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CASE NOTE

Conjunctive Management of Stream-Aquifer Water Rights; The *Hubbard* Decision¹

ABSTRACT

A Department of Ecology regulation in the prior appropriation state of Washington conditions groundwater permits on the maintenance of minimum instream flows if there is "significant hydraulic continuity" between the surface water and the proposed source of ground water. The Department of Ecology promulgated the regulation pursuant to the Washington Water Resources Act of 1971 but did not define the term "significant." The legislative purpose behind the Act and Washington's rules of construction suggest that statutory interpretation of the groundwater provision requires balancing environmental protection with maximum economic utilization. However, the Hubbard court did not meaningfully interpret the provision but, rather, essentially found that any hydraulic connection is significant regardless of the magnitude of the effect of groundwater withdrawal on the stream.

INTRODUCTION

In many of the arid western states, growing populations are increasing the demand for limited surface and ground water resources. Most of these states administer water rights based upon the prior appropriation doctrine. Under prior appropriation, junior rights, those rights obtained later in time, are to be satisfied only after earlier senior rights have been satisfied. Because of the hydraulic connection between surface and ground water, a junior ground water well can impair senior surface water rights by decreasing the amount of water in a stream. Conjunctive management, which seeks to permit ground water appropriations while at the same time protecting senior surface rights, therefore requires an investigation of the hydraulic connection between surface and ground water.

The state of Washington has implemented a conjunctive management system.² The state's goals are to promote the health of the state by protecting existing rights related to the environment, such as minimum instream flow requirements, while at the same time promoting

1. *Hubbard v. Washington*, 936 P.2d 27 (Wash. Ct. App. 1997).

2. WASH. ADMIN. CODE § 173-549-060 (1997).

the economic well-being of the state by encouraging maximum utilization of the state's water resources.³ These goals are achieved by allowing junior appropriators to take water so long as there is no impairment of existing rights.⁴ Unfortunately, the vague wording of one of Washington's ground water regulations, as it has been interpreted by *Hubbard v. Washington*, thwarts the legislature's intent of maximizing utilization and its goal of conjunctive management.⁵ The specific regulation requires that ground water permits be conditioned on maintenance of minimum instream flows if there is "significant hydraulic continuity" between surface water and the proposed source of ground water.⁶ The interpretation of the code provision, particularly the meaning of the term "significant," is the subject of this case note.

This case note begins with an overview of water law in the state of Washington. The overview is followed by a description of the *Hubbard* case, which considered the meaning of "significant hydraulic continuity." Finally, an approach is suggested for meeting the dual goals of conjunctive management to protect the environment and existing rights while maximizing utilization of the state's water resources.

WASHINGTON'S STATUTORY WATER CODE

Washington is a prior appropriation state.⁷ All waters within the state belong to the public, and the right to use the water can only be acquired by appropriation for a beneficial use.⁸ The appropriation procedure begins when a prospective user files an application with the Department of Ecology (Ecology).⁹ Ecology then investigates the application and makes a determination of what water, if any, is available for appropriation and to what beneficial use it can be applied.¹⁰ In Washington, a prior surface water right is superior to a junior ground water right if withdrawal of groundwater would affect the flow of the surface water.¹¹

Ecology is required to investigate all relevant facts material to the application when making its determination whether to issue a permit.¹² In

3. See WASH. REV. CODE ANN. §§ 90.54.010, 90.03.290 (West 1997).

4. See *id.*

5. *Hubbard*, 936 P.2d at 27.

6. See WASH. ADMIN. CODE § 173-549-060 (1997).

7. See WASH. REV. CODE ANN. § 90.03.010 (West 1997).

8. See *id.*

9. See WASH. REV. CODE ANN. § 90.03.290 (West 1997).

10. See *id.*

11. See WASH. REV. CODE ANN. § 90.44.030 (West 1997).

12. See WASH. REV. CODE ANN. § 90.03.290 (West 1997).

order to make a decision on an application, Ecology must determine whether any streams with established minimum flows would be affected by the proposed use.¹³ Ecology considers the established minimum flow to be a prior appropriation as of the date of establishment.¹⁴

