BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF DISTRIBUTION OF WATER TO WATER RIGHTS NOS. 36-15501, 36-02551, AND 36-07694	))))	**SECOND AMENDED ORDER**

This matter is before the Director of the Department of Water Resources ("Director" or "Department") as a result of a letter dated September 23, 2003, and a subsequent letter dated October 6, 2003. Both letters were from J. Dee May ("May"), an attorney representing Rangen, Inc. The September 23 letter sought administration of "the diversion of water in District 36A in such a way that [Rangen] receives its full appropriation of the above referenced water rights" for use at hatchery facilities owned and operated by Rangen near Hagerman, Idaho. Because there are no water rights in Water District No. 36A that are junior in priority to the water rights listed above and divert from the same sources as the listed rights, the Director requested additional clarification concerning the nature of the administration of water rights sought by Rangen. In his October 6 letter, May described the administration sought by Rangen to be the administration of "all water right diversions junior to [Rangen's] that are interfering with and impacting [Rangen's] water rights under the water right numbers referenced above."

In response to the May letter of October 6, 2003, the Director issued an Order on February 25, 2004, and replaced it with an Amended Order on March 10, 2004. The Amended Order of March 10, 2004, was rescinded on March 14, 2005. Based upon the Director's further consideration of this matter, the Director enters the following Findings of Fact, Conclusions of Law, and Second Amended Order.

FINDINGS OF FACT

Procedural History

1. In addition to the letters from May dated September 23, 2003, and October 6, 2003, hereinafter referred to as the "*Rangen Call*," and in addition to the Orders of February 25, 2004, and March 10, 2004, the State of Idaho and parties to the *Rangen Call* signed an agreement titled "The Eastern Snake Plain Aquifer Mitigation, Recovery, and Restoration Agreement for 2004" on or about March 20, 2004. That agreement is hereinafter referred to as the "*ESPA Agreement*."

2. The ESPA Agreement included the provision that: "All pending delivery calls against the aquifer and conjunctive management litigation are stayed and no further delivery calls

against the aquifer will be made from March 15, 2004 to March 15, 2005." The ESPA Agreement also stated: "This Agreement shall be effective until March 15, 2005."

3. On March 24, 2004, the Director issued an order approving the ESPA Agreement as a mitigation plan. The ESPA Agreement was "approved by the Director according to it (sic) terms as interim mitigation for the period from March 15, 2004 through March 15, 2005."

4. On or about May 11, 2004, the Department and its contractors completed the development of a reformulated and recalibrated ground water model for the Eastern Snake Plain Aquifer ("ESPA"). This reformulated ground water model includes significant refinement of the calculated depletions to springs discharging from the Snake River Canyon in the Thousand Springs area resulting from the diversion and use of ground water and apportions the depletions among six adjacent groupings of spring complexes, or reaches, in the Thousand Springs area. The model provides calculated depletions to the reach containing the Curran Spring, from which Rangen receives surface water, resulting from the diversion and use of ground water for irrigation.

5. The calculated depletions to springs discharging in the Thousand Springs area upon which the Amended Order of March 10, 2004, was based, were determined from simulations using a coarser ground water model of the ESPA that was not as well calibrated as the reformulated model described in Finding 4. The ground water model preceding the reformulated model described in Finding 4 no longer provides the most accurate information available to the Director. As a result, the Amended Order of March 10, 2004, was rescinded by the order issued on March 14, 2005.

6. Results of simulations using the reformulated and recalibrated ground water model described in Finding 4 provide the best available science currently available to the Director and should be used to determine the extent of depletions to springs discharging in the Thousand Springs area resulting from the diversion and use of ground water.

The Eastern Snake River Plain Aquifer and the Department's Ground Water Model

7. The Eastern Snake River Plain Aquifer ("ESPA") is defined as the aquifer underlying an area of the Eastern Snake River Plain that is about 170 miles long and 60 miles wide as delineated in the report "Hydrology and Digital Simulation of the Regional Aquifer System, Eastern Snake River Plain, Idaho," U. S. Geological Survey ("USGS") Professional Paper 1408-F, 1992, excluding areas lying both south of the Snake River and west of the line separating Sections 34 and 35, Township 10 South, Range 20 East, Boise Meridian. The ESPA is also defined as an area having a common ground water supply. *See* IDAPA 37.03.11.050.

8. The ESPA is predominately in fractured Quaternary basalt having an aggregate thickness that may, at some locations, exceed several thousand feet, decreasing to shallow depths in the Thousand Springs area. The ESPA fractured basalt is characterized by high hydraulic conductivities, typically 1,000 feet/day but ranging from 0.1 feet/day to 100,000 feet/day.

9. Based on averages for the time period from May of 1980 through April of 2002, the ESPA receives approximately 7.5 million acre-feet of recharge on an average annual basis from the following: incidental recharge associated with surface water irrigation on the plain (3.4 million acre-feet); precipitation (2.2 million acre-feet); underflow from tributary drainage basins (1.0 million acre-feet); and losses from the Snake River and tributaries (0.9 million acre-feet).

10. Based on averages for the time period from May of 1980 through April of 2002, the ESPA also discharges approximately 7.5 million acre-feet on an average annual basis through sources including complexes of springs in the Thousand Springs area, springs in and near American Falls Reservoir, and the discharge of nearly 2.0 million acre-feet annually in the form of depletions from ground water withdrawals.

11. From the pre-irrigation conditions of the 1860s until the 1950s, the amount of water diverted from the Snake River and its tributaries for gravity flood/furrow irrigation increased substantially, from about 8 million acre-feet, or less, in the early 1900s to about 9.5 million acre-feet in the early 1950s. USGS Professional Paper 1408-F, p. F14. Significant quantities of the surface water diverted were in excess of crop consumptive uses and provided incidental recharge to the ESPA above the average incidental recharge of 3.4 million acre-feet described in Finding 9 for the May 1980 through April 2002 time period. Ground water levels across the ESPA responded by rising at many locations. For example, the average rise in ground water levels near Jerome, Idaho, and near Fort Hall, Idaho, was 20 to 40 feet over several tens of years. The average rise in ground water levels west of American Falls may have been 60 to 70 feet. USGS Professional Paper 1408A, p. A40. As a result, spring discharges in the Thousand Springs area correspondingly increased based on USGS data as shown on Attachment A.

12. Beginning in about the 1960s to 1970s time period through the most recent years, the total combined diversions of natural flow and storage releases above Milner Dam for irrigation using surface water supplies have declined from an average of nearly 9 million acre-feet annually to less than 8 million acre-feet annually, notwithstanding years of drought, because of conversions from gravity flood/furrow irrigation to sprinkler irrigation in surface water irrigation systems and other efficiencies implemented by surface water delivery entities. The measured decrease in cumulative surface water diversions above Milner Dam for irrigation reflects the fact that less water is generally needed in the present time to fully irrigate lands authorized for irrigation with a certain crop mix under certain climatic growing conditions than was needed in the 1960s to 1970s for the same lands, crop mix, and climatic growing conditions. With parallel appropriations of ground water, which dramatically increased beginning in about 1950, ground water levels across the ESPA have responded by declining at most locations where levels had previously risen, exacerbated by the worst consecutive period of drought years on record for the upper Snake River Basin. As a result, spring discharges in the Thousand Springs area have correspondingly declined based on USGS data as also shown on Attachment A.

13. The ground water in the ESPA is hydraulically connected to the Snake River and tributary surface water sources at various places and to varying degrees. One of the locations at

which a direct hydraulic connection exists between the ESPA and springs tributary to the Snake River is in the Thousand Springs area.

14. Hydraulically-connected ground water sources and surface water sources are sources that within which, ground water can become surface water, or surface water can become ground water, and the amount that becomes one or the other is largely dependent on ground water elevations.

15. When water is pumped from a well in the ESPA, a conically-shaped zone that is drained of ground water, termed a cone of depression, is formed around the well. This causes surrounding ground water in the ESPA to flow to the cone of depression from all sides. These depletionary effects propagate away from the well, eventually reaching one or more hydraulically-connected reaches of the Snake River and its tributaries, including springs in the Thousand Springs area. When the depletionary effects reach a hydraulically-connected reach of the Snake River or the points of discharge for springs in the Thousand Springs area, reductions in flow begin to occur in the form of losses from the river, reductions in spring discharge, or reductions in reach gains to the river. The depletions to the Snake River and its tributaries increase over time, with seasonal variations corresponding to seasonal variations in ground water pumping, and then either recede over time, if ground water pumping from the well ceases, or reach a maximum over time beyond which no further significant depletions occur, if ground water pumping from the well continues from year to year. This latter condition is termed a steady-state condition.

16. Various factors determine the specific hydraulically-connected reach of the Snake River or spring complexes affected by the pumping of ground water from a well in the ESPA; the magnitude of the depletionary effects to a hydraulically-connected reach or spring complex; the time required for those depletionary effects to first be expressed as reductions in river flow or spring discharge; the time required for those depletionary effects to reach maximum amounts; and the time required for those depletionary effects to either recede, if ground water pumping from the well ceases, or reach steady-state conditions, if ground water pumping continues. Those factors include the proximity of the well to the various hydraulically-connected reaches or springs, the transmissivity of the aquifer (hydraulic conductivity multiplied by saturated thickness) between the well and the hydraulically-connected reach of the Snake River or springs, the riverbed hydraulic conductivity, the specific yield of the aquifer (ratio of the volume of water yielded from a portion of the aquifer to the volume of that portion of the aquifer), the period of time over which ground water is pumped from the well, and the amount of ground water pumped that is consumptively used.

