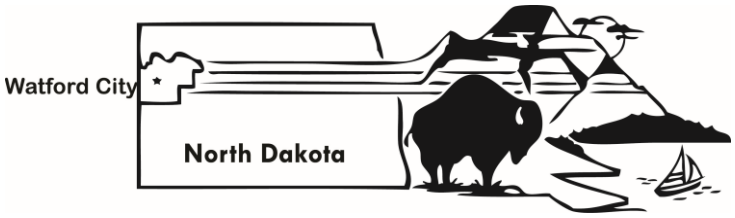

ADVANCED METERING INFRASTRUCTURE (AMI) PROJECT – PHASE I

City of Watford City, North Dakota

Project Proposal for Bureau of Reclamation Funding Announcement

Funding Opportunity Title

WaterSMART Small-Scale Water Efficiency Projects

Funding Opportunity Number

No. R22AS00195

Applicant:

City of Watford City
Justin Smith, Public Works Director

213 2nd St NE
Watford City, ND 58854
Phone: 701.444.2533
Email: jusmith@nd.gov

Unique Entity Identifier

Organizational DUNS: 072553936
UEI: U1KDQNR11FR8

Supported By:

Burian & Associates, LLC
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1.0 TECHNICAL PROPOSAL AND EVALUATION CRITERIA

The Technical Proposal is comprised of the following sections:

1.1 Executive Summary
1.2 Project Location
1.3 Project Description and Milestones
1.4 Evaluation Criteria

The mandatory federal forms (SF424 family) were included prior to the title page of this proposal.

1.1 Executive Summary

Date: April 27, 2022
Applicant Name: City of Watford City
City: Watford City
County: McKenzie County
State: North Dakota
Applicant Category: Category A

The City of Watford City ("City") will install a telemetry base station and add SmartPoint heads to approximately 636 existing municipal water meters as part of the Watford City Advanced Metering Infrastructure (AMI) Project – Phase I. The City's current water meter end points are nearing the end of their estimated useful life, so this project is critically important to the City to ensure water meter readings remain accurate and reliable. The telemetry base station coupled with the new SmartPoint heads will provide more accurate data to the City through AMI technology rather than having to manually read meters, which will help control water loss and water theft, identify and respond to water leaks and water usage spikes more efficiently, as well as provide customers access to real-time water usage data through an online portal. Ultimately, this project will help the City of Watford City conserve and better manage water supplies and more efficiently provide transparent water service to the City's customers.

The anticipated start and completion dates for this project are April 2023 and September 2023 respectively, assuming that the materials and supplies can be procured and delivered in a timely manner. This project is not located on a Federal facility.

1.2 Project Location

The project is in the City of Watford City (City), which is located in McKenzie County, North Dakota. The City is located approximately 50 miles east of the North Dakota – Montana border, approximately 145 miles north of the North Dakota - South Dakota border, and approximately 90 miles south of the North Dakota – Canada border. The coordinates of the project are 47°48'9" N (latitude) and 103°16'50" W (longitude). A location map of the City of Watford City showing the City's water distribution system is provided in **Figure 1**.

