July 22, 2019

FINDING OF NO SIGNIFICANT IMPACT

TO ALL INTERESTED GOVERNMENTAL AGENCIES AND PUBLIC GROUPS

As required by state and federal rules for determining whether an Environmental Impact Statement is necessary, an environmental review has been performed on the proposed action below:

<table>
<thead>
<tr>
<th>Project</th>
<th>Town of Cascade Wastewater System Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Cascade, Montana</td>
</tr>
<tr>
<td>Project Number</td>
<td>C302246</td>
</tr>
<tr>
<td>Total Cost</td>
<td>$1,129,738</td>
</tr>
</tbody>
</table>

The Town of Cascade, through its Wastewater System Improvements Preliminary Engineering Report (PER), written in May of 2016, identified the need to make improvements to its wastewater system. The Town’s original gravity collection system of clay tile pipe and its Russell Drive lift station were installed in the 1940s. The current wastewater treatment system, a two-cell facultative lagoon followed by spray irrigation, was built in 1998 along with the Main Lift Station.

The Town has been pro-active in replacement of its sewer mains since the early 2000s. However, there are still several sections of sewer main that regularly become blocked and result in backups into homes or overflows into streets or right-of-ways. Other problems include a lack of backup power at the Russell Drive lift station and insufficient emergency pumping capacity at the Main Lift Station, which have resulted in sewer overflows at the lift stations during power outages. At 2.2 feet of measured depth, sludge in the primary lagoon cell has accumulated to greater than the design depth of 2 feet. Lagoon capacity is reduced when the sludge layer encroaches on needed treatment volume, shortening detention time and negatively impacting effluent quality.

The proposed project consists of approximately 2,600 feet of open-cut sewer main replacement; 610 feet of cured-in-place pipe (CIPP) rehabilitation; fourteen new manholes; two new air release valves on the existing force main; rehabilitation of the Main Lift Station; and new generators at the Russell Drive and Main lift stations. Sludge from the primary lagoon cell will be removed and land-applied at the Town’s wastewater spray irrigation site in accordance with Federal 40 CFR 503 sludge disposal regulations, or hauled to a landfill. The land application of sludge will enhance soil conditions and provide beneficial reuse of the biosolids. The project is proposed for construction in the fall of 2019.

The estimated project cost (including administration, engineering, and construction) is $1,129,738. The city will fund these project costs through a $500,000 grant from the Treasure State Endowment Program (TSEP); $15,138 in local funds; and a loan in the amount of $614,600 from the Water Pollution Control State Revolving Fund (WPCSRF) Program. Of the WPCSRF funds provided, $153,600 of the loan will be forgiven, with the remaining $461,000 having an interest rate of 2.5% and a term of 20 years. The current residential sewer rate in...
Cascade is $43.64 per month and the need for a rate increase to fund this project is not anticipated.

Federal and State grant/loan programs will fund the project. Environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species, and historical sites are not expected to be adversely impacted because of the proposed project. Public participation during the planning process demonstrated support for the selected alternative. No significant long-term environmental impacts were identified. An environmental assessment (EA), which describes the project and analyzes the impacts in more detail, is available for public scrutiny on the DEQ web site http://deq.mt.gov/Public/ea and at the following locations:

Department of Environmental Quality
1520 East Sixth Avenue
P.O. Box 200901
Helena, MT 59620-0901
mmarsh@mt.gov

Town of Cascade
9 N Front St
Cascade, MT 59421

Comments on the EA may be submitted to the Department of Environmental Quality at the above address. After evaluating comments received, the department will revise the environmental assessment or determine if an environmental impact statement is necessary. If no substantive comments are received during the comment period, or if substantive comments are received and evaluated and the environmental impacts are still determined to be non-significant, the agency will make a final decision. No administrative action will be taken on the project for at least 30 calendar days after release of the Finding of No Significant Impact.

