

RECLAMATION

Managing Water in the West

Executive Summary

Northwest Area Water Supply Project Draft Environmental Impact Statement on Water Treatment



U.S. Department of the Interior
Bureau of Reclamation
Great Plains Region
Dakotas Area Office

December 2007



IN REPLY REFER TO:

GP-4200
ENV-6.00

United States Department of the Interior

BUREAU OF RECLAMATION

Great Plains Region
P.O. Box 36900
Billings, Montana 59107-6900



DEC 21 2007

Subject: Distribution of the *Northwest Area Water Supply (NAWS) Project Draft Environmental Impact Statement (DEIS) on Water Treatment*

Dear Ladies and Gentlemen:

The *NAWS Project DEIS on Water Treatment* is enclosed. The Executive Summary is provided in hardcopy format. The main report and supporting documents are in electronic format on a compact disk located on the inside back cover of the Summary.

This report was prepared by the United States Department of the Interior, Bureau of Reclamation pursuant to Section 7 of the Dakota Water Resources Act (DWRA) of 2000 and the National Environmental Policy Act (NEPA) of 1969. In preparing the DEIS, Reclamation is representing the Secretary of the Interior.

Reclamation, with assistance from Federal and state agencies, tribes, and other cooperating agencies analyzed the environmental effects of four alternatives, including no action. The Secretary has not identified a preferred alternative in the DEIS but is expected to identify a preferred alternative in the final environmental impact statement in accordance with DWRA and NEPA.

Please send comments on the DEIS to the following address by February 26, 2008:

Northwest Area Water Supply Project EIS
Bureau of Reclamation
P.O. Box 1017
Bismarck, ND 58502-1017

If you have any questions or would like more information, please contact Alicia Waters, Dakotas Area Office, Bureau of Reclamation, at 701-221-1206.

Sincerely,

Michael J. Ryan
Regional Director

Enclosure

Executive Summary



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Northwest Area Water Supply Project



Project construction pipe along North Dakota Highway 83 between Lake Sakakawea and Minot, North Dakota, in 2006.

For many years, residents of northwestern North Dakota have experienced water supply problems. Existing ground water sources are of poor quality and the Souris River is a marginal source from both a quality and quantity standpoint. To resolve these problems, the Northwest Area Water Supply project (Project) is being constructed. This Project is a bulk water supply system that will serve the municipal and rural water needs of the Project area (Figure 1). The planning, design and construction of the Project is a cooperative effort between the Bureau of Reclamation (Reclamation) and the State of North Dakota. Reclamation provides technical and financial assistance to the State of North Dakota for the planning and development of projects like this throughout the state.

The source water for this bulk water supply system is Lake Sakakawea, a U.S. Army Corps of Engineers reservoir impounded by the Garrison Dam on the Missouri River. The North Dakota State Engineer has issued a water permit for the Project with an authorized annual withdrawal of 15,000 acre feet. Water from Lake Sakakawea will be pumped 45 miles north to the city of Minot which will serve as a distribution point for city residents, as well as distributing water to other communities and rural water systems throughout the service area. Lake Sakakawea is located within the Missouri River drainage while the majority of the communities and rural water systems to be served by the Project are located within the Hudson Bay drainage. The potential transfer of aquatic invasive species between drainage basins was a key environmental issue identified during the development of the Project. Figure 2 shows the Missouri River drainage and the Hudson Bay drainage, along with the location of the Project service area.

Background

Planning studies for this Project were initiated by the North Dakota State Water Commission in November 1987. During Project planning, environmental issues associated with the construction, operation and maintenance of the Project were