Upon completion of its investigation, Ecology must prepare a report containing its findings of fact of all things investigated.¹⁵ If Ecology finds that there is water available for appropriation for a beneficial use and the application will not impair existing rights or be detrimental to the public welfare, Ecology must issue a permit.¹⁶ It is Ecology's duty, "having due regard to the highest feasible development of the waters belonging to the public," to refuse to issue a permit where the proposed use conflicts with existing rights or threatens to prove detrimental to the public interest.¹⁷

WATER RESOURCES ACT OF 1971

The Washington state legislature enacted the Water Resources Act of 1971 (the Act) after finding that the state's growing population and economy were resulting in an increasingly limited availability of water resources.¹⁸ Recognizing that proper utilization of the water resources is necessary to the promotion of public health and the economic well being of the state, the legislature determined that a comprehensive planning process was essential.¹⁹ The Act's purpose "is to set forth fundamentals of water resource policy...to insure that the waters of the state are protected and fully utilized for the greatest benefit to the people of the state of Washington and...to provide direction to the department of ecology...."²⁰

The Act sets forth several fundamentals to guide the utilization and management of waters of the state.²¹ The Act declares a wide variety of water uses as beneficial²² and requires that the allocation of water among

13. See *id.*

14. See WASH. REV. CODE ANN. § 90.03.345 (West 1997).

15. See WASH. REV. CODE ANN. § 90.03.290 (West 1997).

16. See *id.* Ecology can issue a preliminary permit pending the outcome of its investigation.

17. See *id.*

18. See WASH. REV. CODE ANN. § 90.54.010 (West 1997).

19. See *id.*

20. *Id.*

21. See WASH. REV. CODE ANN. § 90.54.020 (West 1997).

22. See WASH. REV. CODE ANN. § 90.54.020.1. "Uses of water for domestic, stock watering, industrial, commercial, agricultural, irrigation, hydroelectric power production, mining, fish and wildlife maintenance and enhancement, recreational, and thermal power production purposes, and preservation of environmental and aesthetic values, and all other uses compatible with the enjoyment of the public waters of the state are declared to be

potential uses and users shall be based generally on the securing of maximum benefits for the people of the state.²³ The Act also seeks to protect and, where possible, enhance the natural environment by maintaining base flows in streams at a level that will provide for preservation of wildlife, fish, scenic, aesthetic and other environmental values, as well as navigational values.²⁴ This is accomplished by requiring that withdrawals of water which would conflict with these values be authorized only where it is clear that overriding considerations of the public interest will be served.²⁵

The Act directs Ecology to develop and implement a water resource program to provide a process for making decisions on future water resource allocation and use.²⁶ The Act further declares that the establishment of the water resources program and the adoption of appropriate rules is "a matter of high priority to insure [*sic*] that the waters of the state are utilized for the best interests of the people."²⁷

WASHINGTON ADMINISTRATIVE PROGRAM

Pursuant to the Act, Ecology established a program to facilitate further development of the state's water resources.²⁸ Ecology is required, among other things, (1) to establish flows on perennial streams in the amounts necessary to preserve environmental and other values, (2) to establish criteria for limits beyond which further appropriation will not be made, and (3) to be guided by the declaration of fundamentals contained in the Act.²⁹ The program also designates areas within the state to be used for management purposes.³⁰ One of the areas designated is the Okanogan River Basin,³¹ the area involved in *Hubbard*.

The purpose of the water resources program in the Okanogan River Basin is to maintain the flow levels on the Okanogan River necessary to preserve environmental and other values "while, at the same time, allowing the continued use of water for other beneficial uses such as agriculture, which is acknowledged as a vital activity greatly benefiting the

beneficial."

23. WASH. REV. CODE ANN. § 90.54.020.2 (West 1997). Maximum benefits are defined as total benefits less costs, including opportunities lost.