Sincerely,

Kevin B. Smith, PE
Engineering Bureau
Water Quality Division
Montana Department of Environmental Quality
I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant: Town of Cascade

Address: PO Box 314
Cascade, MT 59421

Project Number: SRF Project # C302246

B. CONTACT PERSON

Name: Mayor Murry S. Moore

Address: PO Box 314
Cascade, MT 59421

Telephone: (406) 468-2808

C. ABSTRACT

The Town of Cascade, through its Wastewater System Improvements Preliminary Engineering Report (PER), written in May of 2016, identified the need to make improvements to its wastewater system. The Town’s original gravity collection system of clay tile pipe and its Russell Drive lift station were installed in the 1940s. The current wastewater treatment system, a two-cell facultative lagoon followed by spray irrigation, was built in 1998 along with the Main Lift Station.

The Town has been pro-active in replacement of its sewer mains since the early 2000s. However, there are still several sections of sewer main that regularly become blocked and result in backups into homes or overflows into streets or right-of-ways. Other problems include a lack of backup power at the Russell Drive lift station and insufficient emergency pumping capacity at the Main Lift Station, which have resulted in sewer overflows at the lift stations during power outages. At 2.2 feet of measured depth, sludge in the primary lagoon cell has accumulated to greater than the design depth of 2 feet. Lagoon capacity is reduced when the sludge layer encroaches on needed treatment volume, shortening detention time and negatively impacting effluent quality.

The proposed project consists of approximately 2,600 feet of sewer main open-cut replacement; 610 feet of cured-in-place pipe (CIPP) rehabilitation; fourteen new manholes; two new air release valves on the existing force main;
rehabilitation of the Main Lift Station; and new generators at the Russell Drive and Main lift stations. Sludge from the primary lagoon cell will be removed and land-applied at the Town's wastewater spray irrigation site in accordance with Federal 40 CFR 503 sludge disposal regulations, or hauled to a landfill. The land application of sludge will enhance soil conditions and provide beneficial reuse of the biosolids. The project is proposed for construction in the fall of 2019.

The estimated project cost (including administration, engineering, and construction) is $1,129,738. The city will fund these project costs through a $500,000 grant from the Treasure State Endowment Program (TSEP); $15,138 in local funds; and a loan in the amount of $614,600 from the Water Pollution Control State Revolving Fund (WPCSRF) Program. Of the WPCSRF funds provided, $153,600 of the loan will be forgiven, with the remaining $461,000 having an interest rate of 2.5% and a term of 20 years.

Environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species, and historical sites are not expected to be adversely impacted because of the proposed project. Additional environmental impacts related to land use, water quality, air quality, public health, energy, noise, growth, and sludge disposal were also assessed. No significant long-term environmental impacts were identified.

Under Montana law, (75-6-112, MCA), no person may construct, extend, or use a public sewage system until DEQ has reviewed and approved the plans and specifications for the project. Under the Montana Water Pollution Control State Revolving Fund Act, DEQ may loan money to municipalities for construction of public sewage systems.

The DEQ, Technical and Financial Assistance Bureau, has prepared this Environmental Assessment to satisfy the requirements of the Montana Environmental Policy Act (MEPA) and the National Environmental Policy Act (NEPA).

D. COMMENT PERIOD

Thirty (30) calendar days.

II. PURPOSE OF AND NEED FOR ACTION

The Town of Cascade's wastewater collection system was first installed in the 1940s. This first collection system consisted of clay tile pipe, which included several storm drain connections; a small pump station on Russell Drive South; and an untreated, combined sewer overflow to the Missouri River. In 1963 a facultative lagoon was constructed on an island in the Missouri River to treat Cascade's wastewater before discharge to the river. Because of significant deficiencies with this wastewater treatment facility (WWTF), it was replaced with a two-cell, facultative lagoon followed by spray irrigation in 1998. This new system was located to the north of Town across the interstate highway.

The current WWTF with spray irrigation has been serving the town well since 1998. The only significant deficiency with the facility is the accumulation of sludge in the primary cell. At 2.2 feet of measured depth, sludge has accumulated to greater than the design depth
of 2 feet, and amounts to approximately 18,180 cubic yards of sludge. Excessive sludge depth can lead to odors and contribute to algal blooms through the release of additional BOD and ammonia load to the overlying water, a process known as benthal feedback. Lagoon capacity is also reduced when the sludge layer encroaches on needed treatment volume, shortening detention time and limiting treatment. Sludge removal will improve WWTP performance, and its application on farmland will enhance soil conditions and provide beneficial reuse of the biosolids.

