<u>Why You Should Read This</u>: The document below 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, raise them now. We encourage public input in this decision making process.



IOWA STATE REVOLVING FUND FINDING OF NO SIGNIFICANT IMPACT

November 4, 2020

To: All Interested Citizens, Government Agencies, and Public Groups

An environmental review has been performed based on the procedures for implementing the National Environmental Policy Act (NEPA), for the proposed agency action below:

Applicant: Rock Valley Water Supply SRF Number: FS-84-20-DWSRF-010

County: Sioux lowa DNR Project Number: W2019-0504

State: Iowa

The City of Rock Valley, Iowa is planning an upgrade to their water supply system. The city has applied for financial assistance through the State Revolving Fund (SRF) loan program to build the project. The State Revolving Loan Program is a program authorized by the Environmental Protection Agency (EPA) and administered by the Iowa Department of Natural Resources (DNR) in partnership with the Iowa Finance Authority.

Rock Valley Water Supply is located in Sioux County, Iowa approximately 42 miles southeast of Sioux Falls, South Dakota and 60 miles north of Sioux City, Iowa. The population of Rock Valley according to the 2010 US Census was 3,354. The design population equivalent for the year 2039 is 5,065. Rock Valley has drilled 8 wells since the year 1922, five of which are currently active and used to fulfill the City's demand. All of the wells are in the alluvium of the Rock River. Individual pumping capacity of the wells ranges from 300-450 gallons per minutes, depending on static water levels.

Design standards require that the ground water systems be able to meet the peak day usage with the largest well out of service; this is referred to as "firm" capacity. Rock Valley's firm capacity is

approximately 1,325 gpm, or a theoretical daily capacity of 1.91 MGD. Hydraulic limitations reduce the capacity to approximately 1,200 gpm, or a total daily capacity of 1.73 MGD. The City's average daily demand in 2017 was 525,000 gallons, while their peak day demand in 2017 was 1.25 MG. However, water use projections estimate there will be a need for added source capacity in the coming years. Rock Valley's water use permit allows withdrawal of up to 300 million gallons per year at a maximum instantaneous pumping rate of 1,300 gpm.

All of the wells are located within the floodplain of the Rock River. Well No. 6 has been inundated with flood water during 2014 and 2018 runoff events, requiring temporary shut down and redisinfection prior to re-use. The well heads for Wells 7 and 8 are elevated and protected by an earthen berm. Wells 3, 4, and 6 housed within buildings. All wells have submersible pumps and motors. An emergency connection with Rock Valley Rural Water serves as a backup water source during outages. (Preliminary Engineering Report for Rock Valley Water System Study Phase II – System Improvements, Rock Valley, Iowa, DGR Engineering, May 31, 2019)

The City does not currently have a treatment plant for filtration, however, gas chlorine, a phosphate blend, and fluoride are added at the Well No. 4 building, the last well prior to distribution. Generally, the source water is of adequate quality with no contaminants above the primary maximum contaminant levels (MCL).

At the time of this sampling, the nitrate concentration in wells 3, 4, 6, and 7 averaged 7.6 mg/L. However, since 2011, recordings taken by City staff have ranged from 4 mg/L to 9.5 mg/L indicating the aquifer is highly susceptible to contamination. The primary MCL for nitrate is 10 mg/L. Well No 8 has a much lower level of nitrate, approximately 0.5 mg/L at the time of this sampling. Water from Well No. 8 is blended with the other wells as the City staff begins to observe nitrate levels elevate near the 10 mg/L MCL. The ammonia in Well No. 8 requires the City to increase their chlorine dosing such that either disinfection is completed with combined chlorine and ammonia (chloraminate) or all ammonia is oxidized, and disinfection is completed with free chlorine, also known as breakpoint chlorination.

A disinfection breakpoint chlorination analysis performed on a water sample from Well No. 8 determined that a chlorine to ammonia dosing ratio of approximately 9.5:1 is required to oxidize the ammonia. (Preliminary Engineering Report for Rock Valley Water System Study Phase II – System Improvements, Rock Valley, Iowa, DGR Engineering, May 31, 2019)

The water pumped from the wells is routed directly to the low-pressure zone of the distribution system after chemical dosing, with no hydraulic break. Both 12" and 8" transmission mains convey water away from the Well No. 4 building before connecting to smaller diameter looped mainlines. The distribution system is comprised of 4" diameter through 10" diameter mainlines. The distribution system is comprised of 4" diameter through 10" diameter mainlines. One pumping station constructed in 2009 located along Rock Ridge Road east of 31st Avenue boosts the pressure to the high zone of the distribution system. Redundant 40 horsepower pumps that are set in parallel alternate in operation to transmit 800-1,000 gpm from the low zone into the high zone. A control valve in the booster station allows water to back feed into the low zone. Rock Valley has

continued to upgrade and expand its distribution system as needs arise or as areas of town develop or need to be reconstructed. The older mainline pipes in town are predominantly cast iron and any new piping or replacement is being done with PVC.

