To Whom it May Concern:


Sincerely,

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MEMO: May 9, 2017  
TO: U.S. Army Corps of Engineers  
From: Alan Walter, President  


The proposed rule pertaining to the use of U.S. Army Corps of Engineers (Corps) reservoirs for domestic, municipal, and industrial water supply contains some positive elements, but is fundamentally flawed because of the Corps’ apparent misunderstanding of state versus federal jurisdictions with respect to water appropriation, particularly western water law, and the Corps’ misinterpretation of the 1944 Flood Control Act. For those reasons, the proposed rule fails to sufficiently allay North Dakota’s previously stated concerns and is completely unacceptable.

In numerous instances throughout the proposed rule, the Corps misinterprets, misrepresents, or lacks understanding of: 1) Congress’s intent in resolving conflicts identified in the planning and authorization of the Pick-Sloan Plan; 2) the Congressional history in the development plan and the language introduced to allay state concerns; 3) the history and historical understanding of federal-state issues following the 1944 Flood Control Act and the construction and operation of the reservoirs; 4) court statements and rulings regarding the operation of the reservoirs; and 5) the physical and hydrologic realities of water dispositions in reservoirs.

Throughout the rulemaking discussion, the Corps’ arguments are weak and fundamentally devolve to little more than statements of “we believe” rather than coherent and convincing arguments that would induce states to recognize its platform. Finally, the Corps’ proposed definitions are neither contained in nor supported by the laws it is interpreting, amount to the use of rulemaking to enact a massive power transfer from state to federal jurisdiction, and contrary to its stated intent, federalize waters that do not belong to it.

The rule provides some improvement regarding the issue of pricing, but is a complete failure on the issue of jurisdiction. Of the two issues, jurisdiction is by far the most critical. Our objection to the rule is that a state’s legitimate, historically recognized, and vital jurisdiction over the management of its resources can simply not be subjugated and assumed by a federal entity through the process of rulemaking.

With respect to specific comments, we offer the following:

Dedicated to Protect, Develop, and Manage North Dakota’s Water Resources
“Section 6 of the Flood Control Act of 1944 and the Water Supply Act of 1958 (WSA). Specifically, the Corps proposes to define key terms under both statutes . . . .”

**Comment:**
The proposed rule attempts to provide definitions of terms that are common or similar in the 1944 Flood Control Act (Section 6) and the Water Supply Act of 1958 (WSA). However, although storage is used many times throughout the proposed rule and is key to the understanding of the rule, it is not defined. Since storage can be defined as either stored water or the capacity to store water it would be more concise to use and define the term stored water.

Stored water should be defined as: "Water retained in a reservoir that would not be present but for the construction of the reservoir."

North Dakota and South Dakota prepared the attached October 2014 position paper explaining our position on stored water and natural flow in more detail, as well as providing additional background information. The paper is included as part of our comments. Additionally, North Dakota has repeatedly articulated its concerns relative to state versus federal jurisdiction in the appropriation of water. These previously submitted documents listed below are also enclosed as part of North Dakota’s official comments on the proposed rule:

- February 1, 2011 ND State Engineer letter on the Lake Sakakawea draft Surplus Water Report;
- October 5, 2012 ND State Engineer letter on scoping for Reallocation Study;
- October 10, 2012 ND State Engineer letter on the draft Surplus Water Reports for the five remaining reservoirs;
- August 6, 2013 Western States Water Council letter on states’ rights to appropriate water.

**Pages 91559, 91560, 91563, 91565, 91566, 91567, 91582, and 91587**

**Page 91559** - “The proposed rule is not intended to upset the balance between federal purposes and State prerogatives, or to assert greater federal control over water resources . . . .” Also, “[t]he proposed rule is intended to ensure that the Corps carries out its authority under Section 6 and the WSA in a manner that does not interfere with State, Tribal, or other water rights . . . .”

**Page 91560** - “The Corps believes that these interpretations are respectful of the rights of States and Tribes . . . and consistent with Congressional intent, as expressed through the text of both Section 6 and the WSA.” Also, “to ensure that State water rights prerogatives and reserved water rights of Tribes are protected.”

**Page 91563** - “The operations of Corps projects for those purposes are not expected to interfere with the prerogatives of the States to allocate waters within their borders for consumptive use. Indeed, Congress has expressed its intent, in several legislative provisions of general application, ‘to recognize . . . the interests and rights of the States in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control.’”

**Page 91565** - “When exercising its authority under Section 6, the Corps does not make judgments about beneficial uses of water, as that is a prerogative of the States. (The proposed rule recognizes this, and would more clearly provide for coordination of surplus water determinations with other federal agencies, States, Tribes, and the public, to respect their prerogatives and to ensure that proposed surplus water withdrawals will not interfere with any
then existing lawful uses.)"

Page 91566 - "[A]nd to reaffirm the Corps’ intention not to interfere with State, Tribal, or other federal reserved water rights . . . ."

Page 91567 - “The Corps acknowledges that the allocation of waters for beneficial use is a prerogative of the States, and the Corps may not deviate from Congressional direction - in its existing practice, or under the proposed rule - by interfering with beneficial uses authorized by the States . . . ."

Page 91582 - “In taking action pursuant to either statute, the Corps will respect State prerogatives regarding allocation of water resources . . . ."

Page 91587 - “Congress did not intend for the Corps to interfere with State allocations of water when exercising its discretion under Section 6 or the WSA. The proposed rule recognizes this and would not interfere with State prerogatives.”

Comment:
The proposed rule completely fails to meet any of the above criteria. The states have expended great effort in explaining western water law and the effects of the proposed rule (see attached position paper), which are dismissed based on the Corps’ belief “that the proposed rule would be consistent with past practice in authorizing surplus water withdrawals without charges, responsive to concerns that have been raised, and would avoid disruption and costs in connection with existing and anticipated withdrawals.” (Page 91573) The only conclusion that can be drawn from the proposed rule as written is that the Corps is attempting to take over all water management of any river where it has built a reservoir – in defiance of Congress, court opinions, states’ rights, and the Constitution.

Page 91559
"The proposed rule is not intended to upset the balance between federal purposes and State prerogatives, or to assert greater federal control over water resources, or to interfere with the responsibilities of other federal agencies under other laws, such as the federal reclamation laws implemented by the Department of the Interior, or the marketing of federal hydropower . . . ."

Comment:
There are repeated statements throughout this rule indicating that the Corps intends to place state uses of surplus water subsidiary to power generation priorities and base water pricing for beneficial use on alternative uses for power generation. Moreover, power generation agencies are to be solicited for pricing. There are three issues concerning power: coordination, pricing, and priority.

The Corps’ intention to coordinate with power usage is reasonable and necessary as a part of its operational authority for multiple uses. However, pricing state use as lost opportunity cost to power is an inverted priority. The 1944 Flood Control Act clearly states that upstream beneficial use is the first priority. The priority issue is, therefore, primary. State beneficial use comes first, and therefore cannot be viewed as robbing power generation in a compensation base.

With respect to the priority of federal power, “[t]he cardinal rule of statutory construction is to ‘look at the mischief to be corrected’ and give the statute a meaning that will accomplish that objective. Senators O’Mahoney of Wyoming and Milliken of Colorado were trying to preserve the traditional western sanctity of appropriations for beneficial use. It could not have been their
intent that these were to be protected from impairment by navigation, yet be foregone in favor of hydroelectric power.\[2\]


Pages 91560, 91574, and 91588
Reservoir is defined in several places.
Page 91560 - “The Corps believes that the terms employed in both statutes should be read expansively to include any Corps facility that impounds water and is capable of being operated for multiple purposes and objectives. Any other Corps water resource development facility that does not impound water, or that may not be operated for multiple purposes and objectives . . . .” Similar language also occurs on page 91568.
Page 91574 - “The proposed rule would define the terms ‘reservoir project’ and ‘project,’ as those terms are used in the WSA with respect to the Corps, to mean any facility surveyed, planned, or constructed, or to be planned, surveyed, constructed, or operated, by the Corps to impound water for multiple purposes and objectives. This definition incorporates the same, broad definition of ‘reservoir’ that the Corps is proposing under Section 6 . . . .”
Page 91588 - “For purposes of the Water Supply Act, 43 U.S.C. 390b, when applied to a U.S. Army Corps of Engineers reservoir project: (1) The terms ‘reservoir project’ and ‘project’ mean any facility surveyed, planned, or constructed, or to be planned, surveyed, or constructed, and under the operational control of the U.S. Army Corps of Engineers, to impound water for multiple purposes and objectives.” Also, “for purposes of section 6 of the Flood Control Act of 1944, 33 U.S.C. 708: (1) The term ‘reservoir,’ as used in this section, means any facility, under the operational control of the U.S. Army Corps of Engineers, that impounds water and is capable of being operated for multiple purposes and objectives.”