The Town's old clay tile pipe has experienced numerous blockages and has reached the end of its useful life. This has resulted in sewage backups into homes and streets, posing risks to the environment and human health. Approximately 2,200 feet of sewer main have been replaced through the Town's sewer main replacement program that was begun in the early 2000s to correct these problems. While the Town has made good strides, there are still sections of the collection system that are decrepit and need replacement. One section of sewer crosses through the middle of a privately-owned parcel under several trailers, posing additional maintenance difficulties. In addition to the piping issues, the two lift stations lack adequate backup power, which has resulted in sanitary sewer overflows during power outages. There are also two faulty air release valves on the Town's force main to the WWTF.

Cascade's proposed wastewater improvements project will address long-standing collection system and lift station problems and provide for improved wastewater treatment with the removal of accumulated sludge. The proposed project includes:

- Approximately 2,600 feet of open-cut sewer main replacement within the southern portion of Town.
- 610 feet of cured-in-place pipe (CIPP) rehabilitation at the Maas property.
- Fourteen new manholes.
- Two new air release valves on the force main to the lagoon.
- Rehabilitation of the Main Lift Station.
- New generators at the Russell Drive and Main lift stations.
- Sludge removal and disposal from Cell #1 (approximately 18,000 cubic yards).

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION AND COSTS

The Town of Cascade's Preliminary Engineering Report (PER) analyzed various alternatives to correct deficiencies with the collection system, lift stations, and treatment/sludge disposal. Because the collection system and lift station improvements consist of minor upgrading and rehabilitation of existing components, a more detailed alternative analysis for these components will not be provided in this Environmental Assessment (EA). No-action alternatives were eliminated from further consideration for all three aspects of the proposed project because of serious health and safety concerns, in addition to apprehension about adequate wastewater treatment.

The chosen alternative for the collection system consists of replacement of aging and undersized sewer mains with 8-inch PVC pipe, and using cure-in-place pipe (CIPP) in the sewer main crossing the Maas Property. The recommended lift station alternative consists of a backup generator and transfer switch at each of the two lift stations, as well as some minor lift station and force main improvements.

An alternatives analysis for sludge dewatering/handling follows. Sludge will be removed
from the primary lagoon cell using a dredge pump mounted on a barge or other means approved by the Town and engineer for viable alternatives T-2 through T-5. All viable alternatives have the same options for disposal, either hauling to a landfill in accordance with 40 CFR 258 or land application in accordance with the Environmental Protection Agency's (EPA's) 503 Rules.

A. SLUDGE REMOVAL ALTERNATIVES

Five sludge dewatering alternatives, including the No-Action option, were evaluated in the 2016 Preliminary Engineering Report (PER):

- Alternative T-0: No Action
- Alternative T-1: Sludge Dry In-Place
- Alternative T-2: Dragline Injection/Liquid Sludge Application
- Alternative T-3: Sludge Drying Beds
- Alternative T-4: Geofabric Bags
- Alternative T-5: Mechanical Rental

ALTERNATIVE T-0: NO ACTION – Because the average sludge depth in the primary cell is greater than the design depth of 2 feet, the town has decided to remove sludge to avoid any negative impacts to wastewater treatment. No action is not considered to be a viable alternative and will not be considered further.

ALTERNATIVE T-1: SLUDGE DRY IN-PLACE – This alternative consists of drying the sludge in-place in the primary lagoon cell for a period up to two years. Because the primary cell would need to be taken off-line during the drying period, thus hampering treatment, this is not considered to be a viable option for further consideration.

ALTERNATIVE T-2: DRAGLINE INJECTION/LIQUID SLUDGE APPLICATION – This alternative uses solids handling pumps to remove liquid sludge from the lagoon, convey it to the land application site with either a hose or tanker trucks, and land apply it with either broadcasting or direct injection. T-2 is considered a viable option and will be considered further.

