"Healthy environment, healthy people"

Montana Department of
ENVIRONMENTAL QUALITY

Steve Bullock, Governor
Tracy Stone-Manning, Director

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May 2, 2013

FINAL 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:

Project	Culbertson Collection System and Infiltration Cell Improvements Phase 1
Location	Culbertson, Montana
Project Number	WPCSRF Project # C302115
Total Cost	$2,682,200

The Town of Culbertson, through a November 2011 Preliminary Engineering Report (PER), a November 2012 PER Amendment (#1), and a March 2013 PER Amendment (#2), all prepared by WWC Engineering, has identified the need to upgrade their wastewater treatment system and make numerous improvements to their collection system. The upgrade is due to the age of the system and the influx of people from the oil exploration in the area, which is placing an immediate demand on the town's wastewater system. Although improvements for the entire wastewater system are needed immediately, the improvements must be split into two phases to allow time for the town to obtain a wastewater discharge permit. The first phase will include improvements to the collection system and lift station, as well as modifications to the existing infiltration cell. The Phase 1 improvements will be completed during the summer and fall of 2013. The Phase 2 improvements consist of upgrading the existing wastewater treatment system and new discharge piping to the Missouri River. Phase 2 improvements will be completed in the fall of 2014.

The older gravity sewer piping in the town's collection system consists of mostly vitrified clay pipe (VCP). Several sections of gravity sewer mains have frequent blockages due to problems with alignment and/or grade, sags, roots, and cracked or broken pipes. These blockages are causing overflows into residences and require the city operator to frequently flush the pipe to remove debris. The central lift station was upgraded in 1987, but the major components of the lift station, such as the pumps, control valves, and concrete structure are in very poor condition. The accumulation of solids in the lift station occasionally plugs the inlet pipe, which causes sewage to backup into the collection system and discharge to the surface. Additionally, the lift station control valves are located within the wetwell, making operation and maintenance difficult and unsafe for the operator. The lift station also does not have a backup generator or an alarm system, which has also resulted in sewer backups and overflows during power outages. The forcemain was installed in 1957; however its exact location and condition are unknown. Finally, the low berm height (2 feet) of the existing 24 acre infiltration cell limits storage Page 2 of 2

capacity and creates a safety concern. Additionally, clay soils in the bottom of the cell restrict infiltration and the cell is difficult to use because of an inoperative valve.

The proposed project will replace the central lift station and associated forcemain, repair five segments of gravity sewer mains, and modify the existing infiltration cell and piping. The lift station work will include a new valve vault, wetwell, pumps, pump control system, backup generator, and approximately 3,300 feet of 8-inch diameter force main pipe. Five sections of gravity sewer main will be replaced and include the following work: approximately 3,460 feet of 8-inch diameter pipe, 90 feet of 12-inch diameter pipe, and 19 manholes. The new lift station and sewer main improvements will resolve operator safety concerns and eliminate sewage backups and surface overflows. The town proposes to do some minor treatment system improvements to the infiltration cell to increase the treatment capacity by about 20,000 gallons per day. This additional capacity will provide for some identified new services (hookups). The improvements will include excavating 2-feet of soil from the bottom of the existing 24-acre infiltration cell to heighten the existing west and north berms and rebuild/raise the south berm about 100 feet north of the existing berm. The Phase 1 improvements will also include constructing new piping to the infiltration cell, including new valves and manholes. The improvements will allow more efficient operation of the infiltration cell, provide additional storage capacity, protect against overflow from the cell, and will increase the treatment system capacity.

Federal and State grant/loan programs will fund the project. Environmentally sensitive characteristics such as wetlands, floodplains, historical sites, and threatened or endangered species are not expected to be adversely impacted as a result of the proposed project. 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://www.deq.mt.gov/ea.mcpx**) and at the following locations:

Jerry Paddock, P.E.
Department of Environmental Quality
1520 East Sixth Avenue
P.O. Box 200901
Helena, MT 59620-09011
jpaddock@mt.gov

Gordon Oelkers, Mayor
Town of Culbertson
210 Broadway
Culbertson, MT 59218

Comments on the EA may be submitted to the Department of Environmental Quality at the above address. After evaluating substantive 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,

Todd Teegarden, Bureau Chief
Technical and Financial Assistance Bureau

TOWN OF CULBERTSON
WASTEWATER COLLECTION SYSTEM AND INFILTRATION CELL IMPROVEMENTS
PHASE 1

ENVIRONMENTAL ASSESSMENT

I. COVER SHEET

A. PROJECT IDENTIFICATION

Applicant:	Town of Culbertson
Address:	210 Broadway Avenue/PO Box 351 Culbertson, MT 59218
Project Number:	SRF Project # C302115

B. CONTACT PERSON

Name:	Gorden Oelkers, Mayor
Address:	210 Broadway Avenue/PO Box 351 Culbertson, MT 59218
Telephone:	(406) 787-5271

C. ABSTRACT

The Town of Culbertson, through a November 2011 Preliminary Engineering Report (PER), a November 2012 PER Amendment (#1), and a March 2013 PER Amendment (#2), all prepared by WWC Engineering, has identified the need to upgrade their wastewater treatment system and make numerous improvements to their collection system. The upgrade is due to the age of the system and the influx of people from the oil exploration in the area, which is placing an immediate demand on the town's wastewater system. Although improvements for the entire wastewater system are needed immediately, the improvements must be split into two phases to allow time for the town to obtain a wastewater discharge permit. The first phase will include improvements to the collection system and lift station, as well as modifications to the existing infiltration cell. The Phase 1 improvements will be completed during the summer and fall of 2013. The Phase 2 improvements consist of upgrading the existing wastewater treatment system and new discharge piping to the Missouri River. Phase 2 improvements will be completed in the fall of 2014.

