

BEFORE THE WATER RESOURCES COMMISSION OF THE STATE
OF OREGON

IN THE MATTER OF THE CUMULATIVE
IMPACT REVIEW OF APPLICATION
61243 OF THE FARMERS IRRIGATION
DISTRICT FOR A PERMIT TO APPROPRIATE
WATER FOR HYDROELECTRIC POWER

* FINDINGS OF
* FACT, CONCLUSIONS
* OF LAW, AND
* INTERIM ORDER

This matter comes before the Commission on application of the Farmers Irrigation District for a permit to appropriate water for hydroelectric power. The issue before the Commission is whether the impacts of the proposed project are so small in extent, short-termed or localized that there is no reasonable likelihood of cumulative impacts. The application, maps and information required by ORS 537.140, 537.170, 543.255 and OAR 690-51-100 have been duly submitted. The Commission, having considered this matter, now makes the following findings of fact and enters the following conclusions of law with respect to that application:

FINDINGS OF FACT

HISTORY

1. On February 11, 1981 the Farmers Irrigation District (FID) filed application 61243 for a permit to appropriate surface water in the Hood River Basin for the purposes of hydroelectric generation at three power plant locations. The project would divert water from Dead Point Creek, Spring Camp 4, South Fork Green Point Creek, North Fork Green Point Creek, North Fork Pine Creek, South Fork Pine Creek, Gate Creek, Ditch Creek and the Hood River. The total amount of water requested was 185 cfs.
2. A public hearing was held July 14, 1981. In a series of amendments the applicant was allowed to split out parts of the original application which resulted in permits being issued under three other applications.
3. On November 9, 1981 the Board approved FID application 62989 to divert up to 10 cfs from Ditch Creek. The project included a pump-turbine at an existing pumping station which produced power during periods when water was not required for irrigation. For economic reasons this plant has not operated since 1986. FID surrendered its exemption to FERC for this plant. The Water Resources permit has been cancelled.
4. On November 11, 1981 the Board entered an Interim Order, finding that no determination could be made regarding whether use would impair or be detrimental to the public interest because the information submitted with application 61243 was either insufficient or unavailable. The proceedings were continued for 24 months unless further extended by the Board. FID was required to submit additional information regarding flow requirements, evidence of permits or approvals, evidence of a conditional use permit, project feasibility, and identification of funds necessary for construction of the project.

5. On February 23, 1983 the Board approved application 64061 for powerhouse 2 and application 68131 for powerhouse 3. The permit for these projects allows use of up to 35 cfs from the Low Line Canal through powerhouse 3 and those 35 cfs plus 73 cfs from the Hood River through powerhouse 2. The Low Line Canal diverts water from Dead Point, South Pine, North Pine and Ditch Creeks. In July 1984 FID was granted permit no. 46329 for powerhouse 2 and in January 1987 permit no. 49871 for powerhouse 3.

6. Powerhouse 3, on line since 1987, is located on the west bank of Farmers Ditch near the west intersection of Orchard and Tucker Roads in the SE 1/4, SE 1/4 of S 10, T 2 N, R 10 E. The project includes a Pelton turbine, utilizing a gross head of 720 feet to develop 2,800 theoretical horsepower. Water discharged from powerhouse 3 mingles with water from Farmers Ditch. This powerhouse does not operate during the irrigation season in normal water years.

7. Powerhouse 2 was approved to utilize up to 73 cfs from Farmers Ditch which diverts from the mainstem of the Hood River. Powerhouse 2 has been on line since 1985. It is located on the west bank of the Hood River about 500 feet upstream from Powerdale Dam in the SE 1/4, SE 1/4 of S 11, T 2 N, R 10 E. The project includes two units with Francis turbines, utilizing a gross head of 380 feet to develop a combined 4,500 theoretical horsepower.

8. In approving applications 64061 and 68131, the Board concluded that FID would use existing irrigation works and construct new facilities to expand its present seasonal diversions for irrigation to year round diversions for the purpose of generating hydroelectric power.

9. On August 5, 1983 the Board directed the Department to investigate and support any possibilities of doing research on cumulative effects of hydro projects, hopefully using the Hood River Valley as a case study.

10. On November 14, 1983 the Board entered an Interim Order continuing the hearing on permit application 61243 to November 9, 1988. The Board required FID to submit the same information requested in the 1981 Interim Order and to provide a written assessment of its progress on investigations and studies to the Board annually.

11. On November 1, 1988 FID filed an amendment to application 61243 to appropriate from Gate Creek, Cabin Creek, North Fork Green Point Creek and South Fork Green Point Creek. Revisions to this amendment were filed May 17, 1989 and again December 1, 1989. The latter revision deleted South Fork Green Point Creek from the permit application amendment.