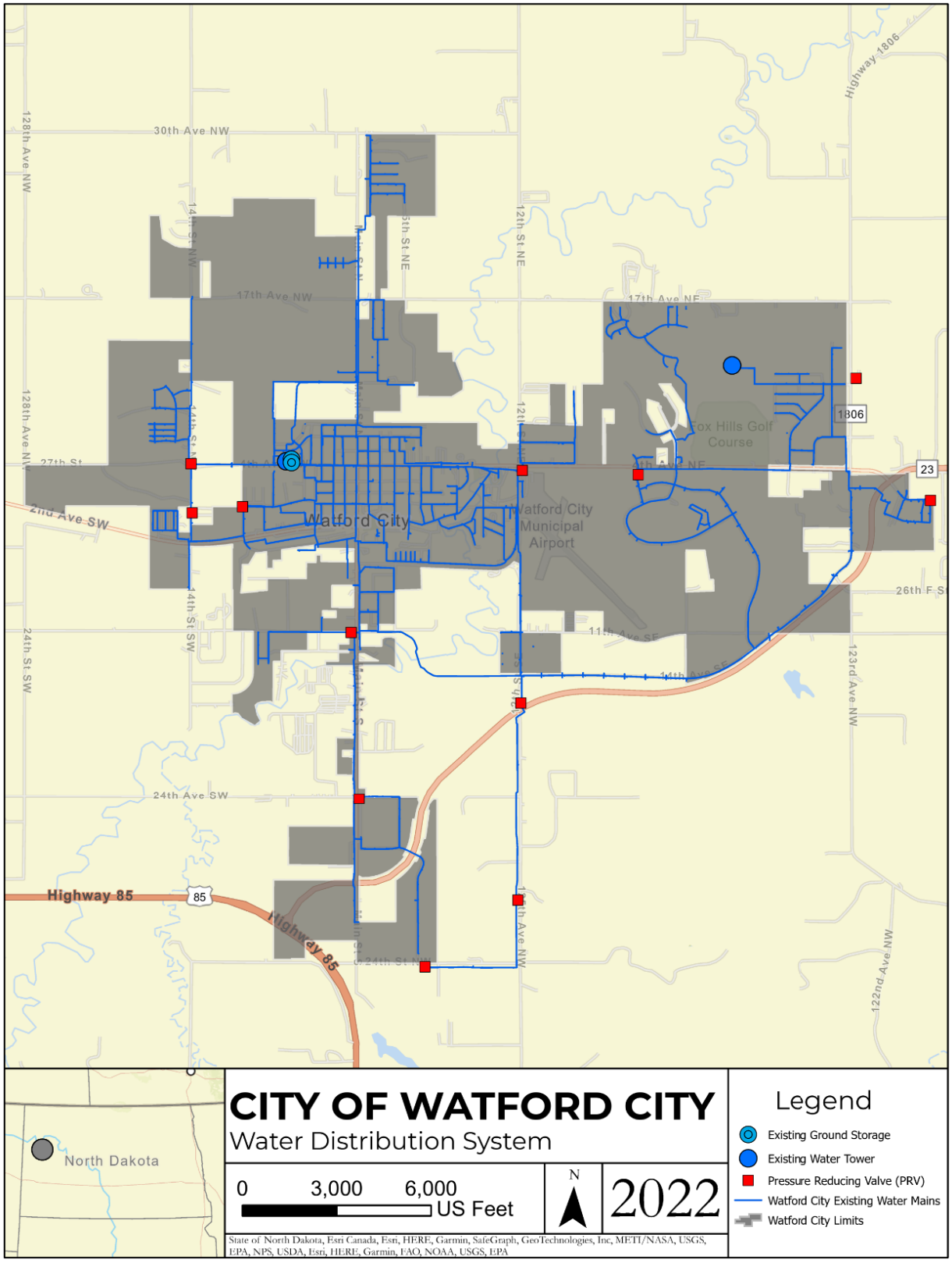

Figure 1. City of Watford City Location Map

1.3 Technical Project Description

Over the last decade, communities across western North Dakota have experienced rapid population growth, primarily due to increased oil and gas activity in the Bakken Formation (a figure of the Bakken Formation is provided in **Figure 2**). Watford City was one of the fastest growing communities in the State, growing from 1,800 people in 2010 to an estimated 6,207 people today (2020 US Census). Much of the City's emphasis over the last 10+years has been directed towards serving the developing and growing areas of the City, which has left little time and investment in existing water system infrastructure, specifically the City's water metering system. Today, the City has reached or is rapidly approaching the estimated useful life on the majority of the City's water meter endpoints.

This project, the Watford City AMI Project – Phase I, includes installation of a telemetry base station and the addition of new SmartPoint heads to approximately 636 existing water meters. The installation of the SmartPoint heads will support the City on their journey towards a full AMI system, and will replace many of the water meter endpoints that have failed or are close to reaching their estimated useful life. The City's plan is to retain the meter supplier to install the meter infrastructure.

Upon completion of this project, the City will be able to see water meter readings in real-time (for the meters equipped with new SmartPoints), which will help control water loss and water theft, identify and respond to water leaks and water usage spikes more efficiently, as well as provide customers access to real-time water usage data. Because the water delivery and water monitoring process will be much more efficient, at the conclusion of this project, the City expects to experience environmental, economic, and social benefits through enhanced water monitoring efforts.

1.3.1 Background Data

As the oil industry began to boom in 2008 and 2009, it was quickly realized that there was a significant need for a water supply solution in northwestern North Dakota to provide an adequate water supply to serve the growing Bakken Region (**Figure 2** provides a map of the Bakken Region along with core oil producing counties).

Around this same time, Watford City was in the process of exploring additional water supply options due to quality concerns around their groundwater supply, which contained high levels of iron, manganese, calcium, phosphates, dissolved solids, sodium, and bicarbonate. The City of Watford City's local water treatment plant was also in need of improvement or replacement, which emphasized the City's need for a reliable long-term water supply solution.

The Missouri River was identified as the clear solution. Recognizing that there was a sizeable amount of existing water infrastructure already in service throughout the region, a solution was preferred that effectively used the existing infrastructure to the extent possible. In 2011, the

Western Area Water Supply Authority (WAWSA) initiated the Western Area Water Supply Project (WAWSP), a $500M water supply project that utilizes Missouri River water treated at the Williston Regional Water Treatment Plant (WRWTP) and supplemented by groundwater through the R&T Water District Water Treatment Plant to supply water to the region. Today, WAWSA provides water service to four Members including the (1) City of Williston, (2) Northwest Rural Water District (NRWD), (3) McKenzie County Water Resource District (MCWRD) and (4) R&T Water District, and all of these Members supply water to Submembers (except the City of Williston).

