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DEPARTMENT OF
WATER RESOURCES

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT
OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA	)	Subcase No. 27-11375
	)	
	)	
Case No. 39576	)	
	)	AFFIDAVIT OF DAVID B. SHAW
	)	
	)	
_____	)	

I, DAVID B. SHAW, being first duly sworn upon oath, depose and hereby state as follows:

1. My name is David B. Shaw, and my work address is ERO Resources Corporation, 3314 Grace Street, Boise, ID 83703-5836. My telephone number is 208-373-7983.

2. My educational background includes a Bachelor of Science and Master of Science degrees in Agricultural Engineering from the University of Idaho in 1966 and 1972, respectively. I am a registered professional engineer in the States of Idaho, Arizona, Colorado and Oregon, and a registered professional land surveyor in the State of Idaho. I continue to attend seminars and short courses in the areas of water law, water rights, and applicable technology. I have made numerous presentations at seminars covering water law and water right issues, most often regarding some aspect of water right adjudication.

3. My work experience includes five years of teaching at the University of Idaho in the College of Engineering from 1968 to 1973. I was with the Idaho Department of Water Resources ("Department"), and its predecessor agencies, from November 1973 until July 1996. With the Department, I served in a number of technical and administrative positions including Regional Supervisor for the Department's western region from 1978 to 1985 and Adjudication Bureau Chief from 1985 to 1996. As Adjudication Bureau Chief, I was responsible for all of the Department's obligations in the Snake River Basin Adjudication ("SRBA"). The Department's obligations included serving notice of the SRBA to all potential water users, assisting claimants in filing their claims to water rights, investigating each state law based claim, and making a recommendation as to each state law based claim to the SRBA Court. If a recommendation was protested (contested), the Department was obligated to present evidence to justify its recommendation. My experience with the Department includes successfully managing the SRBA for 11 years and resolving a variety of water right, water supply, and water delivery matters.

4. Since July 1996, I have been employed by ERO Resources Corporation ("ERO"). In January 2003, I became a Principal of ERO, one of 11 employee owners of the firm. ERO is a natural resources consulting firm based in Denver, Colorado with satellite offices in Boise, Idaho and Durango and Hotchkiss, Colorado. ERO has a long history of, among other services, providing expertise to clients in water right adjudications around the West. I provide consulting services to clients in the areas of water rights, water right adjudication, and water distribution and management.

5. In 1985, the Idaho Legislature, through adoption of H.C.R. 16, directed the Governor and the Attorney General to “attempt to negotiate” a resolution of the Shoshone-Bannock Tribes water right claims.

6. On May 24, 1985, Governor John Evans issued Executive Order 85-9 designating the Idaho Water Resource Board as the lead agency to coordinate reserved water rights negotiations with the Shoshone-Bannock Tribes.

7. The United States, the Shoshone-Bannock Tribes, and the State of Idaho entered into negotiations pursuant to the Memorandum of Understanding attached hereto as Exhibit 1. The Idaho Water Resource Board designated the Committee of Nine to represent water users in the negotiations. (“Signatory Parties”).

8. I was the Adjudication Bureau Chief for the Department during the period 1985–1990 and was the technical representative for the State of Idaho in the Fort Hall negotiations which resulted in The 1990 Fort Hall Indian Water Rights Agreement (“Agreement”). I served as co-chair of the technical committee for the negotiations along with Dr. Woldezion Mesghinna, technical representative for the Tribes.

9. I attended almost all of the negotiation meetings related to the Agreement.

10. The Signatory Parties agreed, as part of the negotiations, to the principle that the tribal water rights would be quantified so as to protect existing uses of water authorized by state law. This principle was implemented through three mechanisms: 1) the Sand Creek water exchange which would permit better utilization of the Sand Creek water supply; 2) the provision of supplemental storage water to water users on the mainstem Snake River impacted by the tribal water rights on the Snake River; and 3) subordination of certain tribal water rights in the

Blackfoot River and Bannock Creek basins to existing diversions under state created water rights.

11. The parties to the Agreement agreed to subordinate Blackfoot River tribal water right no. 27-11375 to those rights “diverting natural flow from the Blackfoot River prior to January 1, 1990, whose rights are decreed in the SRBA . . .” (“Basin 27 Water Users”). Provision x.d of water right no. 27-11375 provides that the Tribes and the United States agree to “exercise this water right in a manner” that ensures persons holding these natural flow water rights “will continue to receive that full legal entitlement under state law.” Provision x.d of water right no. 27-11375 further provides for an equitable adjustment to the tribal water rights in the event that the total diversions pursuant to that provision exceed 45,000 ac-ft per year.

12. In order to ensure the yield of the Blackfoot River basin was sufficient to supply the tribal water use and total diversions under provision x.d of water right no. 27-11375, the negotiators assigned me the task of determining the extent of actual diversions under then-existing Basin 27 Water Users’ Blackfoot River basin natural flow water rights.

13. Since the negotiation of the Agreement predated the taking of SRBA claims to water rights in the Blackfoot River basin and the Department’s water right records were incomplete, it was necessary to estimate the extent of diversions by the Basin 27 Water Users. Various data sources both within and outside of the Department were reviewed to identify acreage irrigated by the Basin 27 Water Users. The primary data source was Landsat Satellite imagery. That imagery was analyzed by the Department’s remote sensing staff using the “supervised

classification” method¹ to estimate the acreage being actively irrigated during the 1986–1987 timeframe by the Basin 27 Water Users. Satellite imagery was selected from the 1986–1987 period to correspond with the initiation of the SRBA in 1987.

14. Once the estimate of actively irrigated acreage was determined, the amount of water needed to be diverted or duty of water for the irrigation of those acres was estimated. The water duty estimate was developed in consultation with other members of the Department staff including members of the Department’s hydrology group. Other individuals outside the Department were consulted, including Ed Hall the Blackfoot River basin watermaster, but I have no current recollection of who the other individuals were.

15. The estimate of actively irrigated acreage and duty of water were combined to produce the estimate of 45,000 ac-ft per year of water diverted by the Basin 27 Water Users. This estimate was developed using the best available science at that time with the information and tools available. I recognized that some water rights not in use at that time were not accounted for but believed such rights would be decreed as disallowed. As indicated in paragraph 13, the records of the Blackfoot River Water District and the Department were considered too incomplete or inaccurate to be used for this estimate.

16. My estimate was used as the basis for the equitable adjustment threshold in provision x.d of water right no. 27-11375.

17. On July 18 and 19, 1995 I testified before the SRBA Court regarding the Agreement. I testified that the purposes of provision x.d of water right no. 27-11375 were 1) to subordinate this right to the water rights of persons diverting natural flow from the Blackfoot River basin

¹ The supervised classification method of satellite image analysis begins with selecting the types of ground cover (vegetation) to be identified, for example, various types of crops. The analyst then selects training areas to classify manually into the types of vegetation selected. Those training areas are then used to “train” the software to categorize similar areas that have the same image signature into the types of vegetation selected.

prior to January 1, 1990 whose rights were subsequently decreed in the Snake River Basin Adjudication, and 2) to provide a mechanism for making “some adjustments in the Fort Hall agreement to account for more than 45,000 acre-feet being decreed.” Transcript of Hearing on Proposed Consent Decree on 1990 Fort Hall Indian Water Rights Settlement Agreement, pg. 27 ln. 18–20, July 18, 1995. The parties represented to this Court that “any adjustments that would be necessitated as a result of a decree with respect to the north side Blackfoot River water users . . . would probably take place shortly after the court had entered a partial final decree as to that basin.” Transcript at pg. 148 ln. 19–24.

18. Paragraph 8.3 of the Agreement required the parties to develop a Blackfoot River management plan for the administration of the Blackfoot River basin surface water rights. A copy of the Blackfoot River Water Management Plan Pursuant to the 1990 Fort Hall Indian Water Rights Agreement (“Plan”) is attached hereto as Exhibit 2.

19. The Director’s Report for Basin 27 state law-based water rights was filed with the SRBA Court on November 10, 2005. The Director’s recommendation of surface water rights, in most cases, did not include annual diversion volume limits. The Tribes and United States objected to the surface water recommendations alleging the diversion volume of the Basin 27 Water Users could not be determined without volume limits placed on the individual water rights.

20. In late 2005, discussions began with the State, the Tribes, the United States, and the Basin 27 Water Users to resolve the objections filed by the United States and the Tribes against the water right recommendations for the Basin 27 Water Users. A technical group was formed to help resolve the objections and find a resolution of whether the Tribes were due an equitable adjustment and if so, what that equitable adjustment would be. The technical group included

representatives from the United States, the Tribes, and the State. I have been the State representative on the technical group since it was formed.

21. The Committee of Nine became involved in the negotiations and ultimately provided a proposal that became the foundation for the proposed Blackfoot River Equitable Adjustment Settlement Agreement (“EA Agreement”).

22. Prior to reaching agreement on the equitable adjustment, the Plan was developed to account for the water diverted by the Basin 27 Water Users as a direct result of provision x.d of water right no. 27-11375. The Plan segregates the Basin 27 Water Users’ diversions that are not subject to provision x.d of water right no. 27-11375 from those that rely upon that provision and must be accounted for under the EA Agreement.

23. The Plan uses the term “Basin 27 Primary Volume” or “Primary Volume” to refer to diversions by the Basin 27 Water Users that must be accounted for under provision x.d of water right no. 27-11375 and I will use that term here for consistency. As the Plan was developed, the Signatory Parties and the Basin 27 Water Users determined that the Basin 27 Water Users’ diversions fit into one of 4 categories: 1) water injected into the Blackfoot River specifically for the benefit of the Basin 27 Water Users; 2) Blackfoot River basin water that was diverted while water right no. 27-11375 was not being exercised; 3) Blackfoot River basin water that was diverted when the natural flow was sufficient to satisfy all water rights including water right no. 27-11375 and all rights diverted under their own priority; and 4) Blackfoot River basin water that was diverted due to provision x.d of water right no. 27-11375. The Signatory Parties and the Basin 27 Water Users agreed that only diversions falling into category 4 affect the Tribal water right and should be counted as Primary Volume.

24. The Plan provides the Water District 27 watermaster with the procedures to account for the Basin 27 Water Users total annual diversion volume under all four categories described in paragraph 23 and to separately account for the portion of that total annual diversion volume that is Primary Volume diverted under category 4. The total diversions and the Primary Volume diversions are reported separately below.

25. Since entry of the interim administration order for Basin 27 on August 21, 2009, Water District 27 has collected 3 years (2010–2012) of data which accounted for both total annual diversion volume and annual Primary Volume diversion by the Basin 27 Water Users. In 2010, total diversions by the Basin 27 Water Users were 54,631 ac-ft and Primary Volume was 32,931 ac-ft. In 2011, total diversions by the Basin 27 Water Users were 55,296 ac-ft and Primary Volume was 12,542 ac-ft. In 2012, total diversions by the Basin 27 Water Users were 48,875 ac-ft and Primary Volume was 38,267 ac-ft. In each of the three years of data, the Primary Volume included some amount of excess diversion, that is, water diverted over and above the quantity specified in the Basin 27 Water Users' decreed water rights. In 2012, the excess diversion was 3,324 ac-ft. Thus, if only the Basin 27 Water Users' decreed quantities had been diverted, the 2012 Primary Volume would have been 34,943 ac-ft.

26. Determination of Primary Volume in this fashion, based upon actual diversions as measured by the watermaster, is consistent with the formulation of the 45,000 ac-ft in the Agreement. The Primary Volume is determined by the amount of water actually diverted and placed to beneficial use, not some amount that theoretically could be diverted based upon the face of the water right.

