

**SNAKE RIVER BASIN ADJUDICATION AND JOHN
WESLEY POWELL'S MUCH-MISUNDERSTOOD WATER
COMMONWEALTH GOVERNANCE PROPOSAL**

JUSTICE GREGORY J. HOBBS, JR., COLORADO SUPREME COURT

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SNAKE RIVER BASIN ADJUDICATION AND JOHN WESLEY POWELL'S MUCH-MISUNDERSTOOD WATER COMMONWEALTH GOVERNANCE PROPOSAL*

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Congratulations, Idaho! You have undertaken and completed the Snake River Basin Adjudication recognizing more than a hundred and fifty-five thousand water rights.

In doing so, you have applied both state and federal law in determining the allocation and ongoing management of the most precious of all natural resources, the public's water resource. In doing so, you have also implemented basic principles of John Wesley Powell's much-misunderstood water commonwealth governance proposal.

"Oh, if we had only listened to Powell." Such laments most often criticize existing state boundary alignments; they postulate that states should have been drawn to conform with major watershed boundaries,¹ instead of the silly blocks of land Congress carved out of the public domain into states (like Colorado) or the even more preposterous stove/stovepipe alignment of Idaho.²

* This article arises from the author's presentation at the August 25, 2014 event in Boise commemorating the official signing of Idaho's Snake River Basin Adjudication decree. Justice Hobbs, who retired from the Colorado Supreme Court on August 31, 2015, is a co-convenor of Dividing the Waters, a water education project of the National Judicial College for state and federal judges and administrative hearing officers. Justice Hobbs now serves as a Senior Water Judge with the Colorado Courts and Distinguished Jurist in Residence and Co-Director of the Environmental and Natural Resources Program at the University of Denver Sturm College of Law.

1. See Frank Jacobs, 489 - *How the West Wasn't Won: Powell's Water-based States*, BIGTHINK.COM, <http://bigthink.com/strange-maps/489-how-the-west-wasnt-won-powells-water-based-states> (last visited Nov. 29, 2015).

2. Professor Susan Schulten points out that better attention to Powell's drainage map (also featured in this article) could have transformed water and land use planning in the west, but Congress ignored his warning about the limitations of development that is dependent upon irrigation in the face of the west's thinly available water supply. Susan Schulten, *The 19th Century Map Could Have Transformed the West*, NEW REPUBLIC (June 8, 2014), <http://www.newrepublic.com/article/118026/john-wesley-powell-19th-century-maps-american-west>.

However, had we earlier listened to Powell in a more careful way, we might have commenced water adjudications throughout the west much earlier than most of the states turned to this necessity. Read Powell's text of his commonwealth governance proposal and we find he was not suggesting rearrangement of existing state boundaries.³ Instead, he proposed the creation of great irrigation districts that, in some instances, might transcend state boundaries to embrace a people unified by a shared hydrographic unit and vested, under state and national law, with authority to locally adjudicate and regulate water rights⁴ – much like Idaho within its jurisdiction has accomplished through its Snake River Basin Adjudication and is setting forth to accomplish in the pending Coeur d'Alene-Spokane River Basin Adjudication.⁵

I. POWELL'S WATER GOVERNANCE PROPOSAL

In his 1890 Century Magazine article *Institutions for the Arid Lands*,⁶ Powell wrote:

Let such a people organize, under national and State laws, a great irrigation district, including an entire hydrographic basin . . . Let there be established in each district a court to adjudicate questions of water rights . . . Each State should provide courts for the adjudication of litigation between people of different districts, and courts of appeal from the irrigation district courts . . . [and each state] should provide general statutes regulating water rights.⁷

In proposing a system of state courts with authority to adjudicate water right disputes, Powell recognized that interstate waters must be divided between two or more states: “The waters must be divided among the States, and as yet there is no law for it, and the States are now in conflict.”⁸

Powell's prescient call for a division of interstate waters among upstream and downstream states is fundamental to his proposal for a system of locally based courts possessing authority to determine the priority of water rights in cases of conflict when there is not enough water to serve all competing claims. A scant seventeen years later, in the face of interstate conflict between Kansas and Colorado over the Arkansas River, the U.S. Supreme Court established the doctrinal basis for sharing such waters between upstream and downstream states in its 1907 *Kansas v. Colorado* equitable apportionment decision.⁹ In turn, this decision prompted the 20th Century wave of interstate

3. John Wesley Powell, *Institutions for the Arid Lands*, reprinted in *Seeing Things Whole*, 305–06 (William deBuys ed., Island Press 2001) (1890).