A prior water system study completed by DGR Engineering in March of 2019, Preliminary Engineering Report: Rock Valley Water System Study: Phase I – Hydraulic Model, found that the majority of the distribution system is in good condition to maintain normal operating pressures between 40 and 105 psi. Design standards recommend that normal operating pressures by approximately 60-80 psi and not less than 35 psi. Estimated fire flow capacities while maintaining 20 psi range from 300 gpm to 1,500 gpm or more. Lower capacity areas are primarily due to deadend and small diameter mains.

The existing service meters are positive displacement meters are aging and not up to date with current meter reading technology. Over time, the moving parts of the positive displacement meters result in wear and inaccuracy. The meters currently require manual reading and incorporation into monthly billing. (Preliminary Engineering Report for Rock Valley Water System Study Phase II – System Improvements, Rock Valley, Iowa, DGR Engineering, May 31, 2019)

Two elevated storage tanks provide 750,000 gallons of finished water storage. The South Tower is located at 18th Place and S. 7th Street in the south-central part of town. It was built in 1977, has a capacity of 250,000 gallons and an overflow elevation of 1,450' (NAVD88). The Industrial Tower is located north of Highway 18 at the east end of the Rock Ridge Industrial Park. It was built in 2009, has a capacity of 500,000 gallons and an overflow elevation of 1,535' (NAVD88).

Design standards require that a minimum effective storage equal to the City's average day needs to be provided. Effective storage under the Iowa Department of Natural Resources (DNR) standards is the amount of storage available to the system water demands, either by gravity from an elevated tank or by pumping from a ground storage reservoir if standby power is provided.

For system's providing fire protection, the minimum storage required is the combination of the desired fire flow plus 80% of the peak hour non-fire flow water requirements for the duration of the fire, or average day requirements, whichever is greater. Insurance Services Office (ISO) requires a 3 hour duration for flow rates less than 3,500 gpm and a 4 hour duration for flow rates greater than 3,500 gpm.

Rock Valley's highest annual average day usage occurred in 2017 and was 525,000 gallons per day. The highest peak day occurred in 2017 and was 1,252,000 gallons. It is estimated that the peak hourly demand is approximately 1,500 gpm. Combined with a fire flow of 1,500 gpm results in a total flow of 3,000 gpm; over a 3 hour duration this equates to 540,000 gallons. The current storage volume of 750,000 gallons is adequate. (Preliminary Engineering Report for Rock Valley Water System Study Phase II – System Improvements, Rock Valley, Iowa, DGR Engineering, May 31, 2019)

The purpose of this project is to make improvements to the drinking water infrastructure to increase capacity, improve redundancy, increase safety, improve drinking water quality and to safely and reliably operate the Rock Valley Water Supply drinking water system for the next 20 years. The proposed project includes construction of a new well and chemical feed building and installation of new static mixing equipment and new service meters. Dimensions of the chemical feed building will be approximately 14 ft x 35 ft and will include an access driveway. The project covers an estimated total of 4.63 acres with 0.10 acres of ground-disturbing construction activity.

Positive environmental effects will be improved water quality for the customers of Rock Valley Water Supply. The new well(s) will provide redundant capacity to the existing wells in the event nitrate concentrations spike. This will also provide resiliency during drought conditions. If the well has low ammonia concentrations it would also reduce the need for Well No. 8 and thereby breakpoint chlorination. The addition of static mixing equipment and increasing the detention time after chlorine dosing would increase water quality consistency. A new chemical feed building would also provide a safe work environment.