17. The time required for depletionary effects in a hydraulically-connected reach of the Snake River or tributary springs to first be expressed, the time required for those depletionary effects to reach maximum amounts, and the time required for those depletionary effects to either recede, if ground water pumping from the well ceases, or reach steady-state conditions, if ground water pumping continues, can range from days to years or even decades, depending on the factors described in Finding No. 16. Generally, the closer a well in the ESPA is located to a hydraulically-connected reach of the Snake River or tributary springs, the larger will be the flow

reductions in the hydraulically-connected reach or springs, as a percentage of the ground water depletions, and the shorter will be the time periods for depletionary effects to first be expressed, for those depletionary effects to reach maximum amounts, and for those depletionary effects to either recede or reach steady-state conditions. However, essentially all depletions of ground water from the ESPA cause reductions in flows in the Snake River and spring discharges equal in quantity to the ground water depletions over time.

18. The Department uses a calibrated ground water model to determine the effects on the ESPA and hydraulically-connected reaches of the Snake River and its tributaries from pumping a single well in the ESPA, from pumping selected groups of wells, and from surface water uses on lands above the ESPA.

19. In 2004, in collaboration with the Idaho Water Resources Research Institute ("IWRRI"), University of Idaho, U. S. Bureau of Reclamation ("USBR"), USGS, Idaho Power Company, and consultants representing various entities, including certain entities relying on the discharge of springs in the Thousand Springs area, the Department completed reformulation of the ground water model used by the Department to simulate effects of ground water diversions and surface water uses on the ESPA and hydraulically-connected reaches of the Snake River and its tributaries, including springs in the Thousand Springs area. This effort was funded in part by the Idaho Legislature and included significant data collection and model calibration intended to reduce uncertainty in the results from model simulations.

20. Below Milner Dam, the Snake River is incised and springs in the Thousand Springs area emanate from the canyon wall. The ground water model used by the Department prior to the reformulation of the model represented the Thousand Springs area as a single, hydraulically-connected, tributary reach of the Snake River. In the reformulated ground water model for the ESPA described in Finding 19, the Thousand Springs area was divided into six adjacent groupings of spring complexes, or spring reaches, based on the relative magnitude of spring discharge as follows:

a. Devil's Washbowl to the USGS stream gage located near Buhl, Idaho ("Buhl Gage") – includes springs having moderately large rates of discharge at intermittent locations;

b. Buhl Gage to Thousand Springs – includes springs having somewhat larger average rates of discharge per river mile than in the reach Devil's Washbowl to Buhl Gage;

c. Thousand Springs – includes springs having very large rates of discharge;

d. Thousand Springs to Malad Gorge – includes springs having moderate discharge;

e. Malad Gorge – includes springs having very large rates of discharge near the confluence of the Malad and Snake Rivers; and

f. Malad Gorge to Bancroft – includes springs having relatively small rates of discharge.

21. The segment that includes the Curran Spring from which Rangen diverts surface water is the Thousand Springs to Malad Gorge spring reach.

22. The reformulated ground water model for the ESPA was calibrated to recorded ground water levels in the ESPA, spring discharge in the spring reaches described in Finding 20, and reach gains or losses to Snake River flows, determined from stream gages together with other stream flow measurements, for the period May 1, 1980 to April 30, 2002. The calibration targets, consisting of measured ground water levels, reach gains/losses, and discharges from springs, have inherent uncertainty resulting from limitations on the accuracy of the measurements. The uncertainty in results predicted by the ESPA ground water model cannot be less than the uncertainty of the calibration targets. The calibration targets having the maximum uncertainty are the reach gains or losses determined from stream gages, which although rated "good" by the USGS, have uncertainties of up to 10 percent.

23. Discharges from springs in the segments or reaches described in Finding 20 have diminished primarily because of significant reductions in incidental recharge of the ESPA from surface water irrigation, resulting from changes in surface water irrigation systems and application practices (conversion from application by gravity flood/furrow irrigation to application by sprinkler systems), and the last five consecutive years of drought. For example, decreases in the springs supplying the Rangen hatchery facilities can be correlated with repairs made to the facilities of the North Side Canal Company to reduce losses of surface water to ground water from the canal company's facilities above those springs in 1987, 1998, and 2000.

24. Spring discharges are also reduced as a result of ground water withdrawals from the ESPA for irrigation and other consumptive purposes, especially ground water that is diverted in relatively close proximity to the area of the springs. Simulations using the Department's calibrated computer model of the ESPA show that ground water withdrawals from certain portions of the ESPA for irrigation and other consumptive purposes cause depletions in the flow of springs discharging in the spring reaches described in Finding 20. When superimposed on diminished spring discharges resulting from changes in surface water irrigation and drought, reductions in spring discharges caused by ground water depletions under relatively junior priority water rights can potentially cause injury to senior priority water rights dependent on spring sources.

25. The Department is implementing full conjunctive administration of rights to the use of hydraulically-connected surface and ground waters within the Eastern Snake River Plain consistent with Idaho law and available information. The results of simulations from the Department's ground water model are suitable for making factual determinations on which to base conjunctive administration of surface water rights diverted from the Snake River and its tributaries and ground water rights diverted from the ESPA.

26. The Department's ground water model represents the best available science for determining the effects of ground water diversions and surface water uses on the ESPA and hydraulically-connected reaches of the Snake River and its tributaries. There currently is no other technical basis as reliable as the simulations from the Department's ground water model for the ESPA that can be used to determine the effects of ground water diversions and surface water uses on the ESPA and hydraulically-connected reaches of the Snake River and its tributaries.

Creation and Operation of Water Districts No. 120 and No. 130

27. On November 19, 2001, the State of Idaho sought authorization from the Snake River Basin Adjudication ("SRBA") District Court for the interim administration of water rights by the Director in all or parts of the Department's Administrative Basins 35 and 41 overlying the ESPA in the American Falls area and all or parts of Basins 36 and 43 overlying the ESPA in the Thousand Springs area. On January 8, 2002, the SRBA District Court issued an order authorizing the interim administration by the Director. After notice and hearing, the Director issued two orders on February 19, 2002, creating Water District No. 120 and Water District No. 130, pursuant to the provisions of Idaho Code § 42-604.

28. On August 30, 2002, the State of Idaho filed a second motion with the SRBA District Court seeking authorization for the interim administration of water rights by the Director in the portion of the Department's Administrative Basin 37 overlying the ESPA in the Thousand Springs area. On November 19, 2002, the SRBA District Court issued an order authorizing the interim administration by the Director. After notice and hearing, the Director issued an order on January 8, 2003, revising the boundaries of Water District No. 130 to include the portion of Administrative Basin 37 overlying the ESPA, pursuant to the provisions of Idaho Code § 42-604.

29. On July 10, 2003, the State of Idaho filed a third motion with the SRBA District Court seeking authorization for the interim administration of water rights by the Director in the portion of the Department's Administrative Basin 29 overlying the ESPA in the American Falls area. On October 29, 2003, the SRBA District Court issued an order authorizing the interim administration by the Director. After notice and hearing, the Director issued an order on January 22, 2004, revising the boundaries of Water District No. 120 to include the portion of Administrative Basin 29 overlying the ESPA, pursuant to the provisions of Idaho Code § 42-604.

30. Water Districts No. 120 and No. 130 were created, and the respective boundaries revised, to provide for the administration of water rights, pursuant to chapter 6, title 42, Idaho Code, for the protection of prior surface and ground water rights. As a result, the watermasters for Water Districts No. 120 and No. 130 were given the following duties to be performed in accordance with guidelines, direction, and supervision provided by the Director:

a. Curtail illegal diversions (i.e., any diversion without a water right or in excess of the elements or conditions of a water right);

b. Measure and report the diversions under water rights;

c. Enforce the provisions of any stipulated agreement; and

d. Curtail out-of-priority diversions determined by the Director to be causing injury to senior priority water rights that are not covered by a stipulated agreement or a mitigation plan approved by the Director.

31. On April 15, 2005, the State of Idaho filed three motions with the SRBA District Court seeking authorization for the interim administration of water rights by the Director in the Department's Administrative Basin 25; Basins 31, 32, and 33; and Basin 45. If the SRBA District Court authorizes interim administration in these administrative basins, nearly all ground water rights authorizing diversion of ground water from the ESPA will be subject to administration through water districts, when combined with the ground water rights already in Water Districts No. 120 and No. 130. At the time of filing Director's Reports in the SRBA later this year for the relatively few remaining ground water rights authorizing diversions from the ESPA, additional motions will be filed by the State of Idaho seeking authorization for interim administration of those remaining rights. While authorization for interim administration of the remaining ground water rights is subject to determinations to be made by the SRBA District Court, the Director anticipates that water districts covering all of the ESPA will be in place for the irrigation season of 2006, and all ground water rights authorizing diversions from the ESPA will be subject to administration through water districts established pursuant to chapter 6, title 42, Idaho Code.

32. The general location and existing boundaries for Water Districts No. 120 and No. 130, as well as the location and existing boundaries for the American Falls Ground Water Management Area, are shown on Attachment B. Boundaries for a proposed addition to Water District No. 120, as well as areas for potential future water districts (Water Districts No. 110 and No. 140), are also shown on Attachment B.

Conjunctive Management Rules

33. Idaho Code § 42-603 authorizes the Director "to adopt rules and regulations for the distribution of water from the streams, rivers, lakes, ground water and other natural water sources as shall be necessary to carry out the laws in accordance with the priorities of the rights of the users thereof." Promulgation of such rules and regulations must be in accordance with the procedures of chapter 52, title 67, Idaho Code.

34. On October 7, 1994, the Director issued *Order Adopting Final Rules*; the *Rules for Conjunctive Management of Surface and Ground Water Resources* (IDAPA 37.03.11) ("Conjunctive Management Rules"), promulgated pursuant to chapter 52, title 67, Idaho Code, and Idaho Code § 42-603.

35. Pursuant to Idaho Code § 67-5291, the Conjunctive Management Rules were submitted to the 1st Regular Session of the 53rd Idaho Legislature (1995 session). During no legislative session, beginning with the 1st Regular Session of the 53rd Idaho Legislature, have the

Conjunctive Management Rules been rejected, amended, or modified by the Idaho Legislature. Therefore, the Conjunctive Management Rules are final and effective.

