

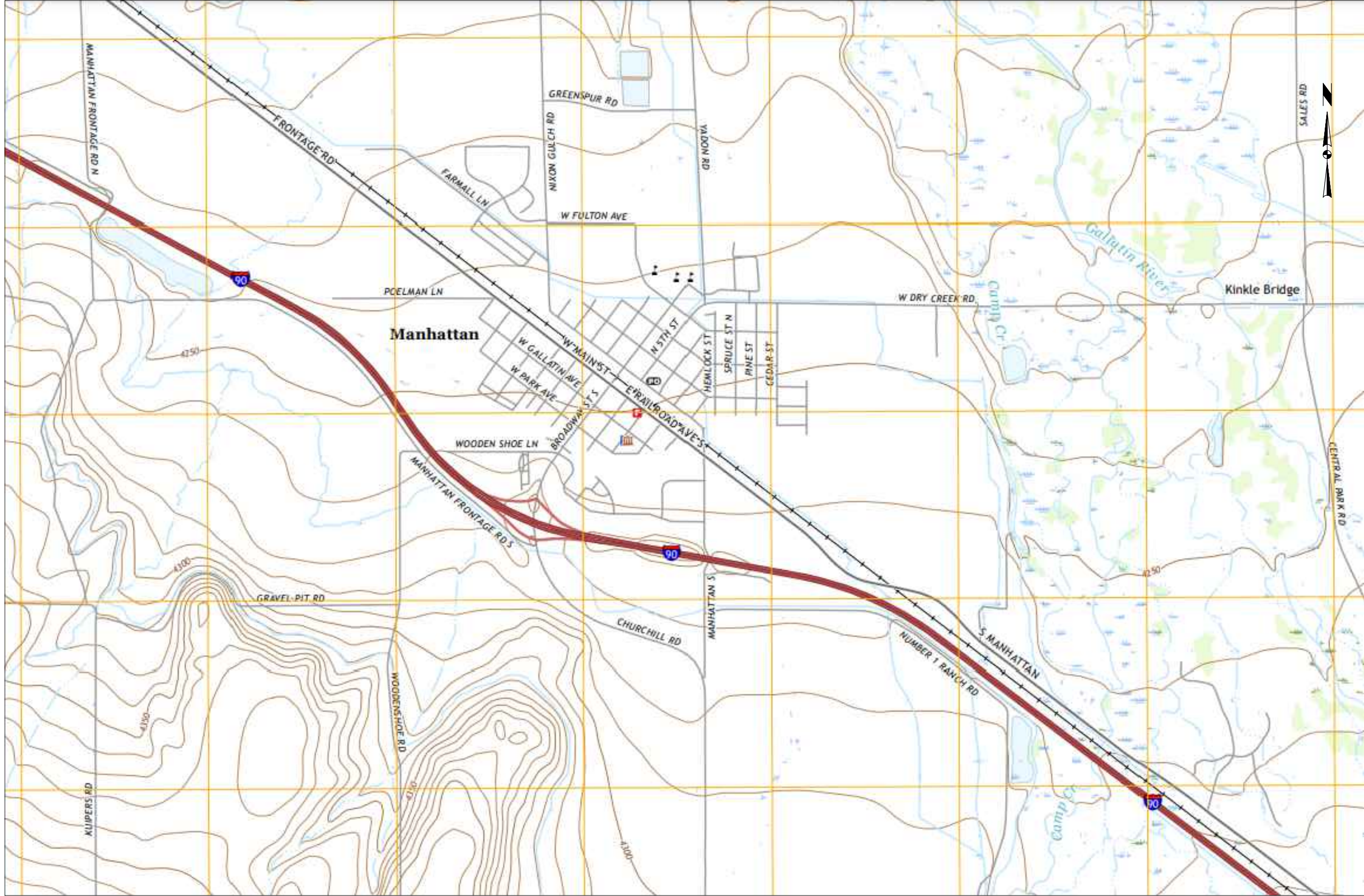
1.0 PROJECT PLANNING

The Town of Manhattan's water system serves the community of Manhattan, MT. The following sections describe the service area in detail.