27. The EA Agreement proposal provides an equitable adjustment ("EA") of water to the Tribes in two forms. The first form of EA water recognizes that when the Basin 27 Water Users'

Primary Volume is less than 45,000 ac-ft there is more water available in the Blackfoot River for the Tribes to either store or use to meet their current water demand. The EA Agreement creates a credit account for the water that is not required to satisfy the Primary Volume for the Basin 27 Water Users and is available to the Tribes. When the Primary Volume used by the Basin 27 Water Users is less than 45,000 ac-ft, the Tribes have agreed to accept such water under the terms of the EA Agreement in lieu of water for its rights in years when the Primary Volume use by the Basin 27 Water Users is greater than 45,000 ac-ft. This exchange agreement is accounted for through a credit system on an acre-foot for acre-foot basis.

28. The second form of EA water, termed "Equitable Adjustment Water" in the EA Agreement, is storage water provided by the Committee of Nine to be used by the Tribes if the Primary Volume diversions by the Basin 27 Water Users are in excess of 45,000 ac-ft plus available credits. A flowchart of the EA Agreement process is attached hereto as Exhibit 3.

29. As discussion of the credit and storage concept began, the Tribes' technical representatives began developing a model of water use from the Blackfoot River basin to evaluate whether the concept would provide a benefit to the Tribes' water supply in satisfaction of the EA requirement of the Agreement. The model was developed to simulate the water supply and water use in the Blackfoot River basin for the period 1976 through 2011. As the EA Agreement proposal developed further, the model was shared with all members of the technical group and a Bureau of Reclamation representative. The model was tested and refined until all reviewers were satisfied with the model's results.

30. The model relies upon the USGS Blackfoot River near Shelley gage records to estimate the natural flow available for diversion by the Basin 27 Water Users. Reliable diversion data for the Basin 27 Water Users is limited to the time during which IDWR has been the

watermaster for Basin 27. In 2004, IDWR, as watermaster, began to measure Basin 27 Water Users' diversions in the lower portion of Basin 27, that portion generally downstream from the Blackfoot River near Shelley gage. In 2008, IDWR, as watermaster, began measuring all the Basin 27 Water Users' diversions in Basin 27. In 2010 and 2011, after entry of the interim administration order for Basin 27, IDWR adjusted the total diversions, as noted above, to determine the Primary Volume for those years. These diversion data and Primary Volume adjustments are the data relied upon within the model to estimate a range of Basin 27 Water Users' diversions for the 1976 through 2011 model period.

31. I used the model to simulate a range of diversions by the Basin 27 Water Users and analyze whether the proposed EA Agreement would be sufficient to satisfy the actual Primary Volume diversions under the Basin 27 Water Users' water rights entitled to the benefit of the subordination of water right no. 27-11375. The highest total diversion produced by the model is about 87,500 ac-ft with a Primary Volume of about 63,600 ac-ft in 1984, a year with a much above average water supply. The period from 1983 through 1986 was a period of good water years during which the model estimated large diversions by the Basin 27 Water Users. During this 4 year period, the average diversion was estimated to be 79,800 ac-ft and the average Primary Volume was estimated to be 57,600 ac-ft. This period was important to analyze the ability of the EA Agreement to protect the Tribal water supply during a series of years with above average diversions by the Basin 27 Water Users. The actual diversions and Primary Volume from 2012 fall within the range of diversions and Primary Volume estimated by the model indicating the model results are reasonable. The model is the best available tool for evaluating the proposed EA Agreement.

32. The model was also used to refine the parameters for the credit and Equitable Adjustment Water to ensure the Basin 27 Water Users water supply would be maintained as contemplated by provision x.d of water right no. 27-11375 without adversely affecting the Tribal water supply under the Agreement. These parameters are spelled out in the EA Agreement submitted to the SRBA Court.

33. Last year, 2012, was an exceptional year for crop water requirements. At the Aberdeen AgriMet station, installed in 1991, crop water requirements were over 114% of average with the highest crop water requirements of record for beets, potatoes, and field corn and the second highest year of record for alfalfa and winter grain. At the Fort Hall AgriMet station, installed in 1993, crop water requirements were over 118% of average with the highest crop water requirements of record for all crops with the exception of spring grain and it was the second highest year of record for spring grain. The April thru mid-October precipitation at both stations was less than 5 inches which was about 68% of average for 1966–2010 for the National Weather Service station at Fort Hall. These data are from the AgriMet stations nearest the Basin 27 Water Users and reflect a year in which the irrigation water requirement was higher than normal because of the lack for precipitation and the exceptionally high water demand of crops grown in the area.

34. No priority calls for water delivery as among the Basin 27 Water Users were made in 2012 indicating the water supply was generally good, at least from the mainstem Blackfoot River.

35. It is significant that for 2012, a year of exceptional irrigation water requirement, but with a generally adequate water supply the Basin 27 Water Users had nearly 7,000 ac-ft (10,000 ac-ft if the Basin 27 Water Users were held to their decreed quantities) (see paragraph 25) of

available diversion pursuant to provision x.d of water right no. 27-11375 without the need for EA water to be available to the Tribes.

36. There are three Basin 27 water rights in the Water Supply Bank that are not currently in use but could be used in the future. The annual diversion volume for these three water rights is expected to be about 800 ac-ft per year.

37. There are other Basin 27 unused water rights that are not in the Water Supply Bank and the potential for these rights to be used in the future and to what extent they might be used is uncertain. The Basin 27 watermaster and I independently estimated the maximum annual diversion if all unused water rights, including the Water Supply Bank rights, were to be put back into use. The annual diversion volume by the currently unused rights would be about 7,500 ac-ft per year. The Basin 27 watermaster also identified some rights that were in use prior to 2010 when the headgate order went into effect. Some of these rights have not diverted at all since 2010 but some continued to divert until the diversions were finally curtailed in 2012. If these rights were to comply with the headgate order and begin using water again in the future, they are estimated to divert a maximum of about 1,500 ac-ft per year. Therefore, all unused water rights are estimated to divert a maximum of 9,000 ac-ft. For 2012, if all Basin 27 Water Users' diversions were held to decreed amounts, including all unused rights, the Primary Volume would have been about 44,000 ac-ft; a Primary Volume that would not require the use of any EA water.

38. An additional analysis that I believe is important for the EA Agreement is to compare the diversions of the past 3 years (see paragraph 25) to the results of modeling the 1983–1986 potential (see paragraph 31) of the EA Agreement. The average diversion for the past 3 years is 52,934 ac-ft and the Primary Volume average is 35,599 ac-ft, excluding the low Primary Volume

of 12,542 ac-ft in 2011. This average total diversion is about 26,900 ac-ft less than the simulated average total diversion for the 1983–1986 period and the average Primary Volume is about 22,000 ac-ft less than the 1983–1986 average. This analysis indicates the proposed EA Settlement has sufficient flexibility to cover a series of years with diversions and Primary Volumes more than 50% higher than the average of the past 3 years. The model shows the EA Agreement to be adequate for both the variability of current Basin 27 Water Users and the potential for unused rights to come back into use.

39. Based upon the analysis of the technical group using the model and my own analysis of the 2012 water use by the Basin 27 Water Users, in my opinion the proposed EA Agreement will ensure that Basin 27 Water Users have a sufficient water supply to allow them to continue to divert that amount of water they historically diverted under their water rights prior to January 1, 1990.

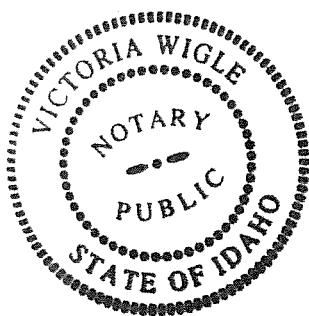
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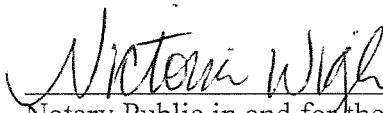
FURTHER YOUR AFFIANT SAYETH NAUGHT



David B. Shaw

SUBSCRIBED & SWORN to before me this 30th day of January, 2013.





Notary Public in and for the State of Idaho
My Commission Expires: 6/22/16

EXHIBIT 1

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding, made in duplicate originals this 30th day of August, 1985, between the State of Idaho, hereinafter State, and the Shoshone-Bannock Tribes, hereinafter Tribes, establishes a framework for discussions regarding the scope and the extent of the Tribes' reserved water right claims in the Snake River Basin.

RECITALS

A. The Tribes claim water rights in the Snake River Drainage Basin, including those under the Winters Doctrine as established by the Supreme Court in Winters v. United States, 207 U.S. 564 (1908). The reserved water right claim is presently unmeasured. The Forty-eighth Idaho Legislature First Regular Session, authorized the Director of the Department of Water Resources to commence in state district court a McCarran Amendment adjudication, 43 U.S.C. § 666, for the purpose of a comprehensive determination of all water rights within the Snake River Basin. Idaho Code § 42-1406A (Supp. 1985). The Legislature, however, resolved that prior to the commencement of the Snake River adjudication, the State, acting through the Governor and the Attorney General, should attempt good faith

negotiations with the Shoshone-Bannock Tribes of the Fort Hall Indian Reservation to resolve as many issues as possible regarding the extent of their water rights. H.C.R. No. 16, 1985 Idaho Sess. L. 745.

B. The Tribes and the State endorse the policy and provisions of H.C.R. No. 16, which calls for government to government discussions between the State and the Tribes within the terms of a written memorandum of understanding.

In order to initiate the negotiations contemplated by H.C.R. No. 16, the State and the Tribes agree as follows:

1. Beginning on October 15, 1985, or as soon thereafter as possible, the parties will commence the process of government to government discussions to attempt to resolve the extent and the scope of the Tribes' reserved water right claims.
2. These discussions are in the best interests of both parties and, therefore, they pledge to negotiate in good faith.
3. These discussions will include among other topics:

General Format

- a. What is the authority of each of the parties and their respective role in the discussions?
- b. Who should participate in the discussions?
- c. What process will be used to keep interested parties and the general public informed?

- d. What is the role of the United States and its agencies as Trustee of the Tribes' interests in the negotiations?
- e. If a settlement is reached, how will it be implemented?

Procedural Issues

- f. Where should talks take place?
- g. How often shall meetings be held?
- h. Should experts meet in "technical" meetings to determine areas of agreement?
- i. Are any and all issues open for discussion?
- j. In what order should the issues be discussed?
- k. What technical studies are needed?
- l. In what areas can the parties agree to cooperate on technical studies?
- m. Is agreement on technical study methodologies, criteria, and standards possible or desirable?
- n. Will parties release studies they have conducted?
- o. If so, what process, criteria, or standards will be established for review of the other party's studies?

General Issues

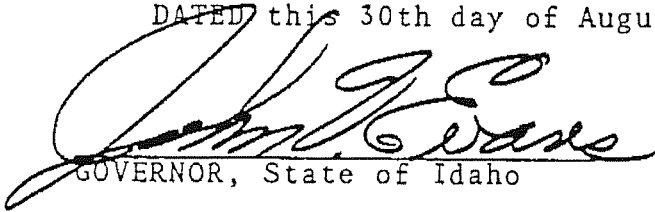
- p. Are there any circumstances under which the Tribes would not object to the State's filing of a petition with the state district court for an adjudication of the Snake River?

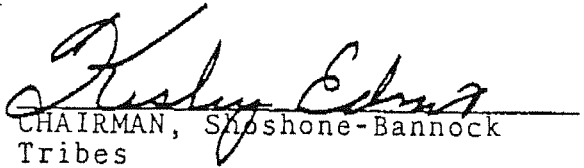
- q. In light of the Tribes' unmeasured reserved water rights claims for present and future uses, is there sufficient water available for new allocation under the public interest criteria in Idaho Code § 42-203C (Supp. 1985)?
 - r. Conceptually, what are the interests the Tribes wish to protect?
 - s. In order for the Tribes to participate in negotiations and/or an adjudication must that portion of the Snake River Drainage Basin within the State of Idaho downstream of Section 14, T.4N. R.6W, B.M. and upstream of where the mainstem of the Snake River leaves the state near Lewiston, Idaho be included in the process?
 - t. What is an appropriate timetable for resolution of substantive issues?
4. a. The Director of the Idaho Department of Water Resources agrees in exercising the authority contained in Chapter 14, Title 42, Idaho Code that it is not in the public interest to commence a general adjudication of the Snake River drainage basin during the pendency of these negotiations and that this determination is intended to implement the provisions of H.C.R. No. 16 and Executive Order No. 85-9.

