

Turtle Creek Cooperative Watershed Group Development and Management Plan



Applicant

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1.0 Technical Proposal

1.1. Executive Summary

March 30, 2022

McLean County Water Resource Board, City of Washburn, North Dakota

The McLean County Water Resource Board (WRB) is seeking funding and assistance in the amount of \$69,147 from the Bureau of Reclamation (Bureau) WaterSMART Cooperative Watershed Management Program (CWMP) as a new group to accomplish the following: 1. Create the Turtle Creek Watershed Partnership, and 2. Prepare a watershed management plan (Plan) that will guide management of water use in the watershed. The WRB intends this to be a two-year program with the first year being focused on creating a diverse group and data collection. The second year will be focused on management plan preparation. Turtle Creek is a rural watershed with a total size of approximately 150 square miles in the project area that has a high diversity of water uses, needs and infrastructure including private livestock producers, irrigators, a regional water supply canal, soil and water conservation issues, a fecal coliform TMDL, and federal waterfowl production areas. There is potential for conflict among these water users. It is the WRBs intent to build a diverse watershed group to collaborate and build consensus on management needs related to conservation of water, drought management, restoration of water and water quality, stream channel restoration, and management of flow rates in the stream to meet the needs of all stakeholders in a way that avoids conflict. A data collection task is being included because little is known about present day flow conditions in Turtle Creek, and flow data is needed to create a sustainable management system related to flow rates, and water levels in the stream and lakes the stream flows through.

During the second year a watershed management plan will be prepared for Turtle Creek to address issues related to high surface and groundwater levels, irrigation water supply, drought management and low flow augmentation, water quality, degrading stream corridors occurring in the watershed, updating the management plan for release of water from the regional canal to the stream, and other issues identified by the partnership. It is the purpose of the Plan to identify the watershed management needs in the area and develop a prioritized list of local solutions to be implemented to address the needs. To be comprehensive the Plan will draw on a variety of programs for input and support, such as the Section 319 program of the South McLean County Soil Conservation District and the North Dakota Department of Environmental Quality, water management programs

of the North Dakota Department of Water Resources, Bureau of Reclamation WaterSMART Program and other federal programs that can identified.

1.2. Project Location

Turtle Creek has its headwaters in the general area of the City of Turtle Lake, ND, and discharges into the Missouri River approximately 1.6 miles southeast of the City of Washburn, ND (Figure 1). The Turtle Creek Watershed is part of the HUC 8 10130101. Specifically, the Project area includes HUC 10 1013010104 (Turtle Creek). It is a largely prairie watershed with approximately 60 percent of the area in agricultural production. Other significant land use types include lakes and waterfowl production areas. The upper watershed area has a maximum elevation around 2100-ft and at the outlet to the Missouri River the elevation is approximately 1650-ft. The gradient of the approximately 70-mile long perennial stream is approximately 4 feet per mile.

Mean annual precipitation in the watershed is approximately 17.5 inches. With the continental climate of North Dakota, the rainfall can vary significantly from year to year, as shown by the long-term rain gage located at the City of Turtle Lake. In the 80-year record at that gage there are 22-years where the rainfall total was less than 15-inches, and 12-years where it was greater than 20-inches. The lowest annual rain that occurred at Turtle Lake was 5.3-inches and the greatest was 27.8-inches.

Significant areas of the upper watershed have sandy soils which infiltrate all runoff or have lakes in depressional areas. However, those same soils are relatively deep and form a shallow aquifer that releases water from springs into the perennial Turtle Creek.

There are lakes through which the stream flows such as Lake Ordway and Turtle Lake that are important component of the Project. For instance, there are irrigators who withdraw water from Lake Ordway, and Turtle Lake is used for waterfowl production.

The McClusky Canal, a major water supply works constructed by the Bureau of Reclamation, and managed by the Garrison Diversion Conservancy District, crosses east-west through the upper watershed. There are several points where water can be released from the canal into the Turtle Creek watershed. Another aspect of the McClusky Canal was identified by a 1996 study which found leakage of water from the canal to the shallow aquifer underlying Turtle Creek (North Dakota State Water Commission, 1994). Related to management of the McClusky Canal, there is an agreement in place between the Bureau of Reclamation and Fish and Wildlife Service regarding water levels in the Turtle Lake area. This agreement was created in 1982 with a draft update revision dated 1992 (Bureau of Reclamation & Fish and Wildlife Service, 1992).

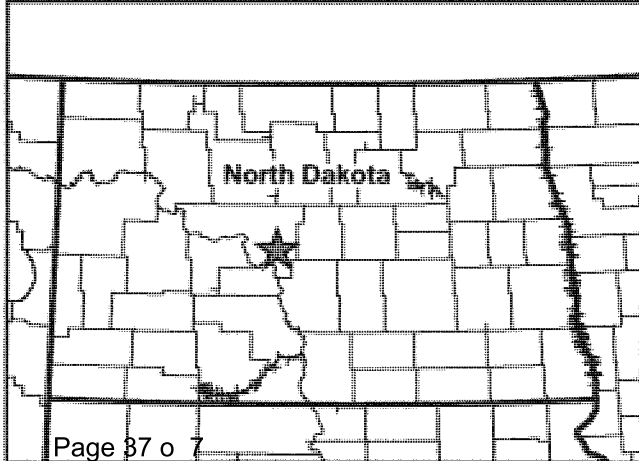


Figure 1:
Turtle Creek Watershed
HUC-10 Watershed Boundary

Legend

- ★ Project Location
- Watershed Boundary
- ▨ USBR Lands
- Waterfowl Production Areas



0 8,750 17,500
 Feet
 1 inch = 17,500 feet



A TMDL for E. coli Bacteria was established for Turtle Creek in 2015 (North Dakota Department of Health, 2015). Meeting TMDL goals will be a management need of this Project.

Landownership in the watershed is primarily private with these lands largely in agricultural production for a variety of crops and livestock. The federal government is the second largest land manager either through ownership of land or through long term leases. Federally control lands are either managed for infrastructure (McClusky Canal) or waterfowl production.

1.3. Technical Project Description

Applicant Category: New Watershed Group

The WRD is seeking funding as a new watershed group, The Turtle Creek Watershed Partnership, because the management of the watershed requires a diverse and collaborate group to be successful. In regards to the WRD, it has been in existence over 40 years. The issue of managing Turtle Creek has only arisen as a modern-day issue in the last several years. During this time there have been informal discussions regarding Turtle Creek water management between the WRD and other stakeholders. A greater level of interaction among stakeholders is now very important to improving the management of the Turtle Creek watershed. This would involve a diverse watershed group to represent the entire geographic scope of the watershed and the multiple agencies and stakeholders with various management responsibilities. The WRD appreciates the opportunity to apply for CWMP funding to make that next step a reality.