ALTERNATIVE T-3: SLUDGE DRYING BEDS – This option consists of a bermed, 1.25-acre drying bed area, lined with a 30-mil PVC liner, and having an underdrain system. This area would be located adjacent to the lagoon cells. The sludge would be dried for a period up to two years and then hauled and disposed of by the Town under a separate project. This is a viable option that will be considered further.

ALTERNATIVE T-4: GEOFABRIC BAGS – This alternative uses geofabric bags laid onto a lined, bermed area adjacent to the lagoon cells to dewater the sludge. A portable polymer dosing unit would be added to aid in coagulation of the solids. The sludge would be dried and removed from the bags for final disposal. A high solids content can likely be achieved within a matter of months. This is a viable option that will be considered further.

ALTERNATIVE T-5: MECHANICAL RENTAL – This option involves rental of a mobile unit mechanical dewatering unit, such as a belt filter press or a centrifuge, which can dry the sludge to 15-20 percent solids much quicker than drying beds.
or geofabric bags. Based on the maximum sludge production rate of 120 gpm and the volume of sludge to be dried, it is estimated that the sludge would take three months to process. The mobile dewatering unit would be placed in a lined area next to the lagoon cells and a portable polymer dosing unit would be added to aide in dewatering. The sludge would be hauled and disposed of by the Town. This is a viable option that will be considered further.

B. COST COMPARISON - PRESENT WORTH ANALYSIS

The present worth analysis is a means of comparing alternatives in present day dollars and can be used to determine the most cost-effective alternative. In the case of one-time sludge disposal, there are no operation and maintenance or salvage costs to allow for a present worth analysis. Therefore, a cost comparison between the four alternatives consists solely of a comparison of total capital costs, as presented in Table 1 below.

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Total Capital Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative T-2: Dragline Injection/Liquid Sludge Beds</td>
<td>$572,000</td>
</tr>
<tr>
<td>Alternative T-3: Sludge Drying</td>
<td>$444,730</td>
</tr>
<tr>
<td>Alternative T-4: Geofabric Bags</td>
<td>$253,825</td>
</tr>
<tr>
<td>Alternative T-5: Mechanical Rental</td>
<td>$331,045</td>
</tr>
</tbody>
</table>

*Capital costs include engineering and construction costs.

E. BASIS OF SELECTION OF PREFERRED ALTERNATIVE

To assist in selection of a preferred sludge disposal alternative, a qualitative ranking process was utilized. The four viable alternatives were compared with respect to financial feasibility, operation and maintenance considerations, social impacts, environmental impacts, and sustainability. Each alternative was given a score ranging from 0 to 10 for each criterion, with 0 having a negative impact and 10 representing the maximum benefit to the community. The criteria were also weighted in relation to each other, with the criteria most important to the Town receiving higher weights. The four most viable sludge disposal alternatives are scored for comparison in Table 2.

As shown in the table below, Alternative T-4 scored the highest with 183 points, predominantly based on cost. The use of geofabric bags for sludge drying is therefore the preferred alternative to dewater sludge from the Town's lagoon. Given the preliminary nature of the PER cost estimates, there is the potential that other alternatives may be more cost-effective during the open bidding process. Because of this, the bid documents allow for all evaluated treatment alternatives
to be considered by contractors during bidding.