4. *Id.* at 299, 308.

5. Powell's famous land and water speech of 1889 to the Montana Constitutional Convention called for counties within that state to be laid out in conformance with drainage basins:

First, I believe that the primary unity of organization in the lands should be the drainage basin which would practically have a county organization, if you please, with county courts . . . then that the government of the United States should cede all of the lands of that drainage basin to the people who live in that basin.

John Wesley Powell, *Address to Montana Constitutional Convention*, reprinted in *SEEING THINGS WHOLE*, 240 (William deBuys ed., Island Press 2001) (1890).

6. POWELL, *supra* note 3, at 299–13.

7. POWELL, *supra* note 3, at 308–09.

8. POWELL, *supra* note 3, at 305.

9. *See Kansas v. Colorado*, 206 U.S. 46 (1907).

compacts designed to resolve or forestall water apportionment litigation, commencing with the 1922 Colorado River Compact.¹⁰

In his 1879 *Report on the Lands of the Arid Region of the United States*, Powell had previously called for priority of utilization as a necessity of living together in the water-scarce lands. “Practically, in that country the right to water is acquired by priority of utilization. . . . If there be any doubt of the ultimate legality of the practices of the people in the arid country relating to water and land rights, all such doubts should be speedily quieted through the enactment of appropriate laws by the national legislature.”¹¹ A law for the arid lands, the foremost principle of prior appropriation water law is that, when there is not enough water to satisfy all water rights in the stream system, the exercise of senior rights needed for actual beneficial use prevails over the exercise of junior rights, which are subject to curtailment for the time and under the conditions required to satisfy the senior rights.¹²

Powell envisioned agricultural use as the mainstay for settlement of the west, but he also foresaw the necessity to adjudicate water rights not only for farms, but also for “[E]ach hamlet, town, and city . . .,” for development of the “[G]reat mineral deposits . . .” and for “[T]he hum of busy machinery” echoing “[T]he symphonic music of industry.”¹³ Prosaically, we would identify this as the traditional litany of agricultural, municipal, commercial, and industrial uses, including hydropower; recognized by the prior appropriation doctrine of the western territories and states as they grew up out of the land and the waters brought into the United States by the 1803 Louisiana Purchase,¹⁴ the 1846 Oregon Treaty,¹⁵ and the 1848 Treaty of Guadalupe Hidalgo.¹⁶ Commencing with these treaties, the land and water laws Congress enacted for settlement of the Western United States have long recognized the lead role of state courts in linking and bridging the hopes and challenges of one nation defined by its watersheds.

II. WATER LAW OF THE STATES AND TERRITORIES SPONSORED BY CONGRESS

Powell was writing large. Through his exploration of the lands and waters of the Colorado River Plateau, notably begun through two headlong plunges down the Colorado River in 1869 and 1871, he had personally filled in the uncharted region roughly depicted in the 1841 Wilkes map as vacant open space.¹⁷

10. See Gregory J. Hobbs, Jr., *CITIZEN’S GUIDE TO COLORADO’S INTERSTATE COMPACTS*, (Rebecca Cantwell and Caitlin Coleman eds. 2d ed. 2015), <https://www.yourwatercolorado.org> (discussing the nine interstate water compacts and two U.S. Supreme Court equitable apportionment decrees to which Colorado is a party).

11. J. W. Powell, *Report on the Lands of the Arid Region of the United States With A More Detailed Account of the Lands Of Utah*, 55–56 (1962) [hereinafter Powell 2].

12. See *Empire Lodge Homeowners’ Ass’n v. Moyer*, 39 P.3d 1139, 1147 (Colo. 2001).

13. POWELL, *supra* note 3, at 305–06.

14. Louisiana Purchase Treaty, U.S.-Fr., Apr. 30, 1803, 8 Stat. 200.

15. Oregon Treaty, U.S.-Gr. Brit., June 15-Aug. 5, 1846, 9 Stat. 869.

16. Treaty of Guadalupe-Hidalgo, U.S.-Mex., Feb. 2, 1848, 9 Stat. 922.

17. Map of Upper California by the U.S. Ex.1841 (Courtesy of Colorado Supreme Court). In fact, this space was not vacant. Multiple native peoples inhabited the great western lands.



