NEBRASKA NATURAL RESOURCES COMMISSION

Water Sustainability Fund

Application for Funding

Section A.

ADMINISTRATIVE

PROJECT NAME: South Sioux City 2.5MG Water Tower

SPONSOR'S *PRIMARY CONTACT INFORMATION* **(Not Consultant's)**

Sponsor Business Name: City of South Sioux City

Sponsor Contact's Name: Lance Hedquist

Sponsor Contact's Address: 1615 1st Avenue, South Sioux City, NE 68776

Sponsor Contact's Phone: 402-494-7517

Sponsor Contact's Email: lhedquist@southsiouxcity.org

1. **Funding** amount requested from the Water Sustainability Fund:

   Grant amount requested. $ 2,211,000

   - If requesting less than 60% cost share, what percentage? Requesting 50% construction costs; 40% total project costs

   If a loan is requested amount requested. $ Not applicable to request.

   - How many year's repayment period? Not applicable to this request
   - Supply a complete year-by-year repayment schedule. Not applicable to this request

2. **Neb. Rev. Stat. § 2-1507 (2)**

   Are you applying for a **combined sewer overflow project**? YES☐ NO☒

   If yes:

- Do you have a Long Term Control Plan that is currently approved by the Nebraska Department of Environmental Quality? YES☐ NO☐

- Attach a copy to your application. Not applicable

- What is the population served by your project? Not applicable
-
- Provide a demonstration of need. Not applicable

- **Do not complete the remainder of the application.**

3. **Permits Required/Obtained** Attach a copy of each that has been obtained. For those needed, but not yet obtained (box **"NO"** checked), 1.) State when you will apply for the permit, 2.) When you anticipate receiving the permit, and 3.) Your estimated cost to obtain the permit.

(N/A = Not applicable/not asking for cost share to obtain)
(Yes = See attached)
(No = Might need, don't have & are asking for 60% cost share to obtain)

G&P - T&E consultation (required) N/A☐ Obtained: YES☒ NO☐
Environmental Study completed 9/2018; Letter received11/15/2019; no Effect – Refer to Attachment 1

DNR Surface Water Right N/A☒ Obtained: YES☐ NO☐

USACE (e.g., 404/other Permit) N/A☐ Obtained: YES☒ NO☐
Permit #NWO-2018+01764-WEH, received 10/22/2018

FEMA (CLOMR) N/A☒ Obtained: YES☐ NO☒
Not required. The proposed site is not located in the flood plain and would not be impacted by any flooding source.

Local Zoning/Construction N/A☐ Obtained: YES☐ NO☒
At time of this application, area is zoned properly. No construction permits have yet been requested. To be obtained August 1, 2019. Estimated costs for permits waived by the city.

Cultural Resources Evaluation N/A☐ Obtained: YES☒ NO☐
NE State Historical Preservation Office, letter / no effect received 11/29/20118, Refer to Attachment 1. No Tribal correspondence received.

Other (provide explanation below) N/A☐ Obtained: YES☒ NO☒

US Fish and Wildlife Services – No concerns letter received 11/5/2018

DHHS Construction Permit – Engineering firm is planning on submitting to the state the week of July 1 for review. After this review, they will issue this permit.

NPDES Storm Water Permit – This permit will be applied for after the project is bid and a contractor has been selected which will be after this grant notification is reviewed and approved.

Through Olsson engineering firm, the following additional federal and state agencies were contacted. Agency response letters were received from the NDEQ (A-3.b), AUSFWS (A-3.c), NGPC (A-3.d), NeSHPO (A-3.e), and USACE (A-3.f). Agency response letters were not received from the EPA, Iowa Tribe, Omaha Tribe, Ponca Tribe, Sac and Sioux Fox Tribe, or Winnebago Tribe. The 30-day specified in the letters has expired. Of the letters that were received, no issues or conflicts were noted. Any other construction permits will be drafted and submitted once funding for the project is secured. Secured funding will allow the project team to secure realistic project timeline and the timing of permits.

Refer to Attachment 1: South Sioux City Environmental Review prepared by Olsson and includes any responses receives, permits obtained.

4. **Partnerships**

List each Partner / Co-sponsor, attach documentation of agreement:

1. Nebraska Department of Environmental Quality – SRF Loan.
2. Olsson – Engineering Services
3. U.S. Department of Commerce – Economic Development Assistance

Refer to Attachment 4: Documentation of Partners

Identify the roles and responsibilities of each Partner / Co-sponsor involved in the proposed project regardless of whether each is an additional funding source.

- State Revolving Loan Fund (SRF) Loan Agreement between Nebraska Department of Environmental Quality and the City of South Sioux City, NE.
- Olsson for pre-project and project Engineering services, costs encumbered by the City of South Sioux and not part of the construction request.
- Construction – Contractor and any sub-contractors will be determined at bidding. Bids will be taken after this grant application status is determined

5. **Other Sources of Funding**

Identify the costs of the entire project, what costs each other source of funding will be applied to, and whether each of these other sources of funding is confirmed. If not, please identify those entities and list the date

when confirmation is expected. Explain how you will implement the project if these sources are not obtained.

The following table summarizes the budget and applies the source of funding to these costs. Both the US Commerce/EDA and NDEQ/SRF funds are committed. If the NRC funds are not received, then the share of the SRF funds increases significantly.

Table 2. Expenses and Source of Funds					
2.5 M Gallon water storage tank	5,553,600				
Budget Line Item	**Costs**	**%**			
Preliminary Engineering	33,400	1%			
Land Acquisition	0	0%			
Design Engineering	267,600	5%			
Capital Construction	4,422,000	80%			
Eng. Construction Admin/Costs	264,800	5%			
Engineering Construction	565,800	10%			
TOTAL EXPENDITURES	**5,553,600**	**100%**			
				Construction	4,422,000
Sources of Funds	**Estimated Amount**	**Total Project**	**Construction Costs**	**Purpose**	**Status**
US Commerce/EDA	2,211,000	40%	50%	Construction	Committed
State Revolving Funds (SRF)	1,131,600	20%	0%	Engineering	Committed
Water Sustainability Fund (NRC)	2,211,000	40%	50%	Construction	Pending
TOTAL REVENUE SOURCES	**5,553,600**	**100%**	100%		

U.S. Department of Commerce / EDA funds are committed evidenced by award letter received 4/22/2019, refer to Attachment 4: Documentation of Partners. Per NDEQ suggestion, State Revolving Fund loan is being reapplied to obtain lower interest rate and longer terms. This will be completed on or before 10/1/2019. Current loan documentation in effect refer to Attachment 4: Documentation of Partners.

6. **Overview**

In 1,000 words *or less*, provide a brief description of your project including the nature/purpose of the project and its objectives. Do not exceed one page!

The South Sioux City Water Storage Project consists of constructing a 2.5 million gallon (MG) water storage facility on an existing city-owned 1.4-acre lot. The new water tower erected will be a composite water tower consisting of a concrete pedestal base supporting a welded steel tank. Included in the construction of the

project will be the replacement of 265 LF of 16” water main, 279 LF of 48” RCP storm sewer pipe, and new installation of 176 LF of 24” DIP water main. The tower will be built near existing water supply lines and resources. At this location, the water storage tank will have the best connectivity to the existing water infrastructure. As part of the project, an access road would be built to accommodate the area.

Based on current and projected water usage for the next 10 years, engineering models indicate that the new water tower is vital to the Roth Industrial Park as existing industries expand and new businesses locate in this area. Planned efforts include an anticipated $220 million in potential growth capital in the city. This expansion is on the heels of $49 million expansion already completed for Great West Casualty and Riverview Surgical Center in the city. This expansion results in 341 job created and the subsequent need for additional housing. The south side of the City is seeing expanded housing growth anticipated to range from 1040 to 1400 mixed-use units in the next 10 years. With this growth, the water needs of the city are rapidly increasing. The storage needs for a municipality of this size is 3 million, plus 1 million gallons for fire needs. Unfortunately, the City of South Sioux City is 3 million gallons short already. This water storage improvement to the area will give the area adequate storage for fire protection, with the anticipated increase of water needs, five –ten gallons a month, the City will be sufficient for supply and demand.

7. **Project Tasks and Timeline**

Identify what activities will be conducted to complete the project, and the anticipated completion date.

Engineering feasibility studies and design is 95% completed. The following construction activities are needed to complete the project. Of the construction costs (T=$4,422,000), $2,211,000 (50% construction costs; 40% of total project costs) is requested from the NCR Water Sustainability Fund.

For multiyear projects please list (using the following example):

Estimated time frame	10/1/2019-9/30/2020	10/1/2020-9/30/2021	10/1/2021-9/30/22		
Tasks	**Year 1$**	**Year 2$**	**Year 3$**	**Remaining**	**Total $ Amt.**
Permits	5,000		5,000		10,000
Engineering Const Admin	41,666.67	100,000	58,333		200,000
Engineering Construciton	117,875	282,900	165,025		565,800
Construction	921,250	2,211,000	1,289,750		4,422,000
Close-out - Eng/Progr Admi	13,500	32,400	18,900		64,800
TOTAL	**1,099,292**	**2,626,300**	**1,537,008**		**5,262,600**
Estimated					
Construction time - months	5	12	7		24
Construction percentage	21%	50%	29%		100%
Unallowable costs - pre-grant activity					
Any permits during this preliminary phase					
Engineer Preliminary	33,400				
Engineer Design	267,600				
Estimated total	301,000				

Olsson Engineers estimate that the construction phase of the project will take 18-24. Based on this, the table above identifies the general cost categories for the project given the estimated time frame listed. Preliminary engineer costs were encumbered by the city, excluded and not calculated in this grant request along with supported design, preliminary permits and other pre-design work. This pre-design work assisted with the feasibility studies, project data collection and other essential work associated with this project.

8. **IMP**

Do you have an **Integrated Management Plan** in place, or have you initiated one? YES☐ NO☒ Sponsor is not an NRD☐

According to the Papio Missouri River Natural Resources Districts Groundwater Management Plan (GMP) document, *"the district's IMP is for the area designated by the NDNR to have alluvial aquifers that are hydrologically connected to the Platte and Elkhorn rivers and includes the portion of the P-MRNRD that contributes surface water runoff to the Platte and Elkhorn rivers."* South Sioux City is not in this area and an Integrated Management Plan (IMP) is not necessary or required.

Section B.

DNR DIRECTOR'S FINDINGS

Prove Engineering & Technical Feasibility

(Applicant must demonstrate compliance with Title 261, CH 2 - 004)

1. Does your project include physical construction (defined as moving dirt, directing water, physically constructing something, or installing equipment)?
YES☒ NO☐

If you answered "YES" you must answer all questions in section 1.A.
If you answer "NO" you must answer all questions in section 1.B.

If "YES", it is considered mostly structural, so answer the following:

1.A.1 **Insert a feasibility report to comply with Title 261, Chapter 2, including engineering and technical data**; Olsson (Engineering) were retained by the City of South Sioux City to prepare a preliminary feasibility report (Project No. 017-0781) on September 2018.The South Sioux City Water Tower Project (Project) involves a proposed water tower for South Sioux City, NE located near the Roth Industrial Park Area (Figure 1) on the south side of the city. This portion of South Sioux City is a developing area of Dakota County and was part of a Tier 1 Environmental Assessment completed in 2011 for the expansion of industrial development in the Roth Industrial Park. The report reviewed environmental resources, potential impacts, design capacity. Refer to Attachment 2: South Sioux City Water Storage Olsson Project 017-0781.

1.A.2 **Describe the plan of development (004.01 A);** Several field investigations were completed both for the September 2018 U.S. Dept. of Commerce/Economic Development Administration application and their requested supplemental information submitted in December 2018. These investigations included: Cultural review (desktop), Hazardous and Toxic Materials/Waste, Natural Environmental Resources (wetlands, streams, surface water), National Wetlands Inventory and National Hydrography Dataset, NRCS Soils, Wetland Delineation, City participation in the MS4 program, Threatened and Endangered Species, Floodplains, Farmland.

