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***AREAWIDE WATER QUALITY
MANAGEMENT PLAN***

2018 UPDATE

For Larimer and Weld Counties (Region 2)

**Approved by
North Front Range Water Quality Planning Association**

(07-26-2018)

Update includes all amendments through this date.

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Acronyms Listing

NFRWQPA	North Front Range Water Quality Planning Association
gpd	Gallons per Day
CWA	Clean Water Act
EPA	Environmental Protection Agency
WQCD	Water Quality Control Division
CDPHE	Colorado Department of Public Health and Environment
WUSA	Waste water utility service area
SWQMP	Statewide Water Quality Management Plan
MS4	Municipal separate storm sewer systems
NPS Council	Colorado Nonpoint Source Council
M&E	Monitoring and Evaluation
TMDL	Total Maximum Daily Loads
mgd	million gallons per day
mg/l	milligrams per liter
TIN	Total Inorganic Nitrogen
GIS	geographic information system
GMA	Growth Management Area
WWTF	Wastewater treatment facility
WWTP	Wastewater treatment facility
SBNR	Single Basin Nutrient Removal
GMA	Growth Management area
IGA	Intergovernmental agreement
NPDES	National Pollutant Discharge Elimination System
CDPS	Colorado Discharge Permit System

1. INTRODUCTION

1.1 EXECUTIVE SUMMARY

The 2018 Update of the Areawide Water Quality Management Plan (208 Plan) for Larimer and Weld Counties (Region 2) has been prepared by the North Front Range Water Quality Planning Association (NFRWQPA) as part of the continuing 208 Plan update process. The NFRWQPA has been the responsible 208 Areawide Water Quality Management Agency since 1987. This update contains information on the following items:

- Water quality information for the region
- Statewide Water Quality Management Plan information for the region
- Watershed initiatives
- Policy / management changes
- Current listing of all the designated Management Agencies for the region
- All changes incorporated to the plan through plan amendments or site applications since the last update (2016)
- Update of the information on all municipal point source discharges including population, loading projections provided by the entities, and a description of the facility and service area map
- Update to description of the operations and treatment facilities for the major permitted point source industrial discharges
- Update to the small community or private systems with CDPS permits capacity greater than 2,000 gallons per day (gpd) but less than 50,000 gpd.

1.2 OVERVIEW

The Clean Water Act (CWA), first passed in 1972, and later amended in 1977 and 1987, is the primary federal law which regulates the quality of surface waters in the United States. This act establishes the need for water quality planning which includes regional water quality planning as outlined in section 208. The CWA allows states to administer many programs under the act as long as the state laws and regulations governing these programs are at least as stringent as the federal act. The Colorado Water Quality Control Act was established in order for the state to assume the lead role in many of these program areas, including water quality management. This Act authorizes the governor to designate planning agencies for the purposes of the federal Clean Water Act. The NFRWQPA is the designated Management Agency for Larimer and Weld Counties (Region 2). The Association has the following Mission and Vision:

Mission Statement

To use collaborative regional planning, facilitation, and review to ensure that present and future wastewater needs are met economically and with a focus on water quality protection.

Vision Statement

As an advocate for our streams, lakes, and communities, NFRWQPA aspires to be a highly respected regional leader in resolving water quality planning issues, and a source of reliable information and data, regulatory interpretation, and thoughtful comment on proposals. It is a unifying force in regional long-term wastewater and water quality planning, ensuring that wastewater service is provided with coordination of effort, and technical expertise.

As the designated planning agency, the NFRWQPA has the responsibility of developing and updating the 208 plan to keep it current. Once approved, the 208 plan serves as the overriding planning document used to coordinate water quality planning in the region. As stated in the Clean Water Act, the plan shall include “the identification of treatment works necessary to meet the anticipated municipal and industrial waste treatment needs of the area” and “the identification of the measures necessary to carry out the plan.” EPA’s 40 CFR 130.6 establishes policies and program requirements for water quality planning, management and implementation under several sections of the CWA including section 208. Included in these program requirements is the need for states to establish a continuing planning process that, among other things, establishes the mechanism for updating and maintaining Water Quality Management Plans. The Water Quality Control Division (WQCD) prepared “*A Guide to Colorado Programs for Water Quality Management and Safe Drinking Water*”, (Commission Policy #98-2, updated in August of 2013). This document can be found on the Water Quality Control Commission’s Website (<https://www.colorado.gov/pacific/cdphe/wqcc>). This document is the latest version of guidelines for the continuous planning process for the state. It also discusses additional details regarding the roles and required elements of 208 plans and provides a list of elements that “need to be kept current through the update and amendment process” in order for the plans to remain useful decision-making documents. A list of these required elements has been included as “Section 208 Planning requirements” in Appendix E of this update and outlines where, in the update, these elements have been addressed. A number of these elements are currently covered under statewide programs and will be discussed in more detail in Chapter 2 “Statewide Water Quality Management Plans.”

The plan provides essential information to ensure that local water quality goals and objectives are considered in state and federal water quality decision making. NFRWQPA is also responsible for carrying out the tasks identified in the plan. The Association has policies and guidance documents that govern specific activities associated with these tasks. These policies are designed to steer the planning process. In the 2018 Update, the following policies and guidance documents have been included in the Appendices:

- Utility Plan Policy
- Utility Plan Guidance Document (updated in 2015)
- Site Location and Design Approval Review Policy
- Plan Amendment Process

This plan update includes information that the Association has identified as needing to be kept current. These elements include facility needs, facility location, capacity, facility expansion timing, population, service areas, level of treatment, partnerships, and regional water quality policies. This information is included in the basin summaries and the individual data sheets for each management / operating agency. Facilities narrative discussion is provided by river basin in Chapter 5 and alphabetically in the Data Sheet

section (Chapter 6). These sections include information such as treatment levels, anticipated future needs, and projections of when the facility will reach 80% and 95% of capacity. The source of much of this information comes from updates by the individual entities and their respective Utility Plans which are on file.

The Utility Plans are critical in determining how wastewater service will be provided to urbanized portions of the region and special case locations that have a permitted wastewater treatment facility. The long-term goal is to have a Utility Plan approved by NFRWQPA for all permitted wastewater treatment systems in the region. In working towards that goal, NFRWQPA has established a Utility Plan Policy that requires any management / operating agency submitting a site application, plan amendment request, or district formation / designation request have in place an approved Utility Plan. These Utility Plans provide specific information as to how service will be provided to the planning area and include detailed information regarding recommendations, including infrastructure, to meet projected needs, as well as how all water quality standards will be met by the treatment processes being recommended. These Utility Plans become the foundation upon which the 208 Plan Update is built and supports decisions and recommendations that are made by the Association. A listing of the associations’ approved Utility Plans are in Table 1. Utility Plans may be updated and approved as needed to meet changing water quality regulations and conditions within the region, or to remove conditions in prior plans that never materialized. For existing Utility Plans the documents are updated as needed when agencies submit undocumented projects or service area amendments not contained within the current approved plan. Understanding that many agencies may be stagnant for several years because of fixed service areas or the facility technology remains adequate to meet water quality-based limits; whereas, other agencies may be constantly updating Utility Plans because of service area population growth and or expansion, and thus facility improvements to compensate for the increase modifications. State coordination with approved Water Quality Management plans should ensure no discharge permit may be issued which is in conflict with the approved Water Quality Management plan or whereas the permittee has an unapproved or out of date Utility Plan. Ensuring consistency with the Water Quality Management Plan is the division’s responsibility while administrating discharge permits. This coordination between agencies is fiscally responsible as neither the State or NFRWQPA is requiring agencies to duplicate efforts in constructing or updating Utility Plans at set or predetermined intervals.

Table 1 NFRWQPA Approved Utility Plans

NFRWQPA Approved Utility Plans			
Agency	Approved Date	Agency	Approved Date
Abbey of St. Walburga	March-2010	Hidden View Estates	December-2007
Annunciation Heights Camp & Retreat Center	October-2014	Hudson, Town of	July-2008
Ault, Town of	June-2014	Johnstown, Town of	September-2011
Ben Delatour Scout Ranch	February-2010	Keenesburg, Town of	January-2018
Berthoud Estates	September-2014	Loveland, City of	September-2010
Berthoud, Town of	November-2014	Mead, Town of	November-2006
Boxelder Sanitation District	March-2018	Metro Wastewater Reclamation District	September-2010
Broomfield, City of	July-2012	Milliken, Town of	May-2016

Broomfield North Park Basin Wastewater Service Area Plan	July-2012	Northglenn, City of	July-2012
Covenant Heights	October-2014	Platteville, Town of	December-2010
Crystal Lakes	May-2014	Prairie School District	May-2012
CSU Pingree Park Campus	May-2011	RiverGlen HOA	June-2013
Eaton, Town of	October-2003	Resource Colorado Water & Sanitation Metro District	September-2008
Eden Valley Institute	June-2013	Saddler Ridge Metro District	October-2008
Erie, Town of	January-2016	Salvation Army-High Peak Camp	January-2018
Estes Park Sanitation District	December-2011	Severance/Saddler Ridge Metro District Joint Utility Plan	December-2010
Evans, City of	August-2015	St. Vrain Sanitation District	April-2012
Fort Collins, City of	January-2009	Shambhala Mountain Center	April-2010
Fort Lupton, Town of	August-2014	South Ft. Collins Sanitation District	March-2018
Fox Acres	May-2015	Sunrise Ranch	June-2014
Galeton, Town of	January-2018	Upper Thompson Sanitation District	February-2010
Glacier View Meadows	Conditional-October-2007	Wellington, Town of	January-2014
Greeley, City of	February-2010	Windsor, Town of	February-2010
Grover, Town of	June-2010	New Vision Mobile Home Community	June-2008

In addition to the information discussed above, updates have also been made to the Wastewater Utility Service Area (WUSA) boundaries where appropriate as a result of Plan Amendment changes. The WUSA maps outline the boundaries of the areas for which the operating entity will be responsible to provide wastewater service in the foreseeable future. No overlaps in service area boundaries are allowed by the 208 Plan unless there is, in existence, an agreement between the involved service providers as to how service will be provided to the overlapping areas. The WUSA boundaries are mapped using a GIS system (ESRI) that is maintained by the Association. Updated GIS data has been included with this plan for all NFRWQPA members and partner agencies (provided on DVD as Appendix F). Any change in these boundaries requires an amendment to the plan unless it is a minor adjustment involving less than ten acres. As indicated above, all changes must be supported by an approved Utility Plan for the entity requesting the change.

The information in this plan updates the information that was included in the 2016 Update and incorporates all amendments to the plan which have been made since the 2016 update through July, 2018.

1.3 DESIGNATION OF MANAGEMENT & OPERATING AGENCIES

The original 208 Plan Update prepared in 1985 listed all the designated management agencies and operating agencies in Larimer and Weld Counties. The original lists have been updated over time by the inclusion of additional agencies when they have become eligible for designation. As in previous updates, the management agencies having the authority to implement the 208 plan are defined as:

Land-Use Management Agency: A general purpose type of governmental agency with land use control powers such as a county, city and county, city, or town. These land-use management agencies are responsible for oversight of all water quality concerns related to land use within their jurisdiction including point and nonpoint sources of pollution and activities which can degrade receiving waters.

Wastewater Management / Operating Agency: An agency responsible for controlling all aspects of the collection, treatment, and discharge of sewage or industrial wastewaters within their (district) boundaries or service area or, in the case of an industrial concern, within their company's sphere of operation.

A wastewater management / operating agency must be able to design, construct, operate, and maintain waste treatment works and satisfactorily finance these operations through the raising of sufficient revenues. As in previous updates, a city or town which operates their own wastewater collection system and treatment plant(s) is designated both as a land-use management agency and a wastewater management / operating agency. All agencies should have the capacity to enter into agreements with each other to provide the best cooperative approach to water quality management.

A land-use management agency should have land use authority to be effective in solving water quality problems associated with development. The land-use management agency would be responsible for land use decisions which could affect the quality of waters in their area of jurisdiction or the ability of the wastewater management / operating agency to provide adequate wastewater collection and treatment. The concerns for water quality relate to septic tank use, proliferation of small treatment plants, urban runoff, and construction-caused erosion and sedimentation, and other activities that can be approached through various forms of land use control.

Land-Use Management Agencies

Responsibilities:

- Define urban utility service areas and urban growth areas
- Review site approval applications
- Exercise land use powers based on water quality considerations
- Provide expertise to the planning process
- Seek agreements with appropriate wastewater management / operating agencies
- Make recommendations to NFRWQPA on any service area boundary change or any facility expansion and certify compliance with the Areawide Water Quality Management Plan
- Encourage cooperation in accomplishing pollution abatement activities within their jurisdictions
- Include in their respective comprehensive plans the necessary water quality considerations

Table 2 Management Agencies

NFRWQPA Designated Land Use Management Agencies: (Recommended for approval)		
Ault, Town of	Garden City	Mead, Town of
Berthoud, Town of	Gilcrest, Town of	Milliken, Town of
Brighton, City of	Greeley, City of	New Raymer, Town of
Broomfield, City & County of	Grover, Town of	Northglenn, City of
Dacono, Town of	Hudson, Town of	Nunn, Town of
Eaton, Town of	Johnstown, Town of	Pierce, Town of
Erie, Town of	Keenesburg, Town of	Platteville, Town of
Estes Park, Town of	Kersey, Town of	Severance, Town of
Evans, City of	Larimer County	Timnath, Town of
Firestone, Town of	La Salle, Town of	Weld County
Fort Collins, City of	Lochbuie, Town of	Wellington, Town of
Fort Lupton, Town of	Longmont, City of	Windsor, Town of
Frederick, Town of	Loveland, City of	

Wastewater Management / Operating Agencies

Responsibilities:

- Define their sewerage service area
- Refer to the responsible land-use management agency any plans for modifying service area boundaries and expansion of sewerage collection and treatment facility
- Refer to NFRWQPA any change in service area and plans for new service plant expansion
- Seek agreements with the appropriate land-use management agency on urban growth areas and service areas
- Operate and maintain their sewerage facilities in compliance with all applicable permit conditions
- Maintain a viable financial and revenue program to provide for future required capital expenditures and operation maintenance costs

Table 3 Management/Operating Agencies

NFRWOPA Designated (Public) Management/Operating Agencies: (Recommended for Approval)		
Ault, Town of	Greeley, City of	Milliken, Town of
Berthoud, Town of	Grover, Town of	Northglenn, City of
Boxelder Sanitation District	Hudson, Town of	Pierce, Town of
Brighton, City of	Johnstown, Town of	Platteville, Town of
Broomfield, City & County of	Keenesburg, Town of	Prairie School District, Weld County
Eaton, Town of	Kersey, Town of	Severance, Town of
Erie, Town of	La Salle, Town of	South Fort Collins Sanitation District
Estes Park Sanitation District	Lochbuie, Town of	St. Vrain Sanitation District
Evans, City of	Longmont, City of	Wellington, Town of

Fort Collins, City of	Loveland, City of	Windsor, Town of
Fort Lupton, Town of	Mead, Town of	Upper Thompson Sanitation District
Galeton Sanitation District	Metro Wastewater Reclamation District	
Gilcrest, Town of		

Table 4 Industries

<u>NFRWOPA – Industries:</u>		
Carestream	Front Range Energy	Swift Beef – Lone Tree
In Bev - Anheuser-Busch	Leprino	Opal Foods
Colorado Division of Wildlife; Bellvue Hatchery	Colorado Division of Wildlife; Poudre Hatchery	Colorado Division of Wildlife; Watson Hatchery

Table 5 Private Agencies

<u>NFRWOPA – Private/Other Agencies</u>		
Abbey of St. Walburga	Davies Mobile Home Park	Magic Sky Ranch Girl Scout Camp
Dao House (formally Aspen Lodge)	Eden Valley Institute	Pine Lake Village
B & B Mobile Home Park	Fox Acres	River Glenn HOA
Ben Delator Boy Scout Ranch	Glacier View Meadows W&S Assoc.	New Vision Mobile Home Park (formally Rocky Mountain Vista)
Berthoud Estates	Harvest Farm – Denver Rescue Mission	Shambhala Mountain Center
Best Western Coach House Resort	Hemingway Lodge at Eagles Nest	Sky Ranch Lutheran Camp
Bonnell West HOA	Hidden View Estates	Emissaries of Devine Light (formally Sunrise Ranch)
Buckhorn United Methodist Camp	High County Estates	Western Mini Ranches
Annunciation Heights Church Camp (formally Covenant Heights)	High Peak Camp (Salvation Army)	Wind River Guest Ranch
Crystal Lakes W&S Association	Laramie River Guest Ranch	Yogi Bear’s Jellystone Park
CSU - Pingree Park Campus		

2. STATEWIDE WATER QUALITY MANAGEMENT PLAN(S)

In 2012, the Water Quality Control Commission (WQCC) approved the first edition of the Statewide Water Quality Management Plan (SWQMP). In 2013, the WQCD prepared the “A Guide to Colorado Programs for Water Quality Management and Safe Drinking Water” (referred to hereinafter as the Water Quality Guide). These documents developed by the Water Quality Control Division (WQCD) provide a framework for water quality planning in the state. The documents are structured utilizing a watershed approach for much of the water quality information. The documents also contain other planning elements including information about water quality management agencies, effluent limitations, total maximum daily loads, municipal and industrial waste treatment, nonpoint source management and control, water quality management plan implementation measures, dredge and fill, and groundwater. These elements are discussed at a statewide programmatic level, with a focus in the document on the Division’s activities. It also makes reference to other existing documents that direct water quality planning-type activities throughout the state. The SWQMP and the Water Quality Guide are not meant to replace regional 208 plans, but rather to build on the planning efforts that have taken place over the last 30 years. The Water Quality Guide and SWQMP are not intended to supersede any procedural requirements and informational resources contained in the existing approved 208 Plans.

One of the goals of these reports is to fulfill the requirements of 40 CFR 130.6 as required by the Clean Water Act (CWA) to develop a water quality management plan. In doing so, the SWQMP covers a variety of water quality planning subject areas and discusses the efforts being conducted on a statewide level to address these planning areas. Two of these subject areas overlap with the required elements associated with regional 208 Plans as defined by the Water Quality Management Plan. These two program areas are nonpoint source and stormwater activities. While these subject areas are discussed in the required elements of a 208 plan, evolving (MS4) regulations and funding sources have resulted in statewide programs associated with these two activities. The discussion below summarizes the statewide activities associated with the two programs. Additional information on both subject areas can be found in the SWQMP.

State Wide - Colorado Water Plan:

In 2013, the Governor decreed the development of a “Water Plan” for Colorado through the year 2050. In the succeeding months, many entities participated in hundreds of public meetings to discuss and develop the plan which was overseen by the Colorado Water Conservation Board. In November of 2015, the Plan was produced which provides many long reaching goals for the State involving water quantity and quality. As a result of the Plan, the WQCD will work with stakeholders including watershed groups, and those with point and nonpoint dischargers to continue to employ available programs to maintain and or improve water quality at a basin scale level. The full report can be accessed on line at: <https://www.colorado.gov/pacific/cowaterplan>

The WQCD will use the State wide “2018 Integrated Water Quality Monitoring and Assessment Report” which is updated biennially to report on water quality progress in the State. This periodic report is available for review on the WQCD website (<https://www.colorado.gov/pacific/cdphe/wqcc>).

CDPHE 10-Year Water Quality Roadmap:

Additionally, WQCD has developed a Water Quality 10-year roadmap (2017-2027) for the implementation of certain regulations and water quality goals. CDPHE’s plan allows stakeholder input concerning the how the new or revised standards with be adopted over the course of the next 10-years. The Water Quality roadmap

addresses point sources and nonpoint sources outlining major milestones the division, WQCC, and stakeholders will undertake collaboratively to implement the plan. Including water quality goals for nutrients (nitrogen, phosphorus, and chlorophyll *a*), cadmium, temperature, arsenic, ammonia, and selenium through 2027. Water quality goal development will include technical and scientific assessments to give the commission evidence to support the adoption of the goals. Once the goals are adopted by the commission those water quality standards will be translated into permits that allow discharge of acceptable levels of pollutants based on the aforementioned scientific assessments.

Nonpoint Source Activities:

The original 208 Plans provided a first attempt at addressing nonpoint sources of water pollution. In 1987, the Clean Water Act was amended to include Section 319 to specifically address nonpoint source types of pollution. In Colorado, the WQCD has been given the primary responsibility for administering the federally mandated nonpoint source program. As such, much of the emphasis of nonpoint source planning and management has shifted from traditional 208 plans into the Nonpoint Source Program at the state level. The WQCD's responsibility includes preparing and updating the nonpoint source assessment and management plan, maintaining the statewide manual of best management practices (BMPs), preparing lists of nonpoint source funding priorities, and administering grants, as necessary, to achieve the goals of section 319.

To assist with these planning responsibilities the WQCD established the Colorado Nonpoint Source Council (NPS Council). The NPS Council served as an advisory group and work group to assist the WQCD with the Colorado Nonpoint Source Program (through 2014). Since then the Division has managed the NPS process. The NPS Council played a role in the continuing effort to identify nonpoint source problems and issues in Colorado, propose programs and projects, and demonstrate and promote best management practices.

As with many federal programs, the Nonpoint Source program has grown and evolved over time. In 2005, the WQCD in cooperation with the NPS Council created the 2005 supplement to the Nonpoint Source Management Program. This document supersedes the major update to the program that was approved by EPA in 2000 and provides an updated action plan, program priorities, and funding guidelines. The Nonpoint Source Management Plan was last updated in 2012.

The supplement outlines the program actions for the next five years. In particular, it outlines how the NPS program will migrate from an individual pollutant category approach, such as agriculture, mining, or construction, to a pollutant-integrated watershed approach, addressing the collective NPS needs of a specific geographic region of Colorado.

In addition, the Environmental Protection Agency (EPA) has adopted new strategic targets and associated reporting requirements which will need to be implemented in the program. Because of this, the WQCD is proposing to prioritize watershed based on four main categories or areas of concern. Those areas include:

1. Water quality standards
2. Watershed groups' level of readiness
3. How ready the local community is to proceed
4. How well project implementation results can be monitored

Using this prioritized watershed approach by the WQCD will result in a more structured approach in approving 319 projects. This should assist in focusing resources and producing more measurable results in regard to water

quality improvements from nonpoint sources. This process also allows for the WQCD to allocate the majority of the NPS funds in the basins on a rotating basis that coordinate with the triennial regulation reviews in the basins.

The two-fold goal of the nonpoint source program is to **Restore** to full designated beneficial uses to those waters impaired by nonpoint sources of pollution and to **Protect** existing water quality from future impairments by using a transparent process that fully involves the public.

Additional nonpoint source information can also be found at www.npscolorado.com.

Stormwater:

Historically, stormwater was considered a nonpoint source of pollution, and therefore was not regulated as a discharge. In August 1993, Colorado established regulations to control the discharge of stormwater from specific industrial and municipal sources. These regulations were necessary in order to implement the 1987 revisions to the CWA. As a result, these regulations redefined discharges of stormwater from these sources as point source discharges which would require a permit.

Stormwater discharges that fall into the point source category are issued permits by the WQCD under Regulation No. 61: *Colorado Discharge Permit System Regulation* (5 CCR 1002-61). These include permits for stormwater discharges from industry and construction sites and to government entities (municipalities) that are responsible for stormwater discharges from urban areas. Additional details regarding stormwater regulation and permits can be found on the WQCD's website www.cdphe.state.co.us . For the types of discharges that still fall under the category of nonpoint sources, additional information can be found in the WQCD's Nonpoint Source Management Program.

3. WATER QUALITY

The state programs which establish water quality standards must meet the minimum requirements established by EPA under the Clean Water Act (CWA). The system used by the state for determining surface water quality classification and standards is based on the adoption of a use classification for waterbody segments (i.e., uses to be protected), and then adopting numeric standards for specific pollutants to protect those uses. There are three components to water quality standards which include: (1) use classifications, (2) numeric or qualitative standards, and (3) antidegradation provisions. The Water Quality Control Commission (WQCC) assigns water quality classifications and standards for specific water body segments as part of their rulemaking processes. All point source dischargers must meet the levels of effluent quality necessary to achieve and maintain these water quality standards which have been established for the receiving stream. Regulation #38 *Classifications and Numeric Standards for South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin* identifies the standards associated with all segments located in Larimer and Weld Counties. This regulation can be found on Water Quality Control Commission website at www.colorado.gov/pacific/wqcc and click on “Regulations”, then Regulations #38.

Stream segments that do not meet the water quality standards for the assigned use classification are considered water quality limited or impaired and are identified in the state’s 303(d) list. This 303(d) listing is part of the WQCC’s Regulation #93. The most recent version of Regulation #93 was approved by the WQCC in March 2018 and can be found on the CDPHE’s website as listed in the previous paragraph and follow the path to Reg. #93. Temporary Modifications for Arsenic were approved in early 2013 and can be found at the address listed above. Regulation #93 also includes those waters on the Monitoring and Evaluation (M&E) list. These are waters for which there is a reason to suspect water quality problems, but there is also uncertainty. All waters on the 303(d) list are required by EPA and the Clean Water Act to have Total Maximum Daily Load’s (TMDL’s) prepared for them in an attempt to resolve the problems causing water quality impairments. Developing TMDLs is a process that calculates the total amount of pollutant (load) that may be discharged into a water body to ensure that water quality standards are met. A listing of TMDLs completed for the South Platte River Basin can be found on the WQCD Website at www.colorado.gov/pacific/wqcc or as provided by the link below:

<https://www.colorado.gov/pacific/cdphe/wqcc-regulations-and-policies-and-water-quality-statutes>

The table below lists the 303(d) and M&E segments included in Regulation #93 for Larimer and Weld Counties. It includes the segment identification number, a description of the segment, the portion of that segment that is impaired, the parameter of concern for impairment, and the level of priority for TMDL development. A map illustrating the 303(d) and M&E stream segments for Larimer and Weld Counties has also been included at the end of this chapter.

93.3 Water Bodies Requiring TMDLs or Identified for Monitoring and Evaluation

Only those segments where Clean Water Section 303(d) impairments have been determined require TMDLs. For these segments, TMDLs are only required for those parameters that are identified as impairments.

Table 6 Clean Water Section 303(d) Impairment listing

COSPBO07b	7b. Mainstem of Coal Creek from Highway 36 to the confluence with Boulder Creek.			
Listed portion:	¹ COSPBO07b_A	Mainstem of Coal Creek from Highway 36 to the confluence with Rock Creek.		
	Affected Use	Analyte	Category / List ²	Priority
	Aquatic Life Use	Macroinvertebrates	3b. - M&E list	NA
	Recreational Use	E. coli	5. - 303(d)	H
Listed portion:	¹ COSPBO07b_B	Mainstem of Coal Creek from Rock Creek to Boulder Creek		
	Affected Use	Analyte	Category / List ²	Priority
	Aquatic Life Use	Macroinvertebrates	3b. - M&E list	NA
	Recreational Use	E. coli	5. - 303(d)	H
	Aquatic Life Use	Selenium (Dissolved)	5. - 303(d)	M
COSPBO10	10. Mainstem of Boulder Creek from the confluence with Coal Creek to the confluence with St. Vrain Creek.			
Listed portion:	¹ COSPBO10_A	Mainstem of Boulder Creek from the confluence with Coal Creek to the confluence with St. Vrain Creek.		
	Affected Use	Analyte	Category / List ²	Priority
	Aquatic Life Use	pH	5. - 303(d)	H
	Recreational Use	E. coli	5. - 303(d)	H
	Water Supply Use	Arsenic (Total)	5. - 303(d)	L
COSPBD01	1. Mainstem of Big Dry Creek, including all tributaries and wetlands, from the source to the confluence with the South Platte River, except for specific listing in Segments 4a, 4b, 5 and 6.			
Listed portion:	¹ COSPBD01_B	Mainstem of Big Dry Creek From Weld County road 8 to the confluence with the South Platte River		
	Affected Use	Analyte	Category / List ²	Priority
	Aquatic Life Use	Iron (Total)	5. - 303(d)	M
COSPBT01	1. Mainstem of the Big Thompson River, including all tributaries and wetlands, within Rocky Mountain National Park, except for specific listings in Segment 2.			
Listed portion:	¹ COSPBT01_A	Mainstem of the Big Thompson River, including all tributaries and wetlands, within Rocky Mountain National Park, except for specific listings in Segment 2.		
	Affected Use	Analyte	Category / List ²	Priority
	Aquatic Life Use	Copper (Dissolved)	5. - 303(d)	H
	Water Supply Use	Arsenic (Total)	5. - 303(d)	H

COSPBT02 2. Mainstem of the Big Thompson River, including all tributaries and wetlands from the boundary of Rocky Mountain National Park to the Home Supply Canal diversion, except for the specific listing in Segment 7; mainstem of Black Canyon Creek and Glacier Creek below Estes Park water treatment plant.

Listed portion: ¹ **COSPBT02_A** Mainstem of the Big Thompson River, including all tributaries and wetlands from UTSD discharge to Cedar Creek, except for the specific listing in Segment 7; mainstem of Black Canyon Creek and Glacier Creek; excluding Fish Creek below Mary's Lake

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Macroinvertebrates	5. - 303(d)	H
Water Supply Use	Arsenic (Total)	5. - 303(d)	L

Listed portion: ¹ **COSPBT02_B** Fish Creek below Marys Lake

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Macroinvertebrates	5. - 303(d)	H
Water Supply Use	Arsenic (Total)	5. - 303(d)	L
Aquatic Life Use	pH	5. - 303(d)	H

COSPBT02_C Mainstem of the Big Thompson River, including all tributaries and wetlands, from RMNP to USTD discharge.

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Macroinvertebrates	5. - 303(d)	H
Water Supply Use	Arsenic (Total)	5. - 303(d)	L
Aquatic Life Use	Copper (Dissolved)	5. - 303(d)	M

Listed portion: ¹ **COSPBT02_D** Mainstem of the Big Thompson River, including all tributaries and wetlands, from Cedar Creek to Home Supply Canal

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Macroinvertebrates	5. - 303(d)	H
Water Supply Use	Arsenic (Total)	5. - 303(d)	L
Aquatic Life Use	Temperature	5. - 303(d)	H

COSPBT03 3. Mainstem of the Big Thompson River from the Home Supply Canal diversion to the Big Barnes Ditch diversion.

Listed portion: ¹ **COSPBT03_A** Mainstem of the Big Thompson River from the Home Supply Canal diversion to the Big Barnes Ditch diversion.

Affected Use	Analyte	Category / List ²	Priority
Water Supply Use	Arsenic (Total)	5. - 303(d)	L
Aquatic Life Use	Copper (Dissolved)	5. - 303(d)	M

COSPBT04b 4b. Mainstem of the Big Thompson from the Greeley-Loveland Canal diversion to County Road 11H.

Listed portion: ¹ **COSPBT04b_A** Mainstem of the Big Thompson from the Greeley-Loveland Canal diversion to County Road 11H.

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Selenium (Dissolved)	5. - 303(d)	L

COSPBT05 5. Mainstem of The Big Thompson River from I-25 to the confluence with the South Platte River.

Listed portion: ¹ COSPBT05_A Mainstem of The Big Thompson River from I-25 to the confluence with the South Platte River.

Affected Use	Analyte	Category / List	Priority
Recreational Use	E. coli	3b. - M&E list	NA
Aquatic Life Use	Selenium (Dissolved)	5. - 303(d)	L

COSPBT07 7. Mainstem of the North Fork of the Big Thompson River from the boundary of Rocky Mountain National Park to the confluence with the Big Thompson River; mainstem of Buckhorn Creek from the source to the confluence with the Big Thompson River.

Listed portion: ¹ COSPBT07_A Mainstem of Buckhorn Creek from the source to the confluence with the Big Thompson River.

Affected Use	Analyte	Category / List	Priority
Water Supply Use	Manganese (Dissolved)	3b. - M&E list	NA
Water Supply Use	Arsenic (Total)	5. - 303(d)	L

Listed portion: ¹ COSPBT07_B Mainstem of the North Fork of the Big Thompson River from the boundary of Rocky Mountain National Park to the confluence with the Big Thompson River

Affected Use	Analyte	Category / List	Priority
Aquatic Life Use	Copper (Dissolved)	5. - 303(d)	H
Water Supply Use	Arsenic (Total)	5. - 303(d)	L

COSPBT08 8. Mainstem of the Little Thompson River, including all tributaries and wetlands, from the source to the Culver Ditch diversion.

Listed portion: ¹ COSPBT08_A Mainstem of the Little Thompson River, including all tributaries and wetlands, from the source to the Culver Ditch diversion.

Affected Use	Analyte	Category / List	Priority
Aquatic Life Use	Temperature	3b. - M&E list	NA
Water Supply Use	Arsenic (Total)	5. - 303(d)	L

Listed portion: ¹ COSPBT08_B Mainstem of the Little Thompson River, including all tributaries and wetlands, from source to St. Vrain Supply Canal

Affected Use	Analyte	Category / List	Priority
Aquatic Life Use	Temperature	3b. - M&E list	NA
Water Supply Use	Arsenic (Total)	5. - 303(d)	L
Water Supply Use	Sulfate	5. - 303(d)	L

COSPBT09 9. Mainstem of the Little Thompson River from the Culver Ditch diversion to the confluence with the Big Thompson River.

Listed portion: ¹ COSPBT09_A Mainstem of the Little Thompson River from the Culver Ditch diversion to the confluence with the Big Thompson River.

Affected Use	Analyte	Category / List	Priority
Aquatic Life Use	Selenium (Dissolved)	5. - 303(d)	L
Recreational Use	E. coli (May-October)	5. - 303(d)	H

COSPBT10 10. All tributaries to the Little Thompson River, including all wetlands, from the Culver Ditch diversion to the confluence with the Big Thompson River.