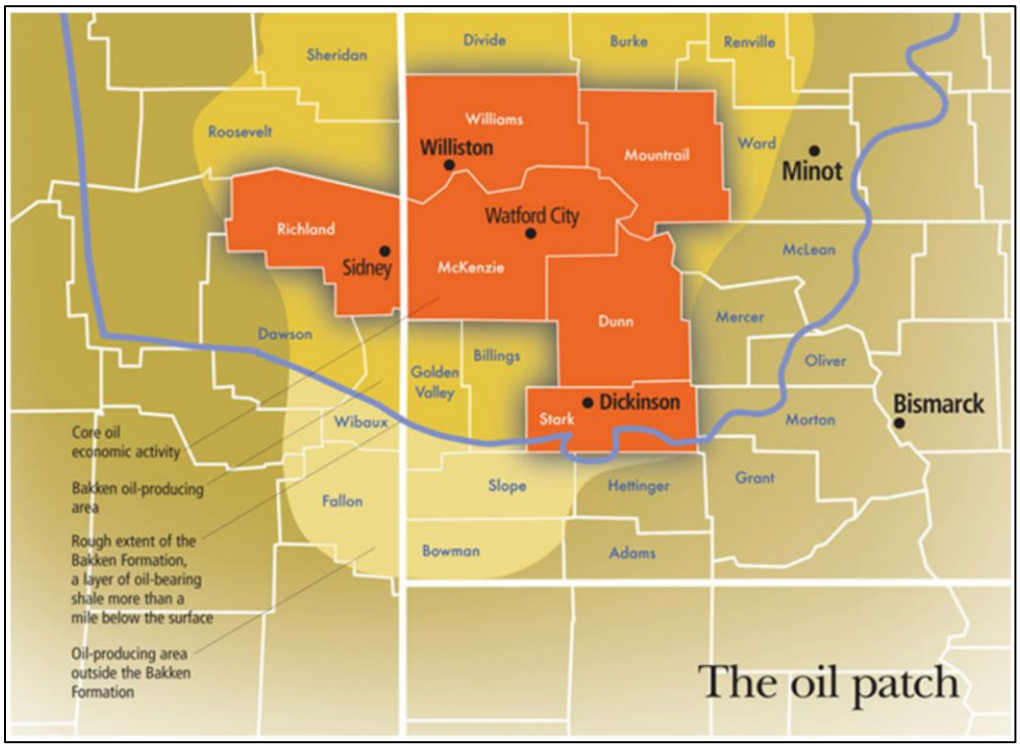

Figure 2. Bakken Region and Core Oil and Economic Activity Counties[1]

Now that the WAWSP is fully operational, Watford City is a wholesale water customer of MCWRD. Treated water is pumped, stored, and conveyed via transmission lines from the Williston Water Treatment Plant to MCWRD's distribution system, where the water is then conveyed, metered, and sold to Watford City.

Because Watford City is a wholesale water customer and they are located a considerable distance from the water treatment plant, the City's water rates are among the highest when compared to other communities in the State and region. This affordability challenge, coupled with their aging current water meter endpoints nearing their estimated useful life has brought to light the

[1] The Federal Reserve Bank of Minneapolis. The Bakken area. Detailed map of the oil patch in the Ninth District.

importance of reliable metering infrastructure. As a result, the City has deemed this project a priority.

1.3.1.1 Future Project Phases

In 2023, the City intends to conduct the first phase of the City's AMI Project, which includes installing a base station telemetry system and installing 636 SmartPoints. This phase will be the first step in transitioning the City's water metering system to an automated and transparent system. This phase will result in improvement of metering inaccuracies, provide customers access to real-time water usage data, and ultimately strive to further reduce the City's non-revenue water (NRW) amount. The addition of the SmartPoint heads will provide the City and customers immediate benefits as they will be able to see water use in real-time.

In 2023 and beyond, the City intends to re-apply for grants under the WaterSMART Program and utilize the cost-share funding to replace the remaining 1,230 water meter endpoints with SmartPoints, as well as replacing all of their 1,866 water meters, which are also nearing the end of their estimated useful life. The specific project timing and number of meters that can be replaced year-to-year will be dependent on available grant funding. **Table 1** below shows the anticipated phased project plan.

Table 1. Phased Project Plan

Phase No.	Year	Description of Improvements
Phase I	2023	- InstallBase Station and Associated Telemetry Infrastructure - Install 636 SmartPoint Heads ***This is the project proposed in this application.***
Future Phases	2024 and Beyond	- Install remaining 1,230 SmartPoint Heads - Replace 1,866 Water Meters

1.3.1.2 Water System Composition

The City of Watford City's water distribution system is comprised of approximately 64 miles of water system piping ranging in pipe diameter, pipe material, and install date. The system also has 12 pressure reducing valves, two water towers (each 1 million gallons) and two ground storage reservoirs (each 1 million gallons) used to maintain storage levels and distribution system pressures. The City has approximately 1,866 customer water meters located throughout the City, which in addition to their meter endpoints, are reaching their estimated useful life.

