTMENT

APPEALS AND JUDICIAL REVIEW

ORS 536.560 provides any order, rule or regulation of the Water Policy Review Board may be appealed to the circuit court of the county in which the property affected by such order, rule or regulation or any part of such property is situated.

ORS 183.482(1) provides that judicial review of contested cases is conferred upon the Court of Appeals. Judicial review may be obtained by filling out a petition for review within 60 days from the service of this order. Judicial review is pursuant to the provisions of ORS 183.482. Until this conflict is judicially resolved, and an appeal is desired, it may be advisable to commence appeal or review procedures in the circuit court and Court of Appeals simultaneously.

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WATER RESOURCES DEPT.
SALEM, OREGON

AGREEMENT

Falls Creek Hydroelectric Project
Frontier Technology, Inc., Developer
(HE 410)

This agreement is entered into this 26 day of November, 1982 between the State of Oregon, by and through its DEPARTMENT OF FISH AND WILDLIFE, hereinafter called the "Department" and

(Name) Frontier Technology, Inc.

(Address) 3980 N. Shasta Loop, Eugene, Oregon 97405
(Box) (Street) (City) (State) (Zip)

hereinafter called the "Developer".

RECITALS

WHEREAS the Department has the statutory responsibility and authority to protect and enhance anadromous and game fish in the waters of the State of Oregon; and

WHEREAS the Developer has proposed to divert the waters of Falls Creek, a tributary to South Santiam River, Linn County, Oregon, for purposes of hydroelectric generation, said project more particularly described in the Developer's Application for a Hydroelectric License which is attached hereto as Exhibit A and by this reference incorporated herein; and

WHEREAS the Department and Developer recognize the need to protect the fish life of Falls Creek, including populations of rainbow trout and cutthroat trout against possible adverse effects of the project; and

WHEREAS, in accordance with ORS 183.415(5), the parties agree that it is in their mutual best interest to informally dispose of the issues which are the subject of this agreement rather than to suffer the time and expense involved in contesting the matter in an administrative proceeding;

NOW, THEREFORE, in light of the above and in consideration of the covenants contained herein, the parties hereto mutually agree as follows:

A. Obligations of the Developer

1. If so directed by the Department at any future time, the Developer shall furnish, install and maintain a screen over the diversion intake to prevent fish migration downstream through the project diversion. The screen shall be constructed, installed and maintained according to Department specifications.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY
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WATER QUALITY CONTROL

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2. The Developer agrees to maintain at least the streamflow specified below, in the natural channel of Falls Creek from point of diversion to its confluence with the South Santiam, in order to maintain upstream and downstream fish passage, reproduction, growth and maintenance of fish populations using the section of Falls Creek affected by the project. The specified flow shall be measured at the Power Project Diversion - Stream Mile 2.35 in Falls Creek by means of a self-regulated, calibrated weir.

Stream Flows

<u>Period</u>	<u>Cubic Feet Per Second</u>
Throughout the year	1

B. Obligations of the Department

1. The Department agrees to accept the Developer's performance of this agreement as providing adequate protection of the public's interest in the use of the waters of the affected section of Falls Creek for fish and wildlife purposes against possible adverse effects of the project; and therefore further agrees not to protest the issuance of a hydroelectric license for the project by the Oregon Water Resources Department.

C. This agreement shall remain in effect as long as the said project exists within the diversion from Falls Creek and it shall be binding upon and inure to the benefit of the parties and their respective heirs, administrators, executors, successors and assigns.

D. 1. Time is of the essence of this agreement. A default shall occur if the Developer fails to perform any obligation imposed by this agreement and does not correct or commence correction of such failure within 15 days of the date of written notice from the Department specifying the manner in which the Developer is in default.

2. In the event of a default, the Department may take either or both of the following steps:

- (a) Specifically enforce the terms of this agreement by civil action.
- (b) Obtain an injunction against operation of the project until the Developer has corrected or commenced correction of the default.

IN WITNESS WHEREOF, the parties hereto have executed this instrument in duplicate through their duly authorized officials as of the first date written above.

DEVELOPER

Frontier Technology, Inc.

STATE OF OREGON
County of Lane

The foregoing instrument was acknowledged before me this 26 day of
November, 1982 by Gary P. Marcus.

Gary P. Marcus, President FTI

Maude R. Lawrence
Notary Public for Oregon
My Commission expires: _____

My commission expires December 21, 1985

STATE OF OREGON
DEPARTMENT OF FISH AND WILDLIFE

By M.L. Montgomery
M.L. Montgomery
Assistant Director, Administration

STATE OF OREGON
County of Multnomah

The foregoing instrument was acknowledged before me this 26th day of
November, 1982 by MONTY L. MONTGOMERY the
ASSISTANT DIRECTOR of the Oregon Department of Fish & Wildlife.

Judith A. Neilson
Notary Public for Oregon
My Commission expires: 3-13-87