The project will not significantly affect the pattern and type of land use (industrial, commercial, agricultural, recreational, residential) or growth and distribution of population. The project will not conflict with local, regional or State land use plans or policies. The project will not impact wetlands. The project will not affect threatened and endangered species or their habitats. If any State- or Federally-listed threatened or endangered species or communities are found during the planning or construction phases, additional studies and/or mitigation may be required. The project will not displace population, alter the character of existing residential areas, or convert significant farmlands to non-agricultural purposes. The project will not affect the 100-year flood plain provided all necessary floodplain development permits, state and local, are obtained and the terms of which are abided by

The project will not have effect on parklands, preserves, other public lands, or areas of recognized scenic or recreational value. No Historic Properties will be adversely affected by the proposed project. However, if project activities uncover any item(s) that might be of archaeological, historical, or architectural interest, or if important new archaeological, historical, or architectural data should be encountered in the project APE, the applicant should make reasonable efforts to avoid further impacts to the property until an assessment can be made by an individual meeting the Secretary of the Interior's professional qualifications standards (36 CFR Part 61). The project will not have a significant adverse effect upon local ambient air quality provided the applicant takes reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property during the proposed project (567 IAC 23.3(2)"c"). The project will not have a significant adverse effect upon local ambient noise levels, surface water quantity, groundwater quality or quantity, or water supply. The project will not have significant impact to surface water quality, fish, shellfish, wildlife, or their natural habitats.

Minimum separation distances will be maintained. Noise during construction will be maintained at tolerable levels through controls on construction activities. Any construction debris will be removed from the site for proper disposal. Adverse environmental effects from construction

activities will be minimized with proper construction practices, inspection, prompt clean up and other appropriate measures. Areas temporarily disturbed by the construction will be restored.

It has been determined that the proposed action will result in no significant impacts to the surrounding environment. This determination is based on a careful review of the engineering report, the environmental assessment and other supporting data which are on file at the Department of Natural Resources' office in Des Moines, Iowa. These are available for public review upon request. A copy of the environmental assessment is attached. This Department will not take any administrative action on the project for at least thirty (30) calendar days from the above date. Persons disagreeing with the above environmental decision may submit comments to the department during this period. Please direct your comments to me at Jean.Mayne@dnr.iowa.gov or 515-725-0487.

Sincerely,

Jean Mayne
Jean Mayne

Environmental Specialist

502 E. 9th Street

Des Moines, IA 50319-0034

Enclosures: Environmental Assessment

Project Map

Distribution

List (email): DGR Engineering

Edward Boling, Council on Environmental Quality

Jake Hansen, Iowa Department of Agriculture and Land Stewardship

Ken Sharp, Iowa Department of Public Health

Stephanie Chickering, Iowa Department of Public Health

Leslie Leager, Iowa Economic Development Authority

Ingrid Gronstal, Iowa Environmental Council

Tracy Scebold, Iowa Finance Authority

Alyson Fleming, Iowa Finance Authority

Mickey Shields, Iowa League of Cities

Jane Clark, Sierra Club

Josh Mandelbaum, Environmental Law and Policy Center

Kate Sand, USDA Rural Development

Tokey Boswell, USDOI, National Park Service, Midwest Region

Kraig McPeek, Fish and Wildlife Service, Rock Island Field Office

Christopher Simmons, USEPA Region VII

Kelly Beard-Tittone, USEPA Region VII

The Rock Valley Bee newspaper

<u>Why You Should Read This</u>: The document below 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, raise them now. We encourage public input in this decision making process.



PROJECT IDENTIFICATION

Applicant: Rock Valley Water SupplySRF Number: FS-84-20-DWSRF-010

County: Sioux lowa DNR Project Number: W2019-0504

State: Iowa

COMMUNITY DESCRIPTION

Location: Rock Valley Water Supply is located in Sioux County, Iowa approximately 42 miles southeast of Sioux Falls, South Dakota and 60 miles north of Sioux City, Iowa.

Population: The population of Rock Valley according to the 2010 US Census was 3,354. The design population equivalent for the year 2039 is 5,065.

Current Source of Water: Rock Valley has drilled 8 wells since the year 1922, five of which are currently active and used to fulfill the City's demand. All of the wells are in the alluvium of the Rock River. Individual pumping capacity of the wells ranges from 300-450 gallons per minutes, depending on static water levels.

Design standards require that the ground water systems be able to meet the peak day usage with the largest well out of service; this is referred to as "firm" capacity. Rock Valley's firm capacity is approximately 1,325 gpm, or a theoretical daily capacity of 1.91 MGD. Hydraulic limitations reduce the capacity to approximately 1,200 gpm, or a total daily capacity of 1.73 MGD. The City's average daily demand in 2017 was 525,000 gallons, while their peak day demand in 2017 was 1.25 MG. However, water use projections estimate there will be a need for added source capacity in the coming years.