A. LOCATION

The Town of Manhattan is in Gallatin County, Montana, located along I-90, approximately 25 miles northwest of Bozeman, MT and 65 miles east of Butte, MT. Manhattan is at an elevation of approximately 4,250 feet above sea level. The Town's center lies in Township 1 North, Range 3 East, Section 10 at a latitude and longitude of 45° 51' 24.62" N and 111° 19' 51.60" W. Refer to **Figure 1-1** a copy of the United States Geological Survey (USGS) Topographic map; the 2020 Manhattan Quadrangle 7.5-minute series map is included in **Appendix 1-C**. A vicinity map is provided in **Figure 1-2**. The Town of Manhattan is located to the west of the Gallatin River. In addition to the Gallatin River, there are several year-round streams, including Warm Springs Canal, Camp Creek, and some other minor tributaries. The Madison and Gallatin mountain ranges are to the south, the Tobacco Root Mountains are to the southwest, and the Bridger Mountains are to the east. The Town abuts Interstate-90 on the southwest and is bisected by the Montana Rail Link (MRL) Railroad.

The average daily low and high temperatures are 9° F and 31° F in December and 47° F and 83° F in August. Precipitation ranges from approximately 0.6 inches per month during the dry season (November through February) to approximately 2.4 inches per month during the wet season (May through June). Manhattan receives on average 14.0 inches of precipitation annually and an average of 47.2 inches of snowfall annually.



NOT FOR CONSTRUCTION

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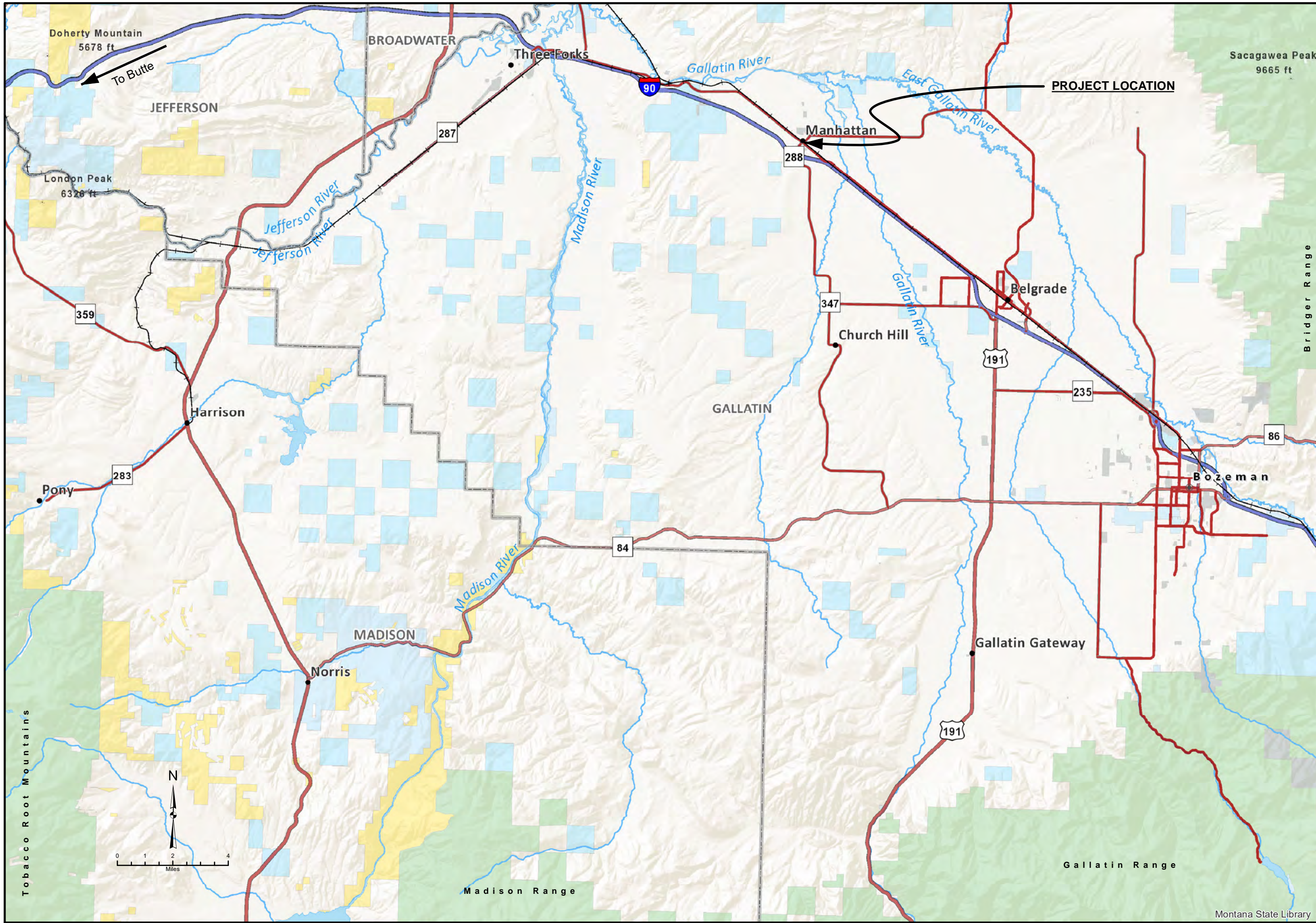