When it comes to water management, there are numerous users, uses and stakeholders of water in the Project Area with a variety of needs that have a potential to be in conflict. Furthermore, little is known about the present-day hydrologic budget of Turtle Creek, and management decision must be made with very limited data. For instance, there are periods of drought when there isn't enough water flowing down the stream to meet all needs, and at other times there is too much resulting in shallow seasonal flooding that adversely affects the riparian corridor. Decisions regarding watershed management in the Turtle Creek watershed need to be consensus based with input that addresses the needs of all stakeholders and uses. The WRD will use the grant to reach out to stakeholders to create a diverse group, help lead the preparation of a consensus-based mission and goals statements for watershed management and protection of the environment, and ultimately help the partnership prepare a sustainable watershed management plan for Turtle Creek.

Eligibility of Applicant:

The McLean County Water Resource District is a local government overseen by a water resource board that is part of McLean County North Dakota and reports to the county board. WRDs are responsible for water management at the local level in North Dakota, and address water management issues such as drainage, water control, and watershed planning projects. Water Resource Districts are empowered by North Dakota Century Code Chapter 61-16.1. The WRD is both legally and technically capable of promoting the sustainable use of water resources.

Turtle Creek and its watershed are a significant resource for McLean County and therefore important to the WRD as a management concern. The WRD has received contacts from landowners related to the management of Turtle Creek and have taken the issue of preparation of a watershed management plan as a high priority.

Project Goals:

Preliminary goals for the project are as follows:

- Complete outreach activities to diverse groups including private landowners, other county agencies, state agencies, and federal agencies to create the Turtle Creek Watershed Partnership.
- Build relationships with and between member organizations.
- Create a mission statement and goals based on consensus of the group members.
- Develop strategies that address the needs and issues of the entire watershed.
- Collaborative outreach efforts will involve at least 6 landowners, the McLean County Water Resource District, the South McLean County Soil and Water Conservation District, the Garrison Diversion Conservation District, The North Dakota Department of Water Resources, the Natural Resources Conservation Service and the Fish and Wildlife Service.
- To provide stream flow information operate one stream gage for the spring to fall period for two years.
- To review and update the 1993 draft operations plan for the McClusky Canal in the Turtle Lake area.
- In the second half of 2023 prepare a draft watershed management plan based on the consensus needs of the Turtle Creek Watershed Partnership.
- In 2024 finalize the watershed management plan based on further work on implementation and further data collection.

Approach:

Task A – Watershed Group Development

A1: Stakeholder Outreach and Partnership Building

The WRD will use existing relationships as a foundation for growth and host meetings to include stakeholders for whom the WRD has held informal discussions in the past and additional stakeholders. It is anticipated that all agencies who have watershed management activities in the Turtle Creek Watershed will be invited and that typically the stakeholders will have technical experts who can contribute to the Project. Representative agricultural producers and landowners will also be invited. At the start of the Project the focus will be on reaching out to and inviting stakeholders to a series of 4 monthly meetings in the April to July period. It is expected that reach out activities will take several months before the first meeting is held, especially for those stakeholders for whom information discussions have not been held. It is also anticipated that development of a mission statement, goals, a listing of issues to be address by the Project, and plan of activities to occur the first year will be key subjects of discussion the first several meetings.

The WRD Board will serve as facilitators for the stakeholder outreach and partnership building activities. Board members have been active in watershed management in McLean County for many years, and one of the board members resides in the Project Area. The WRD will engage the services of a Project Manager (PM) to manage stakeholder meetings, planning and related activities. The PM will assist with convening Turtle Creek Watershed Partnership meetings, which will typically be held at the City of Turtle Lake City Hall, which is located in the Project Area. Additionally, the PM will complete meeting minutes and circulate draft minutes to all stakeholders for review and comment. The meeting minutes will be used to prepare documents such as a mission statement for review and approval of all stakeholders. One of the board members will serve as the main point of contact for stakeholders, and will be supported in the role by the PM.

A2: Collection of Baseline Information

There is limited streamflow data for Turtle Creek. While there use to be a USGS stream gage in the watershed, it was discontinued in 2003, and conditions have changed significantly since that time. One activity that will be included in the Project, therefore, is the establishment of a seasonal stream gage to measure flows for two growing seasons (May through September). This activity would occur during years one and two of the Project. The planned location is at a highway crossing of Turtle Creek, where the existence of culverts can be used to develop a rating curve for transforming recorded water surface

elevation data into daily streamflow values. It is the goal of this data collection effort to establish a location where water surface elevation and associated flow rates can be used to make management decisions on the need for releases of water from the McClusky Canal into Turtle Creek. The planned gage location represents the overall watershed very well and is a well-suited location for making decisions on flow rates that represent the watershed.

The gage itself will be relatively simple. A recording pressure transducer will be inserted in a vertical pipe that has a connection to a pool upstream of the highway crossing. The data can be downloaded physically on a monthly basis or be cell phone connection to an existing web site. The PM, who is a water resources engineer and hydrologist, will be responsible for oversight of operation of the gage and reporting results to the partnership.

Task B: Watershed Restoration Planning

A number of watershed restoration planning activities will be completed by the Turtle Creek Watershed Partnership, with leadership provided by the WRD as follows:

- Completion of GIS analysis to provide mapping to be included in the Turtle Creek Watershed plan.
- During stakeholder meetings, and one and one in some cases, hold discussions with partners to gain ideas and details about restoration activities to complete.
- Work with partners including landowners, Federal agencies, state and local government agencies to identify best practices to improve the watershed in a sustainable manner.
- Review watershed-specific best management practices established by Federal, state and local agencies.
- Create a prioritized matrix for inclusion in the watershed restoration plan that describes and prioritizes watershed management activities and projects to be recommended for implementation.
- Review and update the McClusky Canal Operations Plan for the Turtle Lake Area.
- Starting the second half of the first year (2023) of the Project a Turtle Creek Watershed Restoration Plan (Plan) document will be prepared. This Plan will describe the Partnership development process and results. It will discuss issues of concern within the Project area related to water and identify potential solutions. A partial first draft will be completed by the end of 2023 and will contain results available at that point in time. The focus of the second year will be on Plan implementation, which will be added to the plan in 2024. The Plan will include a discussion of management practices considered and ultimately actions that were selected for implementation. A prioritized matrix of watershed management activities will be included in the Plan.