Rock Valley's water use permit allows withdrawal of up to 300 million gallons per year at a maximum instantaneous pumping rate of 1,300 gpm.

All of the wells are located within the floodplain of the Rock River. Well No. 6 has been inundated with flood water during 2014 and 2018 runoff events, requiring temporary shut down and re-disinfection prior to re-use. The well heads for Wells 7 and 8 are elevated and protected by an earthen berm. Wells 3, 4, and 6 housed within buildings. All wells have submersible pumps and motors.

An emergency connection with Rock Valley Rural Water serves as a backup water source during outages. (Preliminary Engineering Report for Rock Valley Water System Study Phase II – System Improvements, Rock Valley, Iowa, DGR Engineering, May 31, 2019)

Current Water Treatment and Quality: The City does not currently have a treatment plant for filtration, however, gas chlorine, a phosphate blend, and fluoride are added at the Well No. 4 building, the last well prior to distribution. Generally, the source water is of adequate quality with no contaminants above the primary maximum contaminant levels (MCL).

At the time of this sampling, the nitrate concentration in wells 3, 4, 6, and 7 averaged 7.6 mg/L. However, since 2011, recordings taken by City staff have ranged from 4 mg/L to 9.5 mg/L indicating the aquifer is highly susceptible to contamination. The primary MCL for nitrate is 10 mg/L. Well No 8 has a much lower level of nitrate, approximately 0.5 mg/L at the time of this sampling. Water from Well No. 8 is blended with the other wells as the City staff begins to observe nitrate levels elevate near the 10 mg/L MCL. The ammonia in Well No. 8 requires the City to increase their chlorine dosing such that either disinfection is completed with combined chlorine and ammonia (chloraminate) or all ammonia is oxidized, and disinfection is completed with free chlorine, also known as breakpoint chlorination.

A disinfection breakpoint chlorination analysis performed on a water sample from Well No. 8 determined that a chlorine to ammonia dosing ratio of approximately 9.5:1 is required to oxidize the ammonia. (Preliminary Engineering Report for Rock Valley Water System Study Phase II – System Improvements, Rock Valley, Iowa, DGR Engineering, May 31, 2019)

Current Distribution System: The water pumped from the wells is routed directly to the low-pressure zone of the distribution system after chemical dosing, with no hydraulic break. Both 12" and 8" transmission mains convey water away from the Well No. 4 building before connecting to smaller diameter looped mainlines. The distribution system is comprised of 4" diameter through 10" diameter mainlines. The distribution system is comprised of 4" diameter through 10" diameter mainlines. One pumping station constructed in 2009 located along Rock Ridge Road east of 31st Avenue boosts the pressure to the high zone of the distribution system. Redundant 40 horsepower pumps that are set in parallel alternate in operation to transmit 800-1,000 gpm from the low zone into the high zone. A control valve in the booster station allows water to back feed into the low zone.

Rock Valley has continued to upgrade and expand its distribution system as needs arise or as areas of town develop or need to be reconstructed. The older mainline pipes in town are predominantly cast iron and any new piping or replacement is being done with PVC.

A prior water system study completed by DGR Engineering in March of 2019, Preliminary Engineering Report: Rock Valley Water System Study: Phase I – Hydraulic Model, found that the majority of the distribution system is in good condition to maintain normal operating pressures between 40 and 105 psi. Design standards recommend that normal operating pressures by approximately 60-80 psi and not less than 35 psi.

Estimated fire flow capacities while maintaining 20 psi range from 300 gpm to 1,500 gpm or more. Lower capacity areas are primarily due to dead-end and small diameter mains.

The existing service meters are positive displacement meters are aging and not up to date with current meter reading technology. Over time, the moving parts of the positive displacement meters result in wear and inaccuracy. The meters currently require manual reading and incorporation into monthly billing. (Preliminary Engineering Report for Rock Valley Water System Study Phase II – System Improvements, Rock Valley, Iowa, DGR Engineering, May 31, 2019)

Two elevated storage tanks provide 750,000 gallons of finished water storage. The South Tower is located at 18th Place and S. 7th Street in the south-central part of town. It was built in 1977, has a capacity of 250,000 gallons and an overflow elevation of 1,450' (NAVD88). The Industrial Tower is located north of Highway 18 at the east end of the Rock Ridge Industrial Park. It was built in 2009, has a capacity of 500,000 gallons and an overflow elevation of 1,535' (NAVD88).