FIGURE 1. 1841 Wilkes Map.

Presaging Powell's survey, the 1845 Frémont map displayed the route to South Pass up the North Platte through lands occupied by the Sioux, Arapaho, and Cheyenne Tribes and down the front range of the Rocky Mountains to Santa Fe.¹⁸



FIGURE 2. 1845 Frémont map.

18. Map Showing the Route pursued by the Exploring Expedition to New Mexico and the Southern Rocky Mountains made under the orders of Captain J. C. Frémont U.S. Topographical Engineers and conducted by Lieut. J. W. Abert assisted by Lieut. W. G. Peck, U.S. T.E. during the year 1845 (courtesy of Colorado Supreme Court).

The 1858 Emory map had painted all of the public domain west of the Mississippi River as a vast chunk of land yearning for settlement.¹⁹



FIGURE 3. 1858 Emory map.

Lincoln's 1860 Republican Party platform called for the "free soil" slave-free settlement of the newly incorporated western landscape enabled by the Union Congress passage of the Homestead Act,²⁰ the Railroad Act,²¹ and the Land Grant College Act,²² all in 1862 during the Civil War.²³

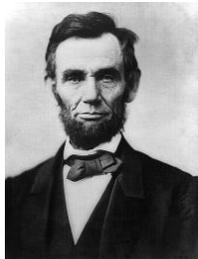


FIGURE 4. Abraham Lincoln

19. Map of the United States and their Territories between the Mississippi and the Pacific Ocean and part of Mexico compiled by surveys made under the order of W. H. Emory 1857-8 (courtesy of Colorado Supreme Court).

20. Homestead Act of 1862, ch. 75, 12 Stat. 392.

21. Pacific Railroad Act of 1862, ch. 120, 12 Stat. 489.

22. Morrill Act of 1862, ch. 130, 12 Stat. 503 (codified as amended at 7 U.S.C. §301 (2012)).

23. Of these significant enactments, Professor Susan Schulten observes that, "During the Civil War, Lincoln and the Republican Party forged an economic path for the West that stressed the development of railways, resources, and land. In fact, the outbreak of the war enabled the party to act on this vision, particularly in the Interior West." Susan Schulten, *The Civil War and the Origins of the Colorado Territory*, 44 *W. Hist. Q.* 21, 21-22 (2013).

Carved into the land to carry the waters flowing from the forested lands of the Rocky Mountains, irrigation ditches sprung up from New Mexico through Colorado, Utah, and Wyoming to Idaho and Montana, as shown by this 1885 map.²⁴



FIGURE 5. 1885 forest lands and irrigation ditches map.

24. Map of the Rocky Mountain Region showing the approximate location of forest areas and irrigation ditches in 1885 compiled from county returns by Col. E.T. Ensign, Forestry Agent of the Department of Agriculture (Courtesy of Colorado Supreme Court). See also *Map of forest lands of the arid region*, 40 CENTURY MAGAZINE, April 1890, at 918, reprinted in POWELL, *supra* note 4, at Map 2, 98–99.

Take a closer look at the Idaho portion of this map. It shows the Snake River Basin country from Wyoming through Idaho to Oregon and Washington.

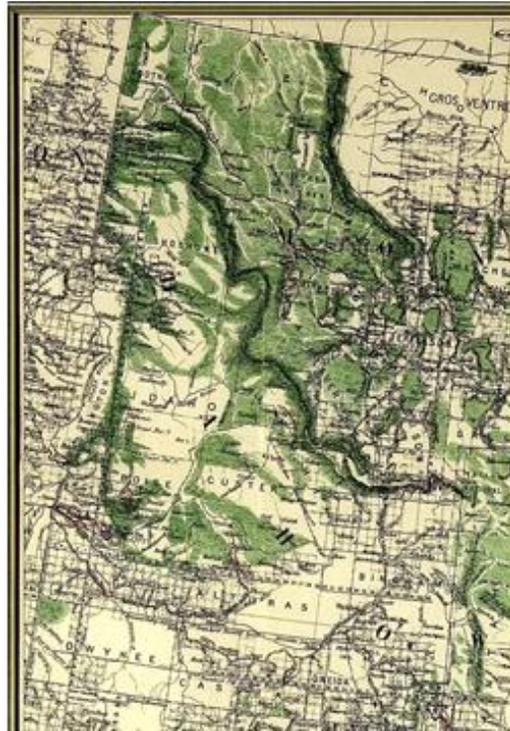


Figure 6. Close-up of Idaho portion of 1885 forest and ditches map.

