What Does a Pallid Sturgeon Say when it runs into a Cement Wall? "Dam!" The Interminable Revision of the Missouri River Master Manual

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COMMENT

WHAT DOES A PALLID STURGEON SAY WHEN IT RUNS INTO A CEMENT WALL?
"DAM!" THE INTERMINABLE REVISION OF THE MISSOURI RIVER MASTER
MANUAL

I. INTRODUCTION

The Missouri River is the longest river in the United States, flowing approximately 2,500
miles and touching seven states. The diversity of the river’s landscape is incredible, reaching arid
plains and lush forests and farmland, large metropolises and vast unpopulated areas, and nearly
every conceivable land use.1 The Missouri River Basin includes eight to ten states, two countries,
and between twenty-five to twenty-eight Indian tribes, each with an interest in the Big Muddy. Add
some endangered or threatened species to the equation, a major federal statute or two, and several
federal and state regulatory agencies, and you have a river roiling with controversy. Governmental
regulation of the Missouri River has a long and tempestuous history, pitting states against states,
irrigation and recreation interests against navigation and flood control interests, economic concerns
against environmental concerns, and even federal agencies against other federal agencies.2

Several of these controversies have come to a head with the Army Corps of Engineers’ long-
awaited revision of its Master Water Control Manual, the document that controls the flow and use of
water in the Missouri River. In the process, the Corps of Engineers has become the rope in a tug-of-
war of powerful interests. This comment will explore the issues surrounding the revision of the
Master Manual. Part II will provide a condensed history of how the Corps has arrived at its current
position. Part III describes the Master Manual and explores the controversy over its revision. Part
IV emphasizes the importance of certain considerations in the Corps’ deliberations, and encourages
the swift conclusion of the review and update process.

II. RIVER OF CONFLICT: A BRIEF HISTORY OF THE REGULATION OF THE MISSOURI RIVER

A. Early Efforts

The federal government has developed the Missouri River extensively, and for conflicting
purposes. "Water concerns of the upper basin are those associated traditionally with shortage –
storage, irrigation, and careful allocation. The water concerns of the lower basin reflect concern for
water abundance – flood control, navigation and land drainage."3 Modern development and
regulation of the Missouri is comprehensive and multi-purposed, and authorized by the Flood
Control Act of 1944.4

The earliest developments were designed to enhance navigation. The Corps first became

(University of Oklahoma Press 1982) [hereinafter Lawson, Damned Indians]; John H. Davidson & Thomas
Earl Geu, The Missouri River and Adaptive Management: Protecting Ecological Function and Legal Process,
2 See generally John E. Thorson, River of Promise, River of Peril: The Politics of Managing the Missouri
River (University Press of Kansas 1994) [hereinafter Thorson, River of Promise].
3 Davidson & Geu, 80 Neb. L. Rev. at 822.
involved with the management of the Missouri in 1838 when it dispatched two army boats to clear snags on the river.\textsuperscript{5} The Corps undertook a project to clear a six-foot navigation channel from the Mississippi River to Kansas City in 1912, and from Kansas City to Sioux City, Iowa in 1925.\textsuperscript{6} In 1933, President Roosevelt approved a plan to construct the Fort Peck Dam in eastern Montana.\textsuperscript{7} Prompted by the desire to create jobs during the Great Depression, as well as to promote navigation and control flooding, the Fort Peck Project also foreshadowed conflict over the purposes of the reservoir. In addition to lower basin interests in navigation and flood control, upper basin residents expected to use the reservoir for irrigation.\textsuperscript{8} While the Corps was charged with promoting navigation on the Missouri, irrigation needs were the province of the Bureau of Reclamation.\textsuperscript{9}

**B. The Pick-Sloan Plan**

Before the construction of the six main stem dams that now regulate it, the flow of the Missouri varied greatly with the changing of the seasons, and flooding was a regular occurrence.\textsuperscript{10} In the spring of 1943, however, there was especially severe flooding in the Missouri River Basin.\textsuperscript{11} The loss of several lives and millions of dollars in property damage\textsuperscript{12} were enough to get the attention of a Congress preoccupied with World War II. On May 13 of that same year the House Flood Control Committee interviewed Colonel Lewis A. Pick, the division engineer of the Corps’ Missouri River office in Omaha, Nebraska, about the Army’s improvements of the dikes and levees in the Missouri valley.\textsuperscript{13} The Committee passed a resolution to study flood control needs on the Missouri, limited, at Pick’s request, to the portion of the River below Sioux City.\textsuperscript{14} The Army’s Chief of Engineers assigned the report to Pick, whose findings and recommendations would come to be known as the “Pick Plan.”\textsuperscript{15}