24. See WASH. REV. CODE ANN. § 90.54.020.3.a (West 1997).

25. See *id.*

26. See WASH. REV. CODE ANN. § 90.54.040.1 (West 1997).

27. *Id.*

28. See WASH. ADMIN. CODE § 173-500-020 (1997).

29. See WASH. ADMIN. CODE § 173-500-020.4, .7, .10 (1997).

30. See WASH. ADMIN. CODE § 173-500-020.9 (1997).

31. See WASH. ADMIN. CODE § 173-549-015 (1997).

citizens of the Okanogan Basin and the state of Washington."³² The program established minimum instream flows for the middle and lower Okanogan River ranging from 600 cfs³³ in the late summer to 3,800 cfs in late spring.³⁴ All permits to appropriate water from the Okanogan River Basin are subject to the required minimum flows.³⁵

The issue addressed in this case note arises from a provision in the water resources program in the Okanogan River Basin. The provision requires that groundwater permits be conditioned on maintenance of minimum instream flows if there is "significant hydraulic continuity" between surface water and the proposed source of groundwater.³⁶ The same provision allows groundwater withdrawal if it does not interfere with maintenance of minimum instream flows.³⁷ The phrase "significant hydraulic continuity" is not defined.

THE HUBBARD DECISION

In *Hubbard*, the Washington Court of Appeals considered the meaning of "significant hydraulic continuity." John Hubbard owned land in the Wagonroad Coulee, a valley near the Okanogan River.³⁸ In 1979 John Hubbard obtained an unconditional permit to pump groundwater and planted an orchard in 1980.³⁹ He later applied to Ecology for an increase after determining that he needed more water for irrigation and frost protection.⁴⁰ Ecology granted John a temporary permit to withdraw groundwater pending the outcome of his application.⁴¹ His well, located about 5,700 feet from the Okanogan River, withdraws water from the

32. *See id.*

33. Cubic feet per second. For reference, 600 cfs and 3,800 cfs are equal to 269,280 gallons per minute and 1,705,440 gallons per minute, respectively.

34. *See* WASH. ADMIN. CODE § 173-549-020 (1997).

35. *See* WASH. ADMIN. CODE § 173-549-027 (1997).

36. *See* WASH. ADMIN. CODE § 173-549-060 (1997).

If department investigations determine that there is significant hydraulic continuity between surface water and the proposed ground water source, any water right permit or certificate issued shall be subject to the same conditions as affected surface waters. If department investigations determine that withdrawal of ground water from the source aquifers would not interfere with stream flow during the period of stream closure or with maintenance of minimum instream flows, the applications to appropriate public ground waters may be approved.

Id.

37. *See id.*

38. *See* *Hubbard v. Washington*, 936 P.2d 27, 28 (Wash. Ct. App. 1997).

39. *See id.*

40. *See id.*

41. *See id.*

Wagonroad Coulee aquifer. The Wagonroad Coulee aquifer drains into the Okanogan aquifer, which in turn feeds the Okanogan River.⁴²

John's brother, James Hubbard, who also owned land over the Wagonroad Coulee aquifer, applied for a groundwater permit in 1990.⁴³ James Hubbard planted an orchard in 1992, after obtaining a temporary permit for irrigation and frost protection, and after receiving assurance from Ecology's field investigator⁴⁴ that he probably would receive a permit within a year.⁴⁵ His well, located about 4,000 feet from the Okanogan River, also draws water from the Wagonroad Coulee aquifer.⁴⁶

Ecology performed an investigation of the Hubbards' applications, which included an examination of the hydrogeologic relationship between the Wagonroad Coulee aquifer and the Okanogan River, and concluded there was "significant hydraulic continuity" between the aquifer and the river.⁴⁷ Ecology granted conditional permits approving withdrawal of groundwater for irrigation and frost protection, but requiring that the Hubbards cease pumping whenever the Okanogan River fell below its minimum instream flow level.⁴⁸

The Hubbards appealed to the Pollution Control Hearings Board (Board), contending that there was no significant hydraulic continuity between their wells and the Okanogan River.⁴⁹ The Board, after hearing testimony of witnesses and examining the data, found significant hydraulic continuity, and denied their appeals in 1994.⁵⁰ The Hubbards then appealed the Board's decision to the Okanogan County Superior Court, which remanded the case for more detailed findings and conclusions.⁵¹ The Hubbards again appealed from the Board's revised findings and conclusions, but the trial court denied the Hubbards' petition for review.⁵²