III. POWELL PUSHES FOR STATE WATER ADJUDICATIONS

Powell published his own map of the “entire arid region”²⁵ depicting what his *Institutions for the Arid Lands* article describes as “natural hydrographic districts, each one to be a commonwealth within itself for the purpose of controlling and using the great values which have been pointed out. There are some great rivers where the larger trunks would have to be divided into two or more districts”²⁶ The map paints the west in glorious color and follows major river basins that cut across state boundaries.

Looking only at this map, one might conclude that Powell is thereby proposing to rearrange state boundaries

25. John Wesley Powell, Eleventh Annual Report of the Director of the United States Geological Survey X (1890) [hereinafter Powell 3]. For an in-depth discussion of this map, see Powell, *supra* note 3, at 98–99.

26. POWELL, *supra* note 3, at 308.



FIGURE 7. 1891 Powell water commonwealth map.

Yet, Powell's article clearly contradicts any such conclusion in the way he assigns roles for "the local governments, the State governments, and the General Government."²⁷ As the owner of most of the lands, the federal government "must provide for the distribution of these lands to the people in part, and in part it must retain possession of them and hold them in trust for the districts. It must also divide the waters of the great rivers among the States."²⁸ The federal government would continue to possess the timber, pasturage, and mining lands but give the irrigable lands "to the people in severalty as homesteads."²⁹ The people of each district would "control and use the timber, pasturage, and the water powers under specific laws enacted by themselves and by the States to which they belong."³⁰ The federal government would declare how "the waters of each district may be distributed among the people by the authorities of each district under State and national laws."³¹ Each district would have "a court to adjudicate questions of water rights"³² and "[e]ach State should provide courts for the adjudication of litigation between people of different districts . . ."³³

Testifying before the House Select Committee on Irrigation, March 15, 1890, Powell explained that "Some of these districts would lie in two states. To this arrange-

27. *Id.*

28. *Id.* at 309.

29. *Id.* at 309–10.

30. POWELL, *supra* note 3, at 310.

31. *Id.*

32. *Id.* at 308.

33. *Id.* at 309.

ment the consent of the States should be obtained, and all the districts should be organized under state laws.”³⁴ Powell described his proposal as one that would create “a great body of commonwealths. In the main these commonwealths would be like county communities in the States.”³⁵ In sum, his commonwealth ideal embraces states, counties within states, and interstate legal arrangements involving watersheds shared by multiple states. The unifying but divisive reality is the imperative of water scarcity in the western lands.

In his *Report on the Lands of the Arid Region*, Powell wrote that “the great Rocky Mountain Region of the United States embraces four-tenths of the whole country, excluding Alaska . . . In all this region the mean annual rainfall is insufficient for agriculture . . . The limit of successful agriculture without irrigation has been set at 20 inches . . . Its western boundary is the line already defined as running irregularly along the one-hundredth meridian.”³⁶

Charles Schott’s rain chart included in Powell’s Arid Lands Report used shades of blue to demonstrate water plenty in the east compared to brown water scarcity in the west.³⁷



FIGURE 8. 1870s Schott rain chart.

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34. POWELL 3, *supra* note 25, at 297.
35. *Id.* at 255.
36. POWELL 2, *supra* note 11, at 13, 15.
37. SCHULTEN, *supra* note 2.

IV. WESTERN STATES PRESS FOR ADJUDICATION OF FEDERAL WATER RIGHT CLAIMS IN STATE COURT

Sorting out Powell's water governance proposals looks a lot like Colorado and Idaho are practicing what Powell was preaching. Locally based courts adjudicate water right claims for uses on public and non-public lands within the hydrographic basins of the states, applying state and federal law. As Congress authorized commencing with the 1866 Mining Act and reiterated through a series of subsequent statutes,³⁸ states may establish use rights in the unappropriated waters of the public domain, subject to the periodic exercise of federal authority to reserve unappropriated water, expressly or impliedly, for federal uses, including for parks, monuments, and Indian reservations.³⁹ The McCarran Amendment, sponsored by a Nevada senator,⁴⁰ provides a waiver of U.S. agency and tribal immunity so that a state may adjudicate federally-based water rights to stream water within the state, along with state-based water rights.⁴¹