Comment:
These definitions are confusing and contradictory. “[C]apable of being operated” would seem to mean that it is physically possible to use the facility for multiple purposes, while “may not be operated” and the “planned, surveyed, constructed, or operated” language seems to refer to the authorized purposes of the reservoir. This should be clarified. The requirement that in order to be a reservoir, the reservoir must serve multiple purposes is also troubling. As a result of this requirement, a navigation lock and dam on the upper Mississippi that is authorized solely for navigation may not be considered a reservoir. Therefore, it is uncertain how an entity that is taking water from the Mississippi River within a navigation pool would be treated. Based on our experience in North Dakota, the Corps would prevent the water withdrawal, interfering with a beneficial use authorized by the state. On the other hand, the rule would apply to a similar Corps’ dam on the Columbia River that is authorized for hydropower and navigation. But in that case, a water user would have to either enter into a storage agreement or a surplus water agreement to make use of the flow.

Page 91563
“Because purposes such as flood control, navigation, and hydropower at Corps reservoirs are carried out pursuant to the Commerce power, and are non-consumptive in nature . . . .” (emphasis added).
Comment:
In the eastern United States where precipitation exceeds evaporation, a reservoir may be non-
consumptive in nature; however, in most areas using western water law, evaporation exceeds
precipitation and reservoirs are very consumptive in nature. For example, the annual average net
evaporation (consumptive use) from Lake Sakakawea is over 551,000 acre-feet. For comparison
North Dakota’s typical annual permitted consumptive water use in recent years has been around
360,000 acre-feet. The reason for our federalism system is to have laws that take into account
the changing conditions across a continent. Imposing a rule that does not acknowledge the
difference in water availability by allowing the states to allocate their own water defies the Equal
Footing Doctrine and Congressional intent.

Page 91565
“The Corps also recognizes that some withdrawals that it may authorize from a Corps reservoir
pursuant to Section 6 could have been made from the river in the absence of the Corps reservoir
project, and in that sense may not be dependent on reservoir storage.”

Comment:
While it is good that the Corps recognizes that there are cases where the water would have been
available without the Corps reservoir, it must also recognize that in these cases the withdrawals
are not dependent on the stored water in a reservoir - no “may” about it. It is a state prerogative
to determine whether there is sufficient flow available in a river to grant a permit, to suspend
water use under a permit during times of drought, or to determine whether stored water is
necessary to grant a permit. The proposed rule, by lumping all water into surplus water,
compromises and ignores state water permitting processes.

Page 91565
The Corps argues that because the term “storage” does not appear in Section 6, but does appear
in the WSA that this is a “significant distinction.”

Comment:
It appears the Corps is using their belief in a “significant distinction” to claim authority over all
water flowing within property owned by the Corps, even though it is clear from the
Congressional Record\(^3\) that Section 6 was to apply to stored water. The Corps is attempting to
assert that because Congress omitted a single word in Section 6, the Corps is entitled to ignore all
context and record to supply its own definition.

This is clearly a misreading of the law and the Congressional intent. The WSA provides a non-
federal entity the opportunity to purchase storage in a Corps reservoir. Once purchased, this
storage would be available for the life of the project and would essentially become an authorized
purpose of the project. On the other hand, Section 6 would authorize the Corps to allow a non-
federal entity to utilize water that is stored in a reservoir that is surplus to the requirements of
authorized purposes (that would include storage under the WSA) for a limited time. Either of
these uses would require permission from the state. In North Dakota, an appropriation of water
that utilizes permanent storage under the WSA would require a water permit that does not expire
as long as it is used. Under Section 6, since it is for a limited time, the appropriation would be
granted as a temporary water permit. In either case, the permits would apply to stored water.
Water that would be available without the Corps reservoirs would be permitted by the state
without interference by the Corps.
Page 91565

"We believe that narrowly interpreting the term ‘surplus water’ to enable the Corps to authorize only those withdrawals from its reservoirs that may be determined to utilize storage, as opposed to those withdrawals that could potentially have been accommodated from the natural flow of the river had the reservoir never been constructed, would frustrate Congress’s intent that the Corps should make surplus water available when doing so would not impair operations for authorized purposes or interfere with then existing lawful uses . . . ."

Comment:
The statement needs clarification. It seems to imply that water can only be appropriated from within Corps take lines (take lines are the boundaries of the property taken by the Corps for the reservoir) with the authorization of the Corps; and therefore, to be accommodating, the Corps is labeling all water surplus water. To claim that existing lawful uses of water need authorization from the Corps clearly frustrates Congress’s intent. To claim the Corps must authorize water appropriation just because the river is surrounded by Corps property clearly interferes with state and tribal water rights and frustrates Congress’s intent. To claim that any interpretation of surplus water is not stored water clearly frustrates Congress’s intent.

Page 91568. Footnote 15

"[T]ext of proposed amendment by Sen. O’Mahoney that would authorize the Secretary of War ‘to contract for water storage for any beneficial uses or purposes’; statement of Sen. O’Mahoney that proposed amendment would enable the Secretary to make surplus waters ‘available for any purpose, domestic irrigation or otherwise, which residents in the neighborhood or in the vicinity affected may desire,’ but would also require the Secretary ‘to take into account the fundamental principles which have governed the distribution and use of water in the West,’ i.e., the Reclamation laws) . . . ."

Comment:
The Corps’ attempts to represent western water law as identical to federal Reclamation Law. This is incorrect. Western water law, established by two centuries of precedence, enshrined in western state constitutions, and ratified by Congress, is that: “all waters within the state are waters of the state to be appropriated by the state for beneficial uses.” Western water law in its root and substance is about state jurisdiction.

4 See ND Const. art. XI, § 3 (“All flowing streams and natural watercourses shall forever remain the property of the state for mining, irrigating and manufacturing.”); N.D.C.C. § 61-01-01 (“All waters within the limits of the state from the following sources of water supply belong to the public and are subject to appropriation for beneficial use and the right to the use of these waters for such use must be acquired pursuant to chapter 61-04 . . . .” See also, e.g., Or. Rev. Stat. § 537.120 (“Subject to existing rights, and except as otherwise provided in ORS chapter 538, all waters within the state may be appropriated for beneficial use . . . .”); Wash. Rev. Code § 90.03-010 (“Subject to existing rights all waters within the state belong to the public, and any right thereto, or to the use thereof, shall be hereafter acquired only by appropriation for a beneficial use and in the manner provided and not otherwise . . . .”); Kan. Stat. Ann. § 82a-703 (“Except as provided in K.S.A. 82a-703a and subject to vested rights, all waters within the state may be
In making its case, the Corps misrepresents the parts as the whole. The fact that Senators O'Mahoney and Hayden in one instance refer to the protection of Reclamation Law from Corps navigation and flood control authorities does not mean that federal Reclamation Law was the only issue, or even the main issue, in the O'Mahoney-Milliken Amendments. The Amendments to be “offered have the combined purpose of not subjecting all of the detail of the reclamation law to projects where the Army engineers have a reservoir in the middle of an existing privately owned irrigation system, where those who have that private irrigation system are in independent position to take the water and therefore should not be required to go through all the incidents of a reclamation project started from grass roots.” In other words, the Corps is to include private appropriations and uses outside of federal Reclamation Law.

But Senator O'Mahoney and others had much more to say on the Amendments that the Corps has ignored. There are numerous examples in the legislative history of the 1944 Flood Control Act and the subsequent development of the Pick-Sloan Plan, documented by Guhin and Trelease that clearly demonstrate that the overriding concern and object of protection was precisely that the states would not lose their rights and jurisdictions to access and appropriate the waters of the rivers within their borders - that the waters not be federalized. For just one example, Senator O'Mahoney, in his explanation of his Amendment to the Senate stated that:

[T]he purpose has at all times been to protect the historical and traditional rights of the people of the West to use the waters rising in the West in the manner which has been recognized by law and by court decision for almost 100 years.8

I want all the Senators who represent what are commonly called the arid-land States to know that there has been no agreement which sacrifices the rights of the people of those States, and, so far as I am concerned, there will be no such agreement.9

appropriated for beneficial use as herein provided.”); Idaho Const. art. XV, § 3 (“The right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses, shall never be denied, except that the state may regulate and limit the use thereof for power purposes.”); Mont. Code Ann. § 85-2-101 (“Pursuant to Article IX of the Montana constitution, the legislature declares that any use of water is a public use and the waters within the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided in this chapter.”); Mont. Const. art. IX, § 3(3) (“All surface, underground, flood, and atmospheric waters within the boundaries of the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided by law.”).


8 90 Cong. Rec. 8420 (Nov. 27, 1944) (emphasis added).
9 Id. (emphasis added).
I am interested, and as the Senator from Montana is interested, in maintaining the rights of individuals to use the water that arises within these States. That is the objective of the amendment, it has been its objective from the very beginning, it will continue to be its objective.  

There are many more examples. When the 1944 Flood Control Act was being considered, the Governors expressed the opinions of their states. Governor Ford of Montana commented that "we are not satisfied with just having the dams; we want the right to the use of the waters. . . ." And Governor Moses of North Dakota argued that if the O'Mahoney safeguarding amendments were not passed, "then in effect we shall have a Missouri Valley Authority with all power in the hands of the Corps of Army Engineers" and that such an action would make the upper basin states "a province, a colony, a hinterland to serve the economic needs of the lower-basin States."

What Governor Moses was identifying as the fundamental mischief to be avoided in the amendment is exactly what the Corps is attempting in the proposed rule. The Corps is proposing, in effect, making River Valley Authorities, with all real power in the hands of the Corps.