36. The Conjunctive Management Rules "apply to all situations in the state where the diversion and use of water under junior-priority ground water rights either individually or collectively causes material injury to uses of water under senior-priority water rights. The rules govern the distribution of water from ground water sources and areas having a common ground water supply." IDAPA 37.03.11.020.01.

37. The Conjunctive Management Rules "acknowledge all elements of the prior appropriation doctrine as established by Idaho law." IDAPA 37.03.11.020.02.

The Letters Submitted on Behalf of Rangen Seeking Administration of Water Rights and Application of the Conjunctive Management Rules

38. On September 23, 2003, the Director received a letter from May representing Rangen, Inc. seeking the administration of "the diversion of water in District 36A in such a way that [Rangen] receives its full appropriation of the above referenced water rights."

39. On September 25, 2003, the Director responded to the letter of September 23, 2003, from May requesting "additional clarification concerning the nature of the administration of water rights in Water District 36A" being sought, since "there are no water rights in Water District No. 36A that are junior in priority to the listed rights and divert from the same sources as the listed rights."

40. On October 10, 2003, the Director received a second letter from May dated October 6, 2003. In that letter, May clarified that Rangen was seeking the administration of "all water right diversions junior to [Rangen's] that are interfering with and impacting [Rangen's] water rights under the water right numbers referenced above."

41. The water rights held by Rangen that Rangen sought to have protected by the administration of junior priority water rights are as follows pursuant to decrees issued by the SRBA District Court:

Water Right No.:	36-15501	36-02551	36-07694
Priority Date:	July 1, 1957	July 13, 1962	April 12, 1977
Beneficial Use:	Fish Propagation	Domestic (0.1 cfs) and Fish Propagation (48.54 cfs)	Fish Propagation
Diversion Rate:	1.46 cfs	48.54 cfs	26.00 cfs
Period of Use:	Jan. 1 – Dec. 31	Jan. 1 – Dec. 31	Jan. 1 – Dec. 31

42. Rule 10.04 of the Conjunctive Management Rules defines a "delivery call" as: "A request from the holder of a water right for administration of water rights under the prior appropriation doctrine." The two letters from May, described in Findings 38 and 40 seeking administration of water rights interfering with and impacting Rangen's water rights, come within the definition of a delivery call.

43. Water Districts No. 36A, No. 120, and No. 130 were created pursuant to Idaho Code § 42-604. Water District No. 36A includes water rights senior in priority to Rangen's water rights that divert from a portion of the same source as Rangen's water rights. Other water rights in Water District No. 36A, both senior in priority and junior in priority to Rangen's rights, are diverted from other sources that are hydraulically connected through the ESPA, to varying degrees, to the source for Rangen's water rights. Water rights diverted from these other sources, which are hydraulically connected through the ESPA to the source for Rangen's water rights, do not interfere with and impact Rangen's water rights. Therefore, there are no water rights in Water District No. 36A that can be administered to prevent injury to Rangen's rights.

44. Water District No. 120 contains water rights that are junior in priority to Rangen's water rights and divert from ground water that is hydraulically connected to the source for Rangen's water rights. Such water rights could potentially interfere with and potentially impact Rangen's water rights.

45. Water District No. 130 contains surface water rights that divert from sources that are hydraulically connected through the ESPA to the source for Rangen's water rights but do not interfere with or impact Rangen's water rights. Water District No. 130 also contains water rights that are junior in priority to Rangen's water rights and divert from ground water that is hydraulically connected to the source for Rangen's water rights. Such water rights could potentially interfere with and potentially impact Rangen's water rights.

46. Rule 40 of the Conjunctive Management Rules is titled "Responses to Calls for Water Delivery Made by the Holders of Senior-Priority Surface or Ground Water Rights Against the Holders of Junior-Priority Ground Water Rights from Areas Having a Common Ground Water Supply in an Organized Water District." Rule 40 applies to the delivery calls made by Rangen against the holders of junior priority ground water rights in both Water District No. 120 and Water District No. 130.

47. Some of the junior priority ground water rights that could potentially interfere with and potentially impact Rangen's water rights are not in a water district created pursuant to the provisions of Idaho Code § 42-604 because a final decree has not been issued by the SRBA District Court and the requirements for interim administration of these rights pursuant to Idaho Code § 42-1417 have not been met.

48. Rule 30 of the Conjunctive Management Rules is titled "Responses to Calls for Water Delivery Made by the Holders of Senior-Priority Surface or Ground Water Rights Against the Holders of Junior-Priority Ground Water Rights Within Areas of the State Not in Organized

Water Districts or Within Water Districts Where Ground Water Regulation Has Not Been Included in the Function of Such Districts or Within Areas That Have Not Been Designated Ground Water Management Areas."

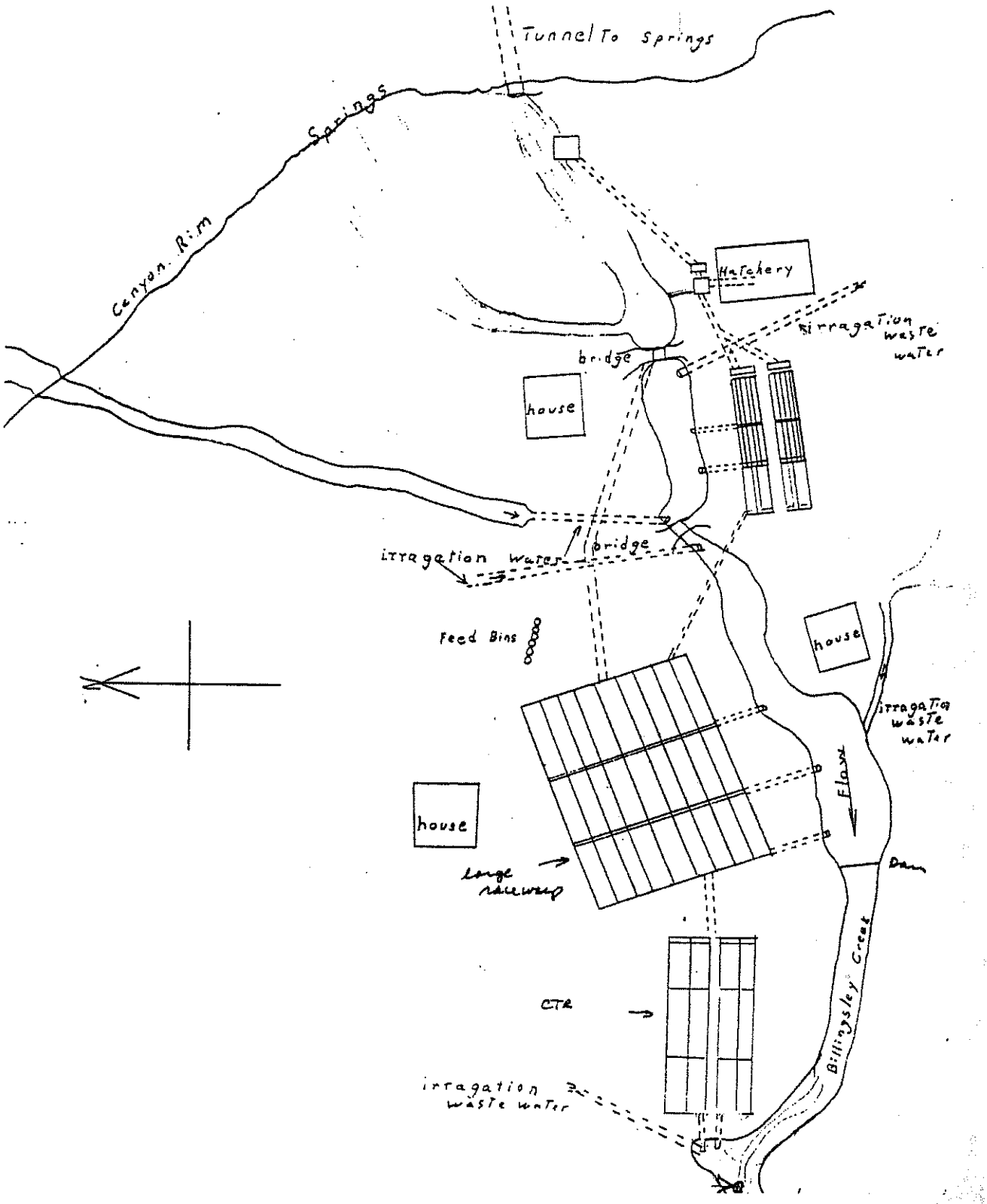
49. Rule 41 of the Conjunctive Management Rules is titled "Administration of Diversion and Use of Water Within a Ground Water Management Area."

50. The two letters from May, described in Findings 38 and 40, seeking administration of water rights interfering with and impacting Rangen's water rights did not meet the requirements set forth in Rule 30 of the Conjunctive Management Rules. Also, the two letters from May did not seek administration of junior priority ground water rights in the American Falls Ground Water Management Area as provided in Rule 41 of the Conjunctive Management Rules. Pursuant to Rule 41, such administration could not occur until the irrigation season of 2006, even if material injury to Rangen's rights was determined to be occurring as a result of diversion and use of ground water under junior priority rights in the American Falls Ground Water Management Area.

51. While Rule 40 of the Conjunctive Management Rules is applicable to the two letters from May, described in Findings 38 and 40, neither Rule 40 nor any other provisions of the Conjunctive Management Rules are applicable to delivery calls or demands for water distribution by the holder of a senior priority water right against the holder of a junior priority surface water right.

52. On October 17, 2003, the Director provided a letter to May initially responding to May's letter of October 10, 2003, described in Finding 40, making a delivery call by seeking administration of water rights interfering with and impacting Rangen's water rights. In his October 17 letter, the Director advised that determinations regarding "material injury" and "reasonableness of water diversions" would be made pursuant to Rule 40 and Rule 42 of the Conjunctive Management Rules in responding to the delivery call against junior priority ground water rights in Water Districts No. 120 and No. 130. In his October 17 letter, the Director also requested that he be provided copies of "all historical records of the amounts of water diverted under the listed rights as soon as practicable." Such records were not available to the Director for diversions under Rangen's water rights prior to 1995 because prior to 1995, the Department did not require the measurement and reporting of diversions under Rangen's rights and most other water rights that were not in organized water districts created pursuant to Idaho Code § 42-604.