- Activities such as mapping and document preparation will be managed by the PM.

1.4. Evaluation Criteria

Evaluation Criteria A1 – Watershed Group Diversity

The WRD is will make a strenous effort to meet subcriterion A1 by reaching out to all interested parties and stakeholders in the watershed. One of the WRD board members resides in the Project Area, and the other two board members have WRD experience in the Project area. They will use that knowledge for the identification and reach out to stakeholders. Furthermore, from the recent informal discussions the WRD has had with stakeholders, there is good knowledge concerning people and agencies to enlist in the Turtle Creek Watershed Partnership. These informal discussions have included landowners such as agricultural producers and agencies. Another factor is a majority of meetings will be held at the City of Turtle Lake city hall, to make it relatively easy for local agencies and landowners to participate. Some meetings will be held at Washburn at the McLean County courthouse. The partnership will be open to all public and private entities and individuals, with the goal of maximizing diversity. Part of the outreach effort will include the publication of a meeting notice for all Turtle Creek Parntership Group meetings in the local newspaper of record and on the McLean County website.

An initial list of affected stakeholders that will be enlisted to join the Turtle Creek Watershed Partnership is as follows:

- Agricultural producers including but not limited to irrigators and livestock operations (Agriculture)
- Private landowners (Resource Management)
- City of Turtle Lake (Recreation/Hunting)
- South McLean County Soil Conservation District (Soil Conservation/Water Quality)
- McLean County Board of Commissioners (Resource Management)
- Garrison Diversion Conservancy District (Water Use)
- ND Department of Water Resources (Water Use, Watershed Management, Water Rights)
- ND Department of Environmental Quality (Water Quality)
- ND Department of Game and Fish (Fish and Wildlife)
- US Fish and Wildlife Service (Fish and Wildlife)
- Bureau of Reclamation (Water Use)
- NRCS (Soil and Water Conservation)

The WRD will use grant funds to identify and engage affected partners/stakeholders to develop a process to identify the following conserns with the watershed:

- Flooding

Drought
Irrigation
Water Use
Water releases from the McClusky Canal
Water quality
Stream channel degradation
Erosion
Soil and watershed health
Groundwater
Sustainable agriculture
Restoration of native habitat

The WRD will use a consensus-based process to prioritize needs, short term solutions and long-term watershed management solutions. A watershed management plan will be prepared on that basis.

Letters of Support that have been obtained as a result of informal discussions held to date are found in Appendix B. At this point in time, agricultural producers, the South McLean Soil Conservation District and the North Dakota Department of Water Resources has expressed support for the formation of the new group.

Evaluation Criteria A2 – Geographic Scope

The Geographic Scope of the Project is depicted in Figure 1, which shows the HUC-10 boundary that is applicable. The Project Area, which is entirely in McLean County, includes this entire HUC-10 1013010104 boundary, which is approximately 150 square miles in size. The HUC-8 boundary associated with the Project area is very large and includes areas on both sides of the Missouri River.

Agencies such as the South McLean County Soil Conservation District, North Dakota state agencies, and the NRCS have watershed management responsibilities for the entire HUC-10. The Garrison Diversion Conservancy District and Bureau of Reclamation are primarily focused on the operation of the McClusky Canal. The US Fish and Wildlife Service is focused on the federal waterfowl production areas depicted on Figure 1, as well as threatened and endangered species. The land use of the watershed is approximately 60 percent agricultural, and it is expected ag producers in the stakeholder group would represent those areas.

Flooding and drought issues associated with the Turtle Creek floodplain are one focus of the Project. Irrigation water presently involves withdrawal of water from Lake Ordway or the local Turtle Creek aquifer. Water for livestock watering can be withdrawn along the length of the stream. To manage associated issues such as stream channel

degradation, groundwater-surface water interactions, and soil erosion involves the entire watershed.

Evaluation Criteria B1 – Critical Watershed Needs or Issues

The Project Area is very interesting from the viewpoint of the high diversity of water uses, needs and infrastructure to be address including livestock producers, irrigators, crop production, a regional water supply canal, stream channel degradation, soil and water conservation issues, groundwater-surface water interactions, an absence of streamflow data, a fecal coliform TMDL, and federal waterfowl production areas, and fish and wildlife management in general. All these issues need to be blended into a consensus-based list of critical issues to be reviewed and the watershed management plan to be prepared.

The McClusky Canal will be one discussion topic. For example, water from the canal is released to Turtle Creek to support agricultural operations including irrigators and livestock producers and to support the federal waterfowl production areas. There is also leakage through the bed of the canal that enters the shallow Turtle Lake aquifer, which is a source of spring flows to Turtle Creek. Furthermore, there is not data or a control location where a decision regarding the amount of water to release from the McClusky Canal can be judged. This leads to periods when releases occur when flow is already high in the stream. It also leads to drought periods when there is limited or no flow in Turtle Creek when a release would be beneficial, but one doesn't occur. Related to this is the operating plan for the McClusky Canal is 30 plus years old and needs to be updated for present conditions. Any critical need that is consider regarding the McClusky Canal also needs to include the water use at the federal waterfowl production areas plus protection of the habitat of wildlife and fish in the Project area.

In the last 40-years the channel of Turtle Creek has slowly become degraded for various reasons such as siltation, channel morphometry changes occurring because of prolonged high water and associated changes in vegetation and scour and erosion of the bed and bank of the stream. There are locations where the stream channel needs to be restored to reestablish the natural hydrology of the stream and the natural riparian habitat. There are also locations where scour and erosion of the stream needs to be mitigated. This will lead to discussions such as which stream reaches need to be restored and how can habitat be improved at the same time.

To protect Turtle Creek and associated lakes and wetlands from deposition of sediment from eroded soils and damage caused by extreme floods, soil and water conservation will be a critical issue. This will involve discussions regarding which areas of the watershed

area sources of sediment and how can soil health be improved to allow more retention of water in soils.

There are water quality issues to be addressed, such as the e. Coli TMDL. It is important to build water quality protection and improvement into management actions that are considered and eventually selected for implementation.

Evaluation Criteria B2 – Developing Strategies to Address Critical Watershed Needs or Issues.