- b. The other signators to this memorandum agree that it is not in the public interest to commence a general adjudication of the Snake River drainage basin during the pendency of these negotiations and that this determination is intended to implement the provisions of H.C.R. No. 16 and Executive Order No. 85-9.
 - c. If this agreement expires by its terms, then neither party shall commence a general stream adjudication without first serving the other party with forty-five (45) days' written notice.
- 5. Minutes of the negotiation shall be taken and transcripts provided to interested entities. Once approved by the parties, the minutes will be deemed a conclusive record of the discussions.
- 6. The parties agree that these negotiations are for the purpose of resolving a legal dispute; thus, any statements made in the course of any discussions shall not be construed as an admission against interest nor shall any party use such statements in any way in future legal proceedings.
- 7. This Memorandum of Understanding shall take effect when signed by all parties and shall continue in effect through January 10, 1986, unless extended by the parties. The parties may amend this Memorandum of

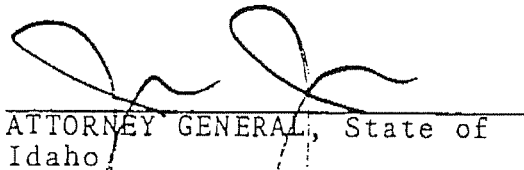
Understanding by joint agreement of the parties at any time.

DATED this 30th day of August, 1985.

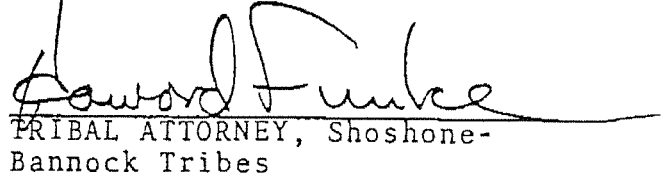

GOVERNOR, State of Idaho


CHAIRMAN, Shoshone-Bannock Tribes

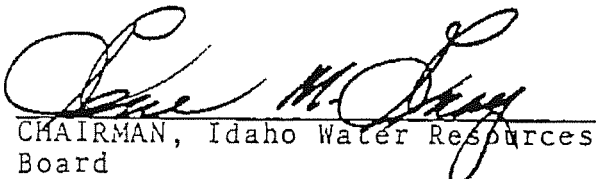
APPROVED AS TO FORM


ATTORNEY GENERAL, State of Idaho

APPROVED AS TO FORM


TRIBAL ATTORNEY, Shoshone-Bannock Tribes

APPROVED AS TO FORM


CHAIRMAN, Idaho Water Resources Board

APPROVED AS TO PARAGRAPH FOUR

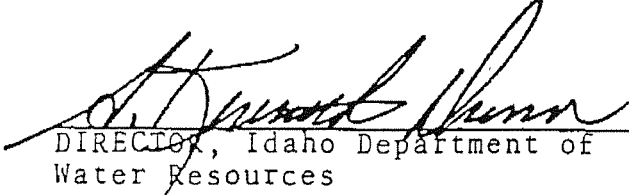

DIRECTOR, Idaho Department of Water Resources

EXHIBIT 2

**BLACKFOOT RIVER WATER MANAGEMENT
PLAN PURSUANT TO
THE 1990 FORT HALL INDIAN WATER RIGHTS
AGREEMENT**

Table of Contents

1. Purposes.....	1
2. Definitions.....	2
3. Measurement Program.....	4
a) Improvement Program.....	4
b) Regulation of Basin 27 Points of Diversion.	4
i) Continuous Monitoring.	4
ii) Installation and maintenance responsibility.	5
iii) Pumps.	5
iv) Non-Continuous Monitoring.	5
v) Rating curves.	5
c) Regulation of Tribal Points of Diversion.....	5
d) Blackfoot River Basin Stream Gaging.....	6
e) Changes to Stream Gage System.....	9
f) Data Sharing.....	9
g) Gage Site Funding.....	9
4. Accounting Program.....	10
a) Accounting program development and maintenance.....	10
b) Available Flow Calculations.....	10
i) Blackfoot River at Blackfoot Dam:.....	12
ii) Blackfoot River at Rocky Ford:.....	12
iii) Blackfoot River near Shelley:.....	12
iv) Blackfoot River at Rich Lane:.....	13
v) Rocky Ford flows.....	13
vi) Unmeasured Blackfoot Reservoir gain.	13
vii) Natural flow accuracy.	13
c) Accounting updates.	14
d) Flow allocation.	14
i) Administration for storage.	14
ii) Storage fill.....	14
iii) Begin storage.	15
iv) Storage season.....	15
e) Blackfoot Dam discharge.....	15
f) Formula for Blackfoot Dam discharge.	15
i) Formula guidelines.....	15
ii) Interim formula.	16
g) Flow below Fort Hall North Gage.	17
i) Required flow.	17
ii) Conveyance loss.....	17
iii) Flow adjustment.....	18
iv) Required flow limit.	18
v) Total flow.....	18
vi) Make-up flow.....	18
h) Accounting for injected flows.....	19
i) Basin 27 Primary Volume calculation.	19
i) Exclude injected flows.	19
ii) Exclude diversions when Fort Hall Canals are off.....	19
iii) Exclude in priority diversions.	19
j) Agreement implementation.....	20
k) Credit accrual.....	20
l) Accounting for credit.....	20
m) Accounting for Equitable Adjustment Water.....	21

n)	Accounting for Q_{Drop}	21
o)	Water Rights.....	21
5.	Sand Creek Exchange.....	21
a)	Implementation.....	21
b)	Calculation method.....	22
c)	Exchange reset.....	22
d)	Calculations.....	22
e)	Review in 5 years.....	22
6.	Equalizing Reservoir and Little Butte Canal.....	23
7.	Review of Plan / Resolution of Disputes.....	23
8.	Points of Contact.....	23
9.	Applicable Law.....	23
10.	Binding Effect.....	24
11.	Effect of Headings.....	24
12.	Multiple Originals.....	24
13.	Effective Date.....	24
14.	Signatures.....	24
Figure 1		28
Figure 2		29
APPENDIX I		30

BLACKFOOT RIVER WATER MANAGEMENT PLAN PURSUANT TO THE 1990 FORT HALL INDIAN WATER RIGHTS AGREEMENT

This Blackfoot River Water Management Plan is developed pursuant to the 1990 Fort Hall Indian Water Rights Agreement and constitutes an agreed upon plan and program by and between the Shoshone-Bannock Tribes of the Fort Hall Reservation, the State of Idaho, the United States, and the Committee of Nine for implementation of effective water management in the Blackfoot River Basin. It is made in reference to the following facts.

RECITALS

WHEREAS,

A. On July 5, 1990, the Shoshone-Bannock Tribes, the State of Idaho, the United States, and certain Idaho Water Users entered into an agreement to settle the water rights claimed by the United States for the benefit of the Shoshone-Bannock Tribes. This Agreement, known as the 1990 Fort Hall Indian Water Rights Agreement, was approved by the legislative branches of these three governments, and on November 16, 1990, the United States Congress enacted Pub. L. 101-602, the Fort Hall Indian Water Rights Settlement Act of 1990.

B. On August 2, 1995, the Presiding Judge of the Snake River Basin Adjudication entered an Order approving the Fort Hall Agreement and decreeing water rights to the United States for the benefit of the Tribes. *See* Partial Final Consent Decree Determining the Rights of the Shoshone-Bannock Tribes to the Use of Water in the Upper Snake River.

C. Article 7 of the Fort Hall Agreement and Section II of the Court's Order recognized the Shoshone-Bannock Tribes' right to use water from the Blackfoot River system and Grays Lake.

D. Subsection 8.3 and the Attachment to the Fort Hall Agreement titled "Blackfoot River Water Management Plan, Statement of Purposes, April 20, 1990" provided for the development of a Blackfoot River Water Management Plan.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. Purposes

This Blackfoot River Water Management Plan establishes a comprehensive program to facilitate efficient and accurate measurement and regulation of Basin 27 diversions, to promote transmission of data amongst the Parties, and to develop a computer accounting program that determines the amount of natural flow available to water users on the Blackfoot River.¹

¹ This Plan does not address purposes 3-5 or 7-8 of the Blackfoot River Water Management Plan Statement of Purposes dated April 20, 1990 attached to the 1990 Fort Hall Indian Water Rights Agreement. Purposes 4, 5 and 8 of the Attachment pertain to Grays Lake and will be addressed in a future amendment to this Plan. Purposes 3 and 7

Figures 1 and 2 are included at the end of this document to aid the reader with understanding and implementing this Plan. The Figures are included for illustrative purposes and the text of the Plan takes precedence over any discrepancy between the text and the Figures.

2. Definitions

The following definitions apply for purposes of this Plan:

- a) "Agreement" means the "Blackfoot River Equitable Adjustment Settlement Agreement" entered into by the Committee of Nine, the State, the Tribes and the United States.
- b) "Basin 27 Water Users" means persons diverting Natural Flow from the Blackfoot River Basin prior to January 1, 1990 whose rights are decreed in the SRBA, exclusive of the Fort Hall Irrigation Project and *de minimis* domestic and stock water uses (where the corresponding water right carries a diversion limit of 13,000 gallons per day or less, or 14.5 ac-ft per year or less for storage). "Basin 27 Water Users" includes the Miners Ditch water bypassed as mitigation for water right no. 27-7577 in the name of the City of Blackfoot.²
- c) "Basin 27 Primary Volume" is the cumulative annual volume of Blackfoot River Basin Natural Flows diverted by the Basin 27 Water Users during the irrigation season as a direct result of being allowed to divert Blackfoot River Basin Natural Flows ahead of the Tribes as provided by the Fort Hall Agreement and described in water right 27-11375. The calculation of the Basin 27 Primary Volume is described in Section 4.i) of this Plan.
- d) "Committee of Nine" means the advisory committee of Water District 01 and any successor thereto.
- e) "Director" means the Director of the Idaho Department of Water Resources, or any successor.
- f) "Equitable Adjustment Water" is a supplemental water supply provided to the Tribes for the purpose of protecting water right no. 27-11375 if the Basin 27 Primary Volume exceeds 45,000 ac-ft per year and all available credits, consistent with the terms of the Agreement.

pertain to the internal operations of the Fort Hall Irrigation Project and will be addressed in a separate agreement between the Tribes and the United States.

² All or part of 16 water rights may be diverted into the Miners Ditch, none of which are in the name of Miners Ditch nor do they include any designation they are to be bypassed for mitigation purposes. Those 16 water rights are: 27-3G, 27-17, 27-20A, 27-20B, 27-22A, 27-23E, 27-35A, 27-10296, 27-10341, 27-10344, 27-10505, 27-10756, 27-10790, 27-10999, 27-11117, 27-11940.

- g) “Fort Hall Agreement” means the 1990 Fort Hall Indian Water Rights Agreement executed by the Shoshone-Bannock Tribes of the Fort Hall Reservation, the State, the United States, and the Committee of Nine.
- h) “Intergovernmental Board” means the three-member Intergovernmental Board established in Article 9 of the Fort Hall Agreement.
- i) “IDWR” or the “Idaho Department of Water Resources” means the executive agency of the State of Idaho created by Idaho Code § 42-1701, or any successor agency.
- j) “Measuring Device Order” means the *Order Requiring Measuring Devices and Controlling Works on the Blackfoot River, Water District 27* entered on April 18, 2008 by IDWR, and subsequent amendments thereto. A true and correct copy of the Measuring Device Order is attached for informational purposes as Attachment I.
- k) “Measuring Device Standards” means the IDWR document entitled “*Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices*” and subsequent amendments thereto. A true and correct copy is attached for informational purposes as Attachment II.
- l) “Natural Flow” means the natural flow of the Blackfoot River Basin that is available for diversion as referred to in section x.d of water right 27-11375 and as specifically defined and calculated in this Plan. When the term “natural flow” is used in this Plan rather than “Natural Flow” the classic meaning of natural flow is intended as illustrated in Section 4.k) of this Plan.
- m) “Parties” means the Committee of Nine of Water District 01, State, Tribes, and United States.
- n) “Plan” means this Blackfoot River Water Management Plan.
- o) “SRBA District Court” means the District Court of the Fifth Judicial District, State of Idaho, in and for the County of Twin Falls that is assigned Civil Case No. 39576.
- p) “State” means the State of Idaho, admitted to the Union on July 3, 1890.
- q) “Tribes” or “Tribal” means the Shoshone-Bannock Tribes of the Fort Hall Reservation in Idaho as the collective successors-in-interest of Indian signatories to the Second Treaty of Fort Bridger of July 3, 1868, 15 Stat. 673, and subsequent Tribal/federal agreements.
- r) “United States” means the United States of America acting through the United States Department of the Interior, Bureau of Indian Affairs.