A McCarran stream adjudication involves a state's commitment to determine the point of diversion, amount of diversion, type of use, and place of use, together with each right's priority date, for every state-based and federal-based water right within its jurisdiction, so that all decreed rights may be administered in relation to each other.⁴² Equitable apportionment decisions of the U.S. Supreme Court and interstate compacts between states approved by Congress address the division of interstate waters. A federally reserved water right within a state is counted as part of the state's apportionment of interstate waters.⁴³

Through "the Colorado trilogy" of McCarran Amendment cases in the U.S. Supreme Court during the 1970s, the western states overcame the Justice Department's persistent effort to keep federal water right adjudications in federal court.⁴⁴ This litigation tested Colorado's 1969 Water Right Determination and Administration Act,⁴⁵ which established seven water divisions within Colorado aligned along major watersheds. Commencing in 1879, three years after statehood, the Colorado General Assembly had assigned state district courts the authority to adjudicate water matters, providing general jurisdiction judges the authority in Colorado's twenty-two judicial districts to decide water cases.⁴⁶ Periodic general adjudications and supplementary adjudications

38. Act of July 26, 1866, ch. 262, § 9, 14 Stat. 253; *See California v. United States*, 438 U.S. 645, 660–62 (1978); *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U.S. 142, 162–64 (1935).

39. *See Winters v. United States*, 207 U.S. 564, 575–76 (1908); *Arizona v. California*, 373 U.S. 546 (1963).

40. McCarran Amendment of 1952, ch. 651, tit. II, § 208(a)–(c) (1952) (codified at 43 U.S.C. § 666 (2012)).

41. *See, e.g., United States v. City & Cty. of Denver*, 656 P.2d 1, 16–20 (Colo. 1982).

42. *See Gregory J. Hobbs, Jr., Priority: the Most Misunderstood Stick in the Bundle*, 32 ENVTL. L. 37 (2002).

43. *See Arizona v. California*, 373 U.S. at 598–601.

44. "The Colorado Trilogy" of McCarran litigation in the United States Supreme Court: *United States v. Dist. Court ex. rel. Eagle Cty.*, 401 U.S. 520 (1971); *United States v. Dist. Court for Water Div. No. 5*, 401 U.S. 527 (1971); *Colorado River Water Conservation Dist. v. United States*, 424 U.S. 800 (1976).

45. Water Right Determination and Administration Act of 1969, ch. 373, Colo. Sess. Laws 1200; Colo. Rev. Stat., § 37-92-101 et. seq. (2014).

46. *See generally*, Gregory J. Hobbs, Jr., *Colorado Water Law: An Historical Overview*, 1 U. DENV. WATER L. REV. 1–74 (1997).

occurred upon petition by interested parties, but the federal agencies and the tribes were not participating due to the sovereign immunity status of federal agencies and tribes.⁴⁷ State water rights holders desired a state forum for the integration of federal and state rights within a unified system of water rights administration.⁴⁸

Colorado's interest in such a system centers on its pressing need to secure the benefit of its compact apportioned and equitably divided waters. The following map showing the seven water divisions and average water flows out of the state illustrates that Colorado must limit its consumption on the average to one-third of the water its watersheds produce because of interstate delivery requirements.⁴⁹