1.3.1.3 Water Use

Watford City's purchased water annual totals, billed water annual totals, and non-revenue water annual totals from years 2016 to 2020 are provided in **Table 1**. Also included in the table is Watford City's annual non-revenue water percentages over the five-year period, as well as the five-year averages for each respective column.

Table 2. Water Purchased, Water Billed, and Non-Revenue Water[1]

Year	Total Water Purchased (AC-FT)	Total Water Billed (AC-FT)	Non-Revenue Water (AC-FT)	Non-Revenue Water Percentage
2016	814	747	67	8.2%
2017	888	845	43	4.8%
2018	920	883	37	4.0%
2019	899	879	20	2.2%
2020	850	837	13	1.5%
Average	**874**	**838**	**36**	**4.1%**

1 Data from 2021 was briefly reviewed, but appeared to contain data anomalies, so that data from 2021 was not utilized and is currently under review.

The City's average non-revenue water amount over from 2016 to 2020 was 36 AC-FT/YR (this value was used in calculations going forward).

According to the City's customer billing records, approximately 37% of water is billed to residential customer accounts, and the remaining 63% of water is billed to commercial and other accounts. Using the five-year average total water billed amount of 838 AC-FT/YR, the following were calculated:

- Typical Residential Use
  - 310 AC-FT/YR (37% of billed usage)
- Typical Commercial and Other
  - 528 AC-FT/YR (63% of billed usage)

Of the City's total 1,866 meters, 1,158 are residential customer accounts. As a result, it is estimated that each residential customer account utilizes 0.27 AC-FT (typical annual residential usage of 310 AC-FT/YR divided by 1,158 residential accounts) of water per year.

1.3.2 Problems and Project Need

This section outlines the need for the project, which includes the following four sections: distribution system losses, residential losses, aging meter endpoints, and affordability challenges.

1.3.2.1 Distribution System Losses

Over the past four years, 4.1% or **36 AC-FT/YR** (as shown in **Table 2**) of purchased water is being lost. This water is being lost in Watford City distribution system (somewhere between the wholesale meters and the customer meters) through either: (1) apparent losses, such as unauthorized consumption and customer meter inaccuracies, or (2) real losses through infrastructure systems including water main, storage, and service connection leaks. The City consistently monitors non-revenue water, and actively strives to keep this number low.

1.3.2.2 Residential Losses

A study conducted by the Environmental Protection Agency (EPA) states that average water loss through a residential home (i.e. leaky appliances, plumbing issues, etc.) is 13.7% of total water use. Based on this value, it is estimated that each City of Watford City's single-family residences lose 0.037 AC-FT/YR (13.7% x 0.27 AC-FT/YR) through residential plumbing leaks, recognizing that some of the older homes may lose more water and some of the newer homes may lose less water. Based on this calculation, the total estimated average residential losses experienced in Watford City is **43 AC-FT/YR** (0.037 AC-FT/YR x 1,158 single-family residential meters).

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1.3.2.3 Aging Meter Endpoints

As mentioned previously, many of the City's water meter endpoints are near the end of their estimated useful life, and are anticipated to start going dead in the near-future. For this reason, the project is important to the City to ensure that water service and water service billings are provided in an efficient, accurate, and uninterrupted manner.

1.3.2.4 Affordability Challenges

Based on a recent annual utility rate survey, Watford City has the highest water rates in the State of North Dakota, and they are also high amongst peer systems in neighboring states. This makes investing the water system challenging; the City sees the importance of proactively maintaining a reliable water system but doesn't want to continuously increase water rates to fund water system improvements. For this reason, the City actively pursues grant and low interest loan funding for needed water system projects.

1.4 Evaluation Criteria

The answers to the evaluation criteria are provided in red.

E.1.4.1 Evaluation Criterion A---Project Benefits

- Describe the expected benefits and outcomes of implementing the proposed project
    - Explain the anticipated water management benefits of the water supply delivery system and water customers.

      This project will replace aging water meter endpoints throughout the City and will help the City transition their water metering system from manual read meters to Advanced Metering Infrastructure (AMI). It is anticipated that this project will lower and stabilize the amount of water the City loses in both distribution system losses and residential losses through utilization of AMI. The new AMI system will help Watford City Public Works staff identify and respond to water usage spikes caused by leaks and watermain breaks out in the distribution system, improve the efficiency and accuracy of the City's water meter readings and billings, and help customers conserve water through access to real-time usage data.

      On average from 2016 to 2020, the City had a non-revenue water percentage of 4.1%, which equates to 36 AC-FT/YR or 32,100 gallons per day in distribution system losses. The City buys water from the MCWRD at a rate of $4.40 per 1,000 gallons; therefore, the City loses approximately $140 per day in non-revenue water ($51,100 per year).

      It is anticipated that Watford City will continue to reduce their amount of water loss through implementation of this project. The money saved from operating an AMI distribution system could be used towards other critical water infrastructure improvements as well as alleviating the burden of significant water rate increases to ensure the City continues to provide affordable and equitable water service.

    - Explain the significance of the anticipated water management benefits of the water delivery system and water customers. Consider the following:
        - Are customers not currently getting their full water rights at certain times of year?