TABLE 2 – WASTEWATER TREATMENT ALTERNATIVES RANKING

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Weight</th>
<th>Alternative T-2</th>
<th></th>
<th>Alternative T-3</th>
<th></th>
<th>Alternative T-4</th>
<th></th>
<th>Alternative T-5</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Score</td>
<td>Points</td>
<td>Score</td>
<td>Points</td>
<td>Score</td>
<td>Points</td>
<td>Score</td>
<td>Points</td>
</tr>
<tr>
<td>Financial Feasibility</td>
<td>10</td>
<td>2.2</td>
<td>22</td>
<td>3.9</td>
<td>39</td>
<td>7.8</td>
<td>78</td>
<td>5.8</td>
<td>58</td>
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<tr>
<td>Operation and Maintenance</td>
<td>7</td>
<td>5</td>
<td>35</td>
<td>5</td>
<td>35</td>
<td>5</td>
<td>35</td>
<td>5</td>
<td>35</td>
</tr>
<tr>
<td>Social Impacts</td>
<td>5</td>
<td>6</td>
<td>30</td>
<td>5</td>
<td>20</td>
<td>5</td>
<td>25</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Environmental Impacts</td>
<td>5</td>
<td>3</td>
<td>15</td>
<td>4</td>
<td>20</td>
<td>5</td>
<td>25</td>
<td>6</td>
<td>30</td>
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<tr>
<td>Sustainability</td>
<td>20</td>
<td>5</td>
<td>20</td>
<td>5</td>
<td>20</td>
<td>5</td>
<td>20</td>
<td>5</td>
<td>20</td>
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<tr>
<td>TOTAL SCORE</td>
<td></td>
<td>122</td>
<td>134</td>
<td>183</td>
<td>173</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In addition to the removal and disposal of sludge from the primary lagoon cell, the project includes approximately 2,600 feet of sewer main replacement, 610 feet of cured-in-place pipe (CIPP) rehabilitation, fourteen new manholes, two new air release valves on the existing force main, rehabilitation of the Main Lift Station, and new generators at the Russell Drive and Main lift stations. The total project cost is broken down into administrative/finance and engineering/construction costs in Table 3.

Table 3 - ESTIMATED PREFERRED ALTERNATIVE COSTS

<table>
<thead>
<tr>
<th>Components</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative/Finance Costs</td>
<td>$54,345</td>
</tr>
<tr>
<td>Engineering/Construction Costs</td>
<td>$1,075,393</td>
</tr>
<tr>
<td>Total Project Cost</td>
<td>$1,129,738</td>
</tr>
</tbody>
</table>

The estimated project cost (including administration, engineering, and construction) is $1,129,738. The city will fund these project costs through a $500,000 grant from the Treasure State Endowment Program (TSEP); $15,138 in local funds; and a loan in the amount of $614,600 from the Water Pollution Control State Revolving Fund (WPCSRF) Program. Of the WPCSRF funds provided, $153,600 of the loan will be forgiven, with the remaining $461,000 having an interest rate of 2.5% and a term of 20 years.

The current residential sewer rate in Cascade is $43.64 per month and the need for a rate increase to fund this project is not anticipated. The financial impact of this project on the system users is shown in Table 3. The proposed project will result in a monthly sewer cost per household that is 1.2% of the monthly median
household income. Based on EPA guidance for project affordability, the sewer rate can be characterized as posing a minor to moderate economic hardship on some households.

**TABLE 4 - PROJECT AFFORDABILITY**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly sewer user cost</td>
<td>$43.64</td>
</tr>
<tr>
<td>Monthly median household income (mMHI)$^1$</td>
<td>$3,619.83</td>
</tr>
<tr>
<td>User rate as a percentage of mMHI</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

$^1$ Based on US Census Bureau data (in 2013 inflation-adjusted dollars)

IV. AFFECTED ENVIRONMENT

A. PLANNING AREA AND MAPS

The Town of Cascade is a small farming and ranching community located approximately 26 miles southwest of the City of Great Falls, in Cascade County. It is bordered by Interstate 15 (I-15) on the west and the Missouri River on the east (see Figure 1). The planning area boundary includes all the developed Cascade community, capturing acreage down to the I-15 interchange (Figure 2). Cascade's wastewater treatment lagoon and spray irrigation site are also shown on Figure 2. The proposed sewer main improvements will occur within existing Town right-of-way (see Figure 3) and sludge removal and any land application will take place on Town-owned spray irrigation acreage. Figure 4 shows available acreage at the lagoon and spray irrigation sites for application of biosolids; however, the spray irrigation parcel is the preferred spot. The sludge-hauling route to the application site is along the Simms Cascade Road and is also shown on Figure 4.

B. POPULATION AND FLOW PROJECTIONS

The current population served by the Cascade wastewater treatment facility (WWTF) is 710. The Town's relatively stable population supports the use of an annual growth rate of 0.7 percent to calculate a design population of 821 for the design year of 2036. Design of the existing WWTF in 1998 was based on a population of 930 and a daily average flow of 97,700 gallons per day (gpd).