53. On November 21, 2003, May transmitted on behalf of Rangen historical records of flow through the hatchery facilities owned and operated by Rangen. Included was the following sketch depicting the layout of the Rangen hatchery facilities, a summary of flows on a monthly basis, and records of periodic flow measurements beginning in 1966 through part of 2003.



Rangen Hatchery Facilities
Hagerman, Idaho

54. The flow measurements that are considered to be representative of the total supply of water available to the Rangen hatchery facilities under water rights nos. 36-15501, 36-02551, and 36-07694, consist of the sum of the discharge from raceways designated by Rangen as the "CTR" raceways and the flow over the check "Dam." The dam is sited upstream from the discharge points from the CTR raceways and downstream from the discharge points from raceways designated by Rangen as the "Large" raceways. The sum of the discharge from the CTR raceways and the flow over the check dam is considered to be representative of the total supply of water available even though at times some of the flow over the check dam may include water flowing from small springs downstream from the diversion to the Large raceways, water discharged from the Large raceways that was not diverted through the CTR raceways, and irrigation return flows.

55. The records of flow measurements submitted by May on behalf of Rangen for the years 1966 through 1974 consist of measurements or estimates of discharges from the Curran Spring made by George Lemmon, a former watermaster for Water District No. 36A. These recorded flows are not representative of the total supply of water available to the Rangen hatchery facilities because water rights for irrigation that are senior in priority to Rangen's rights are entitled to divert the first portion of the discharge from the Curran Spring during the irrigation season. In addition, the recorded flows do not include discharges from springs downstream of the Curran Spring that are upstream of Rangen's diversion to the Large raceways.

56. Without further explanation from Rangen, the Department cannot confirm that the records of flow measurements submitted by May on behalf of Rangen for the years 1975 through 1980 are representative of the total supply of water available to the Rangen hatchery facilities. Based on subsequent findings in this order, however, it is not necessary to confirm whether the flow measurements for the years 1975 through 1980 are representative of the total supply of water available to the Rangen hatchery facilities.

Authorized Diversion Rate for Water Rights Nos. 36-15501, 36-02551, and 36-07694

57. Springs discharging in the Thousand Springs area do not discharge at a constant rate or at a rate that progressively increases or decreases from year to year. While there are overall increases or decreases in the discharge from individual springs between years (inter-year variations), there are also pronounced within-year or intra-year variations in discharge from individual springs.

58. Simplistically, overall variations between years in the discharge of springs in the Thousand Springs area result from differences between the amounts of ground water depletions and recharge to the ESPA above the springs, with delays in the response of spring discharge ranging at the extremes from days to decades depending on the proximity of ground water depletions and recharge and the other factors set forth in Finding 16. Factors affecting overall variations between years in the cumulative discharge from springs in the Thousand Springs area as well as from individual springs include but are not necessarily limited to: variations in surface water supplies available for irrigation above the ESPA, which affect cropping decisions and the

amount of incidental recharge to the ESPA; changes in the amounts and timing of tributary underflow to the ESPA, which also reflect numerous variations upgradient from where tributary underflow contributes to the ESPA; inter-year variations in precipitation and temperature, which not only affect the amount of surface water used above the ESPA and associated incidental recharge to the ESPA, but also affect the quantity of ground water withdrawals and depletions from the ESPA; and differences between years in the quantity of intentional or managed recharge to the ESPA.

59. Intra-year variations in the discharge from individual springs result from the factors described in Finding 58 but also from other factors including: variations in surface water application above the ESPA and associated incidental recharge in response to seasonal changes in precipitation and temperature; variations in timing of ground water withdrawals and depletions from the ESPA in close proximity to individual springs; and the timing of intentional or managed recharge to the ESPA in close proximity to individual springs.

60. While both the regional and local factors affecting inter-year and intra-year variations in spring discharge are generally understood, the interactions between these factors are complex and the specific effects of individual factors and various combinations of factors on the discharge from individual springs are not presently quantifiable.

61. Both inter-year and intra-year variations in the discharge from the springs that are the sources for water rights nos. 36-15501, 36-02551, and 36-07694 existed when appropriations for these rights were initiated (July 1, 1957; July 13, 1962; and April 12, 1977; respectively). Furthermore, the authorized diversion rates for water rights nos. 36-02551 and 36-07694 were licensed based on when the discharges from the springs that are the source for these rights were at or near the maximum intra-year discharges during the years for which the extent of beneficial use was deemed to be established or confirmed (November 1962 for 36-02551 and October 1972 for 36-07694), although erroneously for water right no. 36-07694 (see Findings 62 and 63 below). There are no other measurements of the total supply of water available to the Rangen hatchery facilities in 1962, nor any other means for determining the intra-year variations in the discharges from the springs comprising the source for water right no. 36-02551.

62. Water right no. 36-07694 was licensed on September 19, 1985, and has an authorized diversion rate of 26.00 cfs. The authorized diversion rate, as licensed, was not based on measurements of the amount of water actually diverted and applied to beneficial use. Rather, the authorized diversion rate was based on an estimate (not an actual measurement) made by George Lemon, a former watermaster for Water District No. 36A, of the discharge from the Curran Spring at or near its seasonal maximum flow in October of 1972. This estimate of the discharge from the Curran Spring was made nearly 5 years before the application for permit to appropriate water was filed for water right no. 36-07694.

63. Based on available records, there was not water available for appropriation at the time or subsequent to the date of appropriation for water right no. 36-07694. Therefore, the Department erred in licensing water right no. 36-07694, and should not have recommended this right for decree in the SRBA. Nonetheless, since the SRBA District Court decreed water right

no. 36-07694, Rangen may be entitled to divert water under this right when such water is physically available. However, because water was not available to appropriate on the date of appropriation for right no. 36-07694, Rangen may not be entitled to have a delivery call recognized against junior priority water rights.

64. The records of flow measurements submitted by May on behalf of Rangen that are representative of the total supply of water available to the Rangen hatchery facilities and the records maintained by the Department since 1995 show that the quantity of water available at the Rangen hatchery facilities (sum of the discharge from the CTR raceways and the flow over the check dam) has been sufficient to continuously fill water right no. 36-15501 at the authorized diversion rate of 1.46 cfs.

65. The records of flow measurements submitted by May on behalf of Rangen that are representative of the total supply of water available to the Rangen hatchery facilities show that 1987 was the last year in which the quantity of water available at the Rangen hatchery facilities (sum of the discharge from the CTR raceways and the flow over the check dam) was sufficient to fill water right no. 36-02551 at the authorized diversion rate of 48.54 cfs, when the cumulative discharges from springs supplying the Rangen hatchery facilities were at seasonal maximums (November). Since 1987, the quantity of water available at the Rangen hatchery facilities has not been sufficient to fill water right no. 36-02551 at the authorized diversion rate of 48.54 cfs although in 1997 and 1998, the seasonal maximum quantity of water available came within about 5 cfs (or about 10 percent) of the authorized diversion rate.

66. The rates of diversion authorized pursuant to water rights nos. 36-15501 and 36-02551 (1.46 cfs and 48.54 cfs, respectively) are not quantity entitlements that are guaranteed to be available to Rangen. Rather, the authorized rates of diversion are the maximum rates at which water can be diverted under these rights, respectively, when such quantities of water are physically available and the rights are in priority. Rangen cannot call for the curtailment of junior priority water rights at all times that insufficient water is physically available to fill water rights no. 36-02551 or no. 36-07694 at the authorized rates of diversion. Rangen is not entitled to a water supply that is enhanced beyond the conditions that existed at the time such rights were established; i.e., Rangen cannot call for the curtailment of junior priority water rights simply because seasonally the discharge from springs is less than the authorized rates of diversion for Rangen's rights unless such seasonal variations are caused by depletions resulting from diversion and use of water under junior priority rights.

67. Rangen can only call for the distribution of water to its rights through the curtailment of junior priority ground water rights from the hydraulically-connected ESPA when such curtailment would result in a usable amount of water reaching Rangen's points of diversion in time of need, and depletions causing material injury as a result of diversion and use of ground water under such junior priority rights have not been adequately mitigated.

68. Based on the records of flow measurements submitted by May on behalf of Rangen that are representative of the total supply of water available to the Rangen hatchery facilities for the years 1981 through part of 2003 and annual reports submitted by Rangen to the Department for the years 1995 through 2004, the following table summarizes the maximum daily flow and average daily flow by month for the water supply available to the Rangen hatchery facilities (sum of the discharge from the CTR raceways and the flow over the check dam) in 1987 and 2004. The year 1987 was the last year within which the discharge from springs supplying the Rangen hatchery facilities at the seasonal maximum (November) was sufficient to fill water rights nos. 36-15501 and 36-02551 at the cumulative authorized diversion rate of 50 cfs, and 2004 was the last year for which complete data are available.

Month	Year	Maximum Daily Flow	Average Daily Flow
January	1987	44.25 cfs	44.25 cfs
	2004	15.75	14.58
February	1987	42.89	39.75
	2004	13.58	13.29
March	1987	NM*	NM*
	2004	13.56	13.09
April	1987	32.52	28.55
	2004	12.24	11.74
May	1987	23.97	23.29
	2004	12.06	11.42
June	1987	30.43	27.58
	2004	12.77	12.23
July	1987	30.91	29.09
	2004	12.29	11.84
August	1987	40.13	36.70
	2004	12.38	11.85
September	1987	47.94	40.06
	2004	13.73	13.06
October	1987	46.93	46.93
	2004	15.19	14.39
November	1987	50.08	46.52
	2004	14.50	13.73
December	1987	44.39	44.22
	2004	12.87	12.76

*NM = No measurement

69. Comparing same-month maximum daily and average daily flows representing the water supply available to the Rangen hatchery facilities (sum of the discharge from the CTR raceways and the flow over the check dam) between years for the years shown above demonstrates that there have been significant decreases in the water supply available to the Rangen hatchery facilities between 1987 and 2004. Flow measurements for the other years between 1987 and 2004 not shown above demonstrate that the water supply available to the Rangen hatchery facilities generally decreased from 1990 through 1996, rebounded in 1997 and 1998, and then significantly decreased again after 1998 to record lows by 2002, 2003, and 2004 for the post-1981 time period.