42. See *id.* at 28-29.

43. See *id.* at 28.

44. See Appellant's Opening Brief at 5, *Hubbard*, (No. 15227-8-III).

45. See *Hubbard*, 936 P.2d at 28.

46. See *id.* at 28-29.

47. See *id.* at 28.

48. See *id.*

49. See *id.*

50. See *id.* The Board has maintained in other appeals that "[h]ydraulic continuity is a scientific fact which, once established in any degree, need not meet any further standard or test to be given full credit in Ecology's water allocation decisions." See *In re Appeals from Water Rights Decisions of The Department of Ecology* (1996 WL 514630 at 18) (emphasis added). In response to Ecology's denial of a number of new groundwater permits, the Washington Legislature passed a bill in April 1997, which was later vetoed by the Governor, that would have significantly limited the impact of a finding of hydraulic continuity. See Robert Jerome Glennon & Thomas Maddock, III, 43 *Rocky Mtn. Mineral Law Inst.* 22, 323-35 (1997) citing H.B. 2050, 55th Leg. Sess. (Wash. 1997).

51. See *id.*

52. See *id.*

The Hubbards appealed the trial court decision, contending that the Board erred in concluding that significant hydraulic continuity exists between the groundwater source of their wells and the Okanogan River.⁵³ The Hubbards admitted that there is hydraulic continuity, and that any pumping will affect the flow in the river. Consequently, the Hubbards sought to determine whether there was "significant" hydraulic continuity between the ground water and the river by examining the impact of their proposed pumping on the Okanogan River. The Hubbards' expert testified, based on calculations, that the effect of pumping the wells was projected to eventually decrease the flow in the river by 10 gallons per minute.⁵⁴ The average mean flow of the Okanogan River is 1,391,280 gallons per minute.⁵⁵ The Hubbards argued that a calculated decrease of 0.00006 percent is not even measurable, and, therefore, is not significant.⁵⁶

The State based its argument on its investigation, which showed that there was no barrier between the groundwater beneath the Hubbards' properties and the Okanogan River and that all of the ground water in the Wagonroad Coulee would eventually drain to the river. The State argued that the effects of Hubbards' pumping eventually would affect the Okanogan River. On that basis, the State concluded there was "significant" hydraulic continuity, but it did so without considering the magnitude of the effect of pumping on the river.⁵⁷

The court of appeals affirmed the Board's decision, finding that Ecology's decision to grant conditional permits was not manifestly unreasonable.⁵⁸ The court recognized that the meaning of the term

53. See *id.* The Hubbards also contended that the Board erred in concluding that the Okanogan River's minimum instream flow level is senior to their groundwater rights.

54. See Appellant's Opening Brief at 21, *Hubbard* (No. 15227-8-III); Reply Brief of Appellant at 4, *Hubbard* (No. 15227-8-III).

55. See Appellant's Opening Brief, at 21-22, *Hubbard* (No. 15227-8-III); Reply Brief of Appellant at 4-5, *Hubbard* (No. 15227-8-III). The appellant's briefs report the average mean flow is approximately 83,000,000 gallons per minute. However, the briefs contain an error apparently arising during the conversion of the river flow of 3,100 cfs to gallons per minute. To convert 3,100 cubic feet per second to a number in terms of gallons per minute, multiply 3,100 cfs by 7.5 gallons per cubic foot, and then multiply again by 60 seconds per minute. Thus, the correct value for the average mean flow of the Okanogan River is 1,391,280 gallons per minute. The 83,000,000 gallons per minute value reported in the brief is 60 times greater than the correct value.

56. See Appellant's Opening Brief at 21-22, *Hubbard* (No. 15227-8-III); Reply Brief of Appellant, *Hubbard* (No. 15227-8-III). Again, the briefs contain an error apparently arising during the conversion of the river flow in cfs to gallons per minute, as set out in note 55 *supra*. The correct river flow is 269,280 gallons per minute at low flow. The corresponding change in river flow due to the Hubbards' pumping is, therefore, 0.0037 percent.

57. See Respondent's Brief at 21, *Hubbard* (No. 15227-8-III).

58. See *Hubbard*, 936 P.2d at 30.

"significant" was at issue in this case,⁵⁹ but it did not provide any basis for interpreting the term.