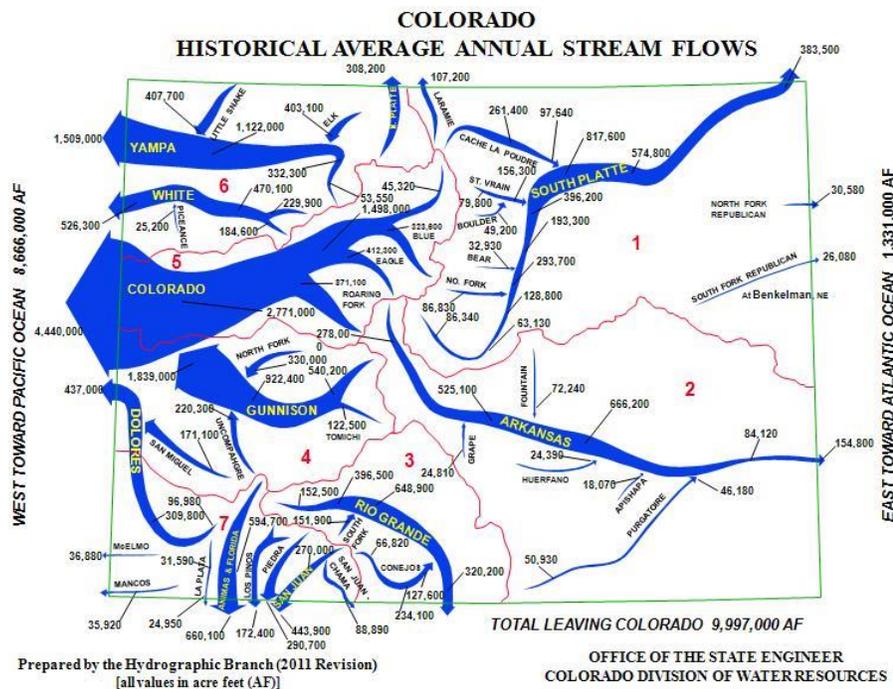


FIGURE 9. Colorado State Engineer average annual streamflow chart.

Accordingly, to secure as much reliability in the definition and exercise of water rights as possible, a two-year General Assembly study mandated in 1967 resulted in the 1969 Act, which provides for all state, federal, and tribal water right claims to be adjudicated in the water court for the division in which a diversion is being made or is proposed.⁵⁰ Each division has a water judge, an alternate water judge, a referee, and a divi-

47. *Id.*

48. *Id.*

49. COLO. DIV. OF WATER RES., <http://water.state.co.us/Home/Pages/default.aspx> (last visited Nov. 29, 2015).

50. See generally, Gregory J. Hobbs, Jr., Colorado's 1969 Adjudication and Administration Act: Settling In, 3 U. DENV. WATER L. REV. 1 (1999).

sion water engineer. Each year the Chief Justice of the Colorado Supreme Court reappoints water judges and alternate water judges from among district court judges residing in the seven water divisions. Applications for determination of conditional water rights, absolute water rights, changes of water rights, and augmentation plans must be filed with the clerk of the water court for the division in which the water is diverted. Applications are noticed and published through a monthly water court resume and a local newspaper of general circulation. The court obtains *in rem* jurisdiction over the water right by virtue of such publication.⁵¹ Appeals from water court judgments proceed directly to the Colorado Supreme Court.

Each application proceeds on a case by case basis within the context of an ongoing adjudication of all surface and tributary groundwater within the state. Interested persons may become parties to the case by filing a statement of opposition to the application within sixty days. All applications are then referred to the referee who conducts a factual and legal inquiry, consults with the division water engineer, receives presentations by the parties, and issues a proposed ruling on the application and a decree if the water right is recognized.⁵² In addition to traditional consumptive water uses, Colorado statutes now provide for Colorado Water Conservation Board appropriation of non-consumptive instream flow water rights⁵³ and local government appropriation of recreational in-channel diversion rights, types of water rights Powell never envisioned.⁵⁴ The referee system produces consent decrees in the overwhelming number of all water cases. But, any person can protest the referee's ruling and obtain a trial before the water judge.

V. IDAHO'S SNAKE RIVER BASIN ADJUDICATION EMBRACES POWELL'S CALL

Idaho's legislature has likewise determined to exercise McCarran jurisdiction, instead of leaving federal and tribal water right claims to the federal courts.⁵⁵ Zoom in on Powell's map and you'll see the Snake River basin in bright blue.

51. See *S. Ute Indian Tribe v. King Consol. Ditch Co.*, 250 P.3d 1226, 1235–36 (Colo. 2011).

52. See UNIF. LOCAL RULES FOR ALL STATE WATER COURT DIV., COLO. CT. R. ch. 36, <http://www.courts.state.co.us/Courts/Water/Index.cfm>.