1.A.3 **Include a description of all field investigations made to substantiate the feasibility report (004.01 B);** Field investigations included: Cultural review (desktop), Hazardous and Toxic Materials/Waste, Natural Environmental Resources (wetlands, streams, surface water), National Wetlands Inventory and National Hydrography Dataset, NRCS Soils, Wetland Delineation, City participation in the MS4 program, Threatened and Endangered Species, Floodplains, Farmland. Per Engineering contract agreement, additional surveys and investigations have occurred including but not limited to the following. Topographical Survey - Detailed topographic surveys of the proposed tower site is

including all topographic features, locations, property lines, and easements. Geotechnical Investigations - A Geotechnical Investigation program will be developed at the water tower site to supplement subsurface conditions that must be considered in the design and construction of the reservoir foundations. The field Investigations, soil evaluations, and recommendations will be summarized in a separate geotechnical report, which will be included as an attachment to the design report and made available to the contractors bidding the project. During drilling operations, the sampling of soils will be conducted at five- foot intervals and in general accordance with ASTM D-1586 (Penetration Test and Split-Barrel Sampling of Soils) and D-1587 (Thin-Walled Tube Sampling of Soils) methodology. It is anticipated that the laboratory testing scope will include visual soil classification (ASTM D-2488), unconfined compression tests (ASTM D· 2166), dry density tests, Atterberg limit tests (ASTM D-4318) and one- dimensional consolidation tests (ASTM D-2435). A final report is to be provided with recommendations for either a shallow or deep foundation options depending on the soil properties of the future site. The foundation system will include an allowable soil bearing pressure and/or pile capacity recommendations. The foundation system would also discuss suitable foundation bearing material, possible over excavation requirements, and acceptable bearing depths. Total and differential settlement would be evaluated as part of the design for the foundation system to determine if settlement and differential vertical movement is within tolerable ranges. Lateral earth pressure for at-rest, passive and activ13 conditions. A coefficient of sliding friction would also be provided. Storm Water Pollution Prevention Plan (SWPPP) - Olsson will develop a SWPPP and Erosion & Sediment Control Plan for the water tower project site. The SWPPP shall satisfy the conditions required for obtaining a National Pollution Discharge Elimination System (NPDES) permit. Site Assessment & Data Collection - Olsson will gather relevant data and information to begin development of the SWPPP. Required information will include existing and proposed contours for the project site. In addition, contours of the surrounding area will be obtained to examine the nature of the drainage features Immediately upstream and downstream of the project site. Other required information includes aerial photos, existing land use, and all available design information for the project. Olsson will prepare Erosion & Sediment Control Plan Sheets. Olsson will develop Erosion and Sediment Control Plan Sheets to be incorporated into the construction plan set. It is assumed that the Erosion and Sediment Control Plan will consist of one plan sheet, including the existing topography, the proposed grading plan, and typical details for structural BMPs. Olsson will prepare SWPPP Documentation. Olsson will assemble and complete SWPPP documents necessary for permit approval, including the following: Erosion & Sediment Control Plan Specifications, Construction Storm water Notice of Intent (CSW-NOI) with the following forms assembled and provided as part of the SWPPP development, with completion of these forms the responsibility of the City and/or Contractor(s), Contractor Certification Form, General Contractor's Delegated Inspector Form, Spill Report Form, Construction Storm water Notice of Termination (CSW-NOT). It is expected that Olsson will format the SWPPP specifications into a format that is compatible with the City's

design specifications. Olsson will also disseminate the required documentation to appropriate team members, including the City, regulatory agencies, and the Contractor(s). Olsson will provide guidance with reviewing regulatory agencies. It is expected that active communication with the reviewing agent at the time of submittal and active follow up will help ensure timely review and approval of the SWPPP.

1.A.4 **Provide maps, drawings, charts, tables, etc., used as a basis for the feasibility report (004.01 C);** The following were used as a basis for the feasibility report (Attachment 2: South Sioux City Water Storage Olsson Project 017-0781): A-5(1) Location Map; (2) NDEQ Facilities Site Map; (3) NWI, NHD & SSURGO Soils Map; (4) Delineation Map; (5) FEMA Floodplain Map; Appendix B: Wetland Determination Data Forms. Refer to Attachment 1: Environmental Review.

1.A.5 **Describe any necessary water and/or land rights including pertinent water supply and water quality information (004.01 D);** None needed. Currently, the 1.4-acre land proposed for the Water Tower is located on city-owned land. Refer to Attachment 6: Warranty Deed, Proof of Ownership

1.A.6 **Discuss each component of the final plan (004.01 E);**
Final Design drawings are near complete supporting bid-letting later this Fall/Early winter based on NRC grant award timing. Final design will be conducted by Olsson, based on the preliminary work already conducted.

A geotechnical Investigation program developed at the water tower site has supplemented subsurface conditions considered in the design and construction of the reservoir foundations. The field Investigations, soil evaluations, and recommendations are summarized in a separate geotechnical report, which will be included as an attachment to the design report and made available to the contractors bidding the project. During drilling operations, the sampling of soils conducted was at five- foot intervals and in general accordance with ASTM D-1586 (Penetration Test and Split-Barrel Sampling of Soils) and D-1587 (Thin-Walled Tube Sampling of Soils) methodology. Laboratory testing scope included visual soil classification (ASTM D-2488), unconfined compression tests (ASTM D· 2166), dry density tests, Atterberg limit tests (ASTM D-4318) and one- dimensional consolidation tests (ASTM D-2435). A final report provided with recommendations for either a shallow or deep foundation options depending on the soil properties of the future site. The foundation system will include an allowable soil bearing pressure and/or pile capacity recommendations. The foundation system would also discuss suitable foundation bearing material, possible over excavation requirements, and acceptable bearing depths. Total and differential settlement would be evaluated as part of the design for the foundation system to determine if settlement and differential vertical movement is within tolerable ranges. Lateral earth pressure for at-rest, passive and activ13 conditions. A coefficient of sliding friction would also be provided.

Storm Water Pollution Prevention Plan (SWPPP) - Olsson will develop a SWPPP and Erosion & Sediment Control Plan for the water tower project site. The SWPPP shall satisfy the conditions required for obtaining a National Pollution Discharge Elimination System (NPDES) permit. Site Assessment & Data Collection - Olsson will gather relevant data and information to begin development of the SWPPP. Required information will include existing and proposed contours for the project site. In addition, contours of the surrounding area will be obtained to examine the nature of the drainage features Immediately upstream and downstream of the project site. Other required information includes aerial photos, existing land use, and all available design information for the project. Olsson will prepare Erosion & Sediment Control Plan Sheets. Olsson will develop Erosion and Sediment Control Plan Sheets to be incorporated into the construction plan set. It is assumed that the Erosion and Sediment Control Plan will consist of one plan sheet, including the existing topography, the proposed grading plan, and typical details for structural BMPs. Olsson will prepare SWPPP Documentation. Olsson will assemble and complete SWPPP documents necessary for permit approval, including the following: Erosion & Sediment Control Plan Specifications, Construction Stormwater Notice of Intent (CSW-NOI) with the following forms assembled and provided as part of the SWPPP development, with completion of these forms the responsibility of the City and/or Contractor(s), Contractor Certification Form, General Contractor's Delegated Inspector Form, Spill Report Form, Construction Stormwater Notice of Termination (CSW-NOT). It is expected that Olsson will format the SWPPP specifications into a format that is compatible with the City's design specifications. Olsson will also disseminate the required documentation to appropriate team members, including the City, regulatory agencies, and the Contractor(s). Olsson will provide guidance with reviewing regulatory agencies. It is expected that active communication with the reviewing agent at the time of submittal and active follow up will help ensure timely review and approval of the SWPPP.

Geotechnical Investigations - A Geotechnical Investigation program is being finalized for the water tower site to supplement subsurface conditions that must be considered in the design and construction of the reservoir foundations. The field Investigations, soil evaluations, and recommendations will be summarized in a separate geotechnical report, which will be included as an attachment to the design report and made available to the contractors bidding the project.

An on-site SCADA Design included instrumentation and control drawings, Division 13 specifications for Instrumentation, SCADA equipment design to new level sensor. This will help to prepare final plans and specifications (i.e. Bidding Documents).

Olsson will prepare for incorporation in the Contract Documents final drawings to show the general scope, extent, and character of the work to be furnished and performed by Contractor (Drawings) and Specifications.

Upon grant award anticipated to be on or about 10/1/2019, Olsson will assist with bidding processes for construction of the water tower.

1.A.7 **When applicable include the geologic investigation required for the project (004.01 E 1);** Geotechnical Investigations - A geotechnical Investigation program is developed at the water tower site to supplement subsurface conditions that must be considered in the design and construction of the reservoir foundations. The field Investigations, soil evaluations, and recommendations are summarized in a separate geotechnical report, which will be included as an attachment to the design report and made available to the contractors bidding the project. During drilling operations, the sampling of soils was conducted at five- foot intervals and in general accordance with ASTM D-1586 (Penetration Test and Split-Barrel Sampling of Soils) and D-1587 (Thin-Walled Tube Sampling of Soils) methodology. It is anticipated that the laboratory testing scope will include visual soil classification (ASTM D-2488), unconfined compression tests (ASTM D· 2166), dry density tests, Atterberg limit tests (ASTM D-4318) and one- dimensional consolidation tests (ASTM D-2435). A final report is to be provided with recommendations for either a shallow or deep foundation options depending on the soil properties of the future site. The foundation system will include an allowable soil bearing pressure and/or pile capacity recommendations. The foundation system would also discuss suitable foundation bearing material, possible over excavation requirements, and acceptable bearing depths. Total and differential settlement would be evaluated as part of the design for the foundation system to determine if settlement and differential vertical movement is within tolerable ranges. Lateral earth pressure for at-rest, passive and activ13 conditions.

1.A.8 **When applicable include the hydrologic data investigation required for the project** (004.01 E 2); No hydrologic study was necessary. The total disturbed area of the site is relatively small and all runoff from the site goes to the existing detention pond as it would have before.

1.A.9 **When applicable include the criteria for final design including, but not limited to, soil mechanics, hydraulic, hydrologic, structural, embankments and foundation criteria** (004.01 E 3). Olsson (Engineers) has conducted an on-site SCADA Design that include instrumentation and control drawings, Division 13 specifications for Instrumentation, SCADA equipment design to new level sensor. This helps prepare final plans and specifications (i.e. Bidding Documents) Olsson will prepare for incorporation in the Contract Documents final drawings to show the general scope, extent, and character of the work to be furnished and performed by Contractor (Drawings) and Specifications. In general, the documents include design of a 2.5MG elevated reservoir, water main interconnections, site plan, electrical and power service design, and associated design, and appurtenances to complete the project. Olsson will prepare front end documents based on their standard front end documents and tailored to support City standard documents for selection of private construction contractors on a competitive public bid basis. Specifications will include: prepare specifications for the proposed construction

work; drawings; prepare computer aided drafting (CAD) drawings, schedules, and schematics for the proposed construction work, and for the materials and equipment required, including civil plans, sections and site plans; tank plans and piping details. It is expected that Olsson will perform a QA/QC Review, an independent quality control review of 90% drawings and specifications. This review will verify conformity with the AWWA and NeHHS design requirements and City Standards and ensure completeness, build-ability, and constructability. Olsson will coordinate the project with the NeHHS and submit the project plans and specifications as required for approval and issuance of a construction permit by the NeHHS. Olsson will prepare applications for federal, state, and local permits that may be required for construction including, FAA 7460-1 Obstruction Data form. Finally, Olsson will assist in the billing process including: invitation for Bids; identify potential contractors and suppliers, and distribute copies of Invitation to Bid for the Contract. Maintain a record of prospective bidders and suppliers to whom drawings or specifications have been issued; Distribute plans and specifications, prepare and distribute construction contract drawings and specifications to city. Olsson will prepare and distribute construction contract documents to potential bidders and be able to answer questions/ prepare addendum(s) and distribute and interpret construction contract drawings and specifications, and provide responses to questions from bidders requiring clarification during bidding periods. If any addenda to the construction contract documents is required, the City expects Olsson to provide that service.

If “NO”, it is considered mostly non-structural, so answer the following:

1.B.1 I**nsert data necessary to establish technical feasibility** (004.02); Based on the South Sioux City Water Storage Project (11/2018, Olsson Project 017-0781, Appendix 2, Appendix B provides Water Demand Data with Appendix C Public Protection Classification Summary Report offering needed fire flow demands. Reflective of these reports, the following data is offered. South Sioux City currently has four existing water towers. They are each 250,000 gallons totaling 1 million gallons. In addition to the storage provided by the towers, SSC has the option to purchase water from Sioux City in the amount of 2.7 MGD. This currently is a necessity to keep up with peak day demands. On a peak day SSC demands 4.7 MGD, this depletes the existing Con Agra tank to 55% of its storage. On a peak demand day, if a fire were to occur or the Sioux City water supply were to be shut down for any reason the Con Agra tank and potentially two other tanks would be completely depleted of water. This would cause the industries in the Roth Park area to shut down their operations and residents throughout SSC to experience low pressures. Design - Based on water modeling and analysis of the existing system, Olsson recommends a 2.5 MG water storage facility be constructed next to the existing Con Agra water tower. The size of the water tower was determined based on a two main factors: the current and future demands of SSC, and the fire suppression requirements laid out in the Public Protections Classifications Summary Report prepared by Insurance Services Office, Inc. To analyze the current and future water demands for South Sioux City data was provided by SSC

showing the total usage for the last three years (2014-2016). The data included the monthly amount of water produced at the water treatment facilities and the water bought from Sioux City. This is included in Appendix B of the PER report (Attachment 2). Based on the data, the average daily use was 2.7 MGD. By 2016, the average rose to 3.0 MGD. The peak month was 3.5 MGD in August 2016, and the peak day was 4.7 MGD on July 16th,2016. From 2014-2016 SSC experienced an 11.5% year-to-year growth in water usage. This is shown in Figure 1 below.