It is clear the issue of the 1944 Flood Control Act was about the "priority" of state water law, not a subsidiary allocation right under the Corps. The Corps seems to be unable or unwilling to comprehend that its authority is limited. It is an operational authority, and states are not subsidiary to it with respect to water appropriation for beneficial use.

Page 91570, Footnote 22
"[T]he Corps will grant access across federal lands controlled by the Corps when necessary to facilitate the exercise of Tribal reserved rights, without requiring a Section 6 or WSA agreement."

Comment:
The exercise of Tribal reserved water rights is a function of the Tribes' sovereignty. We appreciate that the Corps recognizes this sovereignty and water rights, and by this footnote has realized that the rule as written otherwise interferes with Tribal reserved water rights. Tribal reserved rights, however, are quantified through negotiations with the states where the Tribes reside - an implicit recognition that it is state and tribal sovereignty that is being quantitatively negotiated, despite the fact that the existence of a non-quantified federal reserve right (prior to state agreement and Congressional ratification) exists. It is remarkable that the Corps exempts the Tribes from surplus water under Section 6, but cannot recognize a state water jurisdiction

10 Id. (emphasis added).
11 Flood Control: Hearings on H.R. 4485 Before a Subcommittee of the Committee on Commerce, United States Senate, 78th Cong., 544 (1944) (statement of Sam Ford, Governor of Montana) (emphasis added).
12 Id. at 540 (statement of John Moses, Governor of North Dakota).
13 Id. at 541.
specifically protected in the 1944 Flood Control Act. We ask that the Corps expand this realization to acknowledge state sovereignty and water rights by correcting the rule.

Page 91571
"The Corps has previously acknowledged the principle that users should not be required to pay for benefits that they do not receive."

Comment:
The proposed rule completely repudiates this principle. Rather, the Corps is benefiting from the states' water that would have been available without the reservoir.

Page 91571
The Corps goes on to state, "While it may be technically possible, as the Assistant Secretary of the Army (Civil Works) observed in 1986, to evaluate whether particular surplus water withdrawals do or do not rely upon storage, Section 6 does not require the Corps to undertake such an analysis, and the time and cost required to perform such an analysis on a continuing basis may be considerable."

Comment:
The word "surplus" should be removed from this statement, as the evaluation would be to determine if the water would have been available without the Corps project or would actually be "surplus water." The determination of whether water is available to appropriate is a state prerogative that the North Dakota State Engineer's office does for every permit granted. The argument that because it may take some effort to determine if water is stored or naturally available and therefore the Corps will claim all water within the boundaries of its reservoirs is unacceptable and was clearly not the intent of Congress in passing Section 6. The Corps' logic is completely backwards. The Corps should prove that water is stored, and therefore surplus water, before it interferes with state appropriation processes. Additionally, the fact that it may be difficult or expensive in time or money to comply with the law does not justify the alternative.

Page 91571
"Further, the federal government requires information about the quantity and volume of such withdrawals, in order to best manage the reservoirs."

Comment:
In North Dakota, this information is required as a condition of a water permit and is readily available. In states where it may not be available, a condition of reporting this information could be included in the easement document without the Corps effectively claiming to own the water.

Page 91573
"With regard to the Missouri River mainstem reservoirs in particular, we believe that the proposed rule would be consistent with past practice in authorizing surplus water withdrawals without charges . . . ."
Comment:
As described above, the proposed rule removes the word “storage” from the definition of surplus water, which would not be consistent with past practice. In addition, prior to approximately 2010, the Corps acknowledged that the mainstem reservoirs did not provide a storage benefit to many water users, and therefore did not require a water use agreement. This is the past practice the Corps should strive to be consistent with – to only become involved in the water allocation process when the Corps is providing a benefit.

It is remarkable that the Corps could review the history of the 1944 Flood Control Act and the history of the O'Mahoney-Milliken Amendments, including the September 1944 Chicago Water Conference history, testimony of the governors, and the Congressional debate, and not clearly comprehend that the unimpaired rights to use the waters flowing within the reservoir boundaries was the entire issue. In substance:

1) Three of nine basin states were being occupied by the reservoirs, resulting in the loss of more than 1.5 million acres of valuable bottom land;

2) The states had always enjoyed the unimpaired authority to allocate the use of the waters of the Missouri River within their states along the entire reach of the river; and

3) Without that unimpaired right, all downstream states and tribes would enjoy the unimpaired authority of use without Corps impairment while additionally enjoying the benefits, while those bearing the burden of the reservoirs would become subject provinces and supplicants to a federal agency for their most vital resource.

Page 91580
“[T]he Corps has considered return flows and other additive inflows in the same manner as it considers all inflows to a reservoir: All inflows are assimilated into reservoir storage . . . .”

Comment:
By stating all flows are storage, the Corps is ignoring Congress’s direction to “recognize the interests and rights of the States in determining the development of watersheds within their borders and likewise their interests and rights in water utilization and control . . . .”14 The same is true throughout the discussion on return flows and made inflows (page 91563). The Corps must respect the states’ allocation systems and develop a rule that allows the states to allocate water within their boundaries.

Page 91583
“Without the proposed rule, the Corps would not enter into most or all of these contracts, because the authority for the withdrawals, and the Corps’ policies for documenting and applying Section 6 to such withdrawals, would remain unclear.”

Comment:
North Dakota agrees with this statement, as we have been greatly impacted by the Corps’ arbitrary refusal to allow the citizens of our state to access water that would have been available

without the Corps’ reservoirs while the Corps took years to develop this unacceptable rule. However, this appears to be a thinly veiled threat to accept the rule developed by the Corps that not only interferes with but destroys the prerogatives of the states to allocate waters within their borders, or the Corps will destroy those prerogatives by refusing to allow the states to allocate waters where the Corps owns property.

Page 91585

"The proposed rule for implementing Section 6 also will not have a significant impact on a substantial number of small entities; while surplus water users making withdrawals without a contract would need to obtain one in order to continue those withdrawals, the cost of the contract is anticipated to be minimal."

Comment:
The impact would, in many cases, be far from minimal. Under western water law, under state jurisdiction, use, not an arbitrary limited contractual time period, is the determinant of a water right. All waters are waters of the state and held by the state for beneficial use of its citizens. A water right, permitted by the state, is held by the party until it is cancelled or reduced for non-use. Defining all water users as "surplus water users" and requiring a contract that the Corps may decide not to grant, is an unconstitutional taking. Neither is it "surplus" to other uses, in that the state protects the water rights on the basis of priority in time and appropriates additional water with consideration of long-term sustainability of appropriated use.

Surplus water contracts, as defined by the Corps in the proposed rules, are for a limited time with no guarantee of renewal or future cost. Requiring a surplus water contract for water that would have been available without the Corps’ project will compromise the efforts of states and local interests to develop their own water supplies. Water development is a costly endeavor. To expect citizens to invest in water development projects when the rules could change in five years, and potentially destroy the project, is ludicrous.

Page 91587

"We do not believe that the proposed rule has Federalism implications." The same page quotes the Executive Order defining Federalism implications to “include regulations that have ‘substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.’"

Comment:
The proposed rule is the very definition of Federalism implications. By destroying the water appropriation system where the Corps owns property, it satisfies all three of the criteria in the definition. It appears the basis for the Corps’ belief that the rule does not have Federalism implications is its unwillingness to accept that the states are sovereign entities. This is shown on page 91567 where the Corps refers to the states as "stakeholders," a term North Dakota as a sovereign state strongly objects to as an effort to substantially change the relationship between the national government and the states.
The term ‘surplus water’ means water, available at any reservoir defined in paragraph (b)(1) of this section, that the Assistant Secretary of the Army (Civil Works) determines is not required during a specified time period to accomplish an authorized federal purpose or purposes of that reservoir, for any of the following reasons . . . .

Comment:
The previous definition on page 91565 included the phrase “water stored in a Department of the Army reservoir.” This change is an unacceptable federal overreach that upsets the balance between federal purposes and state prerogatives, asserts greater federal control over water resources, interferes with states’ rights, and is inconsistent with Congressional intent. The document itself clearly shows the violation of Congressional intent in footnote 6 on page 91564, “See 90 Cong. Rec. 8548 (Nov. 29, 1944) (statement of Sen. O’Mahoney that ‘if [Corps reservoirs] store surplus waters, such waters should be made available for any purpose . . . .’”

Footnote 15 on page 91568 also states, “‘to contract for water storage for any beneficial uses or purposes’; statement of Sen. O’Mahoney that proposed amendment would enable the Secretary to make surplus waters ‘available for any purpose, domestic irrigation or otherwise, which residents in the neighborhood or in the vicinity affected may desire . . . .’”

The footnote leaves out a portion of Senator O’Mahoney’s statement shown in the Congressional Record as, “but if they store surplus waters, such waters should be made available for any purpose, domestic irrigation or otherwise, which residents in the neighborhood or in the vicinity affected may desire.” Congress understood that the benefit of a reservoir is the stored water it provides, and apparently did not include the word storage in Section 6 because it didn’t think anyone would misunderstand the benefit provided by a reservoir.

