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MARKETING MISSOURI RIVER WATER: COMPETING PLANS FOR COMMODITIZING A NATURAL RESOURCE

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Abstract

The Missouri River ran free across a large piece of the North American continent until, during the 1940s, accumulated national and regional economic concerns led to comprehensive federal development. Six vast dams were constructed on the main channel, impounding somewhere near seventy-five million acre-feet of water, controlling floods and generating electricity, while supporting navigation, recreation and wildlife. As the twentieth century closed it had become apparent that the larger portion of the waters impounded in the federal reservoirs were not allocated to or in demand for any project purposes, and therefore available for use. Somewhat remote geography and a lack of demand in the vicinity of the reservoirs proved to be temporarily insulating, allowing the growth of a recreation industry around the reservoirs. This period of repose may now be closing. The advance of pipeline technology now makes long distance water transfers to water short economies in the south and west feasible. Close-in, immediate demand for withdrawals exists to support energy fields in and around North Dakota. This Essay attempts to briefly describe previous and current efforts to market reservoir waters, and provides details of the federal laws which authorize water marketing. The larger purpose, however, is to initiate discussion of the significant policy questions which the author believes will be raised in the near future.

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*2 I. INTRODUCTION

Crowding of the continent, demand for land, water, air, and minerals, along with the intensification of agricultural production are ever-present themes in natural resources policy. Every place and activity now seems to affect every other. The advance of technologies magnifies scale while collapsing time and distance, leading inevitably toward tension over control and access to coveted but limited resources.

Resisting change are the communities, individuals, economies, and political entities located near, and currently reliant upon, the natural resources, particularly water, forest, air, and open space, which represent amenity, ecosystem and economic values. Such resources are typically seen as uniquely local or regional assets—in some way proprietary—leading to an assumption that current uses and enjoyment will continue. This repose is usually the result of reliance on some combination of laws, geography,² history, political power and economic investment. Yet, legal jurisdiction over natural resources is seldom confined to state or local law. In the typical case, there is a strong federal presence due to land ownership, sovereign obligations, or heavy federal investment, resulting in a national public interest that may appear to be in competition with both state and local expectations. In addition, where a resource extends across state boundaries, interstate competition may defeat cooperation.

Thus, the case of the Missouri River combining all of these elements. The economic values associated with the River today result from a huge federal development program, the benefits of which extend beyond the basin states to the national economy. In time, the benefits of this federal investment may shift sharply in favor of out-of-basin uses. Meanwhile, the states in the basin have failed to cooperate in managing the river, and instead, each state has vigorously asserted its most parochial interests.

II. THE MISSOURI RIVER

The Missouri River is the longest river in the United States. Its 2,540 miles drain one-sixth of the continent, stretching from headwaters in Wyoming and Montana to its mouth deep in the State of Missouri, where it spills into the Mississippi River, providing it with the water necessary to carry the nation's commerce to the Gulf of Mexico. Equally as important, a series of six massive reservoirs have been constructed on the river's main channel, creating three of the five largest man-made lakes in the United States. With a combined storage capacity of seventy-four million acre-feet, it is the largest system of reservoirs in the United States.³ In the upper basin, the two large reservoirs, behind Garrison Dam in North Dakota and Oahe Dam in South Dakota, together store in excess of 46.9 million acre-feet of mountain and prairie runoff.⁴ The Missouri River below the dams flows into the lower basin, where it is channelled within levees and provides a free-flowing navigation channel to the Mississippi.

The Missouri River Basin encompasses ten states, several Canadian provinces, twenty-five Indian tribes, and nearly the full range of human land uses.⁵ It includes major metropolitan areas, relatively unpopulated expanses, sub-humid dry lands in the upper basin, and lands of water⁶ abundance in the lower.⁷ Its modern history is that of conflict between the upper and lower basins, and the inability of basin states to achieve any level of accord in river management. In sum, the basin, as developed, enjoys an abundance of stored water.

This essay argues that an abundance of stored and flowing water will inevitably attract interest from geographical areas not so endowed and by municipal and industrial interests in pursuit of reliable new supplies. Assuming that such interest does or will soon exist, questions emerge: Is there a legal structure and process available that provides for the transfer of water from Missouri River reservoirs? Is use of the reservoir water limited to the river's basin, or can the waters be transported for use out of the basin? Do the basin states and Indian tribes have rights to any of the stored water in the reservoirs and, if so, by what process are they able to exercise control? Are there enforceable rules that assure that the River's ecosystem retains a natural vitality?

III. INDUSTRIAL WATER MARKETING UNDER THE FLOOD CONTROL ACT OF 1944

The river of Lewis and Clark and the Missouri River ecosystem underwent lasting alteration by a massive water development known as the Pick-Sloan Plan, created by the Flood Control Act of 1944 ("FCA 1944").⁸ The project combined two movements prevalent in the early part of the last century. First, the progressive conservation movement was committed to the idea that multiple-purpose, basin-wide water development projects could stimulate economic growth in arid or economically under-developed regions. Second, the arid lands reclamation, or irrigation, movement, which was promoted by land development and irrigation enthusiasts.⁹ Political momentum for the project resulted from prolonged drought in the 1930s, promotion by navigation and irrigation interests, a desire for public works projects to reduce unemployment and provide work for returning soldiers, and the effects on the lower basin of several large floods.¹⁰ The final legislation was the result of the reconciliation of two separate and conflicting plans for development of the Basin. The report for the U.S. Army Corps of Engineers ("Corps") was prepared by Colonel Lewis A. Pick.¹¹ The report for the Bureau of Reclamation ("Bureau") was prepared by W. G. Sloan.¹² The Corps' plan emphasized flood control and navigation utilizing large dams and reservoirs on the main stem of the River. The Bureau's goals were irrigation and hydropower, and proposed approximately ninety dams and reservoirs, along with several hundred irrigation projects.¹³ Both plans included varying numbers of large

mainstem reservoirs. After negotiations, the two plans were reconciled,¹¹ and enacted into law, with legislative recognition and incorporation by reference to the reconciled plans.¹² Although formally reconciled, the two plans were far from a compromise. The legislation "was an impossible attempt to satisfy the competing agencies [which] . . . contained nearly every project proposed in both Pick's and Sloan's plans."¹³ In fact, the legislation included inconsistencies and conflicts, and was passed on a hope "that the engineers would manage the abundant water resources of the basin in a manner that would avert potential conflict."¹⁴ The legal, political, and physical history of the Act is of the struggle to deal with the inherent problems. In many respects, this has been the case. Five mainstem dams were constructed, and the pre-existing Fort Peck reservoir was integrated into the system. Each dam generates hydroelectricity, provides partial protection from floods to cities and farms downstream and allows for management of flows to support navigation seasons in most years. In addition, the reservoirs themselves now support recreation industries. Numerous irrigation works have been constructed upstream of the Dakotas, although the Sloan Plan's dream of a vast irrigation regime across both Dakotas is unrealized.¹⁵ In the broadest sense, the clear purpose of the Pick-Sloan legislation was economic stimulus through agricultural and *6 industrial growth, all perceived as serving a national interest. It was "a basin-wide plan most likely to yield the greatest good to the greatest number of people"¹⁶ and allowed for modifications when physical and economic conditions make necessary.¹⁷ The original Pick-Sloan contemplated extensive diversion of water from mainstem reservoirs to large canals capable of providing irrigation water to vast portions of the eastern Dakotas.¹⁸ This plan contemplated an annual cycle during which summer reservoir levels would be lowered substantially. As events unfolded, irrigation in the Dakotas did not develop and navigation in the lower river diminished. The resulting surplus of water in the reservoirs provided a basis for the surprising growth of an upstream recreation economy based on flat water fishing. The surplus also allowed the Corps a level of flexibility in water management that it employed to respond to legal challenges under the Endangered Species Act and periodic drought, while still delivering cooling water for downstream electrical power stations and production of hydroelectricity at the dams. The availability of ample surpluses in the reservoirs also mooted potentially meretricious legal controversies involving Indian and states' rights in river flows. One of the designated purposes of the Pick-Sloan plan—marketing of water for industrial purposes—has been slower to materialize, although the legislation leaves little doubt as to this goal. Section 6 of the FCA 1944 reads:

The Secretary of War is authorized to make contracts with States, municipalities, private concerns, or individuals, at such prices and on such terms as he may deem reasonable, for domestic and industrial uses for surplus water that may be available at any reservoir under the control of the War Department: Provided, That no contracts for such water shall adversely affect then existing lawful uses of such water. All moneys received from such *7 contracts shall be deposited in the Treasury of the United States as miscellaneous receipts.¹⁹

The legislative history supporting the authority to contract delivery of industrial water is equally straightforward. The Sloan Plan²⁰ contains the more explicit discussion, identifying industrial water clearly as a project purpose.²¹ In addition, the Sloan Plan also acknowledges that there will be a "greater requirement[] for industrial water supplies" in the future.²²

The Pick Plan identifies industrial water marketing as a project purpose while predictably focusing on flood control. It also reflects with some emphasis that the multi-purpose objectives will evolve with the public interest: [The project] contemplates that the uses of presently authorized and existing multiple-purpose reservoirs will be progressively broadened and reapportioned as additional water is stored by the dams When completed the basin plan will be operated for maximum multiple-purpose use. This preference can be given to the functions which contribute most significantly to the welfare and livelihood of the people of the various parts of the basin, and at the same time adequate steps may be taken to meet new economic situations that may arise in the future.²³

As already observed, the final version of the FCA 1944 combined the Pick and Sloan Plans, leaving open the issue of how to deal with the interdependent and potentially conflicting uses of navigation, flood control, hydropower, irrigation, municipal, and industrial uses.

*8 IV. PRIOR EXPERIENCES WITH INDUSTRIAL WATER MARKETING IN THE BASIN

Marketing water from the River for municipal or industrial purposes, although authorized in the original legislation, is a concept that has been emerging slowly. It is only now beginning to take on momentum. The emergence is marked by several Supreme Court opinions and by early attempts to develop water from market.

A. The Montana Litigation

As part of the Pick-Sloan project the Bureau constructed the Yellowstone Reservoir in south central Montana and the Boysen Reservoir in Wyoming. Each project served multiple purposes, including irrigation, hydropower, and flood control. In 1975 the Bureau entered into contracts for the sale of reservoir water for industrial purposes. Agricultural and environmental interest groups filed suit seeking to enjoin the sales, arguing that the FCA 1944 did not authorize such sales.²⁴ The trial court's opinion describes and analyzes the legislative history of Section 6 in detail, concluding that the FCA 1944 "authorizes use of project water for industrial purposes and also expressly authorizes the marketing thereof."²⁵ The opinion also observes that the Pick-Sloan Plan "would develop in stages with sufficient flexibility to meet unforeseen changes in the physical and economic conditions of the area."²⁶ Finally, "[t]he Congressional debate also indicated an awareness by Congress that industrial water supplies would be developed through the proposed projects, and that unforeseen future events might dictate substantial marketing use."²⁷ On appeal, the Ninth Circuit Court of Appeals affirmed, adopting with approval the district court's analysis of Section 6.²⁸ The decisions represent a sharp approval of the industrial marketing purpose in FCA 1944, and their analysis of Section 6 retains validity. We shall soon see, however, that the Supreme Court has held that the power to market water from the mainstem reservoirs is a matter for the Corps rather than the Bureau.²⁹ Together the decisions established a solid set of judicial interpretations that support the marketing of water from reservoirs.

*9 B. South Dakota and the ETSI Litigation

In 1974, the Wyoming State Legislature authorized its State Engineer to issue permits from the Madison groundwater formation to Energy Transportation Systems, Inc. ("ETSI"), a private joint venture, for use in a coal slurry pipeline designed to ship Great Plains coal to the south central United States.³⁰ Coal slurry is a mixture of pulverized coal and water, and a slurry pipeline efficiently transports bulk coal.³¹ The Wyoming groundwater permits entitled ETSI to withdraw an average of 15,000 acre-feet of water per year.³²

The success of the ETSI proposal depended on a world influenced by the OPEC oil embargo of the 1970s—a world of inflation, energy shortages, and regulated railroad shipping rates.³³ These factors all disappeared by the early 1980s, and the ETSI project was ultimately abandoned. However, the events that occurred during project development provided a case study for a time when industrial uses of reservoir water were proposed.

The proposed ETSI well field was located adjacent to the Wyoming-South Dakota border and presented a challenge to South Dakota's water managers and policy makers. The projected drawdown of the local Madison aquifer over time was a direct threat to municipal well fields in South Dakota and the effect on surface water flows threatened drinking water and waste management, as well as environmental and aesthetic impacts on the tourist and outdoor recreation economy of the Black Hills region.³⁴

South Dakota faced an uneasy situation. Its option to actively resist potential damage was limited to lengthy litigation with little prospect of success. This situation changed dramatically when, in 1981, ETSI expressed a willingness to look to the Oahe Reservoir as a primary source for its project and to hold its Wyoming water rights as a reserve.³⁵ A pipeline carrying Missouri River water from the Oahe Reservoir to Wyoming coal preparation stations presented South Dakota with several advantages.

*10 First, the proposed pipeline option avoided the need for a legal confrontation over the Madison aquifer water permits. Second, it allowed a practical method for addressing another state issue—the delivery of reliable supplies for domestic and stock watering use in the open range between the Missouri River and the Black Hills.³⁶ ETSI was willing to contract to provide water to western South Dakota communities along the pipeline route, a result that would otherwise be achieved only by large-scale public subsidy. Third, ETSI proved willing to pay money to the State of South Dakota for the Oahe water right, a bold notion when viewed in the context of western water law systems that are based on rights claimed free of charge to private users.³⁷

Fourth, the U.S. Supreme Court in 1982³⁸ ruled that the Constitution's Commerce Clause precluded states from preventing exports of water from within their boundaries for parochial, political, or economic reasons. In other words, the court's ruling established that water is an item of commerce, subject to federal regulation, and states may not interfere with commerce in water.³⁹ South Dakota interpreted this ruling as a precursor to an active water market in which it hoped to be an early entrant. Finally, the timing of the ETSI proposal was significant because it coincided with a new requirement by the federal executive that state and local governments contribute a share toward federally subsidized water projects within their boundaries.⁴⁰ At that time, economically advanced states were in a position to meet the local share requirement, but South Dakota, with a small population and an agrarian economy, was not in a position to contribute, making it considerably more difficult, if not impossible, to compete for federal subsidies. ETSI's willingness to pay for Oahe water thus provided a potential fund on which future water development would be based.⁴¹