Design standards require that a minimum effective storage equal to the City's average day needs to be provided. Effective storage under the Iowa Department of Natural Resources (DNR) standards is the amount of storage available to the system water demands, either by gravity from an elevated tank or by pumping from a ground storage reservoir if standby power is provided.

For system's providing fire protection, the minimum storage required is the combination of the desired fire flow plus 80% of the peak hour non-fire flow water requirements for the duration of the fire, or average day requirements, whichever is greater. Insurance Services Office (ISO) requires a 3 hour duration for flow rates less than 3,500 gpm and a 4 hour duration for flow rates greater than 3,500 gpm.

Rock Valley's highest annual average day usage occurred in 2017 and was 525,000 gallons per day. The highest peak day occurred in 2017 and was 1,252,000 gallons. It is estimated that the peak hourly demand is approximately 1,500 gpm. Combined with a fire flow of 1,500 gpm results in a total flow of 3,000 gpm; over a 3 hour duration this equates to 540,000 gallons. The current storage volume of 750,000 gallons is adequate. (Preliminary

Engineering Report for Rock Valley Water System Study Phase II – System Improvements, Rock Valley, Iowa, DGR Engineering, May 31, 2019)

PROJECT DESCRIPTION

Purpose: The purpose of this project is to make improvements to the drinking water infrastructure to increase capacity, improve redundancy, increase safety, improve drinking water quality and to safely and reliably operate the Rock Valley Water Supply drinking water system for the next 20 years.

Proposed Improvements: The proposed project includes construction of a new well and chemical feed building and installation of new static mixing equipment and new service meters. Dimensions of the chemical feed building will be approximately 14 ft x 35 ft and will include an access driveway. The project covers an estimated total of 4.63 acres with 0.10 acres of ground-disturbing construction activity.

ALTERNATIVES CONSIDERED

Alternatives Considered: Alternative 1: Do Nothing – This alternative would utilize existing infrastructure with no proposed construction. The system's water quality would remain similar to as it is today. Potential spikes in nitrate concentrations above the 10 mg/L MCL could result in wells needing to be shut down until concentrations drop or be abandoned. The use of Well No. 8 during increased nitrate concentrations would require breakpoint chlorination. The taste and odor complaints the City has experienced in the past would likely continue. The extremely dangerous and corrosive nature of hydrofluorosilicic acid would continue to deteriorate electrical components and pose a risk to operating staff. Meters would continue to be read manually.

Alternative 2: Construct New Wells – Increasing the source capacity by drilling one or more additional wells could provide a threefold benefit to the system:

- 1. The additional well(s) would provide redundant capacity to the existing wells in the event nitrate concentrations spike.
- 2. The redundant capacity would provide drought resiliency.
- 3. A well with low ammonia concentrations would reduce the need for Well No. 8 and thereby breakpoint chlorination.

Test drilling has been completed in the area shown on Drawing 1 of the Preliminary Engineering Report, generally located to the north of Well No. 4. The drilling log provides an aquifer depth of approximately 73' below the existing ground surface and an aquifer thickness of 62'. The observed static water level was 12' below the ground surface. Preliminary test pumping suggests capacities ranging between 400-500 gpm are possible. A water quality analyses found a nitrate concentration of 3.84 mg/L and very

low ammonia concentrations. A complete water quality analysis is contained in Appendix 1 of the Preliminary Engineering Report.

Alternative 3: Build Chemical Feed Facility – The existing chemical feed arrangement does not effectively breakpoint chlorinate the ammonia in Well No. 8 nor does it provide an operator safe environment. The addition of static mixing equipment and increasing the detention time after chlorine dosing would increase water quality consistency. A new chemical feed building would provide a safe work environment. A new building constructed adjacent to the building for Well No. 4 would be reasonable. Drawing 2 in the Preliminary Engineering Report provides a preliminary site plan for a new chemical feed building. Drawing 3 in the Preliminary Engineering Report provides a preliminary piping plan.

Alternative 4: Reduce Hydraulic Limitations – The condition of raw water main piping is prone to deterioration due to the sediment laden water they transmit. Over time, as the sediment deposits accumulate, the hydraulic capacity of the mains are reduced. Pigging a pipeline is the process of cleaning and scouring the interior pipe wall to loosen the bound material and mobilize it into the flowing water. The sediment is then transported to a discharge location where it can be removed from the pipeline. Construction of pig launching and retrieving stations to accommodate cleaning would moderately improve the hydraulic capacity of the pumping system. Further improvements to pumping capacity would necessitate larger pumps capable of generating higher head amounts. The larger pumps would require an increased power supply.