Listed portion: ¹ COSPBT10_A All tributaries to the Little Thompson River, including all wetlands, from the Culver Ditch diversion to the confluence with the Big Thompson River; excluding Big Hollow Creek

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Dissolved Oxygen	3b. - M&E list	NA

COSPBT11 11. Carter Lake.

Listed portion: ¹ COSPBT11_A Carter Lake.

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Fish (Mercury)	5. - 303(d)	H
Water Supply Use	Arsenic (Total)	5. - 303(d)	H

COSPBT16 16. All lakes and reservoirs tributary to the Big Thompson River from the boundary of Rocky Mountain National Park to the Home Supply Canal diversion. This segment includes Lake Estes and St Mary's Lake.

Listed portion: ¹ COSPBT16_B Lake Estes

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Copper (Dissolved)	5. - 303(d)	H
Aquatic Life Use	Lead (Dissolved)	5. - 303(d)	H

COSPCP02a 2a. Mainstem of the Cache La Poudre River, including all tributaries and wetlands, from the boundaries of Rocky Mountain National Park and the Rawah, Neota, Comanche Peak, and Cache La Poudre Wilderness Areas to a point immediately below the confluence with the South Fork Cache La Poudre River.

Listed portion: ¹ COSPCP02a_A Mainstem of the Cache La Poudre River, including all tributaries and wetlands from the boundaries of Rocky Mountain National Park, and the Rawah, Neota, Comanche Peak, and Cache La Poudre Wilderness Areas to a point immediately below the confluence with the South Fork Cache La Poudre River.

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Macroinvertebrates (Provisional)	5. - 303(d)	L
Water Supply Use	Arsenic (Total)	5. - 303(d)	H

COSPCP06 6. Mainstem of the North Fork of the Cache La Poudre River, including all tributaries and wetlands, from the source to the inlet of Halligan Reservoir.

Listed portion: ¹ COSPCP06_A Mainstem of the North Fork of the Cache La Poudre River, including all tributaries and wetlands, from the source to the inlet of Halligan Reservoir.

Affected Use	Analyte	Category / List ²	Priority
Water Supply Use	Arsenic (Total)	5. - 303(d)	L

COSPCP07 7. Mainstem of the North Fork of the Cache La Poudre River from the inlet of Halligan Reservoir to the confluence with the Cache La Poudre River, except for specific listings in Segment 20.

Listed portion: **COSPCP07_B** North Fork of Cache la Poudre River from five miles below Halligan Reservoir to the confluence with the mainstem of the Cache la Poudre River

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Silver (Dissolved)	3b. - M&E list	NA
Water Supply Use	Arsenic (Total)	3b. - M&E list	NA
Water Supply Use	Iron (Dissolved)	3b. - M&E list	NA
Aquatic Life Use	Cadmium (Dissolved)	5. - 303(d)	H
Aquatic Life Use	Lead (Dissolved)	5. - 303(d)	M
Water Supply Use	Manganese (Dissolved)	5. - 303(d)	L

Listed portion: **COSPCP07_C** North Fork Cache la Poudre River five miles below Halligan Reservoir

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Silver (Dissolved)	3b. - M&E list	NA
Water Supply Use	Arsenic (Total)	3b. - M&E list	NA
Water Supply Use	Iron (Dissolved)	3b. - M&E list	NA
Aquatic Life Use	Cadmium (Dissolved)	5. - 303(d)	M
Aquatic Life Use	Lead (Dissolved)	5. - 303(d)	M
Water Supply Use	Manganese (Dissolved)	5. - 303(d)	L

COSPCP08 8. All tributaries to the North Fork of the Cache La Poudre River, including all wetlands, from the inlet of Halligan Reservoir to the confluence with the Cache La Poudre River, except for specific listings in Segment 9.

Listed portion: **COSPCP08_A** All tributaries to the North Fork of the Cache La Poudre River, including all wetlands from, the inlet of Halligan Reservoir to the confluence with the Cache La Poudre River, except for specific listings in Segment 9.

Affected Use	Analyte	Category / List ²	Priority
Recreational Use	E. coli	3b. - M&E list	NA

COSPCP09 9. Mainstem of Rabbit Creek and Lone Pine Creek from the source to the confluence with the North Fork of the Cache La Poudre River.

Listed portion: **COSPCP09_A** Mainstem of Rabbit Creek and Lone Pine Creek from the source to the confluence with the North Fork of the Cache La Poudre River.

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	pH	3b. - M&E list	NA
Water Supply Use	Arsenic (Total)	5. - 303(d)	L

COSPCP10a 10a. Mainstem of the Cache La Poudre River from the Munroe Gravity Canal Headgate (also known as the North Poudre Supply Canal diversion) to a point immediately above the Larimer County Ditch diversion (40.657, -105.185).

Listed portion: **COSPCP10a_A** Mainstem of the Cache La Poudre River from the Munroe Gravity Canal Headgate/North Poudre Supply Canal diversion to a point immediately above the Larimer County Ditch diversion (40.657, -105.185)

Affected Use	Analyte	Category / List ²	Priority
Water Supply Use	Arsenic (Total)	5. - 303(d)	L
Aquatic Life Use	Temperature	5. - 303(d)	H

COSPCP10b 10b. Mainstem of the Cache La Poudre River from a point immediately above the Larimer County Ditch diversion (40.657, -105.185) to Shields Street in Ft. Collins, Colorado.

Listed portion: ¹ COSPCP10b_A Mainstem of the Cache La Poudre River from a point immediately above the Larimer County Ditch diversion (40.657, -105.185) to Shields Street in Ft. Collins, Colorado.

Affected Use	Analyte	Category / List ²	Priority
Water Supply Use	Arsenic (Total)	5. - 303(d)	L

COSPCP11 11. Mainstem of the Cache La Poudre River from Shields Street in Ft. Collins to a point immediately above the confluence with Boxelder Creek.

Listed portion: ¹ COSPCP11_A Mainstem of the Cache La Poudre River from Shields Street in Ft. Collins to a point immediately above the confluence with Boxelder Creek.

Affected Use	Analyte	Category / List ²	Priority
Recreational Use	E. coli	5. - 303(d)	L

COSPCP12 12. Mainstem of the Cache La Poudre River from a point immediately above the confluence with Boxelder Creek to the confluence with the South Platte River.

Listed portion: ¹ COSPCP12_A Mainstem of the Cache La Poudre River from a point immediately above the confluence with Boxelder Creek to the confluence with the South Platte River.

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	pH	3b. - M&E list	NA
Recreational Use	E. coli (May-October)	5. - 303(d)	H

COSPCP13a 13a. All tributaries to the Cache La Poudre River, including all wetlands, from the Munroe Gravity Canal/North Poudre Supply canal diversion to the confluence with the South Platte River, except for specific listings in Segments 6, 7, 8, 13b and 13c.

Listed portion: ¹ COSPCP13a_B Dry Creek and all tributaries.

Affected Use	Analyte	Category / List ²	Priority
Water Supply Use	Manganese (Dissolved)	5. - 303(d)	L
Water Supply Use	Sulfate	5. - 303(d)	L

Listed portion: ¹ COSPCP13a_C Spring Creek and Fossil Creek.

Affected Use	Analyte	Category / List ²	Priority
Recreational Use	E. coli (May-October)	5. - 303(d)	H

COSPCP13b 13b. Mainstem of Boxelder Creek from its source to the confluence with the Cache La Poudre River.

Listed portion: ¹ COSPCP13b_A Mainstem of Boxelder Creek from its source to the confluence with the Cache La Poudre River.

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Selenium (Dissolved)	5. - 303(d)	L
Recreational Use	E. coli	5. - 303(d)	L

COSPCP14	14. Horsetooth Reservoir.			
Listed portion:	¹ COSPCP14_A	Horsetooth Reservoir.		
	Affected Use	Analyte	Category / List ²	Priority
	Aquatic Life Use	Fish (Mercury)	5. - 303(d)	H
	Water Supply Use	Arsenic (Total)	5. - 303(d)	H
COSPCP20	20. All lakes and reservoirs tributary to the North Fork of the Cache La Poudre River from the inlet of Halligan Reservoir to the confluence with the Cache La Poudre River. This segment includes Halligan Reservoir and Seaman Reservoir.			
Listed portion:	¹ COSPCP20_B	Seaman Reservoir		
	Affected Use	Analyte	Category / List ²	Priority
	Aquatic Life Use	Dissolved Oxygen	5. - 303(d)	M
COSPMS01a	1a. Mainstem of the South Platte River from a point immediately below the confluence with Big Dry Creek to the confluence with St. Vrain Creek.			
Listed portion:	¹ COSPMS01a_A	Mainstem of the South Platte River from a point immediately below the confluence with Big Dry Creek to the confluence with St. VrainCreek.		
	Affected Use	Analyte	Category / List ²	Priority
	Water Supply Use	Manganese (Dissolved)	3b. - M&E list	NA
	Recreational Use	E. coli	5. - 303(d)	H
COSPMS01b	1b. Mainstem of the South Platte River from a point immediately below the confluence with St. Vrain Creek to the Weld/Morgan County Line.			
Listed portion:	¹ COSPMS01b_A	Mainstem of the South Platte River from a point immediately below the confluence with St. Vrain Creek to the Weld/Morgan County Line.		
	Affected Use	Analyte	Category / List ²	Priority
	Recreational Use	E. coli	5. - 303(d)	H
	Water Supply Use	Arsenic (Total)	5. - 303(d)	L
	Water Supply Use	Manganese (Dissolved)	5. - 303(d)	L
COSPMS04	4. Barr Lake and Milton Reservoir.			
Listed portion:	¹ COSPMS04_B	Milton Reservoir		
	Affected Use	Analyte	Category / List ²	Priority
	Aquatic Life Use	Ammonia	5. - 303(d)	M

COSPMS07 7. All lakes and reservoirs tributary to the South Platte River from a point immediately below the confluence with Big Dry Creek to the Weld/Morgan County line, except for specific listings in the subbasins of the South Platte River, and in Segment 4.

Listed portion: ¹

Affected Use	Analyte	Category / List	Priority
COSPMS07_C Horse Creek Reservoir			
Aquatic Life Use	Ammonia	5. - 303(d)	M
Aquatic Life Use	pH	5. - 303(d)	M

COSPSV02b 2b. Mainstem of St. Vrain Creek, including all tributaries and wetlands, from the eastern boundary of Roosevelt National Forest to Hygiene Road.

Listed portion: ¹

Affected Use	Analyte	Category / List	Priority
COSPSV02b_A Mainstem of St. Vrain Creek, including all tributaries and wetlands, from the eastern boundary of Roosevelt National Forest to Hygiene Road. Except part of South Saint Vrain Creek.			
Aquatic Life Use	Silver (Dissolved)	3b. - M&E list	NA
Aquatic Life Use	Temperature	5. - 303(d)	H
Water Supply Use	Arsenic (Total)	5. - 303(d)	L

Listed portion: ¹

Affected Use	Analyte	Category / List	Priority
COSPSV02b_B South Saint Vrain Creek from just below its confluence with Red Hill Gulch to its confluence with North Saint Vrain Creek.			
Aquatic Life Use	Silver (Dissolved)	3b. - M&E list	NA
Aquatic Life Use	Temperature	5. - 303(d)	H
Water Supply Use	Arsenic (Total)	5. - 303(d)	L
Aquatic Life Use	Copper (Dissolved)	5. - 303(d)	H

COSPSV03 3. Mainstem of St. Vrain Creek from Hygiene Road to the confluence with the South Platte River.

Listed portion: ¹

Affected Use	Analyte	Category / List	Priority
COSPSV03_B Mainstem of St. Vrain Creek from the confluence with Left Hand Creek to the confluence with Boulder Creek			
Recreational Use	E. coli	5. - 303(d)	H

Listed portion: ¹

Affected Use	Analyte	Category / List	Priority
COSPSV03_C Mainstem of St. Vrain Creek from Hover Road to Left Hand Creek			
Recreational Use	E. coli	5. - 303(d)	H

Listed portion: ¹

Affected Use	Analyte	Category / List	Priority
COSPSV03_D Mainstem of St. Vrain Creek from Hygiene Road to Hover Road and Boulder Creek from I-25 to the confluence with the South Platte River.			
Recreational Use	E. coli	5. - 303(d)	H

Listed portion: ¹

Affected Use	Analyte	Category / List	Priority
COSPSV03_E Mainstem of Boulder Creek from St. Vrain Creek to I-25.			
Recreational Use	E. coli	5. - 303(d)	H

COSPSV04a 4a. Mainstem of Left Hand Creek, including all tributaries and wetlands, from the source to a point immediately below the confluence with James Creek, except for specific listings in Segment 4b.

Listed portion: ¹ **COSPSV04a_B** Mainstem of Left Hand Creek, including all tributaries and wetlands from Hwy 72 to James Creek

Affected Use	Analyte	Category / List	Priority
Water Supply Use	Manganese (Dissolved)	3b. - M&E list	NA

COSPSV05 5. Mainstem of Left Hand Creek, including all tributaries and wetlands from Highway 36 to the confluence with St. Vrain Creek.

Listed portion: ¹ **COSPSV05_A** Mainstem of Left Hand Creek, including all tributaries and wetlands from a point above the Lefthand Feeder Canal to the confluence with St. Vrain Creek.

Affected Use	Analyte	Category / List	Priority
Aquatic Life Use	Copper (Dissolved)	5. - 303(d)	M

Listed portion: ¹ **COSPSV05_B** Mainstem of Left Hand Creek, including all tributaries and wetlands from Highway 36 to a point above the Lefthand Feeder Canal

Affected Use	Analyte	Category / List	Priority
Aquatic Life Use	pH	5. - 303(d)	H
Water Supply Use	Manganese (Dissolved)	5. - 303(d)	L
Aquatic Life Use	Copper (Dissolved)	5. - 303(d)	M

COSPSV06 6. All tributaries to St. Vrain Creek, including wetlands from Hygiene Road to the confluence with the South Platte River, except for specific listings in the Boulder Creek subbasin and in Segments 4a, 4b, 4c and 5.

Listed portion: ¹ **COSPSV06_A** All tributaries to St. Vrain Creek, including wetlands from Hygiene Road to the confluence with the South Platte River, except for specific listings in the Boulder Creek subbasin and in Segments 4a, 4b, 4c and 5; excluding Dry Creek

Affected Use	Analyte	Category / List	Priority
Water Supply Use	Manganese (Dissolved)	5. - 303(d)	L

Listed portion: ¹ **COSPSV06_B** Dry Creek and tributaries

Affected Use	Analyte	Category / List	Priority
Aquatic Life Use	E. coli	5. - 303(d)	H
Water Supply Use	Manganese (Dissolved)	5. - 303(d)	L
Aquatic Life Use	Selenium (Dissolved)	5. - 303(d)	

COSPUS15 15. Mainstem of the South Platte River from the Burlington Ditch diversion in Denver, Colorado, to a point immediately below the confluence with Big Dry Creek.

Listed portion: ¹ **COSPUS15_B** Mainstem of the South Platte River from the Burlington Ditch diversion in Denver, Colorado to Sand Creek

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Temperature	3b. - M&E list	NA

Listed portion: ¹ **COSPUS15_C** Mainstem of the South Platte River from Sand Creek, to 180 meters below 120th Ave.

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Temperature	3b. - M&E list	NA

Listed portion: ¹ **COSPUS15_D** Mainstem of the South Platte River from 180 meters below 120th Ave, to a point immediately below the confluence with Big DryCreek.

Affected Use	Analyte	Category / List ²	Priority
Aquatic Life Use	Temperature	3b. - M&E list	NA

In June of 2012, the Colorado Water Quality Control Commission adopted Regulation #85 “Nutrient Management Control Regulation” (Reg. 85). Reg. #85 requires certain larger wastewater treatment facilities to meet effluent limits for phosphorus and nitrogen based on levels determined to be achievable with available technology. The regulation became effective in September of 2012 and required facilities with over 2.0 MGD capacity to meet effluent limits of 1.0 mg/l Phosphorus and 15 mg/l Total Inorganic Nitrogen (TIN). New systems would have to meet 0.7 mg/l Phosphorus and 7 mg/l TIN. Domestic facilities with \leq 1.0 mgd capacity are exempted from the regulation but must still monitor their effluent. Likewise, existing systems with $<$ 2.0 mgd capacity were given a 10-year deferral from meeting the nutrient standards. The WQCD will use the data collected from the Statewide sampling program to develop a data base of nutrient levels in the State. This information will be of use in developing future standards.

Previously, Colorado’s Integrated Report identified the leading cause of water quality problems in the state as being nonpoint sources. The pollutants having the highest number of listings for the Larimer and Weld region are selenium and E. coli. Water Quality Standards for selenium are exceeded in a significant number of streams in the state, not just in Larimer and Weld Counties. Many of the watershed organizations and monitoring groups, including Big Thompson Watershed Forum, Big Dry Creek Watershed Association, and the Cache la Poudre Monitoring Group, are all currently collecting selenium data as part of their ongoing monitoring programs.

Additionally, the division will continue to work with stakeholders to administer the voluntary nonpoint source provisions of Regulation #85 over the next 10 years. In preparation of the Regulation #85 triennial review in 2020 the division will work with the agricultural sector to implement best management practices, work with partners to implement public information and education programs focused on nonpoint source pollution prevention and restoration activities, collaborate on the development and implementation of nonpoint source management programs, and consider trading proposals. In addition, the division continues to work with stakeholders regarding the adoption of revised temperature standards in the basin rulemaking hearings for Regulation #31. The division will continue to participate in a statewide temperature technical advisory committee to discuss data collection, future studies, and possible modifications to temperature standards. These modifications possibly include removing shoulder limits with bell curve limits to protect reproductive stages and other sensitive life periods of fish but may uncover where the standards may be too stringent. Additional studies will be needed to determine if transition zones will require additional limits in certain stream segments. Upon review of the studies the division may suggest changes to temperature criteria in Regulation #31 during the 2022 hearing based on the work done and all the data compiled in the temperature technical advisory committee and the basin site-specific hearings.

Additional activity related to TMDL development for E. coli has also been occurring. As with selenium, many of the watershed organizations and monitoring groups also are collecting E. coli data as part of their ongoing monitoring programs. Some of the groups, such as the Big Dry Creek Watershed Association, have also initiated more in-depth studies which concentrate on identifying the sources and locations of E. coli concerns along the listed segments.

These established standards and existing or potential impairments on stream segments become an important part in the overall planning process for the Association. As indicated in Chapter 1, much of the detailed planning information received and reviewed by the Association is contained in agency specific Utility Plans. As stated, these Utility Plans address a variety of planning considerations including the quality of the stream or waterbody that a treatment facility will discharge to. Entities must identify the stream segment they will be discharging to

and the water quality standards and impairments associated with that segment. Through the plan, the Operating Agency not only identifies which segments they will discharge to, but how the treatment facilities (both existing and proposed) will provide treatment sufficient to meet these standards or waste load allocations. In addition, the Operating Agencies are also required to consider the potential for more stringent water quality standards in the future and identify potential mechanisms for meeting those requirements.

Other planning references that may be used for either research or informational purposes along with others referenced here within include the following resources for data and regulations.

- Stream segmentation and impaired water GIS coverages
 - o <https://www.colorado.gov/pacific/cdphe/nonpoint-source-watershed-based-planning>
- E-RAMS
 - o <https://erams.com/>
- Colorado Data Sharing Network
 - o <http://www.coloradowaterdata.org/>
- STORET/WQX
 - o <https://www.epa.gov/waterdata/water-quality-data-wqx>
- EPA Grants Reporting and Tracking System
 - o <https://www.epa.gov/nps/grants-reporting-and-tracking-system-grts>

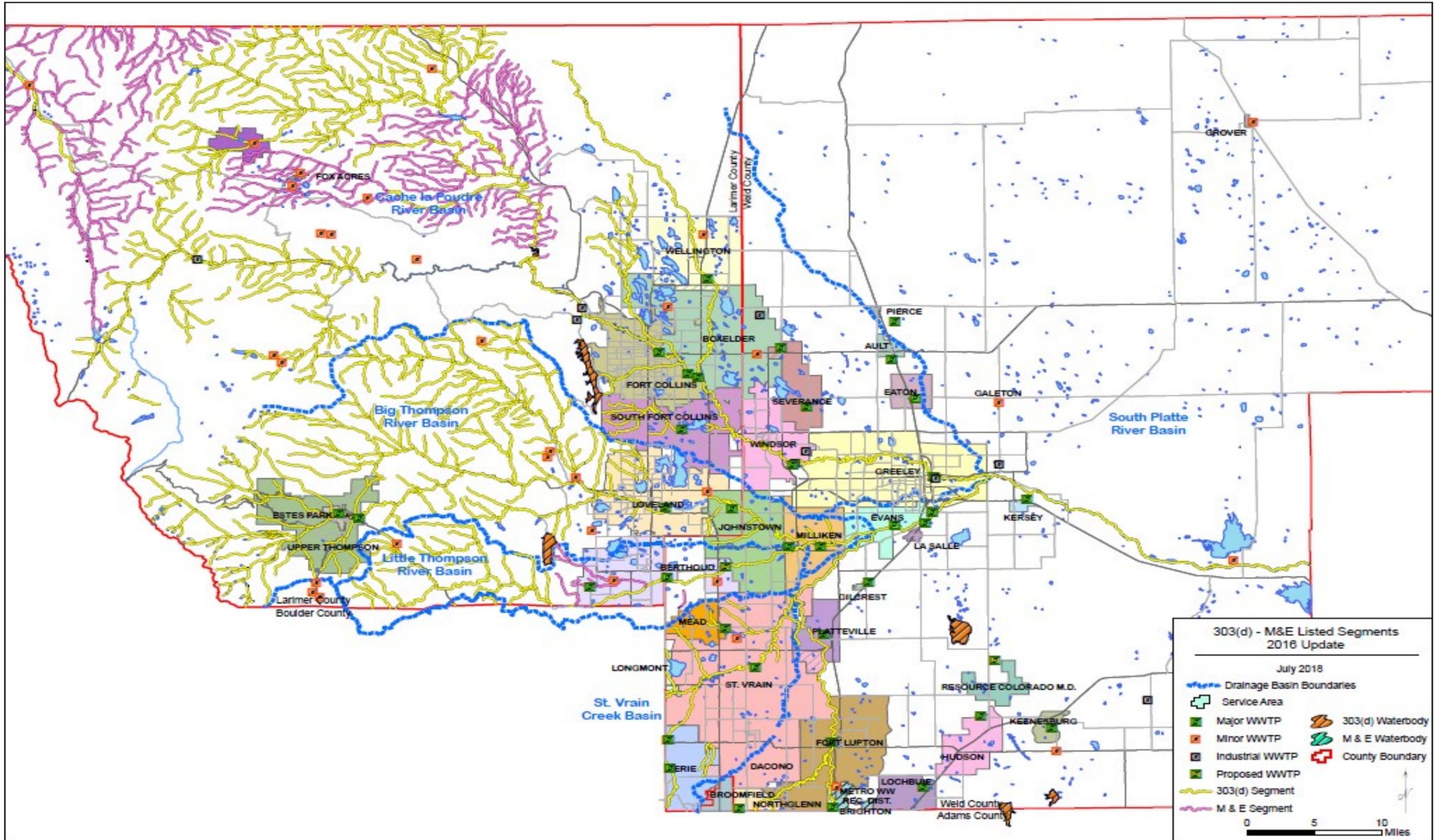


Figure 1 303(d) Monitoring & Evaluation Listed Segments

4. WATERSHED INITIATIVES

EPA's current emphasis is on managing water quality based on a watershed approach. This trend was initiated in the late 1980's, and since that time numerous programs and related efforts have been implemented at the Federal, State, and local level. The NFRWQPA supports this broader approach to watershed planning in the region. This is evidenced by the support the Association has provided to the local watershed efforts.

In the region, there are three active watershed organizations including the Big Thompson Watershed Forum, Big Dry Creek Watershed Association, and the Barr / Milton Watershed Association.

Big Thompson Watershed Forum

Of the three active watershed associations in the region, the NFRWQPA has been the most committed to the Big Thompson Watershed Forum (the Forum) <https://btwatershed.org/>. In 1996, the NFRWQPA, with funding from the cities of Loveland and Greeley, Larimer County, and Northern Water, completed a preliminary watershed study of the Big Thompson River. This study recommended the establishment of a collaborative watershed management effort to address the need for (1) scientifically sound studies of the effects of our activities on water quality, (2) an effective communication network among stakeholders, and (3) an educational program to increase public awareness of the watershed and associated water quality. When the final report was presented to the public, a group of concerned people representing private citizens and government agencies endorsed the formation of a watershed forum. This was the beginning of the Big Thompson Watershed Forum.

The mission of the Forum is to support the protection and improvement of water quality in the Big Thompson Watershed through collaborative monitoring, assessment, and education/outreach projects. Throughout its early years, the Forum functioned as a branch of the NFRWQPA, which provided administrative support and participated directly with a designated representative serving on the Forum's Board of Directors. Eventually, the Forum found it increasingly beneficial to establish itself as a separate non-profit group. In 2002, the Forum filed for nonprofit status; however, the relationship with the NFRWQPA has continued.

One of the strongest benefits the Forum has provided to its stakeholders and the community is the establishment of a coordinated monitoring program that extends throughout the watershed. These monitoring sites are identified on the regional map provided at the end of this chapter. This monitoring program, with the support of the U.S. Geological Survey (USGS), has developed into a valuable water quality resource on a statewide level. NFRWQPA remains involved in the program and continues to serve as the contracting entities with USGS for the data collection and sample analysis. In 2017, samples were collected and analyzed from 15 sites within the Big Thompson Watershed, including the Big Thompson River, North Fork of the Big Thompson River, Buckhorn Creek, East Portal at the Adams Tunnel, and Olympus Tunnel at Estes Park. CB-T canal sites were sampled by Northern Water. More than 30 parameters were collected at each site, including nutrients, chlorophyll a, metals, bacteria, total organic carbon, total suspended solids, major ions, and physical parameters. In addition, the City of Loveland has partnered with the Forum and USGS for State of Colorado Regulation 85 nutrient monitoring 12 times a year.

In 2002, the Forum also began a regular 'volunteer monitoring program' through a 319 nonpoint source grant with the U.S. Environmental Protection Agency, Region 8. This program was designed to sample in nodes where

USGS was not sampling in the watershed and east of I-25 where there are no USGS sites. Surface water samples were collected by Forum staff and volunteers, with all laboratory analyses being conducted by the USEPA 8 laboratory, all in-kind. Unfortunately, this volunteer monitoring program was discontinued in late 2015 due to lack of funding.

Big Dry Creek Watershed Association

The Big Dry Creek Association is a voluntary association of individuals and entities who have a shared desire to develop a sound scientific understanding of the water quality, flow, aquatic life, and habitat conditions in the watershed and act to improve these conditions. The group was formed in 1997 with the initial participants being the City and County of Broomfield, City of Northglenn, the City of Westminster, and the U.S. Department of Energy Rocky Flats Environmental Technology Site with support from EPA. In 2004 the group officially incorporated as a nonprofit entity with the City of Thornton, Adams County, and Weld County also participating.

One of the primary activities of the Association has been the establishment of an in-stream monitoring program. The locations of the monitoring sites within Weld County are shown on the map at the end of this chapter. The association maintains a large database from this program and analyzes this data and makes regular reports to its stakeholders of the findings. A key focus of the association is annual assessments of water quality conditions in Big Dry Creek. In the spring of each year, the association uploads the results of the instream water quality monitoring program into a long-term water quality database and compares the results to applicable water quality standards for Big Dry Creek. Findings are documented in an annual water quality report that is presented and discussed at the March association public meeting and then posted to the association website. Biennially, biological monitoring is also conducted at a subset of the water quality monitoring sites. The most recent round of biological monitoring, which was conducted by Aquatics Associates, occurred during October 2016. Water quality samples were collected and analyzed for a variety of constituents. Metals were monitored on a quarterly basis. All other constituents were monitored on a monthly basis. The association communities also fund operation of the U.S. Geological Survey (USGS) gauging station at Westminster behind Front Range Community College. Additionally, the association conducts studies on grade control and bank stabilization including revegetation of Big Dry Creek. Many of the current members of the association are also active members of the NFRWQPA. In addition, NFRWQPA staff regularly attends meetings of the Association which allows for a sharing of information and coordination between the two entities. For more information about the Big Dry Creek Watershed Association visit the website, <http://www.bigdrycreek.org/index.php>, or contact their coordinator, Jane Clary at clary@wrightwater.com

Barr Lake & Milton Reservoir Watershed Association

The Barr Lake & Milton Reservoir Watershed Association (BMW, www.barr-milton.org) is a watershed group that was established in 2002 and formalized themselves as a nonprofit in 2005. The mission of the group is to encourage cooperation, involvement, and awareness by interested parties in collaborative efforts to improve the water quality of Barr Lake and Milton Reservoir. In both Barr Lake and Milton Reservoir, high concentrations of nutrients have led to elevated pH and algae overgrowth. In 2002, both reservoirs were placed on the 303(d) list of impaired water bodies for exceeding the upper pH limit of 9.0. This listing established the need for the development of a pH Total Maximum Daily Load (TMDL) for the water bodies.

The group was able to establish itself and support its activities associated with addressing the pH issues through a large multi-year 319 nonpoint source grant and significant contributions from the member entities. The group developed and submitted a draft TMDL in 2010 which was submitted to the Colorado Department of Public Health and Environment (CDPHE). CDPHE added Dissolved Oxygen (DO) as an addendum to the TMDL. Both documents were approved by the EPA in July of 2013. NFRWQPA has participated in the group since its

establishment and has been a voting member since 2006. One of the significant accomplishments of the Association has been the publication of the Barr Lake & Milton Reservoir Watershed Management Plan. For more information about BMW visit the website, www.barr-milton.org or contact their coordinator, Amy Conklin at amy.conklin@comcast.net.

One Water Solutions Institute

<https://erams.com/one-water-solutions/project/clean/>

The CLEAN Nutrient Dashboard evaluates management options for wastewater, stormwater and agricultural operations in Colorado. The dashboard was developed in partnership with the U.S. EPA and Colorado Department of Public Health and Environment (CDPHE) to help watershed managers analyze scenarios to implement nutrient abatement requirements from Colorado Regulation 85 – Nutrients Management Control Regulation. A user can apply a portion or all available information sources to analyze nutrient management scenarios in a specified area ranging in size from a HUC-12 watershed up to a regional-scale analysis. The Dashboard will also allow users to input their own data and upload various land use configurations to analyze future growth scenarios. This tool estimates nutrient load (total nitrogen and phosphorus) per source category (urban stormwater, wastewater treatment facilities, agriculture, and background) on an average annual basis. Graphical plots include scenario comparison of loads based on different managements, category comparison of total watershed nutrient load sources, and observed ambient water quality load estimates.

Other

In addition to the three active watershed groups, there has also been a watershed proposal for the Lower South Platte River. The Colorado Department of Agriculture was awarded a 319 Grant for this proposal in 2006. The goals of this proposal were to coordinate landowners / manager and other stakeholders within Colorado's Lower South Platte Watershed to:

- determine priorities for managing natural and agricultural resources within the basin.
- assemble all currently available knowledge and resources to better understand overall resource needs that affect ecosystem functions and overall water quality flowing through the basin in a comprehensive watershed plan.
- establish the Lower South Platte Watershed Plan as a working tool for resource managers and Conservation Districts so that water quality is ultimately improved despite increased demands.

A stakeholder process for the development of this watershed plan has been established, and NFRWQPA has been an active participant on the steering committee.

While there is not an active watershed association established on the Cache la Poudre River, the NFRWQPA has supported in the past and continues to provide support for, broad-based water quality activities along the river. In 2006 the NFRWQPA established the Poudre Monitoring Committee. This Committee is made up of members of the NFRWQPA. The establishment of this committee was spearheaded by Kodak Colorado Division. Kodak recognized an opportunity, through their Environmental Leadership Program, to bring together neighboring entities along segments 11, 12, and 13 of the river, and to develop a coordinated monitoring program. The intent of the program was to eliminate redundant monitoring, share data, facilitate coordination, and provide standardization of data analysis and methods. In addition, the group saw an opportunity to balance effluent monitoring with ambient monitoring in order to reduce overall monitoring costs. This effort has received national recognition, and in 2007 the Colorado Department of Public Health and Environment received an award from the Environmental Protection Agency for their participation in this effort.

In October 2007, the Committee members, who include Kodak Colorado (now Carestream), City of Ft. Collins, City of Greeley, Town of Windsor, and the Boxelder and South Ft. Collins Sanitation Districts, all signed the Cache la Poudre River – Segments 11, 12, and 13 Water Quality Monitoring Agreement. This agreement formalized the commitment of each of the entities to the monitoring program. In addition, it outlines the coordinated program and identifies the individual responsibilities of each of the members. The monitoring sites for this program are also identified on the following map. The members to this agreement continue to monitor these segments.

