



## DRINKING WATER STATE REVOLVING LOAN FUND PROGRAM FINDING OF NO SIGNIFICANT IMPACT

TO: All Interested Citizens, Government Agencies and Public Groups

In accordance with the Nebraska Drinking Water State Revolving Fund environmental review process, which is based on the National Environmental Policy Act, an environmental review has been performed on the proposed agency action below.

This information reviews the environmental impact likely from a project. This project is planned to be federally funded through your tax dollars; therefore, you are entitled to take part in its review. If you have concerns about the environmental impact of this project, please provide them at this time. The Nebraska Department of Environment and Energy (NDEE) encourages public input in this decision-making process.

PROJECT NAME: Replace Water Treatment Plant & Supply Well, Repaint Tower and Upgrade Water Meters  
APPLICANT: Village of Emerson, Nebraska  
COUNTY: Dixon, Dakota, Thurston  
POPULATION: 840 (2010 census)  
DWSRF PROJECT NUMBER: D311668  
TOTAL PROJECT AMOUNT: \$2,580,000  
PROPOSED DWSRF LOAN AMOUNT: \$1,935,000  
PROPOSED DWSRF FORGIVENESS AMOUNT: \$645,000

The Village of Emerson has applied for funding for the above-referenced project through the Drinking Water State Revolving Fund (DWSRF) program jointly administered by the Nebraska Department of Health and Human Services (DHHS) and NDEE. This project has Emerson ranked as a high priority and is included on the Planning List in the DWSRF State Fiscal Year 2021 Intended Use Plan (IUP). Funding can be provided to the Village in accordance with the IUP's bypass criteria, as the January 1, 2021 bypass date has passed.

Emerson is located in northeastern part of Nebraska, uniquely situated in the tri-point of Dakota, Dixon, and Thurston Counties. The community has a population of 840 according to the 2010 census, which has nominally increased over the prior decade. Emerson has been issued a permit to operate a public water system (PWS) under the provisions of the Nebraska Safe Drinking Water Act and the Regulations Governing Public Water Supply Systems, Title 179.

In September 2020, a Preliminary Engineering Report of the system and project alternatives was completed by the Village's Engineer. The PWS consists of two municipal wells, the oldest drilled in 1980, which pump to a water treatment plant (WTP), an elevated 150,000 gallon water storage tower, and a distribution system. Through regular monitoring it is documented that Emerson's water supply is acceptable, presently meeting all primary drinking water standards. However, the WTP is 35 years in operating age, has no redundancy and does not effectively remove manganese, levels of which are above EPA's public health advisory level. Lastly, the plant does not have chemical feed systems meeting current design standards. In general, the proposed replacement project will rely on the same treatment methods, aeration and gravity filtration, updated to current technologies for optimization of chemical feed processes and improved backwashing controls. The Village will also replace its oldest supply well that has deteriorated, is presently pumping sand, as well as repaint the water tower and upgrade water service meters to a radio-read system.

The project was reviewed by numerous federal and state agencies for environmental impacts. The responses received were that the project would have no affect or posed no concerns, there was no comment, or where required, the Village would have to make application for all necessary permits.

The Village is eligible for up to 25% loan forgiveness and for a 30-year loan at an interest rate of 0% and an administrative fee of 0%. The revenues from Emerson's water utility will be dedicated to repay the loan. The projected annual DWSRF Debt Service (including 10% coverage) is \$70,950. The revenues from Village's water utility will be dedicated to repay the loan. From a review of estimated costs, it is estimated that monthly water rates will be raised \$15.24. From current rates, the typical monthly residential water bill would increase to approximately \$43 per month based on 5,000 gallons of water use.

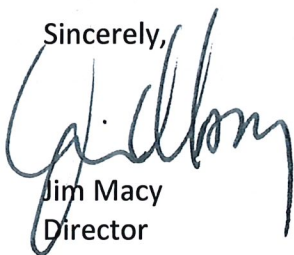
A Public Hearing was held on March 10, 2021 by the Village on the proposed project, with 35 days advanced posted notice. A presentation was made by the Engineer on an update for the project. No input was received from the public.