Alternative 5: Wellhead Protection – In 2002, the City of Rock Valley was funded to implement a source water protection plan. The goal of the source water protection plan was to increase public education on what modifications they can make to operational and agricultural practices to improve groundwater quality. Public meetings were held specifically targeting the property owners in the groundwater capture zone of the City's wellfield and those surrounding it. Measurable quality improvements were observed in the groundwater. Specifically, nitrate concentrations dipped to lower levels.

Alternative 6: Build Treatment Facility – Traditional (gravity or pressure) media filtration would provide effective removal of the iron and manganese in the water produced by the wells. It may be possible to remove ammonia with traditional media filtration through biological treatment. Nitrate removal could not be achieved with traditional media filtration and would rather require an advanced treatment method, such as membrane filtration. A small-scale pilot study, reproducing the process elements of a full-scale application may be necessary to demonstrate the performance of the selected technology for Rock Valley's water quality.

Alternative 7: Replace Meters – Rock Valley has undergone the process of upgrading their metering system and have an agreement with a supplier for furnishing up to 1,500 meters. Rock Valley would like to conduct a sole-source procurement of up to an

additional 200 meters with the same supplier. The new service meters would provide a more efficient and effective way to track water use. With the AMR system, there would no longer be a need for City staff to perform manual meter reads. In addition, the new meters would provide more accurate water use records that are used when setting water use rates and planning for capital improvements. (Preliminary Engineering Report for Rock Valley Water System Study Phase II – System Improvements, Rock Valley, Iowa, DGR Engineering, May 31, 2019)

Reasons for Selection of Proposed Alternative: The No-Action alternative is not viable due to the continued safety concerns to operating staff related to deteriorating electrical components.

The project site was selected for the availability of land (it is already City-owned), engineering criteria, operational considerations, and proximity to existing infrastructure as well as minimization of the impacts to the environment.

MEASURES TAKEN TO ASSESS IMPACT

Public Involvement: A public hearing was held on May 26, 2020 at 12:00PM. The public notice of this hearing was published in the Rock Valley Bee on April 22, 2020. The purpose of this hearing was to present the environmental and financial impacts of the proposed improvement project. No written or oral comments were received.

Coordination and Documentation with Other Agencies and Special Interest Groups:

The following Federal, state and local agencies were asked to comment on the proposed project to better assess the potential impact to the environment:

U.S. Army Corps of Engineers

U.S. Fish and Wildlife Service

Natural Resources Conservation Service

State Historical Society of Iowa (State Historical Preservation Office)

Iowa DNR Conservation and Recreation Division

Iowa DNR Water Resources Section

Citizen Band Potawatomi Indian Tribe

Flandreau Santee Sioux

Ho-Chunk Nation

Iowa Tribe of Kansas and Nebraska

Iowa Tribe of Oklahoma

Kickapoo Tribe in Kansas

Kickapoo Tribe of Oklahoma

Lower Sioux Indian Community Council

Miami Tribe of Oklahoma

Omaha Tribal Council

Osage Tribal Council

Otoe-Missouria Tribe

Pawnee Nation of Oklahoma

Peoria Tribe of Indians of Oklahoma

Ponca Tribe of Indians of Oklahoma

Ponca Tribe of Nebraska

Prairie Band Potawatomi Nation

Prairie Island Indian Community

Sac & Fox Nation of Mississippi in Iowa

Sac & Fox Nation of Missouri

Sac & Fox Nation of Oklahoma

Santee Sioux Nation

Shakopee Mdewakanton Sioux Community

Sisseton-Wahpeton Oyate

Spirit Lake Tribal Council

Three Affiliated Tribes Mandan, Hidatsa & Arikara Nations

Upper Sioux Tribe

Winnebago Tribal Council

Yankton Sioux Tribal Business and Claims Committee

No adverse comments were received from any agencies or general public. Conditions placed on the applicant by the above agencies in order to assure no significant impact are included in the Summary of Reasons for Concluding No Significant Impact section.

ENVIRONMENTAL IMPACT SUMMARY

Construction: Traffic patterns within the community may be disrupted and above normal noise levels in the vicinity of the construction equipment can be anticipated during construction and should be a temporary problem. Adverse environmental impacts on noise quality will be handled by limited hours of contractor work time during the day. Other adverse environmental effects from construction activities will be minimized by proper construction practices, inspection, prompt cleanup, and other appropriate measures. Areas temporarily disturbed by the construction will be restored. Solid wastes resulting from the construction project will be regularly cleared away with substantial efforts made to minimize inconvenience to area residents. Care will be taken to maintain dirt to avoid erosion and runoff.