FID'S PROPOSED PROJECT

12. In the residual of application 61243, FID requests approval to appropriate up to 25 cfs from Gate Creek, Cabin Creek and North Fork of Green Point Creek at existing irrigation diversions. These waters will be used to supplement diversions currently permitted to operate powerhouses 2 and 3 at higher production during the non-irrigation season (October 15 to April 15).

13. There are nine existing diversions used by FID to convey water from natural water courses into FID's canals. All of these diversions are used for irrigation. Only five are used currently for hydropower. The location of the diversions proposed for use under this application are as follows:

- (a) The Gate Creek concrete diversion structure is located at the NE 1/4 of the SW 1/4 of S 30, T 2 N, R 9 E.
- (b) The Cabin Creek concrete diversion structure is located at the NW 1/4 of the NE 1/4 of S 32, T 2 N, R 9 E.
- (c) The river rock and concrete diversion structure on the North Fork of Green Point Creek is located at the SE 1/4 of the SW 1/4 of S 3, T 1 N, R 9 E.

14. Up to 108 cfs can be diverted under licenses previously granted by the Board. The quantity of water available from Dead Point Creek, Ditch Creek, and the Pine Creek system is not sufficient to operate powerhouses 2 and 3 at maximum capacity. The short-fall of water, according to FID, has been up to 25 cfs.

15. The quantity of water requested from the existing diversions is as follows:

North Fork Green Point Diversion	-- 20 cfs,
Gate Creek Diversion	-- 5 cfs, and
Cabin Creek Diversion	-- 5 cfs.

No more than a total of 5 cfs would be diverted from Gate and Cabin Creeks combined and no more than 25 cfs in total would be diverted from these three sources combined. Water would be diverted only when other permitted sources are insufficient to operate at FID's powerhouses at capacity.

16. FID proposes that water would be diverted first from Ditch Creek, then North and South Pine Creeks, and finally from Dead Point Creek. No more than a combined total of 35 cfs may be diverted from these permitted sources. Gate Creek, Cabin Creek and North Fork Green Point Creek then would be used as provided in finding 15 until the balance of 35 cfs is diverted or until the minimum flows of the sources are reached.

17. The waters diverted would be conveyed via an existing canal system consisting of metal pipe and flume, unlined canal, concrete and wooden flume, and spiral rib pipe in various locations. The diversions on Cabin and Gate Creeks would utilize the Stanley Smith Canal which was converted to pipe in 1988. The diversion on the North Fork of Green Point Creek would use the Low Line Canal to the diversion on Dead Point Creek.

18. Two FID reservoirs are connected to the canal system, each formed by an earth-fill dam and date from 1936. The reservoir volumes are 715 and 288 acre-feet. They are filled annually in February and March by exercising an 8.75 cfs winter water right from Gate Creek. For purposes of this application the reservoirs would be used only to convey diverted waters, not to draft the reservoirs for hydropower generation. The existing hydropower generation using water from Ditch Creek does not result in reservoir drafting.

19. The FID proposed diversions are located in the Hood River Basin. In the Hood Basin Plan, OAR Chapter 690, Division 504, the Water Resources Board recognized two areas in the Hood Basin: the Hood Area and the Wasco Area. The project proposed by FID in amended application 61243 is located in the Hood Area of the Hood River Basin.

CUMULATIVE IMPACT NOTIFICATION

20. During the week of January 22, 1990, the Department, on behalf of the Commission, mailed to the agencies listed below a copy of the permit application, a map of existing and proposed projects in the Hood Basin, excerpts of exhibits submitted with the application, a copy of applicable rules from OAR Chapter 690, Division 51, and a form requesting a cumulative impact determination:

- *Oregon Department of Fish and Wildlife
- *U.S. Fish and Wildlife Service
- *National Marine Fisheries Service
- *Northwest Power Planning Council
- Oregon Department of Environmental Quality
- Confederated Tribes of the Umatilla
- Confederated Tribes of Warm Springs
- *State Historic Preservation Officer
- U.S. Forest Service
- Bureau of Land Management
- *Oregon Forestry Department
- *Oregon Division of State Lands
- *Oregon Natural Heritage Data Base (The Nature Conservancy)
- Hood River County Planning Office
- *Oregon Parks and Recreation Department
- *Columbia River Gorge Commission
- Hood River Ranger District Office
- Hanel Lumber Co., Inc.
- *Longview Fibre Company
- *Oregon Department of Energy
- *Oregon Department of Geology and Mineral Industries
- Oregon Department of Land Conservation and Development

21. Responses were received from the agencies listed in finding 20 designated with an asterisk. Those responses are attached to these findings as Exhibit 1 and by this reference are hereby incorporated into these findings.