\textsuperscript{5} Lawson, *Damned Indians* at 10.
\textsuperscript{6} Id.
\textsuperscript{8} Id.
\textsuperscript{9} Id. Secretary of the Interior Ethan Allen Hitchcock established the United States Reclamation Service (USRS) within the U.S. Geological Survey’s Division of Hydrography shortly after conservation-oriented Theodore Roosevelt signed the Reclamation Act of 1902. In 1907, the USRS became an independent agency within the Department of the Interior, and was renamed the Bureau of Reclamation in 1923. Bureau of Reclamation, *Brief History of The Bureau of Reclamation*, 3-4 <http://www.usbr.gov/history/briefhis.pdf> (accessed Dec. 30, 2002).
\textsuperscript{10} Thorson, *River of Promise* at 14.
\textsuperscript{12} Id., *River of Promise* at 14. “The 1943 floods were particularly severe, resulting in the loss of 13 lives, $46 million in direct damage, and $8 million in indirect damage . . . . Floods in the tributaries also caused extensive damage. In 1935, for instance, excessive rain in the Republican River resulted in over 105 deaths.” Id. at 14-15. “By 1940, some estimates set the flood damage caused by the Missouri and its tributaries as high as $77 million per year.” Brian Morris, *Unanswered Prayers: The Upper Missouri River Basin States Take on the U.S. Army Corps of Engineers*, 68 N.D. L. Rev. 897, 907 (1992).
\textsuperscript{14} Id. at 6-7. Pick was already working on a report covering the area from Sioux City to South Dakota. Id.
\textsuperscript{15} Id. at 7-8.
The Corps submitted the Pick Plan to Congress in February 1944. It recommended the building of levees on both sides of the Missouri from Sioux City to its confluence with the Mississippi River, and a deeper, wider navigational channel along that stretch. Estimates in the 1940s projected that these navigational enhancements would result in the transportation of five million tons of annual commercial tonnage. In addition, the plan called for the construction of seven new dams and reservoirs (eleven had already been authorized) on tributaries. The most significant of the proposals, however, was the construction of a series of five massive dams and reservoirs on the main stem above Sioux City.

Although the Pick Plan was primarily a flood control and navigation plan, Pick disliked limited-purpose projects such as Fort Peck because those types of projects were inherently controversial and difficult to justify in light of their limited benefits. He preferred a comprehensive approach, which could garner the greatest possible support from all of the prevalent interests. For this reason, Pick sold his plan to Congress and the public on its multiple benefits, such as irrigation, hydroelectric power, and recreation. The plan was long on ambitions, but short on details. All of these enormous projects were proposed in a mere twelve-page report, meaning it was necessarily "brief and somewhat vague . . . The Plan called for a total storage capacity of 60 million acre feet, much more than was thought necessary for flood control and irrigation, and offered little in the way of specifics concerning hydroelectric power and navigation."

At the same time, however, the Bureau of Reclamation was in the process of completing its own comprehensive report on the Missouri River Basin. The Bureau's study was authorized by Congress in 1939, and directed by William Glenn Sloan, an assistant engineer with the Bureau's office in Billings, Montana. The Bureau submitted its report, known as the "Sloan Plan," to Congress in early May 1944. "Submission of the Pick plan prior to completion of the bureau's proposals gave the Army's report wide publicity and aroused much discussion, particularly since Colonel Pick himself spent a considerable part of the summer of 1943 making addresses throughout the basin states, publicizing and explaining his 'plan.'" By the time the Bureau submitted the
Sloan Plan, the House of Representatives had already approved the Pick Plan.32

The Bureau of Reclamation’s proposal, though just as ambitious, differed in many respects from the Pick Plan. Not surprisingly, the chief interest of the Bureau was in providing for the irrigation needs of the upper basin.35 The Bureau and its lobby, the National Reclamation Association, feared that the Corps’ proposal would promote lower basin navigation at the expense of water uses in the upper basin.34 In addition to irrigation, and to a much greater extent than the Pick Plan, the Sloan Plan also emphasized the benefit of hydroelectric power.35 The Sloan Plan justified the expense of its proposals by estimating that sales of irrigation water and hydroelectric power would more than cover all project costs.36 Specifically, the Plan called for the construction of ninety reservoirs and seventeen power plants.37 The capacity of these smaller reservoirs was about equal that of the massive Pick Plan reservoirs, but they were located in the headwaters rather than down stream, and on tributaries rather than the main stem,38 presumably to ease distribution over the vast acreage the Bureau intended to irrigate.39 While the Bureau’s design was much longer and more detailed than the Corps’, neither demonstrated that there would be enough water for every purpose listed in their respective proposals.40

One commentator classified the interests in the region into four groups: (1) those in favor of the Pick Plan for its emphasis on flood control and navigation; (2) those in favor of the Sloan Plan for its emphasis on irrigation; (3) those desiring a compromise of the two plans; and (4) those who felt that each plan alone was inadequate, and that a centralized agency such as the Tennessee Valley Authority (“TVA”) was necessary.41 When Congress found itself unable to decide between the two incompatible projects, President Roosevelt made his preference clear. Roosevelt’s solution was to remove control over development from both the Corps of Engineers and the Bureau of Reclamation and establish a regional authority, similar to the TVA.42