Concluding Remarks

The State of North Dakota supports the Corps’ efforts to establish rules for withdrawal of water from its reservoirs, as Corps actions in absence of those rules has negatively impacted the state and its citizens. It is critical that this rule be completed, and if necessary litigated, so the Corps, States, Tribes, and citizens all understand the Corps’ authorities and requirements and to allow the orderly allocation of water for beneficial uses.

The state has no objection to the Corps requiring water users to enter into contracts with the Corps to withdraw water from a Corps reservoir when that water is stored water. However, the state insists that the Corps recognize states’ rights to allocate water from the natural flow without Corps interference and not interfere with states’ sovereign rights.

There are some positive elements of the proposed rules:

15 90 Cong. Rec. 8548 (Nov. 29, 1944)
An appropriate set of operational rules clearly defining the role and boundaries of state and federal authorities in relation to rivers within the take line of federal impoundments is needed. The proposed rules mark a first attempt at clearly defining state and federal jurisdictional boundaries with respect to water within the take line of Corps reservoirs.

The pricing issues, while resting on a false platform, exhibit some common-sense improvements.

The proposal to streamline the evaluation of applications for "surplus water" from the reservoirs (assuming that they are indeed surplus stored waters) by combining the evaluation with the real estate permit evaluation is sensible. It is more sensible if the water in question is surplus stored water and not natural flow, which must be acknowledged as state waters.

The separation of large-scale long-term water use projects, requiring more extensive evaluation and possible storage fees, under the WSA, from small short-term water use projects having minimal potential impact or use of stored waters, under the 1944 Flood Control Act, is sensible, particularly if these waters are recognized to be waters of the State. The charging of incidental costs for federal expenditures involved with enabling water use, other than the regulatory investigative costs themselves, is sensible.

The problem with the proposed rule is created entirely by the definition of "surplus" that does not recognize the priority of state authority with respect to beneficial use of natural flows and treats it entirely as a subset of Corps federal operational authority. The Corps relegates state beneficial uses outside of federal projects to temporary (surplus) status. The Corps’ proposed rules treat all water as subject to Corps’ authority, and therefore state appropriations as inferior to Corps determined uses. On the contrary, the 1944 Flood Control Act gave first priority to state use of the water. In contrast, the Corps relegates it to a subsidiary allocation authority under its own allocation authority.

The Corps states on page 91583, “Rather, the rule is expected to improve clarity and coordination, providing unquantified benefits by reducing misunderstanding and litigation risk.” So there is no misunderstanding, if this rule is not modified to ensure the Corps does not interfere with state water rights, the State of North Dakota will litigate. The first essential step in modifying the rule is to change the definition of surplus water to include that surplus water is water stored in the reservoir and to define stored water as water retained in a reservoir that would not be present but for the construction of the reservoir.
**POSITION PAPER ON MISSOURI RIVER ALLOCATIONS WITHIN CORPS' RESERVOIR TAKE LINE BOUNDARIES**  
**PREPARED BY NORTH AND SOUTH DAKOTA IN COOPERATION WITH ASA AND USACE**  
**OCTOBER 2014**

**Introduction**

In Spring 2010, the Corps of Engineers began implementing Real Estate Policy 26. The policy states "no easement that supports any type of water supply agreement will be executed prior to the water supply agreement being executed by all parties." The Corps takes the position that any water removed from within a Corps take boundary requires a water supply agreement. The States\(^1\) take the position that a water supply agreement is only necessary when water is taken out of storage from the reservoir. Stated another way, the Corps believes that all water within a reservoir boundary is part of storage; whereas the States believe dam systems are comprised of both stored water and natural stream flow components.

The overall purpose of this paper is to provide the ASA and Corps with an explanation of how the States’ position is compatible with legal authority and the Corps’ overall system of reservoir operations. While this paper focuses specifically on the Missouri River reservoir system, the States are mindful of the ASA and Corps’ desire to have a nationwide water supply agreement policy. Though versed in neither the details of how other reservoir systems operate nor other states’ specific laws, the States have attempted to present a system believed to be workable throughout at least the western states and possibly nationwide.

This paper first contains a section describing various definitions that are important to the overall context of the discussion. Following that is a brief description of historical background and legal

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1 For purposes of this document, the “States” means North Dakota and South Dakota.
authorities. Next, the paper articulates the unique nature of the Missouri River reservoir system. This background will lead to a discussion of the Missouri River Mainstem Reservoir System Master Water Control Manual (Master Manual), which describes water management and operation on the mainstem Missouri River. Finally, the prior appropriation system will be discussed. Several examples will be used to illustrate the appropriate use of water supply agreements within the prior appropriation states.

Definitions

Three sets of definitions are fundamental to the context of the overall discussion. Further, the differences between the definitions in each set must be understood. The sets are volume versus flow, capacity versus storage, and natural flow versus storage. Once the differences between the terms are clarified, the relationship between flow and storage can be explored.

Volume versus Flow

Volume and flow are often confused when discussing water resources. Volume refers either to the three-dimensional space that a substance occupies or the three-dimensional space contained within a boundary or container. An example of this is the amount of space contained within a measuring cup, which could also be referred to as the measuring cup’s capacity. Volume is measured in units of cubic length, such as cubic feet or cubic meters, though terms like cup, pint, gallon, acre-feet, or liter are often used. Regardless of how a volume is labeled, the fundamental unit originates from cubic length.

An extension of volume is flow (sometimes called a flow rate or volumetric flow rate). Flow refers to a volume that passes a certain point per unit of time. The fundamental difference between volume and flow is that flow accounts for time, while volume does not. The measurement of volume per time (flow) is often expressed in terms of cubic feet per second (cfs), cubic meters per second, gallons per minute, or acre-feet per day.

Capacity versus Storage

As discussed above, volume and capacity are sometimes used interchangeably. Confusion sometimes results because often the terms capacity and storage are incorrectly used interchangeably. These two concepts are very different. The confusion likely occurs because sometimes capacity is referred to as storage capacity, which then gets shortened to storage.

Capacity is the volume of the container or the amount that a given container can hold and does not fluctuate unless there is a physical modification. Storage, however, is the amount in the container
at any given time. Storage does fluctuate. For example, a one gallon container holding milk has a capacity of one gallon. As the milk is consumed, storage in the container decreases.

Another example can be seen in Figure 3 (infra), which shows the Missouri River Mainstem Capacity Zones. Ignoring the effects of sedimentation, the capacity of the reservoir system is a constant 72.4 million acre-feet. But the storage of the system fluctuates continuously, as shown by the indications of the historic minimum in 2007, and the historic maximum in 2011.

**Natural Flow versus Storage**

Natural flow is a concept of a volume of water moving past a point along a river that is not augmented by artificial releases from storage.

Storage is the removal of water from natural flow to hold for a period of time. Storage typically occurs on an annual basis, filling storage reservoirs during spring run-off. Releases are typically made from storage in the summer and fall to augment natural flows. At the end of a year, there may be storage carryover into the subsequent year.

Not all storage is off-stream of a river system. Storage can also be on-stream within the river system. Within the States, on-stream and off-stream storage are viewed similarly; the location of the reservoir does not determine storage rights to the natural flows.

**Relationship between Flow and Storage**

As discussed above, both flow and storage fluctuate with time and conditions. When examining the river and reservoir system, these two concepts are interdependent. The Missouri River is a wildly fluctuating force of nature. The variation of flows and the catastrophic flooding those flows can cause are the primary reason the dam system was constructed. Though the flow in the river has been modified and somewhat tamed by the six main stem dams, it still varies seasonally with the prairie snowmelt generally beginning in March, followed by the mountain snowmelt around June, and supplemented by rains that occur during spring through fall. The dams, however, store these peak flows and release this storage over time as the river can accommodate the additional flow.

Analyzing this system in more depth reveals that water flows into a reservoir at the same time that water passes through a dam's outlet. Water flowing into a reservoir is commonly referred to as inflow, and water passing through a dam’s outlet is commonly referred to as outflow. For inflow to reach a dam and become outflow, there is a flow component through the reservoir. In addition to flow, a reservoir may hold or impound a certain volume of water - the storage. In other words, a reservoir
simultaneously has a volume component and a flow component. This will be illustrated with the following three examples.

**Example 1:** (Inflow = 500 cfs, Outflow = 500 cfs, Storage = 1,000 acre-feet).

Suppose that at a certain point in time a reservoir impounds 1,000 acre-feet of water. 500 cfs is flowing into the reservoir, and 500 cfs is passing through the dam. Because the inflow and outflow are the same, the volume of the water impounded by the dam does not change; it remains at 1,000 acre-feet. Water has not been added or removed from the storage, yet there was both inflow and outflow, and therefore flow through the reservoir. This flow is the river flowing beneath the impounded volume of water.