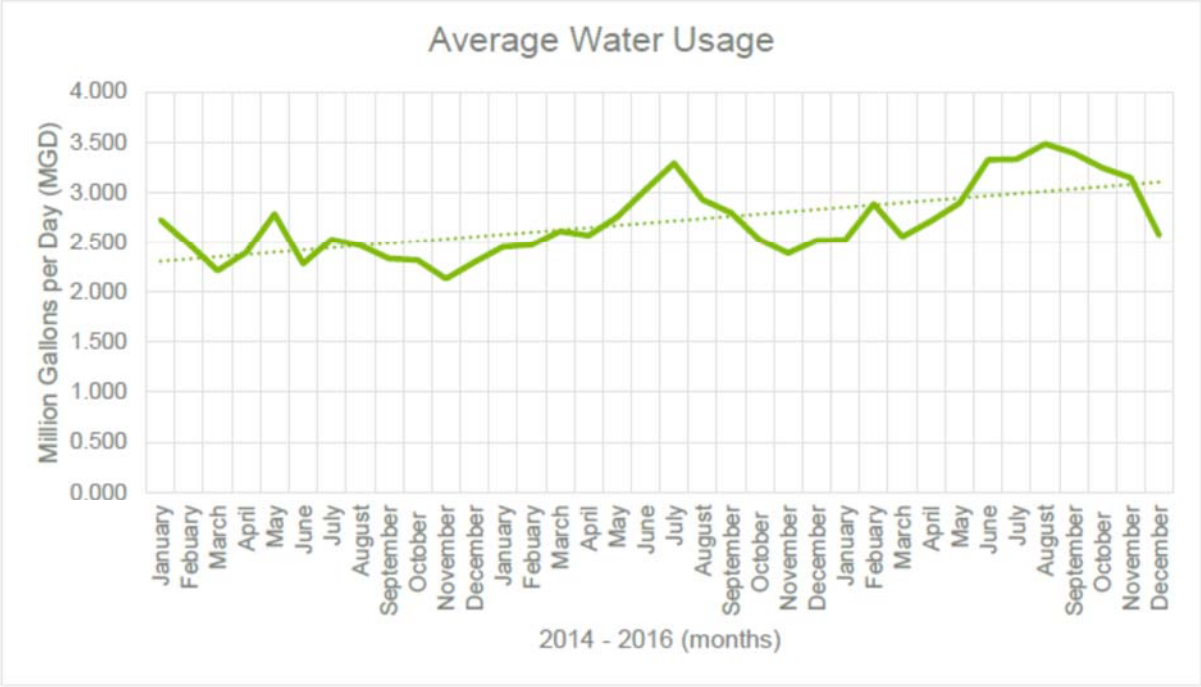

Figure 1. Average Water Usage from 2014-2016.

For the design peak day, 6.5 MGD was used. This was calculated by taking the current peak day of 4.7 MGD, adding .4 MGD demand for future housing developments, and 1.4 MGD future industries in Roth Park.

Fire flow demands from the PPC Report for South Sioux City identified the 4 locations across the city where the fire flow needs would be the greatest. These are given as follows:

- 4500 gpm D St. & E 5th St. Marina Inn & Conference Center
- 4500 gpm Broadmoor Dr. and 29th St Liberty Place Apartments
- 4500 gpm 200 East 39 Street Dakota Point Apartments
- 4000 gpm G St. & Pine St. South Sioux City Schools

According to the AWWA manual M31 Distribution System Requirements for Fire Protection for a fire flow of 4000-4500 gpm it is recommended to assume a 4-hour

duration for that fire. This would equate to a demand of 1 million gallons over 4 hours. The PPC report can be reviewed in Appendix C of PER report

Based on the current peak day demand, design peak day demand, and the fire flow demands scenarios were modeled with and without a new water tower.

The first scenario is a scenario for existing conditions, a fire at the Dakota Point Apartments on a peak demand day. The results are shown in the figure below. The model shows the Con Agra tank would be depleted of water during the fire.

Alternatively, by constructing a new 2.5 MG water tower the model shows the new tower will remain 20% full during a designed worst case scenario. This is shown in the figure below. During this scenario a design peak day of 6.5 MGD and a fire flow of 4500 gpm was used and positive pressure in the system is maintained.

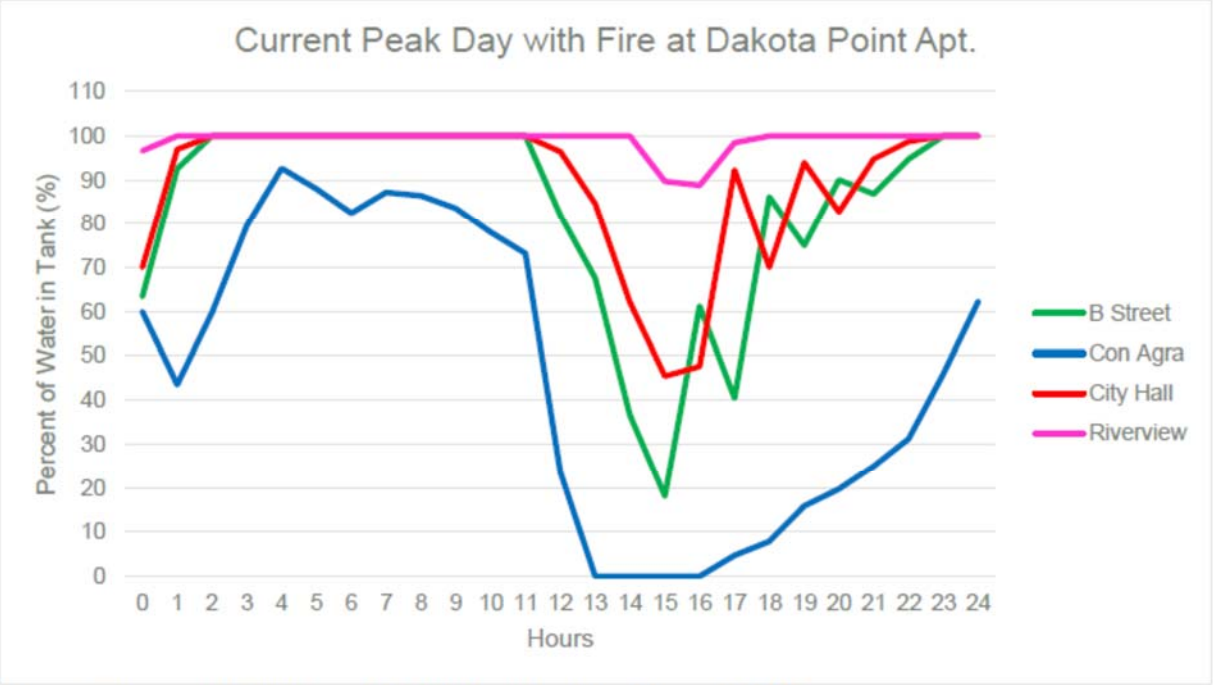

Figure 2. Current Peak Day of 4.7 MDG with a Fire Flow of 4500 gpm.

1.B.2 **Discuss the plan of development** (004.02 A);

Based on water modeling and analysis of the existing system, Olsson Engineers recommend a 2.5MG water storage facility to be construction on land owned by the city and located near Roth Industrial Park on the south side of the city. The size of the water storage tank was determined based on two factors: the current and future demands of SSC and the fire suppression requirements laid out in the Public Protections Classifications Summary Report prepared by insurance Services Office. Inc.

Multiple sites were reviewed as possible locations for the construction of the tower. One reason for site selections was conductivity to the existing system. At this location there is an existing 16" line running through the property. This line is a direct conduit to the Sioux City Interconnect and then continues to the businesses of Roth Industrial Park. This means the water tower can be filled more rapidly than other locations while providing most of the water necessary for the industries. This provides a buffer between the smaller water towers throughout the city and helps maintain a constant pressure for residents even when demands of the industrial park are high. Another reason this site was chosen was because the land is already owned by the City so no land acquisitions will be necessary. Site improvements include the existing water main will need to be relocated, existing storm sewer will need to be relocated, and an existing road will need to be regraded. A nearby high pressure gas line that is catholically protected will require that cathodic protection be added to the relocated water lines installed on site.

1.B.3 **Describe field or research investigations utilized to substantiate the project conception** (004.02 B); Several critical field and research investigations has been conducted to support this project. These include: feasibility studies and site reviews, Environmental Review, Cultural review (desktop), Hazardous and Toxic Materials/Waste, Natural Environmental Resources (wetlands, streams, surface water), National Wetlands Inventory and National Hydrography Dataset, NRCS Soils, Wetland Delineation, City participation in the MS4 program, Threatened and Endangered Species, Floodplains, Farmland. Additional surveys and investigations have occurred including but not limited to the following: topographical Survey Geotechnical Investigations, Storm Water Pollution Prevention Plan (SWPPP), Site Assessment & Data Collection including Erosion and Sediment Control Plan Sheets. The Engineers will prepare the SWPPP Documentation.

1.B.4 **Describe any necessary water and/or land rights** (004.02 C); City owns the current land the water tower will be located on. No water or land rights are necessary for this project.

1.B.5 **Discuss the anticipated effects, if any, of the project upon the development and/or operation of existing or envisioned structural measures including a brief description of any such measure** (004.02 D).

The area adjacent to the proposed site is surrounded by agricultural fields, a BNSF railway, and industrial sites within the Roth Industrial Park. The storage tank will be tied to and near the planned housing development in the southern area of the City. The elevated water storage tank will be constructed on land that already houses city water infrastructure components. No negative impacts are anticipated as the project enhances existing structures and measures.

Prove Economic Feasibility

(Applicant must demonstrate compliance with Title 261, CH 2 - 005)

2. **Provide evidence that there are no known means of accomplishing the same purpose or purposes more economically, by describing the next best alternative.** The Roth Industrial Park is a growing area, with businesses looking to expand and locate in South Sioux City. The Roth Industrial Park encompasses nearly 1200 acres, with approximately 600 acres already in shovel ready condition. Businesses currently occupy approximately 100 acres including: Beef Products, Inc. (BPI) now known as “empirical” along with two additional businesses ready to occupy and expand if the correct water resources are in place. Based on water modeling and analysis of the existing system, Olsson recommended and the City accept Alternative (A) of three options offered. At the proposed site, the water storage tank will have the ability to connect to existing 16” and 12” municipal water supply lines. During times of peak performance and fire suppression needs, this alternative offers the best water conductivity. The B Street, City Hall, and Riverview Storage tanks will be able to maintain the highest capacity rates with the least amounts of fluctuations. This alternative also includes removal of the existing ConAgra tank. Based on Olsson Associates detailed an Alternative B, installing the same 2.5 million gallon elevated water storage tank at a location to the East and leaving the ConAgra water storage tank in place. The 2.5MG water storage tank would have the ability to connect to the municipal water supply via two 12” lines. Water conductivity would be less with Alternative B. During times of peak demand and fire suppression needs, water flows would be difficult to maintain because of decreased conductivity. The B Street, City Hall, and Riverview water storage tanks will be depleted the most under Alternative B. Alternative B is estimated to cost $4,422,000. Long term maintenance costs for the ConAgra tank would be in addition to the construction costs. Those costs were not included in the study. Due to the age of the ConAgra tank, long term maintenance is imminent. A third alternative “C” was examined in the study by Olsson. This alternative entailed installing a 1.5 million gallon elevated water tank and20,000LF of 16” water main. The 1.5 million tank would be constructed at the same location as the Current ConAgra tank. The ConAgra tank would be removed. By installing 20,000 LF of 16” water main, the smaller tank sixe could maintain the similar water conductivity rates as Alternative A. Alternative C will cause rapid capacity fluctuations in case of peak and fire suppression in the B Street, City Hall, and Riverview water storage tanks. Alternative C would result in the most environmental disturbances, permits, and easements. The cost to construct Alternative C is $3,422,000. During time of peak demands and fire suppression, Alternative A causes the least amount of environmental disturbances, has the least number of easements/permits, and offers lower maintenance costs in the long run. Each alternative also includes the replacement of water lines at the current ConAgra elevated water storage tank site. More information on the alternative for the proposed project can be found in the attached PER.

3. **Document all sources and report all <u>costs</u> and <u>benefit</u> data using current data, (commodity prices, recreation benefit prices, and wildlife prices as prescribed by the Director) using both dollar values and other units of measurement when appropriate (environmental, social, cultural, data improvement, etc.). The period of analysis for economic feasibility studies is the project life, up to fifty (50) years; *<u>or</u>*, with prior approval of the Director up to one hundred (100) years,** (Title 261, CH 2 - 005). Several costs and benefit data is offered: economic, housing, and public safety.

a. *Economic Benefit:* There is significant return on investment for this project in relation to housing growth and economic growth evidenced by the following chart delineating a 50-year life of the project and Attachment 5; Cost/Benefit Analysis. The largest benefit to the area and state is the ability to increase the industrial growth footprint estimated to be $250,7731,000 in capital expansion, 341 jobs created, 1376 residential housing units completed in the next 5-10 years. This growth in the community will increase the local and state tax base, further creating additional opportunities for shovel-ready industry expansion with a reliable water source. The following table captures several key benefits with additional details found in Attachment 5: Cost/Benefit Analysis. Capital expansion in South Sioux is currently on track for $250,731,000 with an estimated 341 jobs created. Taxable income on these capital investments over a 50-year basis is estimated to be $75,570,000.

b. Planned *housing units* are estimated to be 1376 multi-use with an additional capital cost of $227,200,000 and an estimated property tax income of $36,771,200 over the course of 50 years. The water tower capital cost is estimated to be $5,553,600 with an annual operating cost of $37,000 or 1.7 million over 50 years, reflecting a significant return on investment.

c. *Public Safety*: South Sioux City currently has four existing water towers. They are each 250,000 gallons totaling 1 million gallons. In addition to the storage provided by the towers, SSC has the option to purchase water from Sioux City in the amount of 2.7 MGD. This is currently a necessity to keep up with peak day demands. On a peak day SSC demands 4.7 MGD, this depletes the existing Con Agra tank to 55% of its storage. On a peak demand day, if a fire were to occur or the Sioux City water supply were to be shut down for any reason the Con Agra tank and potentially two other tanks would be completely depleted of water. This would cause the industries in the Roth Park area to shut down their operations and residents throughout SSC to experience low pressures. One key attraction for both housing starts and business recruitment is adequate infrastructure to support the demand.