THE MEANING OF "SIGNIFICANT"

The Court's Interpretation

The term "significant" is not defined in the code provision.⁶⁰ Interpretation of code provisions is governed by the state of Washington's rules of construction and common law. Washington's rules of construction require that code provisions are to be liberally construed and shall not be limited by any rule of strict construction.⁶¹ Common law requires that words in a statute be given their ordinary meaning.⁶²

Relying on the "ordinary meaning" rule, the *Hubbard* court resorted to a dictionary, and found that the ordinary meaning of "significant" is "important; of consequence."⁶³ The court's dictionary definition of the term "significant" is not helpful, because it merely begs the question: What does "important" or "of consequence" mean? Washington's code doesn't define these terms either.⁶⁴ Further, there are no cases interpreting the term "significant" as used in this code provision. Thus, the phrase "significant hydraulic continuity" remains undefined.

The *Hubbard* court's resolution of the "significant" issue by relying on a dictionary definition prematurely ended its duty of statutory construction.⁶⁵ It is the duty of the court of appeals to consider all provisions of an act in relation to one another when interpreting a provision.⁶⁶ Here, the court considered one sentence in isolation. When interpreting statutes, it is the court's responsibility to ascertain and consider the intent of the legislature in passing the statute.⁶⁷ Where the

59. See *id.* at 28.

60. See WASH. ADMIN. CODE § 173-549-060 (1997).

61. See WASH. REV. CODE ANN. § 1.12.010 (West 1997).

62. See *City of Sunnyside v. Fernandez*, 799 P.2d 753 (Wash. Ct. App. 1990).

63. See *Hubbard*, 936 P.2d at 30. Other terms for "significant" include "weighty," "crucial," "vital," "material." ROGET'S THESAURUS 639 (Sidney I. Landau et al. eds., 1977).

64. See WASH. ADMIN. CODE § 173-549-060 (1997).

65. Apparently because of Ecology's expertise, the court of appeals gave great weight to Ecology's conclusion that there is significant hydraulic conductivity. See *Hubbard*, 936 P.2d at 29. However, Ecology's conclusion was apparently based on a belief that any ground water withdrawal constitutes a significant effect on the instream flows rather than on any defined procedure or standard. See Appellant's Opening Brief at 26, *Hubbard* (No. 15227-8-III).

66. See *Prince v. Savage*, 627 P.2d 996, 999 (Wash. Ct. App. 1981).

67. See *Northwestern Industries, Inc. v. City of Seattle*, 658 P.2d 24, 26 (Wash. Ct. App. 1983).

statute is subject to two interpretations, that which best advances the legislative purpose should be adopted.⁶⁸

Legislative Intent

The Water Resources Act of 1971 has two general purposes.⁶⁹ One is to protect the waters of the state by maintaining base flows in streams to preserve wildlife, fish, scenic, environmental and navigational values.⁷⁰ Withdrawals of water that conflict with these values are authorized only where it is clear that overriding considerations of the public interest will be served.⁷¹

The other is to ensure that waters are fully utilized for the greatest benefit to the people of the state of Washington.⁷² Agriculture is a vital activity greatly benefiting the people of Washington.⁷³ It is the state's duty to have due regard to "highest feasible development of waters."⁷⁴ If water is available, the state must issue a permit unless the appropriation would impair existing rights or be detrimental to the public interest.⁷⁵

The Act directed Ecology to develop a water resource program to provide a process for making decisions on future water resource use which ensures that the state's fundamental water resource policies are met.⁷⁶ Those policies include protection and full utilization of the waters of the state for the greatest benefit of the people of Washington.⁷⁷ Ecology subsequently adopted the ground water provision that requires conditioned ground water permits where there is significant hydraulic continuity.⁷⁸

In the *Hubbard* applications, Ecology's conclusion of significant hydraulic continuity was made by one witness that testified that "any" hydraulic continuity is "significant."⁷⁹ This conclusion was apparently based on considerations of absolute protection of senior rights⁸⁰ and the