The older gravity sewer piping in the town's collection system consists of mostly vitrified clay pipe (VCP). Several sections of gravity sewer mains have frequent blockages due to problems with alignment and/or grade, sags, roots, and cracked or broken pipes. These blockages are causing overflows into residences and require the city operator to frequently flush the pipe to remove debris. The central lift station was upgraded in 1987, but the major components of the lift station, such as the pumps, control valves, and concrete structure are in very poor condition. The accumulation of solids in the lift station occasionally plugs the

inlet pipe, which causes sewage to backup into the collection system and discharge to the surface. Additionally, the lift station control valves are located within the wetwell, making operation and maintenance difficult and unsafe for the operator. The lift station also does not have a backup generator or an alarm system, which has also resulted in sewer backups and overflows during power outages. The forcemain was installed in 1957; however its exact location and condition are unknown. Finally, the low berm height (2 feet) of the existing 24 acre infiltration cell limits storage capacity and creates a safety concern. Additionally, clay soils in the bottom of the cell restrict infiltration and the cell is difficult to use because of an inoperative valve.

The proposed project will replace the central lift station and associated forcemain, repair five segments of gravity sewer mains, and modify the existing infiltration cell and piping. The lift station work will include a new valve vault, wetwell, pumps, pump control system, backup generator, and approximately 3,300 feet of 8-inch diameter force main pipe. Five sections of gravity sewer main will be replaced and include the following work: approximately 3,460 feet of 8-inch diameter pipe, 90 feet of 12-inch diameter pipe, and 19 manholes. The crossing of Highway 2 will not be completed using open-cut construction; crossing Highway 2 will be completed by directional boring under the highway. The new lift station and sewer main improvements will resolve operator safety concerns and eliminate sewage backups and surface overflows. The town proposes to do some minor treatment system improvements to the infiltration cell to increase the treatment capacity by about 20,000 gallons per day. This additional capacity will provide for some identified new services (hookups). The improvements will include excavating 2-feet of soil from the bottom of the existing 24-acre infiltration cell to heighten the existing west and north berms and rebuild/raise the south berm about 100 feet north of the existing berm. The Phase 1 improvements will also include constructing new piping to the infiltration cell, including new valves and manholes. The improvements will allow more efficient operation of the infiltration cell, provide additional storage capacity, protect against overflow from the cell, and will increase the treatment system capacity.

The proposed improvements, including administration, engineering and construction, are estimated to cost approximately $2,682,200. The Phase 1 project will be funded using grants and a low interest loan from the Water Pollution Control State Revolving Fund (WPCSRF) program. Grants include: $15,000 planning grant from the Treasure State Endowment Program (TSEP), $100,000 grant from the Department of Natural Resources & Conservation (DNRC), and a $180,000.00 grant from the U.S. Army Corps of Engineers Water Resources Development Act (WRDA). The town will borrow up to $2,340,000 at 3.00% interest from the WPCSRF loan program and also expects to pay approximately $47,200 in direct costs for the project from town reserves. Construction is expected to begin July 2013, and take up to 120 days to complete.

Environmentally sensitive characteristics such as wetlands, floodplains, threatened or endangered species, and historical sites are not expected to be adversely impacted as a result 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). The Montana Department of Commerce, Treasure State Endowment Program, has also reviewed this EA for purposes of MEPA compliance.

D. COMMENT PERIOD

Thirty (30) calendar days

II. PURPOSE OF AND NEED FOR ACTION

The Town of Culbertson, through its November 2011 Preliminary Engineering Report (PER), as well as November 2012 and March 2013 Amendments prepared, by WWC Engineering, has identified the need to upgrade their wastewater treatment system and replace the central lift station, associated forcemain, and several sections of their gravity wastewater collection system. Several segments of the wastewater collection system have frequent blockages of the pipe, which have caused overflows into residences and require the system operator to frequently flush the pipe to remove debris. Video inspections show the blockages are due to problems with alignment and/or grade, sags, roots, and cracked or broken pipes. The central lift station, which was upgraded in 1987, pumps raw wastewater from the collection system to the treatment cells. All components of the lift station, such as the pumps, valves and controls, and concrete structure are in very poor condition. Occasionally solids in the lift station plug the inlet pipe, which causes sewage to backup into the collection system and discharges to the surface. The valves are located within the wetwell, making operation and maintenance difficult and unsafe for the operator. The lift station does not have a backup generator or an alarm system, which has also resulted in sewer backups and overflows during power outages. The 6-inch diameter asbestos cement forcemain from the lift station to the treatment cells was installed in 1957. Direct inspections, such as video cameras, are not possible in forcemains, so the exact location and condition of the forcemain is unknown. The four cell wastewater treatment system is currently limited to a treatment capacity of about 106,000 gpd and will need major improvements to meet future treatment capacity of 197,586 gpd. However, the town is proposing to make interim improvements to the infiltration cell to provide an additional 20,000 gpd capacity in the Phase 1 project. The existing 24-acre infiltration cell was constructed in 1987 with 2-foot high berms (dikes) which limits storage capacity and creates a safety concern due to overflowing. Additionally, clay soils in the bottom of the cell restrict infiltration and the cell is difficult to use because of an inoperative valve.

To address reliability, capacity and safety issues the town proposes to replace the central lift station, the associated forcemain, repair five segments of gravity sewer main, and modify the infiltration cell and associated piping.

III. ALTERNATIVES INCLUDING THE PROPOSED ACTION AND COSTS

Due to the immediate growth from an influx of people from the oil exploration in the area and associated demand on the wastewater system for the Town of Culbertson, the wastewater system requires an immediate upgrading; however, the improvements must be split into two phases to allow time for the town to obtain a wastewater discharge permit. The Phase 1 improvements, which will be completed in 2013, will include the work on the collection system and modifications to the existing infiltration cell. The Phase 2 improvements will include major improvements to the wastewater treatment facility and will be completed in late 2014. While the major treatment improvements won't occur until 2014, with the Phase 1 project, the town proposes to do some minor treatment system improvements to the infiltration cell to increase the treatment capacity by about 20,000 gallons per day. This additional capacity will provide for some identified new services (hookups). The improvements will include excavating 2-feet of soil from the bottom of the existing 24-acre infiltration cell to heighten the existing west and north berms and rebuild/raise the south berm about 100 feet north of the existing berm. The Phase 1 improvements will also include constructing new piping to the infiltration cell, including new valves and manholes. Numerous alternatives were evaluated in the PER for the needed collection and treatment system improvements.