          Customers are currently getting their full water rights.
        - Does this project have the potential to prevent lawsuits or water calls?

          Because the project will be the start of the City's transition to an AMI system, the City and the customers who have the newly installed SmartPoints will be able to see water usage in real-time. This will likely result in fewer water billing disputes and water calls.

- What are the consequences of not making the improvement?
  If this project is not completed, many of the existing meter endpoints are expected to start going dead, which wouldn't allow the City to read the meters and appropriately bill the customers. This would directly cause the City's non-revenue water amount to increase.
- Are customers water restrictions currently required?
  There are no water restrictions at this time and no water restrictions are forecasted. However, 2021 was a dry year where much of the state experienced drought. There were some municipalities in the state that employed restrictions on outdoor lawn watering to help minimize the negative effects of drought.
- Other significant concerns that support the need for the project.
  This project will reduce the amount of miles driven to collect monthly meter readings, which will reduce carbon emissions and fuel costs, and save on the City's pavement system. It will also free-up time for City staff to focus on other areas of the water system that were once spent collecting meter readings.

- Describe the broader benefits that are expected to occur as a result of the project. Consider the following:
  - Will the project improve broader water supply reliability at sub-basin or basin scale?
    - Extent to which the proposed project will increase collaboration and information sharing among water managers in the region
      This project will provide the City and the City's customers access to real-time water usage data. The City's wholesale water provider, MCWRD, recently undertook a water meter improvement project and they now have an AMI system which provides them real-time data. The City of Watford City and MCWRD often collaborate, and could share the data with the other WAWSA members and peer water systems, to help improve the region's overall water supply and delivery process. The data could also be shared across the state and region to conduct various studies and benchmarking efforts.

    - Any anticipated positive impacts/benefits to local sectors and economies within the applicable geographic area (e.g., agriculture, environment, recreation, tourism)
      Utilizing AMI will reduce the amount of water that is lost throughout the City's water distribution system. As water loss is reduced, there are environmental benefits anticipated such as fewer chemicals used in the treatment and production of water, as well as lower energy consumption

attributed to treatment and pumping of lost water. Utilization of an AMI system should also delay the need for water rate increases since Watford City will be able to plan for less non-revenue water in future rate modeling and water fund budgeting efforts.

- Extent to which the project will complement work done in coordination with NRCS in the area (e.g., with a direct connection to the district's water supply).
  Not applicable.
- Extent to which the project help address drought conditions at the sub-basin or basin scale.
  Because North Dakota is susceptible to drought – the State experienced one of the most significant droughts in the last century in 2021 – the project will support water conservation efforts as well as help with water use restriction enforcement, if needed, in the event of water shortages or droughts.

E.1.4.2. Evaluation Criterion B---Planning Efforts Supporting the Project

- Describe how your project is supported by an existing planning effort.
  - Is the project identified specifically in the planning effort?
    This project has been in the City's plans for a number of years and was either discussed, reviewed, or budgeted directly as part of the two specific previous studies and/or ongoing planning efforts:
    - Watford City and MCWRD Water Rate Appropriateness Study (2020)
    - Watford City 2040 Infrastructure Master Plan (2021)
  - Does the proposed project implement a goal or address a need or problem identified in the existing planning effort?
    - In the Watford City Water Rate Appropriateness Study, water rate affordability was discussed in depth. This problem is not easily solvable as Watford City's drinking water supply comes from two wholesale water providers (WAWSA then MCWRD). Therefore, the City will need to continue to progressively increase rates as their wholesale providers increase rates. However, the City feels that being able to provide transparent real-time usage to their customers will help customers be more aware of how much water they're using, and ultimately what their monthly bill will be at the end of the month.
    - Throughout the development of the Watford City 2040 Infrastructure Master Plan, the City and project team discussed the need for a water meter improvement project to prevent lost data attributed to the existing meter endpoints going dead.

- Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.
  Through ongoing planning efforts and the planning efforts specifically described prior, it has been deemed a priority to improve the City's water meter network and reading processes, as well as reduce the amount of water loss in the distribution system. This project will build on the work the City has previously planned for and prioritized for implementation.

E.1.4.3. Evaluation Criterion C---Project Implementation

- Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.
  The Watford City AMI Project – Phase I will be started in April of 2023 (anticipated start as soon as grant award becomes available) and be completed in September of 2023. The proposed project schedule is outlined below in **Table 3**.

Table 3. Proposed Project Schedule

Approximate Date	Major Tasks
April – June	Procure Telemetry Base Station and SmartPoint Heads
July	Install Base Station and Associated Infrastructure Install 136 SmartPoint Heads
August	Install 250 SmartPoint Heads
September	Install 250 SmartPoint Heads

The water meter infrastructure that will be installed under this Project is planned to be installed by the meter supplier (install costs provided in the budget section). If the City of Watford City is successful in receiving grant funding, the City will work cooperatively with the Bureau of Reclamation to meet specific milestones and adhere to schedule requirements set forth by the Bureau of Reclamation.