**Example 2:** (Inflow = 500 cfs, Outflow = 700 cfs, Storage = 1,000 acre-feet).

Now suppose that a reservoir at a certain point in time impounds 1,000 acre-feet and the inflow is 500 cfs, but the outflow is 700 cfs. Because the outflow is greater than the inflow, the volume of stored water will decrease. The 700 cfs outflow is comprised of two components: (1) the 500 cfs inflow flowing through the reservoir, and (2) a portion of the impounded volume that has been transformed to a flow. Specifically, water is removed from the impounded volume, or removed from storage, at a flow rate of 200 cfs (700 cfs minus 500 cfs). The new storage volume depends on how long water is released from storage at the rate of 200 cfs. If this situation continued for one hour, the new stored volume would be 983.5 acre-feet.²

**Example 3:** (Inflow = 700 cfs, Outflow = 500 cfs, Storage = 1,000 acre-feet).

As a final example, suppose the inflow is greater than the outflow. Now the reservoir impounds 1,000 acre-feet, the inflow is 700 cfs, and the outflow is 500 cfs. Because the inflow is greater than the outflow, the impounded volume of water increases. In this example, instead of removing water from storage, water is added to the impounded volume at a rate of 200 cfs. After one hour, the impounded volume would be 1,016.5 acre-feet.

The relationship between flow and volume is ever-changing and will vary dramatically in different parts of the country. While some dams located on intermittent streams only have a flow component for part of the year, the Missouri River constantly flows in, through, and out of the reservoirs.

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² 1,000 acre-feet – (1 hour * 200 cubic feet/second * 3600 seconds/hour * 1 acre-foot/43,560 cubic feet) = 1,000 acre-feet – 16.5 acre-feet = 983.5 acre-feet.
The Corps' position is any water within a Corps take boundary of its reservoir is storage and requires a water supply agreement. The States' position is that the Missouri River natural flow is available to the people of the basin without the need of storage in the reservoirs. Because this flow is available for use in the basin, the basin states and tribes have the right to appropriate this natural flow without interference by the federal government.

**Historical Background and Legal Authorities**

The Missouri River enjoys a storied legal history. While numerous federal and state legal doctrines, authorities, and cases all impact the Missouri River system, the following discussion is briefly limited to those areas that most directly impact the water supply agreement issue: states' rights, the 1944 Flood Control Act, the O'Mahoney-Milliken Amendment, the Water Supply Act of 1958, and sovereign land doctrine.

**States' Rights**

Each state has its own way of addressing water use and control. In the Enabling Act, Congress provided for the people of the Dakota Territory to form constitutions and state governments and be admitted into the union on an equal footing with the original states. In North Dakota, the constitution provides that "[a]ll flowing streams and natural watercourses shall forever remain the property of the state for mining, irrigating and manufacturing purposes." This constitutional language was adopted through the Enabling Act by proclamation of the President when North Dakota was declared a state in 1889. "A right to appropriate water can be acquired for beneficial use only as provided in [chapter 61-04]. Beneficial use shall be the basis, the measure, and the limit of the right to the use of water."

In South Dakota, water ownership is addressed statutorily: "It is hereby declared that all water within the state is the property of the people of the state, but the right to the use of water may be acquired by appropriation as provided by law." Further, "the people of the state have a paramount interest in the use of all the water of the state and that the state shall determine what water of the state, surface and underground, can be converted to public use or controlled for public protection."
Throughout history, Congress and the Supreme Court have spoken with a clear and consistent voice regarding state deference with respect to water allocation. As the Court observed in the landmark California v. United States decision:

The history of the relationship between the Federal Government and the States in the reclamation of the arid lands of Western States is both long and involved, but through it runs the consistent thread of purposeful continued deference to state water law by Congress.9

As one example of this deference, the Corps of Engineers, Bureau of Land Management, Bureau of Reclamation, Department of Agriculture, Fish and Wildlife Service, Forest Service, and Park Service currently hold a combined total of 195 conditional or perfected water permits in North Dakota.10

1944 Flood Control Act

The 1944 Flood Control Act established policies relating to flood control and authorized the construction of thousands of dams and levees across the country.11 The Act established a Missouri River Basin program to manage the Missouri River and its dams with eight authorized purposes: flood control, navigation, hydropower, water supply, irrigation, water quality, recreation, and fish and wildlife.12

Section 6 of the 1944 Flood Control Act allows the Corps to sell surplus water.13 The Corps defines surplus water as:

(1). Water stored in a Department of Army reservoir that is not required because the authorized need for the water never developed or the need was reduced by changes that have occurred since authorization or construction.
(2). Water that would be more beneficially used as municipal and industrial water than for the authorized purpose that, when withdrawn, would not significantly affect authorized purposes over some specified period.14

The States view the language of the 1944 Flood Control Act as consistent with our position that water within a reservoir boundary is a combination of stored water and pass-through natural flows. The stored water is subject to reallocation and a determination that it is surplus. The natural flow is not stored and not subject to reallocation or determination that it is surplus.

10 See North Dakota State Engineer permit database. http://www.swc.state.nd.us/4dllink7/4d cgi/permitsearchform/Permits
12 Id., § 9.
13 Id., § 6.
O'Mahoney-Milliken Amendment

The very first lines of the 1944 Flood Control Act, known as the O'Mahoney-Milliken Amendment, state:

[It] is hereby declared to be the policy of the Congress to recognize the interests and rights of the States in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control, as herein authorized to preserve and protect to the fullest possible extent established and potential uses, for all purposes, of the waters of the Nation's rivers.15

It is not appropriate to view the O'Mahoney-Milliken Amendment as simple intent language. It is part of the law and must be respected. Several states fought hard for the language to be included and would not have voted for approval of the 1944 Flood Control Act without it. Governor Moses of North Dakota argued that without the language, the upper basin states would be "'a province, a colony; a hinterland to serve the economic needs of the lower-basin States.'"16 Governor Ford of Montana testified that the upper basin states "'are not satisfied with just having the dams; we want the right to the use of the waters behind those dams.'"17 Governor Ford went on to recommend that the entire Missouri River Basin provision be removed from the 1944 Flood Control Act if the protections of the O'Mahoney-Milliken Amendment were not included.18 Finally, Colorado Senator Millikin supported the amendment "by citing and explaining the Acts of 1866, 1877 and 1902, all of which granted special status to state law in water matters."19 Milliken also cited the Denison Reservoir Act, "which specifically gave priority to state law in water impounded in a federal dam."20

As evidenced, the O'Mahoney-Milliken Amendment was something that many states took seriously and believed was required to be included in the 1944 Flood Control Act. Not only was the language important for passage of that Act, but Congress reiterated its commitment to the O'Mahoney-Milliken Amendment by repeating the language in the Rivers and Harbor Act of 1945.21 Both Acts

17 Id. (quoting House Hearings on 4485 at 544).
18 Id. (citing House Hearings on 4485 at 544).
19 Id. (citing House Hearings on 4485 at 723).
20 Id. (citing House Hearings on 4485 at 722-23).
further recognize the difference between the east and west by specifically protecting beneficial uses of water in states west of the ninety-eighth meridian.\textsuperscript{22}

\textit{Water Supply Act of 1958}

The Water Supply Act of 1958 also begins with Congressional recognition of state primacy over water.

It is declared to be the policy of the Congress to recognize the primary responsibilities of the States and local interests in developing water supplies for domestic, municipal, industrial, and other purposes and that the Federal Government should participate and cooperate with States and local interests in developing such water supplies in connection with the construction, maintenance, and operation of Federal navigation, flood control, irrigation, or multiple purpose projects.\textsuperscript{23}

The Act goes on to state that storage may be included in Corps/Reclamation reservoirs “for present or anticipated future demand or need for municipal or industrial water, and the reasonable value thereof may be taken into account in estimating the economic value of the entire project.”\textsuperscript{24} The Act further places a condition that “before construction or modification of any project including water supply provisions for present demand is initiated, State or local interests shall agree to pay for the cost of such provisions.”\textsuperscript{25} Based on this authority and that granted in Section 6 of the 1944 Flood Control Act, the Corps states it has the authority to enter into water supply agreements with any entity that wishes to take water from within the take line boundary.

The States’ position is consistent with the Water Supply Act of 1958 in that if water supply is unavailable from natural flows, additional water supply from storage may be necessary. The portion of the water supply from storage used to augment natural flows should have a water supply agreement.

\textit{Sovereign Land Doctrine}

States generally own title to the beds of their navigable rivers and lakes. This doctrine has deep historical roots. Upon achieving independence from Great Britain, each American colony became sovereign. As such, the colonies held, just as the British Crown did, “absolute right to all their navigable

\textsuperscript{22} Pub. L. No. 534, 58 Stat. 887, 33 U.S.C.A. § 701-1(b); \textit{Id.}
\textsuperscript{23} 43 U.S.C.A. § 390b(a).
\textsuperscript{24} 43 U.S.C.A. § 390b(b).
\textsuperscript{25} \textit{Id.}
waters, and the soils under them." New states admitted to the Union were entitled to the same rights as those held by the original states. They were entitled to become a state on an "equal footing" with the original states, and hence title to the beds of navigable waters is founded on the constitutionally moored equal footing doctrine. To honor the doctrine, the United States held the beds of navigable waters in trust for the future states.

States "gained title to the lands under navigable waters as an incident of sovereignty," as an incident of statehood. These lands come to the state not as a gift from the federal government, but were a grant "conferred . . . by the Constitution itself." Because the state owns the lands "by virtue of its sovereignty," the beds of navigable rivers and lakes are often referred to as "sovereign lands." State title to the beds of navigable waters was confirmed by Congress in the 1953 Submerged Lands Act.