Task A – Water Group Development

The WRD has held information conversations with some of the targeted stakeholders and partnering agencies but has not developed a comprehensive list of needs and issues. Identification of critical needs and issues is one of the outcomes that the WRD intends to obtain from the activities outlined in this funding proposal.

The WRD has existing relationships with many local landowners and partnering agencies. It is the intent of the WRD to reach out to all stakeholders through means such as telephone calls, email, and one on one meetings to grow the Turtle Creek Watershed Partnership. At this point in time there have been commitments to join the group from several local agricultural producers and the South McLean County Soil Conservation District. The WRD will also reach out to the general public, which would include conservation groups, through advertising partnership meetings in the local newspaper of record and on the McLean County website.

Historically there have not been cooperative and consensus-based discussions similar to those proposed by the funding request where all levels of agencies are involved, along with local landowners and the general public. These issues cannot be solved without a cooperative and consensus-based approach making the Turtle Creek Watershed Partnership a vital group for management of the Turtle Creek Watershed.

Task B – Watershed Restoration Planning

Consensus based watershed planning activities will involve the following:

- The WRD, with the help of the PM, will organize, lead and record Turtle Creek Watershed Partnership meetings.
- Each partner agency will bring issues of importance to their organization to the table at the partnership meetings, along with information on the issues to support decision making. It is expected that the partner agencies will have technical experts who can contribute to the process.

- Agricultural producers, other landowners and general public members will be provided the opportunity to provide testimony along with information on issues to support decision making.
- Four Turtle Creek Watershed Partnership Meetings are planned to be held the first year, starting in April and running through July.
- Meeting minutes will be taken at all partnership meetings and circulated in draft form to all members for review and comments. Final versions of meeting minutes will be created based on comments received.
- The first meeting in year one will be more introductory in nature. It will involve introductions, a general discussion of group purpose and issues led by the WRD, a discussion of a Mission Statement and ground rules led by the WRD and an opportunity for all members to express views. One outcome of the first meeting will be an initial list of critical issues to be explored, which will be built on in subsequent meetings.
- Follow on monthly meetings will be focused on discussions of critical issues, with each meeting having identified issues to discuss. New issues that arise will be added to the critical issues list.
- Additional meetings in the form of less formal one-on-one meetings or teleconferences can occur to allow further discussions. Group email discussions on critical issues are also planned.
- The goal for the first year is to have a draft matrix of prioritized critical issues along with identification of existing data needed to resolve critical issues. Various members of the group will be assigned to obtain existing data according to the technical expertise and resources of each member organization. It is not the intent of this proposal to collect new data with the exception of streamflow as described below.
- There is one critical data collection need, operation of a stream gage to obtain data representative of current climate conditions. The gage will also be used to establish a control point on Turtle Creek where water levels can be used to make management decisions regarding release rates from the McClusky Canal. This funding proposal includes operation of the gage for the May to September time period for two consecutive years. This will provide comparative data for flow rates in Turtle Creek and a stream rating curve for calculating the streamflow rate based on water surface elevation. The proposed gage will be at the site of a former USGS gage which will allow broader interpretation of stream flows to be made.
- The results of the meetings, discussions and critical issue matrix from the meetings and discussions, and stream gaging completed the first year will be used to prepare a first draft Turtle Creek Watershed Management Plan (Plan).

An outline will be prepared first and circulated to the Partnership for comment, followed by preparation of a first draft Plan.

- Three Turtle Creek Watershed Partnership meetings held the second year will be for the purpose of reviewing and refining draft Plan contents and for creating implementation details. The final Turtle Creek Watershed Management Plan being completed in the fall of year 2.

Implementation and Results

Evaluation Sub-Criterion C1 – Project Implementation

The table below provides the WRD understanding and abilities to complete the proposed tasks. Included in the table are timelines, milestones and approximate costs associated with each task. During the grant period, the WRD will expend in cash approximately \$69,147 including \$1,583.05 in WRD costs for travel, meeting space and advertising and \$67,256 in contractor fees.

Table 1 – Project Implementation

Task	Timeline	Milestones	Approximate Costs
Increasing Watershed Group Diversity	On-going throughout the grant period	A complete list of affected stakeholders and partners that will participate in the engagement and planning process	Cost to be supported by County WRD. Additional cost included in the Project Manager contract.
Grant Administration by WRD Board	On-going throughout the grant period	Meet Bureau of Reclamation grant administration and reporting requirements	Cost to be supported by County WRD.
Contract signed with Project Manager	Within 6 weeks of award. Services provided during months 1-24	Provide open communication protocols, planning, facilitating discussion at meetings, prepare watershed plan and assist with grant administration,	\$67,564
Initial Outreach to Stakeholders by WRD	1 st Quarter 2023	Develop list of stakeholders and arrange kickoff meeting	Cost to be supported by County WRD. Additional cost included in the Project Manager contract.
Project Partner Kickoff Meeting	April 2023	Agenda, meeting arrangements, invitations to stakeholders sent to Stakeholders, attendance goal of 60% of invited stakeholders, first draft critical issues matrix.	\$100 meeting facility \$106 Board Mileage \$15 advertising Additional costs included in the

			Project Manager contract.
Additional First Year Partnership Meetings	May – July 2023	Discussion of Critical Issues Matrix and Analyzing Issues	\$300 meeting facility \$320 Board Mileage \$45 advertising Additional costs included in the Project Manager contract.
Creation of Critical Issues Matrix	April – July 2023, ongoing	Draft of Critical Issues Matrix to be used for Plan preparation completed July 2023	Cost to be supported by County WRD. Additional cost included in the Project Manager contract.
Establish Stream Gage	April 2023	Stream gage installed and operating	\$2,838.39 in gage equipment and installation materials. \$2,448 included in Project Manager contract.
Stream Gage Operation	May-September 2023 & 2024	Daily data collection with monthly download. Annual data summary for inclusion in Plan.	\$7,288 in Project Manager contract.
Preparation of First Draft Plan Including Partner Review	October – December 2023	First draft Plan to be used as basis for detailed discussion of project management implementation needs	Cost included in Project Manager Contract
Second Year Meetings to Identify Implementation Needs	May – July 2024	Analysis and selection of management implementation needs	\$300 meeting facility \$320 Board Mileage \$45 advertising Additional costs included in the Project Manager contract.
Update Draft Plan to Include Implementation Details	July – August 2024	Include details of management practices selected for implementation in watershed Plan	Cost included in Project Manager Contract
Final Watershed Plan	October 2024	Turtle Creek Watershed Management Plan Completed.	Cost included in Project Manager Contract

Evaluation Sub-Criterion C2 – Building on Relevant Federal, State, or Regional Planning Efforts

The WRD is inviting federal, state and regional agencies with watershed management responsibilities to the Turtle Creek Watershed Partnership. One component of the creation of the critical issues matrix will be to obtain existing planning information from these agencies for use in identifying and analyzing critical issues. For example, stakeholder plans that would be reviewed are drought contingency plans by the ND Department of Water Resources and the e. Coli TMDL report by the ND Department of Health. The WRD will search for other relevant plans such as water conservation plans, nonpoint source and watershed-based plans.