Temporary air quality degradation may occur due to dust and fumes from construction equipment. The applicant shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property during the proposed project (567 Iowa Administrative Code IAC 23.3(2)"c").

Historical/Archaeological: The State Historical Preservation Office (SHPO) and various Native American tribes with an interest in the area were provided information regarding the project. The DNR has determined, and the SHPO has concurred (R&C#200484115), that this undertaking will result in "no historic properties affected" based on the scope

of the project, the prior use of the project area, and the findings of the Phase I Archeological Survey conducted on the project property. However, if project activities uncover any item(s) that might be of archaeological, historical, or architectural interest, or if important new archaeological, historical, or architectural data should be encountered in the project APE, the applicant should make reasonable efforts to avoid further impacts to the property until an assessment can be made by an individual meeting the Secretary of the Interior's professional qualifications standards (36 CFR Part 61).

Environmental: A Joint Application was submitted by the City's consultant to the Iowa DNR Conservation and Recreation Division and U.S. Army Corps of Engineers. According to the Iowa DNR Conservation and Recreation Division, the proposed project will not interfere with any State-owned parks, recreational areas or open spaces. The U.S. Army Corps of Engineers concurs that the project will not impact wetlands. The project will not impact any wild and scenic rivers as none exist within the State of Iowa. The U.S. Fish & Wildlife Service Section 7 Technical Assistance website consultation determined, and Iowa DNR Conservation and Recreation Division agree, that the project will not impact threatened or endangered species or their habitats. However, if any State- or Federally-listed threatened or endangered species or communities are found during the planning or construction phases, additional studies and/or mitigation may be required. According to the Iowa DNR Water Resources Section, this project will not impact the 100-year floodplain provided all necessary floodplain development permits, state and local, are obtained and the terms of which are abided by. No adverse impacts are expected to result from this project, such as those to surface water quantity, or groundwater quality or quantity.

Land Use and Trends: The project will not displace population nor will it alter the character of existing residential areas. No significant farmlands will be impacted. This project should not impact population trends as the presence or absence of existing water/sewer infrastructure is unlikely to induce significant alterations in the population growth or distribution given the myriad of factors that influence development in this region. Similarly, this project is unlikely to induce significant alterations in the pattern and type of land use.

Irreversible and Irretrievable Commitment of Resources: Fuels, materials, and various forms of energy will be utilized during construction.

POSITIVE ENVIRONMENTAL EFFECTS TO BE REALIZED FROM THE PROPOSED PROJECT

Positive environmental effects will be improved water quality for the customers of Rock Valley Water Supply. The new well(s) will provide redundant capacity to the existing wells in the event nitrate concentrations spike. This will also provide resiliency during drought conditions. If the well has low ammonia concentrations it would also reduce the need for Well No. 8 and thereby breakpoint chlorination. The addition of static mixing

equipment and increasing the detention time after chlorine dosing would increase water quality consistency. A new chemical feed building would also provide a safe work environment.

SUMMARY OF REASONS FOR CONCLUDING NO SIGNIFICANT IMPACT

- The project will not significantly affect the pattern and type of land use (industrial, commercial, agricultural, recreational, residential) or growth and distribution of population.
- The project will not conflict with local, regional or State land use plans or policies.
- The project will not impact wetlands.
- The project will not affect threatened and endangered species or their habitats. If any State- or Federally-listed threatened or endangered species or communities are found during the planning or construction phases, additional studies and/or mitigation may be required.
- The project will not displace population, alter the character of existing residential areas, or convert significant farmlands to non-agricultural purposes.
- The project will not affect the 100-year flood plain provided all necessary floodplain development permits, state and local, are obtained and the terms of which are abided by
- The project will not have effect on parklands, preserves, other public lands, or areas of recognized scenic or recreational value.
- No Historic Properties will be adversely affected by the proposed project. However, if project activities uncover any item(s) that might be of archaeological, historical, or architectural interest, or if important new archaeological, historical, or architectural data should be encountered in the project APE, the applicant should make reasonable efforts to avoid further impacts to the property until an assessment can be made by an individual meeting the Secretary of the Interior's professional qualifications standards (36 CFR Part 61).
- The project will not have a significant adverse effect upon local ambient air quality provided the applicant takes reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property during the proposed project (567 IAC 23.3(2)"c").
- The project will not have a significant adverse effect upon local ambient noise levels, surface water quantity, groundwater quality or quantity, or water supply.
- The project will not have significant impact to surface water quality, fish, shellfish, wildlife, or their natural habitats.