A. Seven alternatives for correcting deficiencies within the gravity sewer collection system were evaluated in the PER. These included the following alternatives:

Alternative SC1	No Action
Alternative SC2	Joint Grouting
Alternative SC3	Slip Lining
Alternative SC4	Pipe-Bursting
Alternative SC5	Fold and Form
Alternative SC6	Cured-in-Place (CIPP)
Alternative SC7	Conventional Open-Trench Pipe Replacement

ALTERNATIVE SC1 NO ACTION – The no-action alternative would result in not taking any action to correct the problems within the town's sewer collection system. The town would continue to use sewer mains which are in very poor condition, which have been the primary causes of sewer backups into homes and surface overflows. In addition to structural problems such as alignment problems, as well as cracks and breaks in the pipe, video inspections found protruding service taps, sags, and root penetrations. Additionally, an excessive amount of system operator time is being required to flush and remove obstructions from the sewer mains to alleviate the backups. The overflows and backups are exposing the public to health and liability risks. Based on these concerns, the no-action alternative was not considered to be a viable option for the town.

ALTERNATIVE SC2 JOINT GROUTING – Joint grouting could be completed with remotely operated equipment and could repair specific leaking joints and minor structural problems without disturbance to the surface. However, joint grouting would not repair grade and alignment problems, or repair pipes that have extensive structural damage. Moreover, the service connections protruding into the sewer main would require excavation to repair. Joint grouting would be considered a temporary repair to the sewer mains. Based on these reasons, the

joint grouting alternative was not considered to be a viable option for the town.

ALTERNATIVE SC3 SLIP LINING – Rehabilitation of existing sewer pipe using slip-lining technology is a common and a cost-effective technique. Because a smaller "liner" pipe is pulled into the existing pipe, a decrease in pipe diameter and capacity can be a concern. Slip-lining will require spot excavation at both ends of the pipe segment to be replaced and to reconnect live services. Therefore surface disturbance and impacts to traffic during construction would occur. Slip-lining will not correct grade or alignment problems, and pipe with significant structural problems cannot be slip-lined. Because many of the problems with the existing pipe are with grade and alignment and because of the reduction in the capacity of the pipe after slip-lining, the slip-lining alternative was not considered to be a viable option for the town.

ALTERNATIVE SC4 PIPE-BURSTING – Rehabilitation of existing sewer pipe using pipe-bursting is similar to slip-lining, except the existing pipe is pneumatically broken (in-place) and new pipe is installed in the location of the old pipe. Bursting (breaking) the old pipe and replacing the new pipe is done in one operation. Pipe bursting will allow the old pipe to be replaced with a new pipe that is similar in diameter or with a slightly larger diameter pipe. However, as with slip-lining technology, spot excavation is required at both ends of the pipe to be replaced and to reconnect services, and therefore surface disturbance and impacts to traffic during construction would occur. Pipe-bursting rehabilitation replaces the existing pipe with an equal or slightly larger diameter pipe; therefore no reduction in pipe diameter or capacity is realized. Pipe-busting is considered a long-term alternative. However, due to the many problems with the existing grade and alignment problems, which would not be repaired, and impacts to the surface during construction, pipe-bursting was not considered to be a viable option for the town.

ALTERNATIVE SC5 FOLD AND FORM AND ALTERNATIVE SC6 CURED-IN-PLACE (CIPP) – Fold and Form and CIPP are similar trenchless technologies that utilize a flexible liner (PVC or epoxy fabric) which is inserted into the existing pipe from a manhole and then cured in place using high pressure steam (fold and form) or heated water/steam (CIPP). The services are reconnected using an in-line pipe cutter. With both technologies, excavation is not required to install the new pipe or reconnect the services and therefore there is minimal disturbance at the surface. However, due to the number of grade and alignment problems, which neither technology will correct, the Fold and Form and CIPP alternatives were not considered to be viable options for the town.

ALTERNATIVE SC7 CONVENTIONAL OPEN-TRENCH PIPE REPLACEMENT This alternative considered conventional (open trench cut) construction to replace the existing sewer pipe with new PVC pipe. New pipe construction would allow the alignment and grades to be repaired, and the pipe with extensive structural damage to be corrected. The crossing of Highway 2 will not be completed using open-cut construction; crossing Highway 2 will be completed by directional boring under the highway. New PVC pipe would provide the longest-term solution of the alternatives considered. With conventional construction, disturbance to the surface and impacts to traffic during construction would be the greatest of the alternatives considered. However, the benefit of permanently

replacing the pipe with grade, alignment, and structural problems with new pipe, the long-term solution would offset the disturbances on the surface and impacts to traffic during construction. This alternative was determined to be a viable solution and will be given further consideration.

B. Three alternatives including the no action alternative for correcting the lift station and force main deficiencies were evaluated in the PER. These included the following alternatives:

Alternative LS1	No Action
Alternative LS2	Lift Station Rehabilitation
Alternative LS3	New Lift Station and Force Main

ALTERNATIVE LS1 NO ACTION – The no-action alternative would result in not taking any action to correct the problems with the lift station. The town would continue to use the unreliable existing central lift station which has been the primary causes of sewer backups and surface overflows. Moreover, an excessive amount of system operator time is being required to flush and remove obstructions from the pumps and the overflows and backups are exposing the public to health and liability risks. The exact location and condition of the 6-inch diameter asbestos cement forcemain from the lift station to the treatment cells is unknown, and therefore future maintenance could be a burden to the wastewater system operator. Based on these concerns, the no-action alternative was not considered to be a viable option for the town.

ALTERNATIVE LS2 LIFT STATION REHABILITATION – This alternative would continue to use the existing lift station wet well and 6-inch diameter asbestos cement force main to save the cost of constructing these new structures. However, the structural integrity of the 53-year old wet well and force main are unknown, but most likely in poor condition. Under this alternative, the existing wet well would be retrofitted with new pumps, valves, piping, flow meters, ventilation, controls, control building, and emergency generator. Only portions of the force main would be replaced to accommodate new piping at the lift station and at the outfall (treatment cell). Because the existing control valves are located in the existing wet well, and are in poor condition, a new valve/meter pit would be required and would be constructed. Using the existing wet well to place new equipment in may create future operation and maintenance problems for the town. Therefore, the lift station may have to be upgraded in the future to meet long-term growth (design life). Moreover, to meet future flows, the new pumps will be designed to pump more than double the existing flow of the existing pumps. The additional pressure and flow rate may cause future problems with the existing force main, which would be a burden for the wastewater system operator. Based on these concerns, rehabilitation of the existing lift station and using the existing force main were not considered to be viable options for the town.