68. See *State v. Gilbert*, 657 P.2d 350, 351 (Wash. Ct. App. 1983).

69. See WASH. REV. CODE ANN. §90.54.010 (West 1997).

70. See WASH. REV. CODE ANN. § 90.54.020.3.a (West 1997).

71. See *id.*

72. See WASH. REV. CODE ANN. § 90.54.020.2 (West 1997).

73. See WASH. ADMIN. CODE § 173-549-015 (1997).

74. See WASH. REV. CODE ANN. § 90.03.290 (West 1997).

75. See *id.*

76. See WASH. REV. CODE ANN. §§ 90.54.010, 90.54.040.1 (West 1997).

77. See WASH. REV. CODE ANN. § 90.54.010 (West 1997).

78. See WASH. ADMIN. CODE § 173-549-060 (1997).

79. See Appellant's Opening Brief at 27, *Hubbard* (No. 15227-8-III).

80. See Respondent's Brief at 28, *Hubbard* (No 15227-8-III). Brief of Amicus Curiae at 9, *Hubbard* (No. 15227-8-III). The size of any impairment is not considered relevant.

cumulative effects of additional withdrawals.⁸¹ However, a plain reading of the code provision suggests that "significant" hydraulic continuity does not mean "any" hydraulic continuity.

The relevant code provision states that if the state finds "significant" hydraulic continuity between river and groundwater, any groundwater permit issued shall be subject to the same conditions as affected surface waters.⁸² This clearly implies that where hydraulic continuity is not significant, the state can issue a permit that is not subject to conditions. Because the provision suggests there can be hydraulic continuity that is not significant, Ecology must have intended that the term "significant" have some meaning other than "any."

Turning to the very next sentence in the regulation helps to understand what Ecology meant by including the term "significant." The next sentence allows the state to issue a permit if there is no interference with maintenance of minimum instream flows.⁸³ While it shares some of the vagueness of the term "significant," the term "interference" relates to maintenance of minimum instream flows, which in turn relates to one of the two major objectives of the water resources program, to protect the waters of the state.

The other, equally important, objective of the water resources program is to ensure that the waters of the state are fully utilized for the greatest benefit of the people of Washington. Because the rules of construction require that the provision be interpreted in a manner consistent with the intent and objectives of the legislators, interpretation of "significant" requires a consideration of both environmental and economic values.

Reading the term "significant" in context with the entire administrative program, rather than in isolation, is not only required,⁸⁴ but helps ascertain the legislative intent. Ground water provisions for two other basins in the state of Washington expressly state that the effect of groundwater withdrawal on instream flows should be measurable and suggest that the effect should be weighed against the meaning, intent and objectives of regulations. For example, the groundwater provision for the Puyallup River Basin requires a "determination as to whether groundwater withdrawal will have direct and measurable impact on stream flows."⁸⁵ Similarly, in the Methow River Basin, rights to groundwater are

81. See Reply Brief of Appellant at 6, *Hubbard* (No. 15227-8-III).

82. See WASH. ADMIN. CODE § 173-549-060 (1997).

83. See *id.*

84. See *Prince v. Savage*, 627 P.2d 996, 999 (Wash. Ct. App. 1981).

85. WASH. ADMIN. CODE § 173-510-050 (1997).

conditioned if it "is determined that future development of ground water measurably affects surface water."⁸⁶

Ground water provisions applicable to other river basins at least imply that groundwater permits are to be conditioned where the effects on instream flows are measurable. In the Green-Duwamish River Basin, groundwater permits are not affected unless "withdrawal would *clearly* have an adverse impact on surface water."⁸⁷ In the Walla Walla River Basin, groundwater applications are evaluated to "*minimize* interference with surface water" with permits being issued "where surface water...rights will not be adversely affected...."⁸⁸

Ecology states that "it is not surprising that the rules vary in some respects" because the rules for different basins were adopted independently over a number of years.⁸⁹ However, the different formulations of the ground water provisions for various basins cannot reflect any difference in legislative intent. Ecology promulgated all of these ground water provisions pursuant to the same Water Resources Act of 1971, the objectives of which are to protect the environment and maximize utilization of water resources.⁹⁰ No explanation is given as to why the term "significant," rather than "any," was used in the rule.⁹¹

If Ecology intended "significant" to mean "any," the rule could have been drafted using the term "any." It is possible that Ecology deliberately used the term "significant" when it developed the water resources program for the Okanogan River Basin 20 years prior to the *Hubbard* case. Use of the term "significant," rather than "any," would recognize the Act's dual purposes of protection and full utilization of the state's water resources by allowing new appropriations that would result in *de minimis* impairment of senior rights. If so, then, in the absence of a definition of the term "significant," a balancing approach recognizing the dual purposes of the Act is required to interpret the meaning of "significant."