32 Lawson, Damned Indians at 15; Street, 5 Mo. Env'tl. L. & Policy Rev. at 125.
33 Lawson, Damned Indians at 16; Ridgeway, The Missouri Basin’s Sloan-Pick Plan at 9; Thorson. River of Promise at 64; Morris, 68 N.D. L. Rev. at 909-910; Street, 5 Mo. Envtl. L. & Policy Rev. at 125.
34 Thorson, River of Promise at 64.
35 Lawson, Damned Indians at 16; Ridgeway, The Missouri Basin’s Sloan-Pick Plan at 9; Thorson. River of Promise at 64; Morris, 68 N.D. L. Rev. at 909-910; Street, 5 Mo. Envtl. L. & Policy Rev. at 125.
36 Lawson, Damned Indians at 16.
37 Ridgeway, Missouri Basin’s Sloan-Pick Plan at 9.
38 Lawson, Damned Indians at 15-16.
39 The Sloan Plan proposed this project
[d]espite the . . . drawbacks associated with irrigation farming in cold, high- altitude climates . . . The Bureau hoped to provide enough water to irrigate a total of 4.7 million acres of land. This was an ambitious goal for the 1940s considering that today, even with modern pumps and irrigation systems available, Montana manages to irrigate just slightly more than 2.8 million acres in the entire state.

40 Lawson, Damned Indians at 16; Morris, 68 N.D. L. Rev. at 911.
42 Morris, 68 N.D. L. Rev. at 911-12.
Talk of a Missouri Valley Authority prompted the Corps and the Bureau to seek reconciliation. The Corps did not want to lose another large portion of its jurisdiction, as it had with the creation of the TVA, and the Bureau desired to expand eastward from its established water works in California. One commentator described their cooperation by stating:

Faced with the possible loss of control of any part of the project, the Bureau and the Corps quickly met to hammer out the differences in the two plans. In a series of meetings over two days, the two sides “reconciled” the competing plans into a comprehensive Pick-Sloan Plan for development of the entire Basin. The alleged reconciliation entailed nothing more than an agreement to combine the two plans lock, stock and barrel, with each side responsible for constructing and operating those portions of the project it favored. Thus, the Corps would build and operate projects primarily useful for flood control and navigation, and the Bureau would be responsible for those projects devoted primarily to irrigation and power production.

As a result of this compromise, Congress enacted the Pick-Sloan plan as part of the Flood Control Act of 1944 in December. This complex legislation authorized the construction of five main stem dams and integrated the pre-existing Fort Peck Reservoir into the Missouri River plan.

Seeing that Congress had progressively lengthened and widened the six-foot navigation channel in the lower Missouri, and that it was then considering an even wider nine-foot channel below Sioux City. upper basin members of Congress were concerned that the lower basin might have established a right to the channel. To protect the upper basin, the Act states, in pertinent part:

The use for navigation, in connection with the operation and maintenance of such works herein authorized for construction, of waters arising in States lying wholly or partly west of the ninety-eighth meridian shall be only such use as does not conflict with any beneficial consumptive use, present or future, in States lying wholly or partly west of the ninety-eighth meridian, of such waters for domestic, municipal, stock water, irrigation, mining, or industrial purposes.

Simply stated, the statute says that when there is a conflict between upstream consumption and downstream navigation, the upstream interests receive deference. Judicial interpretation of the provision, however, has not always resulted in such deferential treatment. Though the arrangement

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44 Id.
45 Morris. 68 N.D. L. Rev. at 912 (footnotes omitted).
46 Davidson & Geu. 80 Neb. L. Rev. at 829.
47 Id. at 830. The five dams were constructed at: (1) Gavins Point, at Yankton, South Dakota; (2) Garrison, at Bismarck, North Dakota; (3) Fort Randall, at Chamberlain, South Dakota; (4) Big Bend, below Pierre, South Dakota; and (5) Oahe, at Pierre, South Dakota. Id.
48 Thorson. River of Promise at 67-69.
50 Davidson & Geu. 80 Neb. L. Rev. at 832.
51 “[T]he upper basin states claim [the provision, known as the O’Mahoney-Millikan Amendment,] subordinates flood control and navigation to irrigation. The Amendment, however, has not impressed the Supreme Court, and is an insufficient basis for the upper basin’s claims to control the use of the river.” A.
seemed to establish a hierarchy of water interests, it was Congress’ hope that the enormity of the project’s storage capacity could satisfy everyone’s demands.\textsuperscript{52} Congress approved the Pick-Sloan project even though, as Professor Klein put it, “the proposals formed an irrational combination, for one ‘wanted to spread the river over fields while the other insisted on letting it flow in deep, steady currents in order to float commercial traffic.’”\textsuperscript{53}