The system last underwent a routine sanitary survey by DHHS in August of 2018, wherein three deficiencies were noted, with all being addressed by November of that year. That completed survey is the first step of the Technical, Financial, and Managerial (TFM) program policy. The Village will still be required to undergo an initial, and if necessary, a Final TFM Assessment by the DHHS, to ensure that their capabilities meet the requirements of the Safe Drinking Water Act. Also, their current Environmental Tracking Tool score is 0, well below the allowable 11 per issued U.S. Environmental Protection Agency guidance.

The proposed project is determined by DHHS to help the Village maintain compliance with the Nebraska Safe Drinking Water Act. No significant environmental impacts have been identified that would result from the proposed action. All necessary permits for construction will be obtained from the appropriate agencies (i.e., NDEE, etc.), if needed. Consequently, a preliminary decision has been made that an Environmental Impact Statement will not be prepared.

This action is taken on the basis of a careful review of the Environmental Assessment, the Preliminary Engineering Report and other supporting data that are on file with NDEE. The latter are available for public review upon request and the Environmental Assessment is attached. The NDEE will not take any administrative action for at least 30 calendar days from the date shown below. Persons having a comment on this determination are encouraged to submit directly to Steve McNulty at (402) 471-1006 or email [steve.mcnulty@nebraska.gov](mailto:steve.mcnulty@nebraska.gov) in the Engineering Services Program, or John R. Danforth at (402) 471-3373 or email [john.r.danforth@nebraska.gov](mailto:john.r.danforth@nebraska.gov) of the Planning and Aid Division of NDEE.

Signed this 20<sup>th</sup> day of April, 2021.

Sincerely,  
  
Jim Macy  
Director

Attachments:      Environmental Assessment  
                         Distribution List  
                         Figure and Map

## ENVIRONMENTAL ASSESSMENT DOCUMENT

### A. Project Identification:

**Applicant:** Village of Emerson  
**Project No.:** D311668  
**Village:** Emerson **County:** Dakota/Dixon/Thurston **State:** NE  
**Estimated Project Cost:** \$2,580,000

### B. Community Description:

**Location and Population:** Emerson is located in northeastern Nebraska, on State Highway 9, uniquely situated in the tri-point of Dakota, Dixon, and Thurston Counties. The community has a population of 840 according to the 2010 census, which has nominally increased over the prior decade.

**Current Water System Facilities:** The public water system (PWS) consists of two municipal wells, the oldest drilled in 1980, which pump to a water treatment plant (WTP), an elevated 150,000 gallon water storage tower, and a distribution system. Through regular monitoring it is documented that Emerson's water supply is acceptable, presently meeting all primary drinking water standards.

**C. Project Description:** In September 2020, a Preliminary Engineering Report (PER) recommended that the all the major treatment units at the WTP be replaced. In general, the project will rely on the same treatment methods, aeration and gravity filtration, updated to current technologies for optimization of chemical feed processes and improved backwashing controls. The Village will also replace its oldest supply well that has deteriorated, is presently pumping sand, as well as repaint the water tower and replace/upgrade water service meters to a radio-read system.

### D. Alternatives Considered:

Several alternatives were considered, including:

1. Packaged Gravity Filtration Unit;
2. Mixed Media Filters;
3. Packaged Pressure Filtration Unit; and
4. Connect to the Village of Wakefield.

**Evaluation and Selection of the Alternative:** The PER assessed that the WTP is 35 years in operating age, has no redundancy and does not effectively remove manganese, levels of which are above EPA's public health advisory level. The plant also does not have chemical feed systems meeting current design standards. Thus the need to replace the treatment units was established, and all of the evaluated alternatives provide redundancy and effective designs

meeting current standards. Each include expansion of the WTP building to house second filtration units, which is a key project component, in that it will allow the Village to always provide a treated water supply to its residents, even during construction.