Table 3. Economic Impact				
2.5 Water Storage Economic Development Profile				
Based on known Investments as of 6/2019				
			Taxable	
Private Sector	**Est. Jobs**	**Est. Investment**	**Investment**	**50-year Estimate**
Beef Products Inc.	100	$ 30,000,000	.33*Investment	9,900,000
Green Star (pellet, energ	45	$ 115,000,000	.33*Investment	37,950,000
Ingredion	40	$ 84,000,000	.33*Investment	27,720,000
Natural Gas	1	$ 5,000,000	0	0
Surgery Center	110	$ 13,500,000	.80* investment	10,800,000
Joe Morton	30	$ 1,331,000	.80* investment	1,064,800
Boyle Truckiing	10	$ 1,000,000	.33*Investment	800,000
Health Center Expansior	5	$ 900,000	Tax Exempt	0
Subtotal	**341**	**$ 250,731,000**		**$ 75,570,000**
	Housing Units	**Est Avg Cost /Unit**	**Est. Tax income**	**Planned timeframe**
HoChunk	1000	$ 220,000	$ 4,620,000	25 units/year for 4
Project X	336	$ 95,238	$ 32,000,000	All units within 2 -
Hovey subdivison	40	$ 180,000	$ 151,200	40 units over 5 yea
Total Housing Units	**1376**	**$ 227,200,000**	**$ 36,771,200**	
TOTALS		**$ 477,931,000**	**$ 112,341,200**	
		Avg Unit Cost	**ROI 50-year**	**Total**
Water Tower Operating costs		37,000	50 years	1,762,500
Water costs				

2018 Tax Rate		**50-Year Return on Investment**	
Ag-Society - Fair	0.007485	EDA Investment	2,211,000
County	0.384546	NRC Investment	2,211,000
Ed Service Unit 1	0.015	SRF Loan	1,131,600
Historical Society	0.001855	**Total**	**5,553,600**
NE Community College	0.095		
Pap-Miss Trib NRD	0.037594	Business Capital	$ 250,731,000
South Sioux City	0.385	House Capital	$ 227,200,000
SSC 11 Bond	0.115823	**Total**	**$ 477,931,000**
SSC220011	1.065839	Resident Tax	4,620,000
Tax Levy	**2.1081**	Business Tax	88,197,504
	0.021	**Total**	**92,817,504**

3.A **Describe any relevant cost information including, but not limited to the engineering and inspection costs, capital construction costs, annual operation and maintenance costs, and replacement costs.** Cost information also includes the estimated construction period as well as the estimated project life (005.01). The following costs information and budget has been created for the project as delineated by the following charts.

Table 1. Total Cost of Project

2.5 M Gallon water storage tank

Item Description	Price	Itemized Cost
Composite Elevated Tank	$	3,700,000
Deep Foundation	$	100,000
Tank Coatings and Logo	$	50,000
Tank Mixing System	$	75,000
Electrical Service	$	25,000
Antenna Provisions	$	20,000
Site Improvements	$	50,000
10% Contingency	$	402,000
Subtotal Capital Costs	**$**	**4,422,000**
Engineering and Administrative	$	1,131,600
TOTA Project Costs	**$**	**5,553,600**

Table 2. Expenses and Source of Funds						
2.5 M Gallon water storage tank	5,553,600					
Budget Line Item	**Costs**	**%**				
Preliminary Engineering	33,400	1%				
Land Acquisition	-					
Design Engineering	267,600	5%				
Capital Construction	4,422,000	80%				
Eng. Construction Admin/Costs	264,800	5%				
Engineering Construction	565,800	10%				
TOTAL EXPENDITURES	**5,553,600**	**100%**				
					Construction	4,422,000
Sources of Funds	**Estimated Amount**	**Total Project**	**Construction Costs**	**Purpose**	**Status**	
US Commerce/EDA	2,211,000	40%	50%	Construction	Committed	
State Revolving Funds (SRF)	1,131,600	20%	0%	Engineering	Committed	
Water Sustainability Fund (NRC)	2,211,000	40%	50%	Construction	Pending	
TOTAL REVENUE SOURCES	**5,553,600**	**100%**	100%			
NRC -Water sustainability #7 Project Timeline and costs						
Estimated time frame		10/1/2019-9/30/2020	10/1/2020-9/30/2021	10/1/2021-9/30/22		
Tasks	**Costs**	**Year 1$**	**Year 2$**	**Year 3$**	**Remaining**	**Total $ Amt.**
Permits	10,000	5,000		5,000		10,000
Engineering Const Admin	200,000	41,666.67	100,000	58,333		200,000
Engineering Construciton	565,800	117,875	282,900	165,025		565,800
Construction	4,422,000	921,250	2,211,000	1,289,750		4,422,000
Close-out - Eng/Progr Admi	64,800	13,500	32,400	18,900		64,800
TOTAL	**5,262,600**	**1,099,292**	**2,626,300**	**1,537,008**		**5,262,600**
Estimated						
Construction time - months		5	12	7		24
Construction percentage		21%	50%	29%		100%

3.B Only primary tangible benefits may be counted in providing the monetary benefit information and shall be displayed by year for the project life. In a multi-purpose project, estimate benefits for each purpose, by year, for the life of the project. Describe intangible or secondary benefits (if any) separately. In a case where there is no generally accepted method for calculation of primary tangible benefits describe how the project will increase water sustainability, in a way that justifies economic feasibility of the project such that the finding can be approved by the Director and the Commission (005.02). South Sioux City currently has four existing water towers. They are each 250,000 gallons, totaling 1 million gallons. In addition to the storage provided by the towers in South Sioux City, it has the option to purchase water from Sioux City in the amount of 2.7 MGD. This is currently a necessity to keep up

with peak day demands. On a peak demand day, if a fire were to occur or the Sioux City water supply were to be shut down for any reasons, the ConAgra tank and potentially two other tanks would be completely depleted of water. This would cause the industries in the Roth Park area to shut down their operations and residents through South Sioux City to experience low pressures. The investment in water storage tank project will impact the regional economy by allowing large companies to expand their operations and still allow for planned residential housing projects. The water storage project serves as a building block for critical water infrastructure in the area to help secure and attract American business expansion. The economic impacts of investments in the water storage project will be reflected by the business community capital expansion projects, jobs created, meeting the subsequent housing demand as further described in the following table:

3.C **Present all cost and benefit data in a table to indicate the annual cash flow for the life of the project** (005.03). Refer to Attachment 5: Cost Benefit Calculations that amortizes the schedule over 50-years and is summarized below.

Table 3. Economic Impact				
2.5 Water Storage Economic Development Profile				
Based on known Investments as of 6/2019				
			Taxable	
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Natural Gas	1	$ 5,000,000	0	0
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Tax Levy	**2.1081**		Business Tax	88,197,504
	0.021		**Total**	**92,817,504**

3.D **In the case of projects for which there is no generally accepted method for calculation of primary tangible benefits and if the project will increase water sustainability, demonstrate the economic feasibility of such proposal by such method as the Director and the Commission deem appropriate** (005.04). (For example, show costs of and describe the next best alternative.) Please refer to above for cost benefit analysis.

Prove Financial Feasibility

(Applicant must demonstrate compliance with Title 261, CH 2 - 006)

4. **Provide evidence that sufficient funds are available to complete the proposal.** The City has applied and received approval from the Nebraska Department of Environmental Quality Drinking Water Facilities Loan Fund Revenue Bonds (or State Revolving Funds Loan – SRF funds), (NDEQ Project No. D311584) dated 11/17/2014 for up to $3,128,000. The loan is currently being reworked to obtain a lower interest rate and extended period. Attachment 4: Document of Partners provides additional information regarding the City's Loan Agreement. The City applied and received approval from the U.S. Department of Commerce – Economic Development Administration (EDA) for $2,211,000 on April 22, 2019 as documented in Attachment 4 by the award letter and Investment number 05-01-05912.

5. **Provide evidence that sufficient annual revenue is available to repay the reimbursable costs and to cover OM&R (operate, maintain, and replace)**. Evidence is offered as Attachment 8, Statement of Net Position, FFY 2018.

6. **If a loan is involved, provide sufficient documentation to prove that the loan can be repaid during the repayment life of the proposal.** The City of South Sioux City is requesting grant funds from the Nebraska Natural Resources Commission via the Water Sustainability Fund. The City has already secured a NDEQ SRF loan. As indicated by Attachment 8, Statement of Net Position, FFY 2018 and related SRF loan guarantee assurance supports that this proposal can be adequately operated, maintained, and the loan can be repaid during the repayment life of the loan proposal.

7. **Describe how the plan of development minimizes impacts on the natural environment (i.e. timing vs nesting/migration, etc.).** The tower is on a limited footprint with a review of environmental resources located within the project area completed to form an understanding of environmental resources and potential impacts and mitigation measures necessary with construction of the water tower. No known impacts have been identified with the project evidenced by Attachment 1: South Sioux City Environmental Review.

8. **Explain how you are qualified, responsible and legally capable of carrying out the project for which you are seeking funds.**

As a political subdivision of the State of Nebraska, the City of South Sioux City has been granted the authority to develop water and related land resources under the general laws of the State of Nebraska. The City through its leadership, management and supporting policies and procedures has had experience in successfully completing like-size projects in the area. Through Olsson engineering expertise, City Governance, City Grant Administration and Public Works, combined have the talent, experience and skills necessary in carrying out the project.

9. **Explain how your project considers plans and programs of the state and resources development plans of the political subdivisions of the state.** As a result of industry expansion, location and related housing stock needs, the project directly relates to the state's economic development plan. Governor Pete Ricketts through its support for federal funds specific to this project stated "The State of Nebraska supports expansion of industries that provide quality employment, high wages, and employee health and retirement benefits. Many of these entities require additional utility services including streets, water, sewer, and fiber optics. In South Sioux City's case, additional water storage is needed in order for the community to continue to grow new business opportunities. The demands for water for industries is substantial and exceeds the current water storage demands of the City." The City considers the NDED plan, NE Blueprint, and is aware of the Voluntary IMP Plan for P-MRNRD.

10. Are land rights necessary to complete your project? YES☐ NO☒

If yes:

10.A **Provide a complete listing of all lands involved in the project.** The water tower will be constructed on 1.4 acres of land located near Roth Industrial Park impacting the larger geographic target population area of 76,824 sq. miles. The area is generally known as near the intersection of ibp Avenue and Roth Drive, Section 4, Township 28 North, Range 9 East, Dakota County. The land has the following legal description - Track 2: A track of land located in the east half of the northwest quarter (E1/2 NW1/4) of section 4, township 28 north, range 9 east of the 6th P.M., Dakota County Nebraska, being more particularly described as follows: Commencing at the northeast corner of said northwest quarter (NW1/4): Thence on the north line of said northwest quarter (NW1/4), N88011'34"W (assumed bearing), 486.47 feet to the point of beginning; thence S02'11"W,190.87 feet; thence S88'12'10"E, 423.76 feet to the west right of way line of Dakota Avenue; thence on said west right of way line, S02'07'56"W, 109.63 feet; thence, SS88'06'36", 277.71 feet; thence on a 540.00 foot radius curve to the right, an arc length of 460.64 feet (long chord bears N67'27'08"W, 446.80 feet); thence N43'16'35W, 226.75 feet to the north line of said northwest quarter; thence on said north line,

S88’11’34”E, 433.69 feet to the point of beginning, containing 3.04 acres more or less.

10.B **Attach proof of ownership for each easements, rights-of-way and fee title currently held.** Refer to Attachment 6, Warranty Deed, proof of ownership. The project will require a temporary easement (>100”) southwest of property for construction.

10.C **Provide assurance that you can hold or can acquire title to all lands not currently held.** Refer to Attachment 6, Warranty Deed, proof of ownership

11. **Identify how you possess all necessary authority to undertake or participate in the project.** The City of South Sioux City has contracted with Olsson, an Engineering company, to assist with understanding, navigating and compiling the necessary data, surveys, assessments and feasibility studies to address the proposed water tower project. During this time, the necessary consultation, inspections, investigations and other related activities have occurred, clearances obtained as noted by the Attachment 1: Environmental Review; Attachment: 2 South Sioux City Water Storage Olsson Project 017-0781; Attachment 3: City Public Meeting Documentation; Attachment 4: Documentation of Partners. Through these collaborative partnerships along with the municipalities designation by the state, the City has the authority and capacity to carry out the proposed project.