The current average daily wastewater flow for the Town was determined to be 47,165 gpd, based on water meter records for the months of November through April. This flow rate was verified with flow measurement at the Main Lift Station. The design flow of 57,470 gpd is based on the 2036 population of 821 and historic per capita wastewater generation of approximately 70 gallons per capita per day. Table 4 summarizes current and projected population and average daily flow data.

**TABLE 4 – EXISTING AND PROJECTED POPULATION AND WASTEWATER FLOWS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Average Daily Flow (gal/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>710</td>
<td>47,165</td>
</tr>
<tr>
<td>2036</td>
<td>821</td>
<td>57,470</td>
</tr>
</tbody>
</table>
C. NATURAL FEATURES

The Town of Cascade is located on the relatively flat, western bank of the Missouri River, with the Rocky Mountains off in the distance to the west. The climate is semi-arid and can be very windy, as is typical of north-central Montana.

Quaternary-age glacial lake deposits and alluvial terraces underlay the Town of Cascade. Soils in the Town are primarily Farnuf loam on slopes of 2 to 8 percent. These soils are brownish and light gray loams that contain some pebbles and are stratified with sandy clay loams and fine sandy loams. Judith loam is found at the spray irrigation site that is proposed for sludge disposal. This soil is not rated as limited by National Resource Conservation Service (NRCS) for sludge application.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT ENVIRONMENTAL IMPACTS

1. Land Use/Prime Farmland – No lands currently used for farming will be taken out of production. The sewer main and lift station improvements will occur within previously disturbed area within Town limits, with no change in land use or impacts on prime farmland. As part of the project’s scope, approximately 18,180 cubic yards of sludge will be removed from the primary lagoon cell. Disposal of the sludge will occur on an estimated 12 acres of the 55 acres of buffer zone area available at the Town’s wastewater spray irrigation parcel. The amount of acreage needed is dependent on the amount of TN in the sludge and the crop that will be planted on the acreage. The productivity of that land will be enhanced by the application of the biosolids.

2. Floodplains – According to Federal Emergency Management Area (FEMA) mapping, the Town of Cascade and all the proposed project area are located outside the 100-year floodplain of the Missouri River. DNRC’s Lewiston Regional Office reviewed the proposed project and their comments are summarized in Section X: Agencies Consulted of this report.

3. Wetlands – According to the Preliminary Engineering Report, there are no wetlands or riparian areas mapped within the project area.

4. Cultural Resources and Historical Sites – The proposed improvements should not impact historic or cultural resources since all new facilities will be constructed within the previously disturbed areas of the lagoon, wastewater spray irrigation site, and roadways and easements within Town limits. The State Historic Preservation Office (SHPO) reviewed the proposed project and their comments are summarized in Section X: Agencies Consulted of this report.

5. Fish and Wildlife – According to the State of Montana’s Sage Grouse
Program's website, there are no general or connectivity sage grouse areas within the vicinity of Cascade. Therefore, compliance with Executive Orders 12-2015 and 21-2015 is met.

The following species of concern are found in the area: hoary bat, golden eagle, great blue heron, ferruginous hawk, chestnut-collared longspur, and black-necked stilt. Other critical species in the region include Canada Lynx, Red Knot, and Sprague's Pipit. Given that construction will occur strictly within the residential section of town, at the lagoon, and at the spray irrigation sites, no impacts to any fish or wildlife are anticipated. See Section X: Agencies Consulted of this report for a summary of wildlife agency comments.

6. **Water Quality** – The proposed wastewater improvements will not affect groundwater or surface water quality or quantity, except to reduce the potential for shallow groundwater contamination through exfiltration from deteriorated sewer pipes and surface water contamination from sewage backups and overflows. Biosolids disposal on the fringes of the spray irrigation site will meet EPA's 503 rules and therefore be protective of groundwater and surface water. Cascade's method of wastewater disposal is spray irrigation site well away from the Missouri River.

Stormwater associated with construction activities will be controlled through temporary erosion and sediment control measures, thereby protecting water quality.