- s) “Water District 01” means the instrumentality created by the Director of the IDWR pursuant to Idaho Code § 42-604 (1992) and any successor thereto.
- t) “Water District 27” means the water district designated by the Director of IDWR pursuant to Idaho Code § 42-604 (1992) for the distribution of water in the Blackfoot River Basin and any successor thereto.
- u) “Watermaster” means the person elected by Water District 27 and appointed by the Director of IDWR to distribute water within Water District 27.

3. Measurement Program

- a) Improvement Program.
The Parties shall undertake an on-going program to improve water measurement and delivery throughout the Blackfoot River Basin. IDWR issued the Measuring Device Order in 2008, which required natural flow water users on the Blackfoot River to install and maintain lockable headgates and adequate measuring devices in accordance with the Measuring Device Standards prior to any delivery of water to the water user beginning in 2010. The Watermaster will determine, on a case-by-case basis, the specific improvements needed to facilitate efficient and accurate measurements at each point of diversion within Basin 27 in accordance with the Measuring Device Order. The owner of a point of diversion is responsible for any costs associated with installation and maintenance of lockable headgates and measuring devices and is also responsible for ensuring that the point of diversion remains in compliance with the Measuring Device Order in the future.
- b) Regulation of Basin 27 Points of Diversion.
The Watermaster will regulate Basin 27 points of diversion according to the following guidelines. The frequency and method of regulation for each point of diversion is determined by its flow rate and location. All diversion measurement sites shall be located as close as possible to the point of diversion consistent with the Measuring Device Standards.
 - i) Continuous Monitoring.
The Watermaster shall monitor the following points of diversion through the use of sensors and continuous data-logging equipment:
 - A) Smith-Maxwell diversion,
 - B) Riverton diversion,
 - C) Stevens diversion,
 - D) Central diversion,
 - E) Miners / Younie Blackfoot River pump diversion,
 - F) Miners ground water well diversion(s),
 - G) Little Butte diversion,
 - H) Eastern Idaho / Blackfoot Slough diversion,

- I) Just Ditch diversion,
 - J) Sand Creek Ditch diversion - not included in Basin 27 calculations.
- ii) Installation and maintenance responsibility.
The owners of the diversions described in subdivision 3.b)i) are responsible for maintaining the headgates and measurement sections of their respective ditches. Water District 27 shall install and maintain sensors and continuous data-logging equipment at each site identified.
- iii) Pumps.
Some natural flow water users divert water from the Blackfoot River or its tributaries through the use of pumps. Water users who use pumps are required to install an adequate measuring device on each pump in accordance with the Measuring Device Order. The Watermaster shall record and report pump diversions at a minimum frequency of once per two weeks.
- iv) Non-Continuous Monitoring.
The Watermaster shall monitor and measure manually all other Basin 27 points of diversion. Measurements shall be performed using consistent and accurate methods. All active points of diversion shall be measured at a minimum of once every two weeks. Small variances from this minimum measurement frequency are acceptable if unusual or unique circumstances arise in spite of the Watermaster's best efforts. Non-functional, inactive points of diversion shall be periodically monitored to verify the inactive status. Daily diversion flow rates shall be determined based on a linear interpolation between manual measurements, unless reliable information sources indicate that another methodology is more appropriate. Diversion data shall be reported on a weekly basis.
- v) Rating curves.
Rating curves shall be established and maintained for all sites that utilize water stage data for the estimation of flow rates. Once the rating curve for a site has been established, flow rate and stage measurements will continue to be collected by the Watermaster at least once per month from April to October. Adjustments to the rating curves and shifts in the rating curve relationships will be applied by the Watermaster as appropriate.
- c) Regulation of Tribal Points of Diversion.
The Tribes and United States shall monitor the Fort Hall Main Canal, the Fort Hall North Canal, and the Fort Hall Little Indian Canal through the use of sensors and continuous data-logging equipment. The United States and Tribes shall be responsible for maintenance of their respective sensors, data-logging equipment, and gage houses, and shall comply with all measurement and reporting standards provided under Section 3.b). Copies of the measured flow rate data shall be sent to Water District 27 on a weekly basis.

d) Blackfoot River Basin Stream Gaging.

This subdivision identifies those gaging sites and the minimum operation standards that shall constitute the Blackfoot River stream gage system, which will be used to determine the amount of natural flow and storage flow in the Blackfoot River. The description for each gaging site includes six parts. The first part identifies the name of the site. The second part provides the general location of the site in latitude and longitude (NAD 83). The third part describes the period of the year when monitoring data is collected and reported. Small variances from the specified period of the year are acceptable if unusual or unique circumstances arise in spite of the responsible entity's best efforts. The fourth part identifies the operator of the site. The fifth part identifies the entity or entities responsible for the site. Site responsibilities shall include purchase and replacement of measurement equipment, equipment installation, maintenance of equipment and gage houses, and annual operating costs, including rating curve data collection, data processing, and data transmission. The sixth part describes the stream gage type at each site where continuous indicates the use of electronic sensor equipment that has the ability to transmit real-time data to a common data repository, or a gage type as described below. The stream gages are as follows:

- | | | |
|------|---------------------|--|
| i) | Name: | Clarks Cut |
| | Location: | Lat 43° 00' 20" Long 111° 29' 37" |
| | Monitoring Season: | April through October when Grays Lake water is being transported to Blackfoot Reservoir. |
| | Operator: | USGS (Station #13057300) |
| | Responsible Entity: | United States |
| | Gage type: | Continuous |
| ii) | Name: | Blackfoot River near Henry |
| | Location: | Lat 42° 48' 55" Long 111° 30' 24" |
| | Monitoring Season: | April through October when irrigation diversions are occurring in Basin 27. |
| | Operator: | USGS (Station #13063000) |
| | Responsible Entity: | U.S. Department of the Interior,
Bureau of Land Management |
| | Gage type: | Continuous |
| iii) | Name: | Blackfoot Reservoir Gage |
| | Location: | Lat 43° 00' 20" Long 111° 43' 00" |
| | Monitoring Season: | Year round |
| | Operator: | Idaho Power Company |
| | Responsible Entity: | Tribes |
| | Gage type: | Continuous |
| iv) | Name: | Blackfoot River at Rocky Ford |
| | Location: | Lat 43° 00' 05" Long 111° 43' 45" |

- Monitoring Season: Year round
 Operator: Idaho Power Company
 Responsible Entity: Tribes
 Gage type: Continuous
- v) Name: Blackfoot River near Shelley
 Location: Lat 43° 15' 46" Long 112° 02' 52"
 Monitoring Season: Year round
 Operator: USGS (Station #13066000)
 Responsible Entity: IDWR
 Gage type: Continuous
- vi) Name: Blackfoot River at Rich Lane
 Location: Lat 43° 11' 27" Long 112° 13' 39"
 Monitoring Season: April through October when irrigation diversions are occurring in Basin 27.
 Operator: Tribes
 Responsible Entity: Tribes
 Gage type: Continuous
- vii) Name: Blackfoot River below Fort Hall North
 Location: Lat 43° 10' 06" Long 112° 20' 05"
 Upstream of Corbett Slough Inflow
 Monitoring Season: April through October when irrigation diversions are occurring in Basin 27.
 Operator: USGS (Station #13068300)
 Responsible Entity: United States
 Gage type: Continuous
- viii) Name: Blackfoot River Bypass
 Location: Lat 43° 10' 15" Long 112° 23' 16"
 Monitoring Season: Year round
 Operator: USGS (Station #13068495)
 Responsible Entity: IDWR
 Gage type: Continuous
- ix) Name: Blackfoot River near Blackfoot
 Location: Lat 43° 07' 50" Long 112° 28' 36"
 Monitoring Season: Year round
 Operator: USGS (Station #13068500)
 Responsible Entity: IDWR
 Gage type; Continuous
- x) Name: Meadow Creek near Reservoir
 Location: Lat 42° 55' 29" Long 111° 30' 53"
 Monitoring Season: April through October when irrigation diversions

- are occurring in Basin 27.
- Operator: Water District 27
 Responsible Entity: Water District 27
 Gage type: No equipment; manual flow measurements, once every 2 weeks
- xi) Name: Little Blackfoot River near Reservoir
 Location: Lat 42° 54' 34" Long 111° 31' 53"
 Monitoring Season: April through October when irrigation diversions are occurring in Basin 27.
 Operator: Water District 27
 Responsible Entity: Water District 27
 Gage type: No equipment; manual flow measurements, once every 2 weeks
- xii) Name: Corbett Slough near Blackfoot River
 Location: Lat 43° 10' 23" Long 112° 20' 13"
 Monitoring Season: April through October when irrigation diversions are occurring in Basin 27.
 Operator: Water District 27
 Responsible Entity: Water District 27
 Gage type: Sensor and datalogger only; no real-time data transmittal; site should be operated under the policies provided in 3.b).
- xiii) Name: Idaho Canal near Blackfoot River³
 Location: Lat 43° 15' 26" Long 112° 08' 42"
 Monitoring Season: April through October when irrigation diversions are occurring in Basin 27.
 Operator: Water District 27
 Responsible Entity: Water District 27
 Gage type: Sensor and datalogger only; no real-time data transmittal; site should be operated under the policies provided in 3.b).
- xiv) Name: Sand Creek at Wolverine Road
 Location: Lat 43° 16' 58" Long 112° 09' 36"
 Monitoring Season: April through October when irrigation diversions are occurring in Basin 27.
 Operator: Water District 01 (Station #13064500)
 Responsible Entity: Water District 01

³ This gage will be installed prior to the delivery of any injected flows through the Idaho Canal (IF_{IdahoCanal}) for delivery to the Basin 27 Water Users or prior to delivery of any Equitable Adjustment Water through the Idaho Canal for Tribal use, whichever occurs first. The Watermaster will, from time to time, make observations and estimates of the discharge amount from the Idaho Canal into the Blackfoot River and record and report those observations in the Water District records and on the data sharing website.