22. The Department, on behalf of the Commission, reviewed the potential for cumulative impacts on the natural resources listed in OAR 690-51-190 through 690-51-250 and its analysis is embodied in these findings.

EXISTING AND PROPOSED PROJECTS

23. There are seven other existing projects in the Hood River basin: Farmers Irrigation District's two powerhouses described in findings 6 and 7 (46329 and 49871); Diamond Fruit Growers, Inc. (HE 446); Jack R. Sanders (HE 302); Middle Fork Irrigation District (61188); Odell Hydroelectric Investor's Ltd. (HE 451); and Pacific Power & Light (PC 021). Application 68603 from Port of Hood River is pending.

Diamond Fruit Growers HE 446

24. Diamond Fruit Growers, Inc. diverts up to 3.23 cfs from Indian Creek, a tributary of the Hood River. The project is located 495 feet north and 990 feet west from the southeast quarter corner of Section 35, utilizing a gross head of 231 feet to develop 84.8 theoretical horsepower. The power plant is located in the SE 1/4 of the SW 1/4 of Section 25, T 3 N, R 10 E, W.M. in Hood River County. It includes a 24" Pelton impulse water turbine, driving a 60 HP, 3 phase 460 volt GE induction generator. The project dam, diversion structure and pipeline have been in existence since 1902. The original certificate was cancelled due to nonuse. The company installed new electrical equipment prior to commencement of operation under the new license.

25. The project includes a wood plank diversion dam 7 feet high and 12 feet wide with concrete side wings; a 1200 foot canal; 5,100 feet of pipeline; and a storage reservoir with a total storage volume of .046 acre-feet. The storage reservoir is located on Indian Creek in Section 35, T 3 N, R 10 E, W.M.. Diversion is via a 42" wood stave pipe in the north side wing of the dam. The pipeline is buried from the corner of May and Second Streets to Industrial and Fifth Streets as it passes through the City of Hood River. After passing through the power plant the water is returned to the Columbia River in the NW 1/4 of the NW 1/4 of S 25, T 3 N, R 10 E, W.M. Diamond Fruit Growers, Inc. was granted a hydroelectric license for a minor project not to exceed 100 theoretical horsepower in May 1984. The project must be relicensed by December 31, 2004.

Port of Hood River

26. On October 17, 1985 Port of Hood River, a municipal corporation, filed application number 68603 for a permit to appropriate surface water to operate the project licensed by Diamond Fruit Growers, Inc. and described in findings 24 and 25. No construction will be involved. The purpose of the application is to transfer ownership of the project.

Pacific Power and Light Company PC 021

27. Pacific Power and Light Company holds vested rights to appropriate water for power purposes on the Hood River under a 1920 adjudication. These original rights were down river of the existing site and at a site known as Tucker's Bridge. Powerdale was redeveloped about 1924 at which time the appropriation at the present location, river mile 4.5, was established.

28. PP&L diverts up to 500 sec. feet at SE 1/4, SE 1/4 at S 11, T 2 N, R 10 E, utilizing a gross head of 180 feet to develop 10,227 theoretical horsepower. Total power developed is 8,700 horsepower. Water utilized in the plant is returned at NE 1/4, NE 1/4 in S 36, T 3 N, R 10 E. There is a fish ladder at the existing dam. FERC requires minimum flows of 270 cfs from February 1 to April 30; 170 cfs from May 1 to June 30; 130 cfs from July 1 to July 31; 100 cfs from August 1 to November 30; and 170 cfs from December 1 to January 31.

29. The Powerdale project consists of:

a concrete diversion dam 206 feet long and 11 feet high forming a pool on the Hood River with a surface elevation of 292 feet;

a 15,875 foot-long power conduit having a maximum capacity of 500 cfs composed of (a) a concrete lined canal, wood flume, and concrete settling basin intake section, (b) alternating sections of wood-stave and steel pipe, and (c) a penstock and surge tank;

a powerhouse containing one 6,000 kw generator and one 8,700 horsepower turbine; and appurtenant facilities.

Frederick and Wilma Plog HE 451

30. Frederick and Wilma Plog, Hood River, Oregon, appropriate water for hydroelectric power production and utilize the available flow up to 45 cfs from Odell Creek less the required instream flow of 7 cfs from June to November and 10 cfs the remainder of the year.