This innovative approach required supporting state legislation by a special session of the South Dakota Legislature, and as the pieces of the complex puzzle came into place, the Governor could summarize:

Once this agreement began to take shape and it appeared that our goals with respect to preserving the Madison Formation, providing water to Western South Dakota communities, and obtaining *11 money for water development were actually achievable, it became impossible for South Dakota to reject this virtual bird in the hand in favor of protracted and uncertain litigation that might accomplish only one of our goals.⁴²

Success of the proposed transbasin diversion depended upon a large supply of unappropriated water and a legally valid state water right. State water law is based on the familiar principal of seniority of rights, and the availability, value, and security of a right to use water is dependent on its original appropriation date.⁴³ Because virtually all of the surplus water impounded behind the Oahe and Garrison dams was then, and is now, unappropriated under state law, the ETSI project developers were in a position to claim a secure senior water right, assuming that state water law governed. South Dakota took the position that, at the least, it was entitled to issue state water permits from its share of natural flows from the main channel of the Missouri River, while holding open a potential claim to a share of water impounded by the federal dam.⁴⁴

Implementing the deal required special state legislation in order to address several specific problems. Because the state constitution prohibits transfers of special privileges to private parties, it was necessary to craft legislation of general applicability.⁴⁵ The solution was a law that would allow a state-chartered special district—the South Dakota Conservancy District—to apply for and to obtain water rights for the purpose of selling them to third persons for consideration in energy development use in and out of the state. Nothing in the legislation was specific to ETSI, and the general statute remains on the books.⁴⁶

Under state water law, water rights are issued to successful applicants free of financial charge.⁴⁷ The ETSI developers, however, were willing to pay the State of South Dakota for water, provided that a lawful mechanism for the purpose could be established. Arranging payment to the Conservancy District solved this problem and, as a practical matter, put the *12 State in the business of selling water rights to energy companies, whether in or out of the state.⁴⁸

South Dakota's legal strategy could not be limited to state legislation, however, because the water to be appropriated lay in storage behind the federal Oahe Dam. In order for the State's scheme to succeed, it required recognition of the state water right (and, it follows, the lucrative sales contract) by the appropriate federal water management agency. However, the FCA 1944,⁴⁷ which governs management of the Missouri River, delegates authority to two agencies—and the statutory difference between the two is substantial. The Corps is charged with constructing the large dams on the main river channel and managing them for flood control, navigation, and hydropower.⁴⁸ The Bureau, part of the Department of the Interior, is charged with developing projects that carry water from the main reservoirs to various irrigation projects to be developed in the upper basin.⁴⁹ The irrigation projects from the dams on the main channel never materialized and are generally agreed to be impractical.⁵⁰ The mixture of legislative authorizations caused the Corps to construct and operate the dams, reservoirs, and navigation channel, while the Bureau maintained paper authority but few projects on the ground.⁵¹

The laws that govern the operation of the Bureau of Reclamation provide water marketing authority, as well as a saving clause that states:

Nothing in this Act shall be construed as affecting or intended to affect or in any way interfere with the laws of any State or Territory relating to the control, appropriation, use or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this Act, shall proceed in conformity with such laws.⁵²

Section 8, as it is known, requires the Bureau to conform to state law in the delivery of mainstem water, a constraint that was viewed at the time as basic by the upper basin states, which were and are concerned that state control may be subordinated to the Corp's traditional preference for "13 managing rivers (for flood control and navigation). For South Dakota, a reservoir withdrawal permit issued by the Bureau would be subject to Section 8, and would validate the ETSI water right, because section 9(c) of the FCA 1944 states that "reclamation . . . developments [are] to be undertaken by the Secretary of the Interior . . . governed by the Federal Reclamation Laws."⁵³ The State thus reasoned that a significant portion of the water in storage behind the Oahe Dam was intended for irrigation that was unlikely to be developed in the foreseeable future. Additionally, it reasoned that the use of "irrigation water" ought to be governed by reclamation laws, including Section 8 recognition of state water permits, even when the waters are marketed for energy development.

In contrast, Section 6 of the FCA 1944, as we have seen, authorizes the Corps to "make contracts . . . for domestic and industrial uses for surplus water that may be available at any reservoir under the control of" the Corps.⁵⁴ Thus, when the Corps designates waters in the reservoirs as "surplus," it can market the water independently of the states, without recognition of state water permits, and without risk of sale by the state. The water is subject to a mere administrative permit rather than a legally recognizable appropriation of a property interest. Because the Corp's constitutional authority is pursuant to the Commerce Clause as expressed through the navigation servitude,⁵⁵ it may be assumed that the Agency enjoys the broadest discretion in administering its statutory authority to market surplus water, even in the face of opposition from basin states.

The ETSI project collapsed as economic circumstances changed, but the process still matters. There was widespread opposition to the ETSI proposal, particularly from downstream states in the basin, as well as from the railroads that competed in the business of hauling coal and across whose tracks the slurry pipeline needed to pass.⁵⁶ Most important is the federal court challenge brought by the lower basin states that were concerned with what they saw as a precedent for out-of-basin transfers at the initiative of a single upper basin state; the suit sought to invalidate the water marketing permit issued to South Dakota by the Bureau.⁵⁷ The challenge raised the general question of whether an upper basin state, or any basin state, held "14 independent rights in the stored reservoir water."⁵⁸ This water right was issued, after all, by a state rather than a federal agency.⁵⁹

The downstream states brought suit in federal district court in Nebraska to block the ETSI diversion from Oahe Reservoir.⁶⁰ The issue then was a narrow one: whether Congress in the FCA 1944 intended the reservoir behind Oahe Dam to be a reclamation facility subject to the water marketing authority of the Secretary of the Interior.⁶¹ The district court ruled for the plaintiff lower basin states,⁶² and the court of appeals affirmed.⁶³ The U.S. Supreme Court held that the Secretary of the Interior lacked authority under the FCA 1944 to make a contract allowing the state to use and sell water, and held the contract void.⁶⁴ The decision was a singular victory for the downstream states.