Evaluation Criteria D – Presidential and Department of the Interior Priorities

Sub-criterion No. E1 Climate Change

The Project will address climate change by seeking to restore the Turtle Creek channel and associated habitat. We will collect data on the present-day hydrology of the stream for use in decision making. One goal of the Project is to create a plan for managing flows in Turtle Creek that addresses present climate conditions and how they are changing. The current management results in periods when the flow is excessive and other times when it is inadequate or there is no flow. One purpose of the proposed Turtle Creek Watershed Management Plan is to develop a logical management system related to flow rates in the stream, minimizing periods of excessive or inadequate flows, which will increase the quality and resiliency of water uses in the watershed, including water supply, wildlife habitat, and water quality.

Sub-criterion No. E2 Disadvantaged or Underserved Communities

On page 2 of the Notice of Funding Opportunity No. R22AS00163, a definition is provided as follows: “A disadvantaged community, as defined in Section 6001(2) of the Cooperative Watershed Management Act, means a community (including a city, town, county or reasonably isolated and divisible segment of a larger municipality) with an annual median household income that is less than 100 percent of the statewide annual median household income for the state in which the community is located, according to the most recent decennial census.”

A large portion of the Project area meets that definition. According to US Census Bureau data (Appendix D) the median household income for the state of North Dakota (in 2020 dollars, 2016-2022) is \$65,315. Data aggregated for the Zip Code area associated with the City of Turtle Lake and surrounding portion of the Project area, give the median household income for this period as \$33,073 (Appendix D). The contributing

factors to this area being disadvantaged are believed to be Low income, high and persistent poverty, high unemployment and high transportation cost burden and/or low transportation access.

This project is focused on managing the watershed of Turtle Creek such that conditions become more sustainable and resilient. This will help the disadvantaged community residing in the area by improving irrigation, which will improve local economics, and improving the quality of life through there being improved stream corridor quality, hunting and water quality.

Sub-criterion No. E3 Tribal Benefits

There are no tribal entities in the Turtle Creek Project Area. Tribal entities and tribal members will be able participate or comment as members of the general public.

2.0 Project Budget

The total proposed project budget request from the Bureau of Reclamation WaterSMART program is \$69,147. The following Tables 2 and 3 provide budget details in the recommend Bureau of Reclamation format.

Table 2 – Summary of Non-Federal and Federal Funding Sources

Funding Sources	Amount
Non-Federal Entities	\$0
Non-Federal Subtotal	\$0
Requested Reclamation Funding	\$69,147

Table 3 – Total Project Cost

Source	Amount
Costs to be reimbursed with the requested Federal funding	\$69,147
Cost to be paid by the applicant	\$0
Value of third-party contributions	\$0
Total Project Cost	\$69,147

Table 4 – Budget Proposal

Budget Item Description	Computation		Quantity Type	Total Cost
	\$/Unit	Quantity		
Salaries and Wages				
Employee 1				\$0
Fringe Benefits				
Full-Time Employees				\$0
Equipment				
Item A				\$0
Supplies and Materials				
WRD Mileage	.585	1330	miles	\$778.05
Meeting Space	100	7	ea	\$700.00
Newspaper Ads	15	7	ea	\$105.00
Stream gage equipment	1	\$2,838.39	ea	\$2838.39
Stream gage materials	1	\$150.00	ea	\$150.00
Contractual/Construction				
Contractor A	\$67,564	1	ea	\$67,564
Contractor B				
Third-Party In-Kind Contributions				
Contributor A				\$0
Other				
Other				\$0
Total Direct Cost				
Indirect Costs				
Type of rate	Percentage	\$base		\$0
Total Estimated Project Costs				\$69,147.00

Budget Narrative

Any cost to McLean County, other than those specifically requested in this budget proposal, will be the responsibility of the county. This budget proposal does not include any project costs that may be incurred prior to the award.

Salaries and Wages

None. The WRD Board is voluntary and there is no charge for their time.

Fringe Benefits

None

Travel

The WRD has asked for \$778.05 for local travel by the three board members to the seven Turtle Creek Watershed Partnership meetings being held in Turtle Lake, ND. Project funds will be used to pay for mileage. The mileage reimbursement is based on 2022 GSA rates.

Equipment

None

Materials and Supplies

The WRD is asking for \$700 for meeting space for seven meetings at the City of Turtle Lake city hall. The WRD is also asking for \$105 for advertising the seven Turtle Creek Watershed Partnership meetings in the local newspaper of record. This funding proposal contains \$2838.39 for the purchase of a recording water level transducer and associated data charges for use as a water level recording device for two seasons at the proposed stream gage. In addition, the WRD request \$150 for supplies to construct the stream gage.

Contractual

The WRD is requesting \$67,564 for one contract for Project Management services including facilitation of meetings, preparation of the Turtle Creek Watershed Plan and installation and operation of the gage on Turtle Creek. The Project Manager (PM) has been selected by a qualifications-based procurement method. One of the tasks of the PM is to assist the board with stakeholder reach out activities by providing technical support with explanations of information and answering questions. The PM will also assist the WRD will meeting facilitation including keeping and updating the list of group members, taking and distributing meeting minutes, using the meeting minutes to prepare mission and goal statements, and using the meeting minutes to prepare a critical issues matrix including periodic updates.

Another responsibility of the PM will be the preparation of the Turtle Creek Watershed Plan. The PM will gather the information obtained at the partnership meetings for use as supporting data for the Plan. A first draft will be completed in the fall of 2023 but will only have a limited implementation section at that time. The first draft will be circulated to group members for their review and comment. Any first draft comments received will be incorporated into the draft by the end of 2023. As the 2024 meetings progress, which will focus on implementation, the Plan will be continually updated. The PM will prepare a final draft Plan in July and August of 2024 and circulate it to the

partnership group for review and comment. Comments received will be used by the PM to finalize the Plan by the end of October 2024.