- | | | |
|--|------------|------------|
| | Gage type: | Continuous |
|--|------------|------------|
- xv) Name: Reservation Canal at Head
Location: Lat 43° 22' 24" Long 112° 09' 14"
Monitoring Season: April through October when irrigation diversions from the Snake River are occurring.
Operator: Water District 01 (Station #13060500)
Responsible Entity: Water District 01
Gage type: Continuous
- xvi) Name: Reservation Canal at Drop
Location: Lat 43° 14' 37" Long 112° 11' 04"
Monitoring Season: April through October when irrigation diversions are occurring in Basin 27 or from the Snake River.
Operator: Water District 01 (Station #13065500)
Responsible Entity: Water District 01
Gage type: Continuous
- e) Changes to Stream Gage System.
Changes to any of the elements set forth in Section 3.d) shall be subject to review by the Parties. If any of the Parties have concerns that the quality of the gaging program will be affected by the changes, the concerns will be brought to the Intergovernmental Board and subject to the dispute resolution provisions in Section 7 of this Plan. If any of the stream gages listed in Section 3.d) are not providing data of sufficient quality or at a sufficient frequency to be useful for the purposes set forth in this Plan, any Party may request that the operation standards for the gage be upgraded, with any changes to be approved by the Intergovernmental Board.
- f) Data Sharing.
All data collected under Section 3 shall be communicated by the Responsible Entities to a mutually agreed upon website. The data will be made available to the Responsible Entities and will be publicly available. The data shall be communicated at the same frequency at which the data are collected. The website shall contain all real-time stream gage data, Basin 27 and Tribal diversion data (both continuous and non-continuous sites), and elements of the accounting program specified in Section 4. The Director will instruct the Watermaster to, host, develop, and maintain the data sharing website as required in this Plan. See Appendix I for a list of all data contained on the data sharing website.
- g) Gage Site Funding.
Each Responsible Entity listed in Section 3.d) shall have the responsibility of funding the installation, if a new site, and the operation of the gage site(s) to which it is assigned. Some of the funding required under this subdivision is contingent upon the appropriation of funds by the appropriate legislative entity. If funds are not available to establish, operate, and maintain a gage site, the

Responsible Entity shall inform the other Responsible Entities as soon as possible, and the Responsible Entity shall make efforts to acquire or allocate funding for the site in the future.

4. Accounting Program

- a) Accounting program development and maintenance.
The Watermaster, with approval of the Intergovernmental Board, shall develop and maintain a computer accounting program, as required in this plan, that quantifies the amount of natural flow available to water users on the Blackfoot River, the amount of storage water released from the Blackfoot Reservoir, the amount of water imported from Grays Lake, the amount of Snake River water injected into the Blackfoot River, the amount of water diverted from the Blackfoot River and its tributaries, and the Sand Creek Exchange. Once developed and approved, any subsequent changes to calculations and methods employed in the accounting program will require approval of the Intergovernmental Board.
- b) Available Flow Calculations.
The accounting program shall calculate the amount of Blackfoot River natural flow available for diversion within the Blackfoot River basin. The accounting program shall also calculate the portion of natural flow that is available for diversion as Natural Flow by Basin 27 Water Users. These natural flow calculations do not provide the true theoretical undepleted flow, but rather the actual direct flow that is available for diversion by water users at each location including the natural and storage flows from the Blackfoot River that are available for use by the Tribes and the United States. The accounting program calculations of natural flow shall always include calculation of Natural Flow and shall be made for each of the following locations using the equations specified.

The following data symbols are used in this Plan:

IF = amount of Snake River water ordered by the Basin 27 Water Users and injected into the Blackfoot River for their use, calculated as the lesser of the water amount reported to the Watermaster for delivery and the measured amount of water actually being injected

NF = Blackfoot River Basin Natural Flows available for Basin 27 Water User diversion

TSF = Tribal storage flows released from Blackfoot Reservoir that are dedicated for diversion by the Tribes, which may be comprised of storage flow or Blackfoot River natural flow accruing to the Blackfoot River above Blackfoot Dam, or both.

TNF = Tribal natural flows accruing to the Blackfoot River below Blackfoot Dam that are not requested for use by Basin 27 Water Users, and are available for diversion by the Tribes

TS = total Tribal water supply, calculated as the sum of the natural flow (TNF) and storage flow (TSF) supplies from the Blackfoot River system

TSR = Tribal water supply from the Snake River and Sand Creek diverted through the Reservation Canal as measured at the Drop

NISF = non-Indian storage flows released from Blackfoot Reservoir for use by the non-Indian portion of the Fort Hall Irrigation Project under water rights 27-11561 and 25-13615

NISR = non-Indian water supply from the Snake River and Sand Creek diverted for use by the non-Indian portion of the Fort Hall Irrigation Project pursuant to their 1891 Snake River water right (01-10248) and their 1914 Sand Creek water right (27-11560)

RFT_{BelowNorth} = Total required flow at the Blackfoot River below Fort Hall North gage site as set forth in Section 4.g)v) below

Q = measured or estimated flow data

Q_{BigBlackfoot} = Blackfoot River near Henry

Q_{MeadowCk} = Meadow Creek near Reservoir

Q_{ClarksCut} = Clarks Cut (Grays Lake Diversion)

Q_{LBR} = Little Blackfoot River near Reservoir

Q_{RockyFord} = Blackfoot River at Rocky Ford

Q_{Shelley} = Blackfoot River near Shelley

Q_{Additional} = Estimated non-measured inflows to Blackfoot Reservoir

Q_{Available} = Basin 27 natural flow

V_{Available} = Cumulative annual volume of natural flow for an irrigation season

Q_{RichLane} = Blackfoot River at Rich Lane

Q_{Drop} = Reservation Canal at Drop

Q_{BelowNorth} = Blackfoot River below Fort Hall North Canal

Q_{SandCreek} = Sand Creek at Wolverine Road

Q_{End} = Blackfoot River near Blackfoot

Q_{Bypass} = Blackfoot River Bypass

D_{MainCanal} = Fort Hall Main Canal diversion

D_{NorthCanal} = Fort Hall North Canal diversion

D_{SandCreek} = Sand Creek Ditch diversion

D_{MinersWell} = Miners ground water diversion(s) to be mitigated by Blackfoot River Natural Flow

D_{LittleIndian} = Fort Hall Little Indian Canal diversion

D_{LittleButte} = Little Butte Canal diversion of Blackfoot River Natural Flow

$D_{\text{ShelleytoRichLane}}$ = total Blackfoot River reach gain / loss (loss is positive, gain is negative) between the Shelley and Rich Lane gage sites, including diversions by Basin 27 Water Users of Blackfoot River Natural Flow

$D_{\text{ShelleytoBelowNorth}}$ = total Blackfoot River reach gain / loss (loss is positive, gain is negative) between the Shelley and below Fort Hall North gage sites, including diversion by Basin 27 Water Users of Blackfoot River Natural Flow

IF_{ResCanal} = Net inflows intentionally ordered from the Reservation Canal for use by Basin 27 Water Users.

$IF_{\text{IdahoCanal}}$ = Net inflows intentionally ordered from the Idaho Canal for use by Basin 27 Water Users.

$IF_{\text{CorbettSlough}}$ = Net inflows intentionally ordered to be delivered through the Corbett Slough channel for use by Basin 27 Water Users.

DIF_{Used} = Diverted flow that had been intentionally injected (IF) for use by entitled Basin 27 Water Users.

i) Blackfoot River at Blackfoot Dam:

$$Q_{\text{IntoReservoir}} = Q_{\text{BigBlackfoot}} + Q_{\text{LBR}} + ((Q_{\text{MeadowCk}} - Q_{\text{ClarksCut}}) \geq 0) + Q_{\text{Additional}}$$

Total Grays Lake imported water in acre-feet equals the sum of all $Q_{\text{ClarksCut}}$ daily values multiplied by 1.9835.

ii) Blackfoot River at Rocky Ford:

$NF_{\text{RockyFord}}$ is equal to the amount of Natural Flow requested for discharge by the Watermaster to satisfy the Basin 27 Water User diversion demands below Blackfoot Reservoir, see 4.e) below. The maximum amount that can be requested by the Watermaster is $Q_{\text{IntoReservoir}}$.

$NISF_{\text{RockyFord}}$ is equal to the amount of Blackfoot Reservoir and/or Grays Lake storage requested for release by the non-Indian portion of the Fort Hall Irrigation Project, as described in item 4.b)v) below.

$$TSF_{\text{RockyFord}} = Q_{\text{RockyFord}} - NF_{\text{RockyFord}} - NISF_{\text{RockyFord}}$$

iii) Blackfoot River near Shelley:

$TSF_{\text{Shelley}} = TSF_{\text{RockyFord}}$ for previous day (1 day time lag)

$NISF_{\text{Shelley}} = NISF_{\text{RockyFord}}$ for previous day (1 day time lag)

$$D_{\text{ShelleytoRichLane}} = Q_{\text{Shelley}} + Q_{\text{Drop}} + IF_{\text{IdahoCanal}} - D_{\text{LittleIndian}} - Q_{\text{RichLane}} - DIF_{\text{UsedRichLanetoRockyFord}} - DIF_{\text{UsedAboveReservoir}} \text{ for previous day (1 day time lag)}$$

$$\begin{aligned}
RF_{\text{BelowShelley}} &= D_{\text{ShelleytoRichLane}} + D_{\text{LittleButte}} + RF_{\text{BelowNorth}} \\
&\quad (RF_{\text{BelowNorth}} \text{ is defined in Section 4.g)i)) \\
NF_{\text{Shelley}} &= Q_{\text{Shelley}} - TSF_{\text{Shelley}} - NISF_{\text{Shelley}} \\
NF_{\text{BelowShelley}} &= \text{lesser of } NF_{\text{Shelley}} \text{ and } RF_{\text{BelowShelley}} \\
TNF_{\text{Shelley}} &= NF_{\text{Shelley}} - NF_{\text{BelowShelley}} \\
TS_{\text{Shelley}} &= TNF_{\text{Shelley}} + TSF_{\text{Shelley}}
\end{aligned}$$

iv) Blackfoot River at Rich Lane:

$$\begin{aligned}
NISF_{\text{RichLane}} &= NISF_{\text{Shelley}} \\
NF_{\text{RichLane}} &= NF_{\text{BelowShelley}} - D_{\text{ShelleytoRichLane}} \\
TS_{\text{RichLane}} &= TS_{\text{Shelley}} - D_{\text{LittleIndian}} \\
TNF_{\text{RichLane}} &= (TNF_{\text{Shelley}} - D_{\text{LittleIndian}}) \geq 0 \\
&\quad (\text{if greater than zero, } TNF_{\text{RichLane}} = 0 \text{ otherwise}) \\
TSF_{\text{RichLane}} &= TS_{\text{RichLane}} - TNF_{\text{RichLane}}
\end{aligned}$$

v) Rocky Ford flows.

The measured flows at Rocky Ford, below the outlet of Blackfoot Reservoir, can consist of four distinct streams of water: (1) Blackfoot River Natural Flows requested to be discharged by the Watermaster to satisfy Basin 27 Water User demands, (2) storage releases from Blackfoot Reservoir and/or Grays Lake for non-Indian users in the Fort Hall Irrigation Project, (3) storage releases from Blackfoot Reservoir and/or Grays Lake (or natural flows passing through the Reservoir) for diversion under the Tribes' Blackfoot River water rights, and (4) water spilled or released in excess of the downstream demands and in excess of water that can be stored in Blackfoot Reservoir. The Watermaster shall account for these separate streams based on the reported flow at the Rocky Ford gage. The Fort Hall Irrigation Project will inform the Watermaster how the storage releases should be allocated between (2) and (3).

vi) Unmeasured Blackfoot Reservoir gain.

At the present time, additional spring and tributary inflows to the Blackfoot Reservoir ($Q_{\text{Additional}}$) are estimated as 35 cfs of continuous flow. The Parties agree that the estimate of $Q_{\text{Additional}}$ will be revised 5 years after the date that all of the Upper Basin gage sites become operational, or earlier if the Parties agree. The revised estimate of $Q_{\text{Additional}}$ will be calculated for each month based on the water balance of Blackfoot Reservoir using the most current 5 years of data.

vii) Natural flow accuracy.

The accuracy and reliability of the above natural flow calculations shall be checked once per year by the Watermaster, who shall recommend adjustments as appropriate. These adjustments to the above natural flow calculations can be made following approval by the Intergovernmental Board.

- c) Accounting updates.

The accounting will be updated throughout the irrigation season as data are collected. Revised estimates of natural flow should be updated once per week following the collection of diversion data. Weekly accounting data posted by the Watermaster to the data-sharing website shall indicate the forecasted natural and storage flows for the week following, to be used by water users for scheduling deliveries until new accounting data are posted. Accounting data that is obtained from outside sources such as the USGS will be considered final for purposes of the accounting program as of October 31 of each irrigation season, even if the data are considered “preliminary” by the data collection entity. The natural flow estimates for each of the specified locations will be posted to the data sharing website.
- d) Flow allocation.