C. The Corps of Engineers’ Authority Over the Missouri River

One aspect of the arrangement that enabled passage of the Flood Control Act would later be highly significant. The Bureau postponed its upper basin projects, allowing the Corps to build the large main stem reservoirs first while the money was available.\textsuperscript{54} This decision was pivotal, as it resulted in the establishment of the Corps’ dominance on the river: “[L]ittle money proved to be available when [the Bureau] was finally ready to go ahead with its projects . . . [T]he Corps got the here and now, . . . the Bureau got the then and later.”\textsuperscript{55} While the Bureau was ultimately able to build some of its projects, the Corps completed several more of its own. Because of the operating agreement between the agencies, therefore, the Corps was able to exercise far more control over the river.\textsuperscript{56}

The Corps received affirmation of its authority from the United States Supreme Court in 1988 with its decision in \textit{ETSI Pipeline Project v. Missouri}.\textsuperscript{57} \textit{ETSI} settled a quarrel not over limited resources, which is usually the case in water disputes, but rather over what may be done with surplus water in the Missouri River reservoirs. In 1982, Energy Transportation Systems, Inc. (“ETSI”) entered into a contract with the Secretary of the Interior to withdraw water from Lake Oahe, one of the Missouri River reservoirs, for the purpose of operating an interstate coal slurry pipeline.\textsuperscript{58} Missouri, Iowa, and Nebraska subsequently sued to enjoin performance of the contract, alleging that the Secretary’s actions, sans approval of the Secretary of the Army, were beyond the authority granted by the Flood Control Act.\textsuperscript{59} The district court granted the injunction,\textsuperscript{60} which the Eighth Circuit Court of Appeals affirmed.\textsuperscript{61} In affirming the lower courts’ decisions, the Supreme Court noted that there was no dispute that Lake Oahe was built, operated, and maintained by the Army, nor that under the explicit terms of the Act such reservoirs are under the control or direction of the Secretary of the Army.\textsuperscript{62} The Court specifically emphasized provisions of the Act highlighting the authority of the Secretary of the Army over reservoirs controlled by the Department of the Army, especially over surplus water from such a reservoir, and the Interior Secretary’s subordination in


\textsuperscript{52} Davidson & Geu, 80 Neb. L. Rev. at 832.


\textsuperscript{54} Morris, 68 N.D. L. Rev. at 912.

\textsuperscript{55} Id. (quoting from Marc Reisner, \textit{Cadillac Desert, The American West and its Disappearing Water} 194 (1986)).

\textsuperscript{56} Street, 5 Mo. Envtl. L. & Policy Rev. at 127.

\textsuperscript{57} \textit{ETSI Pipeline Project v. Mo.}, 484 U.S. 495 (1988).

\textsuperscript{58} Id. at 498.

\textsuperscript{59} Id.


\textsuperscript{61} \textit{Id. at 498}.

\textsuperscript{62} \textit{Id. at 505}.
such matters. Professors Davidson and Geu concluded that "[t]his power over the reservoirs, combined with the long-standing authority over downstream navigation, places the Corps in practical control of the River."\textsuperscript{64}

III. THE CORPS OF ENGINEERS' MASTER MANUAL AND THE DISPUTE OVER ITS REVISION

A. The Master Manual and the Demand for Change

To manage the complex Missouri River system, the Corps adheres to a set of written rules called the Missouri River Main Stem Reservoir System Reservoir Regulation Manual, or simply, the Master Manual. The Master Manual specifies the criteria by which the Corps releases water from the reservoirs on the Missouri.\textsuperscript{65} The Master Manual contains a description of the Corps' operating philosophy and an outline of its objectives to fulfill the goals set for the river system.\textsuperscript{66} The Corps' Annual Operating Plan, based on the Master Manual guidelines, governs day-to-day operations.\textsuperscript{67} Although the Master Manual is not a set of administrative rules per se, for the Corps it operates as a set of self-imposed rules.\textsuperscript{68} Nevertheless, the Corps has frequently used the Master Manual as a shield from complaints about its management of the Missouri, asserting that it has little discretion to deviate from its policies and priorities.\textsuperscript{69}

The Master Manual was prepared in 1960\textsuperscript{70} and has not been significantly revised since 1979.\textsuperscript{71} This is about to change, however, as the Corps has undertaken an effort to review and update its rules.\textsuperscript{72} The impetus for this review began several years ago, when the plentiful rainfall that created the surplus water fought over in ETSI was followed by a drought in the Missouri River Basin in the late 1980s. The drought affected the main stem reservoirs more dramatically than at any time since their construction.\textsuperscript{73} significantly reducing the water levels of Lake Oahe, Lake Sakakawea and Fort Peck, and nearly causing the river to subside to its original main channel.\textsuperscript{74} The drought exacerbated tensions between upper and lower basin interests, and intensified the disparity between the Pick-Sloan Plan's successes and shortcomings.\textsuperscript{75}