12. **Identify the probable consequences (environmental and ecological) that may result if the project is or is not completed.** The project is critical to both the industrial and residential growth of the city. Through multiple feasibility studies conducted and subsequent results attached to this request, there has not been any concerns or consequences noted for the project. These reviews have included but not limited to: Nebraska State Historical Preservation Office (NeSHPO), U.S. Fish and Wildlife Services (USFWS), Nebraska Game and Parks Commission (NGPC), U.S. Environmental Protection Agency, Region VII (USEPA), Nebraska Department of Environmental Quality (NDEQ), Nebraska Department of Natural Resources (NDNR), U.S. Army Corps of Engineers (USACE) – Omaha District, and six Federally recognized Tribes of Nebraska (Iowa Tribe of Kansas and Nebraska, Omaha Tribe of Nebraska, Ponca Tribe of Nebraska, Sac and Fox Nation of Missouri (Kansas and Nebraska), Santee Sioux Nation, Winnebago Tribe of Nebraska.)

Section C.

NRC SCORING

In the NRC's scoring process, points will be given to each project in ranking the projects, with the total number of points determining the final project ranking list.

The following 15 criteria constitute the items for which points will be assigned. Point assignments will be 0, 2, 4, or 6 for items 1 through 8; and 0, 1, 2, or 3 for items 9 through 15. Two additional points will be awarded to projects which address issues determined by the NRC to be the result of a federal mandate.

Notes:

- The responses to one criterion *will not* be considered in the scoring of other criteria. Repeat references as needed to support documentation in each criterion as appropriate. The 15 categories are specified by statute and will be used to create scoring matrixes which will ultimately determine which projects receive funding.

- There is a total of 69 possible points, plus two bonus points. The potential number of points awarded for each criteria are noted above. Once points are assigned, they will be added to determine a final score. The scores will determine ranking.

- The Commission recommends providing the requested information and the requests are not intended to limit the information an applicant may provide. An applicant should include additional information that is believed will assist the Commission in understanding a proposal so that it can be awarded the points to which it is entitled.

Complete any of the following (15) criteria which apply to your project. Your response will be reviewed and scored by the NRC. Place an N/A (not applicable) in any that do not apply, an N/A will automatically be placed in any response fields left blank.

1. **Remediates or mitigates threats to drinking water;**

   - Describe the specific threats to drinking water the project will address.

   South Sioux City is experiencing a significant supply shortage to its water storage capacity. Due to tremendous industrial expansion at the Roth Park ($250 million plus) and other city sites coupled with new housing demand (1000+ units expected in the next 10 years), this growth has put pressure on the city's water supply. The storage needs for a municipality of this size is 3 million plus fire needs (1 million gallons of water) as indicated by the Public Protection Classification Summary Report prepared for the City of South Sioux City by Insurance Services Office, Inc.

– Refer to Attachment 2 Engineering and Technical Data Feasibility Report. Unfortunately, the City of South Sioux City is 3 million gallons short of its storage capacity needs. The current circumstances threaten the City's ability for water surges in event of fires, startup efforts and future expansions – both in housing subdivisions and expansion / recruiting business to the area.

In order to meet current and future demand in the area, a feasibility study was conducted to anticipate the water needs of South Sioux City for the next 10 years. Based on the aforementioned user demand with engineering models, it was determined that a 2.5 MG water storage tank is needed.

- Identify whose drinking water, how many people are affected, how will project remediate or mitigate.

The City of South Sioux City has a population of 13,365 (2010 US Census) and interconnects with Dakota County Rural water supply by opening up a value when needed (i.e. increase water needs). On any workday, this population increases by an estimated 2,000 individuals as the large industries operate.

The proposed water storage tank will directly serve to store drinking water and industrial use for the area.

- Provide a history of issues and tried solutions.

The City built a loop around the city to correct water supply issues. This allows the water supply to be interconnected throughout the city. One issue present was the American Best Hotel to the south would receive hot water when the business to the south demanded water surges for operations. This caused the cold water to flow to area businesses and for hot water to remain. The loop helped solve this problem.

To further increase flow, the City is upsizing their piping from 4" to 8" piping as new construction occurs and/or as repairs are made.

Currently, the issue exists due to rapid industrial expansion and housing growth and the need to support these efforts along with providing adequate fire flow as needed. The solution to the current problem is to build an additional water tower in the location nearest the expansion to support these rising industry and housing needs.

- Provide detail regarding long-range impacts if issues are not resolved.

Long range the short supply of water storage capacity will create challenges to recruitment and expansion efforts of area business. It will also threaten the ability for subdivision growth as storage capacity directly relates to the combination of

economic growth, residential growth and firefighting capabilities. Currently, on the table are three long-range impacts if water storage issues are not resolved.

Economic Benefit: There is significant return on investment for this project in relation to housing growth and economic growth evidenced by the following chart delineating a 50-year life of the project. The largest benefit to the area and state is the ability to increase the industrial growth footprint estimated to be $250,7731,000 in capital expansion, 341 jobs created, 1376 residential housing units completed in the next 5-10 years. This growth in the community will increase the local and state tax base, further creating additional opportunities for shovel-ready industry expansion with a reliable water source. Several key benefits with additional details are found in Attachment 6: Cost/Benefit Analysis. Capital expansion in South Sioux is currently on track for $250,731,000 with an estimated 341 jobs created for 2019 and the next 10 years. Taxable income on these capital investments over a 50-year basis is estimated to be $75,570,000.

Planned *housing units* are estimated to be 1376 multi-use with an additional capital cost of $227,200,000, an estimated property tax income of $36,771,200 over the course of 50 years. The water tower capital cost is estimated to be $5,553,600 with an annual operating cost of $37,000 or 1.7 million over 50 years, reflecting a significant return on investment.

Public Safety: South Sioux City currently has four existing water towers. They are each 250,000 gallons totaling 1 million gallons. In addition to the storage provided by the towers, SSC has the option to purchase water from Sioux City in the amount of 2.7 MGD. This is currently a necessity to keep up with peak day demands. On a peak day SSC demands 4.7 MGD, this depletes the existing Con Agra tank to 55% of its storage. On a peak demand day, if a fire were to occur or the Sioux City water supply were to be shut down for any reason the Con Agra tank and potentially two other tanks would be completely depleted of water. This would cause the industries in the Roth Park area to shut down their operations and residents throughout SSC to experience low pressures. One key attraction for both housing starts and business recruitment is adequate infrastructure to support the demand.

Local economic efforts, housing expansion and public safety are all impacted if not resolved presently.

- Identify the specific plan that is being referenced including date, who issued it and whether it is an IMP or GW management plan.

The P-MRNRD Voluntary IMP, dated August 2014, was adopted by P-MRNRD Board of Directors on July 10, 2014 and associated groundwater control rules and regulations were enacted on November 13, 2014. On August 1, 2014, the NDNR issued an order adopting the P-MRNRD IMP and associated surface water controls. July 2016 it was updated by Papio-Missouri River Natural Resources

District. As described in Section 2.1 of the Voluntary Integrated Management Plan dated August 2017 by the Papio-Missouri River Natural Resources District, the Platte River Valley and Elkhorn River Valley are the only aquifers that are hydrologically connected to surface streams in the IMP Area. The Upland area alluvial aquifer and Dakota aquifer are included in the P-MRNRD Groundwater Management Plan but are not hydrologically connected and are; therefore, not included in this IMP.

The Papio-Missouri River Natural Resources District, the entire District, is designated as a Level I Groundwater Quantity Management Area and Phase I Groundwater Quality Management Area which includes Dakota County and the South Sioux City area.

- Provide the history of work completed to achieve the goals of this plan.

The citizens of the Papio-Missouri River Natural Resources District (P-MRNRD) depend on abundant, clean water in their homes for domestic use, on their farms for agricultural production, and for their industries to maintain economic viability. Wildlife that live and migrate through the P-MRNRD depend on clean water for sustenance and habitat. Furthermore, human inhabitants of the District use water in rivers and lakes for recreation including fishing, hunting, boating, and swimming. Without available water, our ancestors would not likely have settled here on the prosperous lands adjacent to the Platte, Elkhorn and Missouri Rivers. Both rural and urban inhabitants along the Lower Platte River from the Elkhorn to the Missouri River have relied on the abundant water resources of the area and over time their water use has increased. Following the drought of 2012, it was clear to leaders at the P-MRNRD and citizen stakeholders within this area that a water use plan needed to be developed to provide a framework for how to wisely manage water resources so that they are available now and in the future. For these reasons, water management planning was voluntarily initiated by the P-MRNRD in collaboration with the Nebraska Department of Natural Resource (NDNR). The plan, called an Integrated Management Plan (IMP), is a water planning document that provides a framework for how the P-MRNRD and the NDNR will work collaboratively to manage groundwater and surface water use across an area where the two are hydrologically connected. The IMP was initiated voluntarily by the P-MRNRD in part to avoid future determinations by NDNR that the area is fully appropriated. Not only did the P-MRNRD volunteer to initiate a IMP, numerous local stakeholders volunteered to represent the wide array of water interests and provide invaluable input during the planning process.

- On December 16, 2008, NDNR made a preliminary determination that the Lower Platte River Basin was fully appropriated. A basin is considered fully appropriated when certain conditions for hydrologically connected surface water and groundwater are met under Neb. Rev. Stat. §46-713(3). The statute states that a basin is fully appropriated when current uses of hydrologically connected surface water and groundwater cause or will, in the reasonably foreseeable future, cause:

- the surface water supply to be insufficient to sustain over the long term the beneficial or useful purposes for which existing natural-flow or storage appropriations were granted and the beneficial or useful purposes for which, at the time of approval, any existing instream appropriation was granted;
- the streamflow to be insufficient to sustain over the long term the beneficial uses from wells constructed in aquifers dependent on recharge from the river or stream involved;
- reduction in the flow of a river or stream sufficient to cause noncompliance by Nebraska with an interstate compact or decree, other formal state contract or agreement, or applicable state or federal laws.

The preliminarily determined area included portions of the P-MRNRD, Lower Platte South, Lower Platte North, Lower Elkhorn NRDs and nearly the entire Upper Loup, Lower Loup and Upper Elkhorn NRDs. Prior to making a final determination, NDNR held a public hearing in early 2009.

- Through this hearing, new information was made available that resulted in NDNR reversing the preliminary determination. Although the fully appropriated status determination had been reversed, in May 2012, the Board of Directors of the P-MRNRD adopted a motion to inform NDNR that P-MRNRD intended to develop a voluntary IMP for a portion of the district and requested NDNR's participation. NDNR approved P-MRNRD's request the same month. This IMP was developed jointly by the P-MRNRD and NDNR with the express purpose to manage the hydrologically connected portions of the P-MRNRD to achieve and sustain a balance between water uses and water supplies for the long term. The IMP provides the regulatory background as well as the detailed goals, objectives, and action items that were developed with stakeholder involvement. This IMP was developed with the understanding that the Lower Platte River Basin is not fully appropriated; should that designation change, the IMP would have to be reevaluated. The P-MRNRD Voluntary IMP, dated August 2014, was adopted by P-MRNRD Board of Directors on July 10, 2014 and associated groundwater control rules and regulations were enacted on November 13, 2014. On August 1, 2014, the NDNR issued an order adopting the P-MRNRD IMP and associated surface water controls. As this IMP is being entered into on a voluntary basis, the IMP area is not currently fully appropriated. The methodology utilized by NDNR to assess the available supplies and uses in the Annual Report will be used to track depletions and gains to streamflow from changes in availability and use. Current supplies are greater than the current level of use and therefore methods to identify water supplies to be used as offsets or for mitigation purposes or an identification de Minimis effects are not included in this IMP. Additionally, the IMP area is not subject to any interstate compact or decree, or any other formal contract or agreement pertaining to surface water or groundwater use or supplies.

While this addresses the IMP or GW Management Plan of P-MRNRD, the proposed project is for water storage capacity, enhances water sustainability efforts within the City of South Sioux City.

- List which goals and objectives of the management plan the project provides benefits for and how the project provides those benefits.

The priority action items for the following two years were discussed at the Annual P-MRNRD and NDNR review meeting on May 25, 2017. The following items are listed as priority actions for calendar years 2017 and 2018:

- The P-MRNRD will continue to work to adopt a revised GWMP and associated rules and regulations; NeDNR will continue to provide feedback on the content, consulting with additional agencies as necessary.
- Both parties will review data from the Platte and Elkhorn River Valley Integrated Water Monitoring study with USGS, as available.
- Both parties will participate at the World O' Water public outreach event to be held on September 10, 2017
- Both parties will coordinate on a potential municipal & industrial water use clearinghouse project
- NDNR will further develop INSIGHT, and will incorporate NRD data whenever possible.
- Both parties will continue to participate in basin-wide and regional planning efforts such as ENWRA, the Lower Platte River Consortium (drought planning), and Lower Platte River Basin Coalition (LPRBC).
- NDNR will coordinate with the LPRBC to further develop the stream depletion/accretion calculator and interface.

Specific to the proposed project, South Sioux City is aware of the P-MRNRD plans and have complemented these efforts by adopting a Storm Water Management Plan to conserve these natural area resources as required by the NDEQ/EPA and the National Pollutant Discharge Elimination System (NPDES). The plan supports the City of South Sioux City, Dakota City, and Dakota County. This plan sets limits to the maximum extent possible the discharge of pollutants into the Missouri River. The plan is a proactive approach to water management with local buy-in and a multi-directional education process. The plan addresses key elements: trash disposal, hazardous household waste, yard waste, pet waste, fertilizer and pesticide use, vehicle maintenance, and rain water collection. Public meetings are held, website education, brochures, and city newsletter all helps to disseminate education to the public. A number is also available for individuals to report illegal dumping.