ALTERNATIVE LS3 NEW LIFT STATION AND FORCE MAIN – This alternative would replace the existing lift station with a new wet well, valve vault, and control building. Additionally, the existing 6-inch diameter asbestos cement force main would be abandoned and a new 8-inch PVC force main constructed. The new control building would house the pumps, pump controls, ventilation system, and emergency generator. A new valve vault would be constructed to house valves, flow meters, and associated piping. The new pumps would be variable-frequency

drives, which would be more energy efficient than the current pumps. The existing force main would be abandoned in-place and a new 8-inch PVC force main would be constructed from the new lift station to the treatment cells. The lift station and force main would be located in a utility easement which would allow the town to provide maintenance to the facilities. New valves and cleanout structures would be included in the force main to aid in maintenance of the force main. This alternative was determined to be a viable solution and will be given further consideration.

C. PROJECT COST

Costs for the viable alternatives and improvements to the infiltration cell are provided in Table 1.

TABLE 1
COST OF IMPROVEMENTS

Improvement	Approximate Cost:
SC7 Conventional Open-Trench Pipe Replacement	$810,675
LS3 New Lift Station and Force Main	$1,074,850
Infiltration Cell Improvements	$796,675
Total	$2,682,200

The proposed improvements, including administration, engineering and construction, are estimated to cost approximately $2,682,200. The Phase 1 project will be funded using grants and a low interest loan from the Water Pollution Control State Revolving Fund (WPCSRF) program. Grants include: $15,000 planning grant from the Treasure State Endowment Program (TSEP), $100,000 grant from the Department of Natural Resources & Conservation (DNRC, and a $180,000.00 grant from the U.S. Army Corps of Engineers (Water Resources Development Act). The town will borrow up to $2,340,000 at 3.00% interest from the WPCSRF loan program and also expects to pay approximately $47,200 in direct costs for the project. Construction is expected to begin July 2013, and take up to 120 days to complete.

D. BASIS OF SELECTION OF PREFERRED ALTERNATIVE

Selection of the preferred alternative was based upon eliminating alternatives that created increased operation and maintenance costs, required a high level of operational control and monitoring, and were not economically or technically feasible. Based on these criteria, open-trench excavation was judged to be the only feasible alternative to repair the collection system and due to the deteriorated condition of the lift station and the limited potential to reuse the existing structure, total replacement of the lift station was judged to be the only feasible alternative.

The project will be funded with a revenue bond. The average monthly sewer rate will increase $21.36 per month, resulting in a new average sewer rate of $40.16 per month per user. The financial impact of this project on the system users is shown in Table 2. Based on the EPA guidance for project affordability, the proposed project will result in a monthly cost per household that is less than 1%

of the monthly median household income, and therefore, is not expected to impose a substantial economic hardship on household income.

TABLE 2 PROJECT AFFORDABILITY	
Existing Monthly wastewater service rate	$18.80
Total monthly user cost[1]	$40.16
Monthly median household income (mMHI)[2]	$4,010.00
User rate as a percentage of mMHI	1.0 %

[1] December 14, 2012 Uniform Application for Montana Public Facility Projects
[2] Based on 2007-2011 census data 5-year estimate - (Culbertson)

IV. AFFECTED ENVIRONMENT

A. PLANNING AREA AND MAPS

The Town of Culbertson is located at the junction of US Highway 2 and State Route 16 near the Missouri River in the eastern portion of Roosevelt County, (see Figure 1). The town boundary and the location of the town wastewater treatment system are shown in Figure 2. Figure 3 is a map showing the general locations of the proposed collection system improvements. Figure 4 is a floodplain map of the Culbertson area and Figure 5 depicts the wetlands in the Culbertson area.

Construction is expected to begin in July 2013, and take approximately 4 months to complete.

B. POPULATION AND FLOW PROJECTIONS

The March 2012 wastewater flow was measured by the town's engineer at approximately 97,000 gallons per day (gpd). Currently, the pumping capacity of central lift station and treatment system is limited to approximately 101,000 gpd. Once the central lift station and force main are complete (fall 2013), they will have an average day capacity of 197,586 gpd (the 20 year design flow). The Phase 1 improvements propose modifications to the infiltration cell to provide an additional 20,000 gallons per day capacity and for a total treatment system capacity of approximately 126,000 gpd. This work will provide an adequate capacity to the existing treatment system until the Phase 2 improvements are completed in late 2014. The March 2012 population was estimated to be between 750 and 800 people. The town population is expected to increase quickly in the few years to over 1,000 people and then increase at a rate of 1% per year to 1,976 people in 2030.

The Town population increased from 1910 to 1960 when it peaked at 919 people. The population then decreased until 2008 to about 689 people, then began to increase. The 2010 town population was 714, but recently as many as 324 new units, including single-family, multi-family hotels/motels, RV/mobile home parks and man camps have been discussed with town staff that will boost the

population to over 1,000 people in the next few years. The new units are a result of the impact by recent oil development in eastern Montana and western North Dakota. Although growth is expected to be rapid in the next few years, the Town is projecting a 1% annual growth rate for the life of the project (20 years) and a population of 1,976 in year 2030

C. NATURAL FEATURES

The town of Culbertson is located in eastern Montana in what is typically called the eastern plains of Montana. Culbertson is located adjacent to the Missouri River on low hills eroded by numerous small drainages. The surface soils typically consist of sands, silts, and clays that were placed as alluvial and colluvial deposits, typical of alluvial fans, terraces, or glacial outwash. The elevation of the town varies from 1,916 feet to 1,950 feet. Groundwater levels in the area vary from 3 to 110 feet. Utility work in town typically does not encounter groundwater.