Alternative No. 1 is to replace the existing WTP units with similar treatment processes, aeration and gravity filtration. This option continues to employ the treatment methods that Village staff are presently used to and does not come with any major changes. This will also include optimizing the chemical feed systems and filter backwashing improvements. Alternatives 2 and 3, switching to mixed media and/or pressure filtration were evaluated, both with higher capital costs, as it was determined that a measurable amount of the Village's existing system layout, piping arrangements and clearwell, could be only re-used with Alternative No. 1. Lastly, Emerson is at an elevation almost 100 feet higher than Wakefield, NE. Thus the interconnection alternative would require a booster station, and as Wakefield already treats its water supply, there would be both significantly higher capital and operation/maintenance costs with Alternative No. 4. Therefore, Alternative 1 was recommended for the Village.

There were no evaluations made for the remaining project phases. Well No. 80-1 is just beyond the average operating age of PWS supply well in Nebraska, and has deteriorated to a point that it is pumping sand. The Water Tower was constructed in 2000, as such, the paint coatings are at or just beyond their useful life. In the same year, the system's current water meters were installed and meters that are manufactured today only come with a 20 year service life. The simplicity of the issues noted for the non-treatment plant phase justifies the need for a replacement supply well, to repaint the water tower and to replace and upgrade to radio-read water service meters. With the latter, operation costs are significantly reduced in the reading of meters remotely.

## **E. Environmental Impact Summary:**

### **Primary**

**Construction:** Temporary impacts caused by construction include noise and dust, a limited potential for soil erosion, and fuel/oil spills. Review and approval for a construction permit will be required from the Department's Engineering Services Program.

**Environmental:** The construction contracts will require that the contractors return the area to its original or better condition. The expanded WTP building and new well will occupy a relatively small area of land (~6,000 square feet) and will have little, if any effect on area species as all infrastructure improvements are within the jurisdictional limits of Emerson, situated in areas previously disturbed. Based on a review of the available mapping, the WTP and supply well improvements are outside of the floodway for the tributary of Middle Creek as it passes through the Village.

The proposed project was reviewed by numerous Federal and State agencies for environmental impacts. The majority of the responses received were that the project would have no affect or posed no concerns, or there was no comment. The U.S. Army Corps of Engineers noted that a Section 404 permit would be required to place fill material into any waters of the United States. The Nebraska Game and Parks Commission noted that the area was a habitat for the Northern Long-eared Bat, and that the clearing of trees should be avoided during certain times of the year. From a detailed review of the proposed scope, neither of these activities will occur during construction.

**Financial:** An application for a DWSRF loan has been received for \$2,580,000 to fund the noted system improvements. The Village qualifies for a 30-year loan with an interest and fee rates of 0%, along with being eligible for 25% forgiveness assistance. Therefore, with 75% of the borrowed amount needing to be repaid, the projected annual DWSRF Debt Service (including 10% coverage) is estimated at \$70,950. The revenues from Village's water utility will be dedicated to repay the loan. From a review of estimated costs, water rates may need to be raised \$15.24. From current rates, the typical monthly residential water bill would increase to approximately \$43 per month based on 5,000 gallons of water use following construction, Emerson will make a final assessment of revenues and cost to determine what rate adjustments are necessary.

#### **Secondary:**

**Population Impacts:** The primary purpose of the project is to replace a significantly aged WTP and deteriorated supply well. While meeting maximum day demands at the design year, both will be reasonably sized for growth of its existing users.

**Land Use and Trends:** The new WTP and supply well improvements will be located within the jurisdictional limits of Emerson, situated in areas previously disturbed. All new water mains will be placed below ground at depths that will not interrupt any planned practices. The Nebraska State Historic Preservation Office indicated a determination of no historic properties affected is appropriate for the proposed project.