70. Based on the records of flow measurements submitted by May on behalf of Rangen that are representative of the total supply of water available to the Rangen hatchery facilities for the years 1981 through part of 2003 and annual reports submitted by Rangen to the Department for the years 1995 through 2004, the quantity of water available at the source for water right no. 36-15501 with the priority date of July 1, 1957, is currently sufficient to fill this right at the authorized diversion rate of 1.46 cfs. *See* IDAPA 37.03.11.042.01.a.

71. Based on the records of flow measurements submitted by May on behalf of Rangen that are representative of the total supply of water available to the Rangen hatchery facilities for the years 1981 through part of 2003 and annual reports submitted by Rangen to the Department for the years 1995 through 2004, and taking into account the variations in spring flows between months that have existed since the date of appropriation for water right no. 36-02551, the quantity of water available at the source for water right no. 36-02551 with the priority date of July 13, 1962, is currently insufficient to fill this right at the authorized diversion rate of 48.54 cfs, even during months when the springs providing the source for this right are discharging at the highest seasonal flows during the year, generally October through January. The quantity of water available at the source for water right no. 36-02551 is expected to continue to be insufficient during 2005. *See* IDAPA 37.03.11.042.01.a.

72. Based on the records of flow measurements submitted by May on behalf of Rangen that are representative of the total supply of water available to the Rangen hatchery facilities for the years 1981 through part of 2003 and annual reports submitted by Rangen to the Department for the years 1995 through 2004, the quantity of water available at the source for water right no. 36-07694 with the priority date of April 12, 1977, is wholly insufficient to fill this right at the authorized diversion rate of 26.00 cfs, even during months when the springs providing the source of water for this right are discharging at the highest seasonal flows during the year, generally October through January. As described in Findings 62 and 63, there was not any water available for appropriation at the time or subsequent to the time that the application for permit to appropriate water for water right no. 36-07694 was filed. *See* IDAPA 37.03.11.042.01.a.

73. Based on subsequent findings and conclusions, it is unnecessary to determine whether Rangen has or has not expended reasonable efforts to divert water for right no. 36-02551 from its source for use at the Rangen hatchery facilities. *See* IDAPA 37.03.11.042.01.b.

74. Based on the Department's water rights data base and simulations using the Department's ground water model for the ESPA described in Findings 19 and 20, the diversion and consumptive use of ground water under water rights having priority dates later than the priority date for water right no. 36-02551 (July 13, 1962), and which at steady-state conditions reduce spring discharge in the Thousand Springs to Malad Gorge spring reach by more than 10 percent of the amount of depletion to the ESPA resulting from those ground water diversions (10 percent is the uncertainty in model simulations, *see* Finding 22), has insignificant effects on the quantity and timing of water available from springs discharging in the Thousand Springs to Malad Gorge spring reach, which includes the Curran Spring from which Rangen diverts surface water. *See* IDAPA 37.03.11.042.01.c.

75. Based on the records of flow measurements submitted by May on behalf of Rangen that are representative of the total supply of water available to the Rangen hatchery facilities for the years 1981 through part of 2003 and annual reports submitted by Rangen to the Department for the years 1995 through 2004, as well as field investigations conducted on November 25, 2003, by the watermaster for Water District No. 130 and Brian Patton, a registered professional civil engineer, Rangen is currently diverting and using surface water within the authorized diversion rate for water rights nos. 36-15501 and 36-02551 (50 cfs total). *See* IDAPA 37.03.11.042.01.e.

76. Based on the field investigations on November 25, 2003, described in Finding 75, the Rangen hatchery facilities have marginally adequate water measuring and recording devices. The watermaster for Water District No. 130 reports that the amounts of water diverted to domestic and irrigation uses are not measured, and the measurements of flows through hatchery raceways reported by Rangen may be systematically about 10 percent lower than actual flows. *See* IDAPA 37.03.11.042.01.f.

77. Based on the results from the field inspection on November 25, 2003, described in Finding 75, two potential modifications to the existing Rangen hatchery facilities were identified that could increase the supply of water to the Rangen hatchery facilities during times that water right no. 36-02551 is not satisfied. However, the combined additional flow that could be diverted is estimated to be 0.64 cfs, which is not significant given the shortages in water supply shown and described in Findings 68 and 69. *See* IDAPA 37.03.11.042.01.g.

78. Based on subsequent findings and conclusions, it is unnecessary to determine whether there are actions that potentially could provide alternate means of diversion or alternate points of diversion to increase the supply of water to the Rangen hatchery facilities during times that water right no. 36-02551 is not satisfied. *See* IDAPA 37.03.11.042.01.h.

Effects of Curtailing Ground Water Diversions Under Rights Junior to Water Right No. 36-02551

79. The following water rights authorize the diversion and use of ground water for consumptive uses from the area of common ground water supply described in Finding 7, have priority dates later than the priority date for water right no. 36-02551 (July 13, 1962), and based on model simulations reduce spring discharge in the Thousand Springs to Malad Gorge spring reach by more than 10 percent of the amount of depletion to the ESPA resulting from those ground water diversions (10 percent is the uncertainty in model simulations, *see* Finding 22):

Water Right No.	Priority Date	Diversion Rate	Authorized Use	Water Right Holder of Record
37-02733	04/12/1966	0.57 cfs	Irrigation of 32 acres	Scott & Sandi Luttmer
36-07156	02/08/1971	2.56	Irrigation of 190 acres	Orval & Bonnie Vader
36-07376	09/29/1973	2.75	Irrigation of 185 acres	Len Riddle & Frank Veenstra
36-07666A	01/05/1977	1.64	Irrigation of 82 acres	Frank Veenstra
36-07666B	01/05/1977	0.66	Commercial/Stock	Frank Veenstra
36-16146	11/25/1977	0.08	Irrigation of 4 acres	Larry & Lauri Nielson
36-07995	07/17/1981	0.20	Commercial/Domestic	Leo & Judith Ray
36-08100	07/13/1982	0.15	Irrigation of 5 acres	Lavar Jackson
36-08101	07/13/1982	0.80	Irrigation of 40 acres	Lavar Jackson
36-08268A	03/26/1985	0.04	Irrigation of 1 acre	Richard & Shelly Regnier
36-08333	08/25/1987	3.66	Irrigation of 183 acres	Ronnie & Sharlene Smith
36-08561	08/24/1990	0.18	Irrigation of 6 acres	Walter & Margaret Candy
36-08652	04/27/1992	0.24	Irrigation of 4½ acres	Valley View Homeowners
36-08662	05/26/1992	0.24	Commercial/Stock	Harry & Flora Bokma
36-08715	07/02/1993	2.00	Municipal	City of Hagerman
36-08747	02/02/1996	0.35	Irrigation of 8 acres	Northview Water Assoc.
36-16204	02/09/2004	0.18	Irrigation of 9 acres	Northview Water Assoc.

80. The Department's ground water model for the ESPA, described in Findings 19 and 20, was used to simulate the effects of permanently curtailing the diversion and use of ground water for the irrigation of 735 equivalent[1] acres under the water rights listed in Finding 79 for irrigation purposes. The results of the simulation show that permanently curtailing the diversion and use of ground water for the irrigation of these lands would increase the discharge of springs in the Thousand Springs to Malad Gorge spring reach, which includes the Curran Spring from which Rangen diverts surface water, by an average amount of 0.4 cfs at steady state conditions.

[1] For the ESPA ground water model, an algorithm is used to simulate the effects of supplemental ground water irrigation where surface water is deliverable for some portion of the irrigation of those lands. For each model cell, acreages simulated to be irrigated with both surface water and supplemental ground water are replaced with acreages simulated to be irrigated using all ground water such that the simulated consumptive use on the replacement acreage equals the consumptive use on the acreage with supplemental ground water irrigation. The equivalent acreage consists of the sum of acreages irrigated solely with ground water and the replacement acreages for acreages irrigated with both surface water and ground water.

81. Finding 80 is consistent with results from simulations conducted by IWRRI using the Department's ground water model for the ESPA. IWRRI simulated the effects of permanently curtailing ground water diversion and use across the ESPA under ground water rights junior to January 1, 1870; January 1, 1949; January 1, 1961; January 1, 1973; and January 1, 1985; with no other changes, using separate model simulations (the "Curtailment Scenario"). IWRRI Technical Report 04-023. Simulating the permanent curtailment of ground water diversions under rights junior to January 1, 1961, for irrigation in areas both within and outside the area having a common ground water supply described in Finding 7, results in the simulated curtailment of ground water irrigation on a total of 664,300 equivalent acres of land. IWWRI's simulation of the effects of such curtailment showed that spring discharges would increase in the Thousand Springs to Malad Gorge spring reach, which includes the Curran Spring from which Rangen diverts surface water, by an average amount of 5 cfs at steady state conditions. Simulating the permanent curtailment of essentially all ground water irrigation (ground water rights junior to January 1, 1870), which would curtail the irrigation of 1,102,000 acres, showed that spring discharges would increase in the Thousand Springs to Malad Gorge spring reach by an average amount of 8 cfs at steady state conditions.

82. Only ground water diverted and used for agricultural irrigation purposes was included in the modeled curtailment simulations conducted by Department staff and IWRRI. Based on USGS data, and disregarding the priority dates of ground water rights from the ESPA, about 95 percent of the ground water diverted from the ESPA is used for irrigation. Uses pursuant to ground water rights from the ESPA for public, domestic, industrial, and livestock purposes constitute 2.6 percent, 1.2 percent, 0.7 percent, and 0.6 percent of the total ground water diversions from the ESPA, respectively. Since a significant portion of these other uses is nonconsumptive, the depletions to the ESPA from irrigation uses that contribute to reduced spring discharges in the Thousand Springs area, and other reaches of the Snake River that are hydraulically connected to the ESPA, are greater than 95 percent of the total depletions from all uses of ground water.