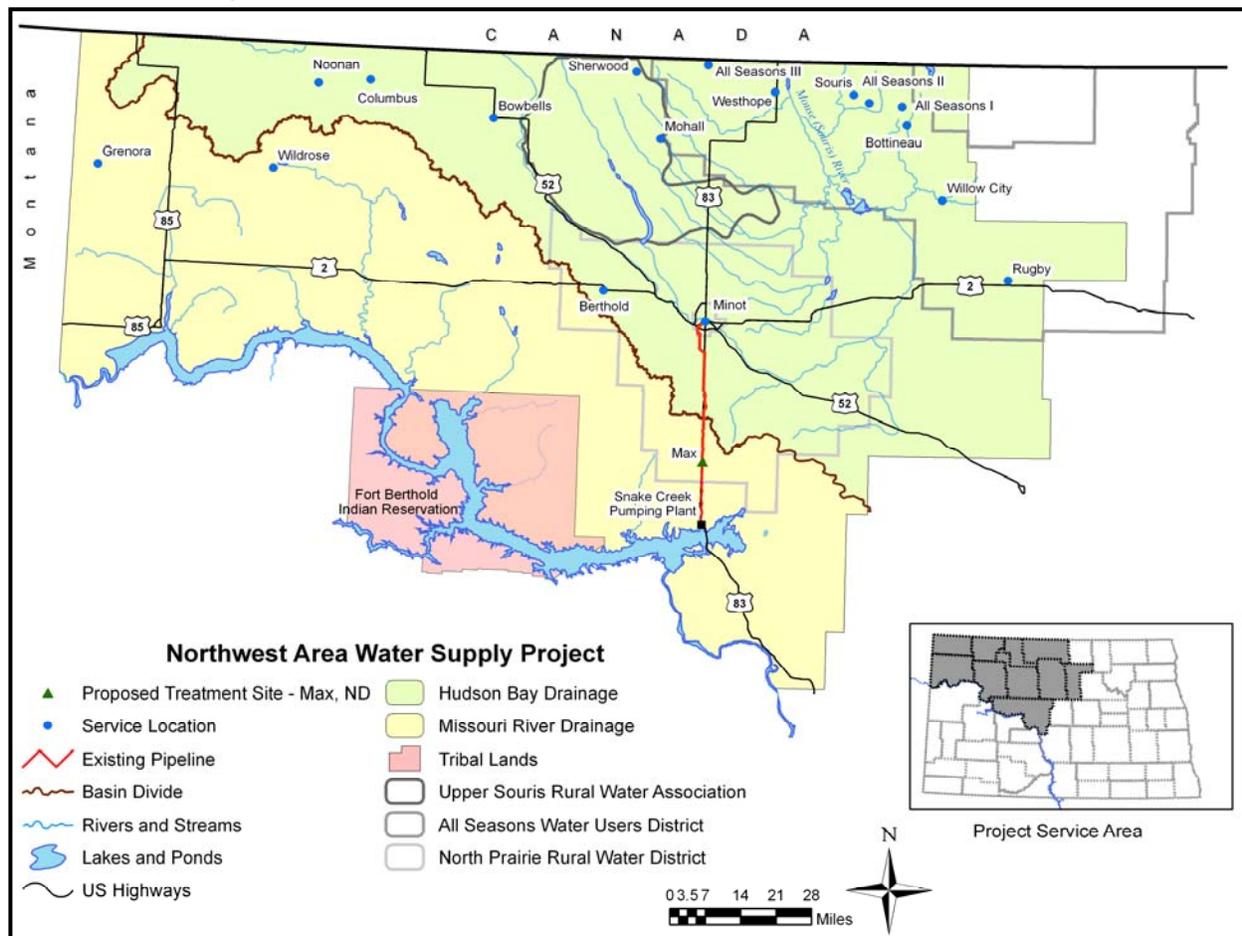


Figure 1. Project Service Area map.

evaluated as required by the National Environmental Policy Act (NEPA). The key environmental concern of this Project was the risk of transferring aquatic invasive species from the Missouri River basin to the Hudson Bay basin. A Final Environmental Assessment (EA) evaluated options to meet the water need of the service area, described the potential environmental impacts, and identified environmental commitments for these potential impacts. Based on the Final EA, Reclamation decided to proceed with the proposed Project and approved a Finding of No Significant Impact (FONSI) in September 2001. The FONSI established environmental commitments to avoid, minimize, or mitigate potential impacts resulting from the Project. To aid in implementing these environmental commitments an Impact Mitigation Assessment team was formed. The purpose of this team is to monitor the final design,

construction, mitigation and operation of the Project. Potential environmental issues associated with this interbasin transfer of water for the Project have been evaluated at length during the planning of the Project.

Construction on the main water pipeline between Lake Sakakawea and the city of Minot began in the spring of 2002. In October that same year, the Canadian Province of Manitoba filed a law suit against the Department of the Interior in U.S. District Court challenging the FONSI issued for the Project and requesting that federal funds and construction activities on the Project be halted.

On February 3, 2005 the court ordered Reclamation to revisit the FONSI upon completion of further environmental analyses. The order states that additional analyses should consider potential impacts associated