Based on water rights, priority dates, provision x.d of water right 27-11375 and available water supply, the Watermaster shall assign the amount of allowable diversion for each Basin 27 Water User’s point of diversion. The allowable diversion shall be updated weekly and posted to the data sharing website. In addition to storage releases and Snake River/Sand Creek water, the allowable diversion by the Tribes and United States on behalf of the Tribes shall include all natural flows not identified by the Watermaster for the Basin 27 Water Users’ allowable diversions.

 - i) Administration for storage.

Priority administration of water rights in Basin 27 includes administration with regard to the September 3, 1907 priority date of Blackfoot Reservoir during the storage season. The end of the storage season for Blackfoot Reservoir is identified by the maximum physical fill or the release of flood control flows. During the storage season the Watermaster can request the discharge of natural flow past Blackfoot Dam to meet the needs of any downstream Basin 27 Water User’s water rights, as described in Section 4.e), senior to September 3, 1907 and will administer junior water rights to protect the Blackfoot Reservoir storage right.
 - ii) Storage fill.

For purposes of this Plan, Blackfoot Reservoir maximum physical storage for the irrigation season will be determined by three (3) consecutive days of storage decline after April 1 of each year. As gaging of reservoir storage and stream flows improves in Basin 27, this method of determining maximum physical storage may need to be modified. Modifications of the Plan are described in Section 7.

iii) Begin storage.

The beginning of the storage season for Blackfoot Reservoir is the day all Fort Hall Canals are turned off for the irrigation season.

iv) Storage season.

The term “storage season” as used in these paragraphs 4.d)i) through 4.d)iv) is solely for the purpose of administering junior water rights and does not change the authorized storage season of 1/1 through 12/31 of water right 27-2007.

e) Blackfoot Dam discharge.

The Watermaster shall inform the Tribes and United States, as part of the weekly accounting report or as needed, of the necessary Natural Flows to be discharged below Blackfoot Dam to satisfy downstream Basin 27 Water User diversions. The Basin 27 Water User diversion requests shall not exceed the natural flow calculated as inflows to the Blackfoot Reservoir, and shall account for tributary inflows below Blackfoot Dam and Snake River inflows (from the Idaho Canal, Reservation Canal, and Corbett Slough) to the extent possible. The Tribes and United States on behalf of the Tribes will have the right to store or otherwise use any available natural flows upstream of Blackfoot Dam, which are not requested by the Watermaster or used by the Basin 27 Water Users above the Blackfoot Reservoir, according to the terms of their water rights. The Tribes and United States shall not be required to discharge any water from the Blackfoot Reservoir for Basin 27 Water Users during the non-irrigation season, November 1 – March 31.

f) Formula for Blackfoot Dam discharge.

The Parties agree to develop a formula to assist the Watermaster in determining the necessary discharges from the Blackfoot Dam. Necessary discharges refer to the natural inflow passing through the Blackfoot Reservoir for which the Basin 27 Water Users have a right on any given day. The formula will be incorporated in the accounting program and will establish a relationship between the Natural Flow request from the Blackfoot Dam and the diversion demands of the downstream Basin 27 Water Users.

i) Formula guidelines.

The formula to be developed shall be based on the following guidelines for determining Basin 27 Water User discharge requests from the Blackfoot Dam. These guidelines provide the general framework within which a more detailed formula is to be developed.

1. Estimate natural gains and/or losses to the Blackfoot River downstream of Blackfoot Dam. These natural gains and/or losses shall consist of reliable inflows that are likely to be sustained for the subsequent week.

2. Estimate all Basin 27 Water User diversion demands located below Blackfoot Dam, including main-stem Blackfoot River demands above the Shelley gage site and all Basin 27 Water User demands located below the Shelley gage site.
3. Determine whether a Basin 27 Water User discharge request is necessary from Blackfoot Dam. If the estimated natural flow supply below Blackfoot Dam is greater than the estimated Basin 27 Water User diversion demands located below Blackfoot Dam, then no Basin 27 Water User discharge request from Blackfoot Dam is necessary. If the estimated natural flow supply is less than the estimated Basin 27 Water User demands, then some Natural Flow deficit exists and some amount of Basin 27 Water User discharge request is likely needed.
4. Determine the Basin 27 Water User discharge request by comparing the Natural Flow deficit below Blackfoot Dam to the available natural flow supply entering into Blackfoot Reservoir. The Basin 27 Water User discharge request shall be calculated as the lesser of: (1) the natural flows entering into Blackfoot Reservoir ($Q_{\text{IntoReservoir}}$) and (2) the Natural Flow deficit below Blackfoot Dam calculated in Step 4.f)ii) below.

ii) Interim formula.

Until the formula is developed, the Basin 27 Water User discharge requests below Blackfoot Dam shall be based upon the following interim formula:

$$NF_{\text{RockyFord}} = RF_{\text{BelowShelley}} - (Q_{\text{Shelley}} - Q_{\text{RockyFord}} \text{ (for previous day (1 day time lag))} \pm \text{Diversion Change Requests})$$

$$\text{Provided } NF_{\text{RockyFord}} \leq Q_{\text{IntoReservoir}}$$

1. The Watermaster may use his discretion to determine if the results for a single day's data or an average of no more than 5 days will give the best results for calculating $NF_{\text{RockyFord}}$.
2. The Watermaster will verify that 90% of $NF_{\text{RockyFord}}$ requested below Blackfoot Dam is diverted by the Basin 27 Water User(s) when the water is available at the water user(s) point(s) of diversion. For purposes of computing Basin 27 Primary Volume as described in Section 4.i) of this Plan, the water user(s) requesting additional water below Blackfoot Dam will be charged for no less than 90% of the water requested when available, whether the water is diverted or not, and these charges will be considered daily diversion volumes.

3. The Watermaster will verify that a Basin 27 Water User(s) reducing or ending their diversion(s) has requested a diversion reduction. For purposes of computing Basin 27 Primary Volume as described in Section 4.i) of this Plan, if the water user(s) reducing or ending their diversion(s) did not request the change, and water for diversion is available at their point(s) of diversion, then that water user(s) shall continue to be charged at the rate of diversion prior to the reduction or turn off and these charges will be considered daily diversion volumes.

g) Flow below Fort Hall North Gage.

The Watermaster shall direct the Tribes and United States in advance to maintain a flow rate at the Blackfoot River below Fort Hall North gage site that is greater than or equal to the Basin 27 Water User diversion demands located downstream of the gage site. The equations set forth are based upon the Blackfoot River below Fort Hall North gage site's location upstream of the Corbett Slough inflow into the Blackfoot River.

i) Required flow.

The required flow rate represents the flow rate requested by the Watermaster to satisfy Basin 27 Water User diversion demands for Blackfoot River Natural Flow located downstream of the below Fort Hall North gage site, based on the available flow supply for the Basin 27 Water Users. The required flow rate (RF) shall be calculated as follows:

$$RF_{\text{BelowNorth}} = C_{\text{Loss}}(D_{\text{BelowNorth}}) \leq (NF_{\text{Shelley}} - D_{\text{ShelleytoBelowNorth}})$$

C_{Loss} = conveyance loss coefficient to account for natural river losses and gains occurring between Blackfoot River below Fort Hall North gage site and the most downstream Basin 27 Water User diversion.

$D_{\text{BelowNorth}}$ = valid Basin 27 Water User diversion demands for Blackfoot River Natural Flow downstream of the Blackfoot River below Fort Hall North gage site, estimated based on the previous five-day average diversions including Miners Ditch mitigation requirements ($D_{\text{MinersWell}}$). Allowance shall be made for all $IF_{\text{CorbettSlough}}$ injected flows, and those portions of IF_{ResCanal} , and $IF_{\text{IdahoCanal}}$ injected flows used to satisfy Basin 27 Water User demand downstream of the below Fort Hall North gage.

$$D_{\text{ShelleytoBelowNorth}} = D_{\text{ShelleytoRichLane}} + Q_{\text{RichLane}} - Q_{\text{BelowNorth}} - D_{\text{MainCanal}} - D_{\text{NorthCanal}} - DIF_{\text{UsedBelowNorthtoRichLane}}$$

ii) Conveyance loss.

The conveyance loss coefficient (C_{Loss}) is not known at this time. The Parties agree to cooperatively develop an accurate estimate of C_{Loss}

within 5 years of the date of the signature of this plan, which shall be approved by the Intergovernmental Board. In the interim, until a more accurate loss coefficient is developed, C_{Loss} shall be estimated as 1.1 and injected flows (IF) shall presume to be delivered without loss in this reach of the Blackfoot River. If the actual loss is determined to be larger than 10% ($C_{Loss} > 1.1$) the injected flows shall be charged loss at the same rate as determined by C_{Loss} .

iii) Flow adjustment.

The Watermaster shall inform the Tribes and United States if the flow rate at the Blackfoot River below Fort Hall North gage site differs from the total required flow rate calculated in 4.g)v) below. The Tribes and United States will adjust the discharges below the Fort Hall North Canal within two days of the Watermaster's notice.

iv) Required flow limit.

The required flow rate at the Blackfoot River below Fort Hall North gage site is limited by the Natural Flow of the Blackfoot River available for use by the Basin 27 Water Users. The required flow rate shall not exceed the available Natural Flow calculated at Shelley gage less the Natural Flow diversions below Shelley to the below Fort Hall North gage site.

v) Total flow.

In addition to $RF_{BelowNorth}$ the total discharge passing the Blackfoot River below Fort Hall North gage must include any portions of the $IF_{IdahoCanal}$ and $IF_{ResCanal}$ injected flows to be diverted and used downstream of the gage, $IF_{IdahoCanalBelowNorth}$ and $IF_{ResCanalBelowNorth}$. Initially these injected flows will be presumed to be delivered without loss in the Blackfoot River. If improved measurement and accounting show either of these injected flows experience a 10% or greater loss from their respective point of injection to the below Fort Hall North gage, the water right accounting formulas shall be adjusted to charge these injected flows the actual loss they encounter as they are conveyed to the gage site. The total required flow (RFT) below the Fort Hall North gage shall be calculated as follows:

$$RFT_{BelowNorth} = RF_{BelowNorth} + IF_{IdahoCanalBelowNorth} + IF_{ResCanalBelowNorth}$$

vi) Make-up flow.

If there are times when the flow rate at the Blackfoot River below Fort Hall North gage is less than the total required flow rate due to over-diversion by the Fort Hall Irrigation Project system, the downstream ditches affected by the shortage shall be entitled to divert, in addition to their water rights, a volume of water equivalent to the volume of the

shortage. Any make-up water requested by the Watermaster as part of $RFT_{\text{BelowNorth}}$ must be requested and diverted within two weeks of the return of the total required flows and, except for the injected flows, will count against the Basin 27 Primary Volume described in Section 4.i).

- h) Accounting for injected flows.

The Watermaster shall account for all Snake River injected flows into the Blackfoot River system that are intended for diversion by Basin 27 Water Users. This information shall be updated at least once per week and posted to the data sharing website. Snake River water that is injected into the Blackfoot River for use by specific Basin 27 Water Users (such as shareholders in Snake River canal companies) will be delivered to the appropriate diversions first, before any water is delivered under their Blackfoot River water rights. Deliveries of Snake River water to Basin 27 Water Users are limited to the lesser of the amount of water scheduled for delivery with the Watermaster and the measured flow that is actually injected into the Blackfoot River less any losses as determined above.
- i) Basin 27 Primary Volume calculation.

The accounting program shall include equations to calculate the Basin 27 Primary Volume and the calculated value shall be updated weekly and posted to the data sharing website. The Basin 27 Primary Volume represents the cumulative volume of water diverted by Basin 27 Water Users, located both upstream and downstream of Blackfoot Reservoir, during the irrigation season as a benefit and direct result of being allowed to divert water ahead of the Tribes, as described in the Tribes' Blackfoot River water right 27-11375. The Basin 27 Primary Volume shall be calculated as the sum of daily diversion volumes, for all Basin 27 Water User diversions upstream of the below Fort Hall North gage plus the $RF_{\text{BelowNorth}}$ quantified as the lesser amount of the Watermaster request or the discharge measured at the below Fort Hall North gage, from the start of the irrigation season to the present day, excluding the following diversions:
- i) Exclude injected flows.