31. The Odell project consists of a dam 15 feet high located in the SW 1/4 of the SW 1/4 of S 14, T 2 N, R 10 E, W. M., the pool elevation being 568 feet. The water diverted is conveyed through a pipeline to a powerhouse along the creek 1270 feet northerly of the diversion. The developed head is 66 feet. The installed capacity is 190 KW with an estimated annual average production of 850,000 KWH. The pipeline, penstock and transmission lines are buried. There is a fish ladder and fish screening is required as part of the project.

32. The project is controlled to adjust the amount of water used to meet the minimum instream flow in channel. In the event that flow drops below the minimum required to operate the generator, the plant shuts down automatically. Power produced is sold to PP&L under a longterm contract. A project was originally approved in August 1981 for Plog for a minor license of 99.4 theoretical horsepower. A license for hydroelectric project 451, a major project of 379 theoretical horsepower, was granted by the department in May 1984. It is due for relicensing before December 31, 2010.

Jack R. Sanders HE 302

33. Jack R. Sanders, San Diego, California, diverts 4.5 cfs from the Middle Fork of the Hood River, 550 east of the SW corner of Section 31, utilizing a gross head of 50 feet to develop 25.5 theoretical horsepower for personal residential use. The power plant is located in the SW 1/4 of the SW 1/4 of S 31, T 1 N, R 10 E W.M. in Hood River County and includes a 12" crossflow turbine driving a 7 KW, 240 volt AC generator.

34. The water is diverted by a channel into a basin which supplies water to a 1800 foot pipeline. After passing through the power plant the water utilized is returned to the Middle Fork of the Hood River in SW 1/4 of the SW 1/4 of S 31, T 1 N, R 10 E, W.M. Sanders was granted a license for hydroelectric project 302 in June 1981. Relicensure must occur prior to December 31, 2001.

Middle Fork Irrigation District 61188

35. Middle Fork Irrigation District, Parkdale, Oregon, uses a combined total of 40 cfs from Clear Branch and Laurance Lake Reservoir, a tributary of Middle Fork Hood River, with any deficiency in the available supply of water to be made up from no more than 25 cfs each from Elliot Branch and Coe Branch. These waters are used to operate three powerhouses. The points of diversion are located in Sections 26, 27, and 34 of Township 1 South, Range 9 East in Hood River County.

36. The 100-foot-high Clear Branch Dam was an existing structure creating Laurance Lake. The 90-foot-high Elliot Branch Dam created a sediment basin as did the 16-foot-high West Evans Creek Dam.

37. The project develops up to 6,123 theoretical horsepower. The installed capacities of the powerhouses is 2073 kw at powerhouse one, 593 kw at powerhouse two and 584 kw at powerhouse three. The project operates under permits R 37284 and 37285 which require, among other things, minimum flows in Clear Creek of 3 cfs from May 15 to August 31.

38. Powerhouse one has a two-nozzle, horizontal-shaft impulse turbine; the required hydraulic capacity of this unit is 40 cfs at heads of 625 feet to 734 feet. Powerhouse two has four 150 kilowatt turbine/generator units. The hydraulic capacity of the combined units ranges from 40 cfs at a head of 205 feet to 12 cfs at 265 feet of head. Powerhouse three contains four 150 kilowatt turbine/generator units with a hydraulic capacity ranging from 40 cfs at 175 feet of head to 12 cfs at 210 feet of head.

STANDARDS FOR DETERMINING CUMULATIVE IMPACTS
WATER RESOURCES

39. The applicable minimum perennial streamflows established in the Hood Basin Plan, OAR Chapter 690, Division 504, are as follows:

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
HOOD RIVER:	at Powerdale Dam to be maintained to the mouth												
	45	45	45	45	45	45	45	45	45	45	45	45	3/30/66
	100	100	170	170	270	270	270	170	170	130	100	100	11/3/83
WEST FORK HOOD RIVER:	at stream gage 14118500 and maintained at mouth												
	100	100	100	100	100	100	100	100	100	100	100	100	3/30/66

40. These minimum streamflows have been converted to instream water rights by order of the Commission: Hood River at Powerdale Dam - June 9, 1989; West Fork Hood river - May 17, 1989. They retain the priority date of the minimum stream flow. **Table 1** summarizes streamflow data from gaging records on the West Fork and main stem Hood Rivers. The table lists recorded flows, existing consumptive and non-consumptive water rights for the basins and the instream water rights.