83. Using the Department's ground water model for the ESPA to simulate increases in reach gains and spring discharges resulting from the curtailment of the diversion and use of ground water solely for agricultural irrigation purposes provides reasonable quantification of the increases in reach gains and spring discharges resulting from the curtailment of the diversion and use of ground water for all purposes.

84. Based on simulations using the Department's ground water model for the ESPA and accounting for the level of uncertainty in the model (10 percent as described in Finding 22), curtailment of the diversion and use of ground water under all water rights with priority dates later than July 13, 1962, the priority date for water right no. 36-02551, will not at any time result in a meaningful increase in the quantity of water discharging from springs in the Thousand Springs to Malad Gorge spring reach, which includes the Curran Spring from which Rangen diverts surface water.

85. Matters expressed herein as a Finding of Fact that are later deemed to be a Conclusion of Law are hereby made as a Conclusion of Law.

CONCLUSIONS OF LAW

1. Idaho Code § 42-602, addressing the authority of the Director over the supervision of water distribution within water districts, provides:

> The director of the department of water resources shall have direction and control of the distribution of water from all natural water sources within a water district to the canals, ditches, pumps and other facilities diverting therefrom. Distribution of water within water districts created pursuant to section 42-604, Idaho Code, shall be accomplished by watermasters as provided in this chapter and supervised by the director. The director of the department of water resources shall distribute water in water districts in accordance with the prior appropriation doctrine. The provisions of chapter 6, title 42, Idaho Code, shall apply only to distribution of water within a water district.

2. Idaho Code § 42-603, which grants the Director authority to adopt rules governing water distribution, provides as follows:

> The director of the department of water resources is authorized to adopt rules and regulations for the distribution of water from the streams, rivers, lakes, ground water and other natural water sources as shall be necessary to carry out the laws in accordance with the priorities of the rights of the users thereof. Promulgation of rules and regulations shall be in accordance with the procedures of chapter 52, title 67, Idaho Code.

In addition, Idaho Code § 42-1805(8) provides the Director with authority to "promulgate, adopt, modify, repeal and enforce rules implementing or effectuating the powers and duties of the department."

3. The issue of how to integrate the administration of surface and ground water rights diverting from a common water source in the Eastern Snake Plain area has been a continuing point of debate for more than two decades. To date, no court has directly and fully addressed the issue of how to integrate the administration of the surface and ground water rights that were historically administered as separate sources. The progress made in adjudicating the ground water rights in the Snake River Basin Adjudication and the development of the reformulated ground water model for the ESPA used by the Department to simulate the effects of ground water depletions on hydraulically-connected tributaries and reaches of the Snake River now allow the State to address this issue during this period of unprecedented drought.

4. Resolution of the conjunctive administration issue lies in the application of two well established principles of the prior appropriation doctrine: (1) the principle of "first in time is first in right" and (2) the principle of optimum use of Idaho's water. Both of these principles are subject to the requirement of reasonable use.

5. "Priority of appropriations shall give the better right as between those using the water" of the state. Art. XV, § 3, Idaho Const. "As between appropriators, the first in time is first in right." Idaho Code § 42-106.

6. "[W]hile the doctrine of 'first in time is first in right' is recognized [and applies to ground water rights], a reasonable exercise of this right shall not block full economic development of underground water resources." Idaho Code § 42-226.

7. Because it is the policy of this state to integrate the appropriation, use, and administration of ground water tributary to a stream with the use of surface water from the stream in such a way as to optimize the beneficial use of all of the water of this state, "[a]n appropriator is not entitled to command the entirety of large volumes of water in a surface or ground water source to support his appropriation contrary to the public policy of reasonable use of water . . .." IDAPA 37.03.11.020.03; *see also Schodde v. Twin Falls Land & Water Co.*, 224 U.S. 107, 119 (1912).

8. It is the duty of a watermaster, acting under the supervision of the Director, to distribute water from the public water supplies within a water district among those holding rights to the use of the water in accordance with the prior appropriation doctrine as implemented in Idaho law, including applicable rules promulgated pursuant to the Idaho Administrative Procedure Act. *See* Idaho Code § 42-607.

9. The Director created Water Districts No. 130 and No. 120 on February 19, 2002, and extended the boundaries of Water Districts No. 130 and No. 120 on January 8, 2003, and January 22, 2004, respectively, to provide for the administration of ground water rights in the area overlying the ESPA in the Thousand Springs area and the American Falls area, pursuant to the provisions of chapter 6, title 42, Idaho Code, for the protection of prior surface and ground water rights.

10. The Director has appointed watermasters for Water Districts No. 120 and No. 130 to perform the statutory duties of a watermaster in accordance with guidelines, direction, and supervision provided by the Director. The Director has given specific directions to the watermasters for Water Districts No. 120 and No. 130 to curtail illegal diversions, measure and report diversions, and curtail out-of-priority diversions determined by the Director to be causing injury to senior priority water rights that are not covered by a stipulated agreement or a mitigation plan approved by the Director.

11. In accordance with chapter 52, title 67, Idaho Code, the Department adopted rules regarding the conjunctive management of surface and ground water effective October 7, 1994. IDAPA 37.03.11. The Conjunctive Management Rules prescribe procedures for responding to a delivery call made by the holder of a senior priority surface or ground water right against junior priority ground water rights in an area having a common ground water supply. IDAPA 37.03.11.001.

12. Rule 10 of the Conjunctive Management Rules, IDAPA 37.03.11.010, contains the following pertinent definitions:

> **01. Area Having a Common Ground Water Supply**. A ground water source within which the diversion and use of ground water or changes in ground water recharge affect the flow of water in a surface water source or within which the diversion and use of water by a holder of a ground water right affects the ground water supply available to the holders of other ground water rights.
>
> **03. Conjunctive Management**. Legal and hydrologic integration of administration of the diversion and use of water under water rights from surface and ground water sources, including areas having a common ground water supply.
>
> **04. Delivery Call**. A request from the holder of a water right for administration of water rights under the prior appropriation doctrine.
>
> **07. Full Economic Development Of Underground Water Resources**. The diversion and use of water from a ground water source for beneficial uses in the public interest at a rate that does not exceed the reasonably anticipated average rate of future natural recharge, in a manner that does not result in material injury to senior-priority surface or ground water rights, and that furthers the principle of reasonable use of surface and ground water as set forth in Rule 42.
>
> **08. Futile Call**. A delivery call made by the holder of a senior-priority surface or ground water right that, for physical and hydrologic reasons, cannot be satisfied within a reasonable time of the call by immediately curtailing diversions under junior-priority ground water rights or that would result in waste of the water resource.
>
> **14. Material Injury**. Hindrance to or impact upon the exercise of a water right caused by the use of water by another person as determined in accordance with Idaho Law, as set forth in Rule 42.
>
> **16. Person**. Any individual, partnership, corporation, association, governmental subdivision or agency, or public or private organization or entity of any character.
>
> **17. Petitioner**. Person who asks the Department to initiate a contested case or to otherwise take action that will result in the issuance of an order or rule.
>
> **19. Reasonably Anticipated Average Rate Of Future Natural Recharge**. The estimated average annual volume of water recharged to an area having a common ground water supply from precipitation, underflow from tributary sources, and stream losses and also water incidentally recharged to an area having a common ground water supply as a result of the diversion and use of water for irrigation and other purposes. The estimate will be based on available data regarding conditions of diversion and use of water existing at the time the estimate is made and may vary as these conditions and available information change.
>
> **20. Respondent**. Persons against whom complaints or petitions are filed or about whom investigations are initiated.

13. As used herein, the term "injury" means "material injury" as defined by Rule 10.14 of the Conjunctive Management Rules.

14. The diversion and use of ground water under existing rights results in an average annual depletion of ground water from the ESPA of nearly 2.0 million acre-feet and does not exceed the "Reasonably Anticipated Average Rate of Future Natural Recharge," consistent with Rule 10.07 of the Conjunctive Management Rules.

15. Rule 20 of the Conjunctive Management Rules contains the following pertinent statements of purpose and policies for conjunctive management of surface and ground water resources:

> **01. Distribution of Water Among the Holders of Senior and Junior-Priority Rights.** The rules apply to all situations in the State where the diversion and use of water under junior-priority ground water rights either individually or collectively causes material injury to uses of water under senior-priority water rights. The rules govern the distribution of water from ground water sources and areas having a common ground water supply.
>
> **02. Prior Appropriation Doctrine.** These rules acknowledge all elements of the prior appropriation doctrine as established by Idaho law.
>
> **03. Reasonable Use Of Surface And Ground Water.** These rules integrate the administration and use of surface and ground water in a manner consistent with the traditional policy of reasonable use of both surface and ground water. The policy of reasonable use includes the concepts of priority in time and superiority in right being subject to conditions of reasonable use as the legislature may by law prescribe as provided in Article XV, Section 5, Idaho Constitution, optimum development of water resources in the public interest prescribed in Article XV, Section 7, Idaho Constitution, and full economic development as defined by Idaho law. An appropriator is not entitled to command the entirety of large volumes of water in a surface or ground water source to support his appropriation contrary to the public policy of reasonable use of water as described in this rule.
>
> **04. Delivery Calls.** These rules provide the basis and procedure for responding to delivery calls made by the holder of a senior-priority surface or ground water right against the holder of a junior-priority ground water right. The principle of the futile call applies to the distribution of water under these rules. Although a call may be denied under the futile call doctrine, these rules may require mitigation or staged or phased curtailment of a junior-priority use if diversion and use of water by the holder of the junior-priority water right causes material injury, even though not immediately measurable, to the holder of a senior-priority surface or ground water right in instances where the hydrologic connection may be remote, the resource is large and no direct immediate relief would be achieved if the junior-priority water use was discontinued.
>
> **05. Exercise Of Water Rights.** These rules provide the basis for determining the reasonableness of the diversion and use of water by both the holder of a senior-priority water right who requests priority delivery and the holder of a junior-priority water right against whom the call is made.