Because the Missouri River was navigable in 1889, the States took title to its bed when they were admitted to the United States. When the Corps condemned land to build the reservoirs, they did not take the sovereign land from the states. The States continue to own this land in fee, including the water within the original river channel, and have the rights of access and use.

Missouri River System

This section of the paper will examine some specifics of the Missouri River system because it is important to understand the unique characteristics of the basin. The Corps would like to adopt a consistent water supply agreement policy nationwide. While consistency in policy application is desirable, such a policy must be flexible enough to recognize and accommodate the distinctive circumstances found throughout the country. Three such circumstances make the Missouri Basin notable: the mix of water law doctrine within the basin, the sizes of the reservoirs, and the purposes for which the dams were constructed.

27 Id.
28 State ex rel. Sprynczynatyk v. Mills, 523 N.W.2d 537, 539 (N.D. 1994) ("Mills I").
30 State v. Loy, 20 N.W.2d 668, 671 (N.D. 1945).
33 Mills I, 523 N.W.2d at 540.
Mix of Riparian and Prior Appropriation Doctrines

The Missouri River Basin is comprised of ten states, and the river itself flows through or borders seven of those states. Of those seven states, Montana, North Dakota, South Dakota, Nebraska, and Kansas all regulate water under the prior appropriation system. Iowa and Missouri regulate water under the riparian system. The Missouri River is roughly the dividing line between the riparian states and the prior appropriation states; no other major watershed in the country encompasses two different appropriative legal regimes that must be respected. In riparian states, reasonable use of the water belongs to the riparian owners. This means the Corps, as the riparian owner, would have a user interest in the water captured by its reservoirs. The prior appropriation states, in contrast, do not vest user rights based on land ownership. Therefore, the Corps would have no user interest in the river flowing through the reservoir in prior appropriation states unless it has been granted those rights by the state. Additionally, because water belongs to the state under prior appropriation systems, those states generally track water use. In contrast, riparian states tend not to monitor water use because the water lawfully belongs to the landowners.

Size of Reservoirs

The three upstream reservoirs (Fort Peck, Garrison, Oahe) on the Missouri River are the three largest Corps dams in the country. See Figure 1. The storage capacities of Fort Peck, Garrison, and Oahe are 18.7 million acre-feet (MAF), 23.8 MAF, and 23.1 MAF, respectively. For comparison, the next largest Corps dam is Sam Rayburn Dam in Texas, with a capacity of 6.3 million acre-feet.

More importantly, because of the size of the reservoirs and the Corps' Real Estate Policy 26 implementation, river access in the States has been severely restricted. As seen in Figure 2, approximately 75% of the river through North Dakota and South Dakota can no longer be accessed due to the Corps' new policy position. Also of critical importance and illustrated by Figure 2 is the fact that access to the river for the Fort Berthold, Standing Rock, Cheyenne River, Lower Brule, Crow Creek, and

35 Wyoming, Colorado, and Minnesota are located in the Missouri River Basin, but the river itself does not flow through those states.
37 Id.
38 Master Manual, Revised March 2006, Plate II-1.
40 Although not shown directly in the graphic, the number of blocked river miles in North Dakota is 262/354 (74%) and the number of blocked river miles in South Dakota is 375/483 (78%).
Santee Sioux tribal reservations has been completely restricted by this policy. The Yankton reservation has also had its access restricted in approximately the northern half of the reservation.

Figure 1: Relative Storage Capacity of Corps' Reservoirs
Source: North Dakota State Water Commission, adapted from Corps' graphic

Purpose for which Dams were Built

In most of the country, the Corps has constructed dams to help with additional water supply needs. While water supply is one of the authorized purposes, the natural flow of the Missouri River provided abundant water supply prior to dam construction and still does. While the upstream states have benefited from the dams in the form of flood control, hydropower, and recreational activities, this has come at great sacrifice. Instead, the Missouri River dams were built mostly to the detriment of the upstream states. As time has passed, the benefits of the system have mostly accrued downstream. Not only were hundreds of thousands of acres flooded and thousands of people displaced, particularly the tribes, but the highly fluctuating nature of the reservoirs causes difficulty with locating water supply intakes and recreational facilities and contributes to erosion of reservoir banks, which results in losses of land and artifacts with cultural or historical significance. When reservoir water levels are drawn down,
Figure 2: Missouri River Basin Illustrating Tribal Reservations, Reservoir Miles, and Open River
Source: Compiled by North Dakota State Water Commission
water quality is degraded. Owners of floating water intakes, which are commonly used by irrigators on the reservoirs, have increased costs caused by responding to changing water levels. The reservoirs also trap sediment that would have historically been carried downstream and contributed to important geomorphic processes. Finally, the upstream ends of reservoirs cause the creation of deltas, which continuously grow, acting as an obstruction in the river channel and increasing the risk of flooding.

**Master Manual Review**

Not only is the Missouri River a complex and unique system, it is governed by the often contentious Master Manual. The Corps’ six multi-purpose dams - Fort Peck, Garrison, Oahe, Big Bend, Fort Randall, and Gavins Point - and reservoirs impounded behind each comprise the Missouri River Mainstem Reservoir System (Mainstem System). The Corps operates the dams as an integrated system to obtain the multi-purpose benefits for which the reservoirs were authorized and constructed. Yet as illustrated in the examples above, the inflow, outflow, and storage of each reservoir is constantly changing. The operation of an individual dam impacts operation at each of the other dams.

The Mainstem System is regulated by the Master Manual, which was most recently revised in 2006. The Master Manual is designed to manage water held in the reservoirs for the eight authorized project purposes of flood control, navigation, hydropower, water supply, irrigation, water quality, recreation, and fish and wildlife. In addition, operation of the Mainstem System must also comply with other applicable Federal statutory and regulatory requirements.

The Master Manual serves as a guide to the Corps in meeting the operational objectives of the system and fulfilling the authorized purposes. Of the eight authorized purposes, only flood control benefits from having vacant capacity available, while the other seven purposes benefit when the reservoirs are full. The reservoirs are separated into multiple zones: permanent pool, carryover multiple use, annual flood control and multiple use, and exclusive flood control (Figure 3).

The Missouri River Basin Water Management Division’s operation and management strategy of the reservoir system is guided by the Master Manual and is based on a combination of system storage levels and calendar date trigger points. Capacity in the Mainstem System is not designated for any specific authorized purpose, excluding flood control, which requires empty capacity.
Operation of the Mainstem System for Flood Control

The Master Manual does not allocate specific blocks of capacity for any particular authorized purpose except flood control. Instead, the Mainstem System is operated on a combination water level/time of year system to supply the other seven purposes. The Mainstem System operation is dictated by the total combined amount of water in the reservoirs, known as system storage, measured on set calendar dates during the year. System storage is the sum of the water volume in each reservoir as determined by the Master Manual and is determined based on the elevation of each reservoir and known elevation-capacity relationships. This method of determining the water in a reservoir inherently includes both the stored water volume and the water flowing through the reservoir.

The upper two zones of the system - the annual flood control and multiple use zone and the exclusive flood control zone - are tied to flood control. The operational goal is to have both of these zones empty on March 1 of each year. This allows capacity to be available for the capture of the spring and summer runoff from the plains and mountain snow packs and rain events.
Filling a portion of the annual flood control and multiple use zone is a normal part of the annual operations. Water temporarily stored in this zone is metered out of the system throughout the year to supply water for the other project purposes. The process is repeated each year.

The exclusive flood control zone is available to capture excessive runoff once the annual flood control and multiple use zone is full. Water captured in this zone is evacuated when downstream conditions are capable of handling the increased releases. Under extreme conditions, the Mainstem System reservoirs are capable of surcharging storage above the elevation of their respective exclusive flood control zones. This occurred on two of the reservoirs during the 2011 flood event.

Authorized Purposes Requiring Water Releases but no Designated Capacity

Specific allocations of capacity have not been designated for the system's consumptive use authorized purposes. Instead, water is released through the Mainstem System reservoirs to meet the various project and system goals. Such goals include water level requirements in reservoirs and flow levels below each project. Water released for one purpose can also serve the other purposes. Water consumptively removed from the Mainstem System for a purpose is considered a depletion. The Master Manual is based on the actual storage volumes; thus, while water use may affect the operation of the system, it does not have any effect on the Master Manual.

Navigation Operations

Navigation on the Missouri River requires a certain flow level to be maintained in the navigation channel downstream from the reservoir reach. Navigation is limited to the normal ice-free season, with an eight-month full-length flow support season from April 1 until December 1. Flow support for navigation begins on April 1 at the confluence of the Missouri and Mississippi Rivers. This requires releases from Gavins Point reservoir to be increased about seven days earlier to account for travel time. A system storage check determines the total amount of combined storage held in the Mainstem System reservoirs on a particular date. The system storage check determines whether navigation support will be at full, intermediate, minimum, or no navigation service. A service level check determines the water depth to be provided in the navigation channel from Sioux City, Iowa, to St. Louis, Missouri, and is related to the draft of the barges navigating that channel. Navigation releases from the Mainstem System at Gavins Point are adjusted to meet the downstream target flow levels at four locations on the lower river - Sioux City, Omaha, Nebraska City, and Kansas City.