The ETSI ruling concluded that because the reservoirs are under the control of the Corps, the Corps has the sole authority to market water from them.⁶⁵ Therefore, the Corps may market water that it determines to be "surplus," that is, "all water that can be made available from the reservoir without adversely affecting other lawful uses of the water."⁶⁶ Described in this way, the Corp's assertion of power is broad and leaves open the question whether any basin state has independent rights in stored reservoir water, absent express congressional action. The Supreme Court's opinion supports a position by the Corps that it can declare reservoir water held for irrigation as dedicated to "project purposes," such as hydroelectric generation, or it can declare water "surplus" and available for marketing under Section 6. Though the Court did not directly address "the relative interests of the United States and South Dakota in Lake Oahe water,"⁶⁷ it read Section 6 as granting the Corps "exclusive authority to contract to remove water for industrial uses" from reservoir projects, like Oahe, that the Corps has constructed and operates,⁶⁸ and that the language of Section 6 is "plain in every respect."⁶⁹

*15 V. THE ETSI MODEL REVISITED: THE WESTERN AREA WATER SUPPLY PROJECT

Demand for industrial use water diversions from Missouri River reservoirs remained quiet from the ETSI period to around 2009 when oil and gas production in western North Dakota's Bakken field grew rapidly. Until then, the prevailing view was that the region's oil shale deposits could not be extracted economically, but advances in the technology of hydraulic fracturing now allow for cost-effective extraction, provided there is a bountiful supply of fresh water.⁷⁰ Each well requires water not only for hydraulic fracturing, but also drilling, casing and maintenance of wells,⁷¹ and demand can reach more than thirteen acre-feet per well.⁷² Hydraulic fracturing generally requires between 2.3 and 3.8 million gallons per well; 11 to 1.5 million gallons are required to drill a Bakken formation well; 50,000 to 100,000 gallons of water are required to drill a non-oil shale well. Based on current projections of Bakken region growth through 2019, Bakken wells could require up to 51,000 acre-feet of water.⁷³ Inevitably, energy industries are looking to the Missouri River to meet this demand.

Local groundwater supplies are unable to meet such quantities, and the energy industry relies on tractors to meet immediate needs. Leaders in the state of North Dakota recognized a situation that resembled the ETSI case of the 1980s. There was a need to finance a new water delivery system for ranches and municipalities in its arid western region. A regional boom in energy production was dependent on a bountiful supply of water, and state government perceived an opportunity to capture value from state-issued water rights and take advantage of an emerging market in water. Subsumed in this perception was a federal-state tension over control of river water for industrial and municipal use.

The result is a state-level special district known as the Western Area Water Supply Authority ("WAWSA"),⁷⁴ and the concept is straightforward. State water rights in Missouri River water are held by WAWSA, which builds a rural-municipal water system sufficient to meet the projected long-term needs of a large area in western North Dakota. In the near term, this "16 system will have considerable excess capacity that will be made available to the thirsty energy industry. Revenue from sales to energy users will retire as much as 80 percent of the system's cost. The original construction costs will be met by loans from the state.⁷⁵ What South Dakota was unable to achieve in the 1980s is now likely to occur in North Dakota. The principal, and important, difference is that whereas the ETSI pipeline would have exported Missouri River water from the basin, the North Dakota project will use the water in the basin although its use will be almost entirely consumptive, generating no return flows.⁷⁶ As in the case of ETSI, however, WAWSA moves forward without addressing the question of legal control over waters impounded in the reservoirs. The assumption is that the North Dakota project's water right will not, when added to all other state water permits in river water, exceed North Dakota's equitable share of the river's natural flow. Of course, that equitable share has not been established. The fact that WAWSA's water will be drawn from the Missouri River under a North Dakota water permit does not implicate the issue of rights in stored reservoir water.

VI. MARKETING OF INDUSTRIAL WATER BY THE CORPS OF ENGINEERS

Spurred by changes in the energy economy, the concept of water marketing pursuant to the FCA 1944 is finally taking on a concrete form. Although the Corps has had legislative authority through Section 6, it is only now building the administrative structure necessary for implementation. In doing so, it is breaking new ground.

A. Introduction

As a direct result of this growth in production, oil producers also approached the Corps requesting Missouri River water from Lake Sakakawea, behind Garrison Dam. The agency responded by concluding that 100,000 acre-feet of surplus water is available to meet oil field needs for the next ten years,⁷⁷ and offered contracts of five years with a right of renewal for another five.

The Corp's decision to provide surplus water for industrial use is based in part on its conclusion that the oil field demand is "of a temporary *17 purpose."⁷⁸ Although the Corp's report does not provide the basis for so concluding, it must be that there are ultimately a finite number of wells to be drilled and serviced; whether that finite number will be reached in five, ten, or fifty years, it does not say. Nonetheless, it is significant that the contracts are to be granted on the basis of an assumption that they are temporary.

Currently, the Corps is reacting only to specific requests for surplus water from the North Dakota reservoir. In order to satisfy these requests, it elected to proceed to issue Surplus Water Reports for each of the six main-stem reservoirs and allocate specific quantities for each. In total, just under 283,000 acre-feet is allocated from the combined reservoirs.

Whether water is surplus within the meaning of Section 6 is based on a simple determination that water in a reservoir is "not required because the authorized use for the water never developed or the need was reduced by changes that occurred since authorization of construction."⁷⁹ Because the original Sloan Plan contemplated irrigation across vast acreages of the Dakotas, none of which has occurred, the determination that there is water surplus to project purposes is an easy one. Consider, as a single example, that the Oahe irrigation project in South Dakota alone would have diverted from the Oahe reservoir 444,000 acre-feet per year.⁸⁰ The current Surplus Water Report for the Oahe reservoir allocates only 57,317 acre-feet for industrial water uses, a small percentage of the water for irrigation which never developed.

The Corp's current industrial water marketing proposals conclude that the Pick-Sloan Plan contemplated that a total of 3,853,000 acre-feet of impounded reservoir waters in the system was for use in irrigation projects which have not developed.

⁸¹ By the Corp's reasoning, all of this is now available for industrial water marketing in the event that demand should arise. In addition, a realistic appraisal supports a prediction that the steady decline in navigation on the River will continue, thereby freeing an additional large supply of reservoir water to meet alternative demand.

*18 B. Defining Surplus Water

Section 6 of the FCA 1944 simply authorizes the Corps to contract "at such prices and on such terms as [it] may deem reasonable, for domestic and industrial uses for surplus water that may be available at any reservoir under" its control.⁸² The statute is silent as to whether the uses contracted for must be temporary, but does require that they not adversely affect "then existing lawful uses."⁸³ Agency regulations restate the statutory language that surplus water is water "that may be available at any reservoir . . . because the authorized use for the water never developed or the need was reduced by changes that occurred since authorization and construction . . ."⁸⁴ This regulation is rooted in a 1986 opinion by the Army General Counsel which concluded:

In my opinion section 6 of the Flood Control Act gives the Secretary of the Army similar authority to

market water stored in the Pick-Sloan flood control reservoirs. The Reclamation Projects Act authorizes the Secretary of Interior to reallocate and market water not needed to fulfill the paramount reclamation purpose of irrigation. Section 6 of the Flood Control Act provides the Secretary of the Army similar authority with regard to water he determines is not needed to fulfill a project purpose in Army reservoirs.

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The Corp's interpretation of the phrase "surplus water" is sensible on its face and is entitled to deference according to recent Supreme Court opinions.⁸⁸ There are opposing views, however, founded in the Corp's own method of labeling and categorizing waters captured in its Missouri River reservoirs. The method describes basin-wide allocations of total storage capacity as: (1) Permanent Pool, 25%; (2) Carryover Multiple Use, 53%; (3) Annual Flood Control and Multiple Use, 16%; and (4) Exclusive Flood Control, 6%.⁸⁹ The Corp's interpretation is that allocations (2)-(4) are available as "surplus waters."