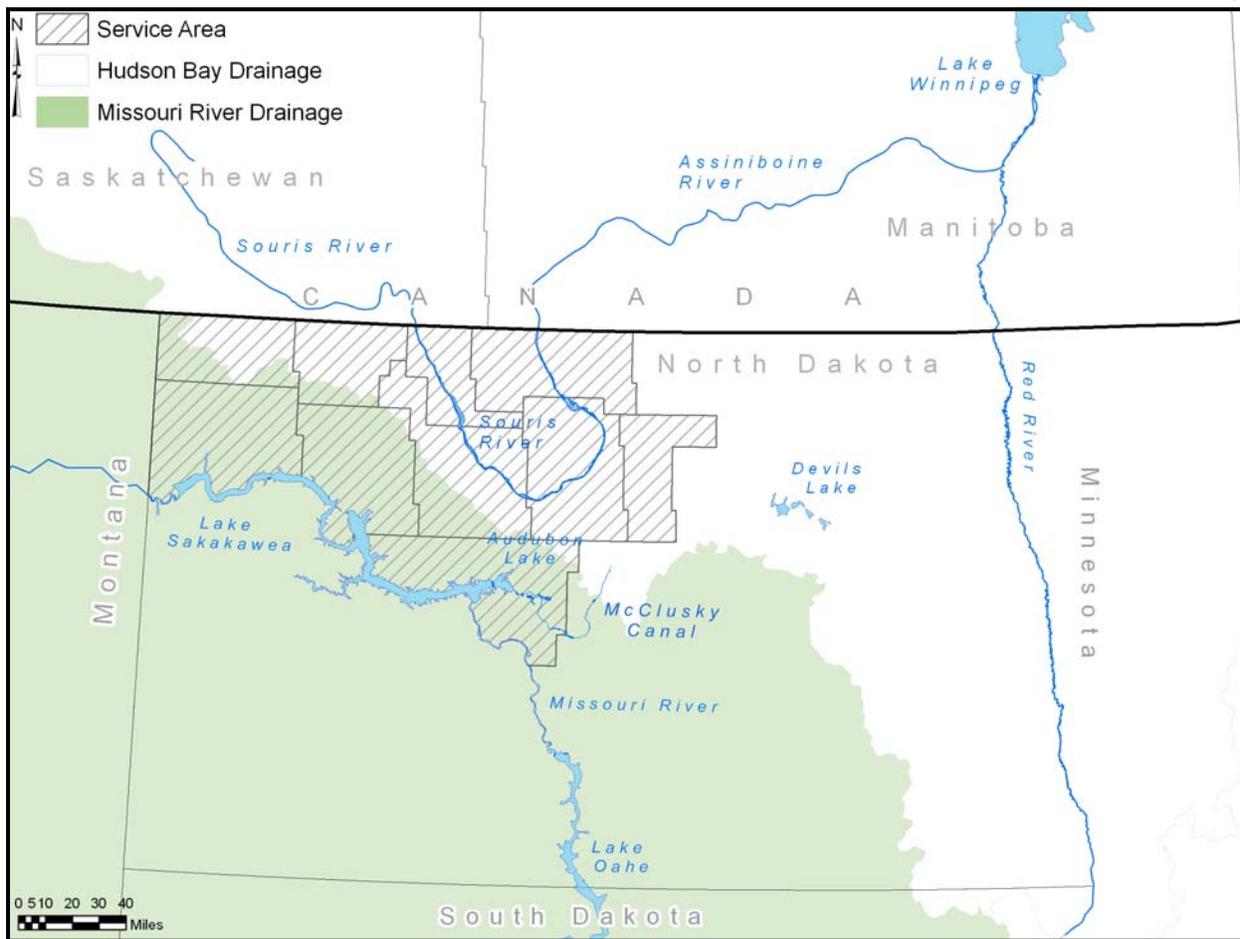


Figure 2. Project Service Area in relation to the Missouri River Drainage and the Hudson Bay Drainage.

with not fully treating the Missouri River water at its source, and potential impacts that could occur due to pipeline leaks and possible failure of water treatment systems. A second ruling from the Court on April 15, 2005 denied the request for an injunction on construction work. This second ruling, while allowing existing contracts to continue, also required Reclamation to request permission from the Court for the design and construction of additional Project features until the environmental analyses are completed. Based on this direction from the Court, construction of the 45 miles of main water transmission pipeline between Lake Sakakawea and the city of Minot continued and is substantially complete.

Most states, including North Dakota, have laws and regulations that prohibit the transportation or introduction of known invasive plants and

animals. For example, in North Dakota the Game and Fish Department [North Dakota Century Code: 20.1-02-01 through 20.1-02-28] provides the Director of the Department with the authority to regulate the importation, introduction and transplanting of fish, fish eggs, and other aquatic animals into the waters of the state.

The U.S. government has not developed water treatment standards, rules or regulations specifically for use in reducing the risk of transferring invasive species through projects that transfer water between basins. The U.S. Environmental Protection Agency has published a proposed rule in the *Federal Register* (71 FR 32887) that would generally exempt interbasin water transfers from regulation under the Pollutant Discharge Elimination System permitting program. This rule has not been finalized and is subject to change.

Project Authorization

Project planning began after the passage of the Garrison Diversion Unit Reformulation Act in 1986. This Project is part of the State Municipal, Rural, and Industrial grant program authorized by this act. The program was established to treat and deliver drinking water to approximately 130 communities and rural residents throughout the state. The Dakota Water Resources Act of 2000 amended the Reformulation Act and authorized additional federal funds for the program.

Each act also includes language relative to compliance with the Boundary Waters Treaty. Section 1(h) of the Dakota Water Resources Act states that “Prior to the construction of any water systems authorized under this Act to deliver Missouri River water into the Hudson Bay basin, the Secretary, in consultation with the Secretary of State and the Administrator of the Environmental Protection Agency, must determine that adequate treatment can be provided to meet the requirements of the Treaty...”. It goes on to state that all costs (construction, operation, maintenance and replacement) of water treatment and related facilities attributable to meeting the requirements of the treaty are non-reimbursable. This means that all costs associated with compliance with the Boundary Waters Treaty would be funded by the Federal government.

Environmental Impact Statement

Reclamation issued a Notice of Intent in the *Federal Register* (Volume 71, Number

43:11226-11227) on March 6, 2006. The notice announced Reclamation’s intent to prepare an Environmental Impact Statement (EIS) to evaluate water treatment alternatives that would further reduce the risk of transferring invasive species from the Missouri River drainage to the Hudson Bay drainage through the construction and operation of the Project. When completed, this EIS will fulfill the requirements of the NEPA.

This EIS analyzes and discloses the environmental impacts of the proposed action. It has been distributed to the public for review and comment prior to a decision being made by Reclamation on the appropriate level of biota water treatment for the Project. This EIS has been prepared in compliance with the NEPA and provides the public an opportunity for review and comment. Information gathered during the comment period will be considered by Reclamation in reaching a decision on the adequate level of treatment to further reduce the risk of transferring invasive species. The schedule at the end of this document provides more detail on the steps of the NEPA process.