7. **Air Quality** – Short-term negative impacts on air quality are expected to occur during construction from heavy equipment in the form of dust and exhaust fumes. Proper construction practices will minimize this problem. Project specifications will require dust control. No long-term air quality impacts will result from the proposed project. Any odors from biosolids removal, drying, hauling, and land application will be temporary and are not expected to be offensive due to the relative location of these temporary operations from residences.

8. **Public Health** – Public health will be positively impacted by the proposed project. The wastewater improvements will greatly reduce the potential for sewer backups into homes and overflows onto streets or ground, thereby protecting public health. Sludge removal will improve lagoon performance and the quality of water applied to the irrigation site. Sludge removed from the lagoon cells will be land-applied in accordance with EPA's 503 rules or land-filled, thereby protecting public health.

9. **Energy** – The consumption of energy resources directly associated with construction of the recommended improvements is unavoidable, but will be short-term. Upgrades to the wastewater collection system will result in less energy expenditure to unclog sewer mains. Improvements to the Main Lift Station will reduce energy required to pump wastewater to the lagoon.

10. **Noise** – Short-term impacts from excessive noise levels may occur during construction activities. The construction period will be limited to normal
daytime hours to avoid early morning or late evening construction disturbances. No significant long-term impacts from noise should occur.

11. **Sludge Disposal** – It is intended that all sludge (biosolids) will be removed from the primary cell and land-applied in accordance with Federal 40 CFR 503 sludge disposal regulations in a one-time application. The Part 503 regulations contain specific numerical limits and other requirements for heavy metals, pathogens, and vector attraction. A potential contractor must perform verification of sludge quantity, in-place sludge nutrient content, identification of a disposal site, and nutrient testing of soils at the application site. The final sludge disposal plan utilizing this information must be submitted to the DEQ for review and concurrence prior to sludge disposal.

The sludge would be removed as a liquid using a dredge; dewatered in geomembrane bags; transported to the Town’s spray irrigation site; and land-applied by surface incorporation within the buffer zone outside the pivot area. With an estimated 18,180 cubic yards of “wet” sludge, approximately 12 acres of land is required, depending on the crop. The contractor also has the option of hauling the sludge to a landfill, presuming it meets the paint-filter liquids test and other requirements of the Part 258 Landfill Rule. The closest landfill to Cascade that can accept wastewater sludge is Highplains Landfill north of Great Falls, approximately 90 miles from Cascade.

12. **Environmental Justice** – Environmental Justice Executive Order 12898: The proposed project will not result in disproportionately high or adverse human health or environmental effects on minority or low-income populations. A rate increase is not anticipated. No disproportionate effects among any portion of the community would be expected.

13. **Wild and Scenic River Act** – The proposed project will not impact any rivers designated as wild and scenic by Congress or the Secretary of the Interior.

14. **Growth** – The proposed wastewater improvements are not expected to trigger or encourage additional growth in Cascade. The existing wastewater treatment plant and lift stations were designed for a population of 930. The proposed improvements are designed to serve the projected 2036 population of 821, an increase of 0.7 percent per year over the current population. Because Cascade’s population base has been relatively stable, this projection is considered reasonable.

15. **Cumulative Effects** – The proposed wastewater improvements are not expected to result in any cumulative effects. However, should any secondary and/or cumulative impacts from the project occur that are associated with housing, commercial development, solid waste, transportation, utilities, air quality, water utilization, and possible loss of agricultural and rural lands, these impacts will be managed and minimized as much as possible through proper community planning. There are several existing county and state regulations already in place (i.e., zoning regulations, comprehensive planning, subdivision laws, etc.)
that control the density and development of property with regards to water supply, sewage disposal, solid waste disposal, transportation, and storm drainage.

B. UNAVOIDABLE ADVERSE IMPACTS

Short-term construction-related impacts (i.e., noise, dust, etc.) will occur, but should be minimized through proper construction management. Energy consumption during construction cannot be avoided.