TABLE 1

WATER RESOURCES DEPARTMENT DATA

HOOD RIVER at RIVER MILE 6.1 at TUCKER BRIDGE

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN/CFS 1966-1982	499	1043	1663	1722	1657	1352	1317	1298	1059	674	448	424
CONSUMP	100	100	100	100	100	100	677	677	677	677	677	677
NON-COMP	725	725	725	725	725	725	725	725	725	725	725	725
INSTREAM 3/30/66 & 11/3/83	100	100	170	170	270	270	270	170	170	130	100	100

WEST FORK HOOD RIVER at RIVER MILE 0.4 near DEE

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN/CFS 1932-1982	283	629	944	858	785	675	754	696	477	260	178	172
CONSUMP	158	158	158	158	158	158	193	193	193	193	193	193
NON-COMP	20	20	20	20	20	20	20	20	20	20	20	20
INSTREAM 3/30/66	100	100	100	100	100	100	100	100	100	100	100	100

44 256

41. FID's proposed use of water will not interfere with any existing water rights or permits. If FID's application is approved with a priority date of February 11, 1981, FID's water right would be the most junior right on Gate, Cabin and the North Fork of Green Point Creeks. Two other parties divert from North Fork Green Point Creek: Stanley Smith Lumber and Albert Capron. Both of these uses are for irrigation and should not be affected by diversions in the non-irrigation season. FID controls all other water rights on Gate, North Fork Green Point and Green Point Creeks. The project would be senior to the 1983 instream water right for Hood River at Powerdale Dam, but water from the project is returned immediately upstream of the dam.

42. Available water supply is based on USGS stream gaging records for Green Point Creek 1950 through 1954. The USGS gage was located downstream of irrigation diversions about 1.5 miles downstream of confluence of North and South Forks of Green Point Creek.

43. Maximum average flow recorded for a month was in January 1953 at 433 cfs while minimum average flow was in October 1953 at 12 cfs. The monthly average at the gage for a five-year period was:

Oct - 59	Apr - 170
Nov - 107	May - 167
Dec - 152	Jun - 106
Jan - 184	July - 42
Feb - 182	Aug - 23
Mar - 128	Sept - 18

44. The flows in March are lower than flows in February or April. A review of West Fork Hood River records from 1937 to 1988 show lower flows in March than in February or April for 19 of those years. A pattern of lower flows in March in Green Point Creek and the West Fork of the Hood River are "real phenomena" that occur periodically.

45. In the months of November to April there are sufficient flows in Cabin, Gate and North Fork of Green Point Creeks to operate FID's powerhouses at nearly total capacity. During the month of October the powerhouses may be required to operate at partial capacity in order to meet minimum flow requirements and instream water rights.

46. The Hood Basin Plan, OAR Chapter 690, Division 504, provides:

Domestic, industrial, recreation, mining, livestock, and wildlife uses, while important, represent comparatively small quantities of water in existing and contemplated future needs.

Municipal use, mainly from springs, is a small, but important consumptive use when determining water needs.

Green Point and Dead Point Creeks and tributaries have been identified as future water sources for irrigation of additional orchards. Irrigation (sic) of orchards from those streams is more important than the support of aquatic life.

Development of additional hydroelectric power appears economically and physically feasible.

The maximum economic development of this state, the attainment of the highest and best use of the waters of the Hood Basin and the attainment of an integrated and coordinated program for the benefit of the state as a whole will be furthered through utilization of the aforementioned waters only for domestic, livestock, municipal, irrigation, power development, industrial, mining, recreation, wildlife, fish life, pollution abatement uses and the waters of the Hood Basin are hereby so classified . . . [except Dog River].

47. According to the Oregon Department of Energy, the FID project would result in an increase in FID annual income by increasing its hydroelectric energy production. Some of this revenue will be used by FID to improve its current conveyance system which would result in water conservation and increased efficiency of the irrigation, and its associated hydroelectric, system. Canal improvements also would reduce adverse economic and environmental impacts that result from canal failure.

48. The Oregon Department of Energy advises that the proposed project will increase the power output from FID's current hydroelectric system resulting in a net increase in power output from the basin since water diverted for power production by FID would still be available to existing downstream hydropower projects.

49. The FID project proposes a non-consumptive rather than a consumptive use. All waters diverted through the canals and pipelines and ultimately through powerhouses 2 and 3 will be returned to the Hood River below powerhouse 2 upstream of Powerdale Dam.

50. Water quality in Green Point Creek and its tributaries are usually excellent. There are no sources of contamination from industrial or municipal operations. There has been increased

turbidity when irrigation canals fail and an earth slide reaches the river directly or through runoff.

51. The Low Line Canal from Dead Point Creek to Ditch Creek is open canal. In this section canal failures have occurred resulting in erosion, sedimentation and turbidity in the Hood River. Most of the canal failures have occurred at the reach of canal located in Section 19, T. 2 N, R 10 E. FID is repairing canals and diversions or replacing canal conveyance with pipe to increase efficiency of delivery as well as decrease possibility of slope failure.