Invasive Species – a nonindigenous species whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Nonindigenous species – a species that does not occur naturally in a given area.

Public Involvement

In 2006, Reclamation began a public involvement program to provide the public, organizations, and government agencies a variety of methods to learn about and participate in the development of the EIS. The program included a scoping notice, public scoping meetings, a Summary of Public Scoping report and a website where information about the EIS and Project were made available. The intent of the scoping process was to inform people about the proposed action and to identify key issues. Six public meetings were held throughout the Project area. All comments received during the scoping period were summarized in the Summary of Public Scoping report which was made available on the website (www.usbr.gov/gp/dkao) along with the written comments received during this same timeframe.



Above: Public scoping meeting held in Minot, North Dakota. Numerous issues and concerns were voiced by the public and agencies during the public scoping meetings.



Above: Public scoping meeting held in Bottineau, North Dakota. Six public scoping meetings were held throughout the proposed project area in May 2006.

Proposed Action

Reclamation proposes to construct a biota water treatment plant (WTP) for the Project to treat the source water from Lake Sakakawea before it is brought into the Hudson Bay drainage. Four alternative courses of action have been developed to further reduce the risk of transferring potentially invasive species from the Missouri River drainage to the Hudson Bay drainage. As part of this proposed action, Reclamation would implement construction methods and operational measures to further reduce the risk of invasive species transfer that may occur as a result of an interruption in the treatment process and breach in the buried pipeline to the Minot WTP.



Above: Missouri River

Purpose and Need

Adequately treating the water from the Missouri River basin (Lake Sakakawea) using methods and measures that further reduce the risk of transferring invasive species into the Hudson Bay basin is the purpose of the proposed action. Reclamation has conducted further environmental analyses on the issue of invasive species transfer between the two drainage basins to fully comply with the NEPA.

The need for the proposed action is to comply with the Court's order of February 3, 2005. Reclamation has conducted additional analyses to address the Court's order regarding fully treating the water at its source, the potential for pipeline leaks, and failure of water treatment systems.

Cooperating Agencies

Reclamation invited other government agencies and entities to assist with the preparation of the EIS. A cooperating agency team was established to provide data, assist in review and contribute to the preparation of the Draft EIS (DEIS) by reviewing preliminary chapters. Governmental agencies and stakeholders invited to participate as members of this team were chosen because they have jurisdiction by law or have special expertise with respect to environmental issues of the proposed Federal Action. The following are participating as Cooperating Agencies:

- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- Three Affiliated Tribes
- North Dakota State Water Commission
- Garrison Diversion Conservancy District
- City of Minot

Scope of the EIS

The scope of this EIS focuses on evaluating environmental impacts associated with the proposed biota water treatment alternatives. To further reduce the risk of this Project transferring invasive species from the Missouri River basin to the Hudson Bay basin, Reclamation evaluated a range of biota water treatment technologies and the environmental impacts associated with the construction of a biota WTP. Reclamation enlisted the services of the Department of the Interior's lead scientific agency, the U.S. Geological Survey (USGS) to evaluate the risk of transferring invasive species between these basins including the long-term operation and maintenance of Project biota treatment facilities.

Findings and environmental commitments in the Final EA (Houston Engineering, Inc. et al. 2001) and FONSI (Reclamation 2001) are incorporated by reference into this EIS, with the exception of the potential impacts and environmental commitments associated with the treatment of Missouri River water and operation and maintenance of a biota WTP and related features. The design features and operational measures described in the Interbasin Biota section of the FONSI will be reviewed and revised as necessary in accordance with the biota water treatment alternative selected on the basis of the information presented in this EIS.

Actions and Issues Addressed in the EIS

During the public scoping period statements and concerns regarding a variety of environmental issues were received. Reclamation considered the comments and determined that the following issues and actions are most relevant to the proposed action and would be evaluated.

Risk of Transferring Invasive Species

There are many existing pathways through which invasive species may be transferred between basins. Although the Project-related risk of invasive species is specifically related to an interbasin water transfer, alternate and competing pathways exist. Non-Project pathways must be considered to assess the relative risk of biological invasions due to the import of Missouri River water by the Project.

Natural pathways that aid in the spread of invasive species include animal transport, wind dispersal, major floods that temporarily link basins and storms (e.g., tornadoes). Human activity also provides pathways for dispersal of aquatic species from one basin to another. According to the Environmental Protection Agency (EPA), human activities have increased the frequency by orders of magnitude by which non-native plants, animals and pathogens are introduced to new areas.

This Project will deliver treated water from the Missouri River basin into the Hudson Bay basin through a buried water pipeline. Each treatment alternative evaluated includes treatment processes which would further reduce the risk of an invasive species being transferred from one basin to another as a

result of Project operations. Additional safeguards included in the construction of the buried pipeline between Lake Sakakawea and Minot reduce the risk of transfer even further. An interruption of the treatment process at the biota WTP and breach in the buried pipeline to the Minot WTP could provide an additional pathway for introducing invasive aquatic species into the Hudson Bay basin.