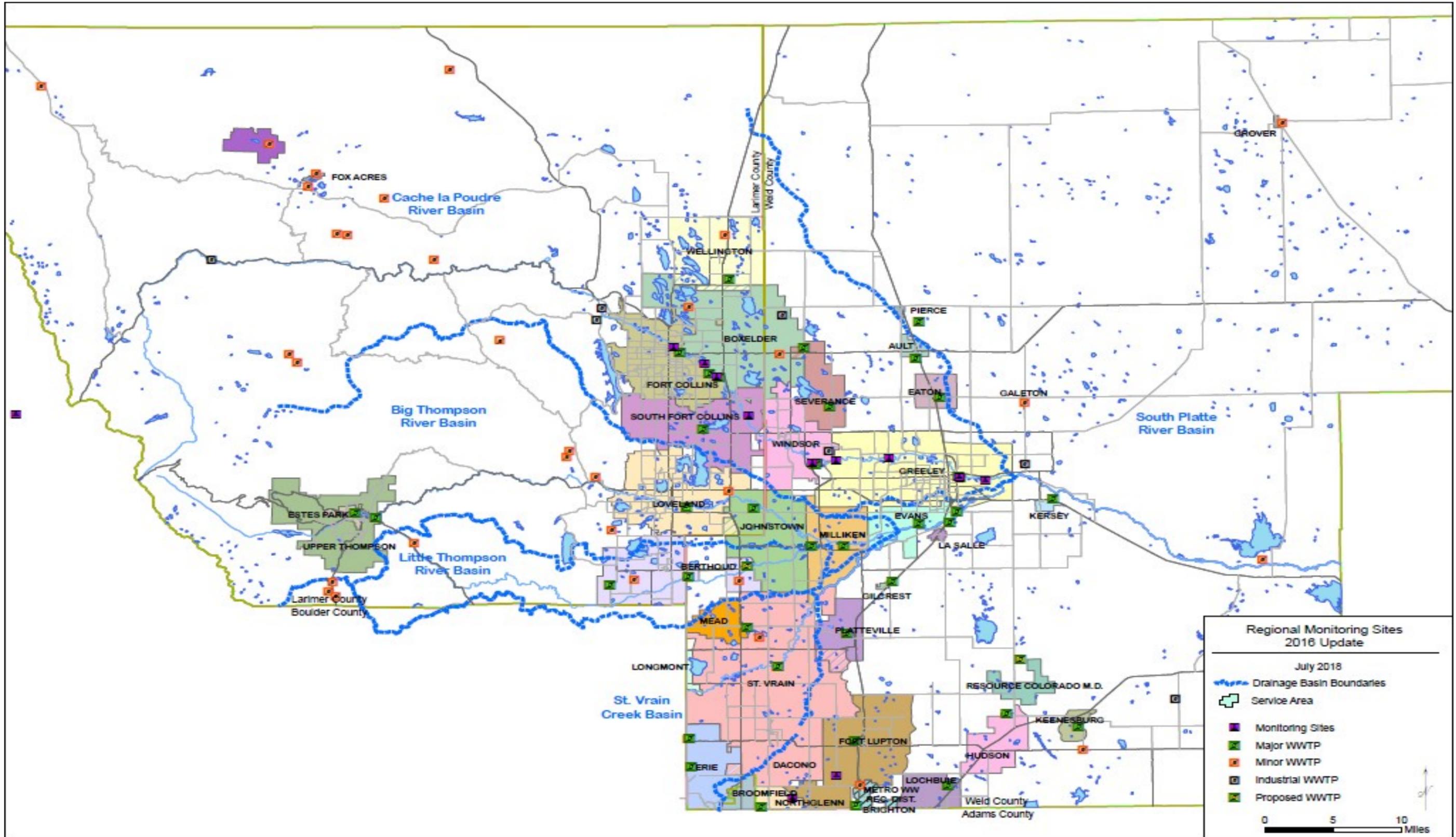


Figure 2 Regional Monitoring Sites

5. BASINS

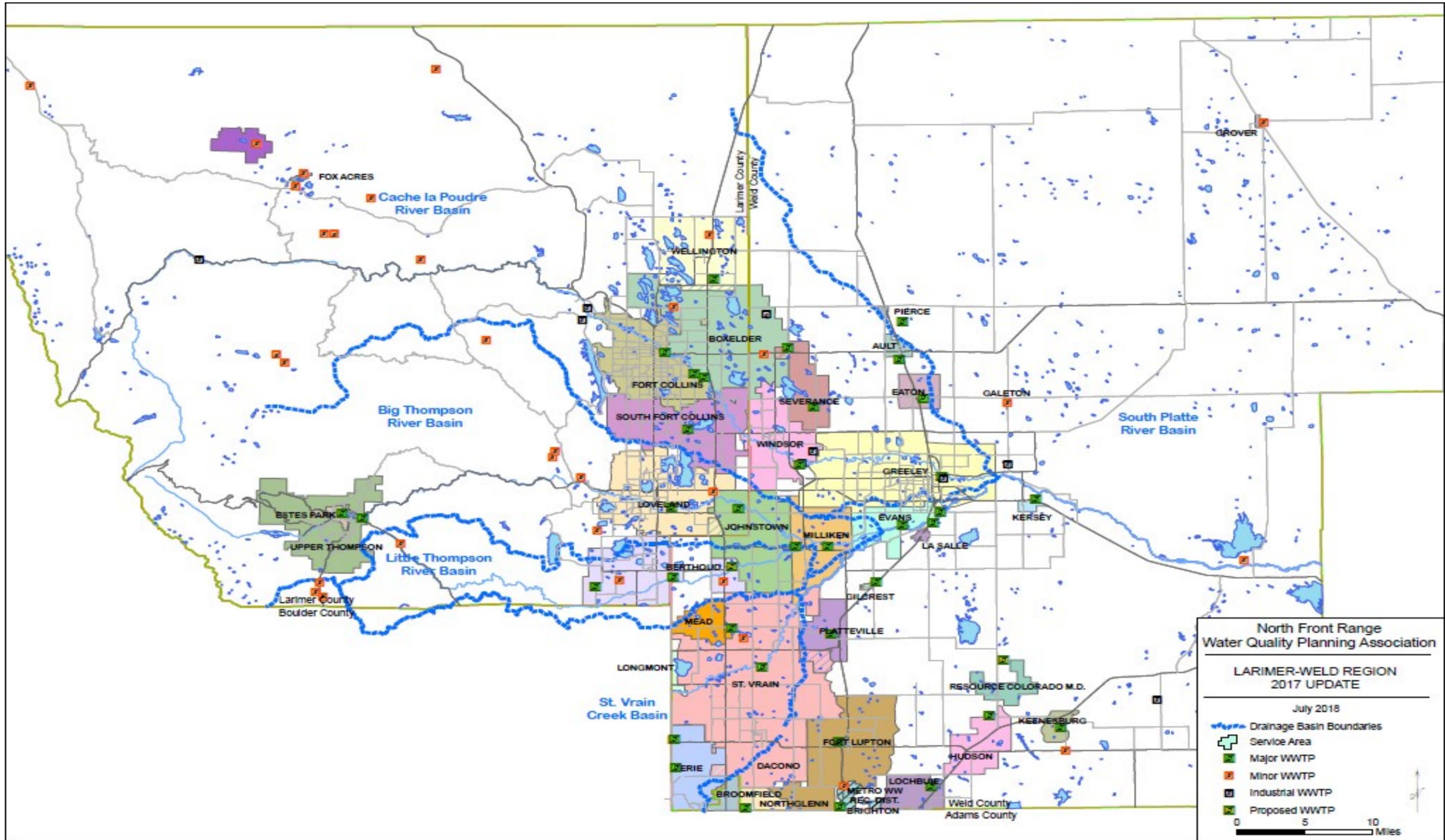


Figure 3 NFRWQPA REGIONAL BASINS

5.1 CACHE LA POUFRE RIVER BASIN

The Cache la Poudre River drains the major portion of northern Larimer County and northwest portion of Weld County. Municipal discharges in the basin include Ault, Eaton, Ft. Collins, Fox Acres, Greeley, Severance, Wellington, Windsor, and the Boxelder and South Ft. Collins Sanitation Districts. The Cache la Poudre River Basin map following this section highlights the basin and identifies the wastewater treatment facilities (WWTF) located within it.

MAJOR SOURCES

Ault, Town of

The Town of Ault's treatment plant is located 320 South 1st Ave. In 2007, the Town completed improvements to the treatment plant that increased the hydraulic capacity to 0.25 mgd and the organic capacity to 500lbs./day BOD₅. The improvements included construction of a new enclosed headworks facility, deepening the pond and dividing it into three cells, lining the ponds, adding diffused aeration and incorporating a disinfection system.

The rapid infiltration ponds do not function as designed and the existing plant cannot provide total inorganic nitrogen (TIN) sufficiently to meet standards. In 2014, the Town completed a Wastewater Utility Plan to address nutrient removal issues with the Wastewater Plant and provide for the future needs of the Town.

The Utility Plan addressed nutrient removal issues and proposed a revised treatment system that would discharge to a drainage south of Town (Mead Lateral). A site application for this new 0.15 mgd facility was approved by the NFRWQPA and the State in late 2014. The Utility Plan also delineated a revision to the Service Area which increased the area served by 155 acres immediately adjacent to the northwest side of Town.

Improvements the WWTP were completed in December 2016 and the facility began discharging to the Mead Lateral (Eaton Draw) in April of 2017. The current treatment process for the Ault WWTP consists of influent screening, grit removal including grit washing, Biolac/Single Basin Nutrient Removal (SBNR) secondary treatment process, including process aeration (blowers, diffusers and controls), secondary clarification, and UV treatment.

Boxelder Sanitation District

Since 1965, this special district has served an area located east and north of Ft. Collins, along the east side of Lemay Avenue and northeast of the Cache la Poudre River. The Boxelder Sanitation District (Boxelder) treatment plant is located just above the confluence of Boxelder Creek and the Cache la Poudre River and discharges into the creek. Boxelder has participated in cooperative planning with its neighbors to determine the most economical and expeditious manner to serve properties of interest. Boxelder will continue cooperation with other wastewater treatment entities.

In 2007, Boxelder prepared a collection system plan for the Drake Interceptor Basin Utility Plan on the east side of Boxelder's 208 service area. The plan covers collection system planning for areas east of Interstate 25 (I-25) that could be served by the existing Drake Interceptor gravity sewer line that crosses I-25 near the Plant.

In 2010, the District submitted a Utility Plan for review and consideration by NFRWQPA. This Utility Plan received approval in July 2010. It included support information for a new mechanical treatment facility that

would meet required effluent limits and provide capacity well into the future. The new facility includes: an influent lift station, screening and grit handling facilities, extended aeration using oxidation ditch(s), secondary clarifiers, recycle and waste activated sludge pumping facilities, ultraviolet light disinfection, and aerobic digesters. Construction of this facility was completed in the fall of 2013. In addition to the treatment facilities, the Utility Plan also outlined planning for the existing collection system and included a detailed capital improvements plan for the future. Beginning in 2017 the District has been planning for a treatment plant expansion project. The expansion will increase the capacity of the plant to accommodate increased growth in the District. The project will also include a new solid handling facility to replace the current solids storage lagoon. A 2020 completion date is anticipated.

Water Quality Monitoring: Since 1996, Boxelder has been carrying out ambient water quality monitoring (physical, chemical, microbiological) of Poudre River segments COSPCP11, COSPCP12 and COSPCP13b. Boxelder intends to continue doing so. Boxelder belongs to a multi-party agreement involving the City of Fort Collins, City of Greeley, Boxelder Sanitation District, South Fort Collins Sanitation District, Town of Windsor, and Carestream to carry out coordinated physical, chemical, microbiological and aquatic life monitoring on the main stem of the lower Poudre River (segments 11 and 12).

Eaton, Town of

The treatment facility for the Town of Eaton serves the town and select areas outside of the town boundaries. As the town continues to expand the treatment plant is serviced by lines that use gravity flow and additional pumps in areas where gravity flow isn't a possibility. The current facility is an extended air-activated sludge Aero-Mod plant with a capacity of 0.75 mgd. This plant will provide the town with sufficient treatment capacity well into the future.

Fort Collins, City of

The City of Fort Collins is the designated management agency for the area within its Urban Growth Area (UGA) boundaries. An intergovernmental agreement (IGA) between Larimer County and Fort Collins specifies the responsibilities of each in relation to approval of developments that are in the UGA and not within the city limits. Fort Collins and Larimer County accepted the responsibility of designated management agencies in 1978. The IGA establishing the UGA was adopted on May 1, 1980, and last revised on September 7, 1999. IGAs have also been adopted between the city and special districts in its area of jurisdiction.

Fort Collins has two municipal wastewater treatment plants. The Mulberry Water Reclamation Facility (MWRf) has a permitted capacity of 6 mgd for discharge to the Cache la Poudre River, and influent flows can be diverted to the Drake Water Reclamation Facility (DWRf) via an interceptor. Presently, MWRf is being base loaded at a flow of approximately 3 to 5 mgd. Excess flows are diverted to DWRf.

DWRf has a total permitted capacity of 23 mgd. DWRf can discharge effluent to the Cache la Poudre River, Fossil Creek irrigation ditch, or to an on-site pump station owned by the Platte River Power Authority for re-use as cooling water at the power plant 20 miles north of Fort Collins.

In 2009, the City completed a Wastewater Utility Plan that outlined necessary improvements to the treatment facilities through the planning period. Major capital projects recently completed include major upgrades to the Mulberry facility and Drake's north process trains. Mulberry was upgraded to a multi-stage biological nutrient removal (BNR) process with improved odor control facilities. Drake's north process trains were upgraded in 2012 to the BNR process with automated air control and high-efficiency blowers. BNR improvements to the

south process train were completed in 2015. Additional projects either currently underway or identified during recent master planning efforts include but not limited to: additional carbon feed system, improved headworks, improved secondary clarifiers, electrical and HVAC improvements, anaerobic digester lid replacement, sidestream treatment system, and biogas waste to energy projects. No major capital projects are currently planned for the collection system. Infiltration and Inflow testing continues with smoke testing starting in 2013 in high inflow areas.

All process Biosolids from MWRF are conveyed via the interceptor to the DWRF where they are mixed with the rest of the DWRF influent. At DWRF, primary sludge and scum are cleaned by the sludge strain press and then conveyed to four anaerobic digesters for stabilization. Waste-activated sludge is thickened in the dissolved air floatation thickener (DAFT) before being sent to the anaerobic digesters. Digested solids are dewatered via centrifuges, and Class B biosolids are transported to the Meadow Springs Ranch biosolids facility where they are land-applied. Ferric chloride is added to the digesters to reduce hydrogen sulfide levels during the anaerobic digestion process. It is also possible to add ferric to the centrifuges for struvite control. Assorted polymers are added to the DAFT and centrifuges to enhance the thickening and dewatering processes.

Greeley, City of

The City of Greeley is the designated management agency for the City and some adjacent unincorporated areas within Weld County. There has been no formal agreement adopted between Greeley and Weld County pertaining to the respective responsibilities of each in the unincorporated areas that are within management boundaries of the City. An IGA between Greeley and the Cities of Windsor and Evans has been adopted to address areas within each community where a sanitary sewer basin could flow via gravity to a treatment facility not owned or operated by that City.

In 1996, Greeley expanded its Water Pollution Control Facility to a permitted capacity of 14.7 MGD. In 2016, a second dewatering centrifuge was added as well as a redundant sludge cake pump. The addition of a de-ammonification process (DEMON) was completed as well. Furthermore, a project to address aging infrastructure and equipment was initiated in late 2016. This project included the conversion of a sludge storage tank to a third primary anaerobic digester, cover replacement for two existing primary anaerobic digesters with the addition of linear motion mixers, and two new sludge volute thickeners. The project will be completed by August 2018. Also, a project to replace three of six existing turbo blowers is underway and will be completed by mid-2019.

Greeley has in place an aggressive wastewater collection system replacement and rehabilitation program that has greatly reduced infiltration and inflow (I/I) to the system. The program has resulted in reducing the amount of storm and ground water that the wastewater treatment facility treats, and thus, has delayed any required facility expansion due to hydraulic loading.

Greeley is currently working on a Water Pollution Control Facility Treatment and Nutrient Master Plan, which will provide a roadmap for future capital improvement projects. That is, the Plan will provide short (≤ 5 -year) and long-term (>5 -year) prioritized improvements to the wastewater treatment plant based on flow and load projections, aging infrastructure and equipment needs. Greeley is planning an update to the Wastewater Collections System Master Plan in early 2019 that will evaluate system capacity and address future expansion of the system as needed. As a part of this effort, it is planned that the City will provide an update to the 2009 Utility Plan.

Severance, Town of

In 1979, Severance constructed a sewage collection and treatment system. The treatment facility consisted of an aerated stabilization pond and a polishing pond with chlorination prior to discharge. In 1999, the town modified the plant to a three-cell system with aeration in the first two cells followed by a settling cell, relined the existing ponds, built a new chlorine contact basin, and installed flow meters. In 2005, the town completed an expansion and improvements of the plant which included covering the first two lagoons and providing additional aerators and mixers. The town has signed an agreement with the Town of Windsor to treat wastewater in the future from the southern end of the planning area. Severance has completed construction of a trunk sewer to Windsor's East Side Trunk Sewer (WESTS) and has purchased 1 mgd of capacity in the WESTS. Currently taps downstream of the Severance lagoon flow to WESTS and are treated in Windsor. As the Severance lagoon facility nears capacity, the Town will begin diverting flow from upstream of the Severance lagoon into WESTS to prevent exceeding the capacity of the lagoons. Once the Severance trunk sewer reaches capacity, the Town will have the option to begin planning for a future treatment facility to replace the lagoon facility or a new parallel interceptor pipeline.

The Town has also approved the construction of the Saddler Ridge Metro District treatment facility which serves the Saddler Ridge PUD west of WCR 19 and north of SH 14. The construction of this facility was completed in 2010 with a Phase I capacity of 0.05 mgd. As the plant reaches capacity, the town and the District will evaluate the expansion of the plant.

As development warrants, a sewer collection pipeline will eventually be constructed from the existing lagoon facility northward, and ultimately to the Saddler PUD to serve development that occurs north of the existing lagoons. The length and timing of this pipeline will be development-driven. Each time a trigger to increase the SRMD facility is reached, the economics of constructing the length of the pipeline necessary to fully connect the Saddler PUD to the existing lagoon facility (or new treatment facility) will be compared to the expansion of the SRMD facility. The Saddler Ridge Metro District is currently working on revising the near term/ long plan for treatment. The revised plan may propose that the Phase II expansion volume for the Saddler plant be 200,000 gpd. Plan preparation will include a cost analysis of the feasibility of constructing conveyance facilities to the Severance plant (per the IGA).

South Fort Collins Sanitation District

The South Fort Collins Sanitation District provides wastewater services to an area of about 30 square miles between the Cities of Fort Collins and Loveland. In addition to providing services to the unincorporated areas of Larimer County, portions of each City's urban growth area are served.

The District utilizes an Orbal type treatment process which is an activated sludge nitrification system with BNR capabilities, final clarifiers, effluent filters, UV disinfection, and an aerobic solids digestion system. The solids that are produced are dewatered and disposed of in a landfill.

In 2016, SFCSD completed construction a new influent Headworks and Lift Station and expanded the dewatering capacity with the addition of a new centrifuge.

The next phase of improvements (Phase I) for the facility will be to expand the liquid treatment portion to 6MGD with the addition of a Step-Feed aeration basin capable of denitrification, and one more final clarifier. This phase will also include the addition of an ATAD digestion process to produce a Class A Biosolids which will eliminate the need to landfill solids. Phase I is scheduled to be completed in 2020 with a final phase (Phase II)

to follow for buildout. Phase II will include an addition to the phase I step feed basin and additional capacity for the ATAD digestion process. This will bring the facility to an ultimate capacity of 9MGD which is anticipated in 2035 depending on actual growth.

Timnath, Town of

The Town of Timnath has requested that they be designated as a management agency for their corporate limits and their urban growth management area (GMA). Because there is no intergovernmental agreement with Larimer County concerning a GMA in place yet, the management agency designation will pertain to the Town boundaries at this time. When an IGA with Larimer County is approved, the designation can be considered for the GMA.

Timnath is currently provided sewer service by both the South Fort Collins Sanitation District (mid and south portions of Town and the GMA) and the Boxelder Sanitation District (north portions of Town and GMA). The intent of the Town is to extend sewer service to existing structures as well as future developments utilizing the appropriate sewer district based on serviceability.

Wellington, Town of

The current wastewater treatment facility for the Town of Wellington became operational in 2003. The original system is sized for an ultimate design flow of 1.2 mgd, with the first phase of construction completing a 0.45 mgd system that could be readily expanded to 1.2 mgd. The town has reduced I/I through their ongoing efforts, by an average of about 30%, bringing per capita flows down to 93 gpd. The NFRWQPA approved a Utility Plan update in January 2014 which outlined the need to expand the treatment system by installing a third ditch ring to the Orbal system. These improvements were constructed in 2014-15. Recently, headworks “replacement in kind” equipment improvements were completed.

As per terms of an IGA with Boxelder Sanitation District, the Town’s service area will overlap that of the District in Sections 7, 8, 14, 15, 16, and 17, T8N, R68W, and in section 12, T8N, R69W.

Windsor, Town of

The Town of Windsor is a Home Rule municipality located in southwestern Weld County and was incorporated in 1890. Presently, the Town has a population of approximately 29,000. The current wastewater utility service area boundary encompasses roughly 32 square miles. In addition, the Town has a formal IGA with the Town of Severance to provide treatment capacity for up to 1.0 MGD of wastewater in their plant for future flows from the Severance service area.

Windsor provides service for approximately 6,700 domestic and 300 commercial/industrial taps. The Windsor system contains several miles of sewer lines varying in size from six inches to thirty-six inches in diameter. The existing wastewater treatment facility incorporates an activated sludge process with a capacity of 2.8 MGD which was constructed in 1995. In 2013-14 a new influent headworks and pumping station were constructed. In 2015-16, with the help of a Nutrient Grant, a new SCADA system and control improvements were implemented to improve the nutrient treatment capabilities of system.

MINOR SOURCES

Abbey of St. Walburga

The Abbey of St. Walburga is located in the Virginia Dale area of northern Larimer County just a few miles south of the Wyoming state line. This facility is fairly new with the original site approval (#4385) being done in 1998. The facility is comprised of a main building, with living and meeting quarters, commercial kitchen facilities, and some smaller free-standing garages and root cellars. In 2010, CDPHE approved a Site Application for the expansion of the facility. The proposal upgraded the existing system to accommodate additional flow, and an enhanced denitrification system would be implemented. The improvements went online in November of 2012.

Ben Delatour Boy Scout Ranch

Ben Delatour is a recreational facility owned by the Longs Peak Council of the Boy Scouts of America. The ranch is typically fully operational during the months of June and July and some of August (8 to 10 weeks of the year). In addition, the ranch staff arrives several weeks in advance of the scouts and remains for several weeks after the ranch closes for the summer.

In 2010, the Ranch received Site Application approval for a new treatment facility that would serve the Coral Rick dining hall, Camp Jeffery shower facility, the pit toilets throughout the camp, and 4 septic systems located in the general vicinity of the treatment facility.

Buckhorn United Methodist Camp

The Buckhorn United Methodist Camp is located in the Rist Canyon area of Larimer County. The camp does not currently have a discharge permit for the treatment facility serving the existing structures at the camp; however, a site application for a new treatment facility to serve a new lodge / dining hall was approved in 1998.

Crystal Lakes Water & Sewer Association

The Crystal Lakes WSA is located northwest of the Red Feather Lakes area. In 2014 the Association submitted a Utility Plan for wastewater treatment improvements. This Plan was approved by the NFRWQPA in April of 2014. The Plan proposed a new SBR treatment system for the 11th filing area with a capacity of 5,000 gpd. The SBR for the 11th filing has not been installed as of July 2018. The existing system is still very seasonal and likely exceeds 2,000 gallons/day only on busy summer holidays. Crystal Lakes operates a pumping truck and pumps the system during those weekends. As the seasonal nature of the system transitions into more permanent residences the system upgrades will become a necessity.

Davies Mobile Home Park

Davies Mobile Home Park is located southwest of Wellington at 1520 E. Douglas Rd. west of I-25. The wastewater facility serves the mobile home park which consists of 26 spaces. The site application for this facility was approved in 1994. Although this area was located within the service area boundary of Boxelder Sanitation District, it was not feasible then (or now) to connect for District service.

Fox Acres

Fox Acres is a recreationally-oriented development, primarily for second homes, located in sections 22, 27, and 28, T10N, R73W, just north of the Red Feather Lakes area. It contains lots for home building, condominiums, and a golf course and clubhouse-restaurant. A PVC pressure sewer serves the subdivision, and wastewater collected is treated through the Community Services Corporation's facilities. The original facility included an

aerated lagoon, polishing pond, and chlorination. Discharge is to an ephemeral tributary to Columbine Creek, and then to North Lone Pine Creek in the SE ¼ of Section 22. These waters are part of Segment 8 of the Cache la Poudre River. There are potentially 259 domestic connections to the sewer system at buildout plus the clubhouse. Buildout is not expected for more than 20 years. Fox Acres conducted a year-long (2013) pilot study for bio-augmentation in the existing facility to determine any beneficial effects for nitrogen removal. In 2015 a new Utility Plan was prepared and approved which recommended a new treatment facility. A site Application was approved in September of 2015 followed by design approval in October of 2015. May 1, 2017, Fox Acres put online a Fluidyne Sequential Batch Reactor (SBR). The SBR is rated for 0.081 MGD and 160 lbs BOD5/day.

Glacier View Meadows

Glacier View Meadows is a rural mountain community located between Livermore and Red Feather Lakes. There are two permitted treatment facilities serving Glacier View Meadows. One system serves the 12th filing of the subdivision and the other system, installed in 2009, serves the 4th, 7th, and upper 8th filings. Other areas of the subdivision were developed prior to permit requirements. The flow to the facilities is 100% domestic.

Harvest Farm – Denver Rescue Mission

Harvest Farm is a long-term rehabilitation facility operated by the Denver Rescue Mission. The farm has dormitory style housing with a kitchen that is served by the wastewater facility. The facility was designed for average flows from 50 campers, with the ability to expand the facility to accommodate 100 campers in the future. They report the system is operating OK and they plan no changes.

High Country Estates

High Country Estates is a subdivision located in the Red Feather Lakes area. The wastewater facility serving the subdivision does not currently have a discharge permit; however, the facility has received site application approval (#3696). This facility was designed to serve the 25 residences in the subdivision as well as four commercial properties. The typical home size in the community is 1-2 people. About 6 out of 24 homes have individual residents. Several of the homes are for part time family use. The Association approximates around 100 gallons per capita per day. Water usage doesn't go up a lot in the summer time. Each lot has its own septic tank. All the lots have one tank with two compartments. The Association does not have any records of when tanks are pumped. It has been determined that not everybody in the Community has the same pump for their septic system. Homeowners are not supposed to use grinder pumps. The Association has 6 leach fields that are used two at a time in alternating succession each quarter.

Laramie River Guest Ranch

The Laramie River Guest Ranch is located in northern Larimer County close to the Wyoming state line. The wastewater facility serves the lodge, which includes a commercial kitchen and seven guest rooms. There is also a smaller septic system (permitted through the county) that serves the cabins.

Magic Sky Ranch Girl Scout Camp

The Magic Sky Ranch Girl Scout Camp is located north of Red Feather Lakes Road approximately six miles southeast of the Red Feather Lakes community. Separate individual-sewage-disposal systems or privies serve some buildings at the ranch. Newer development consisting of cabins, dining hall, activity center, welcome center, health care center, manager housing, equestrian facilities, and maintenance garage are served by the central treatment system.

Pine Lake Village

Pine Lake Village is a mobile home park with 34 homes sitting on approximately 36 acres and is located off Highway 14 east of Ft. Collins. Approximately seven acres of the site are currently being used for the mobile home park with expansion plans on hold. The treatment facility consists of an 18,000 gallon three chamber septic tank. The fluids from the third chamber are dispersed to the leach field. The leach field consists of 4 – 100' x 100' leach beds. Using a diverter box 2 beds are active at all times. We rotate leach beds every 3 months. Prior to the fluids reaching the leach beds, we use a screen that catches any solids from going into the leach beds.

Mountain (formerly Pingree Park) Campus – Colorado State University

Mountain Campus is part of the Colorado State University. The campus includes a conference center dining hall, two classroom buildings, two dormitory buildings, approximately 30 cabins, and a wastewater treatment building.

The facility currently has a total of 281 beds, and averages approximately 100 persons per night. All populations are seasonal (May through October). The dining hall is the limiting factor in campus occupancy and water usage. During 2009 and 2010 a maximum number of 200 people per day were served at the dining hall. In 2015, CSU executed upgrades to the treatment system to improve treatment efficacy, including the addition of an anoxic tank, RAS and recycle pumps, fine bubble diffusers and UV treatment.

CSU is planning to expand or replace the treatment system in or around 2020 to accommodate planned growth at the campus. The proposed system will be sized to accommodate a maximum 562 persons, and 39,000 gpd. The dining hall will be expanded after the new wastewater treatment system has been constructed, and additional accommodations and classrooms will be constructed. A wastewater treatment alternatives analysis was conducted in 2017-2018, and new Preliminary Effluent Limits were issued by CDPHE on February 6, 2018 at the request of CSU.

Shambhala Mountain Center

The Shambhala Mountain Center (formerly the Rocky Mountain Dharma Center) is a mountain retreat center located in the Red Feather Lakes area of Larimer County. The SMC offers programs on Buddhist meditation, yoga, and other disciplines. SMC is limited to 450 visitors and staff on the main campus, plus an additional 80 people on the Red Feather Campus during peak months (June to September). In 2011, the Center received Site Application approval for the expansion of the treatment facility to a design flow capacity of 0.033 mgd and 117 lbs. BOD5/day. The new SBR facility went on line in May of 2012. The capacity of the new facility will also allow for the connection of additional existing buildings to the central treatment system with the installation of phase 2 sewer improvements anticipated in the fall of 2018.

Sky Ranch Lutheran Camp

The Sky Ranch Lutheran Camp (Sky Ranch) is a faith based camp providing outdoor learning and fellowship experiences for youth and adults. The Camp has been in existence since 1963.

Sky Ranch is located on approximately 117 acres of land in the mountains of north central Colorado about 55 miles west of Fort Collins. It is situated at an elevation of approximately 9,200 feet, it is surrounded by Roosevelt National Forest, and it is in close proximity to the northern border of Rocky Mountain National Park. Facilities provided at Sky Ranch include a camping area, guest cabins, a shower facility, a first aid facility, and a lodge

with a dining room. Sky Ranch has the capability to serve up to 170 people including guests and staff. Expanded facilities would be required to accommodate more 170 people.

Potable water for Sky Ranch is obtained from a well located within the camp boundaries. Wastewater from the various facilities is treated in conventional septic tank/leach field systems. There are four (4) such wastewater systems. One serves the Christ Lodge, which is the main lodge and dining facility for the camp, one serves the shower house, one serves the first aid facility and a residence known as Bonhoeffer, and one serves a facility known as the Backpack Center.

A Master Plan for expanding the Camp was prepared in 2000. The Master Plan included expanding the camp capacity to 250 people and replacing the four (4) septic tank/leach field wastewater systems with a new centralized “mechanical” type wastewater treatment facility. The ultimate treatment capacity of the proposed system was to be 32,166 gallons per day. The new wastewater facilities were to be constructed in phases with the first phase including a “package” mechanical wastewater treatment facility designed to treat 9,437 gallons per day. The Master Plan was approved by Larimer County in 2002.

A Site Application for a new wastewater treatment facility with a design capacity of 15,000 gallons per day was approved by the Colorado Department of Public Health (CDPHE) in 2004. The approved wastewater treatment facility was to include septic tanks, a recirculating sand filter, and ultraviolet disinfection. Effluent from the new wastewater treatment facility was to be discharged to Beaver Creek. Design of the proposed new wastewater treatment facility was approved by the CDPHE in 2005 and a discharge permit for the new facility was issued in 2008, but the proposed new wastewater treatment facility was never constructed.

In 2011 Sky Ranch received a letter from the CDPHE informing them that they were allegedly in violation of the Colorado Water Quality Control Act (Act) for operating individual sewage disposal systems (ISDSs) with wastewater flows that “likely” exceed 2,000 gallons per day. Sky Ranch sent a response letter in 2011 indicating that they would monitor flows to the existing ISDSs to determine if flows exceed the 2,000 gallons per day limit established in the Act.

Wastewater flow evaluations performed in 2012 and 2013 determined that the wastewater flows treated by the individual Sky Ranch ISDSs were less than 2,000 gallons per day, but all flows considered together did exceed the 2,000 gallon per day limit. The evaluations also determined that 2 the individual ISDSs were located in such proximity that three of the four ISDSs were considered to be under the groundwater influence zones of one another, therefore could be considered as one system in accordance with the CDPHE’s established policy. This situation could be eliminated by moving the wastewater disposal field (leach field) for the Shower House ISDS to a location further away from the Christ Lodge and Backpack Center ISDSs. This concept was officially approved by the CDPHE in a 2015 letter with the stipulations that new septic tanks be provided for the Christ Lodge and the Shower House systems, and that a new Shower House leach field be constructed at a location sufficiently distant from the Christ Lodge and Backpack Center leach fields that the groundwater influence zones for the onsite wastewater treatment systems (OWTS) do not overlap. The CDPHE indicated that Sky Ranch was to work with the Larimer County Department of Health & Environment to assure that all local approvals and permits were obtained for the required system modifications.

Sky Ranch currently plans to construct a new Adult Cabin and a new Maintenance Building at the camp. Both proposed facilities will require OWTSs. The proposed facilities are to be located at opposite ends of the camp and will be sufficiently distant from each other and the existing OSWTs that there will be no overlap of OWTS groundwater influence zones.

INDUSTRIAL

In-Bev-Anheuser-Busch

The Anheuser-Busch, brewery in Ft. Collins produces wastewater which 100% is pumped to Nutri-Turf, a subsidiary of Anheuser-Busch Companies, for irrigation. Wastewater is land applied by center pivot systems and used as irrigation water. Before application, wastewater is stored in agitated storage tanks. Stormwater runoff collection ponds with pump-back capability collect irrigation runoff and prevent its discharge from the property. Each pond also has an emergency spillway where runoff could be discharged.

Carestream

Carestream is an industrial complex which produces its own medical, dental and nondestructive x-ray film products as well as other coated paper and thin film materials for various Toll Coating customers. There are several individual pretreatment units that are used on processes prior to discharge to the main treatment plant. Those include metal precipitate, rapid sand filters, activate carbon and elementary neutralization.