DRAWN BY: NMR
 DESIGNED BY:
 QUALITY CHECK:
 DATE: 4/05/2024
 JOB NO. B24-010
 FIELDBOOK

MANHATTAN WATER SYSTEM PER
MANHATTAN, MONTANA

USGS TOPOGRAPHIC MAP

J:\2017\B17-034 Manhattan WRF PERCADD\CIVIL\FIG 1-1.mxd



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DRAWN BY: CJS
 DESIGNED BY:
 QUALITY CHECK:
 DATE DRAWN: 10/24/19
 JOB NO.: B17-034
 FIELDBOOK:

**MANHATTAN WATER SYSTEM PER
MANHATTAN, MONTANA
VICINITY MAP**

Montana State Library

B. ENVIRONMENTAL RESOURCES

Environmental resources present in the project area are discussed below. In January 2024, the Montana Natural Heritage Program (MTNHP) provided a Custom Environmental Summary for the Town of Manhattan including a one-mile buffer surrounding the Town, encompassing the service area. The Uniform Environmental Checklist is provided in **Appendix 1-A**. All environmental Agency Correspondence are available in **Appendix 1-B**. Environmental Resources are included in **Appendix 1-C**.

1. Land Resources

The area surrounding the Town of Manhattan is characterized by agricultural farmland, with grains and potatoes being the primary crop. The Town is at an approximate elevation of 4,250 feet above sea level with relatively flat terrain. Area topography is illustrated in the USGS topographic maps provided in **Appendix 1-C**. In general, the land slopes from the south to the north. Soil information available through the Natural Resources Conservation Services (NCRS) Web Soil Survey is included in **Appendix 1-C**. The primary soil type throughout the is an Amesha loam with 0-4% slope. A letter requesting comment has been sent to the Natural Res. All correspondence is provided in **Appendix 1-B**.

2. Floodplains

The Town is classified as Zone X according to the Flood Insurance Rate Maps (FIRM) provided by the Federal Emergency Management Agency (FEMA), included in **Appendix 1-C**. Zone X is defined as "areas determined to be outside the 0.2% annual chance floodplain." The area roughly one-mile northeast of the Town, near the Gallatin River, is Zone A flood area. Zone A does not have base flood elevation determined but has a 1% annual chance of flooding. A letter requesting comment has been sent to the Gallatin County Floodplain Administrator. All correspondence is provided in **Appendix 1-B**.

3. Wetlands

There are significant designated wetland areas immediately adjacent the Gallatin River, including Freshwater Emergent Wetlands, Freshwater Forested/Shrub Wetlands, and Freshwater Ponds, Riverine. However, within the immediate vicinity of the town itself, there appears to be a few Emergent Wetlands. A copy of the US Fish and Wildlife Service's (FWS) National Wetlands Inventory (NWI) is provided in **Appendix 1-C**. Should the planned water system improvements impact wetland or riverine areas, or areas within a floodplain, further environmental investigation, reporting, and permitting may be necessary. A letter requesting comment on the recommended project has been sent to the U.S. Army Corps of Engineers (ACOE). All correspondences are included in **Appendix 1-B**.

4. Agricultural Lands

The Town of Manhattan and surrounding area has considerable amounts of agricultural lands. The Farmlands Protection Policy Act (FPPA) of 1981 was passed to minimize the impact of Federal programs and projects on the conversion of farmland to non-agricultural uses. A NRCS Web Soil Survey was obtained for the Town and immediate vicinity, and

the farmland in the project vicinity is classified predominantly Prime Farmland if Irrigated. A full list of soils and classification information is provided in **Appendix 1-B**.