Federally Listed Threatened and Endangered Species

The U.S. Fish and Wildlife Service identified threatened and endangered species that may be found in the Project area and could be potentially affected. Endangered species (least tern, whooping crane, peregrine falcon, black-footed ferret, gray wolf, and pallid sturgeon) and threatened species (piping plover and bald eagle) were evaluated in the Final EA (Houston Engineering, Inc. et al. 2001). The analysis concluded that there would be no adverse effects to threatened or endangered species as a result of the Project. Following this determination in 2001, the U.S. Fish and Wildlife Service identified critical habitat for the piping plover in 2002. A portion of this designated critical habitat is in McLean County and therefore was evaluated in this EIS. Three species have been removed from the federal list since the publication of the FONSI. They are the peregrine falcon delisted on August 25, 1999, the gray wolf on March 12, 2007, and the bald eagle on August 8, 2007.

Historic Properties

As a federal action the Project must comply with federal legislation concerning historic properties within the area of consideration for the federal action. Reclamation needs to determine if there are any impacts to historic properties that are currently listed or eligible

for listing on the National Register for Historic Places.

Indian Trust Assets

Reclamation has a trust responsibility to protect and maintain rights reserved by or granted to American Indian tribes or Indian individuals by treaties, statutes, and executive orders. Indian Trust Assets are defined as legal interests in property held in trust by the United States for Indian tribes or individuals. Examples of things that may be trust assets include lands, minerals, hunting and fishing rights, and water rights.

Social and Economic Conditions

Current regional economic conditions in the Project area were identified to determine potential impacts associated with the construction and OM&R of each alternative. The indicators used to evaluate the economic conditions in the Project area included the value of regional output for non-agricultural industries, the value of agricultural production, household income and net farm income.

Environmental Justice

Environmental justice addresses the fair treatment of people of all races and incomes with respect to Federal actions that affect the environment. Fair treatment implies that no group of people should bear a disproportionate share of negative impacts from an action. Reclamation evaluated this based on race and income levels within the Project area.

Actions and Issues Outside the Scope of the EIS

Other comments received during the public scoping process included concerns regarding



Figure 3. The above map illustrates the proposed location for the biota water treatment plant site. The proposed biota water treatment plant site is identified in red in the above map.

a variety of environmental issues that Reclamation determined to be outside the scope of analysis. After considering the comments received, Reclamation made this determination based on the proposed action as defined in the EIS, legal constraints and available scientific data regarding other environmental issues. Information in chapter one provides more detailed explanation of why the following actions and issues are outside the scope of the EIS.

- Evaluation of potential consequences to Canada
- Missouri River water depletions
- Other Water Sources
- Global climate change

Proposed Biota WTP Site

The proposed location for the biota WTP is approximately 28 miles south of Minot near Max, North Dakota (see Figure 3). This location is south of the drainage divide between the Missouri River and Hudson Bay basins. The 41 acre site is located in the S $\frac{1}{2}$ SW $\frac{1}{4}$ of section 10, T.150.N. R.83.W., in McLean County. The land was purchased by the State of North Dakota as part of the Project. Construction of the raw water pipeline between Lake Sakakawea and the city of Minot is substantially complete and will connect at the proposed biota WTP site as shown in Figure 3.

Minot Water Treatment Plant

Following the treatment process proposed in the alternatives, the water would be transferred across the basin divide in the existing pipeline to the Minot WTP where it would be softened and filtered before distribution. Each of the alternatives evaluated assumes that the existing Minot WTP would be upgraded as evaluated in the Final EA (Houston Engineering, Inc. et al. 2001). Currently, the WTP treats groundwater from the Sundre and Minot Aquifers to drinking water standards with a filtration and lime softening process. As part of the Project, the proposed upgrades to the WTP would include modifications to existing treatment processes and expansion of the plant's capacity to 26 million gallons per day. The proposed upgrades would occur in three stages at an estimated total cost of \$29.4 million. The use of the existing WTP would provide an additional reduction in the potential risk of the Project transferring invasive species from the Missouri River basin to the Hudson Bay basin.

Alternatives

Four biota water treatment alternatives are evaluated in the EIS. Alternatives evaluated include a No Action Alternative and three action alternatives. A no action alternative is required in an EIS [40 CFR Section 1502.14 (d)] and is based on the selected action alternative identified in the FONSI (Reclamation 2001). Each alternative is composed of three main biota WTP features; the inlet structure, the biota treatment process, and the booster pump station. The same inlet structure and treated water pumping features are common to all

alternatives with different levels of biota treatment occurring in-between these two features. The different levels of biota treatment evaluated in the alternatives may involve the addition of chemicals to the water to inactivate organisms, while other levels of biota treatment involve processes to inactivate organisms as well as the addition of filtration which physically removes them from the water. The alternatives evaluated are explained on the following pages.



Above: Example of a drinking water treatment plant.

ALTERNATIVES IN THE DEIS

No Action –Includes chemical disinfection before the water is transferred into the Hudson Bay basin using chlorine and chloramines followed by softening, filtration, and UV disinfection at the Minot WTP.