The main treatment plant consists of two Biocell lagoons, two settling lagoons, and three multi-media rapid sand filters. The first lagoon is operated as an aerated lagoon for ammonia and nitrite removal. The second aerated lagoon is maintained as an anoxic lagoon for nitrate removal. The Biocells are run in series and discharge to one of the settling lagoons. Only one settling lagoon is operated at a time. The settling lagoons are used primarily for solids settling. When necessary, blowers are used to maintain dissolved oxygen levels for total inorganic nitrogen and BOD reduction. The filters are used to remove particulates. The effluent from the sand filters is discharged to the west storm drainage ditch which flows to Segment 12 of the Cache la Poudre River.

Colorado Division of Wildlife

The Division of Wildlife operates three fish hatcheries under permit in the region. They are the Bellevue, Watson, and Poudre Hatcheries. Specific information about each of the hatcheries can be found on the specific data sheet pages.

Front Range Energy

Front Range Energy is an ethanol plant located south-east of the Town of Windsor.

Leprino Foods

Leprino Foods constructed a new cheese and whey plant on the east side of the City of Greeley (immediately east of the Greeley WWTP) in 2011 with expansions completed in 2013 and 2017. The processing plant is served by an on-site wastewater treatment facility. The facility went into operation in 2011. Tier 1 of the treatment plant accommodated the facility during the first two phases of operation at the facility. The 3rd flow tier for the treatment facility accommodates the final phase of operations.

JBS Swift – Lone Tree Facility

The JBS Swift – Lone Tree WWTF treats wastes from Swift Beef's beef and lamb packing plants in Greeley. The permit for the facility has stringent ammonia and nitrate limitations and has resulted in large capital and operating expenditures by the company. Residual chlorine limits have also been lowered significantly, and bio-monitoring is required. Four anaerobic lagoons, biological nutrient activated sludge system, two final clarifiers, chlorination and dechlorination or channeled directly through two polishing ponds. There is also a pretreatment plant that pretreats wastewater at the packing plant to remove BOD₅, suspended solids, fats, oil, and grease to produce a saleable byproduct and reduce the load on the treatment plant.

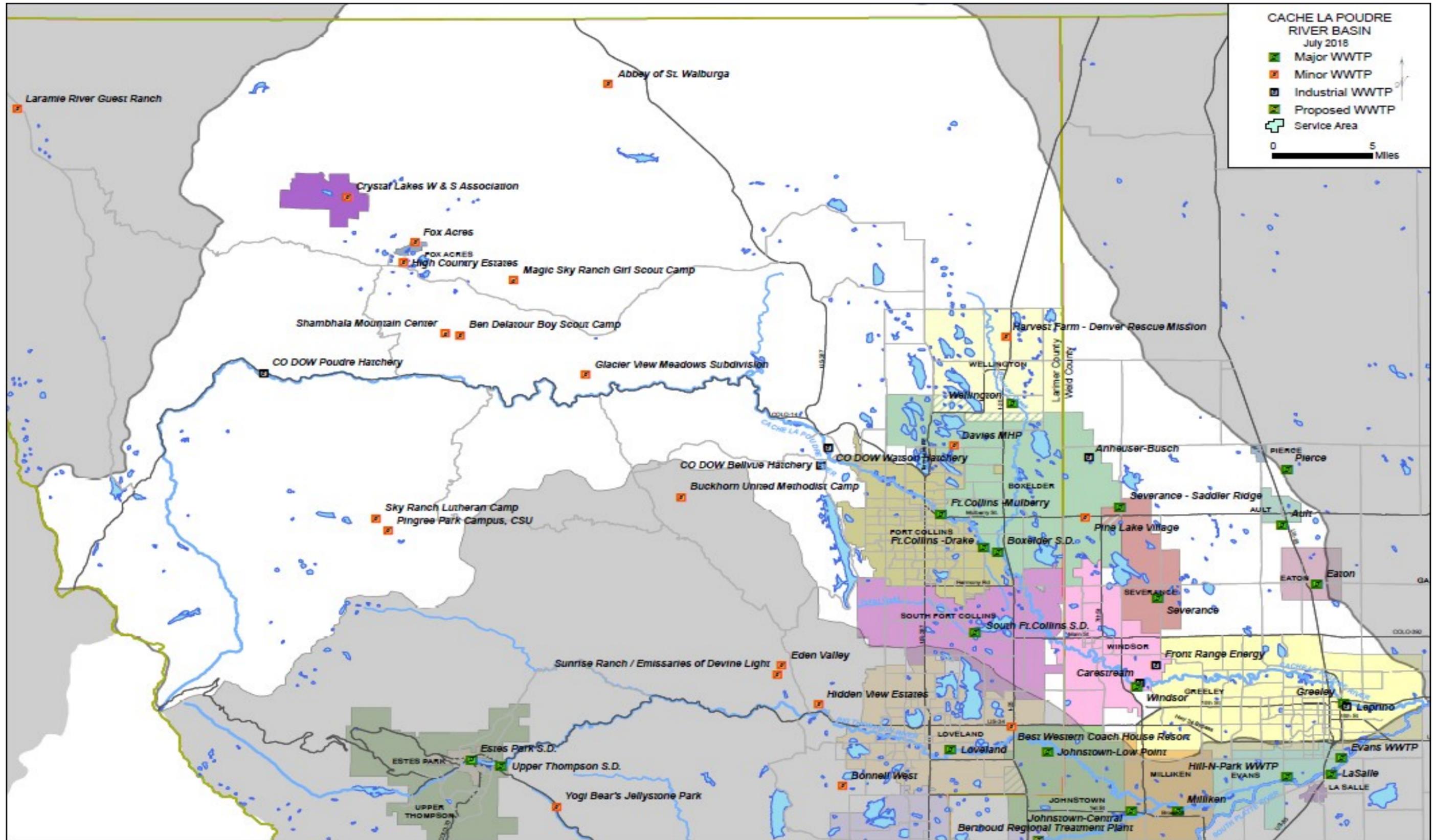


Figure 4 CACHE LA POUDBRE RIVER BASIN

5.2 BIG & LITTLE THOMPSON RIVER BASIN

The headwaters of the Big Thompson River are in Rocky Mountain National Park between the Town of Estes Park and the Continental Divide. After leaving the Big Thompson Canyon, the river flows by Loveland, Johnstown, and Milliken before joining into the South Platte River near La Salle. The Little Thompson River, a major tributary, converges with the Big Thompson at Milliken. Municipal discharges in the basin include Estes Park and Upper Thompson Sanitation Districts, Loveland, Johnstown, and Milliken to the Big Thompson River, as well as Berthoud and Johnstown to the Little Thompson River. The Big and Little Thompson River Basin map following this section highlights the basins and identifies the wastewater treatment facilities located within them.

MAJOR SOURCES

Berthoud, Town of

Berthoud's current sewer service area includes the Town as well as an area east of town to I-25 and the area north of town that was formerly the South Loveland Sanitation District. That district was disbanded, and Berthoud assumed the responsibility of the service in 1986.

Infiltration from high groundwater during the irrigation season has been a problem in the past. Slip-lining the worst sections has been successful in reducing excessive infiltration. Additional line replacement and manhole reconstruction occurs on an ongoing basis.

In 2004, a new wastewater plant serving the main areas of Berthoud was brought on line. This plant was also added onto an existing biosolids digester and digested sludge is hauled by a contract hauler. The new plant is permitted to treat 2 MGD.

In addition to the 2004 facility serving the main area of Berthoud, a conditional plant serving the Serenity Ridge subdivision was brought on line in 2005. This facility was recommended for approval with the condition that it be abandoned when the Berthoud Regional WWTF is built near I-25. The Town of Berthoud received a recommendation for approval from NFRWQPA in January 2005 for the Regional WWTF which is proposed to be built in the SE ¼, SW ¼, Section 14, T4N, R68W. As part of that recommendation for approval, the Towns of Berthoud and Johnstown developed an IGA to ensure the regional intent of that facility. Because the rate of development slowed dramatically construction of the regional plant was not pursued.

In 2014, Berthoud agreed (through a new IGA) to provide service to the Riverglen HOA with the construction of a new lift station and force main. This IGA allows the existing lagoon system at Riverglen (south of Berthoud) to be taken out of service. In 2014, Berthoud prepared a Utility Plan Update. This report further outlined the Town's plan for its service area and a new Regional Plant which is to be located on the NE corner of I-25 and Highway 56. A Site Application for the Regional Facility was approved by the NFRWQPA and the State in 2015 for a facility with a first phase capacity of 0.99 MGD.

In 2018, the Serenity Ridge WWTP was decommissioned and CDPS permit No. CO0047007 had a deactivation application submitted for termination.

Berthoud Estates

The newly constructed wastewater treatment facility serves 183 residential taps for both the Berthoud Estates and Foothills Estates subdivisions. Both subdivisions are completely built out. The governing association for these taps is called the Berthoud Estates Community Association (BECA). The entire service area is served by gravity sewers and there are no sewerage lift stations.

The original lagoon style treatment plant was placed in service in 1978. In 2012 BECA was notified that the plant could not meet updated effluent ammonia limits. Larimer County Health Department helped acquire a State Revolving Fund loan for the construction for a new wastewater treatment facility. The new facility is a Sequencing Batch Reactor and was activated on May 23, 2017.

Estes Park Sanitation District

The Estes Park Sanitation District (EPSD) was formed in 1940 and currently serves 1,396 single family dwellings or full size condominiums, 469 smaller multi-family units, and 325 commercial taps. Since EPSD does not fall within a defined census boundary, a residential count of 3,850 residents is based on a formula provided by the Town of Estes Park. Annualized commercial flow contributes an additional equivalent of 3,600 residents. A significant portion of the commercial flow occurs during the summer tourism season. Peak facility flows associated with tourism occur in July or August. During 2017, the month of June represented the greatest 30-day average at 0.846 mgd. June was a very wet month and we experienced more infiltration than normal. July's daily flow of 0.766 mgd is more representative of our peak flows. While the District has experienced growth, the lack of available land has kept the growth rate very manageable. The biggest potential for growth going forward will be in-fill housing and redevelopment of existing parcels. This process has already begun, and currently there are two proposals on the board for affordable and work force housing that will greatly exceed our annual average growth. In-fill and redevelopment is difficult to forecast and we are continually monitoring this activity.

An ongoing I/I program analyzes troublesome or aging collection lines, and approximately 2,000 to 2,500 feet of these lines are replaced annually. Today approximately 75% of our collection system is PVC, HDPHE or ductile iron pipe. In addition, the program has significantly reduced backups or plugs in service mains.

The original treatment facility was built in 1964 and includes plant processes of flow equalization, activated sludge secondary treatment, clarification, chlorination / de-chlorination and aerobic sludge digestion. Discharge is to Segment 2 of the Big Thompson River just west of Lake Estes. Internal improvements have been made to the facility to allow for increased efficiency and flexibility. The net result was a system that removes more suspended solids and metals; lowered effluent ammonia, phosphorus, and BOD; and increased pH. A new headworks building was put on-line in 2016 that included two DAF units that can be used to polish effluent or provide primary clarification if desired. The improvements are the first step in preparing for stringent nutrient limits that will be in place in 2027. The District is currently engaged in engineering design for improved air handling in the treatment process and solids handling.

The District utilizes aerobic sludge digestion. Biosolids are de-watered to 17 – 19% prior to land fill application. Annual production is approximately will be approximately 120 – 130 dry tons in 2018.

Johnstown, Town of

In 2009, the Town completed a Utility Plan which outlined facility needs through the planning period. In addition, collection system improvements for the entire 208 WUSA through the planning period are also included in the plan.

The Town of Johnstown currently has two wastewater treatment plants serving their 208 area. Johnstown expanded the Central Plant in 2013 to a Phase II design capacity of 0.99 mgd. The plant was re-classified by the State from a lagoon system to a mechanical plant owing to the use of DAF units for effluent solids removal.

The Low Point Plant became operational in November 2006 and discharges to the Big Thompson River. This plant has seen a large growth within its service area as it serves a portion of the I-25 and Hwy 34 interchange area.

Loveland, City of

The City of Loveland is the designated management agency for the area within its UGA boundaries. An IGA exists between Loveland and Larimer County. This IGA sets forth responsibilities of both the City and County concerning development in the UGA. Loveland accepted the designation as management agency in 1978 when this plan was originally adopted.

In 1998, CH2M Hill completed an Incremental Expansion Study of the wastewater treatment plant. This study identified 12 capital projects needed for the plant to achieve a rated capacity of 12.0 mgd. As a result, from 2002 to 2007, the City completed a series of capital improvement projects to increase the treatment capacity and improve water quality. In 2004, the City completed an \$8.5 million project which included a major upgrade to the aeration basins and converted the chlorine disinfection system to ultra-violet radiation. This project increased the hydraulic capacity from 8.0 mgd to 10.0 mgd, and organic capacity from 12,500 lbs. BOD5/day to 20,236 lbs. BOD5/day. In 2007, the City completed a \$3.5 million improvement which included the addition of a third secondary clarifier, RAS/WAS/Scum pumping systems, aeration lift pump station expansion, and anaerobic digester improvements. In 2009, a project upgrading the screening and grit removal systems along with Headworks odor control and a second emergency generator was completed. Design efforts for additional Plant Improvements involving the Digester rehabilitation and/or expansion was undertaken in 2014 and for BNR capabilities in 2015.

A site application for Plant expansion and BNR improvements was approved in June 2017. Included in the Site Application Approval (#4666/ES.SA.03259) were the following items.

Maximum Month Average Daily Flow Capacity – 12.0 million gallons per day (MGD)

Peak Hourly Flow Capacity - 20.3 million gallons per day (MGD)

Organic Loading Capacity (max. month average) - 27,150 lbs. BOD5/day

This approval also addresses the following facility modifications/improvements:

- Addition of two (2) new anaerobic digesters
- Addition of a sludge holding tank
- Addition of a ferric chloride feed system
- Installation of appurtenances, including heating and gas handling equipment
- Various improvements to the piping, valves, channels, and flow control associated with the aeration basin pump station and UV disinfection system.

The City also implemented a complete industrial pretreatment program during 1988. Approximately 2% of the flow volume comes from industrial dischargers. Additionally, the City has had a bio-monitoring program underway since 1986. Several Site applications were approved for collection system lift station work since the last update.

Loveland was issued its current CDPS permit in 2015.

Milliken, Town of

The current treatment facility came online in 2005 and was designed to meet the effluent limits set by the Colorado Department of Public Health and Environment. In early 2016, the Town prepared a Utility plan to provide planning for the next twenty-year period. The Plan outlined several collection and conveyance system improvements and noted that the plant would not need expansion for some time to come. The NFRWQPA approved the plan in May 2016. In September 2016 NFRWQPA approved the Mad Russian Lift Station and East side loop 30" interceptor sewer. Due to increased development the town estimates exceeding the 80% wastewater treatment capacity threshold as early as the third quarter 2018. The town has started investigating the future capacity/design requirements based on current growth as the first step towards wastewater treatment plant expansion. The town has completed sewer line CIP and replacement projects and has used camera inspection to identify and budget for repair or replacement of several additional sections in 2018/19.

Upper Thompson Sanitation District

The Upper Thompson Sanitation District serves approximately 4,446 service connections in an area of about nine square miles around the Town of Estes Park. The major contributors of wastewater flow to the UTSD's facility are the residential population, the YMCA of the Rockies, Rocky Mountain National Park, the Town of Estes Park Water Treatment Plant, the American Honda Corporation, and the Cheley Colorado Camp. In 2017, the District completed the repairs to the collection system impacted by the September 2013 flood. The District continues to complete rehabilitation improvements to the aging wastewater treatment facility and collection system that was constructed in the 1970s. The District will construct interim improvements to demonstrate nutrient removal techniques as well as identify long-term alternatives to increase the treatment capacity to 3 mgd in phases over the next few years. A Utility Plan for the District, which outlines future infrastructure needs, was approved in 2010.

MINOR SOURCES

Best Western Coach House Resort

The Best Western Coach House Resort (formerly the Coach House Inn) is located at the intersection of Highway 34 and I-25. The wastewater facility for this hotel is not currently permitted. This resort has considered the possibility of connecting to the City of Loveland's collection system at some point in the future; however, no definite plans have been established. This facility is an active wastewater system. CDPHE Permit's Section is following up with them to get them covered under the new COX634000 GW General Permit.

Bonnell West Home Owners Association

The Bonnell West HOA wastewater facility serves the Bonnell West subdivision located southwest of Loveland. The subdivision was developed in the mid to late 1970s. In 1998, the HOA amended the existing site application

for the facility to increase the flow from 97 to 120 taps. This facility receives only domestic waste from the homes within the association and is non-discharging as the treatment facilities are a total evaporative aerated lagoon system.

Eden Valley Institute

Eden Valley Institute is a nonprofit organization based on being a religious, charitable, and educational institution. It is located approximately 11 miles northwest of Loveland. The existing treatment works for the institute was constructed prior to 1967, and therefore is considered “grandfathered.” In 2012, the institute submitted a Utility Plan and Site Application for a proposed SBR facility that would replace the facility. This proposed system will serve the majority of the population for the institute; however, several of the existing structures will remain on individual treatment systems. Recently, EVI has submitted a utility plan amendment to change the treatment process from an SBR to an MBBR. The new Plant was constructed in 2015-16

Hidden View Estates

The Hidden View Estates subdivision is located approximately four miles west of Loveland and currently includes 23 homes with a possibility for two additional homes to be built. The subdivision was platted in the late sixties and originally included a combination of individual septic tanks and community leach fields which had begun to experience problems. In order to meet current standards, the subdivision installed a sequencing batch reactor (SBR) system to treat all current and future flows from the subdivision.

Riverglenn Homeowners Association (HOA)

The Riverglenn treatment facility provides service for the Riverglenn subdivision south of Berthoud. The subdivision is close to buildout with 64 of the 65 lots developed. A new subdivision to the north called Riverside has been tied into the Riverglenn facility and consists of an additional 45 lots. At this time there are no new taps contributing flow from the north into the system. Recently, Berthoud agreed to provide service to the Riverglenn HOA through a new IGA. This IGA will allow the existing lagoon system at Riverglenn (south of Berthoud) to be taken out of service. This project was accomplished in 2014-15 and the WWTP taken out of service.

Sunrise Ranch – Emissaries of Devine Light

The Sunshine Ranch facility is a privately owned religious complex located east of Loveland in the Green Ridge Glade area. It receives wastewater from the Sunrise Ranch complex which consists of 33 taps. Of the 33 taps, 27 are residential, one is for a community dining hall and kitchen, three are for the church, one is for a community laundry facility, and one for the administration building. The aerated lagoon facility discharges to groundwater. There are also three houses on individual septic systems in the area. A new mechanical facility was constructed in 2017 that consists of an influent wet well with grinder pumps that lifts flow into an ICEAS Sequence Batch Reactor, followed by UV disinfection prior to discharge to groundwater. Digested Waste Activated Sludge will be hauled by a contractor for final disposal as needed.

Western Mini Ranches / Vaquero Estates

The Western Mini Ranches / Vaquero Estates wastewater treatment facility provides service to both subdivisions. These two subdivisions numbering 84 homes southwest of Berthoud have an estimated population of 268 people. Both subdivisions are completely built out. Due to subdivision / zoning restrictions, the population of the subdivisions is expected to remain approximately the same through the planning period. The Subdivision has switched to Berthoud collection system for treatment by Berthoud. The permit was terminated on 9-22-17.

Yogi Bear's Jellystone Park

Yogi Bear's Jellystone Park is a camping site which was formerly called Park Place Camping Resort. The park is located approximately five miles from Estes Park on Highway 36. The resort consists of 112 total sites including some full hook-up sites, cabins, a heated pool, restrooms, showers, and laundry facilities. There is also a game room, playground, and convenience store. The discharge is to groundwater.

Annunciation Heights Camp and Retreat Center (Formally Covenant Heights)

In 2014, Covenant Heights submitted a Utility Plan to be formally recognized as a permitted entity with the State. The Camp has existed for decades but had never been approved for file a site application. The report outlined improvements to be implemented to allow the camp to meet requirements for discharge to ground water and nutrient regulations. The NFRWQPA approved the Utility Plan and subsequent Site Application in 2014. 2018 has seen a change in ownership and name. Now known as Annunciation Heights Camp and Retreat Center. The new treatment facility has been constructed (finished Oct 2016) and turned on (May 2017). The treatment tanks have not yet been filled, there has yet to be discharge.

INDUSTRIAL

None

5.3 ST. VRAIN RIVER BASIN

The portion of the St. Vrain River Basin which lies within Weld County is in the NFRWQPA planning area. This is a relatively small portion of the basin at the lower end. The entities in this basin have service area boundaries that are in close proximity to each other. Consolidation or regionalization of services should be considered when expanded services or treatment is planned. The St. Vrain River Basin map following this section highlights the basin and identifies the wastewater treatment facilities located within it.

MAJOR SOURCES

Erie, Town of

The Town of Erie provides wastewater collection and treatment services within the town's wastewater utility service area. The North Water Reclamation Facility (NWRf) was completed in 2010 with a design capacity of 1.5 MGD. In addition, the NWRf was designed to treat all the solids (waste activated sludge) generated at both facilities. The South Water Reclamation Facility (SWRF) is out of service and will likely be fully decommissioned in 2019.

In 2012, the Town completed an updated Wastewater Utility Plan. The purpose of the plan was to consolidate relevant sections of past planning efforts into a single comprehensive document and to support a modification to Erie's WUSA. The main changes to the WUSA were on the east side. They included the addition of land which had annexed into the Town as well as the addition of coordination areas with the St. Vrain Sanitation District outlined in an IGA signed by the two parties in November 2012. In 2015, the town provided an update to the Utility Plan for changes in growth projections and timing of future improvements to the NWRf. The Town initiated a Collections System Master Plan in 2017 which it expects to conclude in 2018.

In 2017 the Town completed an expansion project which increased the NWRf capacity to 1.95 MGD. A permit supplement application is currently under review by the Water Quality Control Division (WQCD) to increase the permitted hydraulic and organic loading as well as making adjustments to various permit limits. With a rapidly growing population, the Town initiated design efforts for the next expansion in 2018 which will include a Master Plan for the NWRf and intends to begin construction in 2019 or 2020.

Longmont, City of

The City of Longmont service area includes a 140-acre parcel in Weld County designated as Basin G and served by an interceptor. There is an intergovernmental agreement between Longmont and the St. Vrain Sanitation District that defines the sewer service boundaries of each entity.

The last plant expansion, which was a conversion to activated sludge from trickling filters, was constructed between 2001 and 2004 and increased the secondary treatment capacity to 17 mgd. The plant was subsequently de-rated to 13 mgd as a result of revisions to flow and loading projections.

Ammonia limits for the plant were originally developed in a TMDL based on ammonia modeling of the St. Vrain River basin dischargers. The ammonia limits in the existing permit, which expired in November 2016, were based on the 2008 modeling results and replaced the TMDL limits. Ammonia limits were revised in 2008 and 2015 using the AMMTOX model. The permit contains a compliance schedule for meeting the limits in the 2008 AMMTOX model that requires the addition of ammonia treatment facilities. Those facilities, along with new

biosolids dewatering equipment and a solids handling building, were completed in October of 2017. The plant improvements are capable of meeting the new ammonia limits developed in the 2015 AMMTOX model, which will be included in the new permit when it is issued. Although the plant has the capacity to achieve some level of nutrient removal, full compliance with Regulation 85 nutrient limits will probably require the construction of additional treatment facilities. Regulation 85 limits for nitrogen and phosphorus and a compliance schedule for meeting those limits will be in the next permit renewal.

Mead, Town of

The Town of Mead assumed complete ownership and control of the wastewater treatment facilities serving the Town upon the dissolution of the Mead Sanitation District on January 1, 1993.

Lake Thomas Wastewater Treatment Facility

In 2001, the Town acquired the Lake Thomas Wastewater Treatment Facility (LTWWTF). This aerated lagoon facility, constructed in 1989, was used to serve the Country View Day Care Center. The property has since been remodeled to become condominiums marketed to seniors (age restricted housing). A total of 29 dwelling units exist and it is now known as the Lake Ridge Development. The Lake Ridge Development is partially occupied and generates approximately 1800 gallons per day (GPD) and due to the low flow, the LTWWTF does not discharge effluent via surface water to its permitted discharge point. The Town contracts with McDonald Farms for periodically pumping hauling accumulated wastewater in the lagoon cell to the Town's WWTF.

The LTWWTF discharge permit expired in September 2014 and has not been renewed to date. In April 2014, the CDPHE conducted an inspection of the LTWWTF and cited the facility for major and minor non-compliance. The major violation cited was that the LTWWTF did not meet the design criteria and operation for an aerated lagoon system as documented in their current discharge permit and most recent site application approval. Since 2014, the Town has prepared evaluations and studies on how to best improve LTWWTF to comply with CDPHE regulations.

The Town prepared a Wastewater Master Plan in 2017 which outlined four alternatives for the LTWWTF. The recommended alternative was to decommission the existing lagoon facility and construct a new lift station to convey flow to the St Vrain Sanitation District (SVSD) via force main. However, discussions with SVSD were not favorable due to the high costs associated plant investment fees for connecting and the SVSD was not willing to operate and maintain the lift station. The Town re-evaluated the other alternatives presented for LTWWTF and selected the alternative that included the installation of an impermeable synthetic liner for the lagoon cell to prevent groundwater discharge and development of a plan of operation to continue periodically pumping and hauling accumulated wastewater to the Mead WWTF.

The LTWWTF Lagoon Liner Improvement Project went out to bid in April 2018, with anticipated construction starting early June 2018. Completion of the improvements is expected in July 2018. The Town completed an In-kind Replacement Application with CDPHE for the lagoon liner replacement which was approved in April 2018. Once the liner is installed, the Town will prepare the paperwork for terminating the existing discharge permit, since all the wastewater will be treated at the Mead WWTF under its discharge permit. The Town received a grant from the Department of Local Affairs Energy and Mineral Impact Assistance program for the LTWWTF liner improvements.

Main Wastewater Treatment Facility

In January 2009, the Town completed construction of a new sequencing batch reactor (SBR) facility with aerobic digestion for biosolids treatment. The new SBR facility replaced the previous aerated lagoon facility serving the Town. The completion of the SBR facility allowed the Town to meet more stringent ammonia limits required by the permit, as well as provide needed capacity for the service area. As of 2017, on average, the Mead WWTF is 33 percent and 32 percent of its rated hydraulic and organic capacity, respectively. The Town has made

improvements to the WWTF including enclosing the outdoor grit removal system with a metal insulated / heated building and added additional catwalks across the SBR for better access and ease of maintenance. The Town is setting aside funds each year for making annual improvements, repairs and replacement at the WWTF.

As stated earlier, in 2017, the Town completed a Wastewater Master Plan that included GIS based sanitary sewer mapping, hydraulic modeling and sewer capacity, sewer related capital improvement program, and a road map for serving future development and capital needs. The master plan also included an evaluation of Mead's Wastewater Utility Service Area (WUSA) also known as the 208 boundary. With GIS and survey data, an updated service area was delineated for the recommended WUSA allowing all gravity flow to the Mead WWTF. In total Mead's current WUSA would be reduced from 12,571 acres to 8,800 acres in size with the reduced areas recommended to be served by SVSD and other entities in the surrounding area. In April 2018, the North Front Range Water Quality Planning Association (NFRWQPA) approved the Mead's new WUSA and currently SVSD is in the process with NFRWQPA for adjusting their WUSA to incorporate the areas previously occupied by Mead's WUSA.

North Creek Lift Station

The 2017 Wastewater Master Plan recommended that the Town decommission the North Creek Lift Station (NCLS) and connect via gravity to an existing sanitary sewer. The Town has prepared drawings and specifications for public bid to eliminate the NCLS and construct an 8-inch gravity sewer and connect to the existing sewer at Eagle Avenue. With the elimination of the NCLS, the Town will not have a lift station to operate and maintain, and with the new WUSA, future development will only be served by gravity.

St. Vrain Sanitation District

The St. Vrain Sanitation District was created in 1986 to serve the area near the intersection of I-25 and State Highway 119, commonly referred to as Del Camino, and the surrounding areas. Currently, there are 140 square miles included within the District boundaries. The District now includes the former Dacono Sanitation District, the Tri-Area Sanitation District, and the East I-25 Sanitation District. Consolidation with the Dacono and Tri-Area Districts was effective in January 2008. Consolidation with the East I-25 District was effective in May 2012. The District presently serves a small portion of the Cities of Longmont and Mead, and all of Dacono, Frederick, and Firestone located in Weld County.

In 2011, St. Vrain Sanitation District and the Town of Platteville developed an IGA to address wastewater service within sections 25, 26, 36, and the east half of section 27 and 35. This IGA maintains this area within the St. Vrain Sanitation District WUSA boundary; however, it allows for the boundary to be adjusted if the criteria of the IGA are met.

The St. Vrain Sanitation District constructed a new plant in 2011-13 that will treat up to 6 mgd. The plant was completed in the spring of 2013. The District also continues to build line extensions as development occurs. The District currently serves over 12,000 tap connections.

MINOR SOURCES

Dao House (Formally the Aspen Lodge)

Aspen Lodge is located off Highway 7 south of Estes Park and includes the lodge as well as guest cabins. The lodge is open year round and has a full kitchen.

B & B Mobile & RV Park

This treatment facility serves the mobile home and RV park located at the northeast corner of Highway 52 and Weld County Road (WCR) 1. The park currently has a total of 55 homes. Due to zoning restrictions, it is not anticipated that any additional homes will be added. Therefore, the current capacities are expected to remain consistent.

High Peak Camp (Salvation Army)

The Salvation Army High Peak Camp is located south of Estes Park on Highway 7. The Salvation Army has reportedly updated the facility to bring it within local code requirements. Camp is still going to prepare a Utility Plan to examine growth and treatment needs. Camp is working with Wright Water in developing the next steps.

INDUSTRIAL

None

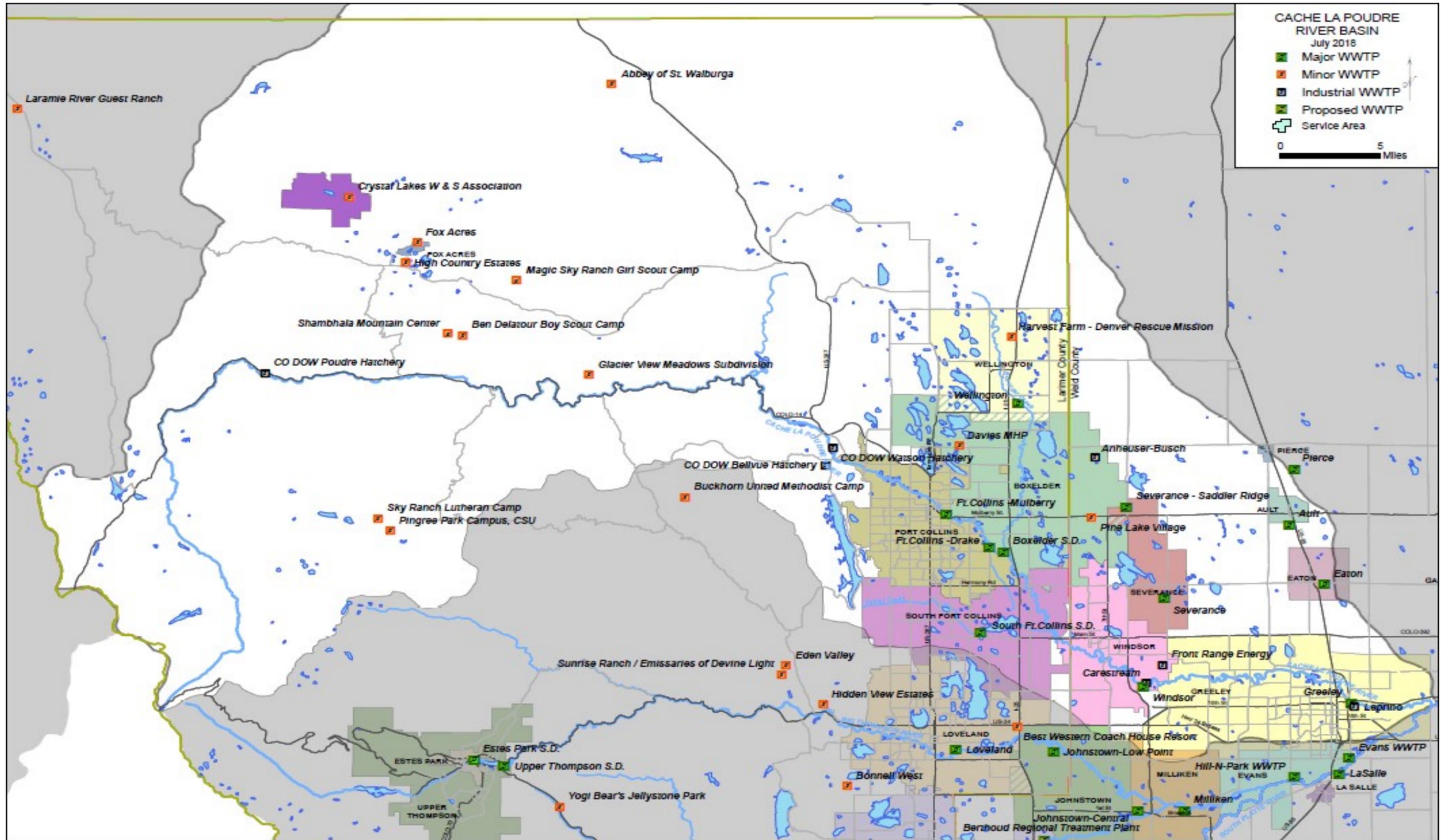


Figure 6 ST. VRAIN RIVER BASIN

5.4 SOUTH PLATTE RIVER BASIN

The South Platte River is the major drainage through Weld County, entering from the south and flowing into Morgan County on the east. In addition to the Cache la Poudre River, Big Thompson River, and St. Vrain Creek, its other significant tributaries are Big Dry Creek, Crow Creek and Lone Tree Creek. Municipal dischargers in this lowest basin of the region include Ft. Lupton, Gilcrest, Hudson, Lochbuie, Platteville, La Salle, Evans, Pierce, Kersey, Keenesburg, and Grover. The South Platte River / Big Dry Creek Basin map following this section highlights both basins and identifies the wastewater treatment facilities located within each.