⁸⁹ Gahin, in his 1985 milestone article *The Law of the Missouri*,⁸⁹ argues that "surplus waters" are not "all" waters⁹⁰ but are limited to waters captured for the purpose of flood control. This interpretation would limit the Corp's Section 6 authority to Annual Flood Control and/or Exclusive Flood Control at the most—22% or 6% respectively. Even if Gahin's argument is accepted, however, waters allocated by the Corps to flood control in the basin total 16.4 million acre-feet, a considerable amount. The Corp's regulations, in contrast, define all but the Permanent Pool as potentially available for "surplus" designation, an additional 53%.

C. Revising Project Purposes, Reallocating Project Water

The Corp's regulations do more than restate the Section 6 language, however. They declare that surplus water also includes "water that would be more beneficially used as municipal and industrial water than for the authorized purpose and which, when withdrawn, would not significantly affect authorized purposes over some specified time period."⁹² Going considerably further, the regulation states that the agency has the authority to: [M]ake reasonable reallocations between different project purposes. Thus, water stored for purposes no longer necessary can be considered surplus. In addition, the Secretary may use his broad discretionary authority to reduce project outputs, envisioned at the time of authorization and construction, if it is believed that the municipal and industrial use of the water is a higher and more beneficial use. . . .⁹³

Although the specific contracts under consideration—small diversions from Sakakawea for oil and gas production—fit neatly within the more confined definition, the regulatory umbrella under which the agency claims to be acting is strikingly broad, perhaps as broad as the constitutional authority of the FCA 1944 itself. Reducing project outputs and making "reasonable reallocations" so that it is "more beneficially used. . . . [for] a municipal and industrial water than for the authorized purpose" is a broad claim of agency authority.⁹⁴

*20 D. Temporary Uses Only?

Section 6 does not stipulate that industrial water contracts must be for temporary, time-limited uses only. Although the Corp's report on the proposed Sakakawea contracts emphasizes that they are to simply meet "urgent temporary" demands,⁹⁵ the agency regulations in this case are also considerably broader, stating "[s]urplus water agreements will normally be for small amounts of water and/or for temporary use as opposed to storage reallocations and a permanent right to that storage. . . . Normally, surplus water agreements will be limited to 5 year periods."⁹⁶

The regulations leave open the question of whether the FCA 1944 allows the Corps to enter into long-term industrial or municipal water use contracts, perhaps for energy projects such as the coal slurry pipeline envisioned by the original ETIS proposal, or to respond to lasting regional water shortages in densely populated areas outside of the Missouri basin.

VII. PRICING RIVER WATER—COMMERCIALIZING RIVER WATER

The Corp's new proposals to market industrial water specify that the water will be sold. The administrative process is that current demand will be met by issuing five-year contracts, with no charge for water until the conclusion of the formal establishment of a pricing policy, which will be the result of notice and comment rulemaking.⁹⁷ Upon the adoption of a pricing policy, existing contracts will be revised, and charges imposed.⁹⁸

What the Corps is doing in the Missouri basin is a surprise only because it has not occurred before. The FCA 1944 clearly calls for the Corps to do precisely what it is doing. What has been absent until now is demand. The demand that has arisen—delivery of water to North Dakota oil and gas fields—is described as temporary, which it may be, although it must be noted that most oil fields remain productive for lengthy periods. By emphasizing its authority to reallocate, and by undertaking a more permanent reallocation study, the Corps recognizes that new and more enduring uses are likely to emerge.

⁹² At the time of this writing, the Corps has yet to publish notice of a rule-making process for industrial water pricing, and the context of that notice is open to speculation; however, certain preliminary issues are presented here. An open market for reservoir water is a first option, and there is abundant literature on the nature of and process for reaching a proper price for a scarce natural resource.⁹⁹ It is possible that the Corps will utilize some form of bid or other open call device. Even in an auction format, however, the seller is entitled to establish a minimum, thus presenting the question whether the Corps is either authorized or reasonable to include minimum elements in its price. It is likely, for example, that the Corps will charge the equivalent of a connection fee to gain access to the reservoir supply, as well as a service charge to cover costs that are not related to the quantity diverted.

Section 6, itself, is silent on the elements of pricing and specifies only that the monies be "deposited in the Treasury of the United States as miscellaneous receipts."¹⁰⁰ When revenues from a federal water resources development project are involved—and the Pick-Sloan project in particular—certain complicating questions emerge. When the Pick-Sloan project was approved in the Flood Control Act of 1944, specific purposes were identified and portions of overall costs assigned to each. Some of these purposes were deemed to serve a broad national interest and the assigned costs therefore absorbed by the taxpayer directly. Such is the case with flood control, navigation, recreation, and wildlife, which are referred to as "non-reimbursable" costs of the project. Such non-reimbursable costs are not included in the repayment obligation of Pick-Sloan purposes. In contrast, a portion of the overall project cost was designated as "reimbursable." The primary example is the project costs assigned to hydroelectric generation which are required to be repaid to the government with interest over a period as long as or exceeding fifty years. Reimbursable costs also carry an obligation to repay operation, maintenance, and replacement costs. In the Pick-Sloan project all reimbursables are paid into a common basin-wide account.

The legislative history of Pick-Sloan supports an argument that municipal and industrial water is a reimbursable project cost and that prices charged for water must include such elements as repayment of project costs.¹⁰² With interest, operation, maintenance, and replacement, as well as a charge for storage in the reservoir. Moreover, if reimbursable, revenues should be paid into the basin account. Subsequent agency planning supports this argument as well. For example, in the original authorization of the first phase of a now de-authorized Oahe irrigation project, it was specified that municipal and industrial water "would provide repayment over a period of fifty years at 3 and 1.8% interest of costs allocated to this purpose"¹⁰³ and consistently referred to municipal and industrial water revenues as reimbursable,¹⁰² including repayment of operation, maintenance and replacement expenses.¹⁰³ Since 1986, the Corps has held the position that water sold for municipal and industrial purposes should include a charge for reservoir storage.¹⁰⁴ An associated, but vital, issue is whether water pricing should include hydroelectric sales lost or foregone as one result of municipal and industrial water sales. In a 1986 opinion of the General Counsel, it is stated:

In my opinion the Secretary of the Army has the discretion to market water in Lake Sakakawea even if this results in a decrease of the project's actual or potential power production. Section 6 was included in the Flood Control Act to empower the Secretary of the Army to make reasonable reallocations between the different project purposes.¹⁰⁵

In other words, the Corps can favor water marketing over other project purposes when circumstances warrant such a change. Because revenues from hydroelectric generation are the fundamental source of revenue for the Pick-Sloan basin account, it is unlikely that the Corps would reduce them without a replacement in the form of revenue from municipal and industrial sales.

In contrast to the argument that revenues from water sales are reimbursable and payable to the Pick-Sloan basin account is the clear language of Section 6, specifying that revenue from water sales be deposited with the U.S. Treasury "as miscellaneous receipts." Reimbursable costs of Pick-Sloan are paid into a basin account and not to the general accounts of the United States. If Congress in 1944 had intended the costs allocated to water sales to be reimbursable, it would have so specified. Instead, it created an unambiguous exception.