Diversions of Snake River water intentionally injected into the Blackfoot River for Basin 27 Water User use, which shall be separately accounted for by the Watermaster.
 - ii) Exclude diversions when Fort Hall Canals are off.

In priority diversions on days when all of the Fort Hall Canals are off and the requested reservoir discharges described in Section 4.e) are zero for the previous day.
 - iii) Exclude in priority diversions.

Diversions occurring downstream of the Blackfoot Reservoir on days when the Tribes' Blackfoot River water right 27-11375 is delivered and satisfied to the extent of Tribal demand as the senior-most priority

water right on the Blackfoot River and there are no discharges from the Blackfoot Dam, other than flood control, spill, or minimum flows, if any, for the previous day. This situation only occurs when $NF_{RockyFord} = 0$ for the previous day and $RF_{BelowNorth} = 0$ for the current day.

j) Agreement implementation.

The Agreement sets forth a procedure for use of credits and Equitable Adjustment Water. When the Water District 27 accounting indicates the Basin 27 Primary Volume is approaching 45,000 ac-ft for the year, the Watermaster will post on the data sharing website notice the use of credits and Equitable Adjustment Water is about to begin. The Watermaster will allow use of the maximum credits and Equitable Adjustment Water provided by the Agreement. The amount of credit and Equitable Adjustment Water available to the Tribes for the current year will be determined in advance as provided by the Agreement. If the Primary Volume at any point during the irrigation season exceeds 45,000 ac-ft plus credit used and Equitable Adjustment Water used, the provisions of paragraph x.d of water right 27-11375 shall be deemed satisfied for the year and all water rights shall be administered in priority.

k) Credit accrual.

At the end of each year in which the Basin 27 Primary Volume diversion is less than 45,000 ac-ft credit may be accrued as provided by the Agreement. The accrual of credits is computed as the lesser of $V_{Available}$ (natural flow in ac-ft) or 45,000 ac-ft minus the Basin 27 Primary Volume diverted for the year. Where:

$$Q_{Available} = Q_{RichLane} - Q_{Drop} - IF_{IdahoCanal} + Q_{IntoReservoir} \text{ (for previous day)} - NF_{RockyFord} \text{ (for previous day)} + \text{Diversions above the Reservoir (for previous day)} + \text{Diversions between Blackfoot Dam and the Rich Lane Gage} - TSF_{RockyFord} \text{ (for previous day)} - NISF_{RockyFord} \text{ (for previous day)} + D_{LittleIndian}$$

and is accumulated on a daily basis for the irrigation season from 4-1 to 11-1 as:

$$V_{Available} = \sum_{4-1}^{11-1} (Q_{Available} \times 1.9835) \text{ ac-ft}$$

l) Accounting for credit.

The accounting program will keep track of the accrual of credits calculated as described in paragraph k) above as well as the use and remaining balance of credits at all times as required by the Agreement. During periods of credit use the Watermaster will account for credit use on a daily basis and report credit use and the balance remaining on a weekly basis to the data sharing web site. The Watermaster will report the remaining credit balance as specified in the Agreement.

- m) Accounting for Equitable Adjustment Water.
The accounting program will keep track of the accrual and use of Equitable Adjustment Water at all times as specified in the Agreement. During periods of Equitable Adjustment Water use the Watermaster will account for the Equitable Adjustment Water use on a daily basis and report Equitable Adjustment Water use and balance remaining on a weekly basis to the data sharing web site. The Watermaster will report the remaining Equitable Adjustment Water balance plus the annual accrual as specified in the Agreement.
- n) Accounting for Q_{Drop} .
The accounting program will also keep a record of the allocation of the Q_{Drop} flows, a portion of which are needed to compute the Sand Creek exchange. Q_{Drop} is a measured discharge made up of up to 4 distinct streams of water: (1) Snake River natural flow diverted pursuant to the Tribes' 1867 Snake River water right, TSR less any Sand Creek water available to the Tribes. (2) Snake River natural flow diverted pursuant to the Fort Hall Irrigation Project 1891 Snake River water right, NISR less any Sand Creek water available to the non-Indian portion of the Fort Hall Irrigation Project. (3) Sand Creek consisting of the measured discharge of Sand Creek at Wolverine Road less the amount of water diverted by the Sand Creek Ditch, $Q_{SandCreek} - D_{SandCreek}$. (4) Snake River injected flows, $IF_{ResCanal}$. The Fort Hall Irrigation Project will inform the Watermaster of the portion of Q_{Drop} that will be allocated to (1) and (2) giving due consideration that the sum of the 4 streams of water must equal Q_{Drop} .⁴
- o) Water Rights.
IDWR and the Watermaster shall enforce all Basin 27 water rights in accordance with the elements of their rights, i.e., priority, period of use, and quantity, as listed in their partial and final decrees, and in accordance with the terms of the Agreement. On days when flood control flows are passing the Snake River near Milner gage and natural flow water is available in the Blackfoot River downstream of the Fort Hall North Canal and the requested reservoir discharges described in Section 4.e) are zero for the previous day, water rights will not be enforced for the diversions located downstream of the Fort Hall North Canal.

5. Sand Creek Exchange

- a) Implementation.
The Parties agree to implement the Sand Creek Exchange as provided for in the Fort Hall Agreement and described in paragraph x.d of water right 01-10223. The measurements and equations necessary to implement the Sand Creek Exchange are available under the terms of this Plan.

⁴ It is possible the Tribes or the non-Indian project water users could obtain storage from the Snake River for diversion through the Reservation Canal and the Drop for use on the Fort Hall Irrigation Project. Storage diversions could be substituted for or added to the streams (1) and (2) diversions without changing the allocation process described in n).

- b) Calculation method.
The volume of water credited to the Tribes under the Sand Creek Exchange will be calculated as an after-the-fact accounting procedure, and credited water may be diverted from the Snake River through the Reservation Canal at any time during the irrigation season. The exchange calculations and provision of credited water will be completed on a weekly basis and posted to the data sharing website referenced in Section 3.f). Exchange credits will not be carried over from year to year.
- c) Exchange reset.
In those years in which Water District 01 resets all storage use accounts, water right volume limits, and exchange accounts to zero, including the Tribal volume limits, calculated at the Reservation Canal at the Drop gage, the Sand Creek Exchange account will also be reset to zero on the same date.
- d) Calculations.
The daily volume of Sand Creek Exchange water shall be calculated based upon a comparison of the measured Sand Creek flows, the excess Blackfoot River flows below the Tribes' diversions, the Blackfoot River flows near the mouth, and the Tribes' diversion demands. The total annual volume of Sand Creek Exchange is limited to 50,000 acre-feet per year. The Sand Creek Exchange shall be calculated based on the following equations.
- i) Excess flows bypassing the Tribes' diversions:

$$Excess = (Q_{BelowNorth} - RFT_{BelowNorth} - (Q_{SandCreek} - D_{SandCreek}) \times 15\%)$$

$$\geq 0$$

Never less than 0.
 - ii) Diversion demands of the Fort Hall Main and North Canals:

$$Tribal\ Demand = (D_{MainCanal} + D_{NorthCanal}) - NISF - NISR$$
 - iii) Sand Creek flows available for exchange:

$$Sand\ Creek = (Q_{SandCreek} - D_{SandCreek}) \times 85\%$$
 - iv) Blackfoot River flows near the confluence with Snake River:

$$Blackfoot\ River = Q_{End} + Q_{Bypass} - D_{MinersWell} \text{ (accounting for 12-hour lag time)}$$
 - v) Sand Creek Exchange calculation:

$$Exchange = \text{lesser of (1) } Excess, (2) Tribal\ Demand, (3) Sand\ Creek, \text{ or (4) } Blackfoot\ River$$
- e) Review in 5 years.
The Sand Creek Exchange calculations shall be reconsidered within 5 years after implementation of the Sand Creek Exchange to validate the equations provided in

Section 5.d) and to determine if changes are needed. The Parties agree to cooperatively develop any necessary changes to the calculations, and any consensus changes shall be approved by the Intergovernmental Board.

6. Equalizing Reservoir and Little Butte Canal

Due to the construction of the Equalizing Reservoir, the Little Butte Canal was asked to abandon its headgate on the Blackfoot River and begin to divert water out of the Equalizing Reservoir pool. Sedimentation in the Equalizing Reservoir can make it so that the Little Butte Canal is unable to divert water through its headgate. The United States and Tribes agree to work with Water District 27 to improve the Little Butte Canal diversion structure(s) and to operate the Equalizing Reservoir in such a way that the Little Butte Canal is provided an adequate supply of water at its headgate throughout the irrigation season.

7. Review of Plan / Resolution of Disputes

The Parties shall periodically review at a meeting of the Fort Hall Intergovernmental Board the status of the programs described in this Plan and shall provide recommendations, based upon the best available data and good science, for any changes in the programs to the Watermaster, the Director, the United States and the Tribes, taking into account the recommendations of the Parties' technical experts. The Parties agree that all disputes and objections regarding the implementation of this Plan will be taken up at the annual Intergovernmental Board meeting. Modifications to this Plan will be based on mutual agreement of the Parties.

8. Points of Contact

To effectively carry out the provisions of this Blackfoot River Management Plan, each Party will designate a representative who will serve as the point of contact to communicate and coordinate the implementation of this Plan.

9. Applicable Law

- a) This Blackfoot River Management Plan shall be construed and enforced pursuant to the Fort Hall Agreement and relevant decrees entered by the SRBA District Court. Nothing in this plan shall be interpreted or implemented to change any portion of any decree entered in the SRBA.
- b) The United States' and the State of Idaho's agreement is subject to the terms of applicable federal and state law, including the Anti Deficiency Act - 31 U.S.C. § 1341 and similar requirements of state law. Nothing contained in this Agreement shall be construed to require the obligation, appropriation or expenditure of any money from the U.S. Treasury or the State General Fund. The Parties acknowledge that the federal or state agencies shall not be required under this

Plan to expend any appropriated funds unless and until an authorized official of the relevant agency affirmatively acts to commit to such expenditures in writing.

10. Binding Effect.

This Plan shall bind and inure to the benefit of the respective successors of the Parties.

11. Effect of Headings

Headings appearing in this Agreement are inserted for convenience and reference and shall not be construed as interpretations of the text.

12. Multiple Originals

This agreement is executed in quadruplicate. Each of the four (4) Agreements with an original signature of each Party shall be an original.

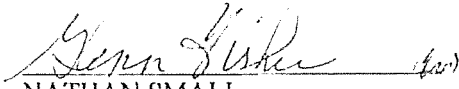
13. Effective Date

This Plan shall be effective upon signature by the Parties and approval by the Director.

14. Signatures

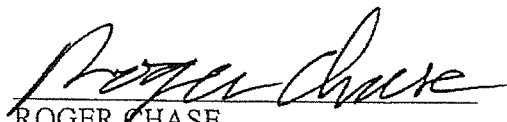
The Parties have executed this Blackfoot River Water Management Plan on the date following their respective signatures.