2. **Contributes to water sustainability goals by increasing aquifer recharge, reducing aquifer depletion, or increasing streamflow;**
   List the following information that is applicable:

   - The location, area and amount of recharge;

The project will be situated on 1.4-acres of land located near Roth Industrial Park impacting the larger geographic target population area of 76,824 sq. miles. The area is generally known near the intersection of ibp Avenue and Roth Drive, Section 4, Township 28 North, Range 9 East, Dakota County.

The area adjacent to the proposed site is surrounded by agricultural fields, a BNSF railway, and industrial sites within the Roth Industrial Park. The storage tank will be tied to and near the planning housing development in the southern area of the city. The elevated water storage tank will be constructed on land that already houses city water infrastructure components.

The proposed project will impact the water supply and distribution in a positive manner. The water supply and distribution will see increased water conductivity. This will allow the City to better respond to the increasing water supply demands and be better prepared for peak times, fire suppression needs.

The goal of the project is to provide a consistent water flow for current industries and residents while preparing for expanded industry and residential growth. The location of the new water tower was chosen based on several factors. The location is in an area of the City where major industries are located, industry expansion is occurring and where current and future housing growth will pull from this water tower. Multiple sites were reviewed as a possible location for the construction of the tower. Another reason for site selections was conductivity to the existing system. At the location chosen, there is an existing 16” line running through the property. This line is a direct conduit to the Sioux City Interconnect and then continues to the businesses of Roth Industrial Park. This means the water tower can be filled more rapidly than other locations while providing most of the water necessary for the industries. This provides a buffer between the smaller water towers throughout the city and helps maintain a constant pressure for residents even when demands of the industrial park are high. Another reason this site was chosen was because the land is already owned by the City so no land acquisitions will be necessary. Site improvements include the existing water main will need to be relocated, existing storm sewer will need to be relocated, and an existing road will need to be regraded. A nearby high pressure gas line that is catholically protected will require that cathodic protection be added to the relocated water lines installed on site.

- The location, area and amount that aquifer depletion will be reduced;

Presently, the aquifer depletion has not been an issue as water is drawn from groundwater sources utilizing the deep Dakota sandstone aquifer and the shallower Missouri River alluvium formations. Water supply is made up entirely of well water. All these wells take water from both the Missouri Alluvium, which is an aquifer that is recharged by the Missouri River, and water from the Dakota sandstone aquifer. An aquifer is defined as a layer of sand and gravel under

the ground with which water fills the spaces between the sand and gravel particles. Because of the use of the Missouri Alluvium, this water supply obtains its water from the sand and gravel of the Alluvial-Dakota aquifer.

South Sioux City also has a connection to the Sioux City, IA water system. South Sioux City has an agreement to purchase water in times of need via a 16-inch main that extends under the Missouri River to the north side of the city. This 25-year agreement was signed in 2002. The current agreement allows for 2.7 MGD to be provided to the city. At this time, South Sioux City utilizes this connection during times of peak demands or when the existing WTP's cannot keep the water towers full. The City is dependent upon the rates set by Sioux City.

The Riverview Water Treatment Plant (WTP) constructed around 1983 is the primary source of water for the City of South Sioux City as drawn from its six wells. It is designed for a maximum day production capacity of 3.2 million gallons per day (MGD). The plant treats ground water through aeration, chemical addition, pumping and pressure filtration. The rated capacity of the plant is determined by the capacity of the two aerators at 1,120 gallons per minute (gpm) each or 3.2 MGD.

The city has a second water treatment plant that is occasionally used during peak water demand periods in the summer. The B street WTP is much older and smaller. It is designed for maximum production of about 1.1 MGD and utilizes an aerator, chemical addition/detention, and four gravity filters. Currently, the B Street plant produces about 0.75 MGD due to supply limitations and the age of the water plan.

There are 85 miles of water main throughout the city. The City maintains 450 fire hydrants throughout the city.

- The reach, amount and timing of increased streamflow. Describe how the project will meet these objectives and what the source of the water is;

  The project will not affect the reach, amount and timing of increased streamflow. The project addresses the ability of the City to store water sufficiently to meet the ongoing demands of its residents and industries.

- Provide a detailed listing of cross basin benefits, if any.

  None noted.

3. **Contributes to multiple water supply goals, including, but not limited to, flood control, agricultural use, municipal and industrial uses, recreational benefits, wildlife habitat, conservation of water resources, and preservation of water resources;**

- **List the goals the project provides benefits.**

The project does not directly impact flood control or agricultural use.

The project directly and primarily relates to municipal and industrial uses given the increase demands and growth of both industry and housing. The project primary benefits residential and industrial uses. Residential uses include recreational residential use and the community swimming pool.

Wildlife habitat – While the project does not directly impact wildlife habitat, the City uses raingardens, natural storm water chains, recharge areas to improve water quality for the city's water system. The natural storm water chains with meandering channels, sporadic pools, and wetland vegetation not only convey storm water and filter out solids but refreshes groundwater while providing aesthetic value.

Conservation and preservation of water resources – the City conveys to its employees as well as residents through a variety of ways conservation measures.

- Describe how the project will provide these benefits

About 96 percent of all unfrozen fresh water is found below the Earth's surface and is known as groundwater. Groundwater systems globally provide 25 to 40 percent of the world's drinking water. Groundwater represents an enormous resource that can only be managed through an understanding of the different types of aquifers and their rates of renewal. Aquifers that are located close to the surface are often intimately connected with surface water systems. They may be replenished directly by infiltration of precipitation and sometimes surface runoff, and may discharge to waterbodies such as streams and lakes. When such aquifers are drawn down by pumping, they can cause a decrease in river flow, resulting in shortages of drinking water, water for agriculture, or water for the aquatic ecosystem. Deeper aquifers may also be replenished indirectly by water slowly leaking downward from shallower aquifers. Not all groundwater is renewable. In some cases, people are using groundwater faster than it can be replenished in many regions of the world. This is not the case in the specified region, rather an abundance of water has been the norm of late.

As groundwater is slow moving, a well develops a cone of depression around it. The further the away from the well the ground water is effected less. Well water usage can impact streams, rivers, and wetlands. Thus, the need to conserve water usage especially in dry weather conditions is important for the local and aquifer environments.

Presently, the aquifer depletion has not been an issue as water is drawn from groundwater sources utilizing the deep Dakota sandstone aquifer and the shallower Missouri River alluvium formations. Water supply is made up entirely of

well water. All these wells take water from both the Missouri Alluvium, which is an aquifer that is recharged by the Missouri River, and water from the Dakota sandstone aquifer. An aquifer is defined as a layer of sand and gravel under the ground with which water fills the spaces between the sand and gravel particles. Because of the use of the Missouri Alluvium, this water supply obtains its water from the sand and gravel of the Alluvial-Dakota aquifer.

Mitigation opportunities
The City has a number of ongoing mitigation projects throughout its' footprint to conserve measures and reduce impacts to the aquifer environments.

Rain gardens - Every time it rains, water runs off impermeable surfaces, such as roofs or driveways, collecting pollutants such as particles of dirt, fertilizer, chemicals, oil, garbage, and bacteria along the way. The pollutant-laden water enters storm drains untreated and flows directly to nearby streams and ponds. The US EPA estimates that pollutants carried by rainwater runoff account for 70% of all water pollution.

Rain gardens collect rainwater runoff, allowing the water to be filtered by vegetation and percolate into the soil recharging groundwater aquifers. These processes filter out pollutants. A rain garden is a garden of native shrubs, perennials, and flowers planted in a small depression, which is generally formed on a natural slope. It is designed to temporarily hold and soak in rain water runoff that flows from roofs, driveways, patios or lawns. Rain gardens are effective in removing up to 90% of nutrients and chemicals and up to 80% of sediments from the rainwater runoff. Compared to a conventional lawn, rain gardens allow for 30% more water to soak into the ground. A rain garden is not a water garden. Nor is it a pond or a wetland. Conversely, a rain garden is dry most of the time. It typically holds water only during and following a rainfall event. Because rain gardens will drain within 12-48 hours, they prevent the breeding of mosquitoes. South Sioux City currently has six rain garden areas with more planned. They are located at:

- Klasey
- G Street
- City building at 17th and Dakota
- Scenic Park
- Tree Orchard
- Near Bennet lift station.

Recharge areas where surface water predominantly flows downward through the unsaturated zone to replenish an aquifer, allows water to soak back into the ground rather than leave the water to simply run off. Also this water has time to go back into the soil and eventually reach aquifers many feet below ground, recharging the water that has been removed from these aquifers. South Sioux City currently has three recharge areas with additional ones being planned. They include: College Center, West 17th Street, and West 29th Flatwater.

Water Conservation Plan - The goal of the City of South Sioux City is to reduce by 10% current water usage for existing areas of the community by 2025 while allowing for growth with new housing and new industrial users. New water saving appliances; industrial water recycling, smart water sprinkling systems; smart shower systems, reduced flow toilets, landscape plans; reduced mainline water leakage; and advanced clothes washing systems will all assist in this effort. From a residential usage standpoint, the City educates annually via newsletter and other media venues - water conservation efforts.

- Provide a long range forecast of the expected benefits this project could have versus continuing on current path.

A 2.5MG water storage tank to be built near the existing tower on the south side of the South Sioux City will have the best connectivity to the existing water infrastructure and be located on land that is presently owned and accessible by the City. The new water storage tank will be tied into the systems' existing water infrastructure. At this location there is an existing 16" line running through the property. This line is a direct conduit to the Sioux City Interconnect and then continues onto the businesses of Roth Industrial Park. This means the water tower can be filled more rapidly than other locations while providing most of the water necessary for the industries. This provides a buffer between the smaller water towers throughout the city and helps maintain a constant pressure for residents even when demands of the industrial park are high. Another reason this site was chosen was because the land is already owned by the City so no land acquisitions will be necessary.

Based on current and projected water usage for the next 10 years, engineering models indicate that the new water tower is vital to the Roth Industrial Park as existing industries expand and new businesses locate in this area. Planned efforts include an anticipated $220 million in potential growth capital. This expansion is on the heels of $49 million expansion already completed in 2019 for Great West Casualty and Riverview Surgical Center in the city. This expansion results in job creation of approximately 186 jobs and the subsequent need for additional housing. The south side of the City is seeing expanded housing growth anticipated to range from 1040 to 1400 mixed-use units in the next 10 years.

With this growth, the water needs of the city are rapidly increasing. The storage needs for a municipality of this size is 3 million, plus 1 million gallons for fire needs. Unfortunately, the City of South Sioux City is 3 million gallons short already. This water storage improvement to the area will give the area adequate storage for fire protection, with the anticipated increase water needs, five –ten gallons a month, the City will be sufficient for supply and demand.

4. **Maximizes the beneficial use of Nebraska's water resources for the benefit of the state's residents;**

   - Describe how the project will maximize the increased beneficial use of Nebraska's water resources.

   Water storage tank in this area will maximize the beneficial use of Nebraska's water resources by serving a growing number of residential users (1000+ housing units) while also serving the industrial needs of the growing businesses in Roth Industrial Park.

   Blueprint Nebraska outlines infrastructure as a key toward economic growth.

   The Nebraska Department of Environmental Quality (NDEQ) regulates groundwater quality and quantity. NDEDQ helps assist local municipalities with protecting their drinking water supply with the development of the Nebraska Wellhead Protection Act (WPA) Program. Wellhead Protection Areas were delineated with community safety in mind with the ultimate goal of protecting land and groundwater surrounding public drinking water supply wells from contamination. The City of South Sioux city has a designated wellhead protection area with restrictive land use regulations to prevent potential contaminants in sensitive areas. NDEQ has mapped the area so that the City can apply zoning regulations to the district.

   - Describe the beneficial uses that will be reduced, if any. – None noted

   - Describe how the project provides a beneficial impact to the state's residents. Creating a viable water storage system to serve the residents and industries within South Sioux City area is critical to its ongoing health as a community. The storage system is critical to existing and expanded industrial and residential growth of the city.

5. **Is cost-effective**;

   - List the estimated construction costs, O/M costs, land and water acquisition costs, alternative options, value of benefits gained.

   There is a significant return on investment for this project in relation to population growth, economic growth and public safety (fire suppression) as indicated in the following summary chart. This chart is further delineated per 50-year life as indicated by Attachment 5: Cost / Benefit Analysis, Table3. Economic Impact.