¹⁰³ These and other issues will arise when and if the Corps publishes a notice of rule-making. It is sufficient here to state that the process will involve far more than the establishment of market price. Beyond the technicalities of price-setting, a formal process of water marketing, once clearly established, is likely to have far-ranging effects. This argument asserts that once a reliable price and sale process is established, new demand will appear. Industries and municipalities across the nation are gradually outgrowing their usable local water supplies. The rate at which this is occurring is accelerating because of climate, deteriorating quality of available local sources, increasing consumption, and concentration of population in water-short regions. Historically, water has been viewed as a local resource, but modern technologies now make long distance water transfer an economical and technologically feasible alternative.¹⁰⁶ With a predictable pricing mechanism in place, long-term economic calculations become predictable, legal questions mostly resolved, and an open market will exist.

VIII. THE PERMANENT REALLOCATION OPTION: APPORTIONMENT?

In addition to undertaking the sale of surplus water, the Corps has initiated a study to determine whether the waters captured by the Pick-Sloan dams should be permanently re-allocated. Titled the Missouri River Municipal & Industrial Water Storage Reallocation Study, the study according to the Corps "will systematically and comprehensively examine whether some amount of the storage [in Pick-Sloan dams] may be allocated solely to municipal and industrial water supply."¹⁰⁷ The study is based specifically on a 1970 statute which states:

The Secretary of the Army acting through the Chief of Engineers, is authorized to review the operation of projects the construction of which has been completed and which were constructed in the interest of navigation, flood control, water supply and related purposes, when found advisable due to significantly changed physical or economic conditions, and to report thereon to Congress with recommendations on the advisability of modifying the "24 structure or their operation and for improving the quality of the environment in the overall public interest.¹⁰⁸

This reallocation study supplements the Corp's existing assertion of authority to reallocate among project purposes when a new use "is a higher and more beneficial use."¹⁰⁹ Although not so stated explicitly, the study is a long-term effort to obtain Congressional recognition of the obvious fact that Pick-Sloan irrigation water is surplus and available for alternative purposes.

The format of this option is a formal report and set of recommendations to Congress. Were the Corp's final report to specify an amount to each state and tribe as its equitable share of the natural flow of the river, and, were Congress to formally adopt the reallocation recommendations, it is likely that a full apportionment will have occurred.¹¹⁰

IX. THE PROSPECT OF OUT-OF-BASIN TRANSFERS

The Corp's water marketing plans place no restrictions on out-of-basin transfers, and the legislation makes no reference to any such limits. Although largescale transbasin diversions have not been prevalent in recent years, the idea is hardly new. For example, when Congress created the National Water Commission ("NWC") in 1973, it included in its charge an instruction that it identify alternative ways of meeting future water needs, "giving consideration, among other things, to . . . interbasin transfers . . ."¹¹ In its report, the NWC recognized that interbasin transfers were already numerous, and that: "As economic demand for water increases, as available water supplies in areas of shortage shrink, as technological capability improves, and as national income grows, the feasibility of interbasin transfers increases and the scale of the proposals grow larger."¹²

In the ETSI litigation, the lower basin states objected to the coal slurry project because it diverted water from the river basin; ETSI was a classic transbasin diversion. Under the current Corps proposal, there are no limits on place of use, and the prospects for moving water out of the basin appear realistic, particularly when combined with a reliable pricing system. There *25 is no clear avenue, other than through Congress, by which the states may assert their interest in keeping the River's water within the basin.

X. THE ECOSYSTEM EFFECTS OF WATER COMMODITIZATION

Commoditizing reservoir water raises the issue whether the millions of acre-feet of available surplus water will be marketed in balance with other project purposes. The Corps is unlikely to fail to meet its obligation to serve purposes such as hydropower and navigation, which represent conventional economic value. But, will the same balance be struck when competing uses are fish, wildlife and the delivery of ecosystem services?

The Corps has elected to prepare individual environmental impact statements for its industrial water-marketing program on a reservoir-by-reservoir basis, and based on the limited amounts allocated in the initial proposals. However, the wording of the statute and regulations, combined with the effect of the ETSI litigation, make clear that the current proposals, although described in limited terms, actually authorize marketing of all waters "not required because the authorized use for the water never developed." Thus, what is lacking is a cumulative environmental analysis that considers the potential effect of an active and growing transbasin demand for a large portion of the supply now made available for marketing.

XI. THE PLACE OF TRIBES AND STATES IN A FEDERAL WATER MARKETING SYSTEM

The states and tribes in the basin do not have a strong position. Predictably, they argue that the waters retained behind the federal dams are actually just the flowing waters of the stream, which are under their control and subject to their power to allocate through water permits or other procedure. In the ETSI decision, the United States Supreme Court did not address directly "the relative interests of the United States and South Dakota in Lake Oahe water"¹³ but it did read the language of Section 6 as granting the Corps "exclusive authority to contract to remove water for industrial uses" from reservoir projects, like Oahe, that the Corps has constructed and operates.¹⁴ The Court found the language of Section 6 "plain in every respect."¹⁵

The legal issue is the Corp's power over impounded water and whether water stored by the government in federal reservoirs is itself a source of power to allow allocation independent of the states and tribes. Professor *26 Trefeas describes the power in this way: "[i]mpounded water, not appropriated by any person, could be similarly regarded as the property of the United States, and this theory could be used to justify the distribution of water by sale to those who would enter into contractual relations with the United States . . ."¹⁶

In 1975, the pending ETSI pipeline proposal led to hearings in the United States Senate.¹⁷ The Corp's statement at that time included the following:

The States have authority to grant permits for the use of the natural flow taken from the river. The right of the Federal Government to control the use of water in its reservoirs is based upon the legislation authorizing the construction and operation of the reservoirs and upon Federal jurisdiction over navigated waterways.¹⁸

The Corp's initiatives under Section 6 today are consistent with that earlier statement; the agency claims jurisdiction over waters stored in the reservoirs.

States can no doubt issue a water permit under state law from the state's equitable share of the flowing river. However, the case is different when the water to be diverted under the state permit is available only because of the storage capacity provided by the federal reservoirs. Is the water, once captured and stored pursuant to federal law, no longer subject to state law? The question has not been answered by the courts, but the argument exists that the Corps has the full power to allocate waters stored in its reservoirs.

XII. CONCLUSION

The current industrial water marketing proposals return us to the persistent issue: are river waters mere economic commodities, to be sold or moved about when economic demand arises, or are they public amenities, and thereby insulated from the full rigors of the marketplace? By way of the Pick-Sloan plan, the Missouri River is already heavily committed to serving short-term economic interests, particularly in the delivery of flowing water for navigation, hydropower, power plant cooling, as well as that water for recreation. While industrial water marketing proposals are *27 currently quite small in relation to the overall supply, they provide a lens through which to observe an alternative future.

The development of WAWSA by North Dakota, along with the earlier case of South Dakota's ETSI proposal, are significant because they represent one state initiating a sizeable diversion without consulting the other states and tribes in the basin. Similarly, the Corps is initiating its marketing program without fully integrating the states and the tribes into the administrative process. Thus, by a series of ad hoc decisions, basin waters are committed without reference to any agreed upon principles to govern their use of the common resource. More fundamentally, this process ignores the obvious fact that the waters of the Missouri River are interconnected and part of a single hydrologic system. As stated earlier in this essay, the modern history of the basin is that of an inability of basin states to achieve any level of accord in river management. Recent events suggest that the history is continuing.