5. Biological Species Occurrences

The U.S. FWS lists four species of concern within Gallatin County that are candidate, proposed, or protected under the Endangered Species Act as threatened species. There are no endangered species in Gallatin County. The species listed by the U.S. FWS and their statuses are as follows:

- Canada Lynx –Listed Threatened
- Wolverine – Listed Threatened
- Grizzly Bear – Proposed, Listed Threatened
- Monarch Butterfly – Candidate
- Ute Ladies'-tresses – Listed Threatened

In January 2024, the Montana Natural Heritage Program (MTNHP) provided a Custom Environmental Summary for the Town of Manhattan including a one-mile buffer surrounding the Town, encompassing the service area. A query of the MTNHP Environmental Report provided a list of the plant and animal “Species of Concern”, “Potential Species of Concern”, “Special Status Species”, and “Important Animal Habitat” within the queried area. The species of concern and potential species of concern are plants or animals that are native to Montana and are currently, or potentially at risk for extirpation or local extinction. The special status species are species that have some legal protection in place but are no longer recognized as federally listed under the Endangered Species Act. The report noted the occurrences of 97 plant and animal species of concern or potential species of concern, 2 special status species, one important animal habitat, and 43 invasive species potentially present within the planning boundary. The full list of species can be found in **Appendix 1-C**.

6. Historic Sites

The Montana State Historic Preservation Office (SHPO) has been contacted to comment on the historical and archeological sites around the proposed improvements. According to Mr. Damon Murdo, Cultural Records Manager for SHPO, "As long as the project will be occurring within previously disturbed ground, and there will be no disturbance or alterations to structures over fifty years of age we feel there is a low likelihood cultural properties will be impacted." Correspondences are included in **Appendix 1-B**.

6. Sage Grouse

A query of the Montana Sage Grouse Conservation Program website indicates any improvements to Town of Manhattan’s water system will be located outside of the sage grouse habitat designated as a core area, general habitat, or connectivity area and will not be subject to Executive Orders 12-2015 and 21-2015. The Montana Sage Grouse Habitat Conservation Map is included in **Appendix 1-C**. Previous conversations with the Program indicate that projects not within defined sage grouse habitat are not required to coordinate with the Program.

8. Socio-economic/Environmental Justice Issues

Manhattan is a small community where approximately a third of the residents are low and moderate income (LMI). American Community Survey (ACS) indicated that only 32.8% of the Power Census Designated Place's (CDP) population was LMI and 9.3% were below the poverty level. The 2019 ACS also indicated the median household income (MHI) is \$60,324.

All proposed improvements to the Town's water system will benefit all residents equally, The District has been proactive in pursuing grants and low interest loans to minimize impacts to the residents' user rates.

C. POPULATION TRENDS

The Town of Manhattan has experienced fluctuating population growth recently. In the 1990's, both Gallatin County and Town saw an annual growth rate of 3.0%, indicating strong residential and commercial growth. From 2000 to 2010, the County's growth remained high. From 2010 to present the Town's annual as remained above 2.5%; the County's growth has averaged 2.61% **Table 1-1** presents the historic population data for the Town of Manhattan and Gallatin County.

Table 1-1 Historic Population Data				
Year	Gallatin County		Manhattan Town	
	Population	% Annual Growth	Population	% Annual Growth
1970	32,505	--	816	--
1980	42,862	2.80%	988	1.93%
1990	50,463	1.65%	1,034	0.46%
2000	67,831	3.00%	1,396	3.05%
2010	89,513	2.81%	1,520	0.85%
2020	118,960	2.88%	2,086	3.22%
2024	128,469	1.94%	2,319	2.68%

The *Town of Manhattan 2014-2018 Capital Improvement Plan* indicates an expected growth annual rate between 3.0 and 3.5%. There has been a recent population boom in Gallatin County and the neighboring cities of Belgrade and Bozeman to support this prediction. The 2023 Capital Improvement Plan lists the lack of water capacity as the "largest inhibitor of growth". The recent Wastewater Preliminary Engineering Report referenced a growth rate of 3.5% to the Town's existing population. Applying a 3.5% annual growth rate to the Town's current population of 2,319 persons results in a **2044 populations of 4,614 people**. Population trend calculations are provided in **Appendix 1-D**.

D. COMMUNITY ENGAGEMENT