MAJOR SOURCES

Brighton, City of

Only a portion of the Brighton service area is located within the NFRWQPA planning area. This area has experienced growth over the last several years resulting in the need for Brighton to install a lift station to serve the general area including the Vestas manufacturing facility and associated area. The existing treatment facility for Brighton is located just to the south of the NFRWQPA planning area in Adams County. After previous attempts to develop a regional facility failed, the Metro Wastewater Reclamation District (Metro District) proposed the Northern Treatment Plant (NTP), which will provide regional service, and is located at Weld County Road 2 and Highway 85. In 2009, the Metro District voted to include Brighton as a Member Municipality. This will allow Brighton to utilize the NTP to meet its long-term capacity needs. Brighton began to transition flows to the NTP in 2018.

Evans, City of

Since 1985, the City of Evans has operated its WWTF (prior to this it was operated by the Evans Sanitation District). In 1997, the plant capacity was re-rated from 0.9 to 1.2 mgd. The Hill-N-Park Sanitation District served a residential development area in the western growth area of Evans as well as Country Estates Mobile Home Park. In 2005, the Hill-N-Park Sanitation District was officially dissolved and all assets of the District were assigned to the City of Evans. The City is now fully responsible for all operations and maintenance at the Hill-N-Park WWTF.

Flood waters in 2013 destroyed the east treatment plant (City of Evans WWTF). Temporary treatment was provided by Greeley while planning was accomplished for future improvements. In 2015, a Utility Plan was approved for a new system to be built at the Hill-N-Park site to treat all flows. A lift station will be constructed at the old east site to convey flows from the east side back up to the new Plant. Construction is nearing completion and is expected to go on-line in May of 2018.

The consolidation of the existing Evans Wastewater Treatment Facility (WWTF) and the Hill-n-Park WWTF will result in the design and construction of City of Evans WWTP, force main, and lift station. A new lift station at the Evans WWTF will be constructed to pump wastewater generated in the east portion of the City over to the new City of Evans WWTP (located at the current Hill-n-Park WWTF site). The City of Evans WWTP will consist of a new headworks building, a new Johannesburg secondary biological nutrient removal (BNR) process (with basins and a blower / chemical/ pump station building), secondary clarifiers, and ultra violet (UV) disinfection that will be capable of meeting the requirements of Regulation 85 and CDPHE Policy WPC-DR-1. The plant capacity will be rated at 2.88 mgd.

Ft. Lupton. City of

In 1993, the City has replaced its old plant with a new oxidation ditch secondary treatment plant. The annual average design hydraulic capacity of the plant is 2.75 mgd for domestic sewage plus cooling water from a major industrial contributor which began operations in mid-1994. Approximately 40% of the City's flow originates from commercial and industrial sources. In 2007, an update to the City's Master Plan was completed which included long-range wastewater planning information. In 2014 a Utility Plan update for the system was prepared to plan for future nutrient removal requirements and collection system improvements. Work on the collection system (south lift station) was commenced in 2015. Planning is ongoing, whereas the city plans on applying for PELs in 2019, updating their Utility Plan if conditions warrant, and engineering upgrades to meet Regulation 85 parameters.

The City of Fort Lupton and the City of Brighton entered into an IGA in 2009 regarding a service area boundary amendment conditionally approved by NFRWQPA; however, this IGA has remained in dispute between Ft. Lupton and Brighton ever since and is not recognized by either municipality. The IGA denotes Brighton taking over a portion of Ft. Lupton's service area south of WCR 6, east of WCR 21, north of WCR 2 and meeting back up Brighton's service area boundary on the east border. This is worth noting since NFRWQPA can not approve any site applications within this service area until the two municipalities settle the dispute. Currently, Brighton is a member of the Metro District and transfers wastewater to the Metro Wastewater Reclamation District's Northern Treatment Plant.

Gilcrest. Town of

The Town of Gilcrest provides sewer service to approximately 1,100 residents. Discharge from the facility is pumped through an 18,000 foot six inch outfall that is partially by force main, and the remainder flows by gravity to the South Platte River. The outfall and other plant improvements were constructed in 1987 at a cost of \$169,000. In 2005, the Town completed improvements to the facility which included the installation of liners in the aeration lagoons and polishing pond. In 2009, the Town made significant improvements to the collection system by replacing a sewer main and manholes following a collapse. These improvements reduced the amount of I/I to the plant, thus reducing the average flows. The capacity of the plant should be adequate to address the demands of the Town for the foreseeable future. Gilcrest had conversations with Platteville about consolidation, but no IGA was ever signed. A site application was approved in 2015 for "In Kind" improvements to lagoon system including replacement of headworks facilities, lagoon aeration blower, lagoon liners chlorination basin and effluent pumping station.

Hudson. Town of

The Hudson wastewater lagoon facility was acquired by the Town of Hudson from the Hudson Sanitation District in 1997. In 2007, the Town submitted a Utility Plan for consideration to NFRWQPA, which recommends the construction of a new mechanical facility, which was approved by NFRWQPA in July 2008. In 2010, the Town completed construction of the new facility located north of the Town. In 2012, the Town completed construction of a lift station and sewer line that would deliver existing flows from the former lagoon site to the mechanical facility. As a result, all flows are now being treated at the new mechanical facility, and the lagoon facility has been decommissioned. In 2014, the Town amended their service area to include a parcel on the north east side of town. This addition is east of the treatment plant. The Town is anticipating that the local prison will re-open in the future (possibly 2020) which will impact flows.

Keenesburg. Town of

The Town of Keenesburg's WWTF was originally constructed in 1955 as a two-cell, non-aerated pond facility which discharged to an unnamed, intermittent tributary of Lost Creek. When the Town's CDPS Discharge Permit # CO-0041254 was scheduled for renewal in 2003, new water quality standards, including ammonia limits, were

to be included. The town requested from the Water Quality Control Commission, and was granted, a “three-by” stream standard (pH, fecal coliform and dissolved oxygen) for the pending new permit. The receiving waters were reclassified as not supporting aquatic life, and the effluent parameters were modified as such.

In 2010, the Town completed a Utility Plan. The plan outlined recommended improvements to the current lagoon system to provide additional capacity for the Town’s growing population. These improvements were completed in April, 2011.

The new improvements included increasing the size of the Fermentation cell, a new intermediate lift station, two new aeration cells having a ten-foot depth, and a new polishing pond with a ten-foot depth. Piping at the lift station was designed to allow use of a new flow equalization basin. Incorporating flow equalization eliminated the need for a standby power source and the need to add chlorination facilities for peak flows. In 2014, the Town expanded the Service area to include a parcel on the north East side of town where development was slated to occur. The Service Area was increased by 94 acres. As of April 2018, the Weld County School District RE-3J has signed an IGA with the Town of Keenesburg for wastewater service. This was approved by NFRWQPA within Keenesburg’s 2018 Utility Plan and Site Application for a lift Station and interceptor sewer.

Kersey, Town of

In 2006, the Town completed construction of a new Sequencing Batch Reactor activated sludge facility. This new facility will provide adequate capacity for the Town well into the future. Including influent flow monitoring, grit removal, Sequencing Batch Reactor activated sludge process, UV disinfection.

La Salle, Town of

LaSalle’s wastewater treatment facility consists of a large aerated 6.64 acre primary cell and a smaller aerated 0.76 acre secondary cell. Discharge from the secondary cell is chlorinated then dechlorinated before discharge to the South Platte River. New influent and effluent recording equipment for the system was installed in 2014.

Lochbuie, Town of

The Town of Lochbuie is located in the Beebe Draw drainage basin just north of the Weld-Adams County line. The treatment facility currently serves the town and portions of Bromley Park in the City of Brighton. The Lochbuie wastewater treatment facility has been planned for construction in several phases, with an ultimate capacity of 10.0 mgd. The Town has expanded the plant to 2.0 mgd. This expansion: added an enclosed headworks building that included a mechanical screen and Partial flume, and permanent influent pumping station; additional aeration basin and aerobic digester capacity; and small lab / office building. Future Phase 2 expansion will increase the plant capacity to 5.0 mgd with plant components to include primary clarification, additional aeration basins, and anaerobic sludge digestion. In 2018 the Town will be adding a larger influent wet well, influent pumping station and grit removal along with adding sludge dewatering to one of the existing buildings.

Metro Wastewater Reclamation District (MWRD)

A regional wastewater treatment facility serving the northeastern portion of the Denver metropolitan area was acknowledged as part of the area wide water quality management plans for a number of years. The Metro District has completed construction of a new wastewater treatment facility, the Northern Treatment Plant (NTP), to serve as this regional facility. The NTP is located at 61 Baseline Road, Brighton, and will be capable of providing service to portions of the Cities of Brighton, Thornton, and Aurora; South Adams County Water and Sanitation District (South Adams County), the City and County of Denver, the Adams County Regional Park, Hi-Land Acres Water and Sanitation District, and Todd Creek Metropolitan District. In 2012, the site was annexed into the City of Brighton.

The NTP is expected to reduce flows at the Metro District’s existing Robert W. Hite Treatment Facility

(RWHTF) by approximately 5 mgd in 2016. Based on Service Contracts between the Metro District and Brighton and South Adams County, the NTP will reduce flows to the existing South Adams County Williams- Monaco Wastewater Treatment Plant (WWTP) and the Brighton WWTP, and ultimately replace the Brighton WWTP. The NTP will also allow the potential decommissioning of up to seven wastewater lift stations. Construction on the facility began in 2012 and startup of the facility occurred in 2016.

In 2010, NFRWQPA approved a utility plan submitted by the Metro District supporting the NTP. NFRWQPA also recommended approval of the Site Application. Approval was received from the Colorado Department of Public Health and Environment (CDPHE) in 2011. The Site Application also included an Effluent Pump-Back (EPB) System that would be needed in order to mitigate the impact of moving the effluent discharge point for a portion of the City of Thornton's (Thornton) effluent from the RWHTF to the NTP site. An alternative that would eliminate the need for the EPB System is an effluent trade between the City of Aurora (Aurora) and Thornton. The Metro District, Thornton, and the City of Aurora sought Water Court approval for this trade, and in December 2012, the final decree for the trade was issued allowing the Metro District to cease design efforts on the EPB System.

In addition, an interceptor (South Platte Interceptor) is necessary to convey wastewater to the NTP. The Site Application for the Metro District's 7-mile South Platte Interceptor (SPI) was approved by CDPHE in 2012. Construction of the SPI commenced in 2013 and was completed in 2015.

Pierce. Town of

Pierce is a town of approximately 920 residents, located in northeastern Colorado. In 2007, the NFRWQPA recommended for approval of site application for a new sequencing batch reactor facility. The new facility, completed in 2009, has a design flow capacity of 0.18 mgd and an organic capacity of 495 lbs/day BOD₅.

Platteville. Town of

The Town discharged to the South Platte River via a 4,700-foot outfall line. Flows discharged to the river are reduced due to evaporation. The Town modified the plant in 1992-93 by constructing a wetland treatment system in a portion of lagoon #3 to reduce algae growth and improve treatment efficiency. The remainder of lagoon #3 was abandoned.

A change in classification of the receiving water to Class 1a Recreation limited bacteria discharge. Total ammonia limits were also added. The Town completed a Utility Plan in 2010 which outlines what approach the Town will take to address future needs.

In 2011, St. Vrain Sanitation District and the Town of Platteville developed an IGA to address wastewater service within sections 25, 26, 36, and the east half of sections 27 and 35. This IGA maintains the area within the St. Vrain Sanitation District WUSA boundary; however, it allows for the boundary to be adjusted if the criteria of the IGA are met. In May 2012, the Town received approval from NFRWQPA for a plan amendment which acknowledged this shared area between the Town and the District, as well as expanded the Town's overall WUSA boundary.

Colorado Water & Sanitation Metropolitan District

The Resource Colorado Water & Sanitation Metropolitan District (RCWSMD) was formed in Weld County in 2004 to provide water, wastewater, and reuse service to the Pioneer Community Development in southern Weld County. The NFRWQPA has been informed by the District that they have entered an "Inactive" status and have no current plans to construct facilities until such time as the board of directors decided to become "active" again.

MINOR SOURCES

Galeton Water and Sanitation District

The Galeton Water and Sanitation District was created in 1990 to provide sewer service to the Town of Galeton, which was served by septic-leach field systems. The population served initially was 120 with a facility capacity of 185-person equivalents. The sewer system and treatment plant construction were completed in 1992. This facility, however, has not been in compliance with the issued permit. A new permit was issued for the facility in 2007 which includes a compliance schedule that specifies timetables for the completion of planning and construction of either an upgrade to the current facility or the building of a new facility. In 2009, the District received Site Application approval for a new sequencing batch reactor facility. The District has not been able to secure funding for the treatment plant improvements, and therefore no construction has taken place. RG & Associates a consulting firm has been retained by Galeton (2014) for the purpose of getting the system into compliance and assisting with funding for upgrading the WWTP. In 2017, Galeton received Utility Plan and Site Application approval from NFRWQPA for a new plant. Currently RG Associates is still working with the Town and PELs are going to be requested in 2019.

Grover, Town of

The Town of Grover installed a wastewater system in 1974, which predated the Colorado Water Quality Control Act (Act) and related regulations, and therefore had no existing discharge permit. The Town submitted a Site Application for a new treatment facility which received CDPHE approval in 2010. The Town recently completed the installation of a new IFAS activated sludge system which went on online in April of 2013.

Hemingway Lodge at Eagles Nest

The Hemingway Lodge at Eagles Nest is a corporate conference center owned and operated by Equus Farms, Inc. in eastern Weld County. The facility was first constructed in 1993 and included a main lodge with 13 bedrooms, plus a three-bedroom caretaker's house. A six-bedroom addition was constructed in 1997. A septic system consisting of two septic tanks and a lift station plus a 1,395 square foot leach field was installed with the original construction in 1993. A 1,116 square foot leach field plus a third septic tank (1,500 gallons) and a 500 gallon lift station were installed at the time of the six-bedroom addition in 1997.

Prairie School District

The Prairie School District is located near the Town of New Raymer, CO.

Wastewater Treatment processes include: preliminary treatment-grease trap specific to kitchen services for the removal of fats, oils, and grease, primary treatment septic tanks for solids and organics removal, secondary and nutrient treatment-individual fixed film cells for treatment of organic material, nitrification, and denitrification, with provisions for chemical addition to support the denitrification process. Discharge to land treatment and monitored at end of pipe prior to land treatment site and groundwater monitoring wells.

New Vision Mobile Home Community Wastewater Treatment Facility (Previously Rocky Mountain Vista Mobile Home Park)

The New Vision Mobile Home Community WWTF serves the New Vision Mobile Home Community. The property was previously called the Rocky Mountain Vista Mobile Home Park. The New Vision Mobile Home Community has 54 useable mobile home sites and a house. In 2012, the Water Quality Control Division (WQCD) of the Colorado Department of Public Health and Environment issued Site Approval # ES1041923 for a new sequencing Batch Reactor (SBR) WWTF to replace the failing system of septic tanks and absorption/infiltration fields. In January 2013 the property was purchased by a new owner who installed a new

advanced SBR facility. The new SBR facility currently discharges to groundwater under a General Permit issued in November 2013 (Permit Certification No: COX-631056). The rated hydraulic capacity is 0.0151 MGD and the organic capacity is 44 lbs/day (as BOD₅). The facility is currently in compliance with the Permit Certification limits and conditions.

Sylmar Manor Mobile Home Park

Sylmar Manor Mobile Home Park was located in southern Weld County just off Highway 85 and Weld County Road 2. The property was purchased by Metro Wastewater Reclamation District as part of the site for the Northern Treatment facility, and the treatment plant previously serving the mobile home park has now been decommissioned.

Weld County School District RE-3J

The Weld County School District RE-3J treatment facility provides service to the Weld Central Middle school and High School. The school is located just south of Keenesburg off Highway 52. The schools will eventually go to the Town of Keenesburg for wastewater service. As of April 2018, the Weld County School District RE-3J has signed an IGA for the Town of Keenesburg for wastewater service. This was approved by NFRWQPA within Keenesburg's 2018 Utility Plan and a Site Application for a lift station and interceptor sewer is currently pending approval by NFRWQPA.

INDUSTRIAL

Opal Foods

Opal Foods, formerly known as Boulder Valley Poultry, formerly known as Moark Hatcheries, LLC, is defined as a shell egg processing plant. The facility is located in south east Weld County near the Town of Roggen. Now under the Agricultural program.

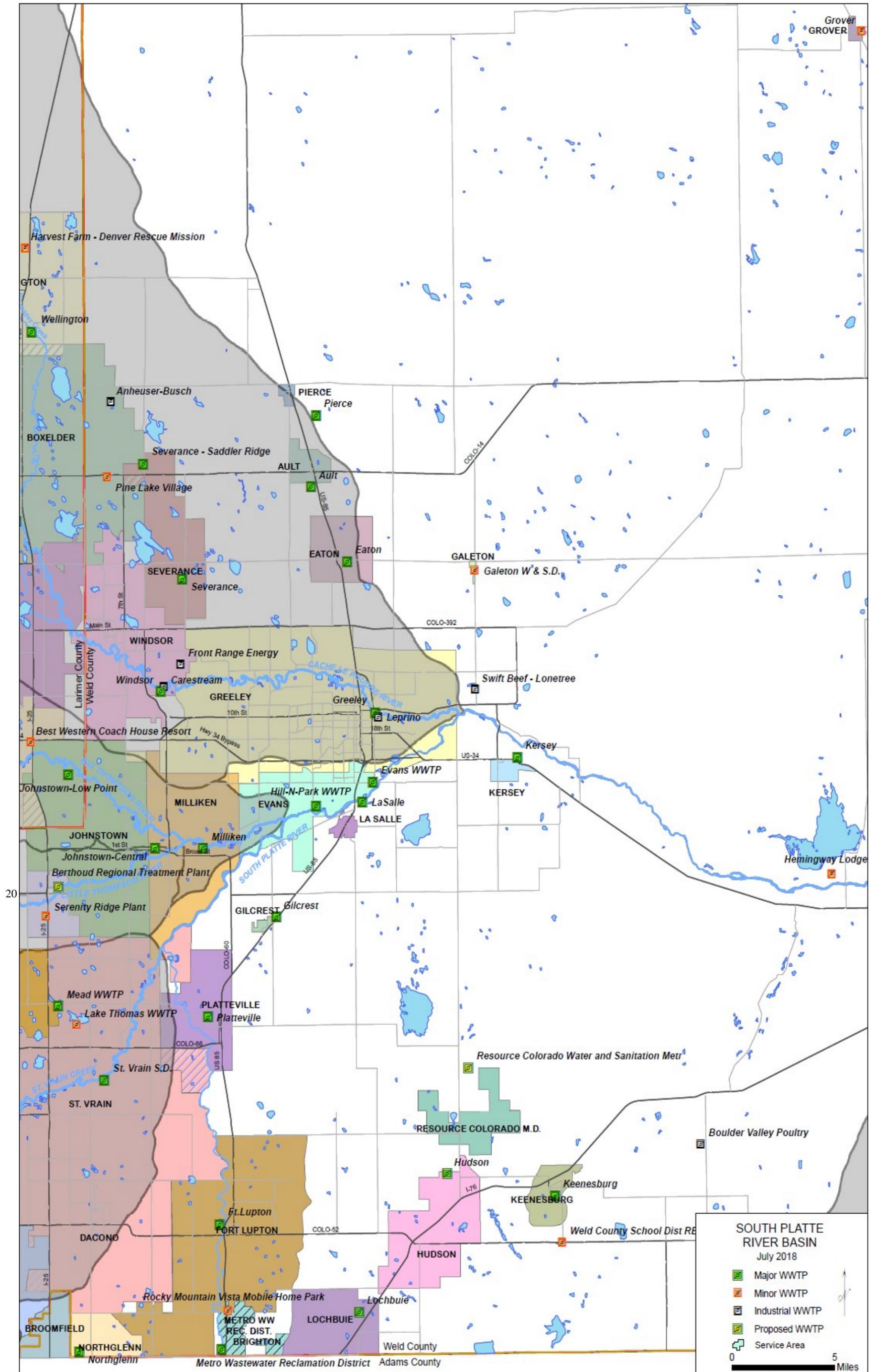


Figure 7 SOUTH PLATTE RIVER BASIN

5.5 BIG DRY CREEK RIVER BASIN

Big Dry Creek flows north from the Broomfield area into Weld County and into the South Platte River just south of Ft. Lupton. The only municipal treatment plant in the Weld County portion of this basin is that of Northglenn. The South Platte River / Big Dry Creek Basin map following this section highlights both basins and identifies the wastewater treatment facilities located within each.

MAJOR SOURCES

City and County of Broomfield

The City and County of Broomfield is the designated wastewater management and operating agency for the City and County of Broomfield's urban growth area (UGA) and jurisdiction. Broomfield's environmental vision is to be a leader in implementing environmental stewardship policies that help to create a desirable and sustainable community now and for future generations.

The role of government is to protect the public health, safety, and welfare. Increasingly, the realization that we have finite natural resources has deepened the discussion about how we live now, and how what we do impacts future generations. While debate about global and national environmental issues brings much attention, on a regional and local scale people express concern over the loss of open space, the loss of habitat for a variety of plant and animal species, and the impacts of air and water pollution. Residents of Broomfield, like many other Coloradans, value the natural environment as a primary factor that contributes to their quality of life. Members of our community believe that it is "very important" that Broomfield "encourage(s) development that enhances air and water quality" and "regulates the use of environmentally sensitive lands." The inclusion of this new environmental stewardship element within the 2005 Comprehensive Plan is to help guide Broomfield's stewardship of its environmental resources.

Historically, Broomfield had developed a strong record of environmental compliance with national, state, and regional environmental laws and policies. Broomfield prides itself in its compliance efforts. Broomfield is active in national and state pollution prevention programs, storm water and air quality programs, watershed protection efforts, and the monitoring of Rocky Flats remediation efforts. Broomfield has developed local recycling and environmental education programs to promote environmental stewardship among its citizens. Since Broomfield became a County in 2001, additional resources have been allocated to County functions, thus allowing the community to become more proactive in environmental health efforts aimed at pollution prevention, pollution monitoring, and hazardous chemical clean-up. Efforts also are under way to create a "wellness collaboration" promoting "healthy community initiatives" and an overall active community life for Broomfield residents and employees.

Broomfield is a suburban community located along US 36 Denver-Boulder Turnpike and consists of 33.6 square miles. The City and County's jurisdiction traverses the north Denver metropolitan area from the southwest boundary of Indiana Street and approximately 106th avenue moving northeast across I-25 and to the northeast boundary of Weld County roads 8 and 11.

The area now known as Broomfield was founded in the 1880's shortly after the railroad came through the area. By the early 1920's a small downtown had evolved, but until the 1950's only 100 people lived in the area. In 1955, construction began on the first filing of Broomfield Heights; the first modern planned new community in

the state. In 1961, the Broomfield Heights community voted to incorporate into a city and to begin providing municipal services.

In 1961, the City was located wholly within Boulder County; but in 1971 the corporate limits were expanded to include portions of Jefferson and Adams Counties, and in 1990 areas lying within Weld County were added to the City. At the November 3, 1998, statewide election, Colorado voters approved an amendment to the state constitution creating the City & County of Broomfield. On November 15, 2001, all areas within the City of Broomfield were detached from the other four counties – Adams, Boulder, Jefferson, and Weld – and the newly created entity became the City & County of Broomfield.

Historically, Broomfield's population growth has fluctuated with the up and down cycles of the larger regional economy, but in more recent years has seen higher growth rates as compared with the region as a whole. Broomfield has estimated that the 2040 population will be 97,034 people.

It is important to note that the estimated population projection of approximately 97,034 people is simply that, a projection. It is not intended to identify or establish a population cap or policy for Broomfield. Instead, the buildout population projection number provides an analytical basis for other critical planning efforts that include the City and County of Broomfield's Long-Range Financial Plan and numerous other service provision plans.

The City & County of Broomfield provides wastewater treatment and management services through its municipal wastewater reclamation facility located at 2985 West 124th Avenue. As outlined in the City and County of Broomfield's 2011 updated Utility Plan, approved by NFRWQPA, Broomfield has moved forward with the completion of two of the three-phase expansion of the Broomfield Wastewater Reclamation Facility to include biological nutrient removal, solids handling, and wastewater reuse.

The construction of the first phase of the expansion and upgrade was completed in January 2005. Phase 2 construction was completed in November 2010. The current design capacity identified in Broomfield's CPDES discharge permit is 12.0 mgd and 23,018 lbs. BOD₅ per day for organic loading (30 day average).

The first phase of the project expanded the wastewater treatment capacity to 8.0 mgd and added nitrification, de-nitrification, and phosphorus treatment, solids dewatering processes, and 6 mgd wastewater reuse treatment and pumping processes. The second phase increased capacity to 12.0 mgd and added a new screening building, new grit removal, additional nitrification, de-nitrification, phosphorus treatment, secondary clarification, and UV disinfection capacity. The City and County of Broomfield has developed a 3,200 acre-feet per year reuse system utilizing Broomfield's western slope water in the effluent from the wastewater reclamation treatment plant.

Phase three (3) would ultimately expand the facility to a projected 16 mgd for hydraulic flow (30 day average) and 30,691 lbs./day BOD₅ for organic loading (30 day average). The current site location has the available land area to meet the space requirements necessary for the completion of all three phases.

The City and County of Broomfield's biosolids management program consists of beneficial recycling methods. The current process consists of anaerobic digestion, on-site storage, solids dewatering, and subsurface application of the dried digested biosolids on agricultural property. To ensure proper usage of the biosolids, the volume of each application is based on agronomic rates and crop rotations.

In 1996, to ensure current and future land availability for the beneficial reuse of this nutrient-rich organic by-product of the wastewater treatment process, the City and County of Broomfield purchased a 1400-acre working farm northeast of Gilcrest, Colorado. The farm consists of six parcels located between WCR 44 and 42 (north to south) and WCR 45 and 53 (west to east). The farm serves two purposes. First, it continues to be an active crop-producing site where it is jointly managed by Broomfield and the local area farmer who leases out the cropland. Secondly, it provides a secure location for the beneficial reuse of the biosolids produced by Broomfield. The beneficial reuse of biosolids provides an environmental and economic benefit to both the citizens of Broomfield and the agriculture community, which includes the reduction of commercial fertilizer, improved physical properties of the soils, which in turn help produce healthier crops and enhanced soil conservation measures.

In February of 2010, the City and County of Broomfield was issued the sixth renewal of the CDPES permit. The renewed permit became effective on April 1, 2010, and expired on March 31, 2015. Currently, CDPES has administratively extended Broomfield's discharge permit until such time as the new discharge permit is prepared. As a result of the Water Quality Control Commission proceedings to adopt the Classification and Numeric Standards for the South Platte Basin, the renewed permit resulted in several new water quality stream standards being added to the discharge limitations. Those parameters added included: effluent temperature, more restrictive total ammonia, seasonal selenium limitations, and boron.

After the Water Quality Control Commission (WQCC) Regulation 85 was adopted in 2012, Broomfield completed a process optimization study to investigate viable treatment options that could meet the more stringent discharge limits associated with WQCC Regulation 85. The study concluded that Broomfield would be able to meet the WQCC Regulation 85 nutrient standards through additional capital improvements. The Wastewater Treatment Facility Nutrient Treatment Enhancement project began construction in November 2014 and was completed in April 2016. The improvements included replacing the existing aeration blowers with variable speed turbo blowers, providing for centrate equalization and primary effluent bypass line to provide a source of carbon to support the denitrification treatment process.

In 2011, the City and County of Broomfield completed the 2011 Update to the Wastewater Utility Plan. This document was supplemented by the 2012 North Park Basin Wastewater Service Area Plan. Both of these documents were reviewed and approved by NFRWQPA in July 2012. In 2014, the City and County implemented BNR enhancements to the treatment process which did not impact design capacity.

Northglenn, City of

The Northglenn WWTF is located at the intersection WCR 2 and 11. The existing facility consists of preliminary treatment (Headworks) followed by a Biological Nutrient Removal (BNR) facility with discharge through Bull Reservoir to Bull Canal, Thompson Ditch, or Big Dry Creek. The 4,200 acre foot Bull Reservoir facilitates Northglenn's water management exchange program with Farmers Reservoir and Irrigation Company (FRICO).

The rated capacity of the existing facility is 6.5 mgd. This capacity is above the level required by the City at the projected buildout, and therefore the additional capacity is available to the Cities of Broomfield and Thornton, unincorporated Weld County, and others within the vicinity of the treatment plant who may need wastewater treatment service.

The Northglenn wastewater utility service area (WUSA) includes two separate geographical areas. The Southern Service Area consists of the area within the Northglenn corporate boundaries and three enclaves within the City

of Thornton adjacent to the southern boundary of Northglenn. The Northern Service Area consists of Section 36 (also incorporated) and adjacent land located in Weld County east of the Northglenn WWTP. Any new growth in this area is currently limited by an IGA between Northglenn and Thornton that was decreed in 1993.

In the Lower South Platte Study prepared by the DRCOG, the Northglenn WWTF was recommended as the most cost-effective solution for providing wastewater treatment service for much of the Big Dry Creek Basin north of 136th Avenue in Adams County. Additionally, areas in Weld County and the City and County of Broomfield adjacent to the WWTF can be reasonably served by the Northglenn plant.

The City of Northglenn has entered into an IGA with the City of Thornton and Metro Wastewater Reclamation District, defining roles for the service area if the City of Thornton annexes into Weld County. This IGA defines management and operating status of this area.

Westminster and Broomfield both operate WWTFs that discharge to Big Dry Creek upstream of the Northglenn facility. Water quality in Big Dry Creek generally meets the standards for dissolved oxygen and pH, while the fecal coliform standard is exceeded at times. Data indicates this is not from permitted treatment plants. Additional effluent discharged to the creek from the Northglenn plant should not have an adverse effect on the stream's quality as long as discharge permit effluent limits are met.

Monitoring is performed by Northglenn, Broomfield, and Westminster. DRCOG began monitoring the creek for D.O and no impacts were identified with full utilization of the Northglenn facility at 6.5 mgd. Today the Big Dry Creek Watershed Association continues further monitoring on the creek. Additional modeling for un-ionized ammonia has also been conducted. This modeling has been incorporated into Broomfield's, Westminster's, and Northglenn's permits. No impacts to water rights are expected if Northglenn discharges treated wastewater to Big Dry Creek.

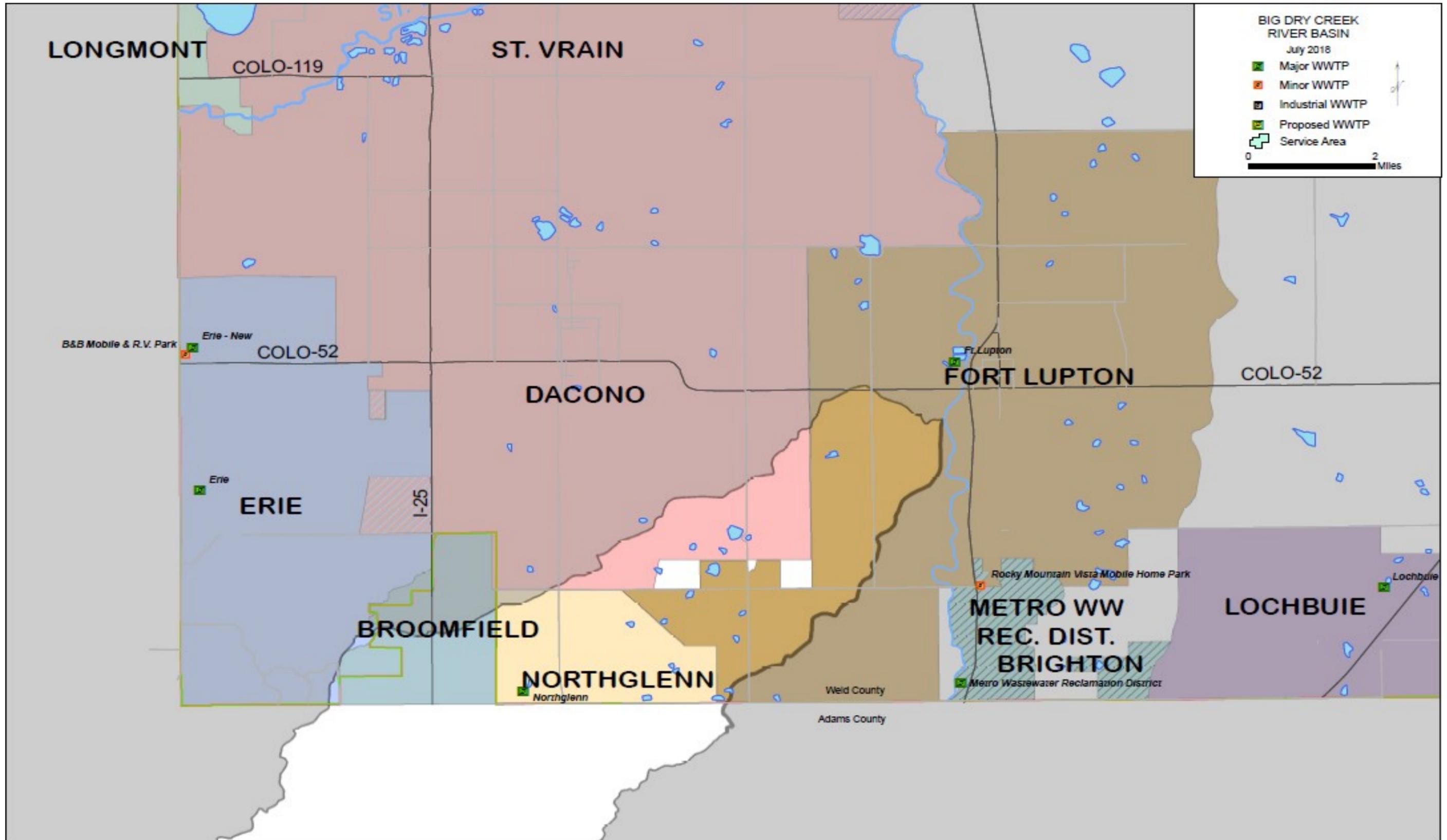


Figure 8 BIG DRY CREEK BASIN

6. DATA SHEETS

6.1 MAJOR FACILITIES

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Ault*

Utility Plan Approved: June-2014

CDPS Permit #: COG-589140

Permit Expires: September 2018

Description of Treatment Facilities: Influent screening, Grit removal, SBNR (BIOLAC System), Clarifiers, UV disinfection.