**Environmental:** The project will have no effect on the availability of water quantity in the area. The minimal amount of solid waste generated by the project will be disposed in a licensed landfill. No safety, vibration, noise or aesthetic considerations were identified other than the normal noise and disruptions associated with building and water well construction.

**Environmental Justice:** The project will not produce any environmental justice concerns. All structures will be placed in areas previously disturbed or on Village owned property, and the services provided by the project will be available to everyone in Emerson, equally. No segment of the community's population is impacted disproportionately from related effects.

**Mitigation measures necessary to eliminate adverse environmental effect:**

Proper construction techniques will be utilized to minimize soil erosion and other potential impacts of construction. Traffic flow may be temporarily affected by construction. A National Pollutant Discharge Elimination (NPDES) Construction Stormwater permit for runoff associated with construction activity and a Stormwater Pollution Prevention Plan will be required by NDEE for this project. The Village can designate the General Contractor as the authorized representative on the stormwater permit notice of intent submitted to the NDEE. Authorization of stormwater runoff from the construction activity must be in place prior to commencing construction.

**Irreversible and irretrievable commitment of resources:** The resources committed to the project include the equipment, materials and energy used in construction.

**F. Measures Taken to Insure Environmental Soundness:**

**Public Involvement:** A Public Hearing was held on March 10, 2021 by the Village on the proposed project, with 35 days advanced posted notice. A presentation was made by the Engineer on an update for the project.

**Public Opposition or Opinions:** No input was received from the public.

**Coordination and Documentation with Other Agencies and Special Interest Groups:**

**Facility Planning:** Preliminary Engineering Report, Village of Emerson, NE, JEO Consulting Group, Inc., September, 2020

**Federal:** U.S. Department of the Army, Corps of Engineers, March 2, 2021, email  
U.S. Natural Resources Conservation Service, February 19, 2021, email

**State:** Nebraska Department of Natural Resources, March 16, 2021, memorandum  
Nebraska Game and Parks Commission, March 17, 2021, letter  
Nebraska State Fire Marshal, February 22, 2021, email  
Nebraska State Historical Society, February 25, 2021, letter

**Local:** Lower Elkhorn Natural Resources District, February 22, 2021, letter

**Consulting Engineers:** JEO Consulting Group, Inc., Lincoln, NE

**Public Groups:** Village of Emerson Residents

**G. Positive Effects to be Realized from the Proposed Project:** The project will allow Emerson to maintain compliance with the Nebraska Safe Drinking Water Act and ensure future water availability. As such, the project is considered reasonable, not contrary to conservation or the public welfare and is a beneficial use of resources by the Village of Emerson.

**H. Reasons for Concluding there will be no Significant Impacts:** Review of the facility evaluation report and supporting information indicates that the project will result in no significant impact

on the environment. Federal and State agencies reported no impact will result to threatened and endangered species or historical resources. All necessary permits for construction will be obtained from the appropriate agencies (i.e., NDEE, NRD, etc.), if necessary.



Reviewing Engineer

April 5, 2021

Date



FNSI DISTRIBUTION LIST  
EMERSON, NEBRASKA

DEPARTMENT OF ENVIRONMENT AND ENERGY  
Office of Public Affairs  
P.O. Box 98922  
Lincoln, NE 68509-8922

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
DIVISION OF PUBLIC HEALTH  
Steve McNulty  
P.O. Box 95026  
Lincoln, NE 68509-5026

DEPARTMENT OF NATURAL RESOURCES  
Curt Inbody  
P.O. Box 94676  
Lincoln, NE 68509-4676

NEBRASKA GAME & PARKS COMMISSION  
Schuyler Sampson/Shannon Sjolie  
P.O. Box 30370  
Lincoln, NE 68503-0370

DIRECTOR, NEBRASKA STATE  
HISTORICAL SOCIETY  
P.O. Box 82554  
Lincoln, NE 68508-2554

STATE OFFICE OF POLICY RESEARCH  
Policy Advisor  
Rm. 1319, State Capitol  
P.O. Box 94601  
Lincoln, NE 68509-4601