Installation and operation of the stream gage will also be the responsibility of the PM. The PM will provide oversight of purchase of the equipment, including materials needed for installation. The labor for gage installation and operation, including data reduction, will also come from the PM. Travel to the site for gage installation and operation will be an expense of the PM.

Third-Party In-Kind Contributions

None

Environmental and Regulatory Compliance Costs

The proposed funding does not involve construction. Because of that there will be no environmental and regulatory compliance cost associated with the proposed project.

Other Expenses

None

Indirect Costs

None

3.0 Overlap or Duplication of Effort Statement

There is no overlap between the proposed Project and any other active or anticipated proposals or projects in terms of activities, costs or commitment of key personnel. Nor is this proposal being submitted to the Cooperative Watershed Management Program of the Bureau of Reclamation duplicative of any proposal or project that has been or will be submitted for funding consideration to any other potential funding source, either Federal or non-Federal.

4.0 Environmental and Cultural Compliance

Question 1: Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)?

Answer: The work to be completed under the funding proposed involves planning and not construction, thus the initial work will have no impact on the environment.

Regarding Project implementation, the construction activities for which are not known at this time, it is expected those activities will involve environmental restorations. It is

believed that improved management of flow rates will have a positive benefit on both the quantity and quality of streamflow in Turtle Creek.

Question 2: 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?

Answer: There is no construction included in the funding proposal, so no impacts on threatened or endangered species would occur during the Project. There are stakeholders, such as the US Fish and Wildlife Service, who are experts in threatened and endangered species. It is the WRDs intent to use their expertise to identify any species or habitat that needs to be protected during implementation of management practices. All construction would be for restoration projects so those activities should be beneficial to threatened and endangered species. In addition, there is a list of threatened and endangered species for every county in North Dakota which will be referenced. Environmental review processes in place require analysis and protection of threatened and endangered species during proposed construction projects.

Question 3: 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.

Answer: Turtle Creek and a number of associated lakes are Waters of the United States. However, the proposed funding is not for construction, so the proposed Project has no impacts on Waters of the United States. Implementation during a later phase may involve environmental restoration in one of these water bodies, but those details are unknown at this time. Appropriate permit review processes would be followed.

Question 4: When was the water delivery system constructed?

Answer: The delivery system providing water to Turtle Creek is the McClusky Canal, which was constructed from 1970 to 1976.

Question 5: 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.

Answer: No, this type of activity is not part of the funding proposal, nor will this type of activity be in implementation efforts.

Question 6: Area any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?

Answer: No. The agency requesting funding is not an irrigation district. The funding proposal does not involve buildings, structures or features eligible for listing on the National Register of Historic Places.

Question 7: Are there any known archeological sites in the proposed project area?

Answer: No.

Question 8: Will the proposed project have a disproportionately high and adverse effect on low income and minority populations?

Answer: No. The funding proposal is a planning effort that will consider these populations. This is an environmental restoration project in more rural areas and will not adversely affect any local resident.

Question 9: Will the proposed project limit access to, and ceremonial use of, Indian sacred sites or result in other impacts on tribal lands?

Answer: No. There are no Indian sacred sites or tribal lands in the Project area.

Question 10: 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?

Answer: No. The funding proposal is a planning effort and does not involve ground disturbance. It is anticipated that that future implementation projects involving construction that may be selected during a later project phase will involve environmental restoration that features native species.

5.0 Required Permits and Approvals

The funding proposal is a watershed planning project for which there are no permits and approvals needed.

6.0 Letters of Support

Letters of support are found in Appendix A.

7.0 Official Resolution

The official resolution is found in Appendix B.

8.0 Conflict of Interest Disclosure

The WRD board, who are managers of the county department submitting this funding proposal, do not have any actual or potential conflict of interest at the time of this submission.

9.0 Federal Forms

Copies of the Federal Forms are found in Appendix C.

10.0 References

North Dakota Department of Health, 2015, E. coli Bacteria for Turtle Creek in McLean County, North Dakota, by J Collins.

North Dakota State Water Commission, 1996, The Geohydrology of East-Central McLean County, North Dakota, by K.D. Swanson.

US Bureau of Reclamation and Fish and Wildlife Service, 1992, Draft Operating Plans for Control of Water Surface Elevations in the Turtle Lake Area Garrison Diversion Unit, North Dakota.

US Census Bureau, Quick Facts for North Dakota, 2016 – 2022, <https://www.census.gov/quickfacts/ND> , Accessed March 25, 2022.

Zipdatamaps.com/58575, Zip Code 58575 Map and Profile, <https://www.zipdatamaps.com/58575> , Accessed 3/25/22.

APPENDIX A

Letters of Support

Cory Grabinger
518 Main St
Turtle Lake, ND 58575

March 17, 2022

Bureau of Reclamation
Attn: Ms. Robin Graber
Mail Code: 86-6300
PO Box 25007
Denver, CO 80225

RE: McLean County North Dakota Water Resource Board's WaterSmart Grant application

Dear Ms. Graber,

Please accept this letter of support on behalf of Cory Grabinger, local landowner, stating my support of the McLean County Water Resource Board's (the Board) grant application through the Bureau of Reclamation WaterSmart Cooperative Watershed Management Program (CWMP). In particular, we support the creation of a new watershed group who would collaborate on developing a watershed plan to meet critical needs of the Turtle Creek Watershed. We support the collection of baseline data, including seasonal flow data, to help guide management decisions. Another critically important feature of the project is the update of the approximately 40-year old "OPERATING PLANS FOR CONTROL OF WATER SURFACE ELEVATIONS IN THE TURTLE LAKE AREA GARRISON DIVERSION UNIT, NORTH DAKOTA" that affects the hydrology of the watershed.

The ultimate goal of the project is to create a diverse group to collaboratively develop a multipurpose water management philosophy that addresses many water uses such as wildlife habitat, water supply/irrigation, livestock and agricultural production, water quality concerns, stream channel restoration and other potentially competing demands.

Currently the Board is in the process of formalizing the composition of the diverse watershed group which has to this point operated informally where matters of watershed management are concerned. There are many stakeholders who can bring important views and needs to the cooperative group. For example, local landowners, US Fish and Wildlife Service, North Dakota Department of Water Resources, South McLean County Soil and Water Conservation District, NRCS, and the Garrison Diversion Conservancy District.

Please do not hesitate to contact McLean County Water Board Manager Shannon Jeffers (701-460-0923) if you have questions concerning this issue.