Average annual precipitation in Culbertson is 13.49 inches. The wettest months are typically May, June, and July and the driest months are usually November through February. The average maximum temperature for July is 86 degrees and the average minimum temperature in January is -2 degrees.

V. ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

A. DIRECT AND INDIRECT INVIRONMENTAL IMPACTS

1. Land Use/Prime Farmland – All Phase 1 pipe replacement work will occur on land previously disturbed, mostly streets, parking lots, or alleys that were previously disturbed to install the existing piping. The lift station will be constructed within a developed area and roadway. The force main will be installed adjacent to a county road, and therefore will be installed in areas that have been developed. Construction at the lagoon site will also occur in areas previously disturbed. The proposed improvements will not impact prime farmland or land use in general.

2. Floodplains and Wetlands – Improvements to the infiltration cell and about half of the force main work will occur within the 100-year floodplain of the Missouri River. The town will apply and receive a floodplain permit prior to any construction in the floodplain. All provisions of the permit will be followed during construction. The top elevation of the infiltration cell berm is between elevations 1,910 and 1,911 and above the 100-year flood elevation of 1,908-1,909, therefore the proposed new top berm elevation of 1,916.5 will be well above the 100-year flood level. Figure 4 depicts the floodplains in the Culbertson area. The proposed sewer main improvements are in town and within roadways, parking lots, and alleys, and will not impact wetlands. Although the existing infiltration cell to be improved and area adjacent to the treatment cells have been mapped as wetlands in the National Wetlands Inventory, the Department of the Army Corps of Engineers (COE) determined that the wetlands are not jurisdictional wetlands and are not waters of the United States. Figure 5 depicts the mapped wetlands in the Culbertson area. Therefore, there will be no direct impact to jurisdictional wetlands. See Section X: Agencies

Consulted of this report for a summary of their comments.

3. Cultural Resources and Historical Sites – No impacts to cultural resources are anticipated. The proposed improvements should not impact historic or cultural resources since all new facilities will be constructed within the existing disturbed areas. The State Historic Preservation Office (SHPO) reviewed the proposed project. They conducted a cultural resource file search for the area and concluded that there is a low likelihood that cultural properties will be impacted by the proposed project, and that a cultural resource inventory is unwarranted at this time. However, if cultural materials are inadvertently discovered during this project, SHPO must be contacted and the site investigated. See Section X: Agencies Consulted of this report for a summary of their comments.

4. Fish and Wildlife – Animal life will not be significantly affected by the proposed project. The project will not affect any critical wildlife habitats, nor will any known endangered species be affected. The Montana Department of Fish, Wildlife, and Parks and U.S. Fish and Wildlife Services were notified of this project and asked to reply with any concerns. They indicated that they did not have any comments regarding the proposed improvements. The Montana Natural Heritage Program was contacted regarding the proposed project and identified three animal species of concern in the project area. These included the Eastern Red Bat, Townsend's Big-eared Bat, and Western Hog-nosed Snake. The impacts to these animal species are expected to be minimal for a variety of reasons, including:
   - Habitats (caves or riparian forests) are not present in the area for either bat species
   - the project sites are within areas previously disturbed with residential development
   - construction would occur during the summer when the animals are in their best condition and when ground animals have the most mobility
   - the work is not near the Missouri River
   - the construction period is relatively short

   See Section X: Agencies Consulted of this report for a summary of their comments.

5. Water Quality – Improvements to the sewer collection system will reduce potential leakage from the existing damaged pipes and reduce sewer overflows that could impact surface and groundwater.

6. 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.

7. Public Health – Public health will not be negatively affected by the proposed project. The new lift station and sewer main improvements will resolve operator safety concerns and eliminate sewage backups and surface overflows. The proposed improvements to the sewer collection system will reduce potential leakage from the existing damaged pipes.

8. Energy – An increase in energy consumption should not occur after the new lift station is constructed. Although new pumps and controls that include variable-frequency drives will be more efficient than the existing pumps, the energy savings may be offset by the additional energy used by the climate control and additional pump control and monitoring equipment. The consumption of energy resources directly associated with construction of the recommended improvements is unavoidable, but will be a short-term commitment.

9. Noise – Short-term impacts from excessive noise levels may occur during the construction activities. The construction period will be limited to normal daytime hours to avoid early morning or late evening construction disturbances. A new emergency generator for backup to the new lift station is proposed, but would only operate during power outages and occasionally (30 minutes once a month) to insure it is operating correctly. The lift station is separated from the town by the railroad tracks and therefore should not disturb the town residents. No significant long-term impacts from noise should occur.

10. Sludge Disposal – The infiltration cell does not contain sludge, therefore, no sludge removal, handling, or disposal will be a part of the Phase 1 work.

11. 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. All base sewer rates will be increased equally. No disproportionate effects among any portion of the community would be expected.

12. Growth – The 20-year design population is based on a growth rate of approximately 1% per year after accounting for the immediate growth of approximately 500 people (2-5 years). The proposed improvements should be capable of serving the projected 2030 population of 1,976. The anticipated increase in immediate population and development in the town due to the influx of people from the oil exploration in the area, and will result in increased flows to the wastewater system. The town has applications submitted to the town council for approval to connect to the town system. The proposed improvements to the collection system will be a positive feature for the community and will allow the town to manage its growth in a proactive manner and promote urbanization within its service area.

13. Cumulative Effects – No significant secondary and/or cumulative impacts are anticipated with the proposed phase 1 improvements. The proposed improvements will temporarily create additional storage capacity which will help accommodate the community's recent growth surge associated with oil field development in the region. Secondary impacts linked to housing, commercial development, solid waste, transportation, utilities, air quality, water utilization, and possible loss of agricultural and rural lands may occur. These secondary impacts are uncertain at this time and

therefore cannot be directly addressed in the EA. However, these impacts will need to be managed and minimized as much as possible through town policies and proper community planning. There are several existing town, 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 systems.

B. UNAVOIDABLE ADVERSE IMPACTS

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

VI. PUBLIC PARTICIPATION

Public participation for this project included a public meeting held on November 1, 2011. At the public meeting, the need for the project, the recommended alternative, and budget were discussed. No negative comments on the project were received from the public.