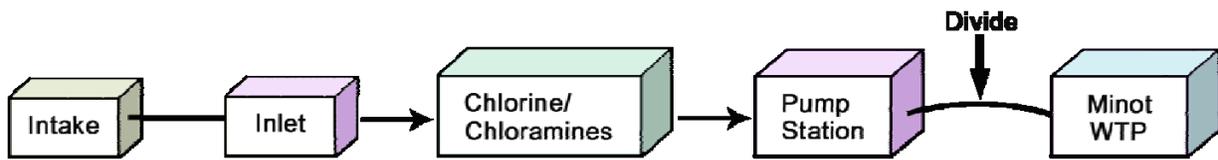
Basic Treatment – Includes pre-treatment (coagulation, flocculation, sedimentation) UV disinfection and chemical disinfection using chlorine and chloramines at the proposed biota WTP prior to water crossing the drainage divide.

Conventional Treatment – Includes pre-treatment (DAF), media filtration, UV disinfection and chemical disinfection using chlorine and chloramines at the proposed biota WTP prior to water crossing the drainage divide.

Microfiltration – Includes coagulation, pin floc, microfiltration, UV disinfection, and chemical disinfection using chlorine and chloramines at the proposed biota WTP prior to water crossing the drainage divide.

No Action Alternative

The preferred biota treatment alternative described in the Final EA (Houston Engineering, Inc. et al 2001) and selected in the FONSI (Reclamation 2001) is included as the No Action Alternative of this EIS. Based on guidance from the Council of Environmental Quality, a no action alternative can be defined as a continuing action of the current management direction. Based on this guidance, the No Action Alternative would include chemical disinfection of raw Missouri River water prior to crossing into the Hudson Bay basin to further reduce the risk of transferring invasive species. Additional safeguards included in the construction of the buried pipeline also reduce the risk of transfer even further. Ultraviolet (UV) disinfection would be provided along with softening and filtration at the existing Minot WTP. Ultraviolet (UV) disinfection would be provided along with softening and filtration at the existing Minot WTP.

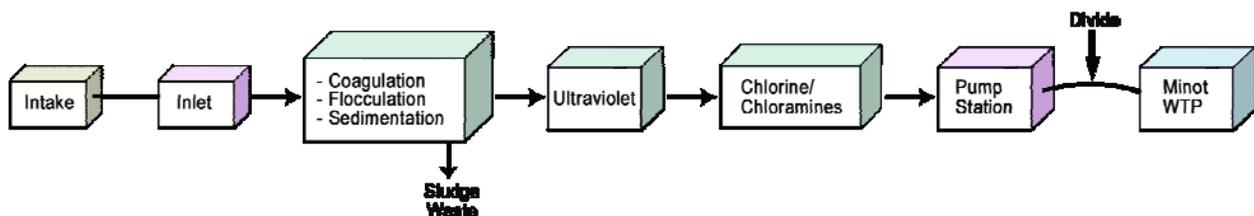


Basic Treatment

This treatment alternative would include a pre-treatment (Coagulation, Flocculation, Sedimentation) process followed by chemical and UV disinfection prior to the water crossing the drainage divide. The purpose of the pre-treatment process is to reduce raw water turbidity which can influence the effectiveness of the disinfection processes. Softening and filtration would be provided at the existing Minot WTP.



Above: Example of a sedimentation basin used in basic treatment.

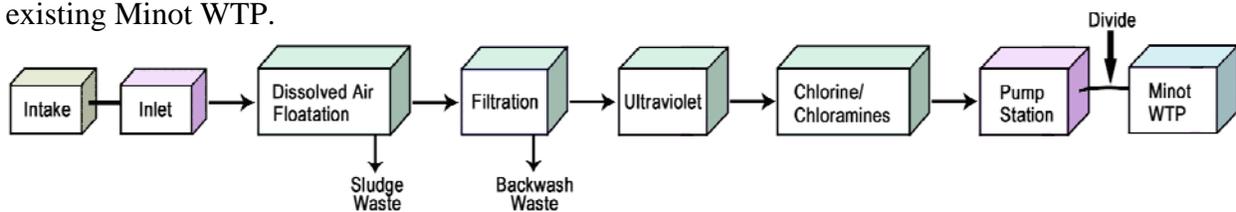


Conventional Treatment

This treatment process would include a pre-treatment process of Dissolved Air Flotation (DAF) followed by media filtration and disinfection using UV and chemicals (chlorine and chloramines) within the Missouri River basin. Like the No Action Alternative, the pre-treatment process is designed to reduce the raw water turbidity and increase the effectiveness of the disinfection process. The media filtration process is designed to remove particles and biological components from the water, thereby further increasing the effectiveness of the disinfection process as well. Softening and filtration would be provided at the existing Minot WTP.



Above: Dissolved Air Flotation water treatment system in Kelowna, British Columbia, Canada.