Treatment Facility Location: NW ¼, SW ¼, Section 13, T7N, R66W

Discharge Location: Eaton Draw of Segment COSCP13a

Stream Segment Classification:

COSPCP13a - Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population: (revisions from Utility Plan page 10)

Existing	2020	2025	2030	2035
1,750	1,830	1,900	1,980	2,130

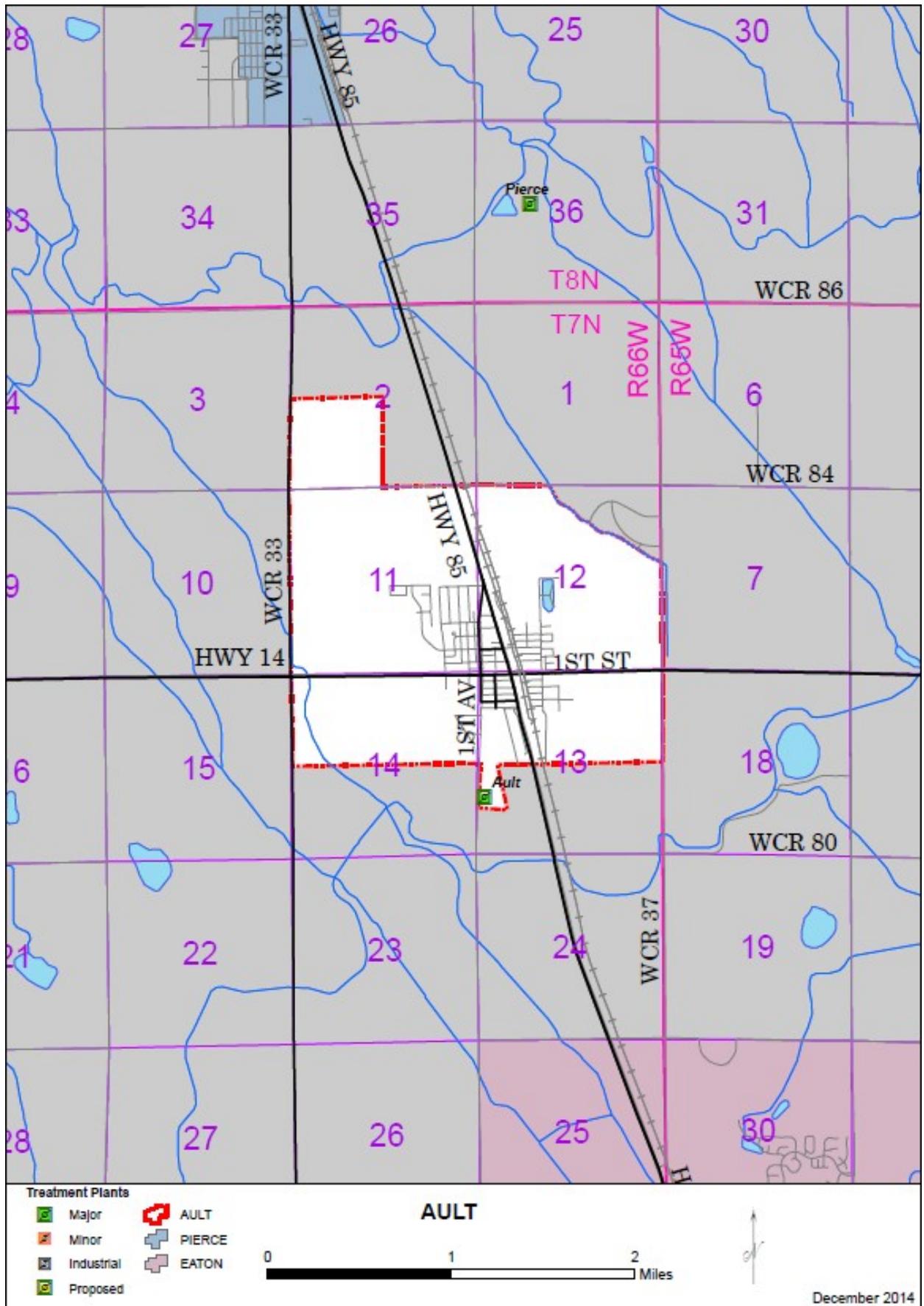
Capacities:

	Design Capacity New Sys	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.150	0.089	.093	.100	.120	.142	2030	2035
Organic (lbs./day BOD ₅)	625	223	232	250	300	355		

Biosolids treatment and disposal: Extended aerobic digestion with periodic haul off by a contract hauler.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG589140.

Estimated 5-year construction needs: None



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Berthoud*

CDPS Permit #: Main: CO-0046663

Permit Expires: 8/31/2014

CDPS Permit #: Serenity Ridge: CO-0047007

Permit Expires: Terminated 8/1/2018

CDPS Permit #: Berthoud Regional CO0048998

Permit Expires: 4/30/2021

Description of Treatment Facilities: Include activities of Site Application 2016 for Heron Lakes Lift Station?? The Heron Lakes Lift Station (Site Location Approval No. ES.16.SA.02704) was approved November 21, 2016 and constructed was complete in June 2018 and is ready to accept flows.

Main facility: screening, grit removal, lift station, activated sludge aeration basins, clarifies, and UV disinfection with an aerobic digester.

Serenity Ridge facility: sequencing batch reactor activated sludge process, chlorination, and dechlorination.

Regional facility: manual influent screening, Sequencing Batch Reactor process for biological nitrogen removal, chemical phosphorus removal, ultraviolet light disinfection, and sludge holding tanks

Treatment Facilities Location: Main: SW ¼, Section 19, T4N, R68W.

Serenity Ridge: N ½, NW ¼, Section 27, T4N, R68W.

Regional: SW ¼ of SE ¼ of S14 T4N R68W

Discharge Location: Main: COSPBT09 Little Thompson River Segment 09, SW ¼, Section 19, T4N, R68W.

Serenity Ridge: COSPBT10 Little Thompson River Segment 10, SE ¼, SE ¼, Section 22, T4N,

R68W. Regional: COSPBT09 Little Thompson River, 40.30798° N, 104.97050° W

Stream Segment Classification:

COSPBT09- Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

COSPBT10 - Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E

Service Area Population:

Existing	2020	2025	2030	2035
6,400	14,500	19,400	24,700	26,500

Capacities:

		Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	Main Plant	2.0	0.71	1.5	1.9	2.5	2.9	2020	2022
	Serenity Ridge	0.022	N/A	*	*	*	*	*	*
	Regional Plant	0.099	0.007	0.01	0.05	0.08			

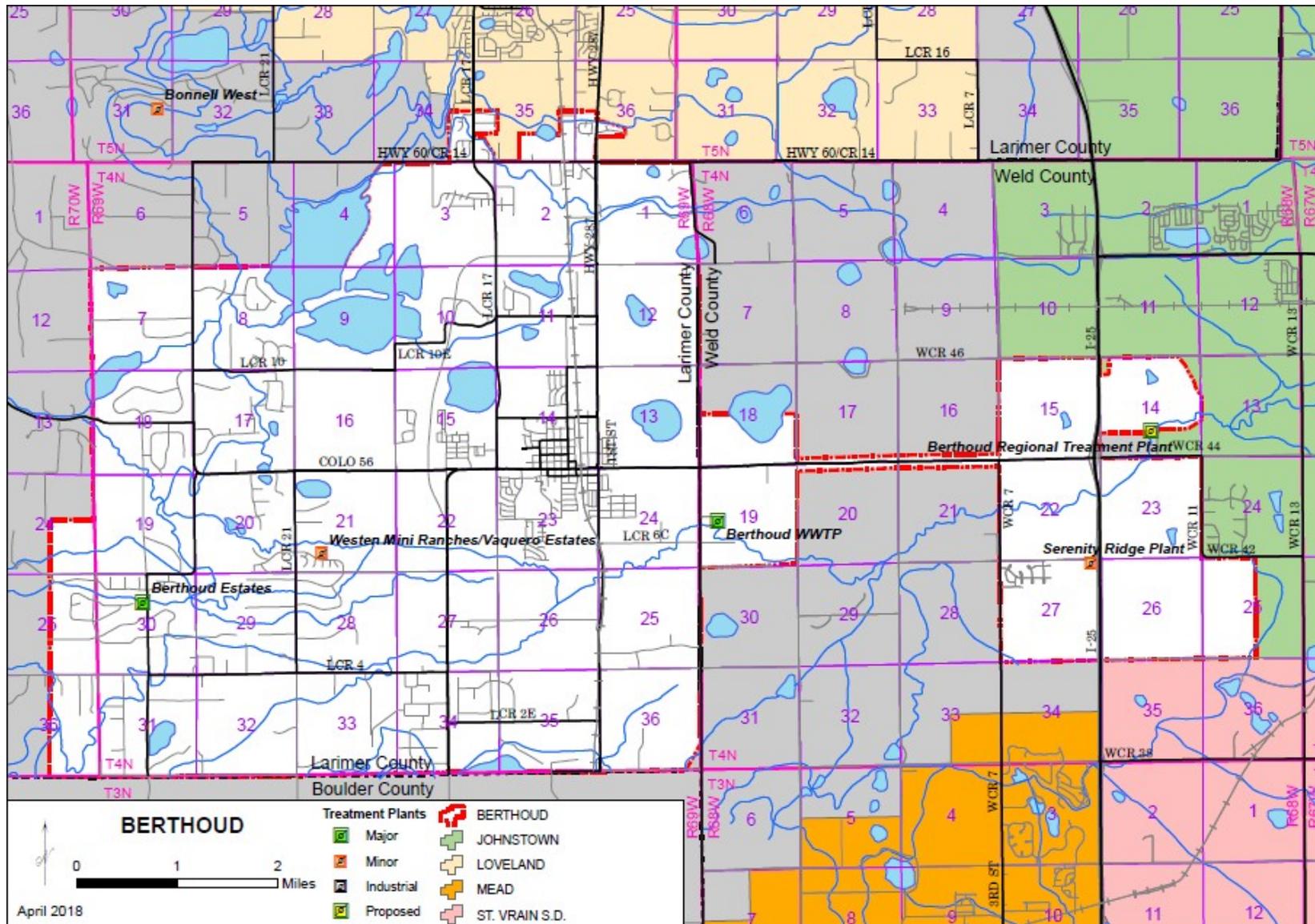
Organic (lbs./day BOD ₅)	Main Plant	3,900	1750	2,900	3,700	4,900	5,500	2020	2022
	Regional Plant	52	23	*	*	*	*	*	*

* The Serenity Ridge plant was approved with the condition that it be abandoned when the Berthoud Regional East WWTF is built and on line. The Regional WWTP came on line in December 2016 and treat all flows from Serenity Ridge development and the new Loves fuel stop which should open August 2018.

Biosolids treatment and disposal: Aerobic digestion and land application

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0046663 for the Main facility and Permit #CO-0047007 and Permit # CO-0048998 for Regional facility

Estimated 5-year construction needs: The new Regional facility may need additional expansion as flow increases from development in the area.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Berthoud Estates*

Utility Plan Approved: September-2014

CDPS Permit #: COG-589097

Permit Expires: 9-30-2018

Description of Treatment Facilities: The facility provides treatment to the fully build out Berthoud Estates and Foothills Estates subdivisions only. A new activated sludge facility utilizing SBR technology was constructed in 2017.

Treatment Facility Location: NW ¼, Section 30, T4N, R69W

Discharge Location: COSPBT10, Dry Creek which is tributary to Little Thompson River Segment 10, NW ¼, Section 30, T4N, R69W.

Stream Segment Classification:

COSPBT10 - Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E

Service Area Population:

Existing	2020	2025	2030	2035
439	Built out	Built out	Built out	Built out

Capacities:

	Design Capacity (New)	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.052	0.053	*	*	*	*	2001	NA
Organic (lbs/day)	193	168.2	*	*	*	*	NA	NA

* Both subdivisions are completely built out so population and loading are not expected to change.

Biosolids treatment and disposal: The Association holds an annual maintenance contract with a local waste removal contractor and waste Biosolids will be hauled by contact hauler offsite as needed.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-589097. Requirements for the new facility are outlined in the PELS provided with Site Application #ES14SA01055.

Estimated 5-year construction needs: None

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Boxelder Sanitation District*

Utility Plan Approved: July-2010

CDPS Permit #: CO-0020478

Permit Expires: April 30, 2021

Description of Treatment Facilities. Completed in 2013, the new facility includes an influent lift station, screening and grit removal facilities, extended aeration using two oxidation ditch(s) with a single anaerobic selector basin, two secondary clarifiers, WAS recycle system, ultraviolet light (UV) disinfection, and aerobic sludge holding ponds.

Treatment Facility Location: NE ¼, Section 28, T7N, R68W

Discharge Location: COSPCP13b, Boxelder Creek just above the confluence with the Cache la Poudre River, NE ¼, Section 28, T7N, R68W.

Stream Segment Classification:

COSPCP13b – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation N (9/16 - 5/14), Recreation P (5/15 – 9/15)

Service Area Population:

Existing	2020	2025	2030	2035
19,584	20,979	24,916	29,539	35,147

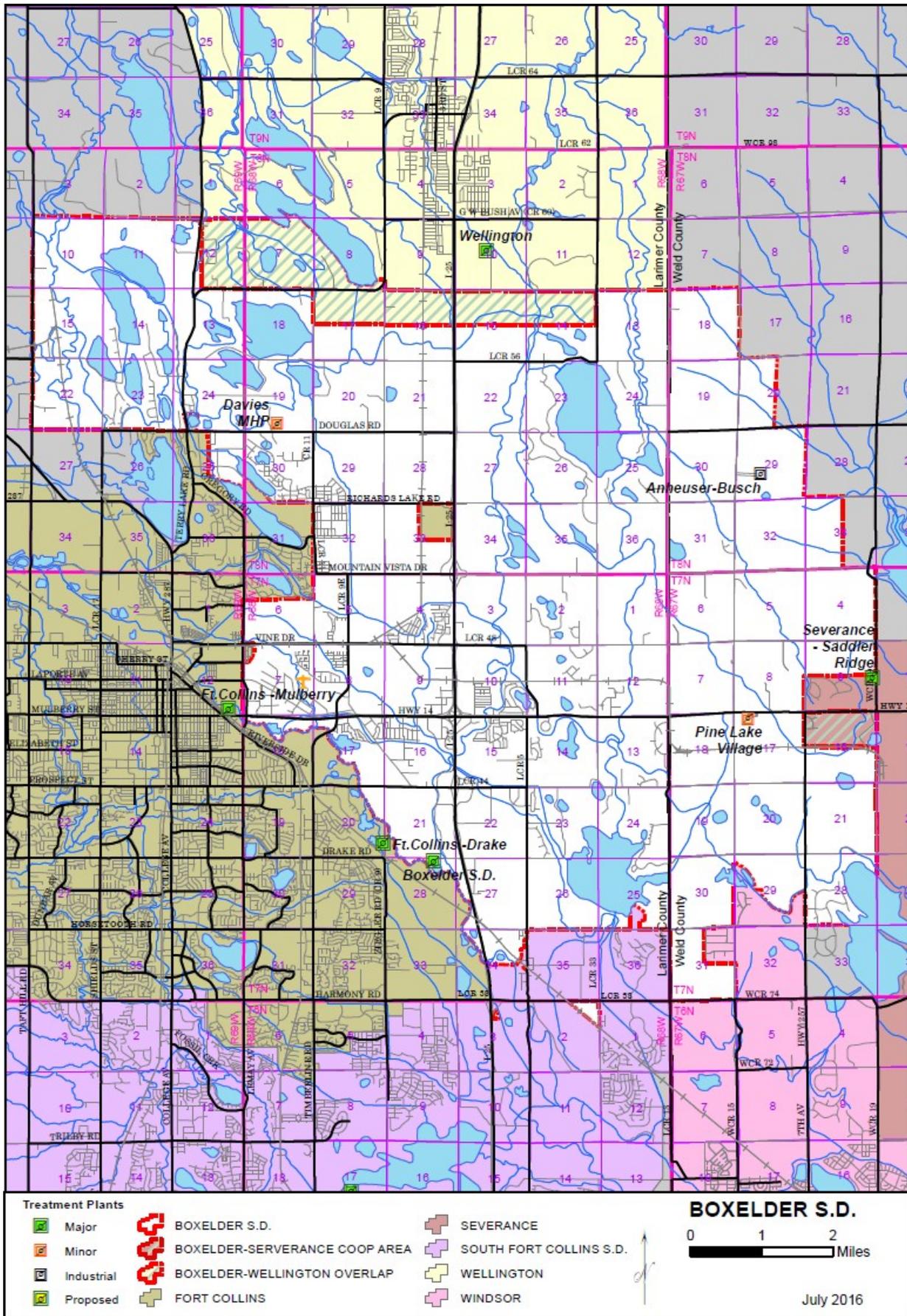
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	3.0	2.9	3.2	3.7	4.4	5.1	2017	2018
Organic (lbs./day BOD ₅)	3,881	5,231	6,003	7,129	8,467	10,056	2016	2018

Biosolids treatment and disposal: The original primary, aerated ponds will be utilized as sludge holding ponds for biosolids storage. Bi-annually, the District will remove stabilized solids, dewater and land apply the biosolids using a private contractor.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0020478.

Estimated 5-year construction needs: Treatment Plant expansion project will start construction in 2019. Expansion required to accommodate increased growth in the District. Other capital projects include annual sewer rehabilitation, pump station upgrades and minor capital projects.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *City of Brighton*

Utility Plan Approved: Amendment Conditional Approval April-2009

CDPS Permit #: CO0021547

Permit Expires: 2/28/2021

Description of Treatment Facilities: (Outside NFRWQPA Planning Area) 3.0 MGD Activated Sludge Treatment Facility. Screening, grit removal, primary clarification, aeration basin, secondary clarification, contact basin, chlorination/dechlorination. Aerobic digestion, centrifuge dewatering.

Treatment Facility Location: (Outside NFRWQPA Planning Area) only the northern portion of the City's collection system lies within the NFRWQPA boundaries.

Discharge Location: (Outside NFRWQPA Planning Area) COSPUS15, South Platte River Segment 15.

Stream Segment Classification: COSPUS15 – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
39,211	41,586	45,702	49,819	53,935

Capacities:

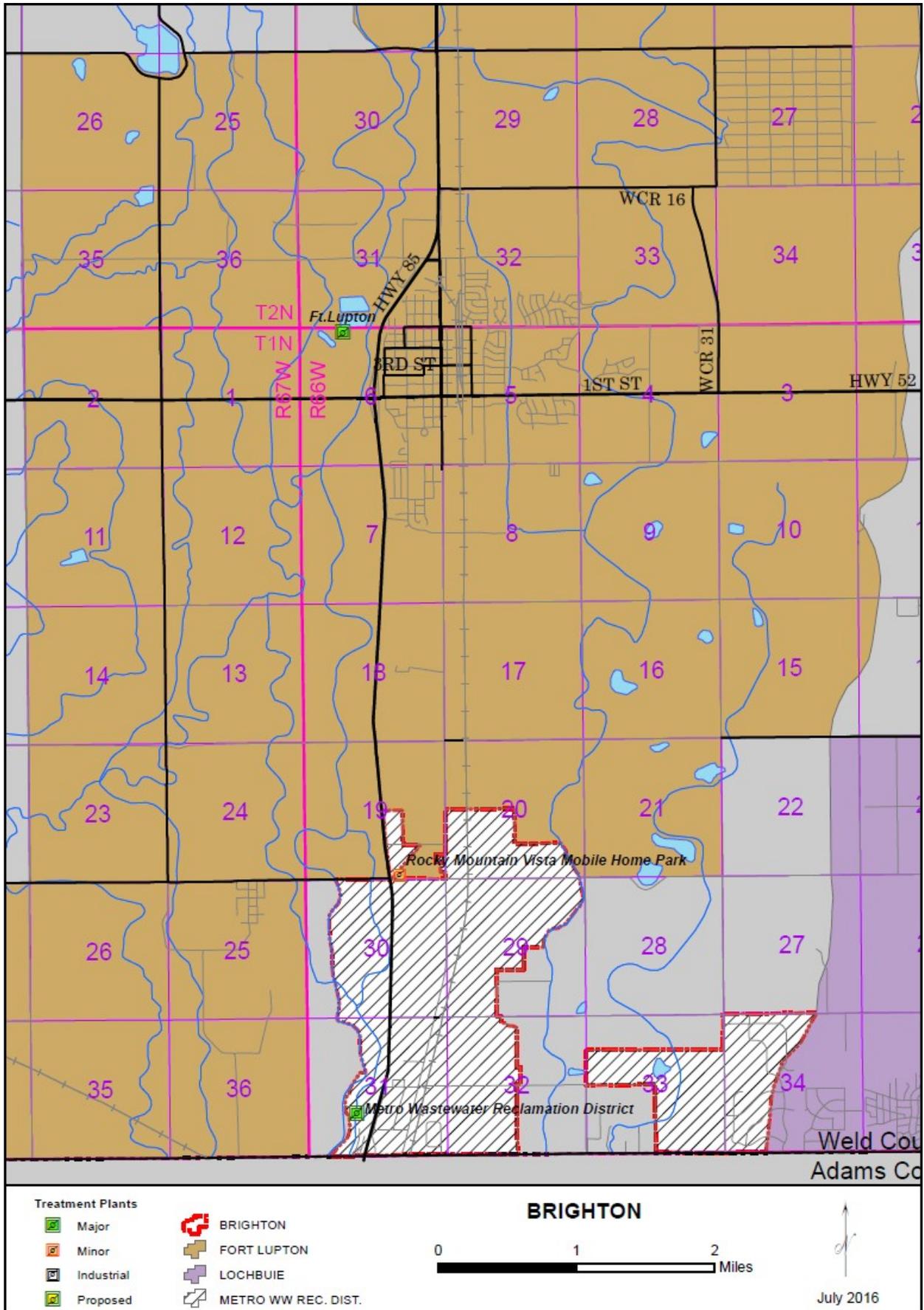
	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)			3.0	3.0	3.0	3.0	*	*
Organic (lbs./day BOD ₅)			5,610	5,610	5,610	5,610	*	*

*See 5-year construction needs.

Biosolids treatment and disposal: Anaerobic digestion for Class B requirements.

Treatment level: The degree of treatment required and effluent limitations are outlined in the facility permit.

Estimated 5-year construction needs: In 2009 the City of Brighton joined the Metro Wastewater Reclamation District. The City will continue to utilize the existing treatment facility through its useful life and over time continue to buy into and transition flows to the new Metro Northern Treatment Facility for their long term capacity needs. The Metro Facility became operational late in 2016. Brighton began incrementally transitioning flows to the NTP in early 2018.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *City and County of Broomfield* Utility Plan Approved: July-2012

CDPS Permit #: CO-0026409 Permit Expires: 3/31/2015 - New Permit expected in 2019
 Administrative Extension

Description of Treatment Facilities: Preliminary treatment (screening and grit removal), primary settling followed by multiple trains of phased anoxic basins discharging to integrated fixed film activated sludge (IFAS) basins. This system provides secondary biological and nutrient removal treatment. IFAS effluent is discharged to final clarifiers for settling and sludge return. Following settling, flow is disinfected using a U.V. system. Anaerobic digestion is utilized for biosolids treatment with dewatering and land application of treated biosolids. A portion of the effluent is directed to a Reclaimed Water Treatment Facility (RWTF) for reuse following filtration and further disinfection.

Treatment Facility Location: (Outside NFRWQPA Planning Area) NW ¼, SE ¼, Section 32, T1S, R68W; 2985 W. 124th Avenue, Broomfield, CO 80020.

Discharge Location: (Outside NFRWQPA Planning Area) COSPBD01 and 03, Big Dry Creek Segment 1 and Great Western Reservoir Segment 3 in Broomfield County.

Stream Segment Classification:

COSPBD01 – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation P
 COSPBD03 – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation N, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
68,090	72,045	77,613	83,611	90,073

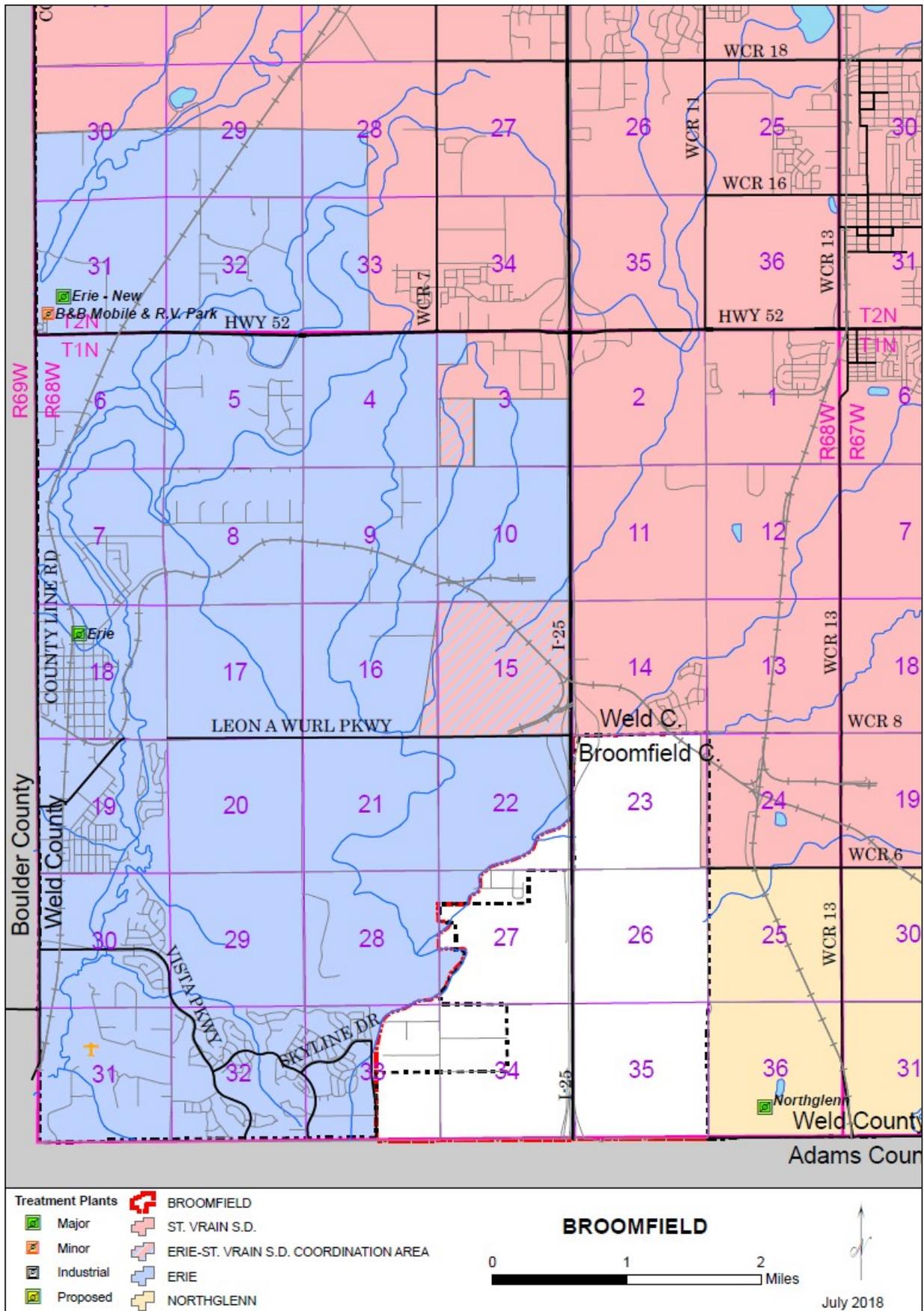
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	12 mgd	6.09	6.48	6.99	7.53	8.11	>2040	>2040
Organic (lbs./day BOD ₅)	23,018	15,745	16,753	18,072	19,468	20,968	2026	2036

Biosolids treatment and disposal: The City's biosolids management program consists of beneficial recycling methods. The current process consists of anaerobic digestion, on-site storage, solids dewatering, composting followed by surface application and incorporation of the composted biosolids on agricultural property. A secondary process utilized by the facility incorporates a dissolved air flotation process for thickening followed by dewatering, composting followed by surface application and incorporation of the composted biosolids on agricultural property. During emergency conditions, the City has contracted with a local composting facility to handle biosolids disposal.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0026409.

Estimated 5-year construction needs: The plant has the necessary capacity to handle the additional population and employment growth identified through build out and can meet all discharge permit requirements through at least 2018. Changes to address effluent temperature and nutrients may be necessary over the next one or two permit cycles. Additionally, as the city continues to expand to the north and east, more collection system facilities will be required.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Eaton*

Utility Plan Approved: October-2003

CDPS Permit #: CO-0047414

Permit Expires: 8/31/2020

Description of Treatment Facilities: Extended aeration activated sludge Aero-Mod, ultra violet disinfection, mechanical step screen, and grit removal.

Treatment Facility Location: NW ¼, Section 6, T6N, R65W

Discharge Location: COSPCP13a, Thirty yards south of East Collins St. in Eaton Draw, tributary to the Cache la Poudre River.

Stream Segment Classification:

COSPCP13a – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
5,373	5,729	6,025	7,296	9,057

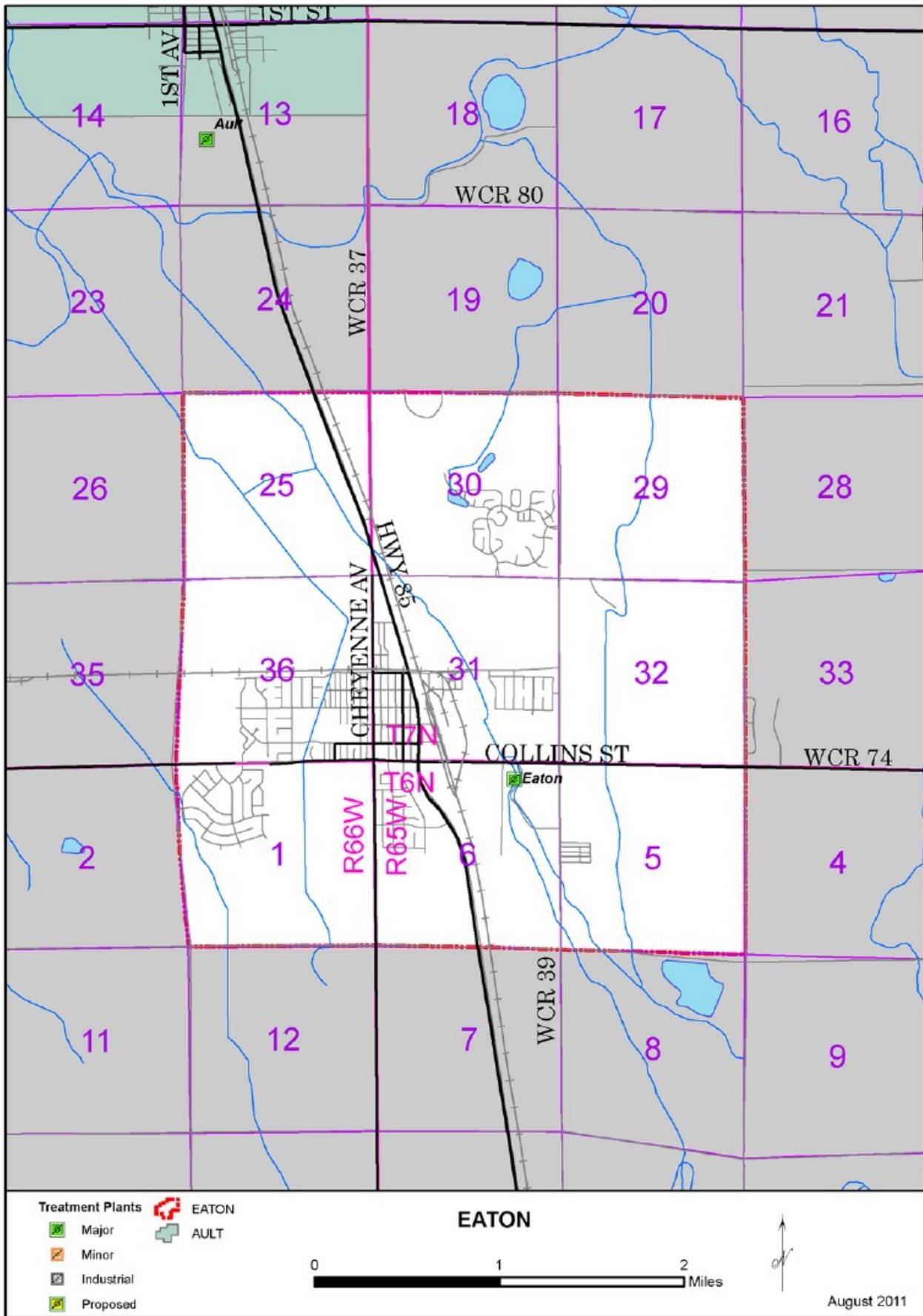
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.75	0.340	0.49	0.58	0.70	0.73	2025	2023
Organic (lbs./day BOD ₅)	1,876	750	795	836	1,013	1,258	>2025	>2025

Biosolids treatment and disposal: Dewatering with centrifuge, storage on site and removal by contract waste disposal company.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0047414.