DEPARTMENT OF ECONOMIC DEVELOPMENT  
Aaron Boucher  
P.O. Box 94666  
Lincoln, NE 68509

DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
Eliza Hines  
9325 South Alda Road  
Wood River, NE 68883

NATIONAL PARK SERVICE  
Christine Gabriel  
Environmental Coordinator  
Midwest Regional Office  
601 Riverfront Drive  
Omaha, NE 68102-4226

USDA RURAL DEVELOPMENT  
Ryan Brandt, P.E.  
Room 308, Federal Building  
100 Centennial Mall North  
Lincoln, NE 68508

ENVIRONMENTAL PROTECTION AGENCY  
Chris Simmons and Kelly Beard-Tittone  
11201 Renner Blvd  
Mail Code: WWPDWIMB  
Lenexa, KS 66219

STATE CONSERVATIONIST  
Natural Resources Conservation Service  
Federal Building, Room 152  
100 Centennial Mall North  
Lincoln, NE 68508-3866

DEPARTMENT OF THE ARMY  
John Moeschen  
State Program Manager  
US Army corps of Engineers  
Nebraska State Office, Suite 1  
8901 South 154<sup>th</sup> Street  
Omaha, NE 68138-3621

APPLICANT:  
John Ahlers, Chairman  
Village of Emerson  
511 North Main Street  
Emerson, NE 68733-3663

CONSULTING ENGINEER:  
Dane Simonsen, P.E.  
JEO Consulting Group, Inc.  
2700 Fletcher Avenue  
Lincoln, NE 68504

LOCAL NEWSPAPER  
(Public Information Only not for Public Notice)  
The Pender Times  
313 Main Street  
Pender, NE 68047

LOWER ELKHORN NATURAL RESOURCES DISTRICT  
Mike Sousek, Manager  
PO Box 1204  
Norfolk, NE 68702-1204

Figure 4-1: Packaged Gravity Filtration Unit

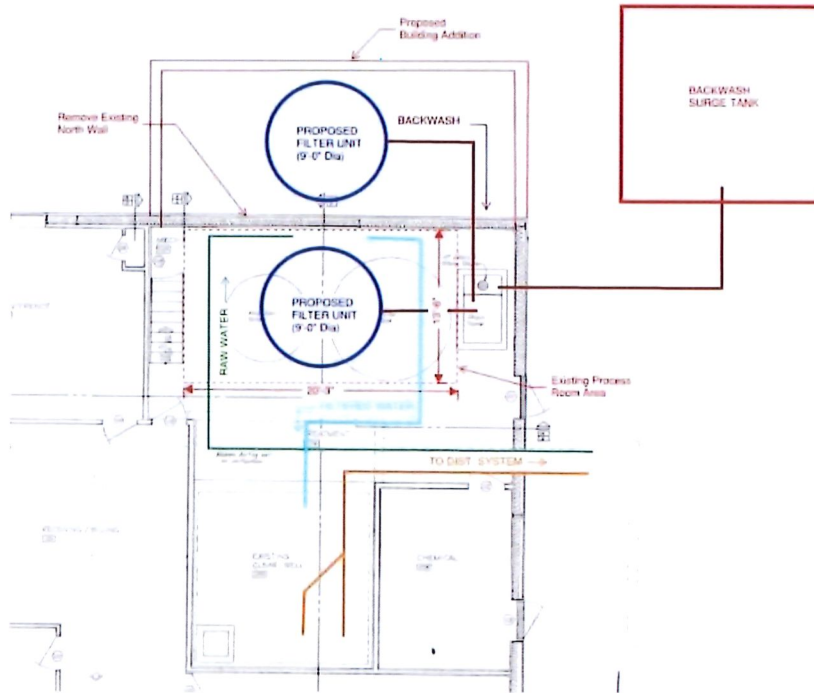


Figure 4-5: Location of Alternative 3