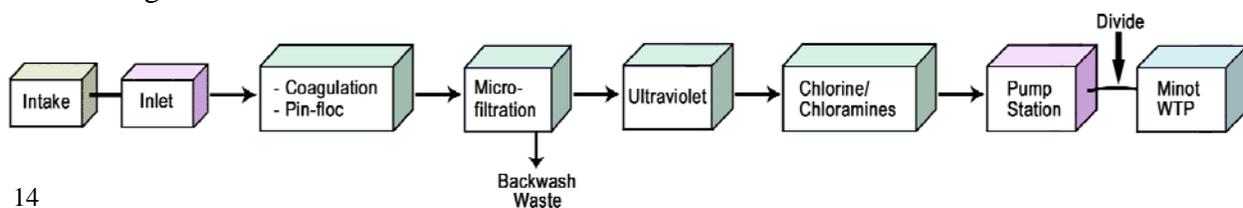


Microfiltration

This treatment alternative would include pre-treatment (coagulation, pin floc) followed by membrane filtration and chemical and UV disinfection processes prior to the water crossing the drainage divide. As described in the previous alternative, the pre-treatment process is designed to reduce the turbidity levels in the raw water resulting in more effective disinfection processes. However, the membrane filtration process designed for this alternative would remove smaller particles in the water compared to the media filtration process included in the Conventional Treatment Alternative. Softening and filtration would be provided at the existing Minot WTP.



Above: Microfiltration water treatment plant in Kenosha, Wisconsin.



Alternative Costs

To compare the alternatives Reclamation estimated the total construction cost along with the OM&R cost for each alternative. Construction and annual OM&R costs associated with each alternative are shown in table 1. The construction cost estimates include contingency (21% +/-) and non-contract costs (25% +/-) to account for unforeseen changes, engineering fees and contract administration. The annual OM&R cost estimates include labor, chemical costs and energy costs required to operate the biota WTP in an average year.

Table 1 lists the biota treatment alternatives in the order of their relative treatment inactivation/removal capability which is shown in more detail in table 2.5 of chapter two in the DEIS. As shown, the No Action Alternative provides the lowest level of biota treatment and the Microfiltration Alternative provides the highest level of biota treatment. As would be expected, the cost of biota treatment increases with increased inactivation and removal efficiency.

Table 1 – Construction and Annual OM&R Costs for Each Alternative.

Alternative	Construction Costs (2007 dollars)	Annual OM&R Costs (2007 dollars)
No Action	\$8,100,000	\$232,000
Basic Treatment	\$68,000,000	\$1,781,000
Conventional Treatment	\$73,000,000	\$1,789,000
Microfiltration	\$90,000,000	\$2,076,000

*Costs in the table are rounded.

Identification of the Federal Preferred Alternative

Reclamation has not identified a preferred alternative in this DEIS. A federal preferred alternative will be identified in the final EIS.

Affected Environment



Above: Proposed Biota Water Treatment Plant Site at Max, North Dakota.

The area evaluated in this EIS is the site of the proposed biota WTP near Max, North Dakota (see Figure 3). Prior to this site being purchased by the State of North Dakota the land was used as cropland; but the soils are not classified as prime or unique farmland. A palustrine, emergent, seasonally flooded wetland about 7 acres in size is located along the northeast boundary of the site. Several small (less than 1 acre) palustrine, emergent, temporarily flooded and a small seasonal wetland are also located within the site area.

Each of the alternatives evaluated has a biota WTP, including a pump station, which would be constructed at this site. Each biota WTP and pump station would have a unique design footprint; therefore, the potential impacts of each alternative may vary.

Environmental Impacts and Mitigation

The potential impacts considered are direct, indirect, and cumulative effects that may result from the proposed action and alternatives. Potential environmental impacts associated with the possible transfer of invasive species between the Missouri River drainage and the Hudson Bay drainage are evaluated in Chapter four. The alternatives under consideration have a wide range of estimated costs and would therefore have a wide variety of potential impacts on the regional economy. Regional social and economic impacts associated with the construction and operation of a biota water treatment plant were evaluated. Potential impacts to the resources evaluated and mitigation measures identified for these resources are briefly described in the following paragraphs.

Risk of Transferring Invasive Species

The risk of transferring invasive species through the construction and operation of any of the proposed alternatives is very low compared to other existing and competing pathways. With a multiple barrier treatment, including filtration and disinfection, the risk of invasion through the Project is very close to zero.

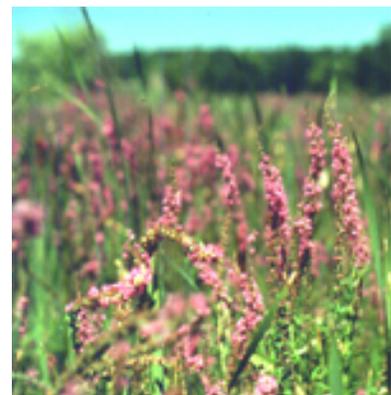
To further reduce risks of biological invasions associated with an interruption in the biota water treatment process and breach of the buried pipeline to the Minot WTP, a framework for evaluating the condition of water system components and developing long-term monitoring programs would be part of the operation and maintenance of the Project facilities.

Environmental commitments identified for the design criteria for the biota WTP include:

- A computerized supervisory control data acquisition system will be designed to monitor the entire operation of the biota WTP.
- Standby power units would be located at the biota WTP to ensure continuous monitoring in case of a temporary or total power outage.