- Describe any permits that will be required, along with the process for obtaining such permits
  Because the base station will be installed on one of the City's existing water towers, and the SmartPoints heads will be installed in homes and businesses, no permits will be required for this project. Customers will be notified ahead-of-time prior to installation of the SmartPoint heads.

- Identify and describe any engineering or design work performed specifically in support of the proposed project.
  No engineering or design work is anticipated for this project.
- Describe any new policies or administrative actions required to implement the project.
  There will be public outreach efforts performed prior to implementing the project to make customers aware of the SmartPoint installation, as well as the new capabilities offered to customers to view their water usage.
- Describe the timeline for completion of environmental and cultural resource compliance.
  No environmental and cultural resource compliance is anticipated for this project.
- Was the timeline for completion of environmental and cultural resource compliance discussed with the local Reclamation office?
  Not applicable.

E.1.4.4. Evaluation Criterion D---Nexus to Reclamation

- Is the proposed project connected to a reclamation project or activity?
  No, this would be the first project conducted for City in conjunction with the Bureau of Reclamation.

- If so, how? Please consider the following:
  - Does the applicant receive Reclamation project water?
    No.
  - Is the project on Reclamation project lands or involving Reclamation facilities?
    No.
  - Is the project in the same basin as a Reclamation project or activity?
    There is an ongoing project connected to the Bureau of Reclamation going on in the State of North Dakota that would potentially provide water supply to serve central and eastern North Dakota (however Watford City is not engaged in this Project). According to the Bureau of Reclamation website, the Bureau of Reclamation signed a record decision on January 15, 2021, selecting the preferred alternative proposed for the Eastern North Dakota Alternate Water Supply (ENDAWS) Project. The selected alternative includes construction of infrastructure to provide up to 165 cubic-feet-per-second of water from the McClusky Canal. Water will be delivered through a buried pipeline along a northern route and connect with the main transmission pipeline of the state-led Red River Valley Water Supply Project (RRVWSP). Both ENDAWS and the RRVWSP are located in North Dakota (Bureau of Reclamation Region 5).
  - Will the proposed work contribute water to a basin where a Reclamation project is located?
    No.

E.1.4.5. Evaluation Criterion E---Presidential and Department of the Interior Priorities

Without repeating benefits already described in previous criteria, describe in detail how the proposed project supports a priority(ies) below.

E.1.5.1. Sub-criterion No. E1. Climate Change

- Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.
    - Because the improvement associated with this project will automate the water meter readings, the City will not need to manually read as many meters. This will result in a reduction in vehicle mileage, which ultimately lowers carbon emissions and preserves pavement infrastructure.
    - This project is also anticipated to promote and encourage water conservation efforts by providing customers access to real-time water usage.
- Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?
    - As part of the EPA's Lead and Copper Rule Improvements (LCRI), public water systems are required to develop an inventory and make public the locations of lead service lines by October 16, 2024. This project will serve as the genesis for the City's compliance with the EPA's LCRI - After the City installs a SmartPoint, they will have an updated data point which can serve as a road map for verifying service line material, in which the City can make a plan for replacement if the service line is lead.

E.1.5.2. Sub-criterion No. E2. Disadvantaged or Underserved Communities

- Will the proposed project serve or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, or economic growth opportunities.
  The project will provide real-time access to water usage information for the water meters where new SmartPoints are added. This will result in real-time information transfers that allow customers to curb and limit water usage, which would in turn lower water bills.
- Please describe in detail how the community is disadvantaged based on a combination of variables that may include:
    - Low income, high and/or persistent poverty
        - Not applicable.
    - High unemployment and underemployment
        - Not applicable.
    - Racial and ethnic residential segregation, particularly where the segregation stems from discrimination by government entities

        - Not applicable.
    - Linguistic isolation
        - Not applicable.
    - High housing cost burden and substandard housing
        - Not applicable.
    - Distressed neighborhoods
        - Not applicable.
    - High transportation cost burden and/or low transportation access
        - The City of Watford City is not located along a major interstate (nearest interstate is I-94 [68 miles away]) and there are no passenger rail systems nearby. Nearest major airport is in Williston, ND (47 miles away).
        - There is also no public transportation system in the community.
    - Disproportionate environmental stressor burden and high cumulative impacts
        - Not applicable.
    - Limited water and sanitation access and affordability
        - High water rates were already stated in previous evaluation criteria.
    - Disproportionate impacts from climate change
        - Not applicable.
    - High energy cost burden and low energy access
        - Not applicable.
    - Jobs lost through energy transition
        - Not applicable.
    - Access to healthcare
        - Not applicable.
- If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985, which includes populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.
  Not applicable.

E.1.5.3 Sub-criterion No. E.3. Tribal Benefits

- Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for a Tribe?
  The project is not located within tribal jurisdiction. Not applicable.
- Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?
  The project is not located within tribal jurisdiction. Not applicable.

1.5 Overlap of Duplication of Effort Statement

The only overlap that could potentially exist between this project and other projects are if the City elects to start improving water meter end points in the event they go dead, ultimately forcing the City to make an immediate improvement.