52. The National Marine Fisheries Service indicated that occasional canal failures have sent large amounts of sediment and debris into the Hood River and that turbidity from earth slides have impacted fish and angling downstream.

53. FID ceases diversion of water into canals and pipelines during very low temperatures when ice forming may occur. Pipelines and canals are dewatered to prevent pipelines freezing and ice jams in open canals. Hydropower operation continues at a greatly reduced level as dewatering occurs. Icing at intakes is monitored on a daily basis.

54. Water temperatures range from 30 to 58 degrees F with highest temperatures in July and August. FID does not expect an increase in water temperatures due to diversion of water due to the time of year when diversion occurs, the relatively low volume diverted and the riparian vegetation shading the stream.

FISH RESOURCES

55. Some of the streams in the Hood Basin are populated by fish such as native trout, rainbow trout, coho salmon, chinook salmon and steelhead trout. The presence of these fish is limited upstream of Powerdale Dam due to this impediment to anadromous fish migration. Many of the waterways such as Ditch Creek, Low Line Ditch and Farmers Ditch no longer support resident fish because these streams are dewatered during portions of each year for irrigation usage. Typically, Ditch Creek is dewatered from April to October for irrigation usage. The Green Point reservoirs do support trout populations and are periodically stocked.

56. According to FID, there are no anadromous salmon or steelhead in Gate, Cabin or North Fork Green Point Creeks. There is a nearly vertical barrier seven to ten feet high 300 to 500 feet upstream of the confluence of the South Fork of Green Point Creek. There is no record of salmon or steelhead above the barrier.

57. The U.S. Forest Service conducted a habitat survey in 1984 of the mainstem of Green Point Creek and up to river mile 7.0 of the South Fork of Green Point Creek. This survey indicated the

presence of rainbow/cutthroat hybrids, winter steelhead and possibly coho salmon.

58. In a 1963 Basin report the Oregon Department of Fish and Wildlife found rainbow, steelhead and possible presence of cutthroat trout. This report recommended a minimum flow of 5 cfs as rearing flow at the mouth of Green Point Creek.

59. FID conducted a fish survey in October 1989 on Gate Creek, Cabin Creek and Green Point Creek. Brook trout was the only species captured in Gate Creek while cutthroat trout was the only species in Cabin Creek. In Green Point Creek rainbow, steelhead and sculpins were present. The study concluded that the presence of fish suggests the need for fish protection devices to prevent fish from entering the canal system.

60. In 1989 FID constructed a fish trap in a section of pipeline at the South Fork Green Point Creek diversion. A 1/8 inch screen is in the trap to prevent anadromous and resident fish from entering the distribution system. A bypass is provided in the trap for fish to return to the South Fork.

61. The Hood Basin Plan, OAR Chapter 690, Division 504, provides:

Use of the Hood River and gorge headwater streams by fish life is of importance to the Hood Area and the state. Development proposals on the Hood River and other major streams should consider anadromous fish runs.

Restrictions on further appropriation of natural stream flow would materially aid in maintaining minimum flows to support aquatic life and recreation on the main stem, Middle Fork, and West Fork of Hood River.

62. FID maintains that the limiting factors to anadromous fish production are, in order of importance, high channel velocities, high scouring flows, lack of substantial gravel-sized substrate, the bedrock chute near the mouth of Green Point Creek, and low summer flows during dry years.

63. In application 61243 FID proposes mitigation strategies for anadromous fish and resident fish to be developed over a five-year period. During that period interim flows would be maintained to protect the fisheries resources below the confluence of the North and South Forks of Green Point Creek in the mainstem of Green Point Creek.

64. The interim flows have been reviewed and approved by U.S. Fish and Wildlife Service, National Marine Fisheries Service and the Oregon Department of Fish and Wildlife. The flows are predicated on data and methodology acceptable to these agencies.

INTERIM FLOW RECOMMENDATION

Oct	30 cfs
Nov	30
Dec	30
Jan	60
Feb	60
Mar	60
Apr	60

65. The Oregon Department of Fish and Wildlife advises that these interim flows of 30 and 60 cfs will sufficiently protect fish populations in the mainstem of Green Point Creek from any impact of the proposed diversions.

66. Mitigation measures for the mainstem of Green Point Creek proposed by FID and under review by the Oregon Department of Fish and Wildlife include:

(a) provision of 5 gravel-sized substrate areas for spawning of anadromous fish between the mouth and confluence of North and South Green Point Creek;

(b) provision of wood structures in 25 locations in the area below the confluence to provide backwater areas, cover, increased food production and gravel traps; and

(c) provision of a "pool and weir" carved into 300 feet of bedrock to eliminate the block near the mouth of Green Point Creek.