By this time, the economic landscape in the Basin did not closely resemble that anticipated decades earlier by the framers of the Pick-Sloan Plan. The irrigation of the upper basin never fully materialized.\textsuperscript{76} and navigation in the lower basin failed to develop.\textsuperscript{77} Instead, the upper basin states

\textsuperscript{65} Id. at 503-05.
\textsuperscript{66} Davidson & Geu. 80 Neb. L. Rev. at 826.
\textsuperscript{68} Street. 5 Mo. Envtl. L. & Policy Rev. at 129.
\textsuperscript{69} Id.
\textsuperscript{70} Davidson & Geu. 80 Neb. L. Rev. at 834.
\textsuperscript{71} Morris. 68 N.D. L. Rev. at 922.
\textsuperscript{72} Davidson & Geu. 80 Neb. L. Rev. at 834; Morris. 68 N.D. L. Rev. at 922; Street, 5 Mo. Envl. L. & Policy Rev. at 129.
\textsuperscript{73} Street. 5 Mo. Envtl. L. & Policy Rev. at 129.
\textsuperscript{74} Capossela. 6 Great Plains Nat. Resources J. at 132.
\textsuperscript{75} Davidson & Geu. 80 Neb. L. Rev. at 832.
\textsuperscript{76} Capossela. 6 Great Plains Nat. Resources J. at 157.
\textsuperscript{77} Davidson & Geu. 80 Neb. L. Rev. at 832 (quoting John R. Ferrell, \textit{Big Dam Era: A Legislative and Institutional History of the Pick-Sloan Missouri Basin Program}, at ix (1993)).
\textsuperscript{78} Davidson & Geu. 80 Neb. L. Rev. at 834. Of the over 5 million acres that were promised to be irrigated
realized an unanticipated, lucrative benefit from its reservoirs in the form of recreation. As the drought lingered and the water level in the reservoirs decreased, the upper basin states believed that the Corps was favoring downstream navigational interests in violation of the priorities established by the Flood Control Act. The difficulty of the matter arose from the virtual silence of the Flood Control Act with regard to managing the dams and reservoirs for purposes other than flood control, navigation, irrigation, and hydroelectric power.78

As a result, South Dakota, North Dakota, and Montana sued to enjoin the Corps from lowering the water level at Lake Oahe until their game fish, the walleye, and the walleye’s favorite food, the rainbow smelt, could spawn successfully.79 The Corps argued that if they did not maintain the level of the river downstream from Oahe by releasing water from the reservoir, downstream navigation would be impossible.80 This would harm lower basin agriculture by preventing the shipment of fertilizer and other goods.81 Moreover, the Corps maintained that reducing discharges would eliminate river traffic all summer, as they would not be able to increase discharges after the Oahe fish spawn.82 This is due to the fact that two endangered species of birds would have built their nests on the edge of the river while the water was low: a subsequent increase in flow would destroy these nests in violation of the Endangered Species Act.83 Despite its own reservations about the reviewability of the Corps’ actions, the district court granted the injunction.84 On expedited appeal, the Eighth Circuit’s immediate order stayed the injunction and found that, even if the Corps’ actions were reviewable, they were not arbitrary or capricious, which is the standard of review under the Administrative Procedure Act.85 By the time the appellate court handed down its formal opinion, the Oahe fish spawn was complete.86 Thus, the court declared the issue moot and refused to consider the matter further.87

As the drought continued and the water in the reservoirs continued to recede, the upper basin states tried a different approach.88 This time they sued to challenge previous interpretations of the Flood Control Act of 1944, arguing that the Act ordained only two priorities: flood control and upstream beneficial consumptive uses.89 In addition, they argued that all other priorities were under the Pick-Sloan Plan, only a little over 500,000 acres ever had irrigation developed. Thorson. River of Promise at 81.


78 Davidson & Geu. 80 Neb. L. Rev. at 834.
79 S.D. v. Hazen, 914 F.2d 147, 148 (8th Cir. 1990).
80 Id.
81 Id.
82 Id. at 148-49.
83 Id. at 149.
84 Id.
85 Id. at 148-49.
86 Id. at 150.
87 Id. at 151.
88 Davidson & Geu. 80 Neb. L. Rev. at 833.
89 Id.
established administratively by the Corps, and that the Act not only allows, but requires the Corps to operate the reservoirs in a way that reflects contemporary uses and needs of the basin. If the Corps weighed the realistic value of lower basin navigation against upper basin fish, wildlife, and recreational benefits, so the plaintiff’s argument went, the Corps should leave more water in the upstream reservoirs.