This grant application submitted for consideration under this program does not in any way duplicate and proposal or project that has been or will be submitted for funding consideration to any other potential funding source. However, the City would like to continue to apply for future WaterSMART grant opportunities, as applicable and available, to continuously improve their water system.

2.0 PROJECT BUDGET

The proposed project budget is described in the forthcoming sections.

2.1 Funding Plan and Letters of Commitment

The funding plan for this project is to utilize money from the City of Watford City water fund to fund the City's cost-share portion of the project. These funds are available and already programmed in the City's budget, so no time constraints exist on the available funds. The total estimated project costs (including federal and local cost shares) for this project are $224,837.13. The City is requesting $100,000 (44% of total project costs) in federal cost-share from the Bureau of Reclamation under this grant, with the remaining amount to be funded by the City of Watford City through their water fund.

Included in the notice of funding opportunity were the following parameters, which are answered in red. Please identify the sources of the non-Federal cost-share contribution for the project, including:

- Any monetary contributions by the applicant towards the cost-share requirement and source of funds (e.g., reserve account, tax revenue, and/or assessments)
  The City of Watford City will use budgeted funds from the City's water fund to pay for the non-federal share of the Project costs.
- Any costs that will be contributed by the applicant
  The City of Watford City Public Works Director is planning to provide oversight over the project. The salary and wages associated with these activities are outlined in the budget proposal and budget narrative.
- Any third-party in-kind costs (i.e., goods and services provided by a third party)
  No.
- Any cash requested or received from other non-Federal entities
  No.
- Any pending funding requests (i.e. grants or loans) that have not yet been approved and explain how the project will be affected if such funding is denied
  No.

No project costs are anticipated prior to award. A summary of the total project costs is provided in **Table 4**. It should be noted that the City of Watford City is registered (and maintains and active registration) in the System for Award Management (SAM). The City is also registered with and willing to process payments through the Department of Treasury Automate Standard Application for Payments (ASAP) system with the Bureau of Reclamation.

Table 4. Total Project Costs

Source	Amount	Percentage
Costs to be reimbursed with the requested Federal funding	$ 100,000.00	44%
Costs to be paid by applicant	$ 124,837.13	56%
Value of third-party contributions	$ 0.00	0%
TOTAL PROJECT COST	**$ 224,837.13**	**100%**

2.2 Budget Proposal

The budget proposal for this project is provided below in **Table 5**.

Table 5. Budget Proposal

Budget Item Description	Computation		QTY Type	Total Cost
	$ / Unit	QTY		
Salaries and Wages				
Public Works Director	$ 175.00	40	Hours	$ 7,000.00
Fringe Benefits				
Travel				
Equipment				
Supplies and Materials				
Sensus M400 Base Station	$ 32,204.00	1	EA	$ 32,204.00
Amphenol Omni Antenna	$ 3,461.13	1	EA	$ 3,461.13
L&S Install of Antenna	$ 4,000.00	1	EA	$ 4,000.00
Commissioning of Base Station	$ 2,000.00	1	EA	$ 2,000.00
510M Smart Point M2 Wired DP HR&LD	$ 177.00	636	EA	$112,572.00
Installation of Smart Points	$ 100.00	636	EA	$ 63,600.00
Contractual/Construction				
Other				
TOTAL DIRECT COSTS				**$ 224,837.13**

Budget Item Description	Computation		QTY Type	Total Cost
	$ / Unit	QTY		
Indirect Costs				
TOTAL INDIRECT COSTS				**$ 0.00**

2.3 Budget Narrative

The following categories were included in the notice of funding opportunity and provide the budget narrative for this project.

2.3.1 Salaries and Wages

The City's plan is to retain the supplier to install the SmartPoint heads and the telemetry/base station infrastructure. However, some time has been budgeted for the Public Works Director for providing oversight on the project and answering questions as they arise.

2.3.2 Fringe Benefits

The City's hourly rate schedule provides one rate for each employee class, which includes salaries, wages, and benefits. However, the hourly rate schedule does not provide the detailed breakout of salary compared to benefits. As such, the total rate was included under the 'Salaries and Wages' category.

2.3.3 Travel

Travel is not eligible and will not be requested for reimbursement.

2.3.4 Equipment

Because the City plans to retain the meter supplier to conduct the improvements, no City equipment is anticipated; therefore, no reimbursement is requested.

2.3.5 Materials and Supplies

Reimbursement is being requested for the procurement and installation of one (1) Sensus Base Station, one (1) antenna, and 636 Sensus SmartPoint 510M Non-Pit Set Modules. The costs for materials and supplies are provided in a quote from a nation-wide and local supplier, Core & Main, and is included as **Appendix A**. Also included in Appendix A are the data sheets for the respective infrastructure planned to be installed.