Suggested Approach

A balancing approach, combined with rules of construction, is suggested to interpret the meaning of the term "significant." This approach

86. WASH. ADMIN. CODE § 173-548-060 (1997).

87. WASH. ADMIN. CODE § 173-509-050 (1997) (emphasis added).

88. WASH. ADMIN. CODE § 173-532-080 (1997) (emphasis added).

89. See Respondent's Brief at 20, *Hubbard* (No. 15227-8-III).

90. See WASH. ADMIN. CODE § 173-549-015 (1997).

91. See Respondent's Brief at 20, *Hubbard* (No. 15227-8-III).

will require a balancing of environmental and economic values rather than making an either/or decision.

The issue of the meaning of the term "significant" is one of degree. Although both parties admitted there is "no formal definition of 'significant' in hydrology," that should not end the investigation. "Significant" is not an absolute characteristic; it is chosen by the user.⁹² The choice of the level of significance depends on risk, and the consequences of being wrong, that the user of the term "significant" is willing to assume.⁹³ The level of significance is chosen by balancing the benefits of desired ends against the detriments resulting from a wrong decision. Generally, if a wrong decision could result in high cost to the ecosystem, it becomes more important to minimize the risk of a wrong decision.

Theoretically, all ground water pumping in a stream-aquifer system will decrease the amount of surface water because all geologic materials are permeable to some degree.⁹⁴ However, rather than forbid all ground water pumping that may impact nearby streams, an effective conjunctive management system should evaluate the hydraulic connection between the aquifer and stream to allow appropriation of ground water in those cases where there would be no measurable impairment. A balancing approach not only protects existing ecological interests, it also allows for maximum utilization of water resources.

There is a spectrum of possible interpretations of the term "significant." At one end, "significant" hydraulic continuity could mean "any" hydraulic continuity, as it was interpreted by Ecology. At the other end, no hydraulic connection would be "significant." Drawing the line at either end would plainly not give a proper result.

If "significant" means "any," then all hydraulic connections would be significant regardless of the magnitude of any pumping effects on the river. Consequently, all groundwater permits issued after establishment of minimum instream flow for the river must be conditioned, even if the groundwater withdrawal would cause a reduction in the instream flow by only one teaspoon per day.⁹⁵ With "significant" meaning "any," the goal of

92. See R.L. SCHAEFFER & W. MENDENHALL, *INTRODUCTION TO PROBABILITY: THEORY AND APPLICATIONS* 245-56 (1975).

93. For example, in criminal cases, innocence is determined on the basis of "reasonable" doubt, not "any" doubt.

94. See R. ALLAN FREEZE & JOHN A. CHERRY, *GROUNDWATER* (1979).

95. Certainly a large number of small effects could have a cumulative impact on the river. However, the potential for cumulative effects should not necessarily preclude all groundwater withdrawals. For example, domestic and stockwatering uses are exempt from the provisions of the Okanogan River Basin Water Resources Program except "when the cumulative impacts of numerous domestic diversions begins to significantly affect the quantity of water available for instream uses..." WASH. ADMIN. CODE § 173-549-070(2) (1997).

protecting the environment will be met. However, if the conditioned permit requires that pumping cease when the river flow decreases below the established minimum flow criteria,⁹⁶ the legislature's economic goal of maximum utilization will not be met because many agricultural uses cannot survive periods of no irrigation.

Conversely, if no hydraulic connection were "significant," then the legislature's economic goal of maximum utilization would be met because groundwater permits would not be conditioned. However, with no conditioned permits, there is potential for future groundwater withdrawals to cause adverse impacts on instream flows contrary to the legislature's goal of environmental protection.

Clearly, to meet both the environmental protection and economic goals of the Act, the meaning of "significant," must lie somewhere between "any hydraulic connection" and "no hydraulic connection." Evaluation of the "significance" of the hydraulic connection between a proposed groundwater source and a river will likely need to occur on a case-by-case basis due to the unique hydrogeologic characteristics of various locations within a river basin. Furthermore, the "significance" of the hydraulic connection must be related to the potential effect of the proposed groundwater withdrawal on the object of the Act's environmental protection goal, the instream flow of the river. Finally, any conditions on groundwater permits to protect instream flows must be designed to actually protect the stream. In other words, the restrictions on groundwater withdrawals must prevent impacts on instream flow during the period of time that the flow in the river is less than the established criteria.