B. Considerations Involved in Revising the Master Manual: What is permitted? What is required? What is likely?

The Corps has committed itself to an unenviable task. To say that the revision of the Master Manual is a complex process is a laughable understatement. There would be enough complications if the analytical framework were limited to the issues present during the Pick-Sloan negotiations, but several new issues of law and fact are now extant. Compounding this complexity are the high stakes for several apparently irreconcilable constituencies. The Corps is pressed on all sides by assertions that economic, environmental, governmental, or tribal catastrophe is certain if it strikes the wrong balance; some of these claims may even be true. Moreover, the Corps must make its decisions judiciously, for even though the updated Master Manual is not permanent, the complexities of a revision mean that whatever arrangement is made, it is likely to be in place for a significant period. The constituents, however, are running out of patience—the review process has been grinding along for more than a decade, and will not be implemented before 2004—and further delay diminishes the legitimacy of the Corps as a regulatory authority. What follows is an examination of some of the issues and interests facing the Corps as it continues to weigh its options.

As has been mentioned earlier, the economics of the Missouri River have not developed as they were envisioned either at the time of the passage of the Flood Control Act of 1944, or at the publishing of the Master Manual in 1960.

There can be little doubt that the Congressional authors of the Pick-Sloan Plan contemplated that the principal economic enterprises supported by the development would be hydropower. Bureau of Reclamation irrigation and main channel navigation. Of these three, only hydropower has prospered. From the outset irrigation was a dream without foundation in fact, science, or economic demand.

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90 Id.
91 Id. “Upstream benefits from fish, wildlife, and recreation . . . were at that time estimated at $67 million annually, while the annual benefit of downstream navigation was estimated at less than $14 million.” Id.
92 Id. at 835.
93 One commentator described the dilemma this way:

In the Master Manual review, the Corps finds itself in the middle of a difficult political battle, the resolution of which will make it few friends. Senate Majority Leader Senator Thomas Daschle of South Dakota champions upper basin interests. House Minority Leader Richard Gephardt, powerful Missouri Senators, and the U.S. Attorney General (also from Missouri) remain protective of Missouri River and Mississippi River navigators.

94 Davidson & Geut. 80 Neb. L. Rev. at 835.
Navigation, despite the Corps' provision of an expensive nine-foot channel from Sioux City, Iowa to the mouth, requiring lavish amounts of water, had not developed into an enterprise of noticeable size or need; it is an experiment that has failed, delivering less than 1 percent of the overall economic benefits produced by the River. Meanwhile, as irrigation and navigation had failed to materialize, a tasty sport fish—the Walleye—became the base of a fast growing recreation industry in the upper basin, particularly around the large Oahe and Garrison reservoirs.95

Since the priorities of the original Master Manual do not mesh neatly with the economic realities of the river, the Corps has been forced to consider the priority it will give to each of the various uses of the main stem system. The Corps' discretion is guided and limited by the Flood Control Act—the Pick-Sloan Plan that was hammered out to enable the Act's passage is predominated by references to the purposes of flood control, navigation, irrigation, and hydroelectric power.96 The Pick-Sloan Plan clearly intended for the dams and reservoirs to be multipurpose structures. The Corps' own reading of the Act and its legislative history led it to assert that the hierarchy of purposes was flood control, irrigation, navigation and hydroelectric power.97 Included in the statutory language and legislative history, however, are references to "other purposes" and "other uses," which the Corps construes to allow it to consider wildlife and recreation.98 It acknowledged that such unspecified uses are necessarily subordinate to those enumerated, but demonstrated a willingness to give "other purposes" and "other uses" higher billing if upper basin states could persuade Congress to grant it the authority to do so.99

The revision of the Master Manual also has a large impact on another constituency; Indian tribes in the Missouri River Basin. Most scholarly writing on the subject of Indian relations with Missouri River management demonstrates that the tribes have lost significantly more than they have gained from the Pick-Sloan Plan.100 Because the land that was flooded to create the main stem reservoirs is relatively flat, fluctuations in the reservoirs' water levels expose or inundate much more land than would a deeper lake. For this reason, Indian tribes are greatly affected by Missouri River operations, especially those whose reservations come into direct contact with the river such as the Standing Rock and Cheyenne River Sioux on Lake Oahe.101 The tribes have water claims of millions of acre-feet in the Missouri River Basin, which, if fully enforced, could exceed the amount the Corps estimates is necessary to meet its current program functions on the Missouri.102 This does not mean, however, that the Corps is obligated to give a great deal of deference to the tribes' interests. "[T]he power to allocate benefits among riparians is lodged almost exclusively with the Corps, which comes to the process armed with a broad constitutional and legislative mandate. Thus, how the Corps chooses to manage the Missouri River is likely to bear on the tribes with the heavy

95 Id. at 836 (footnotes omitted).
96 Id. at 834.
97 Department of the Army, Missouri River Division, Corps of Engineers Office of Counsel, The Role of Recreation in the Regulation of the Corps of Engineers Constructed and Operated Main Stem Reservoirs of the Missouri River, 4 Great Plains Nat. Resources J. 26, 33 (1999).
98 Id.
99 Id. at 49.
100 E.g., Lawson, supra n. 1.
102 Id. at 158-59.
Supporters of the tribes' interests are not optimistic that their lot will improve under the revised Master Manual.