THEREFORE:

The above project conforms to the criteria in 567 Iowa Administrative Code 44.10(3) relating to compliance with the National Environmental Policy Act of 1969. No adverse effect or significant environmental impact is foreseen at this time.

Jean Mayne

Jean Mayne

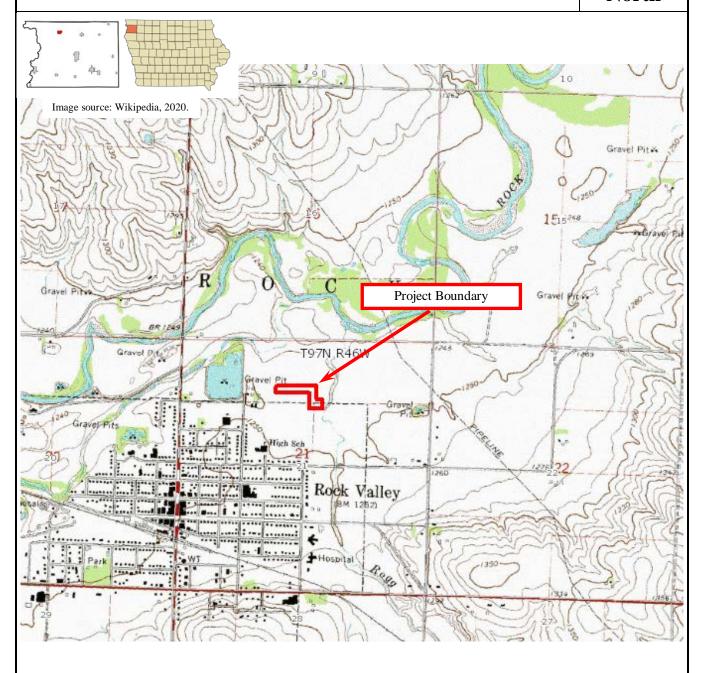
Environmental Review Specialist State Revolving Fund Iowa Department of Natural Resources

USGS 7.5 Minute Quadrangle: Rock Valley Section(s): 21, Township: 97 N, Range: 46 W Date: 1972

Scale: 1 Inch = 2,000 Feet



North



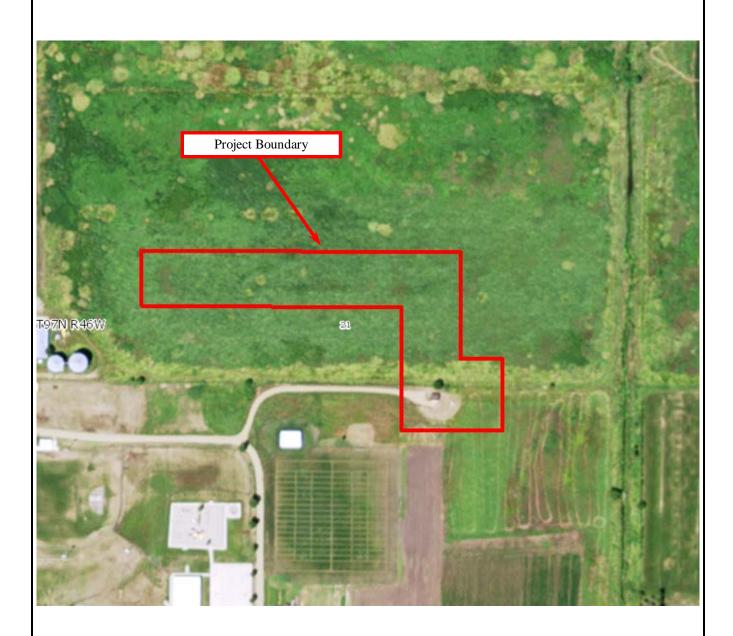
USGS Topographic Map

Rock Valley Water Supply – Water System Improvements Rock Valley, IA



State Revolving Fund 502 East 9th Street Des Moines, IA 50319-0034





Aerial Photograph

 $\label{eq:conditional_condition} Rock\ Valley\ Water\ Supply-Water\ System\ Improvements \\ Rock\ Valley,\ IA$



State Revolving Fund 502 East 9th Street Des Moines, IA 50319-0034