Navigation support levels are set for the first half of the navigation season during a March 15 system storage check. Navigation support level and season length for the second half of the season are
determined by a July 1 system storage check. Total system storage also determines the navigation season length of a full season with normal storage levels, reduced season due to low storage levels, or an extended season due to excess storage levels.

**Hydropower**

Hydropower is a non-consumptive use requiring the release of water through each of the six reservoir power houses. Fluctuations in electricity demand from consumers are handled by adjusting operations at individual reservoirs by temporarily storing more water in certain reservoirs during low demand and increasing water releases when the demand is high. There is no specific block of water allocated directly to hydropower use, so hydropower piggybacks onto and generates power by using water released for other project purposes, such as navigation.

**Water Supply**

Municipal and rural water systems and industrial supply throughout the reservoir and river reaches are consumptive water uses and are treated as depletions from the system. An estimated three million people are served by municipal water supplies from the Missouri River, and it is the major water supply source for the cities of Bismarck, Omaha, Kansas City, St. Louis, and several smaller rural and Native American communities. Rural water systems withdraw water from the river, transport it to treatment facilities, and then send the treated water to water systems for distribution to communities and individuals located away from the river.

**Irrigation**

The 1944 Flood Control Act envisioned nearly 5.3 million acres of irrigation development from the Mainstem System, including four million acres in the upper basin states. Authorized irrigation development for the States also included water supply to communities along the irrigation conveyance systems. Only a small fraction of this irrigation was ever developed. The majority of the irrigation has been privately developed and uses small private intakes scattered throughout the reservoir and river reaches.

Although not specifically identified as releases from the reservoir, water supply and irrigation use upstream from Gavins Point are treated as depletions from the system by the Corps. In the reach below Gavins Point, water for these uses is included in the water released for navigation use. Flows diminished by pumping for these uses are accounted and compensated for using the same target locations described in the navigation section.
Water Quality

Several coal-fired and nuclear power plants currently draw cooling water from the river. The river's flow and water temperature affect the power plants' abilities to discharge heated water back into the river while staying within state limits in their National Pollutant Discharge Elimination System permits. Generally, system project release levels necessary to meet the downstream navigation and water supply needs exceed the minimum release levels necessary to meet minimum downstream water quality requirements. This usually allows water used for industrial thermal power generation cooling to be returned to the river.

Recreation

Recreation, a non-consumptive use, occurs in both the reservoir and river reaches of the system. Although recreation use occurs at all reservoir elevations, recreation during extreme high and low water levels can be adversely affected by access issues. Public access points, such as boat ramps, parks, and fishing areas, can be under water and unusable during periods of high water levels. Boat ramps can also become unusable during periods of extremely low water levels when the water recedes and the ramps are left high and dry.

Fish and Wildlife (Including threatened and endangered species)

The reservoir and river reaches support a large variety of fish and wildlife species. In the reservoir reaches, fluctuating water levels can negatively affect the propagation and survival of certain species. In the river reaches between reservoirs and downstream of Gavins Point, a number of species of fish and wildlife are able to survive and flourish. However, some species of fish and wildlife can be adversely affected by widely fluctuating release levels due to changing the available habitat, spawning, and nesting zones.

Since the reservoir system was completed 50 years ago, a large section of the Missouri River changed from a free flowing meandering river to one with large impoundments and channelized, non-meandering river reaches. Some native fish and bird species have been adversely impacted by these changes to the point they have been listed as threatened or endangered species. The Master Manual contains operational criteria to address the recovery of these species.

The Effects of Recognizing States' Rights to Natural Flows on Master Manual Operations

The construction of the Missouri River Mainstem System between 1939 and 1964, altered the river's natural hydrograph. The river's flow has been manipulated in a process where the base flow passes through the reservoirs, while the excess flow is captured in the reservoirs. This base flow is
available to meet the water needs of the States’ populations, including Native Americans, in both the reservoir and river reaches. If there is not sufficient base flow available to meet those needs, the Corps has the ability to augment this flow by releasing water from storage.

The States view this base flow as a natural flow, to which they and the tribes have the unimpeded right to allocate for use under water appropriation systems. If this natural flow water is not being used, it continues to be available to meet the authorized purposes, some of which hold state issued water rights. Recognizing natural flow separate from storage, as well as state and tribal water rights for allocating water, does not run contrary nor interfere with the Corps meeting the authorized purposes of the Mainstem System nor the operation of the Mainstem System through the Master Manual.

**Prior Appropriation System and Water Supply Agreements**

In the western United States, where water can be limited and is often scarce, the risk to water-using enterprises and the need for investment in water-use infrastructure has required an orderly regulatory system within which water rights can be assured and the risk associated with those established rights can be clearly evaluated and minimized. For this reason, water use in western states is governed under the doctrine of prior appropriation. Under prior appropriation, “[w]ater belongs to the state, but users can acquire the right to use water” and “[t]he first user of water has priority (superior legal right) to continue using the water over subsequent users of the water.” The principle of prior appropriation is often summarized as “first in time, first in right.”

While the general system of prior appropriation is similar throughout the west, each state and tribe implements its laws with various nuances.

All water users who want to put water to beneficial use must get a permit. The water rights are established and protected in the order of priority. The order of priority is established by the date which the completed application for a water permit is received by the state’s water appropriation agency. After a water right is established, the right of use belongs to the permit holder as long as the user complies with the permit conditions. Each permit specifies a maximum flow rate (cfs), maximum volume (acre-feet), and various other conditions (such as metering and reporting requirements).

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41 Dr. David Saxowsky, Law Professor, University of North Dakota Law School and North Dakota State University Department of Agricultural Economics. Web Access Sept. 19, 2014. [http://www.ndsu.edu/pubweb/~saxowsky/aglawtextbk/chapters/waterlaw/PriorAppr01.html](http://www.ndsu.edu/pubweb/~saxowsky/aglawtextbk/chapters/waterlaw/PriorAppr01.html)
In times of scarcity, beneficial use of the most junior permit holder is curtailed by the state to guarantee satisfaction of the beneficial use of all senior water rights within the available supply of water. Water permit use is curtailed in the reverse order of priority until all remaining senior water rights can be satisfied. When water supplies become more abundant (flows increase), rights of diversion and beneficial use are restored in the order of seniority of the curtailed users. In this manner, an orderly process of use and risk assessment is known before investment in a water-using enterprise.

Under the appropriative system, storing water in a reservoir is considered a beneficial use. Water permits for storage are obtained in the same manner as for other uses. The permit is assigned a priority date and allows the permit holder the right for one annual fill of the reservoir. If another downstream appropriative water user on the same watercourse has a senior permit to the reservoir storage permit, the junior priority reservoir permit holder cannot store water until the senior permit holder's right is satisfied.

Indian reserved water rights are often referred to as "Winters rights." A 1908 Supreme Court case, Winters v. U.S., held that the United States, when creating a reservation, implicitly reserved water for tribal use on the reservation.\(^{42}\) Even if the legal regimes of different tribes varies, the Winters right is a prior appropriation right when viewed in conjunction with the states' water rights. Although the process of quantifying Indian reserved water rights is complex, as a general rule, the priority of an Indian reserved water right is the date the reservation was established.\(^{43}\) Thus, the majority of Winters rights pre-date statehood and thus pre-date the majority of state appropriations. Additionally, if tribes believe they are not getting enough water under their Winters rights or they want water in addition to their Winters rights, this is an issue for the states to work out between themselves and tribes and does not involve the Corps. Similarly, if a state believes another state is using too much water from the system, this is an issue for the states to resolve via compact or litigation. Neither of these situations impact the Corps' reservoir operations, which is the only authority the Corps should be exercising over the system.

The following hypothetical examples illustrate the manner in which adjustments of water use are made in the States under the prior appropriation doctrine. These examples will also demonstrate the appropriate use of water supply agreements within the prior appropriation states. Figure 4 visually explains the hypothetical system of permits. Several water-using enterprises are shown sequentially along a river reach below a gaging station. Each water use enterprise has a corresponding priority date


\(^{43}\) Conf. of W. Att'ys Gen., American Indian Law Deskbook, 8.8 (p. 571) (2014 ed.).
and permitted diversion rate. The order of priority is also listed on the figure. Additionally, the descriptive information for the hypotheticals is contained in Table 1.

Table 1: Descriptive data for water use cases discussed in the examples and shown on Figure 4.