In the Corps of Engineers' Revised Draft Environmental Impact Statement, it is stated, “the Corps acknowledges that the operation and maintenance of the Missouri River can and does significantly affect Tribal trust assets and therefore, the Corps has a legal and trust responsibility to the Tribes affected.” This must provide little consolation to Tribal leaders, however, as much of the rest of the Revised Draft EIS understates and misstates the import of Indian reserved water rights to the Missouri River.104

One aspect of the Master Manual revision process that is not within the Corps’ discretion to consider is the environmental impact of its actions. Federal environmental laws have changed significantly since the Corps developed the Master Manual in 1960. Especially important is the National Environmental Policy Act of 1969 (“NEPA”).105 One section of that Act in particular has played a large role in the Master Manual revision. Specifically, it requires federal agencies to include in every recommendation or report on proposals for legislation and other major federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on: (i) the environmental impact of the proposed action; (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented; (iii) alternatives to the proposed action; (iv) the relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity; and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.106

The comprehensive environmental analysis required by NEPA has been a prolonged, contentious process.107 In the course of developing its environmental impact statement, the Corps solicited a biological opinion from the U.S. Fish and Wildlife Service (“the Service”) to assess the operation of the Missouri River main stem system under the Endangered Species Act (“ESA”).108 The Service opined that the continued operation of the main stem system according to the old Master Manual would result in the decline of certain endangered and threatened species, and in the listing of other species as endangered or threatened.109

The species specified are the least tern, the piping plover, and the pallid sturgeon.110 Very

107 The process has been in progress for years, and various groups have threatened or prosecuted law suits over various aspects of the Corps’ deliberations. See infra nn. 113, 126.
109 Id.
roughly stated, conservationists claim that what these animals need to recover is the natural ebb and flow of the river; changes in flow cue the sturgeon to spawn and reveal sand bars on which the tern and plover nest. This obviously presents a problem. “For purposes of the Master Manual review, the three species have in common the fact they are all dependent on the Missouri River’s natural flow patterns. In other words... because the current water management regime alters the nature flow in a radical way, a conflict is inevitable.” To avoid violating the ESA by maintaining the status quo, the Service developed a “Reasonable and Prudent Alternative” RSA, which consists of five components, summarized below:

1. “Flow enhancement”: operate the main stem system in a way that mimics the natural flow of the river (i.e., a spring rise followed by a summer draw down).
2. “Habitat restoration/creation/acquisition”: create twenty- to thirty-acre areas per mile of slow moving, shallow water and make certain changes affecting interchannel sandbars.
3. “Unbalanced system regulation”: when runoff conditions permit, maintain alternating low and high water levels in the upper three main stem reservoirs on a three year rotation.
4. “Adaptive Management/Monitoring”: adopt an “adaptive management process” to enable the modification of management actions in response to changing conditions by establishing an interagency coordination team and implementing a vigorous monitoring program.
5. “Propagation/Augmentation”: stocking recovery priority areas with sturgeon juveniles and monitoring their progress.

Because the channelization of the river and artificial maintenance of its water levels to permit navigation is incompatible with these requirements, navigation and other interests in the lower basin worried about the future of their livelihoods. As it became apparent that the Service’s RPA would become the Corps’ new rules of operation, several such interest groups banded together to form the Coalition to Protect the Missouri River, and gave their sixty-day notice of intent to sue the Service per the requirement of the ESA. Specifically, the Coalition alleged that the Service failed to perform its nondiscretionary duty to include economic and other impacts among its considerations in developing the Biological Opinion, and to issue multiple reasonable and prudent alternatives. In its original form, the ESA required no assessment of the economic impact of the federal designation of an area as critical habitat, but subsequent amendment made such an assessment mandatory.

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113 Davidson & Geu, 80 Neb. L. Rev. at 837.
116 *Id.* at 1-2.
Under pressure from Congress and private citizens, the Corps submitted a Revised Draft Environmental Impact Statement ("RDEIS"). The RDEIS contains six alternatives: the current Water Control Plan, a modified conservation plan, and four variations of the Gavins Point release provisions of the MCP, known as the Gavins Point options.\(^{118}\) The RDEIS contains dozens of pages of analysis of the proposals' potential impact, not just on environmental concerns, but on flood control, drainage, water supply, hydropower, recreation, and navigation as well.\(^{119}\) The Corps has refrained from selecting its preferred alternative, purportedly to receive public comment.\(^{120}\) The Corps promised a preferred alternative by May 2002,\(^{121}\) but has repeatedly pushed that deadline back,\(^{122}\) and now hopes to have a plan in place by the end of 2003.\(^{123}\) For its part, the Coalition to Protect the Missouri River is still unsatisfied with the proposals,\(^{124}\) and asserts that new evidence supports the delisting or downgrading of the piping plover and least tern.\(^{125}\)

IV. CONCLUSION: MAKE A DECISION ALREADY!

For those whose interests may be affected by the Corps' preferred alternative, the review of the Master Manual must seem interminable. Delays continue to come.\(^{126}\) This author recognizes the

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\(^{121}\) Id.