67. The Northwest Power Planning Council advised in October 1988 by letter to FID that this project is an operating FERC-licensed project and therefore is not affected by the Council's recently adopted protected areas designation. In addition, this project is not specifically referenced in the Council's 1987 Columbia River Basin Fish and Wildlife Program. Subsequently, the Council submitted a cumulative impact review form indicating the impacts of this project may be unacceptable. Attached to the form was a draft of the "Hood River Subbasin Salmon and Steelhead Production Plan of September 1, 1989" which, when finalized, will be used to develop

an integrated system plan. The system plan will guide the adoption of future fish enhancement projects under the Council's Basin Fish and Wildlife Program.

WILDLIFE RESOURCES

68. The Hood River Valley supports a varied mixture of wildlife, but due to the presence of orchards which are intensely cultivated, cover for wildlife is limited. In the mountains at higher elevations there are some big game animals such as black-tailed deer, mule deer, Roosevelt elk and black bear. There is a variety of non-game animals such as raccoon, bobcat, coyote, skunk, rabbit, squirrel, mink, mountain beaver and weasel located in the area's forestland.

69. Upland game birds in the area include ring-necked pheasant, California quail, ruffed grouse, mountain quail, dove and boned-tailed pigeons. Other non-game birds are the hawk, owl, crow, raven, jay, woodpecker, flycatcher, heron, shorebird, meadowlark, robin and other smaller birds. Waterfowl are located in low quantities mostly along streams and on small ponds located near the Columbia River.

70. No endangered species in the project area have been identified by NMFS, USFWS, or ODFW.

71. The staff maintaining the Oregon Natural Heritage Data Base reviewed its data base information for the following areas: T 2 N, R 9 E, Sec. 30 NE 1/4 SW1/4 (Gate Creek), T 2 N, R 9 E, Sec. 32 NE 1/4 NE 1/4 (Spring/Camp 4), T 1 N, R 9 E, Sec. 9 NE 1/4 NE 1/4 (Green Pt. Cr), and T 1 N, R 9 E, Sec. 3 SE 1/4 SW 1/4 (N Green Pt). The Data Base had no records of rare, threatened or endangered plants or animals or unique ecosystems for these areas.

72. The Columbia River Gorge Commission advises that it reviewed the FID proposal and because the streams associated with this project are not located within the Columbia River Gorge National Scenic Area, the Commission has no jurisdiction over this development.

PLANT LIFE

73. The area impacted by the diversions and the powerhouses includes forestland, fruit orchards and improved pasture lands.

74. The Oregon Natural Heritage Data Base indicated, as described in finding 68, that it had no records for rare, threatened or endangered plants or unique ecosystems for this area.

75. The U.S. Forest Service advises that use of water from Gate Creek, if diverted year round, may impact the riparian zones in the lower Gate Creek System.

76. FID maintains that diversion of water will not affect riparian growth in Cabin Creek or Gate Creek because water levels normally approach zero during summer months which is the time of most growth. Presently, riparian vegetation is dense and is not affected by low summer flows. Diversion would occur during times of the year when flows are increasing due to rainfall or snowmelt and less water is needed for growth. Impacts on riparian

vegetation upstream of diversion in North Fork Green Point Creek are likely to be insignificant since natural flow, except when 5 cfs are diverted from Gate and Cabin Creeks, would pass down Green Point Creek to the North Fork diversion. Flows commonly are close to zero during some dry years. Loss of 5 cfs during times of high flows would not affect riparian vegetation.

RECREATION

77. The Oregon Department of Parks and Recreation advises that the creeks identified in this project are tributaries of the West Fork of the Hood River. In its study, "Recreational Values of Oregon Rivers", the Department of Parks and Recreation has classified the West Fork of the Hood River as having outstanding recreation value for salmon and steelhead, and such recreational activities as hiking, swimming, camping and nature viewing. The West Fork also has substantial recreation value for trout fishing.

78. According to the Oregon Department of Parks and Recreation, there also may be impacts to the potential for wild and scenic eligibility for these creeks and the West Fork of the Hood River, which should be investigated and coordinated with the Mt. Hood National Forest. The Department of Parks and Recreation concludes that the potential contribution of this project to cumulative impacts with other existing and proposed hydroelectric projects in the Hood Basin may be unacceptable.

79. In response FID maintains that the area in the vicinity of Gate, Cabin and North Fork Green Point Creeks provide little or no opportunity for recreation. There are no hiking trails, no anadromous fish, no swimming, and no established campgrounds. Access is severely limited due to vegetative understory, no trails and only one primitive logging road. Trout fishing is limited by access, small size of native fish, undergrowth and small size of stream.