Estimated 5-year construction needs: The existing infrastructure should meet our needs over the next 5 years.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Erie*

Utility Plan Approved: January-2016

SWRF: CDPS Permit #: CO-0045926 Permit Expires: 9/30/2016 (Administratively Extended)

NWRF: CDPS Permit #: CO-0048445 Permit Expires: 1/31/2016 (Administratively Extended)

Description of Treatment Facilities: South Water Reclamation Facility (SWRF): Use of the SWRF has been discontinued with all flow being diverted to the North Water Reclamation Facility (NWRF). The NWRF is comprised of an Integrated fixed-film activated sludge (IFAS) system, secondary clarification, filtering (with the construction of reuse reservoir), and UV disinfection.

The NWRF was expanded to 1.95 MGD hydraulic capacity and 5,372 lbs/day organic load. We are waiting on re-rating from CDPHE as we submitted a permit supplement application in April 2018.

Treatment Facility Location: SWRF: NE ¼, NW ¼, Section 18, T1N, R68W. NWRF: E½, Section 31, T2N, R68W.

Discharge Location: SWRF: Segment COSPBO07b, Coal Creek, approximately 2 miles upstream of the confluence of Coal and Boulder Creeks. NWRF: Segment COSPBO10, Boulder Creek.

Stream Segment Classification:

COSPBO07b – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

COSPBO10 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 1, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
25,000	28,000	35,500	43,000	50,500

Capacities:

Average	Design Capacity SWRF	Design Capacity (1) NWRF	Existing Load (2) Combined	2020 (3)	2025 (3)	2030 (3)	2035 (3)	Year at 80% Design	Year at 95% Design
Flow (mgd)	NA	1.95	1.42	1.7	2.2	2.8	3.3	2018	2022
Organic (lbs./day BOD ₅)	NA	5,372	3,484	3,920	4,970	6,020	7,070	2018	2015

(1) Pending permit renewal.

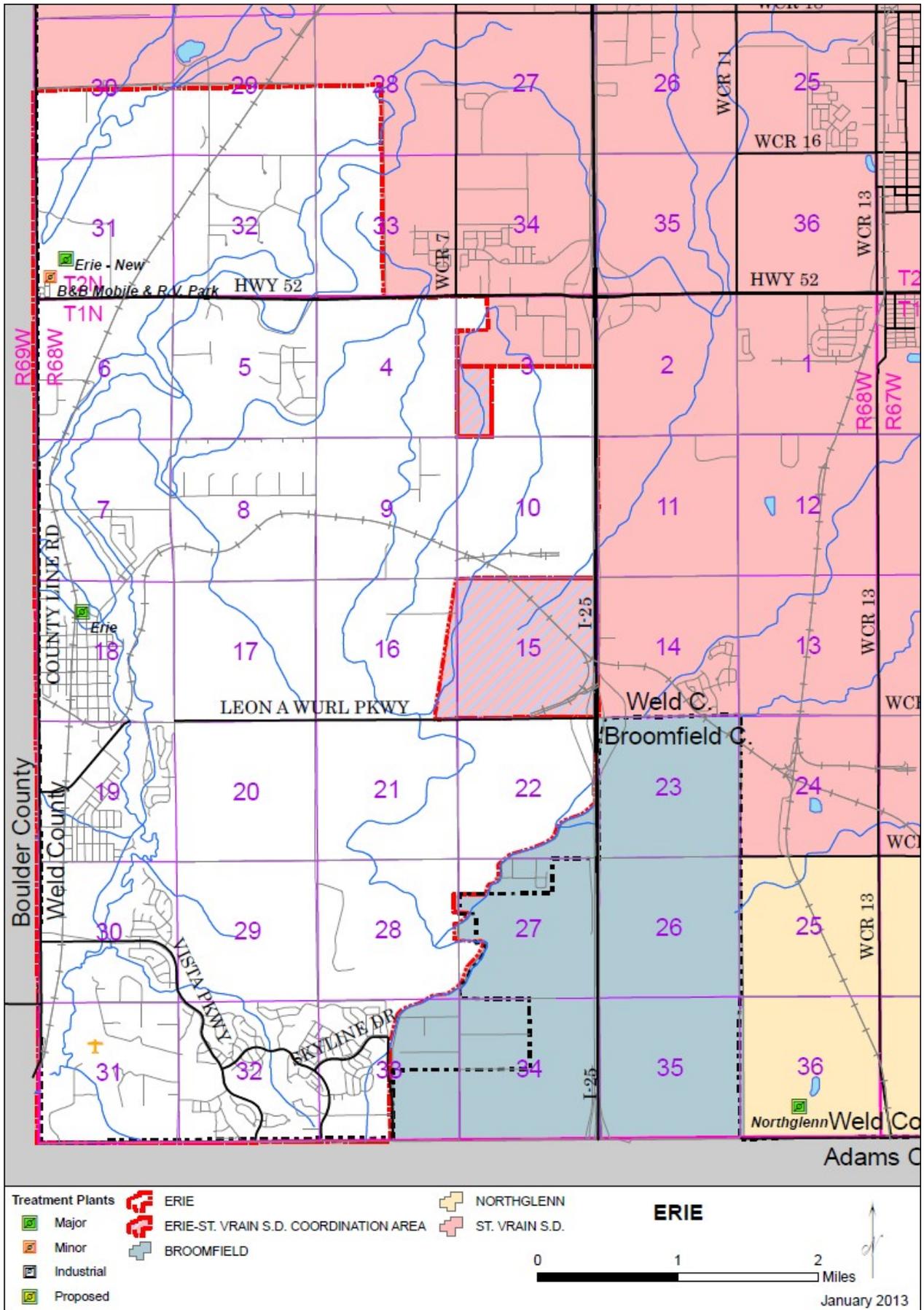
(2) Based on Monthly Averages

(3) Based on 0.14 lbs/day per person (compared to current per person loads)

Biosolids treatment and disposal: The NWRf stabilizes solids with lime prior to dewatering with a screw press and produces a Class A biosolids.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0048445 for the NWRf.

Estimated 5-year construction needs: Needs include upgrades to the collection system for improvements (mostly related to development) and plant expansion. We are currently beginning design for our next expansion, which is anticipated to be constructed in 2019 or 2020, to increase both hydraulic and organic capacity to levels yet to be determined.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Estes Park Sanitation District*

Utility Plan Approved: December-2011

CDPS Permit #: CO-0020290

Permit Expires: 12/31/2020

Description of Treatment Facilities: Activated sludge process with flow equalization and clarification. Through 9/30/16 disinfection is chlorination / de-chlorination (after 9/30/16 UV), aerobic digestion, dewatering and contract land application. Beginning 10/1/16, effluent polishing will use dissolved air filtration (DAF).

Treatment Facility Location: SW ¼, SW ¼, Section 19, and NW ¼, Section 30, T5N, R72W

Discharge Location: COSPBT02, Big Thompson River Segment 2 just west of Lake Estes in the SW ¼, SW ¼, Section 19, and NW ¼, NW ¼, Section 30, T5N, R72W.

Stream Segment Classification:

COSPBT02 – Designation: Reviewable; Classifications: Agricultural, Aquatic Life Cold 1, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
3,850	4,275	4,400	4,625	4,835

Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	1.5	0.766	0.825	0.870	0.925	0.975	>2035	NA
Organic (lbs./day BOD ₅)	3,300	2,000	2,200	2,350	2,500	2,625	2035	NA

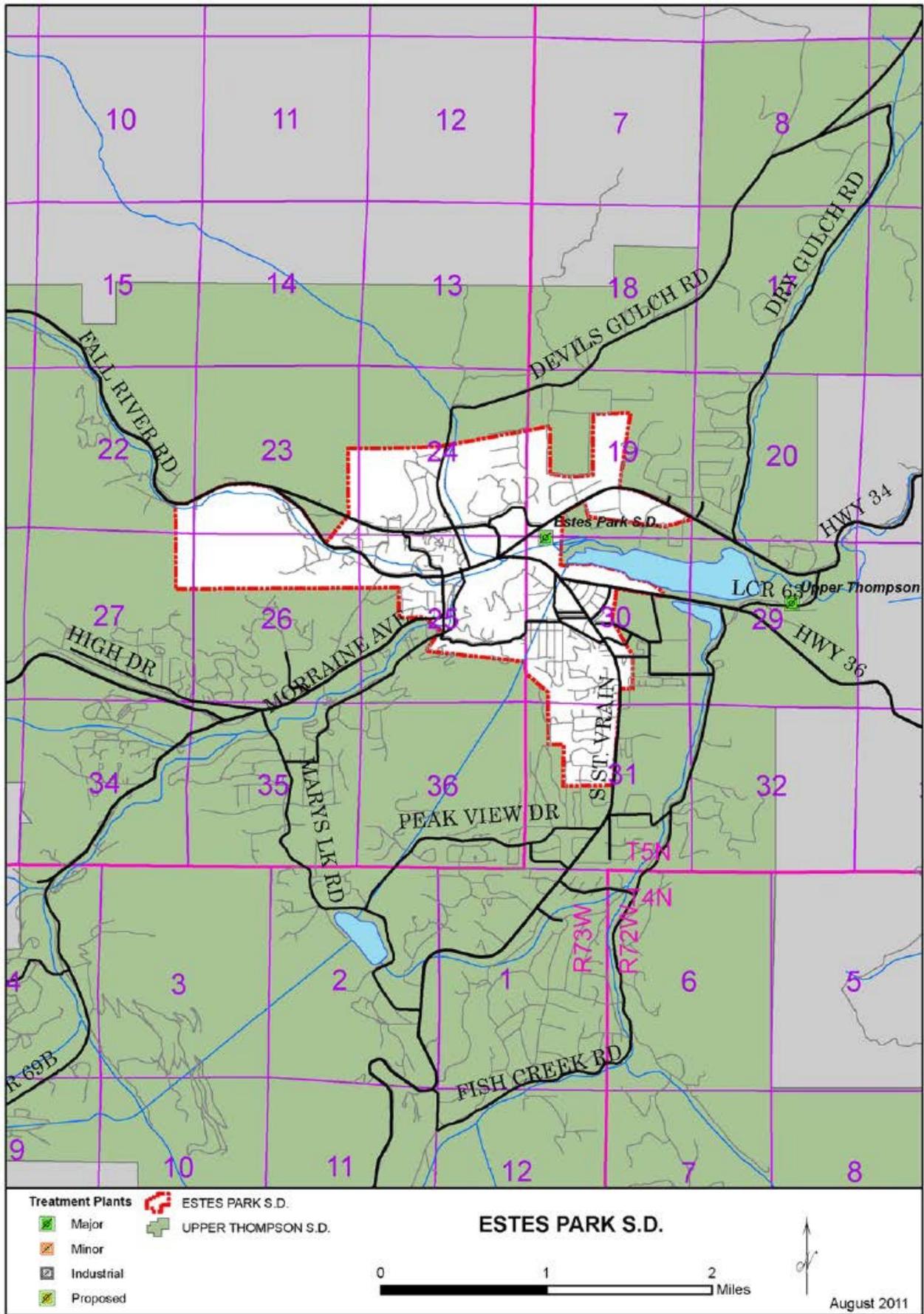
Estes Park is primarily a warm weather tourist community. Peak season is July – September.

Biosolids treatment and disposal: The District utilizes aerobic sludge digestion. Biosolids are de-watered to 18-20% prior to land fill application by McDonald Farms. Annual production is approximately 130 dry tons.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0020290.

Estimated 5-year construction needs: The District is currently engaged in engineering design for improved air handling in the treatment process and solids handling. Solids handling improvements would address redundancy since currently the District has a single centrifuge to dewater biosolids. Failure during peak periods would be problematic and expense. Studies are currently underway to determine requirements to meet nutrient limits in

2027. Short term improvements will likely include effluent temperature control. Collection line improvements are addressed annually to lower infiltration levels and have been very effective.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *City of Evans*

Utility Plan Approved: August-2015

CDPS Permit #: City of Evans WWTP: CO 0047287

Permit Expires: Administratively Extended

Permit Expires: Per CDPHE, the current Permits for the Evans and Hill-n-Park WWTP's will be extended until the new Consolidated permit is issued. The Consolidated permit application has been submitted for consideration. CDPHE is noting that they have a backlog of permit applications to review.

Description of New Treatment Facilities: The consolidation of the existing Evans Wastewater Treatment Facility (WWTF) and the Hill-n-Park WWTF will result in the design and construction of the City of Evans WWTP, force main, and lift station. A new lift station at the Evans WWTF will be constructed to pump wastewater generated in the east portion of the City over to the new City of Evans WWTP (located at the current Hill-n-Park WWTF site). The City of Evans WWTP will consist of the design and construction of a new liquid stream treatment process. This will include a new headworks building, a new Johannesburg secondary biological nutrient removal (BNR) process (with basins and a blower / chemical/ pump station building), secondary clarifiers, and ultra violet (UV) disinfection that will be capable of meeting the requirements of Regulation 85 and CDPHE Policy WPC-DR-1.

Status of progress of the activities of Consolidated WWTP Needs Assessment Approved Feb-2016 Final construction details are being completed which generally include blower discharge pipe insulation, laboratory equipment installation, lift station electrical and site work. The Consolidated WWTP has begun treating wastewater from the Hill-n-Park basin and is reported as producing excellent water.

Treatment Facility Location: City of Evans WWTP: 44°, 21', 47.95" latitude and 104°, 44', 5.8316" longitude. The project will be located in the SW ¼ of the SW ¼ of Section 25 and the NW ¼ of the NW ¼ of Section 36, Township 5 North, and Range 66 West.

Discharge Location: City of Evans WWTP: The City of Evans WWTP will discharge to the South Platte River in stream segment COSPMS01b, NW ¼ of Section 36, T5N, R66W.

Stream Segment Classification:

COSPMS01b – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
21,340*	20,825*	22,118	23,524	25,053

*Current population has already exceeded projections.

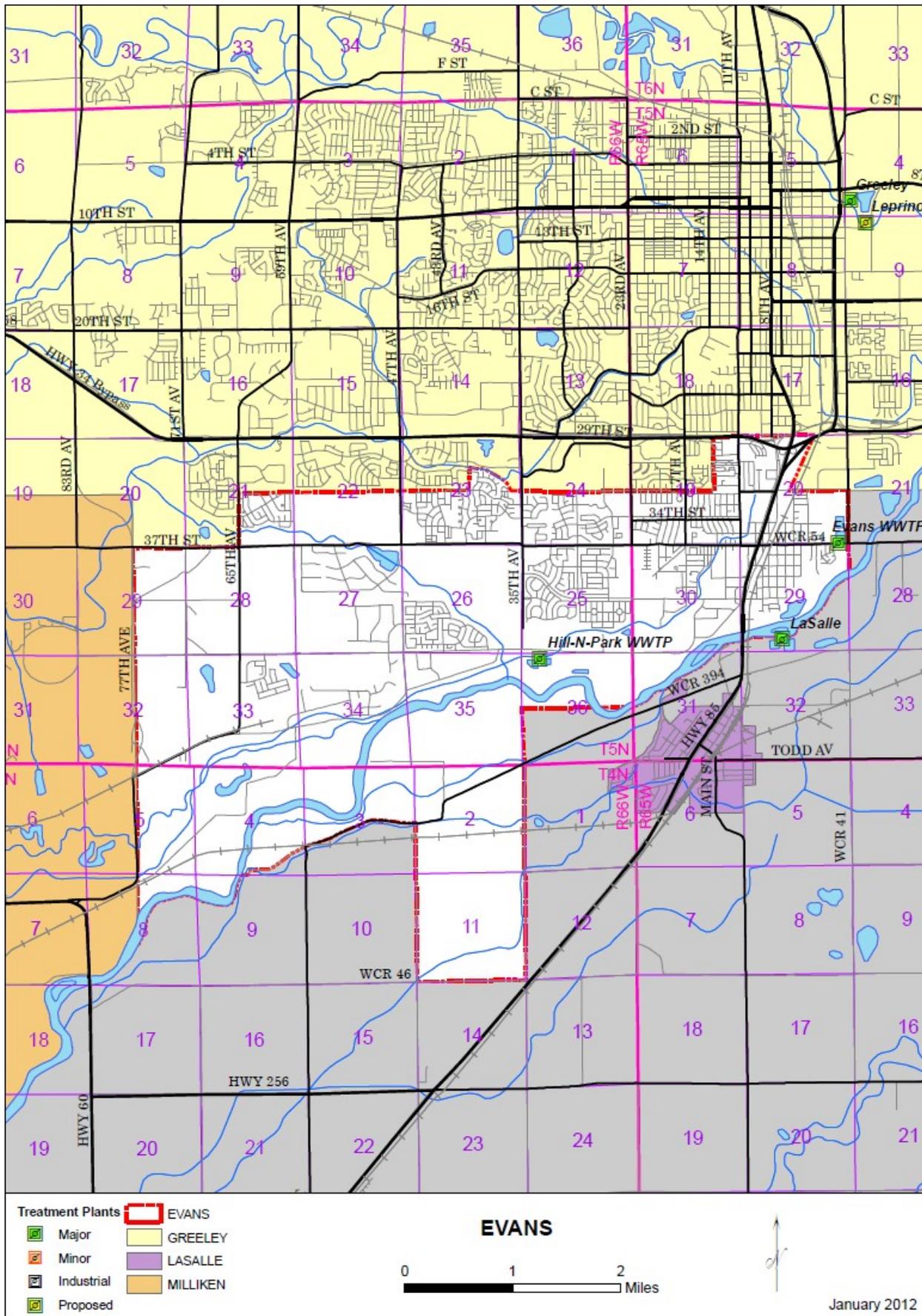
Capacities:

Evans Consolidated WWTP (New)	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd) MM	2.88	1.88	2.40	2.54	2.71	2.88	2020	2030
Organic (lbs./day BOD ₅) MM	6,024	4,721	5,007	5,318	5,656	6,024	2020	2030

Biosolids treatment and disposal: Biosolids disposal at the Consolidated WWTP will consist of dredging the anaerobic solids handling lagoon approximately every two years and hauling and land applying or disposing of the biosolids using a licensed hauler. The solids handling upgrades will take advantage of existing infrastructure, improve the reliability of the digestion process, and decrease solids disposal costs. Solids produced at the new WWTP will meet Class B biosolids requirements by land applying and incorporating the biosolids into the soil within 6 hours. Pathogen testing per EPA regulation Part 503 will be conducted to ensure pathogen destruction is below the biosolid permit limits.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0020508 (Evans) and #CO-0047287 (Hill-n-Park).

Estimated 5-year construction needs: As part of the utility planning process, a number of collection system improvements have been identified. Near term, the construction of the new Evans facility is the main priority. It is recommended that upgrades to the Consolidated WWTP liquid stream process, including the headworks, secondary process basins, clarifiers, and process building, UV building and new administration/O&M/lab building be constructed first. Construction of the Evans Lift Station will occur simultaneous with construction of the Consolidated WWTP liquid stream processes. This is the majority of the infrastructure and will result in an operating WWTP with sufficient capacity to address growth, proposed regulations, capacity and redundancy concerns, and improve treatment plant energy efficiency and resiliency. Once the new liquid stream is in place, the Hill-n-Park WWTF can be decommissioned (excluding lagoon 2). The existing polishing cell can be used for solids storage while the existing Aeration Lagoon No. 2 is being modified into an anaerobic solids lagoon.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *City of Ft. Collins*

Utility Plan Approved: January-2009

Mulberry: CDPS Permit #: CO-0026425

Permit Expires: 4/30/2021

Drake: CDPS Permit #: CO-0047627

Permit Expires: 4/30/2021

Description of Treatment Facilities: Mulberry WRF (MWRF): Primary treatment (screening and grit removal), 3-stage activated sludge process, followed by secondary clarification, and UV disinfection. Drake WRF (DWRF): primary sedimentation, 3 stage activated sludge, secondary clarification, and UV disinfection.

Treatment Facility Location: MWRF: 920 Mulberry St., SE ¼, SE ¼, Section 12, T7N, R69W. DWRF: 3036 East Drake St., SE ¼, SE ¼, Section 20, T7N, R68W.

Discharge Location: COSPCP11, MWRF outfall 001A to Segment 11, Cache la Poudre River; DWRF outfall 002A to Segment 11, Cache la Poudre River; DWRF outfall 001A to Fossil Creek Reservoir Inlet Ditch which flows to Fossil Creek Reservoir COSPCP13a; and DWRF outfall 005B to Rawhide Power Plant.

Stream Segment Classification:

COSPCP11 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 1, Recreation E

COSPCP13a– Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
133,736	139,200	145,900	150,800	157,100

Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	29*	14.5	16.1	16.9	17.5	18.2	2012	>2030
Organic lbs/day	67,007*	47,193	47,234	49,262	51,290	NA	>2030	>2030

* MWRF permitted for 6 mgd and 10,007 lbs./day BOD₅, DWRF permitted for 23 mgd and 57,000 lbs./day BOD₅.

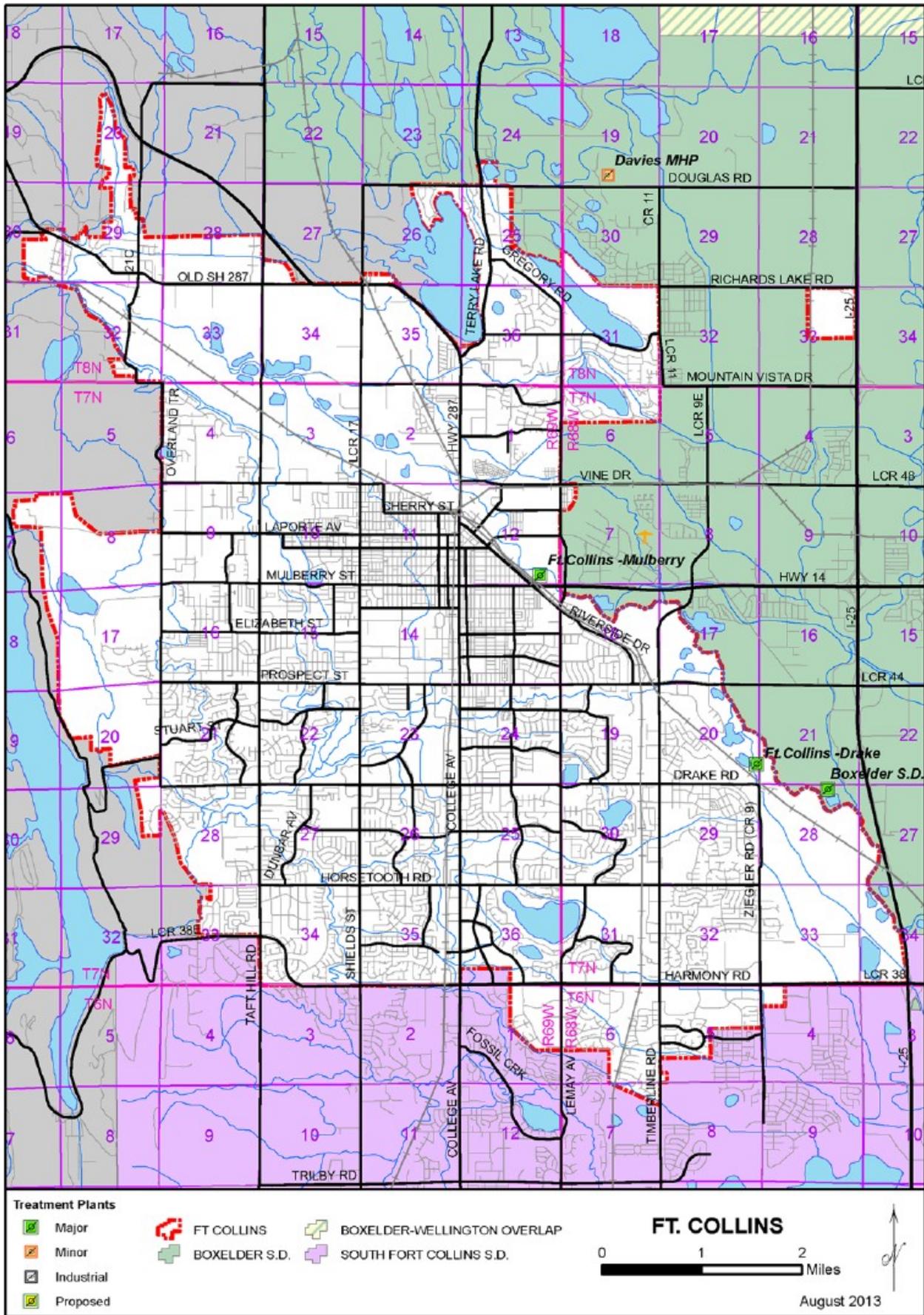
Note: WW flow (mgd) based on domestic (MWRF + DWRF)

BOD based on total lbs. /day (MWFR + DWRF)

Biosolids treatment and disposal: Sludge from MWRF is transferred to DWRF and mixed with influent. At the DWRF, primary clarifier sludge and scum is conveyed to the three anaerobic digesters for stabilization. Intermediate sludge and waste activated sludge are thickened in the dissolved air floatation thickener (DAF) before being sent to the digesters. Digested solids are dewatered via centrifuge and trucked to the Meadow Springs Ranch biosolids facility where they are land applied. A Class B biosolids product is produced from the solids treatment process.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-26425 for the Mulberry WRF and Permit #CO-0047627 for the Drake WRF.

Estimated 5-year construction needs: In 2009 the City received Site Location Approval for modifications to the MWRf which include the conversion of the secondary treatment process from trickling filter/activated sludge process to a 3-stage activated sludge process with anaerobic, anoxic, and aeration zones. The City had also previously installed an odor control system at the facility. At the direction of CDPHE, 3-stage activated sludge process was constructed for DWRF's north process trains to provide additional redundancy for MWRf. This project was completed in 2012. In addition, 3-stage improvements were completed for DWRF's south process train in 2015 to comply with CDPHE's redundancy requirements. Additional projects either currently underway or identified during recent master planning efforts include but not limited to: additional carbon feed system, improved headworks, improved secondary clarifiers, electrical and HVAC improvements, anaerobic digester lid replacement, side stream treatment system, and biogas waste to energy projects.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *City of Ft. Lupton*

Utility Plan Approved: August-2014

CDPS Permit #: CO-0021440

Permit Expires: 10/31/2017

Description of Treatment Facilities: Oxidation ditch secondary treatment operated in complete mix aeration mode, clarification, and UV disinfection. Biosolids are treated in aerobic digesters, dewatered, and land applied.

Treatment Facility Location: SE ¼, SW ¼, Section 31, T2N, R66W and NE ¼, NW ¼, Section 6, T1N, R66W

Discharge Location: COSPMS01a, Middle South Platte River Segment 1a, SE ¼, SW ¼, Section 31, T2N, R66W

Stream Segment Classification:

COSPMS01a – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
7,800	9,201	10,667	12,366	14,335

Capacities:

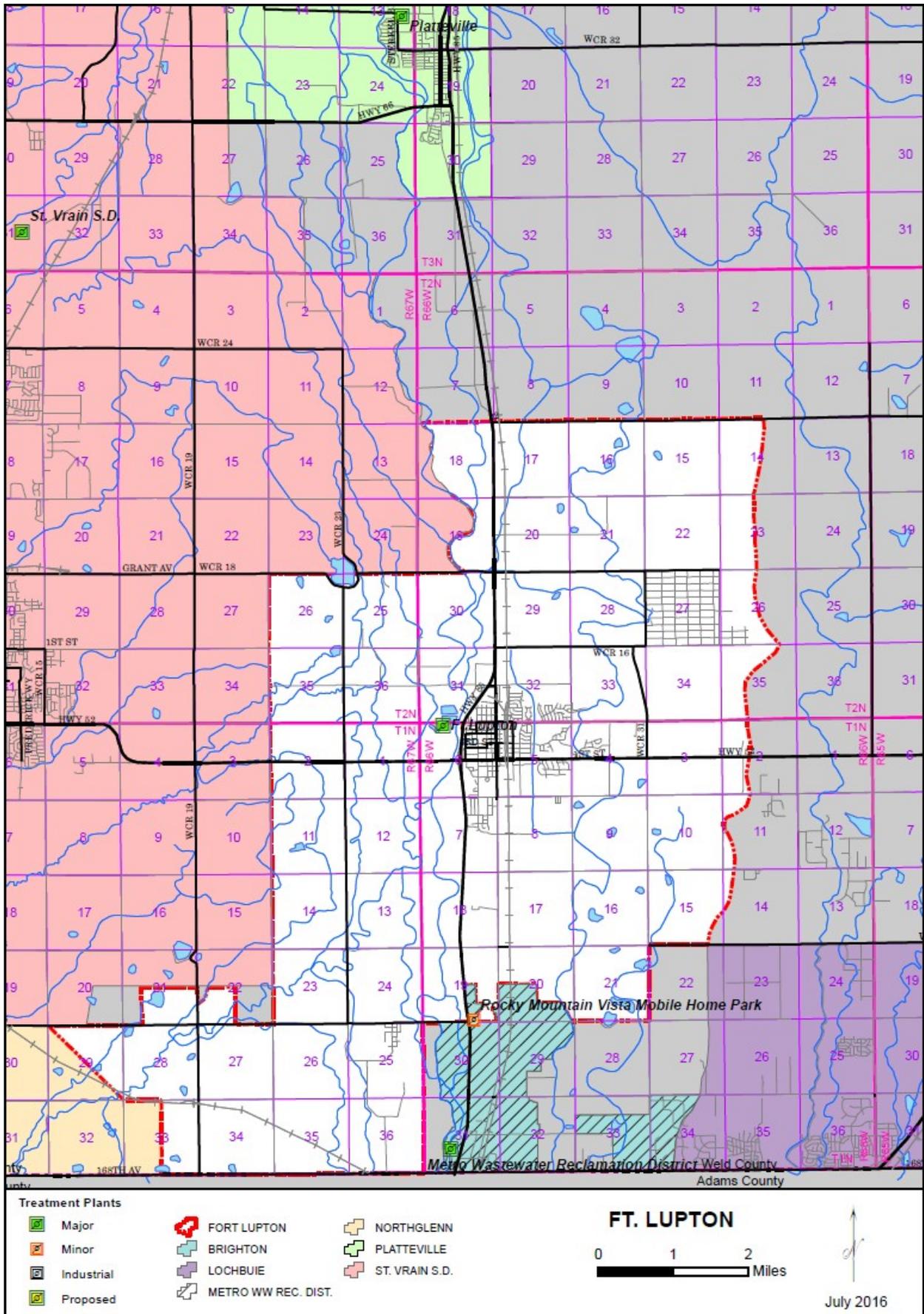
	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	2.75	1.20	1.45	1.80	1.95	3.00	2030	2033
Organic (lbs./day BOD ₅) MM*	4,355	2954	3864	4480	5181	6020	2017	2024

*Projected s loads are based on historical Mx Month per capita contributions in Utility Plan

Biosolids treatment and disposal: The facility utilizes aerobic digestion followed by centrifuge for disposal of solids. Dewatered cake is hauled for land application by Veris Environmental.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0021440.

Estimated 5-year construction needs: The City completed an upgrade of the water treatment plant in January 2011 which will utilize technologies that reduce the amount of backwash water leaving the facility. In 2014, a Utility Plan update was prepared outlining both collection system and WWTP near term needs. With these improvements to the collection system and water treatment facility, expansion of the WWTP will be delayed past 2015. Currently, the expansion of the WWTP is still in the planning phase(s) and the city plans on applying for PELs in 2019. In 2015, a site application was approved for improvements to the South Lift Station and construction was completed October 2015. WWTP upgrading and expansion is anticipated to need to start within the next five years as outlined in the Utility Plan.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Gilcrest*

Utility Plan Approved: Unapproved

CDPS Permit #: CO-0041653

Permit Expires: 05-31-2018

Description of Treatment Facilities: Influent screening, two aerated lagoons, polishing pond, chlorination, and dechlorination.