<table>
<thead>
<tr>
<th>Location</th>
<th>Permit Holder</th>
<th>Priority Date</th>
<th>Priority</th>
<th>Diversion (cfs)</th>
<th>Summer Use Order</th>
<th>Total Ordered Diversion (cfs)</th>
<th>Spring Use Order</th>
<th>Spring Ordered Diversion (cfs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Tribe</td>
<td>1867</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Municipality</td>
<td>1920</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>11</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>7</td>
<td>Municipality</td>
<td>1930</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>12</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>5A</td>
<td>Municipality</td>
<td>1945</td>
<td>4**</td>
<td>1</td>
<td>4</td>
<td>13</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>6</td>
<td>Irrigation</td>
<td>1954</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>15</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Reservoir</td>
<td>1955</td>
<td>6</td>
<td>6</td>
<td>One-fill</td>
<td>6</td>
<td>One-fill</td>
<td>One-fill</td>
</tr>
<tr>
<td>3</td>
<td>Irrigation</td>
<td>1980</td>
<td>7</td>
<td>2</td>
<td>7</td>
<td>17</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>Irrigation/ U.S.B.R. Contract</td>
<td>1965</td>
<td>6a*</td>
<td>40</td>
<td>6</td>
<td>57</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5B</td>
<td>Industrial/ U.S.B.R. Contract</td>
<td>2014</td>
<td>8[6b]*</td>
<td>1</td>
<td>6</td>
<td>58</td>
<td>6</td>
<td>14</td>
</tr>
</tbody>
</table>

* Under Reclamation water supply agreement.
** Point of diversion on reservoir, but established on the river before reservoir construction.

The U.S. Bureau of Reclamation dam and reservoir (Priority 5, Location 5) are governed by the one-time fill rule, in which the reservoir can be filled completely once a year at snowmelt. For simplicity, all case examples assume full diversion and use of appropriated water with no return flows. Unless otherwise specified, they also assume that the Tribe will fully use its indicated water right.
**U.S. Geological Survey Gage**

1. **MUNICIPALITY**  
   Priority Date: 1920  
   Priority Number: 2  
   1 cfs

2. **IRRIGATION**  
   Priority Date: 1980  
   Priority Number: 7  
   2 cfs

3. **TRIBE, RESERVATION**  
   Established Date: 1867  
   Priority Number: 1  
   10 cfs

4. **U.S. BUREAU OF RECLAMATION DAM & RESERVOIR**  
   Priority Date: 1955  
   Priority Number: 6  
   One Fill Rule

5. **INDUSTRIAL**  
   Priority Date: 2014  
   Priority Number: 8  
   U.S.B.R Contract  
   Priority Number: 6b  
   1 cfs

6. **IRRIGATION**  
   Priority Date: 1954  
   Priority Number: 5  
   2 cfs

7. **MUNICIPALITY**  
   Priority Date: 1945  
   Priority Number: 4  
   1 cfs

8. **IRRIGATION**  
   District U.S.B.R. Contract  
   Priority Number: 6a  
   40 cfs

**Figure 4:** Hypothetical Water Appropriation Permit Scenario  
Source: North Dakota State Water Commission
Example 1: 22 cfs at the U.S.G.S. gage during the summer irrigation season.

Result: With the exception of the irrigation district at Location 8 (priority 6a) and the industrial user at Location 5B (priority 8), only 17 cfs is necessary to supply all users. The irrigation district at location 8 and the industrial user at Location 5B have water contracts from the Reclamation reservoir, which was filled in the spring and passes all inflows through as outflows. Thus, all water rights can be fully used.

The irrigation district at Location 8 and the industrial user at Location 5B have chosen to obtain water through a water storage agreement with Reclamation. If Reclamation has been able to fill its reservoir, water use by the irrigation district and industrial user should not be impacted. Comparing this to Corps operations, a water user could choose to enter a water supply agreement with the Corps for stored water to mitigate the risk that water supply will not otherwise be available from natural flows.

Example 2: 15 cfs at the U.S.G.S. gage during the summer irrigation season.

Result: The irrigator at Location 8 (priority 6a) and the industrial water user at Location 5B received their full appropriation because they are supplied by releases from storage from the Reclamation reservoir, which was filled in spring. The remaining users need a total of 17 cfs, which means there is a two cfs deficit. The irrigator at Location 3, being most junior, may not divert water. The tribe, the three municipalities, and the irrigation user at location 6 (priority 5) will divert their water rights from the full 15 cfs natural flows.

Similar to Example 1, the irrigation district at Location 8 received water under a water supply agreement with Reclamation, which provided water out of storage in the reservoir from the spring fill. Similarly, the industrial user at Location 5B wanted to mitigate the risk associated with being the most junior user and entered a water supply agreement to receive water out of storage from the spring fill each year.

Example 3: 10 cfs at the U.S.G.S. gage during the summer irrigation season.

Result: The Tribe diverts all of its 10 cfs water allocation. The irrigation district at Location 8 (priority 6a) is supplied by releases from storage in the Reclamation reservoir, which was filled in spring. Because the industrial user at Location 5B (priority 8, beneficial use date 2014) has entered a water supply agreement with Reclamation, the industrial water user would have the ability to use water stored in the reservoir (as Priority 6b) from the spring fill. All users on or upstream of the reservoir, except the Tribe, will have to defer diversion and pass water downstream. All non-contract users downstream of
the reservoir will have no water to divert because of upstream diversions by the Tribe. If the Tribe defers some use and passes water downstream, the first right for any water not used by the Tribe would belong to the municipality at Location 2 (priority 2). The next would be the municipality at Location 7 (priority 3), followed by the municipality at Location 5A (priority 4), and then the irrigator at Location 6 (priority 5).

**Example 4:** 15 cfs at the U.S.G.S. gage during spring following a dry winter.

Result: There is no irrigation demand in the spring. With no irrigation, only the Tribe, the three municipalities, and the industrial user (Location 5B, priority 8) are diverting water. Assuming full diversion by the Tribe and municipalities, 13 cfs of diversions are senior to the Reclamation one-fill permit and have precedence, leaving only two cfs for filling the reservoir until natural flows increase. The industrial user at Location 5B may not divert water unless that person obtains a water supply agreement with Reclamation. Reclamation, with an earlier priority date than the industrial user, may decide whether to supply the industrial user and fill at a one cfs rate or use the full remaining two cfs to fill the reservoir. Reclamation (Location 5, priority 6) must pass at least one cfs of natural flow downstream for the municipality at Location 7 (priority 3). Reclamation must also allow diversion of one cfs from natural flows within the reservoir for the municipality at Location 5A. Although diverting from a location on the reservoir, the municipality at Location 5A has a water right from the river at the point of diversion now covered by the reservoir, which predates the water right of the Reclamation reservoir.

The States and the Corps’ reservoir management are analogous to the municipality and the Bureau reservoir described in the example. Like the example municipality, the States had water rights prior to reservoir construction. Both the language and history of the 1944 Flood Control Act and the Rivers and Harbors Act of 1945 attest to federal protection of states’ rights to use the natural flow of the Missouri River. The States’ use would have priority over the discretionary management of Corps reservoir stored water.

**Example 5:** 12 cfs at the U.S.G.S. gage during spring following a dry winter.

Result: There is no irrigation demand in the spring. With no irrigation, only the Tribe (Location 4, priority 1) and two of the municipalities (Location 2, priority 2; Location 7, priority 3) are diverting water. Full diversion by the Tribe and all three municipalities (Locations 2, 5A, and 7) would require a diversion of 13 cfs from the river. Thus, there is a water supply deficit of one cfs. Reclamation may not divert any water to satisfy its one-fill right until flows increase. Reclamation must pass all natural flows downstream. If Reclamation considers its existing storage sufficient to supply annual needs, it may
choose to supply the most junior municipality (Location 5A, priority 4) and the industrial user (Location 5B, priority 7) from its storage under water supply agreements. Another possibility would be for the municipal and industrial users at Locations 5A and 5B to enter into water supply agreements with the Tribe. This possibility would depend on the terms of the State-Tribal compact quantifying the tribal water rights.

These examples are obviously simplified and will have variations in different states. However, in accordance with the examples, as long as the flow remains at least 17 cfs, there is enough water in the system to supply all users without the benefit of storage. Those having a Reclamation water supply agreement are supplied from storage. If the flow drops below 17 cfs, non-storage water users would have the option of either being curtailed from use until flows increase or purchasing water from storage through a water supply agreement with Reclamation.

Comparing to the Corps operations, as long as the flows in the Missouri River remain higher than the overall use, water users are not benefiting from the storage in the reservoirs and should not be forced into water supply agreements with the Corps simply by virtue of access being within the reservoir boundary. Also, because the tribal reserved water rights will in nearly all cases be superior to any state user rights, it is unlikely that tribes would ever need to use water from storage. However, several of the tribes have no free-flowing river access because their reservations were flooded by the reservoirs. But the Corps’ current policy interpretation forces the tribes into water supply agreements. From this perspective, the tribes and states are similarly situated.

Conclusion

The Corps’ new policy interpretation that all water behind a reservoir is subject to its control is contrary to law and to the way the system has been operated for over sixty years. The States recognize the Corps’ authority to operate the Missouri River System to meet the project purposes. The Corps needs to recognize the States’ authority in carrying out their statutory authority and responsibility to appropriate the natural flows of the Missouri River within the reservoir system. Similarly, the tribes also have authority to regulate their Winters appropriations without interference by the Corps. Both the States and the tribes can permit water from the natural flow when water is available. Any conflicts between the States and the tribes or between the States and other states need to be worked out either via compact or litigation amongst each other. Such disputes are not within the purview of the Corps’ authority. The Corps has authority to operate the reservoir system in conjunction with the Master
Manual. The recognition of natural flows as separate from storage does not impact the Corps’ authorities and is the only way for the system to operate within the confines of the law.