80. FID does not believe that there will be impacts on recreation since the project operation will occur during winter months when access is even more limited due to heavy snowfall of three to seven feet. Altitude is approximately 2,000 to 4,000 feet depending on diversion location. Trout fishing season from April 28 to October 31 overlaps the times of diversion slightly.

81. FID states that, since the project diversions and canals are not open to recreation, impacts would not be expected to occur during operation. The irrigation reservoirs are about 40 and 20 acres. The larger is stocked with trout by the ODFW and is open for public fishing.

82. FID states that during operation, diversion of water would cause reduced flows below the diversions. The impact to recreation, such as fishing, is expected to be minor because of the low volume of water diverted during the high flow season (non-irrigation season).

83. The Hood Basin Plan provides: Recreational use of inland waters including the Columbia River reservoir pools is of major importance and is associated primarily with sport fishing, boating, swimming, sightseeing, and waterfowl hunting.

84. The Oregon Department of Parks and Recreation concludes, based on a review of FID's response to a request for additional information, that the impacts to recreation are "minimal at best."

HISTORIC, CULTURAL AND ARCHAEOLOGICAL RESOURCES

85. According to the State Historic Preservation Officer, the proposed project would have 'no effect' on sites on, or eligible for inclusion, on the National Register of Historic Places. While the area of the proposed project has never been surveyed, the use of the existing facilities should have no impact on any unknown sites.

86. FID consulted with the State Historic Preservation Office, the State Legislative Commission on Indian Services and appropriate Tribes about Indian historic and cultural resources in the project vicinity.

LAND RESOURCES

87. According to the Hood River County Planning Office, Hood River County can generally work with FID and would support any project that would replace the canals.

88. FID intends to complete any associated project work with minimal impact upon forestland. Since FID would make use of existing diversion facilities, the only construction work associated with application 61243 would be enhancement projects where existing canals would be replaced by pipe. These projects will eventually decrease forestland impacts as canal breaches and consequent environmental degradation are eliminated.

89. According to the Oregon Forestry Department, FID contacted the Hood River County Forester and arranged with him to construct the penstock in such a way that land will not be permanently removed from forest production. Based on information supplied by FID, it appears that only 1.5 acres of land will be permanently removed from forest production. This loss will not have a significant effect on the Forestry Department's programs.

90. The Oregon Forestry Department advises that FID's project does not contribute to cumulative impacts with other existing, approved or proposed hydroelectric projects in the same river basin on land resources.

91. An open stretch of FID's Low Line Canal passes through property owned by Hanel Lumber Company. Hanel has no objection to the proposed project as long as FID converts the current open ditch to pipeline at a depth of 36" as funds are available. Underground piping would allow future land management activities to proceed much more efficiently.

92. The Hood River County Planning Office advises that any substantial increase in use, noise, or activity by the powerhouses beyond the original approval shall be reviewed by the Planning Department to determine whether a review of the conditional use permit is required by the Planning Commission or Director.

CONCLUSIONS OF LAW

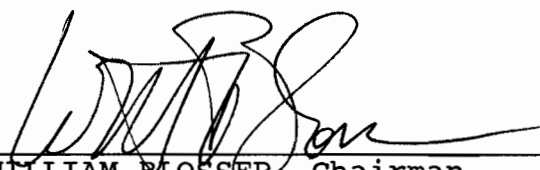
1. Application 61243, as amended, is subject to the requirements of Senate Bill 2990 codified in ORS Chapters 537 and 543, and implemented by OAR Chapter 690, Division 51.
2. The draft 1989 Hood River Subbasin Salmon and Steelhead Plan is not binding on the issue of cumulative impacts.
3. Since there are other existing and proposed hydroelectric projects in the Hood Basin, there is a rebuttable presumption of a potential for cumulative impacts.
4. The findings show that the impacts of the diversions requested in application 61243, as amended, on water resources, fish resources, wildlife, plant life, land resources, historical, cultural and archaeological resources are so small in extent that there is no reasonable likelihood of cumulative impacts. The presumption has been rebutted.
4. A consolidated review is not required.

INTERIM ORDER

The Commission, having jurisdiction under ORS 537.170, 543.255 and OAR 690-51-290, orders:

1. There is no potential that the proposed diversions on Gate, Cabin and North Fork Green Point Creeks may contribute to cumulative impacts with other existing, approved or proposed hydroelectric projects in the Hood Basin.
2. The Water Resources Department shall reconvene the hearing on application 61243, as amended, as a contested case hearing in the public interest to determine whether or not a permit should be granted.

Dated this 16th day of May, 1990.


WILLIAM BLOSSER, Chairman
Water Resources Commission