If the City of Watford City is selected for grant funding, the City would like to consider procuring the materials and supplies as soon as they are notified of grant award (if allowed by the Bureau of Reclamation). Through discussions with various suppliers, the materials and supplies outlined in this grant application have long lead times due to the COVID-19 pandemic, foreign conflicts,

supply chain issues, etc. Procuring the materials and supplies in early will help the City maintain the schedule outlined in the Project Implementation Plan.

2.3.6 Contractual

No contractual services are anticipated; therefore, no reimbursement is requested.

2.3.7 Third-Party In-Kind Contributions

No third-party in-kind contributions are anticipated; therefore, no reimbursement is requested.

2.3.8 Environmental and Compliance Costs

No environmental and compliance costs are anticipated; therefore, no reimbursement for this is requested.

2.3.9 Indirect Costs

No indirect costs are anticipated; therefore, no reimbursement is requested.

3.0 ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

The following questions were provided in the notice of funding opportunity (NOFO), and answers to the questions are provided in red.

- Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.
  The impact to the surrounding environment will be negligible during the installation of the telemetry base station and SmartPoint heads given they will be installed on an existing water tower and on existing water meters. The City of Watford City staff and retained supplier will take all necessary precautions and steps to minimize negative effects towards air, water, or animal habitat during installation of the telemetry base station and SmartPoint heads.
- Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?
  Within McKenzie County (county where Watford City is located), there are four federally listed threatened or endangered species: Dakota Skipper (insects), Whooping Crane (birds), and Northern Long-Eared Bat (mammals), and Pallid Sturgeon (fish). Although there are threatened or endangered species listed in the project area, none will be affected with the installation of the base station or SmartPoint heads because the base

station will be installed on an existing water tower, and the SmartPoint heads will be installed within City residences and businesses on existing water meters.

- Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.
  Yes, but the project will not impact any 'Waters of the United States' because the installation of the telemetry base station and SmartPoint heads will be installed on an existing water tower and inside City residences on existing water meters.
- When was the water delivery system constructed?
  The water system was initially constructed between 1900 – 1950 around the time the City originated, which was founded in 1914. The City still has water system pipes in-service that were installed during the 1940s. Since then, the City has grown considerably and made significant investments in water system infrastructure. It is estimated that roughly 15% of the water system infrastructure was installed pre-1980s.
- Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.
  No.
- Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.
  No.
- Are there any known archeological sites in the proposed project area?
  There are no known archaeological sites in the proposed project area.
- Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?
  The project will have positive impacts on low income and minority populations because every property owner with a water meter will have access to an online portal that allows them to view their water usage in real-time. Having this information will allow customers to be more cognizant of their water use and allow them to catch water spikes caused by leaks or plumbing fixtures left on inadvertently.
- Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?
  No.
- Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?
  No.

4.0 REQUIRED PERMITS OR APPROVALS

No permits are required for this project. The telemetry base station will be installed on a water tower that is on City-owned property. Property owners will be notified in advance prior to installation of the SmartPoint head on their water meter.

5.0 LETTERS OF FUNDING COMMITMENT

The non-federal share for this project will be funded through the City of Watford City water fund. Therefore, no letters of funding commitment were included.

6.0 LETTERS OF PROJECT SUPPORT

The project has the support of City staff and was presented to Watford City's City Council at the April 4, 2022 Council meeting, and has the support of the Council. The project has also been presented at a subcommittee level and has support of the subcommittee. The Official Resolution will be signed and adopted by the City Council at their next Council meeting.

7.0 OFFICIAL RESOLUTION

The Watford City City Council meets the first Monday of every month. At the time of preparing this application, the next scheduled City Council meeting is on May 2, 2022.

The Official Resolution will be adopted at the May 2nd City Council meeting and submitted to the Bureau of Reclamation at *sha-dro-fafoa@usbr.gov* within the 30 day allotted time window following the April 28, 2022 application deadline.

OFFICAL RESOLUTION REGARDING PARTICIPATION IN FUNDING FOR A BUREAU OF RECLAMATION WATERSMART GRANT PROJECT.

WHEREAS, the United States Department of the Interior, Bureau of Reclamation, under its WaterSMART Grant Program, is accepting applications for Small-Scale Water Efficiency Projects (Funding Opportunity No. R21AS00257); and

WHEREAS, the City of Watford City, has identified a project that exemplifies the objectives of the WaterSMART grant program;

THEREFORE, be it resolved as follows:

1. The Watford City City Council verifies that (Justin Smith, Public Works Director) has legal authority to enter into an agreement with Reclamation.

2. The Watford City City Council has reviewed and supports the application submitted.

3. The Watford City City Council ensures that the City of Watford City is capable of providing the amount of funding and/or in-kind contributions specified in the funding plan.

4. That if selected for a WaterSMART Grant under the Fiscal Year 2023, the City of Watford City will negotiate and execute a Cooperative Agreement with Reclamation on/or prior to the established deadline, to fund at least 50% of the project costs and provide documentation showing the sources of non-Reclamation funding that totals 50% of project costs for the Project.

ADOPTED AND APPROVED this _____ day of _____ 2022.

_____
Mayor, Philip Riely

ATTEST:

_____
City Auditor, Peni Peterson