53. See COLO. REV. STAT. ANN. § 37-92-103(4)(b) (West 2014).

54. See COLO. REV. STAT. ANN. § 37-92-103(4)(c) (West 2014).

55. See generally SNAKE RIVER BASIN ADJUDICATION, <http://www.srba.idaho.gov/SRBA1.HTM> (last visited Nov. 29, 2015).



FIGURE 10. Close-up of Powell water commonwealth map.⁵⁶

Mark Fiege describes water development's effect in Idaho's Snake River country as an "Irrigated Eden" that "combined varying degrees of family-based labor, voluntary cooperation, bureaucracy, industrial organization, and affiliation with the federal government."⁵⁷ "One of the most striking aspects of this changing social order was the extent to which the landscape encouraged irrigators to act cooperatively, in contradistinction to the individualism and private property boundaries that otherwise divided them."⁵⁸

The Snake River plain gave rise to irrigated farms out of which cities grew, fueled by hydropower, water storage dams, and the high capacity irrigation pump for extracting groundwater. Controversy over the water rights of hydropower dams capable of limiting further upstream development and a better understanding of tributary groundwater's interconnection with surface water supply, ultimately required the initiation and completion of a comprehensive Snake River Basin adjudication to identify the amount and priority of state based and federal based water rights, including Indian water rights.⁵⁹

Thus, a map of Idaho is a map of interconnected water needs, water rights, and their administration.⁶⁰

56. See Map 7, JOHN WESLEY POWELL, INSTITUTIONS FOR THE ARID LANDS, *reprinted in SEEING THINGS WHOLE*, *supra* note 3, at 98.

57. Mark Fiege, *Irrigated Eden: The Making of an Agricultural Landscape in the American West* 206 (1999).

58. *Id.* at 207.

59. Idaho's adjudication and management of tributary groundwater and surface water priorities, see *Clear Springs Foods, Inc. v. Spackman*, 252 P.3d 71, 84, 150 Idaho 790, 803 (2011), like Colorado's, is a necessity of water law and the imperatives of interconnected hydrology. See Gregory J. Hobbs, Jr., *Protecting Prior Appropriation Water Rights Through Integrating Tributary Groundwater, Colorado's Experience*, 47 IDAHO L. REV. 5 (2010).

60. Idaho Rivers Map, <http://www.bing.com/images/search?q=idaho+rivers+map&id=67CD8F9ABBADF853455D48554E4E7E723E84C9A5&FORM=IQFRBA#view=detail&id=49B614ED19244E040A20C8B61687FD8BFFE2B27F&selectedIndex=25>.

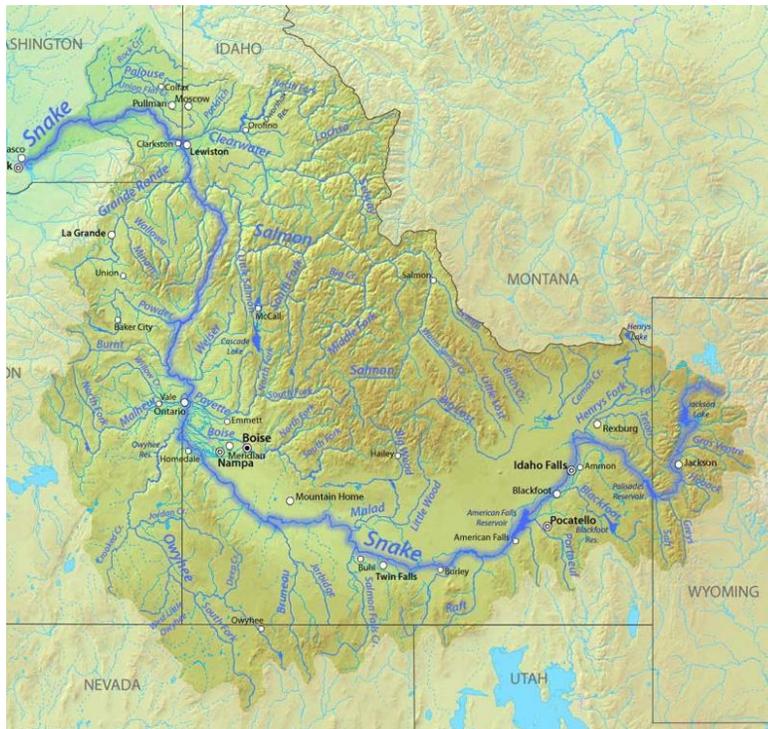


FIGURE 11. Idaho rivers map.