Sincerely,



Cory Grabinger
Local Landowner

APPENDIX B

Official Resolution

By Resolution: McLean County Water Resource District

March 18, 2022

The McLean County Water Resource District approved the Turtle Creek Cooperative Watershed Group and Management Plan and associated Water Smart grant application to move forward as a project.

Water District Board members: Shannon Jeffers, Gerard Goven, Lynn Oberg

Lynn Oberg, Chairman

A handwritten signature in cursive script that reads "Lynn Oberg Chairman". The signature is written in black ink and is positioned below the printed name.

APPENDIX C

Federal Forms

APPENDIX D

Disadvantaged Community Data



QuickFacts
North Dakota

QuickFacts provides statistics for all states and counties, and for cities and towns with a *population of 5,000 or more*.

Table

All Topics	North Dakota
Population Estimates, July 1, 2021, (V2021)	774,945
Population	
Population Estimates, July 1, 2021, (V2021)	774,945
Population estimates base, April 1, 2020, (V2021)	779,094
Population, percent change - April 1, 2020 (estimates base) to July 1, 2021, (V2021)	-0.5%
Population, Census, April 1, 2020	779,094
Population, Census, April 1, 2010	672,591
Age and Sex	
Persons under 5 years, percent	7.1%
Persons under 18 years, percent	23.6%
Persons 65 years and over, percent	15.7%
Female persons, percent	48.8%
Race and Hispanic Origin	
White alone, percent	86.9%
Black or African American alone, percent (a)	3.4%
American Indian and Alaska Native alone, percent (a)	5.6%
Asian alone, percent (a)	1.7%
Native Hawaiian and Other Pacific Islander alone, percent (a)	0.1%
Two or More Races, percent	2.3%
Hispanic or Latino, percent (b)	4.1%
White alone, not Hispanic or Latino, percent	83.7%
Population Characteristics	
Veterans, 2016-2020	46,288
Foreign born persons, percent, 2016-2020	4.3%
Housing	
Housing units, July 1, 2019, (V2019)	380,173
Owner-occupied housing unit rate, 2016-2020	62.5%
Median value of owner-occupied housing units, 2016-2020	\$199,900
Median selected monthly owner costs -with a mortgage, 2016-2020	\$1,457
Median selected monthly owner costs -without a mortgage, 2016-2020	\$476
Median gross rent, 2016-2020	\$828
Building permits, 2020	3,493
Families & Living Arrangements	
Households, 2016-2020	320,873
Persons per household, 2016-2020	2.29
Living in same house 1 year ago, percent of persons age 1 year+, 2016-2020	82.5%
Language other than English spoken at home, percent of persons age 5 years+, 2016-2020	6.0%
Computer and Internet Use	
Households with a computer, percent, 2016-2020	91.3%
Households with a broadband Internet subscription, percent, 2016-2020	83.1%
Education	
High school graduate or higher, percent of persons age 25 years+, 2016-2020	93.1%
Bachelor's degree or higher, percent of persons age 25 years+, 2016-2020	30.7%
Health	
With a disability, under age 65 years, percent, 2016-2020	7.2%
Persons without health insurance, under age 65 years, percent	8.1%
Economy	
In civilian labor force, total, percent of population age 16 years+, 2016-2020	69.1%

In civilian labor force, female, percent of population age 16 years+, 2016-2020	64.8%
Total accommodation and food services sales, 2012 (\$1,000) (c)	2,045,123
Total health care and social assistance receipts/revenue, 2012 (\$1,000) (c)	5,418,355
Total manufacturers shipments, 2012 (\$1,000) (c)	14,427,360
Total retail sales, 2012 (\$1,000) (c)	15,519,816
Total retail sales per capita, 2012 (c)	\$22,183

Transportation

Mean travel time to work (minutes), workers age 16 years+, 2016-2020	17.6
--	------

Income & Poverty

Median household income (in 2020 dollars), 2016-2020	\$65,315
Per capita income in past 12 months (in 2020 dollars), 2016-2020	\$36,289
Persons in poverty, percent	△ 10.2%

BUSINESS

Businesses

Total employer establishments, 2019	24,654
Total employment, 2019	353,333
Total annual payroll, 2019 (\$1,000)	18,291,999
Total employment, percent change, 2018-2019	2.1%
Total nonemployer establishments, 2018	56,523
All firms, 2012	68,270
Men-owned firms, 2012	37,016
Women-owned firms, 2012	20,316
Minority-owned firms, 2012	3,190
Nonminority-owned firms, 2012	62,271
Veteran-owned firms, 2012	6,584
Nonveteran-owned firms, 2012	56,904

COMMUNITY

Geography

Population per square mile, 2010	9.7
Land area in square miles, 2010	69,000.80
FIPS Code	38

[About datasets used in this table](#)

Value Notes

⚠ Estimates are not comparable to other geographic levels due to methodology differences that may exist between different data sources.

Some estimates presented here come from sample data, and thus have sampling errors that may render some apparent differences between geographies statistically indistinguishable. Click the Quick Info ⓘ icon to the row in TABLE view to learn about sampling error.

The vintage year (e.g., V2021) refers to the final year of the series (2020 thru 2021). Different vintage years of estimates are not comparable.

Users should exercise caution when comparing 2016-2020 ACS 5-year estimates to other ACS estimates. For more information, please visit the [2020 5-year ACS Comparison Guidance](#) page.

Fact Notes

- (a) Includes persons reporting only one race
- (c) Economic Census - Puerto Rico data are not comparable to U.S. Economic Census data
- (b) Hispanics may be of any race, so also are included in applicable race categories

Value Flags

- Either no or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest or upper int open ended distribution.
- F Fewer than 25 firms
- D Suppressed to avoid disclosure of confidential information
- N Data for this geographic area cannot be displayed because the number of sample cases is too small.
- FN Footnote on this item in place of data
- X Not applicable
- S Suppressed; does not meet publication standards
- NA Not available
- Z Value greater than zero but less than half unit of measure shown

QuickFacts data are derived from: Population Estimates, American Community Survey, Census of Population and Housing, Current Population Survey, Small Area Health Insurance Estimates, Small Area Income and F Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