Environmental commitments for the final design and operation of the biota WTP include:

- All waste streams from the biota WTP will be retained and disposed at an approved disposal site within the Missouri River basin.
- Water quality monitoring of the raw water source will be implemented prior to final design to determine how seasonal changes in water quality may affect the biota WTP design.
- A long-term water monitoring plan for the biota WTP will be developed to assess treatment efficacy.
- An emergency response plan will be developed for the biota WTP with special emphasis on preventing potential transfer of invasive species in the event of a plant malfunction.
- Reclamation will assume ultimate responsibility for the OM&R of the biota WTP.
- An adaptive management plan will be prepared in accordance with the Department of the Interior Policy guidance (Order 3270) and the report *Adaptive Management, The U.S. Department of the Interior Technical Guide* (Williams, B.K. et al. 2007). The plan will be implemented to assess control system efficacy and make modifications to the control system if the risk changes significantly.



Above: Purple Loosestrife, an example of invasive species. (<http://www.great-lakes.net>)

Federally Listed Threatened and Endangered Species

The critical habitat designated for the piping plover in McLean County is not adjacent to the proposed site of the biota WTP and therefore would not be affected by the proposed action. A determination of “no effect” on federally protected species has been made and no further or formal consultations with the U.S. Fish and Wildlife Service is necessary.

During the construction of any features associated with the No Action Alternative or the action alternatives, Reclamation would require that all permanent and temporary power or communication lines associated with the construction area be buried where practical. If not possible, the lines would be designed and located to avoid raptor collisions and/or electrocutions. The impact mitigation team will review the location of the proposed biota WTP and pump station to determine if additional field surveys are needed to determine the occurrence of listed species. If threatened or endangered species are encountered during construction, Reclamation would immediately consult with the U.S. Fish and Wildlife Service.



Above: Example of wetland avoidance during pipeline construction along North Dakota Highway 83.

Historic Properties

The determination of no historic properties affected for the No Action Alternative as recorded in the Final EA and FONSI is still a relevant determination. In terms of the other action alternatives evaluated in the EIS, the exact location of the proposed treatment facility may or may not fall within the area previously surveyed at the Class III level. If one of the action alternatives is selected, Reclamation commits to reviewing the Class III survey during the final design phase to determine if additional surveys are warranted based on consultation with the State Historic Preservation Officer. If unanticipated cultural resources are encountered during construction, all ground disturbing activities in the immediate area of the resource will be stopped until Reclamation can consult with the State Historic Preservation Officer and appropriate Tribes and evaluate the resource.

Indian Trust Assets

Reclamation has determined there would be no effect on Indian Trust Assets resulting from the proposed action. There are no trust lands or hunting, fishing and gathering rights issues in the Project area. However, cumulative effects concerns related to the amount of water that potentially would be available for other projects if tribes quantified their water rights to the Missouri River are noted. This quantification could affect Project water users and other Missouri River water users with permits junior to Indian water rights.

Social and Economic Conditions

The alternatives evaluated have a wide range of estimated costs; therefore, they have a wide variety of potential impacts on the regional economy. Each of the alternatives would have a positive effect on the local and regional economy. These impacts are the

result of facility construction expenditures, annual OM&R expenditures and any potential increase in local commercial and domestic activities that is directly related to improved water treatment.

Environmental Justice

No environmental justice issues were identified in the Final EA and FONSI. Additionally, none of the alternatives considered would disproportionately affect low income or minority populations. There are other areas within North Dakota in need of water supply improvements. Some of these areas include Indian reservations and low income rural populations. It is unknown what level of future funding at the state and/or federal level would be available for this Project and other MR&I water supply projects.

Public Hearing Dates and Locations

February 4, 2008 - Bismarck, North Dakota
Best Western Ramkota - 800 South 3rd St.

February 5, 2008 - Minot, North Dakota
Sleep Inn & Suites - 2400 10th St. SW

February 7, 2008 - New Town, North Dakota
Four Bears Casino - 202 Frontage Road

Schedule

There will be a 60-day public review and comment period on the DEIS. Public hearing(s) will be conducted to receive oral and written comments on the DEIS during this comment period. A Final EIS will be prepared following the end of the public review period and it will include written responses to all public comments on the DEIS. It will be made available to the public

prior to a final decision on implementation of the proposed action.

In accordance with NEPA, there will be a minimum 30-day period between the availability of the Final EIS and the issuance of a Record of Decision. Comments on the Final EIS may be offered to Reclamation for consideration. Following this 30-day period, Reclamation's Great Plains Regional Director will determine the appropriate final action. The NEPA process will be completed with the approval of a Record of Decision.

No final decisions regarding the proposed action have been made by the Regional Director at the time of publication of the DEIS. Final decisions with respect to the proposed action will be included in the Record of Decision.

After the Final EIS and consultation with the Administrator of the Environmental Protection Agency and the Secretary of State are completed, the Regional Director will proceed in making a final decision for the Project. The intent is to meet the purpose and need of the proposed action and comply with the provisions of the Dakota Water Resources Act relative to the Boundary Waters Treaty of 1909.

The Record of Decision will also include the significant comments received and issues raised in the Final EIS. The selected alternative and the alternatives considered in the Final EIS will be discussed. Alternative(s) considered environmentally preferable will also be identified. Factors considered with respect to the alternatives and how these considerations entered into the decision will be discussed. Reclamation will identify all environmental commitments, means to avoid or minimize environmental harm, and any monitoring or enforcement activities to ensure that environmental commitments will be met.