Footnotes	
a1	Professor Emeritus, University of South Dakota School of Law.
1	John R. Ferrell, Big Dam Era: A Legislative and Institutional History of the Pick-Sloan Missouri Basin Program xii (1993).
2	North Dakota v. U.S. Army Corps of Eng'rs, 264 F. Supp. 2d 871, 874-75 (D. N.D. 2003).
3	See generally Sandra B. Zellmer, The Missouri River, in 4 Waters and Water Rights, Pt. XI (A.K. Kelley ed., 2012).
4	A. Dan Tarlock, The Missouri River: The Paradox of Conflict Without Scarcity, 2 Great Plains Nat. Res. J. 1, 2 (1997); Sandra B. Zellmer, A New Corps of Discovery for Missouri River Management, 83 Neb. L. Rev. 305, 307 (2004).
5	Flood Control Act of 1944, ch. 665, 58 Stat. 887 (1944), (codified at 16 U.S.C. §§ 460d, 825; 33 U.S.C. §§ 701-1, 701a-1, 701b-1, 708, 709, 43 U.S.C. § 390, and notes at 33 U.S.C.A. §§ 701c, 701e, 701f & 701g (2009)).
6	National Research Council, The Missouri River Ecosystem: Exploring the Prospects for Recovery 28 (2002).
7	Id. at 28-29, and Ferrell, supra note 1, at 5-6.
8	Pick Plan, Missouri River Basin: Letter from the Secretary of War, H.R. Doc. No. 78-475 (1944).
9	Sloan Plan, Missouri River Basin: Conservation, Control and Use of Water Resources, S. Doc. No. 78-191 (1944).
10	National Research Council, supra note 6, at 29.
11	Pick-Sloan Plan, Missouri River Basin: Report to Congress on the conciliation of S. Doc. 191 and H. Doc. 475, H.R. Doc. No. 78-247 (1944).
12	Section 9 of FCA 1944 reads in part: "The general comprehensive plans set forth in House Document 475 and Senate Document 191, Seventy-eighth Congress, second session, as revised and coordinated by Senate Document 247, Seventy-eighth Congress, second session, are hereby approved and shall be prosecuted by the War Department and the Department of the Interior as speedily as may be consistent with budgetary requirements." Flood Control Act of 1944, Pub. L. No. 78-534, 58 Stat. 887.
13	Sarah F. Bates et al., Searching Out the Headwaters: Change and Rediscovery to Western Water Policy 125 (1993).
14	Zellmer, supra note 3, at 16.
15	National Research Council, supra note 6, at 45-46.
16	S. Doc. No. 78-191, at p. 17 (1944).
17	Id.
18	The Initial Stage of the Oahe Irrigation Project alone would have resulted in the diversion of 444,400 acre-feet of water from Oahe Dam, and irrigated 190,000 acres of land. Allowing for return flows and water from downstream tributaries, the average annual depletion at Sloan City, Iowa, would have been 303,200 acre-feet, representing 1.3 percent of the average annual flow there. Oahe Unit, Missouri River Basin Project, South Dakota, H.R. Doc. No. 90-163 (1967). The complete Oahe irrigation plan provided for increasing the irrigable area to 495,000 acres, providing M & I water to 23 towns and cities, as well as fish and wildlife developments at twenty-nine locations. H.R. Doc. No. 90-163 at 3. This doubling of irrigation, combined with the vastly larger proposed irrigation project in North Dakota (Garrison) would presumably have made an impact on downstream flows at some point, especially in dry years.
19	Flood Control Act of 1944, 66 Stat. 93, 33 U.S.C. § 708.
20	Sloan Plan, supra note 9 at 10. "To the extent that the uses of water are competitive, the use of water for domestic, agricultural, and industrial purposes should have preference." Page 13 of the Report states: "In the future there will also be greater requirements for industrial water supplies."

21	"To the extent that the several functions of water control and utilization are conflicting, preference should be given to those which make the greatest contribution to the well-being of the people and to the areas of greatest need. To the extent that the uses of water are competitive, the use of water for domestic, agricultural and industrial purposes should have preference." <i>Id.</i> at 10 and quoted in <i>Environmental Defense Fund v. Morton</i> , 420 F. Supp. 1037, 1041 (D. Mont. 1976).
22	Sloan Plan, <i>supra</i> note 8, at 13.
23	Pick Plan, <i>supra</i> note 7, at 3. Marian E. Ridgeway, <i>The Missouri River Basin's Pick-Sloan Plan: A Case Study in Congressional Policy Determination</i> 77-79 (1953) observes that the section authorizing the U.S. Corps of Engineers to sell surplus water was "particularly debated," and further observes that "multiple purpose" means "to harness completely the water resources of the basin for all useful purposes."
24	<i>Morton</i> , 420 F. Supp. at 1040.
25	<i>Id.</i>
26	<i>Id.</i> at 1041.
27	90 Cong. Rec., pt. 3, 4119 (1944).
28	<i>Envtl. Defense Fund, Inc. v. Andrus</i> , 596 F.2d 848, 850 (9th Cir. 1979).
29	<i>ETSI Pipeline Project v. Missouri</i> , 484 U.S. 495, 505-06 (1988).
30	John P. Guhin, <i>The Law of the Missouri</i> , 30 S.D. L. Rev. 347, 380 (1985); South Dakota and the ETSI Experience, in <i>New Sources of Water for Energy Development and Growth: Interbasin Transfers</i> 3.66 (1982), available at http://udlc.utl.edu/WL0000321/00001 .
31	Nancy Taylor Reed, <i>An Analysis of Technical and Legal Issues Raised by the Development of Coal Slurry Pipelines</i> , 13 <i>Hous. L. Rev.</i> 528, 530 (1976).
32	South Dakota and the ETSI Experience, <i>supra</i> note 30, at 3.66.
33	<i>Id.</i>
34	South Dakota and the ETSI Experience, <i>supra</i> note 30, at 3.66.
35	<i>Id.</i> at 3.68.
36	<i>Id.</i> at 3.67.
37	<i>Id.</i> at 3.68.
38	<i>Sporhase v. Neb. Ex rel. Douglas</i> , 458 U.S. 941, 960 (1982).
39	<i>Id.</i> at 953-54 (recognizing the "Western States' interest[] in conserving and preserving scarce water resources," while categorizing such interests as "not irrelevant" to commerce clause inquiry and granting Congress the "power to deal with" water problems on a national scale).
40	Water Resources Development Act of 1986, Pub. L. No. 99-662, 100 Stat. 4082.
41	Zellmer, <i>supra</i> note 3, § IV(E).
42	Janklow, <i>supra</i> note 30, at 3.68-3.69.
43	See A. Dan Tarlock, <i>The Law of Equitable Apportionment Revisited, Updated, and Restated</i> , 56 <i>U. Colo. L. Rev.</i> 381, 383 (1985) (describing actions by states to claim "ownership" of waters).
44	In a subsequent decision, the Eighth Circuit Court of Appeals left open the question of whether the state held an interest in Lake Oahe water. See <i>infra</i> note 63.
45	Janklow, <i>supra</i> note 30, at 3.69.
46	For an overview of South Dakota's special state-sponsored water development districts, see generally John H. Davidson, <i>South Dakota's Special Water Districts--An Introduction</i> , 36 <i>S.D. L. Rev.</i> 499, 533 (1991).
47	<i>Id.</i> at 530.
48	See <i>id.</i> at 534 (the Conservancy District "may directly acquire water rights as well as market water, and it can market hydroelectric power generated by its water projects.") (internal citations omitted).
49	Flood Control Act of 1944, Pub. L. No. 78-534, § 2, 58 Stat. 887 (1944).
50	William A. Hillhouse II, <i>The Federal Law of Water Resources Development</i> , in <i>Federal Environmental Law</i> 844, 846 (Erica L. Dolgin & Thomas G. P. Guilbert eds., 1974).
51	<i>Id.</i> at 848.
52	See Guhin, <i>supra</i> note 30, at 430 (noting the tentative but unlikely future course of the project).
53	Zellmer, <i>supra</i> note 4, § IV.
54	Reclamation Act, 43 U.S.C. § 383 (1902).
55	Flood Control Act, § 9(c).
56	33 U.S.C. § 708.
57	See Tarlock, <i>supra</i> note 43, at 402 (discussing the move from limited federal power based on navigability to increased federal power "with the full reach of the Commerce Clause").
58	Janklow, <i>supra</i> note 34, at 3.71.
59	<i>ETSI Pipeline Project v. Missouri</i> , 484 U.S. 495, 498 (1988).
60	<i>Id.</i> at 503.
61	<i>Id.</i> at 505.
62	<i>Id.</i> at 498.
63	<i>Missouri v. Andrews</i> , 586 F. Supp. 1268, 1269 (D. Neb. 1984).
64	<i>Id.</i> at 1281.
65	<i>Missouri v. Andrews</i> , 787 F.2d 270, 287 (8th Cir. 1986).
66	<i>ETSI Pipeline Project</i> , 484 U.S. at 505.
67	<i>Id.</i> at 506.
68	<i>Id.</i> ; see also, Guhin, <i>supra</i> note 30, at 378; Guhin, <i>supra</i> note 25, at 378.
69	<i>Id.</i> at 498 n.2.
70	<i>Id.</i> at 506.
71	<i>Id.</i> at 505.
72	Omaha District, U.S. Army Corps of Engineers, <i>Garrison Dam/Lake Sakakawea Project, North Dakota: Surplus Water Report i-iii</i> (March 2011).
73	<i>Id.</i> at ii.
74	<i>Id.</i> at 3-7.
75	Jeffrey T. Matson, <i>Water Resources and the Oil and Gas Boom: Impacts to States and Tribes</i> , ND L. Rev. Energy L. Lecture Ser. (Mar. 14-15, 2013).