CONNECT WITH US

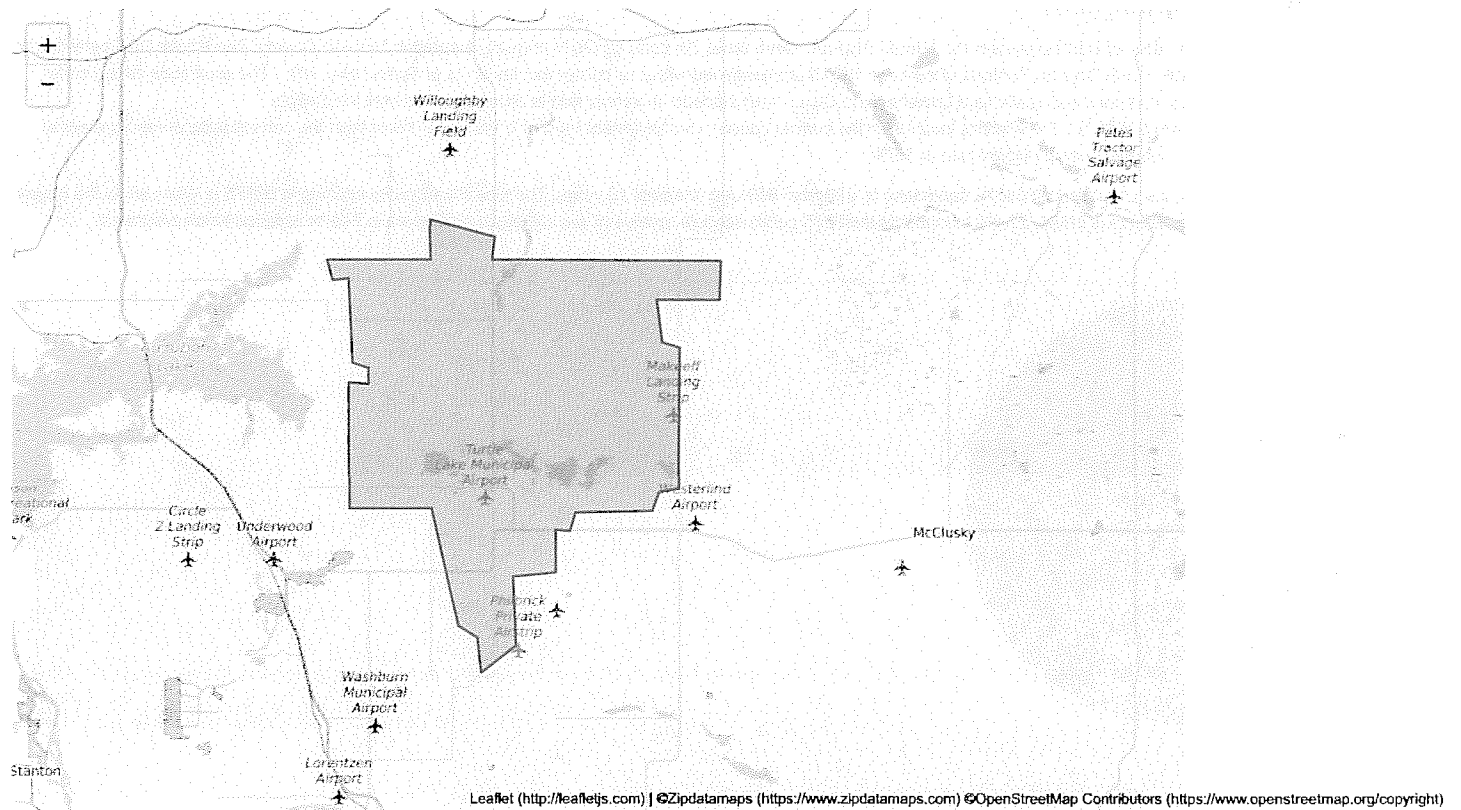


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Home (//www.zipdatamaps.com/index.php) / North Dakota Atlas (//www.zipdatamaps.com/atlas/state-level/us/atlas-of-north-dakota) / McLean (//www.zipdatamaps.com/mclean-nd-county-zipcodes) / Turtle Lake (//www.zipdatamaps.com/zipcodes-turtle-lake-nd) / Zip Code 58575

Zip Code 58575 Map and Profile

Map of Zip Code 58575 Border



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(https://www.zipdatamaps.com/zipcodes-turtle-lake-nd) article?

u=http://www.zipdatamaps.com/zipcodes-turtle-lake-nd/zipcode-profile+and+map+and+source=https://www.zipdatamaps.com

Zip Code 58575 Profile Data

Official Zip Code Name	Turtle Lake (//www.zipdatamaps.com/zipcodes-turtle-lake-nd)
Zip Code State	North Dakota (//www.zipdatamaps.com/list-of-zip-codes-in-north-dakota.php)
Zip Code Type	Non-Unique
Primary County:	McLean (//www.zipdatamaps.com/mclean-nd-county-zipcodes)

Area Code (https://www.zipdatamaps.com/area-codes/map-of-all-north-dakota-area-codes)	701 (https://www.zipdatamaps.com/area-code-701)
Current Population:	920
Racial Majority:	White 98.15%
Public School Racial Majority:	White 94.5%
Unemployment Rate:	2.7% (economics/jobs/region/minot-bismark-dickinson-area-unemployment-level-heat-map)
Median Household Income	\$33073
Average Adjusted Gross Income (economics/income/agi/metro/wealthiest-zipcodes-in-minot-bismark-dickinson-area)	\$65120
School Test Performance:	Average
Average Commute Time	18.2 Minutes
Time Zone:	Central Daylight Time (https://www.zipdatamaps.com/time/country/us/united-states-time-zone-map)
Elevation Range	1828 - 1998 ft.
Area	226 Sqm.
Coordinates(Y,X)	47.57124600, -100.89032800

Zip Code 58575 Description

Zip Code 58575 is located in the state of North Dakota in the Minot - Bismark metro area. Zip code 58575 is primarily located in McLean County. The official US Postal Service name for 58575 is TURTLE LAKE, North Dakota. Portions of zip code 58575 are contained within or border the city limits of Turtle Lake, ND, . The area code for zip code 58575 is 701. 58575 can be classified socioeconomically as a Lower Middle Class class zipcode in comparison to other zipcodes in North Dakota. The current unemployment level in 58575 is 2.7% which is lower than the current county unemployment level of 3.0% and is lower than the current state unemployment at 2.8% and lower than the current national unemployment rate at 3.9%.

According the 2010 US Census, the population of 58575 decreased to 920 from 969 over the past 10 years. The majority ethnicity residing in 58575 is White while the majority ethnicity attending 58575 public schools is White. 27.4% of students in 58575 public schools receive or are eligible to participate in free or reduced lunch programs.