SHOSHONE-BANNOCK TRIBES


NATHAN SMALL
Chairman, Shoshone-Bannock
Tribal Council

Dated: 1/28/13

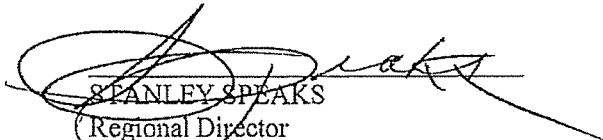
STATE OF IDAHO



ROGER CHASE
Chairman, Idaho Water Resource Board

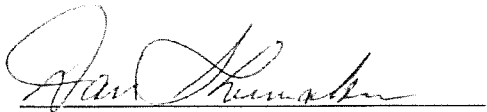
Dated: 1-25-2013

UNITED STATES


STANLEY SPEAKS
Regional Director
Pacific Northwest Region
Bureau of Indian Affairs
U.S. Department of the Interior

Dated: 1/24/2013

COMMITTEE OF NINE OF WATER DISTRICT 01


DAN SHEWMAKER
Chairman, Committee of Nine

Dated: Jan 25, 2013

Figure 1

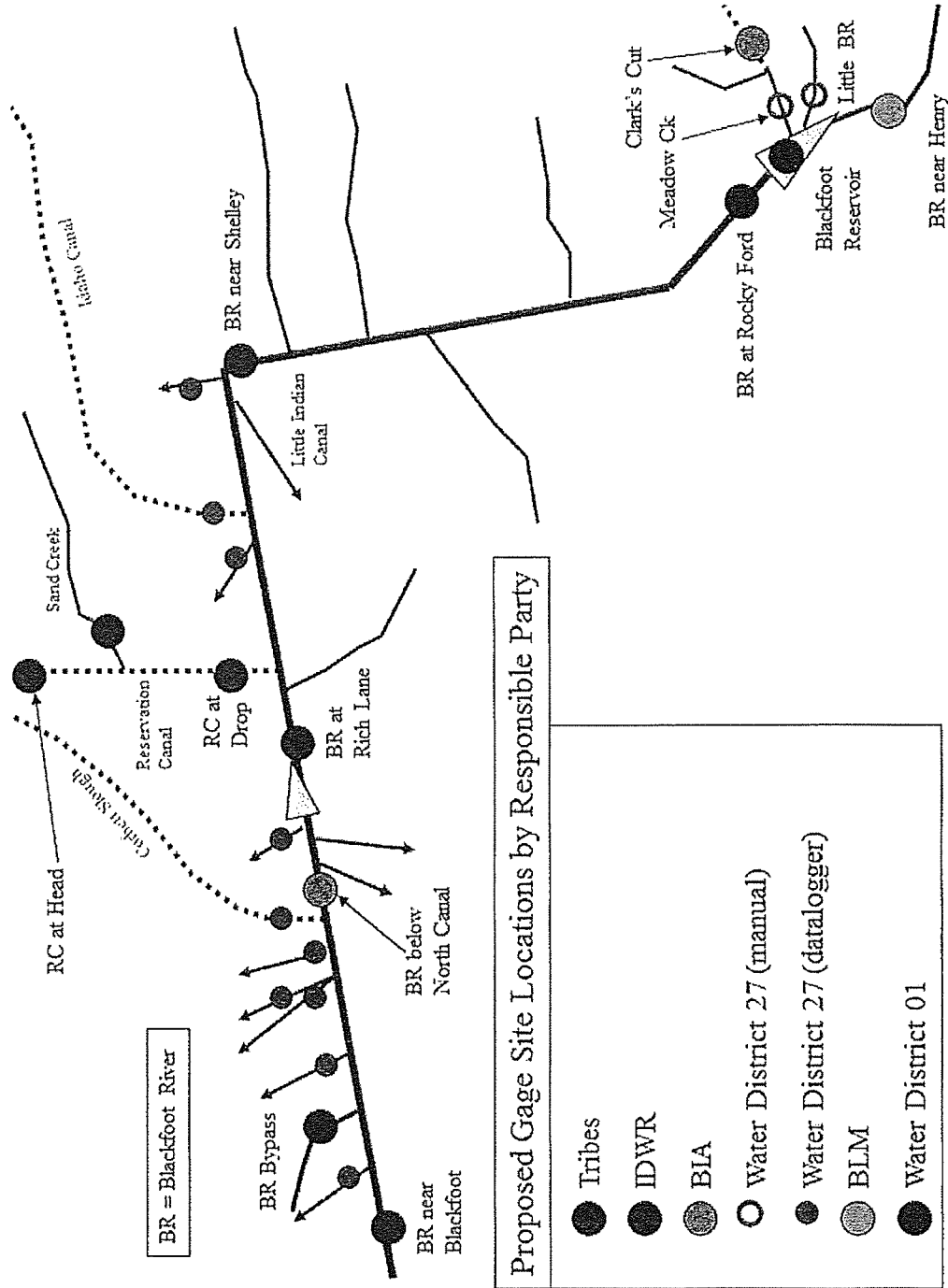
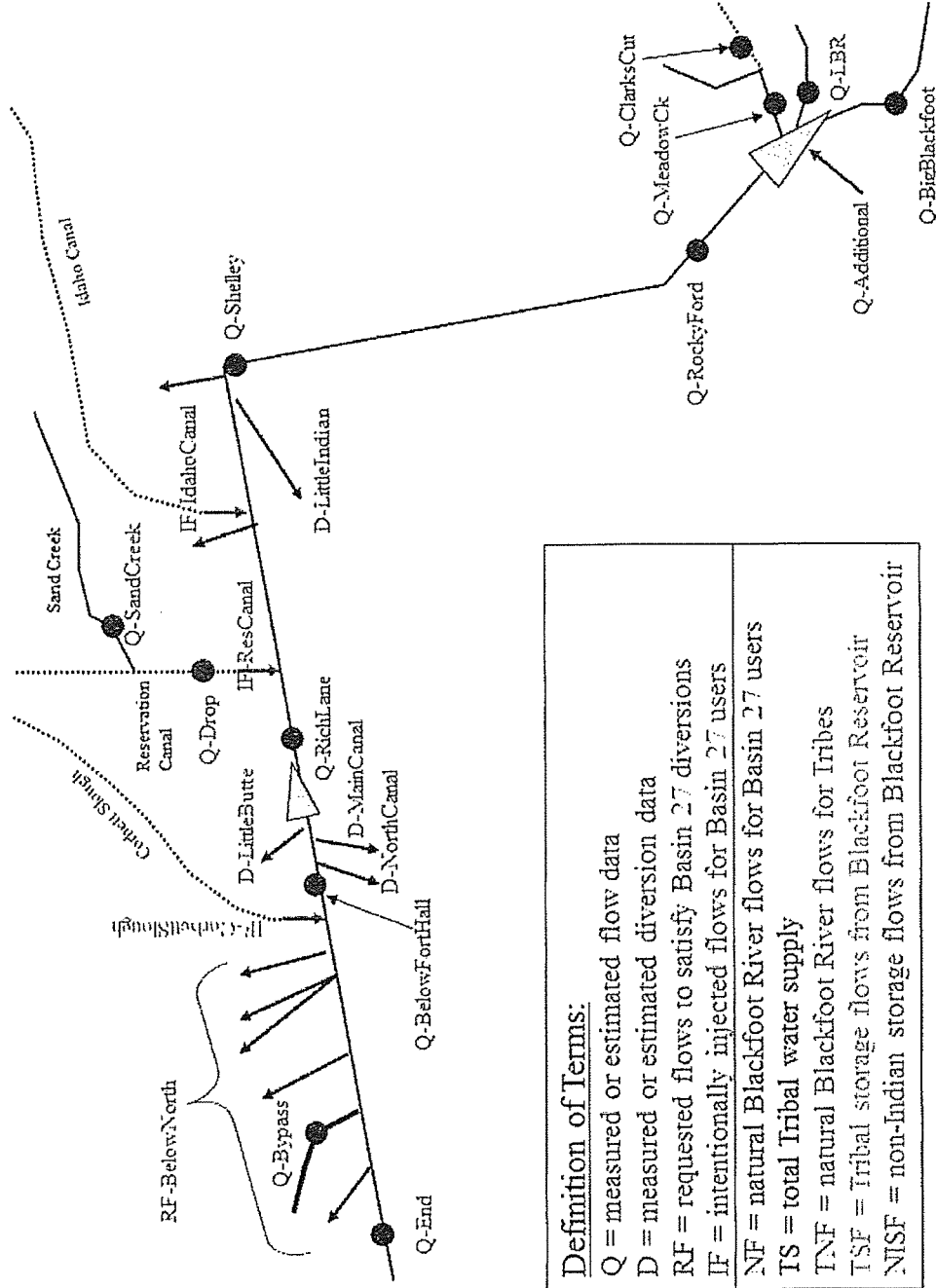


Figure 2



Definition of Terms:

Q = measured or estimated flow data
D = measured or estimated diversion data
RF = requested flows to satisfy Basin 27 diversions
IF = intentionally injected flows for Basin 27 users
NF = natural Blackfoot River flows for Basin 27 users
TS = total Tribal water supply
TNF = natural Blackfoot River flows for Tribes
TSP = Tribal storage flows from Blackfoot Reservoir
NISF = non-Indian storage flows from Blackfoot Reservoir

APPENDIX I

Contents of Data Sharing Website

All data from the stream gages identified in Section 3.d) of the Plan. Those gages include the following:

- Clarks Cut
- Blackfoot River near Henry
- Blackfoot Reservoir Gage
- Blackfoot River at Rocky Ford
- Blackfoot River near Shelley
- Blackfoot River at Rich Lane
- Blackfoot River below Fort Hall North
- Blackfoot River Bypass
- Blackfoot River near Blackfoot
- Meadow Creek near Reservoir
- Little Blackfoot River near Reservoir
- Corbett Slough near Blackfoot River
- Idaho Canal near Blackfoot River
- Sand Creek at Wolverine Road
- Reservation Canal at Head
- Reservation Canal at Drop
- Additional unmeasured flow into Blackfoot Reservoir

All diversion data identified in Sections 3.b) and 3.c) including the following:

- Smith-Maxwell diversion
- Riverton diversion
- Stevens diversion
- Central diversion
- Miners / Younie Blackfoot River pump diversion
- Miners ground water well diversion(s)
- Little Butte diversion
- Eastern Idaho / Blackfoot Slough diversion
- Just Ditch diversion
- Sand Creek Ditch diversion
- Fort Hall Little Indian Canal
- Fort Hall Main Canal
- Fort Hall North Canal
- Non-continuous measurements of diversion data provided for in Section 3.b)iv)

Quantities calculated within the accounting program identified in Section 4.

- $Q_{\text{IntoReservoir}}$
- Total Grays Lake imported water in acre-feet
- $NF_{\text{RockyFord}}$
- $NISF_{\text{RockyFord}}$

$TSF_{RockyFord}$

$TSF_{Shelley}$

$NISF_{Shelley}$

$D_{ShelleytoRichLane}$

$RF_{BelowShelley}$

$NF_{Shelley}$

$NF_{BelowShelley}$

$TNF_{Shelley}$

$TS_{Shelley}$

$NISF_{RichLane}$

$NF_{RichLane}$

$TS_{RichLane}$

$TNF_{RichLane}$

$TSF_{RichLane}$

The natural flow available for diversion as provided in Section 4.d)

Projected natural flow for the following week as provided in Section 4.c)

Injected flows for use by the Basin 27 Water Users and account for injected flow use

$RF_{BelowNorth}$

C_{Loss}

$D_{BelowNorth}$

$D_{ShelleytoBelowNorth}$

$RFT_{BelowNorth}$

Primary Volume and exclusions identified in Sections 4.i)i) through 4.i)iii)

Available credit at the beginning of the irrigation season

Credit use

Remaining credit balance

$Q_{Available}$

$V_{Available}$

Credit accrual at the end of the irrigation season

Available Equitable Adjustment Water at the beginning of the irrigation season

Equitable Adjustment Water use

Remaining Equitable Adjustment Water balance

Equitable Adjustment Water accrual at the end of the irrigation season

The allocation of Q_{Drop} as provided for in Section 4.n)

Diversions made pursuant to Section 4.o)

Calculation of the Sand Creek Exchange as provide for in Section 5.

Excess flows bypassing the Tribes' diversions

Diversion demands of the Fort Hall Main and North Canals

Sand Creek flows available for exchange

Blackfoot River flows near the confluence with Snake River

Sand Creek Exchange calculation

EXHIBIT 3

Blackfoot River Equitable Adjustment

PV = Basin 27 Primary Volume
 EA Water = Equitable Adjustment
 Water
 Credit = Unused PV (See
 Agreement)