11. Domestic and Stock Watering Ground Water Rights Exempt. A delivery call shall not be effective against any ground water right used for domestic purposes regardless of priority date where such domestic use is within the limits of the definition set forth in Section 42-111, Idaho Code, nor against any ground water right used for stock watering where such stock watering use is within the limits of the definition set forth in Section 42-1401A(12), Idaho Code; provided, however, this exemption shall not prohibit the holder of a water right for domestic or stock watering uses from making a delivery call, including a delivery call against the holders of other domestic or stockwatering rights, where the holder of such right is suffering material injury.

16. Rule 40 of the Conjunctive Management Rules sets forth the following procedures to be followed for responses to calls for water delivery made by the holders of senior priority surface or ground water rights against the holders of junior priority ground water rights from areas having a common ground water supply in an organized water district:

01. Responding to a Delivery Call. When a delivery call is made by the holder of a senior-priority water right (petitioner) alleging that by reason of diversion of water by the holders of one or more junior-priority ground water rights (respondents) from an area having a common ground water supply in an organized water district the petitioner is suffering material injury, and upon a finding by the Director as provided in Rule 42 that material injury is occurring, the Director, through the watermaster, shall:

a. Regulate the diversion and use of water in accordance with the priorities of rights of the various surface or ground water users whose rights are included within the district, provided, that regulation of junior-priority ground water diversion and use where the material injury is delayed or long range may, by order of the Director, be phased-in over not more than a five-year period to lessen the economic impact of immediate and complete curtailment; or

b. Allow out-of-priority diversion of water by junior-priority ground water users pursuant to a mitigation plan that has been approved by the Director.

02. Regulation of Uses of Water by Watermaster. The Director, through the watermaster, shall regulate use of water within the water district pursuant to Idaho law and the priorities of water rights as provided in section 42-604, Idaho Code, and under the following procedures:

a. The watermaster shall determine the quantity of surface water of any stream included within the water district which is available for diversion and shall shut the headgates of the holders of junior-priority surface water rights as necessary to assure that water is being diverted and used in accordance with the priorities of the respective water rights from the surface water source.

b. The watermaster shall regulate the diversion and use of ground water in accordance with the rights thereto, approved mitigation plans and orders issued by the Director.

c. Where a call is made by the holder of a senior-priority water right against the holder of a junior-priority ground water right in the water district the watermaster shall first determine whether a mitigation plan has been approved by the Director

whereby diversion of ground water may be allowed to continue out of priority order. If the holder of a junior-priority ground water right is a participant in such approved mitigation plan, and is operating in conformance therewith, the watermaster shall allow the ground water use to continue out of priority.

d. The watermaster shall maintain records of the diversions of water by surface and ground water users within the water district and records of water provided and other compensation supplied under the approved mitigation plan which shall be compiled into the annual report which is required by section 42-606, Idaho Code.

e. Under the direction of the Department, watermasters of separate water districts shall cooperate and reciprocate in assisting each other in assuring that diversion and use of water under water rights is administered in a manner to assure protection of senior-priority water rights provided the relative priorities of the water rights within the separate water districts have been adjudicated.

03. Reasonable Exercise of Rights. In determining whether diversion and use of water under rights will be regulated under Rules 40.01.a., or 40.01.b., the Director shall consider whether the petitioner making the delivery call is suffering material injury to a senior-priority water right and is diverting and using water efficiently and without waste, and in a manner consistent with the goal of reasonable use of surface and ground waters as described in Rule 42. The Director will also consider whether the respondent junior-priority water right holder is using water efficiently and without waste.

04. Actions of the Watermaster under a Mitigation Plan. Where a mitigation plan has been approved as provided in Rule 42, the watermaster may permit the diversion and use of ground water to continue out of priority order within the water district provided the holder of the junior-priority ground water right operates in accordance with such approved mitigation plan.

17. In accordance with Rule 40 of the Conjunctive Management Rules, curtailment of junior priority ground water rights may only occur if the use of water under senior priority rights is consistent with Rule 20.03 of the Conjunctive Management Rules and injury is determined to be caused by the exercise of the junior priority rights. Factors that will be considered in determining whether junior priority ground water rights are causing injury to the senior priority water rights held by Rangen are set forth in Rule 42 of the Conjunctive Management Rules as follows:

01. Factors. Factors the Director may consider in determining whether the holders of water rights are suffering material injury and using water efficiently and without waste include, but are not limited to, the following:

a. The amount of water available in the source from which the water right is diverted.

b. The effort or expense of the holder of the water right to divert water from the source.

c. Whether the exercise of junior-priority ground water rights individually or collectively affects the quantity and timing of when water is available to, and the cost of exercising, a senior-priority surface or ground water right. This may include the seasonal as well as the multi-year and cumulative impacts of all ground water withdrawals from the area having a common ground water supply.

d. If for irrigation, the rate of diversion compared to the acreage of land served, the annual volume of water diverted, the system diversion and conveyance efficiency, and the method of irrigation water application.

e. The amount of water being diverted and used compared to the water rights.

f. The existence of water measuring and recording devices.

g. The extent to which the requirements of the holder of a senior-priority water right could be met with the user's existing facilities and water supplies by employing reasonable diversion and conveyance efficiency and conservation practices; provided, however, the holder of a surface water storage right shall be entitled to maintain a reasonable amount of carry-over storage to assure water supplies for future dry years. In determining a reasonable amount of carry-over storage water, the Director shall consider the average annual rate of fill of storage reservoirs and the average annual carry-over for prior comparable water conditions and the projected water supply for the system.

h. The extent to which the requirements of the senior-priority surface water right could be met using alternate reasonable means of diversion or alternate points of diversion, including the construction of wells or the use of existing wells to divert and use water from the area having a common ground water supply under the petitioner's surface water right priority.

02. Delivery Call For Curtailment of Pumping. The holder of a senior-priority surface or ground water right will be prevented from making a delivery call for curtailment of pumping of any well used by the holder of a junior-priority ground water right where use of water under the junior-priority right is covered by an approved and effectively operating mitigation plan.

18. The two letters received on September 23 and October 10, 2003, by the Director from J. Dee May, representing Rangen, Inc., seeking the administration of "all water right diversions junior to [Rangen's] that are interfering with and impacting [Rangen's] water rights" are either delivery calls as defined by Rule 10.04 of the Conjunctive Management Rules against junior priority ground water rights or demands for the administration of surface water rights pursuant to Idaho Code § 42-607.

19. Rule 40 of the Conjunctive Management Rules applies to the delivery calls made by Rangen against the holders of junior priority ground water rights, but not surface water rights, in Water Districts No. 36A, No. 120, and No. 130.

20. There are no surface water rights in Water Districts No. 36A or No. 130 that are junior in priority to Rangen's water right no. 36-02551 and that are diverted from the same

surface water source as right no. 36-02551. There are also no surface water rights in Water District No. 120.

21. There are no ground water rights subject to administration included within Water District No. 36A.

22. Rules 40 and 42 of the Conjunctive Management Rules require the Director to make determinations regarding "material injury" and the "reasonableness of water diversions" in responding to a delivery call against junior priority ground water rights in Water Districts No. 120 and No. 130.

23. The reductions in the quantity of water discharging from springs in the Thousand Springs area attributable to depletions to the ESPA from the diversion and use of ground water in Water Districts No. 120 and No. 130 do not automatically constitute material injury to surface water rights diverting from springs or dependent on sources formed by springs even when the diversion and use of ground water occur under water rights that are junior in priority to such surface water rights. Whether reductions in the quantity of water discharging from springs caused by the diversion and use of ground water under junior priority rights in Water Districts No. 120 and No. 130 constitute material injury is dependent on the factors enumerated in Rule 42 of the Conjunctive Management Rules.

24. Since the records of flow measurements submitted by May on behalf of Rangen and the records maintained by the Department since 1995 show that the quantity of water available at the Rangen hatchery facilities has been sufficient to continuously fill water right no. 36-15501 at the authorized diversion rate of 1.46 cfs, the exercise of junior priority ground water rights have not reduced the quantity of water available for water right no. 36-15501. Therefore, there is no material injury to water right no. 36-15501.

25. Based on simulations using the Department's reformulated and recalibrated ground water model, permanently curtailing the diversion and use of ground water under rights for agricultural irrigation that (1) are in the area of common ground water supply described in Finding 7, (2) have priority dates later than the priority date for water right no. 36-02551 (July 13, 1962), and (3) reduce spring discharge in the Thousand Springs to Malad Gorge spring reach by more than 10 percent of the amount of depletion to the ESPA resulting from those ground water diversions (10 percent is the uncertainty in model simulations, see Finding 22), would increase the discharge of springs in the Thousand Springs to Malad Gorge spring reach, which includes the Curran Spring from which Rangen diverts surface water, by a total average amount of 0.4 cfs at steady state conditions. Therefore, the delivery call against ground water rights junior in priority to July 13, 1962, to supply water right no. 36-02551 is futile because an insignificant quantity of water would accrue to the entirety of the Thousand Springs to Malad Gorge spring reach (*see* IDAPA 37.03.11.010.08), and since the diversion and use of ground water under rights junior in priority to July 13, 1962, do not significantly affect the quantity of water available for water right no. 36-02551, there is no material injury to water right no. 36-02551 (*see* IDAPA 37.03.11.042.01.c).