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, are required 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 required for any work that occurs in a streambed or (jurisdictional) wetlands, and will be obtained if 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 town of Culbertson wastewater improvement 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 documents have been utilized in the environmental review of this project and are considered to be part of the project file:

1. Preliminary Engineering Report for Town of Culbertson Wastewater Improvement Project, November 2011, prepared by WWC Engineering
2. PER Amendment for Town of Culbertson Wastewater Improvement Project, November 30, 2012, prepared by WWC Engineering
3. PER Amendment #2 for Town of Culbertson Wastewater System, March 19, 2013, prepared by WWC Engineering
4. Uniform Application Form for Montana Public Facility Projects for the Town of Culbertson, December 14, 2011
5. Design Report for the Town of Culbertson Wastewater Facility Rehabilitation, November 2012 , prepared by WWC Engineering

X. AGENCIES CONSULTED

The following agencies have been contacted in regard to the proposed construction of this project:

1. The U.S. Fish and Wildlife Service reviewed the proposed project and had no concerns with the project. They are supportive of any viable improvements that are likely to result in the improved quality of waters as they would be beneficial to fish, wildlife, and habitat resources. They further indicated that there are unlikely to be any significant adverse effects to fish, wildlife, and habitat because most of the project related construction impacts are temporary and will occur in a previously disturbed, semi-urban or agriculture setting.

2. The Montana Historical Society's State Historic Preservation Office (SHPO) reviewed the proposed project. According to their records, there have been no previously recorded sites within the designated search locales. 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) reviewed the proposed project. They indicated that if any work is proposed below the ordinary high water mark of stream channels, and lakes or ponds connected to the tributary system, and wetlands adjacent to these waters that Section 404 permit would apply and authorization from USCOE would be needed. They stated that the proposed project locations do not contain jurisdictional waters of the United States, including wetlands, and therefore a Section 404 permit is not required for this project. However, if the project deviates from the reviewed information the project will be re-evaluated and authorization may be required from their office.

4. The Montana Department of Fish, Wildlife and Parks indicated that they did not have any comments regarding the proposed improvements.

5. The Montana Natural Heritage Program was contacted regarding the proposed project and found no plant species of concern, but did identify three animal species of concern in the project area. These included the Eastern Red Bat, Townsend's Big-eared Bat, and Western Hog-nosed Snake. The impacts to these animal species are expected to be minimal (see Section V.4).

EA Prepared by:

Jerry Paddock, P.E. Date 5/2/13

EA Reviewed by:

Mike Abrahamson, P.E. Date 5/2/13

FIGURE 1
LOCATION MAP

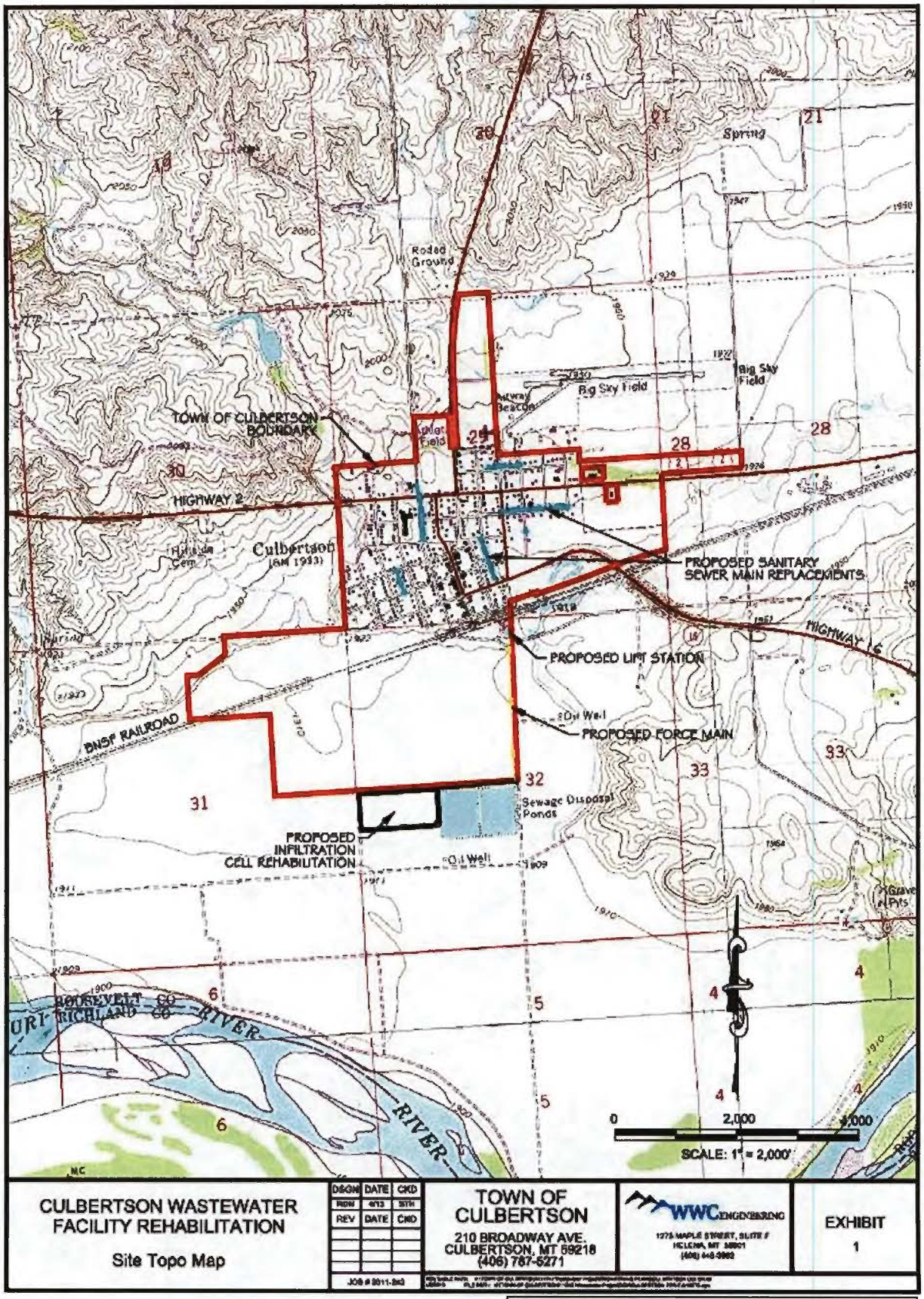

FIGURE 2
CULBERTSON BOUNDARY AND WASTEWATER TREATMENT SITE

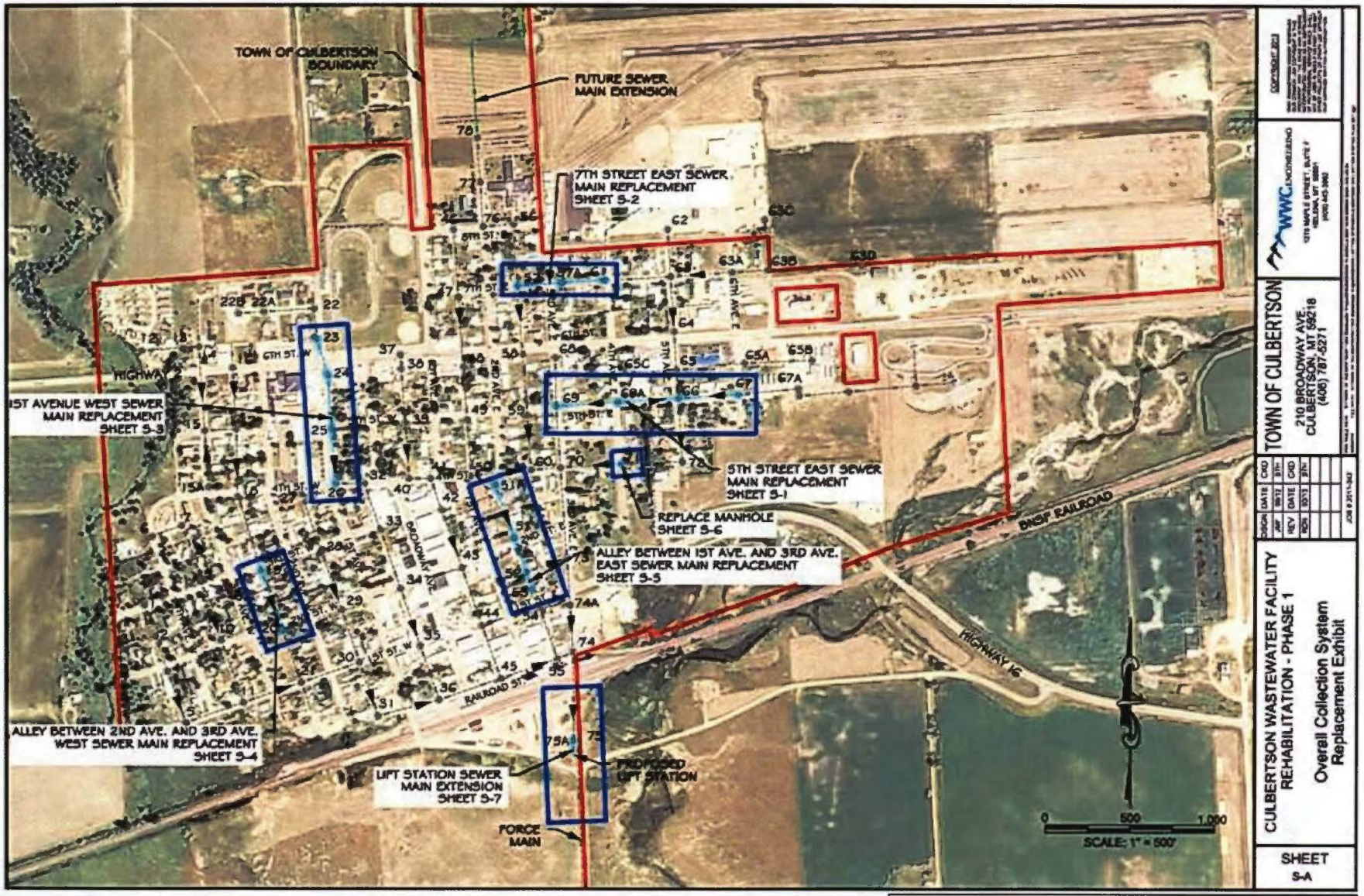