Table 3. Economic Impact				
2.5 Water Storage Economic Development Profile				
Based on known Investments as of 6/2019				
			Taxable	
Private Sector	**Est. Jobs**	**Est. Investment**	**Investment**	**50-year Estimate**
Beef Products Inc.	100	$ 30,000,000	.33*Investment	9,900,000
Green Star (pellet, energ	45	$ 115,000,000	.33*Investment	37,950,000
Ingredion	40	$ 84,000,000	.33*Investment	27,720,000
Natural Gas	1	$ 5,000,000	0	0
Surgery Center	110	$ 13,500,000	.80* investment	10,800,000
Joe Morton	30	$ 1,331,000	.80* investment	1,064,800
Boyle Truckiing	10	$ 1,000,000	.33*Investment	800,000
Health Center Expansior	5	$ 900,000	Tax Exempt	0
Subtotal	**341**	**$ 250,731,000**		**$ 75,570,000**
	Housing Units	**Est Avg Cost /Unit**	**Est. Tax income**	**Planned timeframe**
HoChunk	1000	$ 220,000	$ 4,620,000	25 units/year for 4
Project X	336	$ 95,238	$ 32,000,000	All units within 2 -
Hovey subdivison	40	$ 180,000	$ 151,200	40 units over 5 yea
Total Housing Units	**1376**	**$ 227,200,000**	**$ 36,771,200**	
TOTALS		**$ 477,931,000**	**$ 112,341,200**	
		Avg Unit Cost	**ROI 50-year**	**Total**
Water Tower Operating costs		37,000	50 years	1,762,500
Water costs				

2018 Tax Rate			**50-Year Return on Investment**	
Ag-Society - Fair	0.007485		EDA Investment	2,211,000
County	0.384546		NRC Investment	2,211,000
Ed Service Unit 1	0.015		SRF Loan	1,131,600
Historical Society	0.001855		**Total**	**5,553,600**
NE Community College	0.095			
Pap-Miss Trib NRD	0.037594		Business Capital	$ 250,731,000
South Sioux City	0.385		House Capital	$ 227,200,000
SSC 11 Bond	0.115823		**Total**	**$ 477,931,000**
SSC220011	1.065839		Resident Tax	4,620,000
Tax Levy	**2.1081**		Business Tax	88,197,504
	0.021		**Total**	**92,817,504**

- Compare these costs to other methods of achieving the same benefits. Economic, housing and public safety are the comparable benefit factors as itemized in the preceding table.

- List the costs of the project. The following estimated costs of the project include:

Item Description Price		**Cost**
Composite Elevated Tank	$	3,700,000
Deep Foundation	$	100,000
Tank Coatings and Logo	$	50,000
Tank Mixing System	$	75,000
Electrical Service	$	25,000
Antenna Provisions	$	20,000
Site Improvements	$	50,000
10% Contingency	$	402,000
Subtotal Capital Costs	**$**	**4,422,000**
Engineering and Administrative	$	1,131,600
TOTA Project Costs	**$**	**5,553,600**

- Describe how it is a cost effective project or alternative.

There are no alternatives for the need for additional water storage capacity given the industrial and residential growth South Sioux City is experiencing, evidenced by Attachment 5, Table 3 Economic Impact. Foreseeing this need, the City and Olsson Engineers began working on the project in early 2017, addressing the feasibility and design of the water storage tank. Several alternative locations were examined, several alternative types of units were vetted, and costs analyzed. This information resulting in the final proposed project. Based on water modeling and analysis of the existing system, Olsson recommended and the City accepted Alternative (A) of three options offered. At the proposed site, the water storage tank will have the ability to connect to existing 16” and 12” municipal water supply lines. During times of peak performance and fire suppression needs, this alternative offers the best water conductivity. The B Street, City Hall, and Riverview Storage tanks will be able to maintain the highest capacity rates with the least amounts of fluctuations. Based on Olsson Associates detailed an Alternative B, installing the same 2.5 million gallon elevated water storage tank at a location to the East and leaving the ConAgra water storage tank in place. The 2.5MG water storage tank would have the ability to connect to the municipal water supply via two 12” lines. Water conductivity would be less with Alternative B. During times of peak demand and fire suppression needs, water flows would be difficult to maintain because of decreased conductivity. The B Street, City Hall, and Riverview water storage tanks will be depleted the most under Alternative B. Alternative B is estimated to cost $4,422,000. Long term maintenance costs for the ConAgra tank

would be in addition to the construction costs. Those costs were not included in the study. Due to the age of the ConAgra tank, long term maintenance is imminent. A third alternative “C” was examined in the study by Olsson. This alternative entailed installing a 1.5 million gallon elevated water tank and20,000LF of 16” water main. The 1.5 million tank would be constructed at the same location as the Current ConAgra tank. The ConAgra tank would be removed. By installing 20,000 LF of 16” water main, the smaller tank sixe could maintain the similar water conductivity rates as Alternative A. Alternative C will cause rapid capacity fluctuations in case of peak and fire suppression in the B Street, City Hall, and Riverview water storage tanks. Alternative C would result in the most environmental disturbances, permits, and easements. The cost to construct Alternative C is $3,422,000. During time of peak demands and fire suppression, Alternative A causes the least amount of environmental disturbances, has the least number of easements/permits, and offers lower maintenance costs in the long run. Each alternative also includes the replacement of water lines at the current ConAgra elevated water storage tank site. More information on the alternative for the proposed project can be found in the attached PER.

6. **Helps the state meet its obligations under interstate compacts, decrees, or other state contracts or agreements or federal law;**

   - Identify the interstate compact, decree, state contract or agreement or federal law.
     The City of South Sioux City has an interlocal agreement with the City of Sioux City, Iowa for the option to purchase water from Sioux City in the amount of 2.7 MGD. The 25-year agreement was signed in 2002.

   - Describe how the project will help the state meet its obligations under compacts, decrees, state contracts or agreements or federal law.

     The water storage option is a cheaper long-term alternative with owning and maintaining its own water supply rather than relying on cross-state pacts for rates that may change frequently. While the interstate agreement for South Sioux City and Sioux City Iowa will remain in effect, this solution will reduce our reliance on them while increasing our storage capacity, an essential component for retaining, attracting, and expanding new housing and industrial growth options.

   - Describe current deficiencies and document how the project will reduce deficiencies.

     None noted

7. **Reduces threats to property damage or protects critical infrastructure that consists of the physical assets, systems, and networks vital to the state or**

the Untied States such that their incapacitation would have a debilitating effect on public security or public health and safety;

- Identify the property that the project is intended to reduce threats to.

  The threat to property damage and protecting critical infrastructure is the availability of adequate water supply. This water storage will support new housing sites – Hovey subdivision, Flatwater Crossing subdivision, Project X subdivision, and industries locating or wishing to expand at Roth Industrial Park. The threat includes adequate water supply including drinking water, residential and industrial water usage and fire suppression, if needed. Due to the interconnectivity of the water system that surrounds the city, current depletion impacts the current supply, significantly reducing its capacity.

  The property will be the newly constructed 2.5MG water storage tank located on the south side of the city near Roth Industrial Park and serve the park as well as the residential housing construction (1000-1200 units) planned in the upcoming years.

- Describe and quantify reductions in threats to critical infrastructure provided by the project and how the infrastructure is vital to Nebraska or the United States.

  The propose water tower is an important infrastructure component toward addressing the region's growing housing and industry, both impacting the state's economic growth and local stability. Healthy, secure communities require clean drinking water and sanitary waste treatment infrastructures. The City has in place and continues to review security efforts related to these critical infrastructures.

- Identify the potential value of cost savings resulting from completion of the project.

  The potential cost savings will increase availability of water to serve a greater number of residents and expanded industries; thus, spreading the costs across a greater number of businesses and residents.

- Describe the benefits for public security, public health and safety.

  The project clearly provides increase benefits for public health and safety as it relates to increase water flow, availability at peak times and adequate fire suppression activities.

8. **Improves water quality;**

- Describe what quality issue(s) is/are to be improved.

Quality issues to be improved includes increase water pressure, expanded storage capacity. The current water quality is good as indicted by the recent release of its annual report for 2018.

- Describe and quantify how the project improves water quality, what is the target area, what is the population or acreage receiving benefits, what is the usage of the water: residential, industrial, agriculture or recreational.

Improves water quality: The proposed project will improve the water quality of the area by increasing capacity for residential and industrial and increasing fire suppression capabilities. South Sioux City currently has four existing water towers. They are each 250,000 gallons, totaling 1 million gallons. In addition to the storage provided by the towers in South Sioux City, it has the option to purchase water from Sioux City in the amount of 2.7 MGD. This is currently a necessity to keep up with peak day demands. The City of South Sioux City is 3 million gallons short of required storage capacity. This water storage improvement to the area will give the area adequate storage for fire protection, with the anticipated increase of water needs. By constructing a new 2.5 MG water tower, modeling shows the new tower will remain 20% full during a designated worst case scenario (fire, industrial usage, residential usage). During this scenario a design peak day of 6.5 MGD and a fire flow of 4500 gpm was used and positive pressure in the system was maintained.

Target area: South Sioux City

Population is approximately 13,500 (2010 Census)

Primary usage of the water is residential (current and planned housing development), industrial (Roth Industrial Park).

- Describe other possible solutions to remedy this issue.

There are no other solutions to provide adequate water supply necessary to meet the growing residential and industrial demands of the city.

- Describe the history of the water quality issue including previous attempts to remedy the problem and the results obtained.

The Riverview Water Treatment Plant (WTP), constructed around 1983 is the primary source of water for the City of South Sioux City. It is designed for a maximum day production capacity of 3.2 million gallons per day (MGD). The plant treats ground water through aeration, chemical addition, pumping and pressure filtration. The rated capacity of the plant is determined by the capacity of the two aerators at 1,120 gallons per minute (gpm) each or 3.2 MGD. The city has a second water treatment plant that is occasionally used during peak water demand

periods in the summer. The B street WTP is much older and smaller. It is designed for maximum production of about 1.1 MGD and utilizes an aerator, chemical addition/detention, and four gravity filters. Currently, the B Street plant produces about 0.75 MGD due to supply limitations and the age of the water plant. The city currently has six (6) wells in use serving the two treatment plants, though one well is in poor condition and currently not used. South Sioux City also has a connection to the Sioux City, IA water system. South Sioux City has an agreement to purchase water in times of need via a 16-inch main that extends under the Missouri River to the north side of the city. This 25-year agreement was signed in 2002. The current agreement allows for 2.7 MGD to be provided to the city. At this time, South Sioux City only utilizes this connection during times of peak demands or when the existing WTP's cannot keep the water towers full. The city currently has four (4) separate elevated water storage towers with a rated capacity each of 0.25 million gallons (MG). One tower is the primary tower for the Roth Industrial Park south of I-129 in South Sioux City. High users in the park average demands at nearly 1 MGD per day. (Source: Consolidated Plan 2017)

As the city grows, adding storage capacity and wells has been made. The city has limited capacity to treat water; hence, the need to store water as treated. Currently, the City meets the standards for treating water. If we cannot accommodate additional storage capacity, it will prohibit the City on industrial growth and housing capacities.

9. Has utilized all available funding resources of the local jurisdiction to support the program, project, or activity;

- Identify the local jurisdiction that supports the project. - City of South Sioux City
    - List current property tax levy, valuations, or other sources of revenue for the sponsoring entity.

As of 6/28/2019, the following property information available indicates:

- Current property tax levy rate - .38500 / $100 valuation
- Valuations - $683,460,586

Other sources of revenue for the sponsoring entity, based on 2018 audit is indicated in the following table.

CITY OF SOUTH SIOUX CITY, NEBRASKA
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
Governmental Funds
For the Year Ended September 30, 2018

	General	Capital Projects Street Projects
Revenue:		
Property Taxes	$ 1,914,682	$ -
Franchise Taxes	1,007,166	-
Local Option Sales Taxes	-	1,403,165
Occupation Taxes	31,920	-
Special Assessments	-	2,101
Licenses and Permits	2,059	-
Intergovernmental	3,091,036	436,470
Charges for Services	724,149	-
Fines and Forfeits	2,746	-
Lottery Revenue	75,842	-
Interest	18,158	2,342
Rental Income	221,066	-
Contributions	1,862	-
Miscellaneous	224,780	5,281
Total Revenue	7,315,466	1,849,359

- List other funding sources for the project.

Sources of Funds	Estimated Amount	Total Project	Construction Costs	Purpose	Status
US Commerce/EDA	2,211,000	40%	50%	Construction	Committed
State Revolving Funds (SRF)	1,131,600	20%	0%	Engineering	Committed
Water Sustainability Fund (NRC)	2,211,000	40%	50%	Construction	Pending
TOTAL REVENUE SOURCES	**5,553,600**	**100%**	100%		

US Commerce / EDA committed via award letter received 4/22/2019. NDEQ SRF: loan received. Refer to Attachment 4: Documentation of Partners

10. Has a local jurisdiction with plans in place that support sustainable water use;

- List the local jurisdiction and identify specific plans being referenced that are in place to support sustainable water use.

The City is a participant in the Papio- Missouri (P-MRNRD) Groundwater Management Plan. The City of South Sioux City has a Water Sustainability Plan (Updated January 2019) to support sustainable water use. Additionally, sustainable water use, wellhead protection and other water sustainability efforts are further described in the South Sioux City Comprehensive plan adopted in July 24, 2017.

- Provide the history of work completed to achieve the goals of these plans.

Groundwater represents an enormous resource that can only be managed through an understanding of the different types of aquifers and their rates of renewal. Aquifers that are located close to the surface are often intimately connected with surface water systems. They may be replenished directly by infiltration of precipitation and sometimes surface runoff, and may discharge to waterbodies such as streams and lakes. When such aquifers are drawn down by pumping, they can cause a decrease in river flow, resulting in shortages of drinking water, water for agriculture, or water for the aquatic ecosystem. Deeper aquifers may also be replenished indirectly by water slowly leaking downward from shallower aquifers. Not all groundwater is renewable. In some cases, people are using groundwater faster than it can be replenished in many regions of the world.

As groundwater is slow moving, a well develops a cone of depression around it. The further the away from the well the ground water is effected less. Well water usage can impact streams, rivers, and wetlands. Thus, the need to conserve water usage especially in dry weather conditions is important for the local and aquifer environments.