Going forward, Idaho like its sister western states will continue to confront the need for voluntary changes of water rights to new and different uses and new and different locations for all the values, consumptive and non-consumptive, that anchor western state economies to the needs and likes of the people who live in or visit this great landscape. Colorado's experience has produced an ongoing case-by-case adjudication process to address changes of water rights⁶¹ and augmentation plans that protect senior water rights while allowing out-of-priority diversions to occur.⁶² In all western states, enforcement of water rights priorities and mechanisms to accomplish sale and/or lease of them, without causing injury to other state, federal, and tribal water rights, will likely be a necessity,⁶³ together with the use of all available water saving and storage technologies that can be reasonably employed.

VI. REFLECTING ON POWELL'S COMMUNITY WELL-BEING IDEALS

Democracy works in increments of adaptation to the needs and values of the people. Powell believed the perpetual future of American democracy would be agrarian in nature; he did not see that the 20th Century would feature the West as the nation's foremost urbanizing region. He did not envision the extent to which the 20th Century's Pro-

61. See *Farmers Reservoir and Irr. Co. v. City of Golden*, 44 P.3d 241, 245–47 (Colo. 2002).

62. See *Williams v. Midway Ranches Prop. Owners' Ass'n*, 938 P.2d 515, 521–22 (Colo. 1997).

63. See *ISG, LLC v. Ark. Valley Ditch Ass'n*, 120 P.3d 724, 732–33 (Colo. 2005).

gressive Conservation movement would result in laws placing the national government squarely in control of supervising use of the remaining public lands. He did not anticipate that national government would finance large water storage and distribution projects, mainly implemented to keep agriculture in place while cities boomed. He did not foresee that the Environmental movement would result in federal permitting requirements constraining local decision making. He would have been amazed at state water laws that preserve instream flow, recreation, fish and wildlife. Yet, he was prescient about the value of the public's water resource and its agrarian roots.

As Donald Worster explains, Powell's proposal to establish local self-government by hydrographic basins depended upon irrigation districts supervising the forests and grazing lands as they did the water.⁶⁴ The people of these districts would be restricted to whatever water flowed within their drainage area; accordingly, the amount of water available for storage and use should be determined and measured in acre-feet of water available.⁶⁵ The government would not build them any dams or canals for them, or decide who should harvest forests, or protect them from fire, or manage grazing of livestock on the open range.⁶⁶ While much land was potentially available for irrigation, only a fraction of it could actually be irrigated even if all the streams were dried up, an eventuality he contemplated.⁶⁷

Powell's economic proposals were utopian, anti-speculative, and anti-monopolistic, informed by the emerging sciences of hydrology and climatological variation. Above all, as Worster emphasizes, Powell stressed that whoever controls water in an arid country controls society; thus, state constitutions should vest possession and right to the waters in the people.⁶⁸ "Fix it in your Constitution that no corporation—no body of men—no capital can get possession and right to your waters. Hold the waters in the hands of the people."⁶⁹

The moorings of prior appropriation water law reside in this penultimate principle that the public owns the water and its actual beneficial use, without speculation, monopolization, or waste, is available to the people for the values it prizes, subject to the amount of water available.⁷⁰ Due to water scarcity and inevitable conflict, despite his belief in community control problem-solving befitting a democratic society, Powell foresaw the necessity to establish courts with jurisdiction to declare and enforce water rights. The integration of federal reserved rights, tribal rights, state appropriative rights, and inter-state apportionments in the public's water resource will continue to be a work in the progress of justice.

64. DONALD WORSTER, *A RIVER RUNNING WEST, THE LIFE OF JOHN WESLEY POWELL* 495 (2001).

65. *Id.* at 477, 489.

66. *Id.* at 495.

67. *Id.* at 529 (citing Official Report of the International Irrigation Congress at 109, 112). (Powell said "When all the rivers are used, when all the creeks in the ravines, when all the brooks, when all the springs are used, when all the reservoirs along the streams are used, when all the canyon waters are taken up, when all the artesian waters are taken up, when all the wells are sunk or dug that can be dug in all this arid region, there is still not sufficient water to irrigate all this arid region.")

68. See WORSTER, *supra* note 64, at 480-81.

69. *Id.*

70. See Gregory J. Hobbs, Jr., Reviving the Public Ownership, Antispeculation, and Beneficial Use Moorings of Prior Appropriation Water Law, 84 U. COLO. L. REV. 97 (2013).