FIGURE 3
LAYOUT OF PROPOSED COLLECTION SYSTEM IMPROVEMENTS

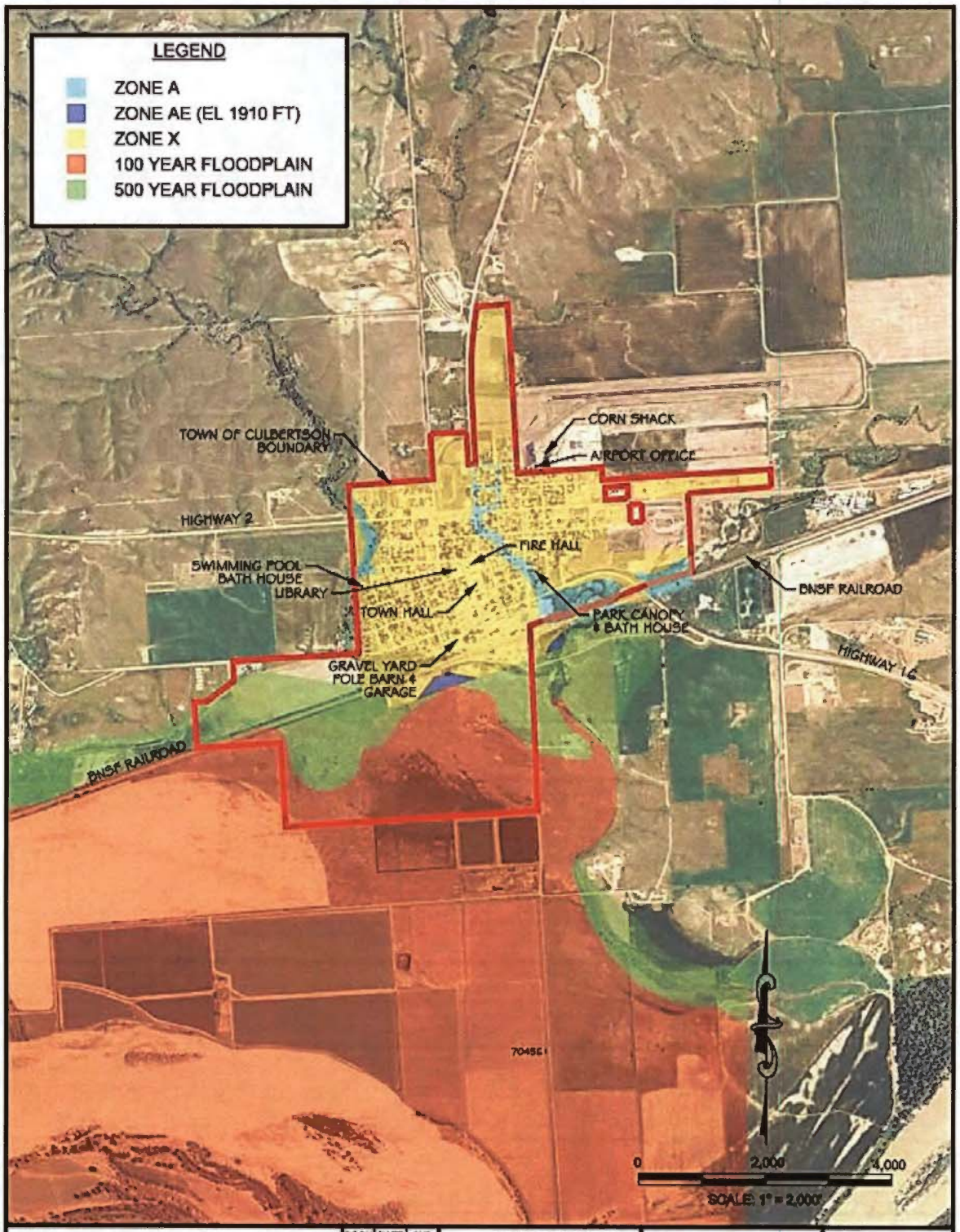

FIGURE 4
FLOODPLAIN MAP

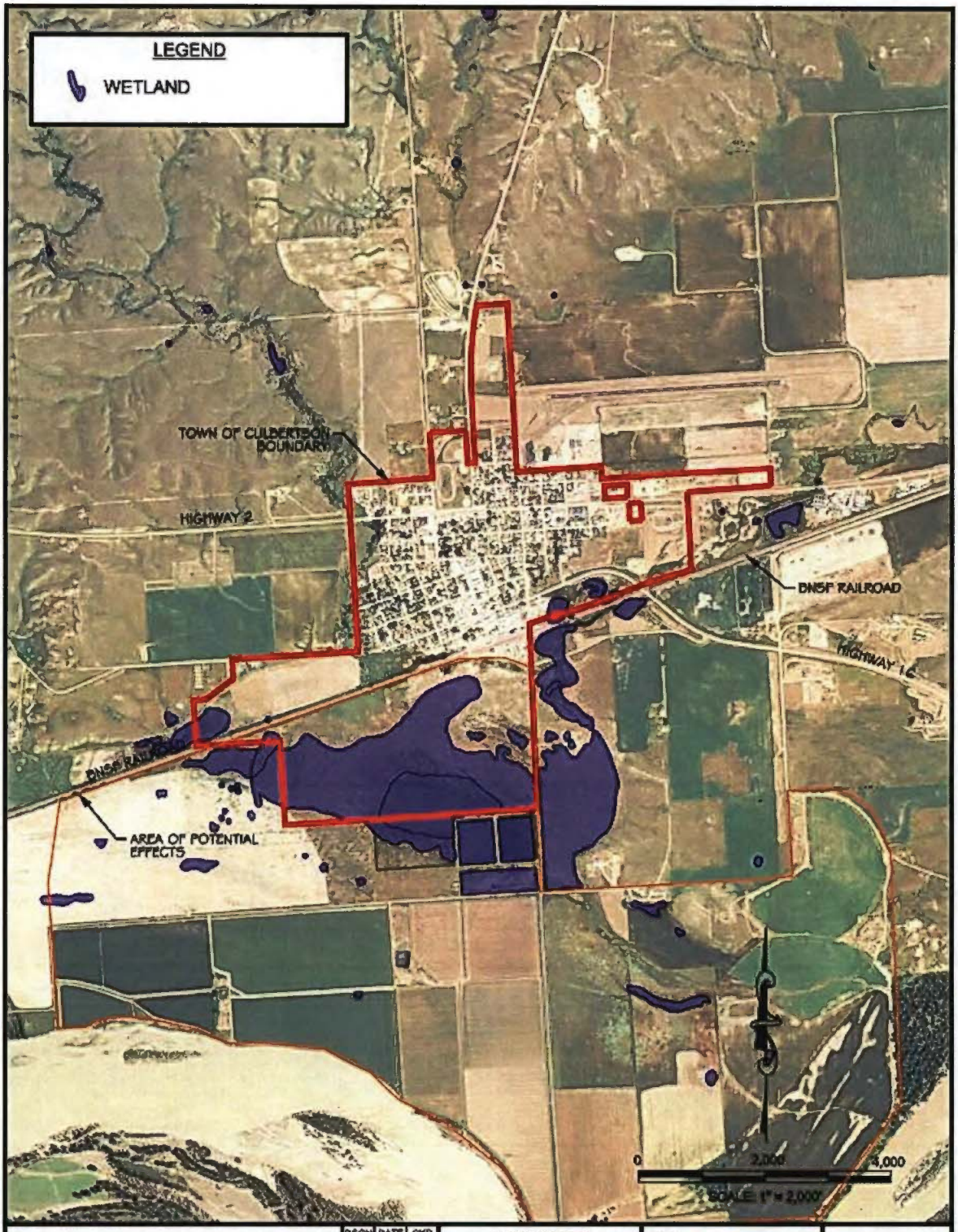

FIGURE 5
WETLAND MAP