76	N.D. Cent. Code §§ 61-40-01 to 09 (2013).
77	Western Area Water Supply Project, available at http://www.wawsp.com/facts.asp (last visited June 6, 2013).
78	The North Dakota legislature does not prohibit the authority from selling water outside the basin. See N.D. Cent. Code § 61-40-05(6) (2013).
79	U.S. Army Corps of Engineers, Omaha Dist. Garrison Dam/Lake Sakakawea Surplus Water Report & Environmental Assessment, add. 1 (2012).
80	U.S. Army Corps of Engineers, ER 1105-2-100, Planning Guidance Notebook, para. E-57(b)(2)(b) (2000), available at http://planning.usace.army.mil/toolbox/library/ERs/entire.pdf .
81	Id. at E-57(b)(2)(a)(1).
82	U.S. Bureau of Reclamation, Final Environmental Statement, Initial Stage, Oahe Unit, Pick-Sloan Missouri Basin Program, South Dakota III-5, III-6 (1973), HD 163, Oahe Unit, xxvi pegs the amount at 408,400 acre-feet. The Oahe Project was deauthorized by Congress in 1982.
83	Omaha District, supra note 72, at 2-10.
84	Flood Control Act of 1944, 66 Stat. 93, 33 U.S.C. § 708.
85	Id. It is noted that the Oahe Irrigation Project was deauthorized by Congress and is not, therefore, an existing lawful use.
86	Planning Guidance Notebook, supra note 80, ER 1105-2-100, P 3-8(b)(4), and P E-57(b)(2)(a)(1).
87	Dep't of the Army, Office of the General Counsel, Proposed Contracts for Municipal and Industrial Water Withdrawals from Main Stem Missouri Reservoirs, (Mar. 13, 1986).
88	In <i>City of Arlington v. Fed. Comm'n's Comm'n</i> , 133 S. Ct. 1863 (U.S. 2013), Justice Scalia for the Court wrote that the question is always "simply, whether the agency has stayed within the bounds of its statutory authority," and finally, "whether the statutory text forecloses the agency's assertion of authority, or not."
89	Ferrell, supra note 1 at 128.
90	See generally Guhin, supra note 30.
91	Id. at 180.
92	Omaha District, supra note 72, at 1-2.
93	Id.
94	Id.
95	Omaha District, supra note 72, at 1-3.
96	Id.
97	Memorandum from Dep't of Army, Office of the Ass't Sec'y Civil Works (May 8, 2012).
98	Establishing a price for surplus water will be an unprecedented undertaking, and is not analyzed here in detail. The questions that must be answered in the process are fascinating. Will the baseline be the cost of alternative methods of delivering water? Will cost include reimbursable expenses of the Pick-Sloan project, including capital costs, interest, operation, and maintenance? Will cost reflect the irrigation water subsidy and exclude interest? Will cost take loss of ecosystem services into account or ecosystem mitigation?
99	The proper price of a scarce resource is a question that has interested economists from early days of the discipline. One introduction is Henrique Monteiro, <i>Water Pricing Models: A Survey</i> (2005).
100	For example, the cost and repayment schedule for the initial stage of the Oahe irrigation project detailed specific repayment obligations assigned to municipal and industrial water. See H.R. Doc. 90-163, supra note 18, at 6.
101	Oahe Unit, Missouri River Basin Project, South Dakota, H.R. Doc. 90-163, at 25 (1st Sess. 1967).
102	Id.
103	Id.
104	See supra note 82, at 10.
105	Id.
106	Those who suggest that large scale long distance transfers are unrealistic are reminded that in 2002, China began construction of the South-to-North Water Diversion Project which will pipe 44 billion cubic meters of Yangtze River water to the Yellow River.
107	Press Release, U.S. Army Corps of Engineers, Missouri River Mun. & Indus. Water Storage Reallocation Study (Sept. 7, 2002).
108	Rivers and Harbors, Flood Control Acts of 1970, Pub. L. No. 91-611, § 216, 84 Stat. 1818 (1970).
109	See ER 1105-2-100, Parag. E-57b(2)(a)(2).
110	See generally <i>Arizona v. California</i> , 530 U.S. 392 (2000).
111	Nat'l Water Comm'n Act, Pub. L. No. 90-515, § 3(a)(1), 82 Stat. 868, 868 (1968).
112	Id.
113	ETSI Pipeline Project, 484 U.S. at 498 n.2.
114	Id. at 506.
115	Id. at 505.
116	Frank J. Trelease, <i>Arizona v. California: Allocation of Water Resources to People, States and Nation</i> , 1963 Sup. Ct. Rev. 158, 181 (1963).
117	Missouri River Basin Industrial Marketing, Pt. 1: Hearing Before the Subcomm. On Energy Research and Water Resources, 94th Cong. 1 (1975).
118	Id. at 3.