\(^{122}\) Kevin Woster, Corps of Engineers misses its own deadline for releasing management plan, Argus Leader 1A (June 1, 2002) (available at 2002 WL 20593440).


\(^{125}\) Catherine Welch, Missouri River Level at Center of Controversy <http://www.publicbroadcasting.net/kbia/news.newsmain?action=article&ARTICLE_ID=435212> (accessed Dec. 27, 2002).

\(^{126}\) Early this year it was reported that

The [Corps] wants to talk to the US Fish and Wildlife Service again about how to protect endangered species living along the waterway. Fish and Wildlife had recommended a spring rise and summer drop to restore the habitat of two shore birds and the pallid sturgeon. But Corps spokesman Paul Johnston in Omaha says new information about the habitats of the piping plover and interior least tern have become available since the US Fish and Wildlife Service issued its biological opinion in 2000. So, Johnston says the Corps has requested another consultation with Fish and Wildlife to try to resolve an issue at the heart of the Corps' [sic] attempt to update its river management guide or Master Manual. Farmers and barge operators complain low water levels in the Missouri River last summer halted navigation from mid-July to late August... and say businesses cannot plan for the summer of 2003 with
humility with which he should make recommendations to policymakers who have devoted their careers to the issues set forth in this comment. That being said, there are some things that the Corps should do to shape the outcome of this review process and hasten its conclusion.

To the extent that the Corps’ deliberations center on the conflict between protecting the environment and protecting economic interests, it obviously must obey the law. Nevertheless, to the degree that it has discretion within the bounds of the law, it should prefer the alternative that does the least violence to the efficiency of the marketplace. That is, it should interfere as little as possible with the business environment that it has itself created and on which the various interests now depend.

To the extent that the Corps’ deliberations center on the conflict between benefits to the lower basin and benefits to the upper basin, it cannot simply rely on the argument that X should win if the benefit to X is greater than the harm to Y. For example, the right of barge operators in the lower basin to ply their trade, even if it is less profitable than recreation in the upper basin, is a legitimate one. A government should be loath to grant or withhold its blessing on the basis of its own judgment of the viability or profitability of competing enterprises. It should exercise a great deal of restraint in taking actions that will effectively end someone’s livelihood, especially if it is simply motivated to deliver benefits to another.

Beyond equitable arguments, however, Professor Norman W. Thorson articulates a sound argument in favor of consensus and moderation, and points out that the impact of altering the Basin’s economies is difficult to predict:

The Corps should continue to strive for consensus among basin states. Basin states, in turn, would be well advised to suppress purely parochial instincts. Recreation in the upper basin, for instance, clearly has value that was not anticipated. . . . Preservation of this value is deserving of significant management attention. Conversely, upper basin states would be well advised not to oversimplify the navigation issue. While commercial navigation on the Missouri River has not met expectations, it is not clear what effect the existence of the potential for barge traffic has on other transportation rates. Intermodal competition is far more complex than a simple examination of commercial shipments would suggest. Moreover, Missouri navigation flows undoubtedly have a real or perceived impact on navigation flows in the lower Mississippi, where traffic is significant. If for no other reason than disparity in population and political power, upper basin states should search for management compromise . . . . The problem in the Missouri Basin ordinarily is not a limited physical supply of water; rather, the problem is in defining the purposes that should be served by river management in a way that is fair and equitable to all interests.127

The Master Manual review process has lasted too long. Five years after those comments were published, Attorney John E. Thorson explained why the Corps will not find a perfect solution, and why this process needs to be concluded:

The Master Manual review process is in its twelfth year and will now take at least

all of the uncertainty surrounding the issue.

Yount, supra n. 123.

fifteen years to complete. This fact alone evidences serious weaknesses in our policymaking process. If not soon concluded, the process will be fittingly described as farce . . . . The Corps is to be commended for its ongoing communication with basin states, tribes, and stakeholders. The agency has encouraged consensual processes and mediated solutions. Sometimes conflicts cannot be resolved consensually, and that is why we have courts and agencies. Sometimes the responsible decision-maker has to make up its mind.128

Even if it could satisfy all contemporary interests, the limited ability of Lewis Pick and William Sloan to predict the future needs of the Missouri River Basin do not suggest that the new Master Manual will meet the needs of the very distant future. For this reason, perhaps the most important changes to the Master Manual should not be substantive, but procedural. At least some changes to the Master Manual should be in the form of increasing the Corps’ flexibility to alter its policies as circumstances change. Maybe such a change, with a little more decisiveness, would prevent or at least shorten the agonizing process of revising an outdated policy manual.

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128 Thorson, *River of Promise* at 128-129.