VI. PUBLIC PARTICIPATION

Two meetings were held in February of 2016 prior to submittal of the Preliminary Engineering Report (PER) to the Treasure State Endowment Program (TSEP). At the February 8th meeting, wastewater system deficiencies and potential improvement alternatives for the collection system and lift station improvements, and sludge removal and disposal, were identified and presented to the public. A second public meeting was held on February 25th to solicit specific input on the PER and the proposed alternatives. Project costs, funding strategies, and potential effects to user rates were presented. Council members, the public works director, and the public agreed on the preferred alternatives. Ten community members attended the meeting.

VII. AGENCY ACTION, APPLICABLE REGULATIONS AND PERMITTING AUTHORITIES

All proposed improvements will be designed to meet state standards in accordance with Circular DEQ-2, and will be constructed using standard construction methods. Best management practices will be implemented to minimize or eliminate pollutants during construction. No additional permits will be required from the State Revolving Fund (SRF) section of DEQ for this project after the review of the submitted plans and specifications. However, coverage under the storm water general discharge permit and groundwater dewatering discharge permit, if necessary, must be obtained from the DEQ Water Protection Bureau prior to the beginning of construction. A 124 Permit from the Department of Fish, Wildlife and Parks, a 404 Permit from the U.S. Corps of Engineers, and a 318 Authorization from the Department of Environment Quality will be obtained for any work that occurs in a streambed or (jurisdictional) wetlands, should it become necessary.

VIII. RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS

[ ] EIS [ ] More Detailed EA [ X ] No Further Analysis

Rationale for Recommendation: Through this EA, DEQ has verified that none of the adverse impacts of the proposed Cascade wastewater improvements project are significant. Therefore, an environmental impact statement is not required. The environmental review was conducted in accordance with the Administrative Rules of Montana (ARM) 17.4.607, 17.4.608, 17.4.609, and 17.4.610. The EA is the appropriate level of analysis because none of the adverse effects of the impacts are significant.
IX. REFERENCE DOCUMENTS

The following document was utilized in the environmental review of this project and is considered to be part of the project file:


X. AGENCIES CONSULTED

As part of the Preliminary Engineering Report (PER) process, the following agencies were contacted regarding the proposed construction of this project:

1. The U.S. Fish and Wildlife Service (Service) was contacted in April 2014 with respect to the proposed project. They determined that there could be potential impacts to migratory birds and recommended basic measures to be taken if construction occurred during the breeding season. There is at least one known bald eagle nest within one mile of the project site. Should eagle nests occur within 0.5 miles of the construction area, temporary seasonal and distance construction buffers are recommended. The Service listed candidate, proposed, threatened or endangered species, and designated critical habitat as follows: Canada Lynx, Red Knot, Sprague’s Pipit, and Whitebark Pine. Given the proposed project’s scope and location, the Service does not anticipate adverse effects to these species.

2. The Montana Historical Society’s State Historic Preservation Office (SHPO) reviewed the proposed project. They indicated that if there is no disturbance or alteration to structures over fifty years of age, there is low likelihood that cultural properties will be impacted. However, should structures need to be altered or cultural materials be inadvertently discovered during the project, SHPO must be contacted and the site investigated.

3. The U.S. Department of the Army Corps of Engineers (USCOE) stated that impacts to aquatic resources must be avoided and minimized to the greatest extent practicable. If any work is proposed below the ordinary highwater mark of stream channels, lakes, or wetlands adjacent to these waters, then a Section 404 permit would apply and authorization from USCOE would be needed.

4. The Montana Department of Fish, Wildlife and Parks (FWP) commented in 2016 that they did not have any comments. They indicated that they would provide comments during the permitting process, should a permit be required. There were no comments from the agency specific to fish and wildlife.

5. The Montana Department of Natural Resources and Conservation (DNRC) Lewistown Regional Office was contacted with respect to potential floodplain impacts from the proposed wastewater improvements project. They recommended that contact be made with the Cascade County Floodplain Administrator to verify whether a permit is required.
FIGURE 1
LOCATION MAP
PROPOSED HAUL ROUTE

PROPOSED SLUDGE DISPOSAL AREA

CASCADe SLUDGE DISPOSAL HAUL ROUTE EXHIBIT
TOWN OF CASCADe WASTEWATER SYSTEM IMPROVEMENT PROJECT