APPLICATION OF THE BALANCING APPROACH TO THE HUBBARD CASE

Applying a balancing approach in this case requires analyzing the consequences of granting the Hubbards an unconditional permit to pump ground water, versus what actually happened as a result of granting of a conditional permit. Both scenarios should be evaluated with respect to the legislature's two goals, protection of the environment and maximum utilization.

Unconditional Permit

With an unconditional permit, the Hubbards could pump ground water to irrigate and protect their orchards from frost. There are two

96. Presumably, conditioned permits could require a decreased rate of groundwater withdrawal rather than cessation of pumping.

consequences of Hubbards' pumping groundwater, economic gain and an eventual decrease in the amount of water in the Okanogan River. The economic gain for the Hubbards and the State arises from agriculture, which the State acknowledges as a vital activity greatly benefiting the State.

Pumping by the Hubbards also eventually will decrease the amount of tributary ground water flowing into the Okanogan River. However, there is no measurable impact on the Okanogan River. The established minimum flow level for the Okanogan River is over a quarter million gallons per minute. Groundwater withdrawal proposed by the Hubbards is projected to reduce the river flow by 10 gpm. It is difficult to understand how the pumping would impair the existing right of instream flow because a reduction in the flow of the Okanogan River by less than four thousandths of one percent⁹⁷ would not be measurable.⁹⁸

Granting the Hubbards unconditional permits would have been consistent with the balancing approach and would maximize utilization without adversely affecting the legislature's objective of preserving the environmental values by maintaining minimum instream flows.

Conditional Permit

The balancing approach also requires consideration of the consequences of the court's affirmation of Ecology's decision to condition the Hubbards' permits. The conditional permits issued to the Hubbards require them to stop pumping when the flow in the river is below the established minimum level, which generally occurs in the late summer and early fall. This essentially deprives the Hubbards of all the usefulness of the permit, as it would be senseless and wasteful to irrigate all spring and summer but stop irrigating prior to harvest and lose not only the crop but possibly also the orchards. The Hubbards cannot operate their orchards with a conditional permit. Consequently, with a conditional permit, there is no economic gain via agriculture, an activity that the state acknowledges as vital and greatly benefiting the state.

When the Okanogan River falls below the established minimum flows, the Hubbards must cease pumping. Thus, according to Ecology, there should then be no impairment of the maintenance of instream flows. However, unlike a surface water diversion, there is a delayed impact on the river; the impact also will continue to diminish the flow in the river for a period of time after pumping stops. Even if the Hubbards stop pumping

97. See notes 55-56 *supra* (discussing error in brief during calculation of percentage).

98. Granted, the river could be impacted by the cumulative effect of many ground water appropriations. However, it would take about 270 appropriations the same size as the one the Hubbards applied for to decrease the river flow by one percent.

when the Okanogan River is at the established minimum flow, some depletion of the river flow would still occur due to the prior pumping. Therefore, the court's and Ecology's decisions thwart the legislature's purpose of economic benefit/maximum utilization while at the same time doing nothing to maintain the instream flow.

CONCLUSION

The Washington legislature directed the Department of Ecology to establish criterion beyond which additional ground water appropriations will not be made, the objectives being to protect the environment while at the same time maximizing utilization of the state's water resources. The Department responded by promulgating a vague provision in which the criterion limiting ground water appropriation is not defined. Despite recognizing that the issue was the meaning of the term "significant," the *Hubbard* court did not meaningfully interpret the provision. As a consequence, uncertainty in the application of the rule remains, and the legislative purpose behind the Water Resources Act of 1971 has not been fully met. Washington's rules of construction suggest that statutory interpretation of the groundwater provision requires balancing environmental protection with maximum economic utilization. Balancing these two values in the context of the underlying facts in *Hubbard* reveals that granting the Hubbards unconditional permits to pump ground water would have better met the legislative intent of the Act.

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