26. If the area of simulated permanent curtailment includes all of the area included in the ESPA ground water model (not limited to the area of common ground water supply described in Finding 7), and the uncertainty in the model simulations is disregarded, simulating the permanent curtailment of ground water under rights for agricultural irrigation that have priority dates later than the priority date for water right no. 36-02551 (July 13, 1962) would increase the discharge of springs in the Thousand Springs to Malad Gorge spring reach, which includes the Curran Spring from which Rangen diverts surface water, by a total average amount of less than 5 cfs at steady state conditions. Even if an average accrual of 5 cfs in the Thousand Springs to Malad Gorge spring reach would result from the permanent curtailment of 664,300 irrigated acres, curtailment of such rights would be precluded under principles of the prior appropriation doctrine as established by Idaho law. *See e.g.*, IDAPA 37.03.11.020.03; *Schodde*, 224 U.S. at 119.

27. Based on available records, there has never been water available for water right no. 36-07694 (See Finding 63). The exercise of junior priority ground water rights cannot reduce the quantity of water available for water right no. 36-07694 since water has never been available anyway. Therefore, there is no material injury to water right no. 36-07694 caused by the diversion and use of ground water under junior priority rights. Even if water had been available at one time to partially or completely satisfy water right no. 36-07694, the delivery call would still be futile and no material injury would be found. See Conclusion 25.

28. The Director should deny Rangen's delivery call.

ORDER

In response to the water delivery call made by Rangen, Inc., and for the reasons stated in the foregoing Findings of Fact and Conclusions of Law, the Director orders as follows:

IT IS HEREBY ORDERED that the delivery call made by Rangen through the letters filed with the Director by J. Dee May on September 23, 2003, and October 6, 2003 is hereby DENIED.

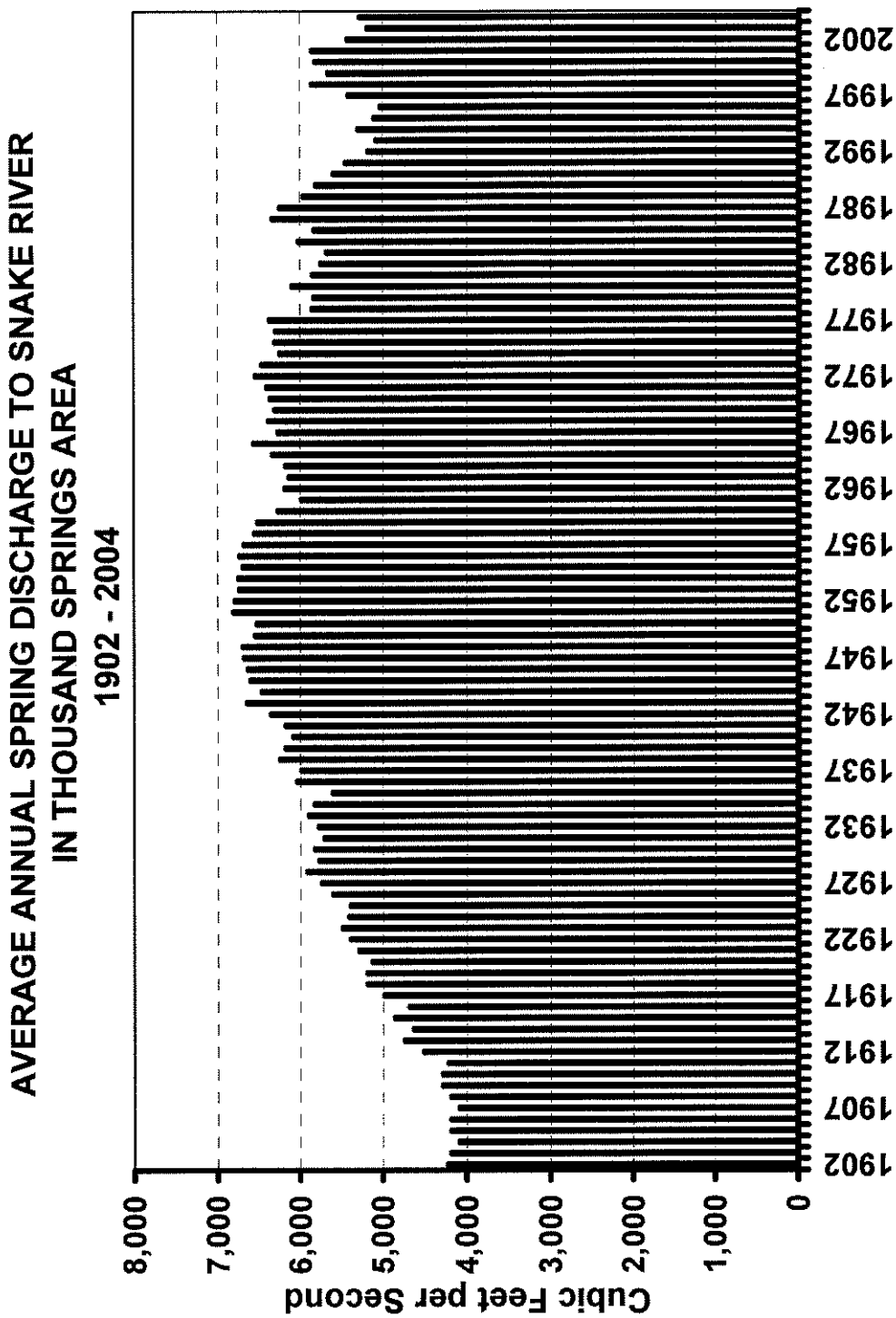
IT IS FURTHER ORDERED that this is a final order of the agency. Any party may file a petition for reconsideration of this final order within fourteen (14) days of the service date of this order. The agency will dispose of the petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law pursuant to Idaho Code § 67-5246.

IT IS FURTHER ORDERED that any person aggrieved by this decision shall be entitled to a hearing before the Director to contest the action taken provided the person files with the Director, within fifteen (15) days after receipt of written notice of the order, or receipt of actual notice, a written petition stating the grounds for contesting the action and requesting a hearing. Any hearing conducted shall be in accordance with the provisions of chapter 52, title 67, Idaho Code, and the Rules of Procedure of the Department, IDAPA 37.01.01. Judicial review of any final order of the Director issued following the hearing may be had pursuant to Idaho Code § 42-1701A(4).

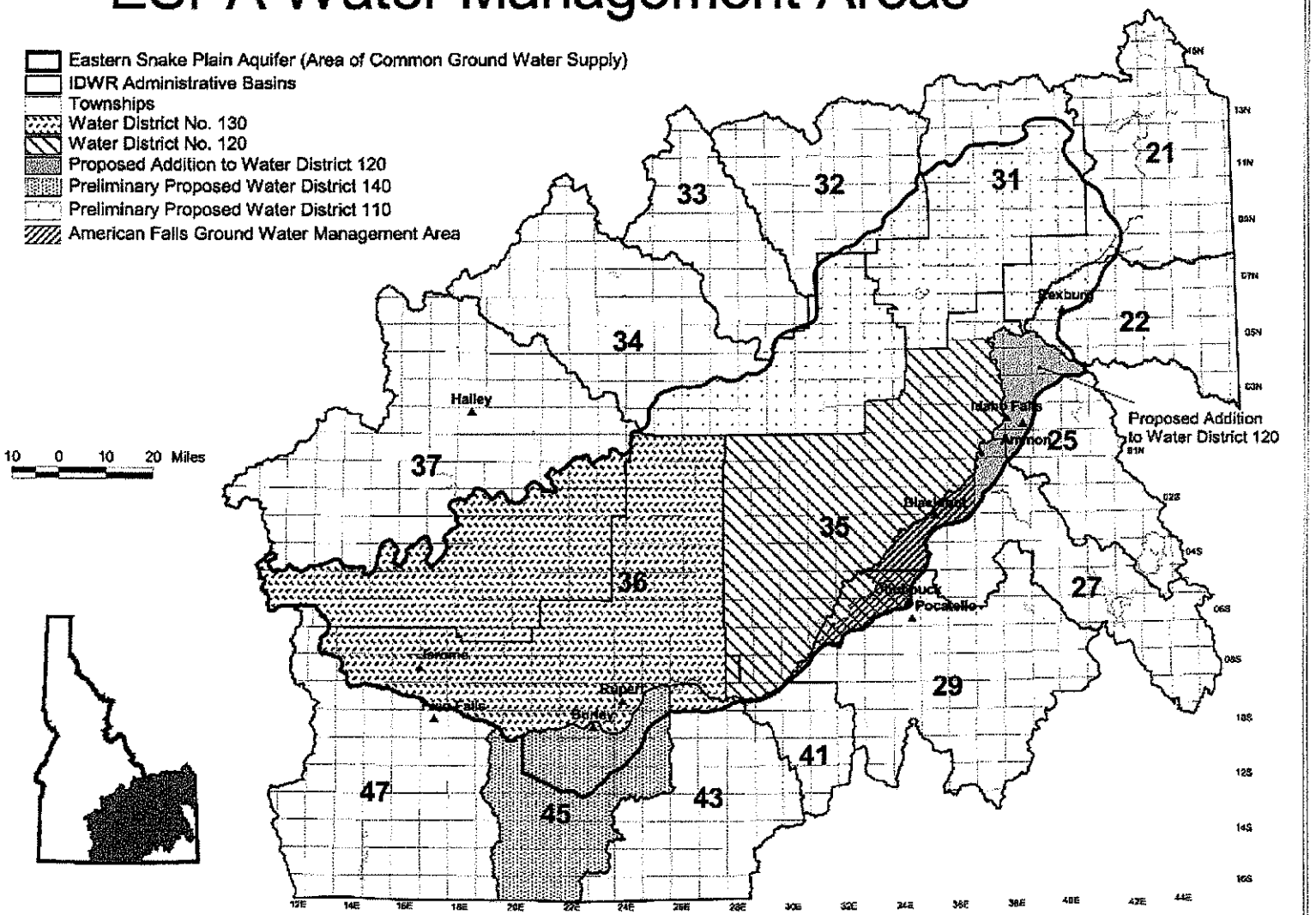
DATED this 19 th day of May 2005.

KARL J. DREHER
Director

ATTACHMENT A



ESPA Water Management Areas



CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 19th day of May, 2005, the above and foregoing document was served by the method indicated:

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Victoria Wigle

Victoria Wigle
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Idaho Department of Water Resource