Mitigation opportunities

Rain gardens - Every time it rains, water runs off impermeable surfaces, such as roofs or driveways, collecting pollutants such as particles of dirt, fertilizer, chemicals, oil, garbage, and bacteria along the way. The pollutant-laden water enters storm drains untreated and flows directly to nearby streams and ponds. The US EPA estimates that pollutants carried by rainwater runoff account for 70% of all water pollution.

Rain gardens collect rainwater runoff, allowing the water to be filtered by vegetation and percolate into the soil recharging groundwater aquifers. These processes filter out pollutants. A rain garden is a garden of native shrubs, perennials, and flowers planted in a small depression, which is generally formed on a natural slope. It is designed to temporarily hold and soak in rain water runoff that flows from roofs, driveways, patios or lawns. Rain gardens are effective in removing up to 90% of nutrients and chemicals and up to 80% of sediments from the rainwater runoff. Compared to a conventional lawn, rain gardens allow for 30% more water to soak into the ground. A rain garden is not a water garden. Nor is it a pond or a wetland. Conversely, a rain garden is dry most of the time. It typically holds water only during and following a rainfall event. Because rain gardens will drain within 12-48 hours, they prevent the breeding of mosquitoes. South Sioux City has six rain garden areas:

- Klasey
- G Street

- City building at 17th and Dakota
- Scenic Park
- Tree Orchard
- Near Bennet lift station.

Recharge areas are where surface water predominantly flows downward through the unsaturated zone to replenish an aquifer, allowed to soak back into ground rather than leave the water just to run off. Also this water has time to go back into the soil, it eventually will reach aquifers many feet below ground, recharging water that has been removed from these aquifers. South Sioux City currently has three recharge areas: College Center, West 17th Street, West 29th Flatwater.

For both rain gardens and recharge areas, future locations are being planned and developed.

To assist in the local area's sustainability plan, the City educates residents via newsletters, website and other media, actions that can be taken to conserve water fixing leaks, placing old sprinkler systems with smart water sprinkler systems, replacing old toilets, washers with more efficient units. The City advocates with commercial and industries to consider conservation efforts. Finally, the City also works to improve their use in a more efficient and conservative means.

Wellhead protection – Each of the wellheads are fenced in and monitored. Camera systems are planned to be installed on and near all wellhead as an additional protection measure as funding becomes available.

Water storage tank Inspections - Like water quality monitoring, tank inspections provide information used to identify and evaluate current and potential water quality problems. Both interior and exterior inspections are employed to assure the tank's physical integrity, security, and high water quality. Inspection type and frequency are driven by many factors specific to each storage facility, including its type (i.e. standpipe, ground tank, etc.), vandalism potential, age, condition, cleaning program or maintenance history, water quality history, funding, staffing, and other utility criteria.

- List which goals and objectives this project will provide benefits for and how this project supports or contributes to those plans.

The goal of the proposed project is to meet the supply demand of the current and growing residential and industrial water use. The City has taken into consideration the described plans in addition to the housing and economic plans of the city.

Goal: To provide adequate residential, industrial and firefighting demands upon the city's water supply

Objectives:

1. Olsson and City to conduct feasibility study to determine size, scope, location and other related factors for a water tower (Completed via Olsson)
2. City staff to review and update the city's Water Sustainability Plan to address water conservation practices both currently and proposed. (Updated January 2019)
3. Olsson to ensure all easements, rights of ways and fee titles secured, all environmental reviews completed.
4. Olsson to assist with design components, necessary permits and other regulatory factors.
5. Olsson to ready bid packet and assist with construction oversight.
6. City staff to secure additional revenue to support the project.
7. Public works to oversee and monitoring the project upon completion.

- Describe and quantify how the project supports sustainable water use, what is the target area, what is the population or acreage receiving benefits, what is the usage of the water: residential, industrial, agriculture or recreational.

  Sustainable water use: Storage is and always will be a priority for municipalities such as South Sioux City. Water storage tanks are more optimal than an uncovered storage reservoir which provides the greatest opportunity for contaminant entry into the distribution system. Finished water storage facilities are an important component of the protective distribution system "barrier" that prevents contamination of water as it travels to the customer. Historically, finished water storage facilities have been designed to equalize water demands, reduce pressure fluctuations in the distribution system; and provide reserves for firefighting, power outages and other emergencies. Many storage facilities have been operated to provide adequate pressure and have been kept full to be better prepared for emergency conditions.

  The Riverview Water Treatment Plant (WTP), constructed in 1983 is the primary source of water for the City of South Sioux City. It is designed for a maximum day production capacity of 3.2 million gallons per day (MGD). The plant treats ground water through aeration, chemical addition, pumping and pressure filtration. The rated capacity of the plant is determined by the capacity of the two aerators at 1,120 gallons per minute (gpm) each or 3.2 MGD.

  The City has a second water treatment plant that is occasionally used during peak water demand periods in the summer. The B street WTP is much older and smaller. It is designed for maximum production of about 1.1 MGD and utilizes an aerator, chemical addition/detention, and four gravity filters. Currently, the B Street plant produces about 0.75 MGD due to supply limitations and the age of the water plan.

By expanding storage capacity, the city can keep more water in reserve and reduce the number of hours a day it is processing and pumping, which in turn keeps electric bills in check. The city also employs sustainability strategies such as the use of rain gardens, recharge areas and water conservation efforts.

Target area: The immediate target area for water usage from this tank is on the city's south side:

- Hovey residential construction:
- Flatwater Crossing residential construction: 200 acres, 1000 units along with small business development
- Project X residential construction: 70 acres, 360 units
- 600 acre Roth Industrial Park, 5 current businesses; 3 planned businesses ($68 million capital improvement) in next year.

Population: Since the water is interconnected, the entire South Sioux City area will be impacted, with a population of 13,500 and a land area of 5.71 square miles.

- List all stakeholders involved in project.

  - US Department of Commerce – Economic Development Administration
  - Olsson (Engineering)
  - NE Department of Environmental Quality (SRF Loan)
  - Various permitting agencies, i.e. DHHS
  - City of South Sioux City
  - Residents and businesses within South Sioux City
  - Roth Industrial Park

- Identify who benefits from this project.

The main beneficiaries to this project are the residents of South Sioux City and businesses located therein, particularly on the south area of the city where new housing starts are located and large industries located (Roth Industrial Park). Particular to industries, these include but are not limited to: Empirical formerly Beef Products, Inc., Green Star Energy, Ingredion.

11. Addresses a statewide problem or issue;

- List the issues or problems addressed by the project and why they should be considered statewide.

The storage tank will resolve and address several issues:

a. Address need for adequate water supply system to support economic development and residential housing market

b. While water usage depletes groundwater sources, related ongoing efforts to replenish these resources should concurrently be used such as rain gardens, recharge areas of which South Sioux City does.
c. The addition of the storage tank aids in retaining and attracting new businesses and residents to Nebraska, increasing tax base for all.

- Describe how the project will address each issue and/or problem.
  a. The 2.5MG storage tank will ease the current water flow issues while addressing future planned residential and industrial growth
  b. The project will work with concurrent efforts to address replenishing groundwater resources by the City including storm water channel improvements similar to the 29th street channel improvement completed in July 2019; additional rain gardens, recharge areas, wellhead protection efforts, maintenance of current storage tanks, staff and residential education.
  c. Adequate water is a necessity to grow business and attract residents to Nebraska as indicated by Blueprint for Nebraska and NDED efforts. These economic efforts provide jobs, increase tax base while sustaining the viability of the local area.

- Describe the total number of people and/or total number of acres that would receive benefits.

  The total number of people benefiting from the project is approximately 13,500 with an additional 2000+ increase when industries are in operation. The project will be situated on 1.4 acres of land impacting the larger geographic target population area of 5.71 sq. miles. The area adjacent to the proposed site is surrounded by agricultural fields, a BNSF railway, and industrial sites within the Roth Industrial Park. The storage tank will be tied to and near the planning housing development in the southern area of the city. The elevated water storage tank will be constructed on land that already houses city water infrastructure components.

- Identify the benefit, to the state, this project would provide.

  The largest benefit to the state is the ability to increase the industrial growth footprint estimated to be $250,7731,000 in capital, 341 jobs created, 1376 residential housing units completed in the next 5-10 years. This growth in the community will increase the local and state tax base, creating additional opportunities for shovel-ready industry expansion.

12. Contributes to the state's ability to leverage state dollars with local or federal government partners or other partners to maximize the use of its resources;

- List other funding sources or other partners, and the amount each will contribute, in a funding matrix.

The request to the Nebraska Natural Resources Commission will be leverage by the following committed funds:

Sources of Funds	Estimated Amount	Status
US Commerce/EDA	2,211,000	Committed
NDEQ State Revolving Funds (SRF)	1,131,600	Committed

- Describe how each source of funding is made available if the project is funded.

The US Commerce – EDA grant 05-01-05912 was awarded on April 22, 2019 and approved for $2,211,000. These grant funds will support construction costs.

Nebraska Department of Environmental Quality (NDEQ) approved loan D311584 on November 17, 2014. Upon NDEQ suggestion, the City is opening a new loan to obtain a longer period and lower interest rate. The loan is expected to be completed by 10/1/2019 with the current loan still in place. These funds will support project Engineering costs.

- Provide a copy or evidence of each commitment, for each separate source, of match dollars and funding partners.

Refer to Attachment 4: Documentation of Partners - US Commerce – EDA grant 05-01-05912; (NDEQ) loan D311584 verified.

- Describe how you will proceed if other funding sources do not come through.

Other funding sources included in this grant application request to NRC – Water Sustainability Fund for $2,211,000. If funds are not received, a greater share of project will be paid for from the NDEQ loan.

13. Contributes to watershed health and function;

- Describe how the project will contribute to watershed health and function in detail and list all of the watersheds affected.

All land, from the wildest preserve to the most densely developed urban neighborhood, is part of a watershed, an area of land that receives precipitation and drains into a body of water (creek, river, lake). For South Sioux City, the boundaries of its natural watershed is the Missouri River. Since the project is a water storage tank, it depends on the livelihood of the watershed and draws all of its water from groundwater sources utilizing the deep Dakota sandstone aquifer

and the shallower Missouri River alluvium formations. The project is water storage capacity.

14. **Uses objectives described in the annual report and plan of work for the state water planning and review process issued by the department.**

- Identify the date of the Annual Report utilized.

Nebraska Department of Natural Resources - Annual Report and Plan of Work for the State Water Planning and Review Process submitted to the Governor and Legislature by the Director of the Nebraska Department of Natural Resources September 2018

- List any and all objectives of the Annual Report intended to be met by the project
    - Support locally developed water management plans for conjunctively managing hydrologically connected groundwater and surface water supplies;
    - Participate in interagency collaboration with federal agencies, state agencies, local natural resources districts (NRD's), and other water interest entities on various water resources programs and projects;

- Explain how the project meets each objective.

Support locally developed water management plans for conjunctively managing hydrologically connected groundwater and surface water supplies – The project assists the local area to manage groundwater and surface water supplies in a manner consistent with state.

Participate in interagency collaboration with federal agencies, state agencies, local natural resources districts (NRD's), and other water interest entities on various water resources programs and projects: The local project brings expertise (Olsson), NDEQ (loan), US Department of Commerce /EDA (economic development) to partner in a project that will expand housing (1000+ new housing units) and increase economic efforts ($250,731,000) in the region.

15. **Federal Mandate Bonus. If you believe that your project is designed to meet the requirements of a federal mandate which furthers the goals of the WSF, then:**

- Describe the federal mandate.

The **Federal Opportunity Zone** Program is a new community and economic development tool that aims to drive long-term private investment into low-income communities throughout the country. South Sioux City is designated in whole as an Opportunity Zone and in whole as a low-income area. The proposed project

supports industrial expansion in the area and housing development, both driving by private investments.

- Provide documentary evidence of the federal mandate.

Refer to Attachment 7. Federal Opportunity Zone designation

- Describe how the project meets the requirements of the federal mandate.

Adequate water storage capacity directly impacts the ability of the area to accommodate existing industries, while addressing the needs of expanding industries as they locate here. Additionally, housing supports industrial growth as the demand for housing is significant in the area. Both these efforts direct support the Federal Opportunity Zone which aims to drive long-term private investment into low-income communities throughout the country.

- Describe the relationship between the federal mandate and how the project furthers the goals of water sustainability.

No direct relationship is offered

List of Attachments:

Attachment 1: South Sioux City Environmental Review prepared by Olsson
G&P - T&E consultation
USACE, e.g., 404/other Permit #NWO-2018+01764-WEH, received 10/22/2018
Cultural Resources Evaluation

Attachment 2: South Sioux City Water Storage Project – Olsson Project 017-0781

Attachment 3: City Public Meeting Documentation

Attachment 4: Documentation of Partners
a) Nebraska Department of Environmental Quality – reapplying for SRF Loan
b) Olsson – Engineering Services
c) U.S. Department of Commerce – Economic Development Assistance

Attachment 5: Cost / Benefit Analysis

Attachment 6: Warranty Deed, Proof of Ownership

Attachment 7: Federal Opportunity Zone designation

Attachment 8: Audit, Statement of Revenues, expenditures, and changes in Fund Balances, For the Year Ended September 30, 2018