Treatment Facility Location: NW ¼, NW ¼, Section 27, T4N, R66W

Discharge Location: COSPMS01b, Middle South Platte Segment 01b, SE ¼, SE ¼, Section 24, T4N, R67W

Stream Segment Classification:

COSPMS01b – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
1,085	1,085	*	*	*

Capacities:

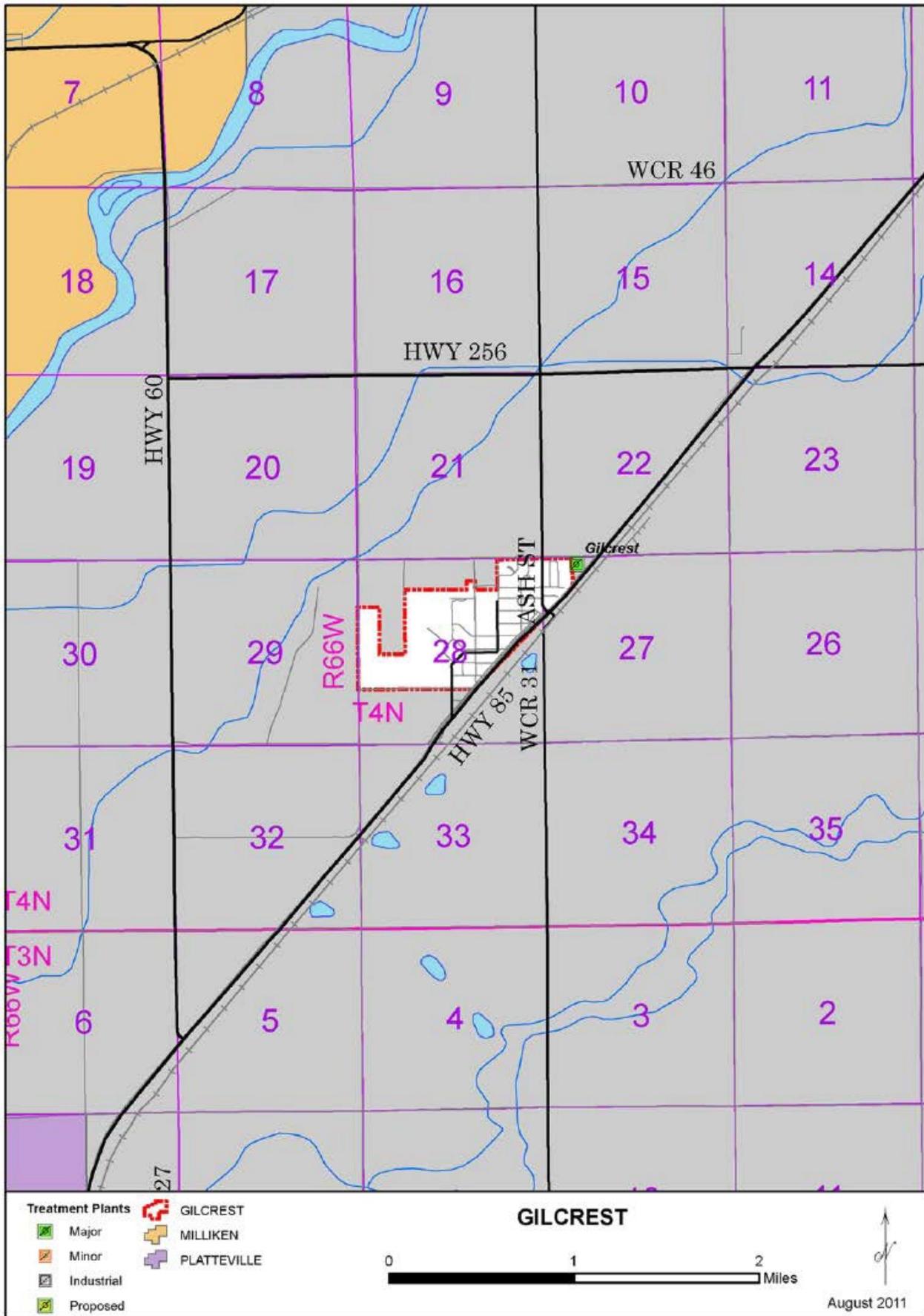
	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.196	0.06	*	*	*	*	*	*
Organic (lbs./day BOD ₅)	466	264	*	*	*	*	*	*

* Information not available

Biosolids treatment and disposal: Done as needed when ponds are drained and cleaned.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0041653.

Estimated 5-year construction needs: Recent improvements to the lagoon system should provide several years' service to the Town. In – Kind Improvements included: headworks, aeration blower, lagoon liners, sludge disposal, chlorination basin and effluent pumping. None



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: **City of Greeley**

Utility Plan Approved: February-2010

CDPS Permit #: CO-0040258

Permit Expires: 3/31/2017

Description of Treatment Facilities: Primary and secondary settling, activated sludge secondary treatment, UV disinfection, anaerobic digestion, and land application of biosolids.

Treatment Facility Location: SW ¼, SW ¼, Section 4, T5N, R65W.

Discharge Location: COSPCP12, Cache la Poudre River Segment 12, approximately 6 miles above the confluence with the South Platte River, SW ¼, SW ¼, Section 4, T5N, R65W.

Stream Segment Classification:

COSPCP12 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 1, Recreation E

Greeley

The City of Greeley is the designated management agency for the City and some adjacent unincorporated areas within Weld County. There has been no formal agreement adopted between Greeley and Weld County pertaining to the respective responsibilities of each in the unincorporated areas that are within management boundaries of the City. An IGA between Greeley and the Cities of Windsor and Evans has been adopted to address areas within each community where a sanitary sewer basin could flow via gravity to a treatment facility not owned or operated by that City.

In 2016, a second dewatering centrifuge was added as well as a redundant sludge cake pump. The addition of a de-ammonification process (DEMON) was completed as well. Furthermore, a project to address aging infrastructure and equipment was initiated in late 2016. This project included the conversion of a sludge storage tank to a third primary anaerobic digester, cover replacement for two existing primary anaerobic digesters with the addition of linear motion mixers, and two new sludge volute thickeners. The project was completed November 2018. Also, a project to replace three of six existing turbo blowers is underway and will be completed by mid-2019. Greeley is currently working on a Water Pollution Control Facility Treatment and Nutrient Master Plan, which will provide a roadmap for future capital improvement projects. That is, the Plan will provide short (≤ 5 -year) and long-term (>5 -year) prioritized improvements to the wastewater treatment plant based on flow and load projections, aging infrastructure and equipment needs.

Greeley has in place an aggressive wastewater collection system replacement and rehabilitation program that has greatly reduced infiltration and inflow (I/I) to the system. The program has resulted in reducing the amount of storm and ground water that the wastewater treatment facility treats, and thus, has delayed any required facility expansion due to hydraulic loading. Greeley is planning an update to the Wastewater Collections System Master Plan in early 2019 that will evaluate system capacity and address future expansion of the system as needed. As a part of this effort, it is planned that the City will provide an update to the 2009 Utility Plan.

Service Area Population:

Existing (2017)	2020	2025	2030	2035
109,000	114,299	132,920	147,289	164,626

Capacities:

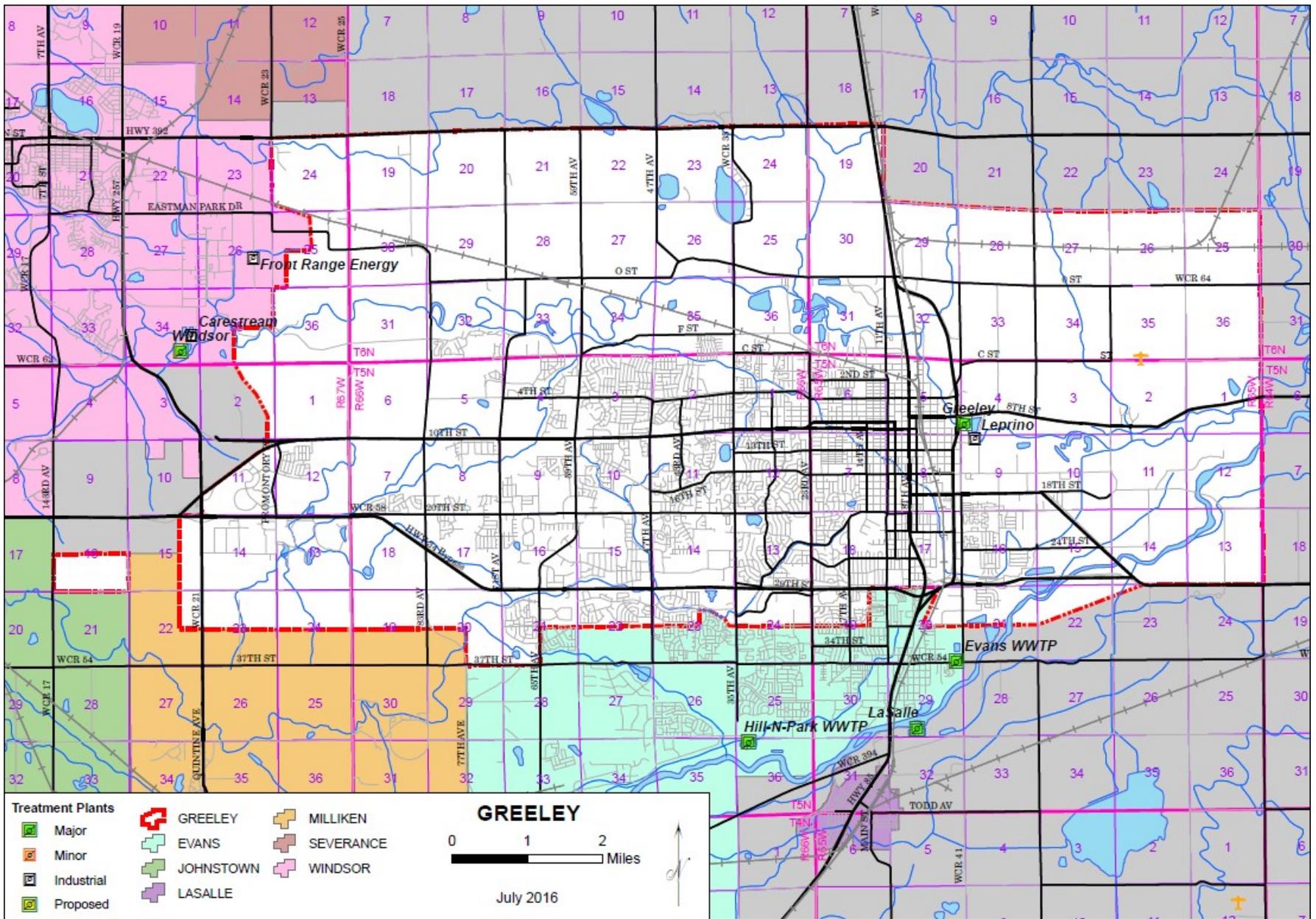
	Design Capacity	Existing (2017)	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design	
Flow (MGD)	14.7	7.82	8.05	8.44	8.83	9.21	>2030	>2030	
Organic (lbs./day BOD ₅)	39,000	26,723	28,788	31,013	33,410	35,992	>2030	>2030	

Biosolids treatment and disposal: The current biosolids treatment is a Class B dewatering process using dewatering centrifuges (2) and volute thickeners (2). The process produces 18-20% total solids (cake) that is land applied on area farmland by a private contractor.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0040258.

Estimated 5-year construction needs: It is anticipated that most of the 5-year needs will be predicated on the findings and recommendations from the Wastewater Treatment and Collection System Master Plans. Some of the projects identified to be completed (or planned for) within the next five years include;

- WPCF Nitrification Project (Phase II) – This project will upgrade the wastewater treatment plant to meet Regulation 85 discharge requirements. It has been budgeted for with design anticipated to commence in late 2018. The plant’s current discharge permit was administratively extended after it expired on March 31, 2017, and a new permit is expected in the near future.
- A project to replace the three influent (raw sewage) influent pumps is planned to commence in 2019.
- Wastewater treatment projects to upgrade and improve existing plant SCADA and electrical systems, primary clarifiers, and backup generators are being planned.
- Ashcroft Draw Basin Lift Station – A lift station planned to serve existing and future development south of Highway 34, west of 65th Avenue, and within the limits of City of Greeley.
- Poudre Trunk Phase II – An extension of an existing interceptor expanding sewer service west of 83rd Avenue along the Poudre River. This project is currently budgeted for construction in 2020.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Hudson*

Utility Plan Approved: July-2008

CDPS Permit #: COG-0589014

Permit Expires: 9/30/2018

Description of Treatment Facilities: Mechanical plant: Influent lift station and headworks, Sequencing Batch Reactor (SBR), chlorination, and dechlorination.

Treatment Facility Location: SBR Plant: SE ¼, SW ¼, Section 24, T2N, R65W.

Discharge Location: SBR Plant: Box Elder Creek, COSPMS05a

Stream Segment Classification:

COSPMS05a – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation N, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
1684	3030	3499	4378	*

Capacities:

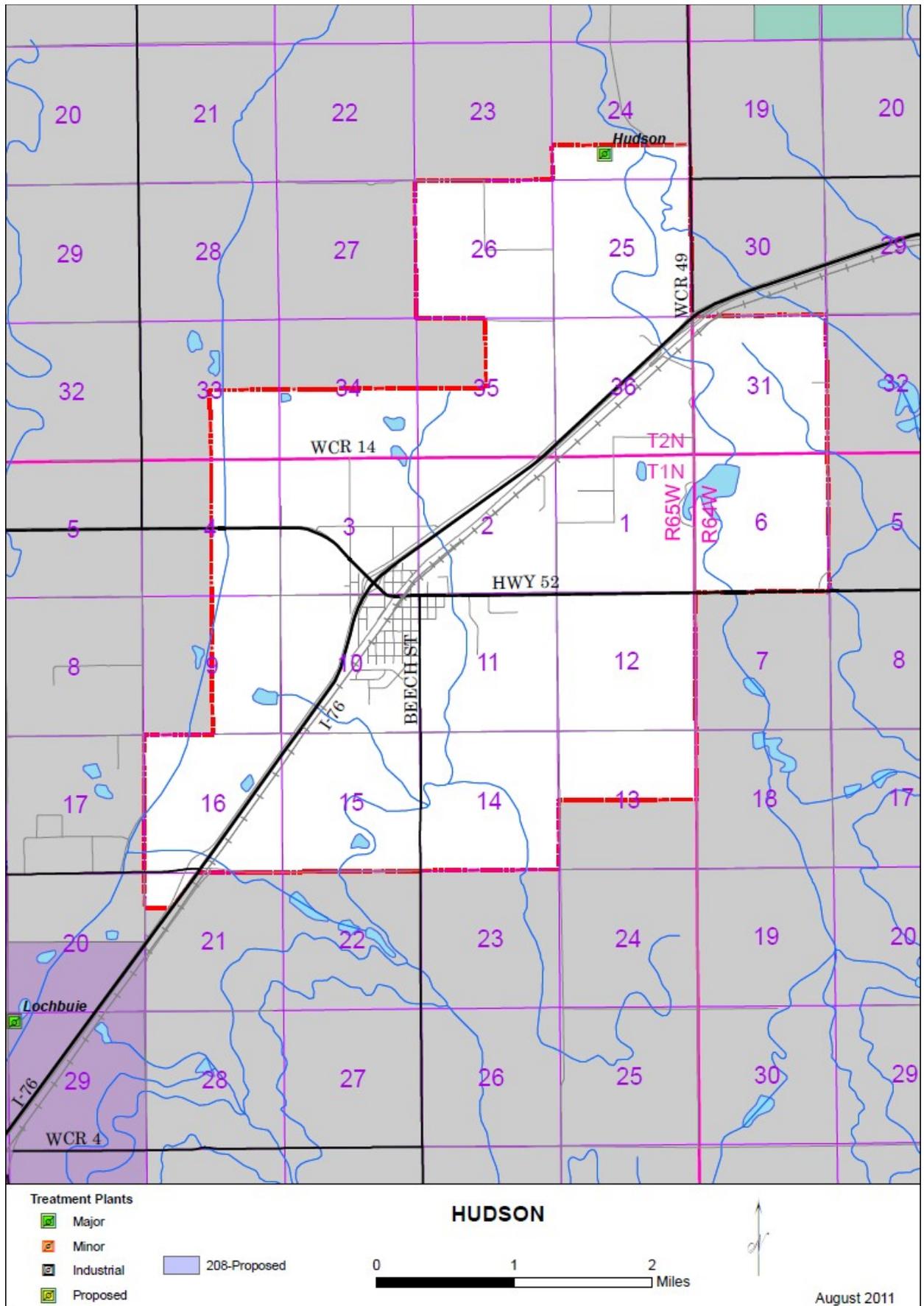
	Design Capacity SBR	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.5	0.19	0.34	0.39	0.493	*	2026	2029
Organic (lbs./day BOD ₅)	1,043	240	432	499	624	*	2035	2037

* Information not available

Biosolids treatment and disposal: On site digestion with land application by a licensed hauler.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0589014.

Estimated 5-year construction needs: In 2010 the Town completed the construction on a new mechanical facility located north of Town. This facility will provide adequate capacity for the Town well into the planning future. In 2012 the Town completed construction of a new lift station and sewer main that will deliver existing flows from the Town’s former lagoon site to the new WWTP. The lagoons were also decommissioned in 2012. Long term, a gravity interceptor will need to be installed to provide service to the new area northeast of Town (as amended to the Service Area).



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Johnstown*

Utility Plan Approved: 2/2009

CDPS Permit #: Central WWTF: CO-0021156

Permit Expires: Administratively Extended

Low Point WWTP: CO-0047058

Administratively Extended

Description of Treatment Facilities: Central WWTF: A two cell aerated pond system followed by a four compartment nitrification basin (using MBBR media), followed by dissolved air floatation, chlorination and dechlorination. The Central Plant is considered a mechanical system. Low Point WWTF: A two-basin concrete SBR (activated sludge) facility with headworks screening / grit removal, and chlorination / dechlorination.

Treatment Facility Location: Central WWTF: S ½, SW ¼, Section 3, T4N, R67W. Low Point WWTF: NW ¼, SW ¼, Section 24, T5N, R68W.

Discharge Location: Central WWTF: COSPBT09, Little Thompson River Segment 9, north of State Hwy 60 approximately one mile east of Johnstown in the S ½, Section 3, T4N, R67W. Low Point WWTF: COSPBT05, Big Thompson River Segment 05, east of I-25 approximately one mile at Larimer Co. Rd. 3 in the NW ¼, SW ¼, Section 24, T5N, R68W.

Stream Segment Classification:

COSPBT09 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

COSPBT05 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation N (10/16 – 4/30), Recreation P (5/1 – 10/15)

Service Area Population:

	Existing	2020	2025	2030	2035
Combined for all facilities	15,459	17,043	21,752	27,762	35,432

Capacities: (at a low growth rate)

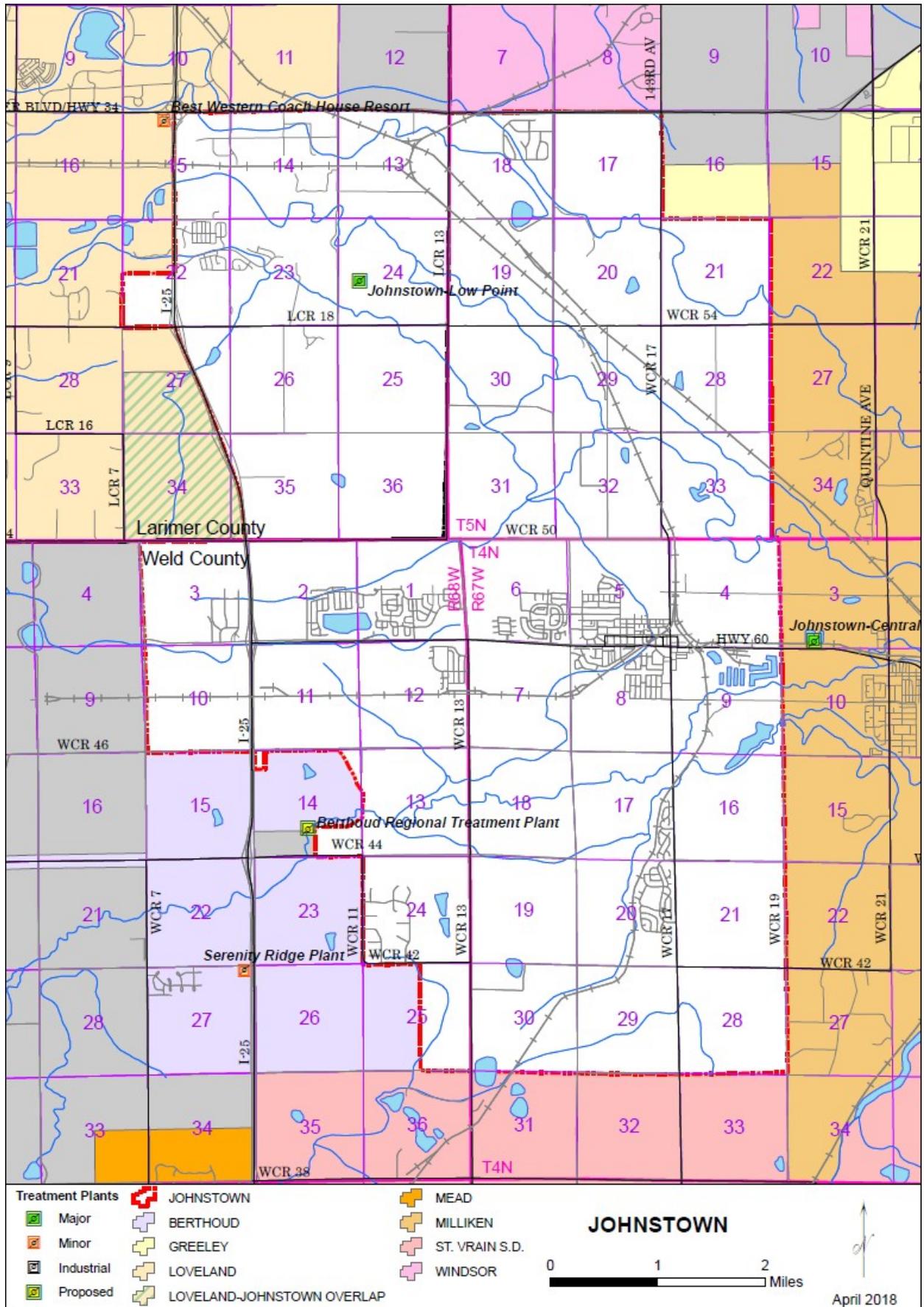
	Design Capacity Current	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
<u>Central Flow (mgd)</u>	0.99	0.6	.66	.85	1.07	1.37	2023	2027
<u>Organic (lbs./day BOD₅)</u>	2,213	1,346	1,484	1,894	2,417	3,085	2024	2026

<u>Low Point</u> Flow (mgd)	0.5	.20	.22	.38	.62	1.01	>2026	>2028
Organic (lbs./day BOD ₅)	1,000	493	605	975	1,570	2,529	>2023	>2025

Biosolids treatment and disposal: The Central Plant uses natural lagoon processes. The Low Point Plant uses an Aerobic digester followed by land application.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0021156 for the Central WWTF and Permit # CO-0047058 for the Low Point WWTF.

Estimated 5-year construction needs: The Central Plant was upgraded and expanded in 2013. This capacity increase expanded the MBBR system, on-site piping replacements, influent flow metering upgrades, an additional (redundant) DAF unit. The Low Point Plant has been seeing large growths with I-25 and Hwy 34 growths. Low Point depending on growth in its service area has approximately ten years before expansion is required. The former Cross Point WWTF (now the Berthoud Regional WWTF) received a recommendation for approval from NFRWQPA in 2005. The plant will be constructed by Berthoud in the next couple of years) and an IGA has been developed between Johnstown and Berthoud for joint use of capacity at the facility.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Keenesburg*

Utility Plan Approved: February-2018

CDPS Permit #: CO-0041254

Permit Expires: 6/30/2023

Description of Treatment Facilities: 3-step advanced integrated pond system and chlorination.

Treatment Facility Location: SW ¼, SE ¼, Section 26, T2N, R64W

Discharge Location: COSPMS06, Sloan’s Reservoirs – farmer’s private ponds – used to irrigate fields, slight discharge to intermittent draw only occurs under a significant storm event when Sloan’s Reservoirs are full.

Stream Segment Classification:

COSPMS06 – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation N Class 2 Warm Water Aquatic Life, Recreation Class N.

NOTE: This Segment had an Aquatic Life Use Attainability Analysis (UAA) completed and presented to the WQCC and was specially established for Keenesburg WWTF discharge.

Service Area Population:

Existing	2020	2025	2030	2035
1,239	1,507	1,833	2,231	2,714

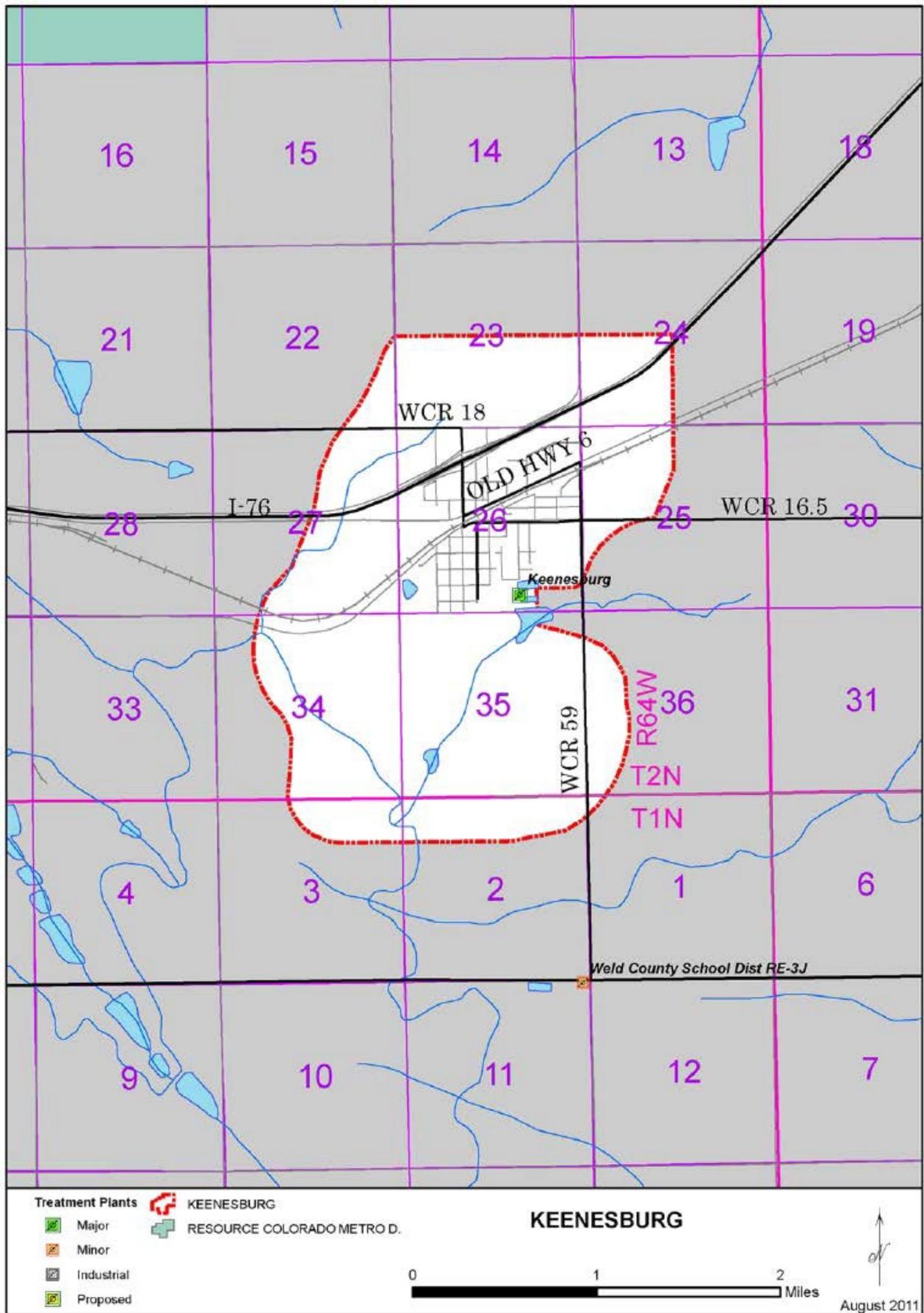
Capacities:

	Design Capacity	Existing load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.256	0.946	0.131	0.156	0.185	0.222	2033	>2035
Organic (lbs./day BOD ₅)	468	260	300	356	424	507	2027	2032

Biosolids treatment and disposal: Since the treatment facility consists of aerated lagoons, sludge removal will be infrequent (once every 5 to 10 years) and only take place if the ponds are drained and cleaned.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0041254.

Estimated 5-year construction needs: In 2010 the Town received Site Application approval for improvements to the existing lagoon facility. These improvements include the replacement of the shallow, aerated lagoons with a 3-step Advanced Integrated Pond System and a new intermediate lift station to lift wastewater from the fermentation basin into the new aeration basin. These improvements were completed in April, 2011. No improvements to the facility are anticipated from 2016 through 2020.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Kersey*

Utility Plan Approved: Unapproved

CDPS Permit #: CO-0021954

Permit Expires: 06/2021

Description of Treatment Facilities: Influent flow monitoring, grit removal, Sequencing Batch Reactor activated sludge process, UV disinfection.

Treatment Facility Location: SW ¼, SW ¼, Section 16, T5N, R64W

Discharge Location: COSPMS01b, Middle South Platte Segment 01, SW ¼, SW ¼, Section 16, T5N, R64W.

Stream Segment Classification:

COSPMS01b – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
2,101	2,132	2,220	2,300	2,400

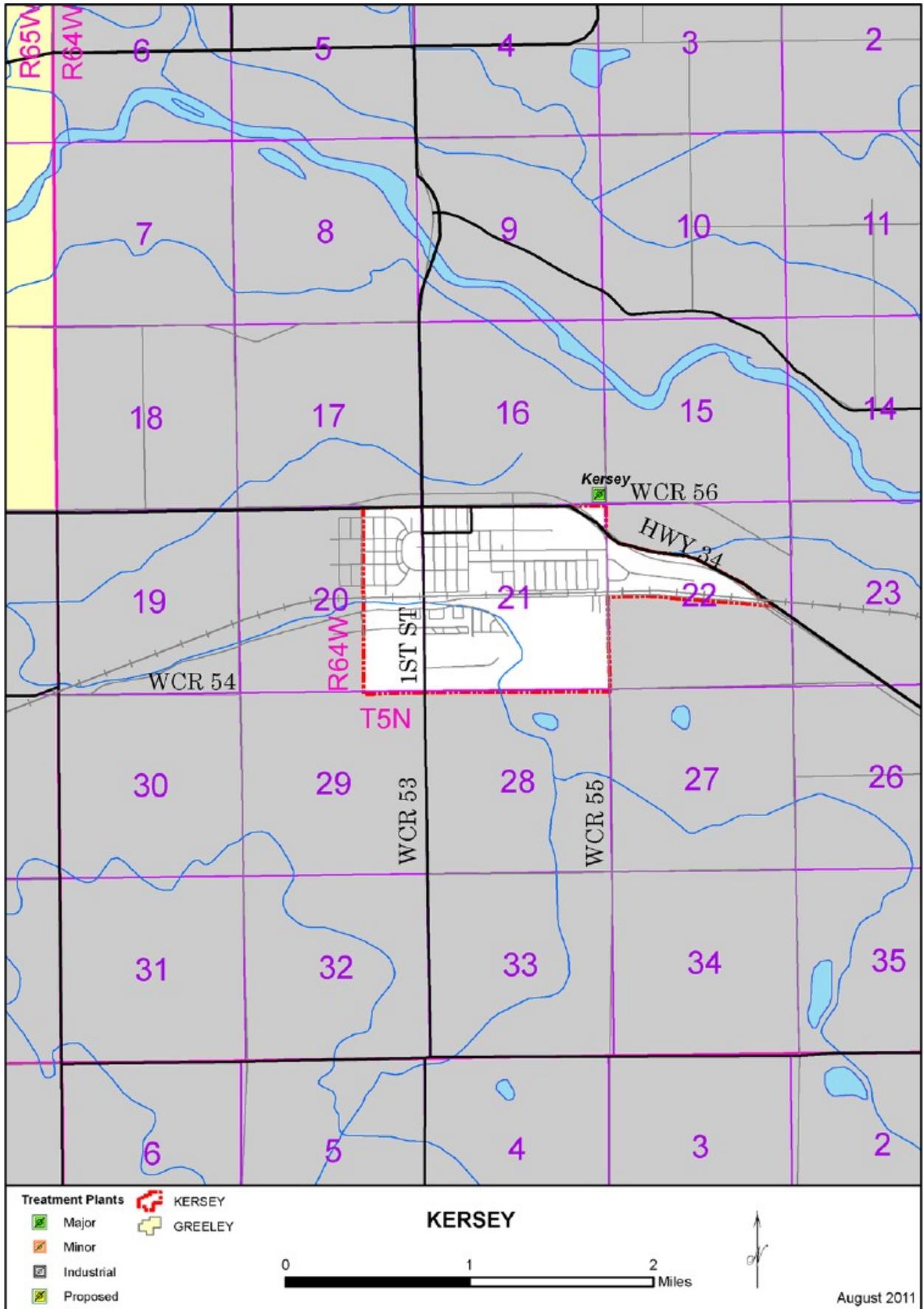
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.380	0.079	0.085	0.090	0.1	.11	2015-2020	2020-2025
Organic (lbs./day BOD ₅)	919	265	300	350	375	400	2015-2020	2020-2025

Biosolids treatment and disposal: Storage on site and land application.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0021954.

Estimated 5-year construction needs: The Town completed the construction of an activated sludge plant in 2006. This plant should provide the town with adequate treatment facilities into the foreseeable future.



NFRWQPA 2016 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of La Salle*

Utility Plan Approved: Unapproved

CDPS Permit #: COG-588000

Permit Expires: 5/31/2018

CDPS Facility #: COG-588058

Description of Treatment Facilities: Aerated lagoon flowing to a secondary aerated pond, chlorination, and dechlorination. An expansion lagoon is located directly to the east of the main lagoon for future expansion if needed.

Treatment Facility Location: SE ¼, SE ¼, Section 29, T5N, R65W

Discharge Location: COSPMS01b, Middle South Platte River Sub basin Segment 1b.

Stream Segment Classification:

COSPMS01b – Designation: Undesignated; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035	2040
2,025	2,800	3,000	3,400	3,843	4,369

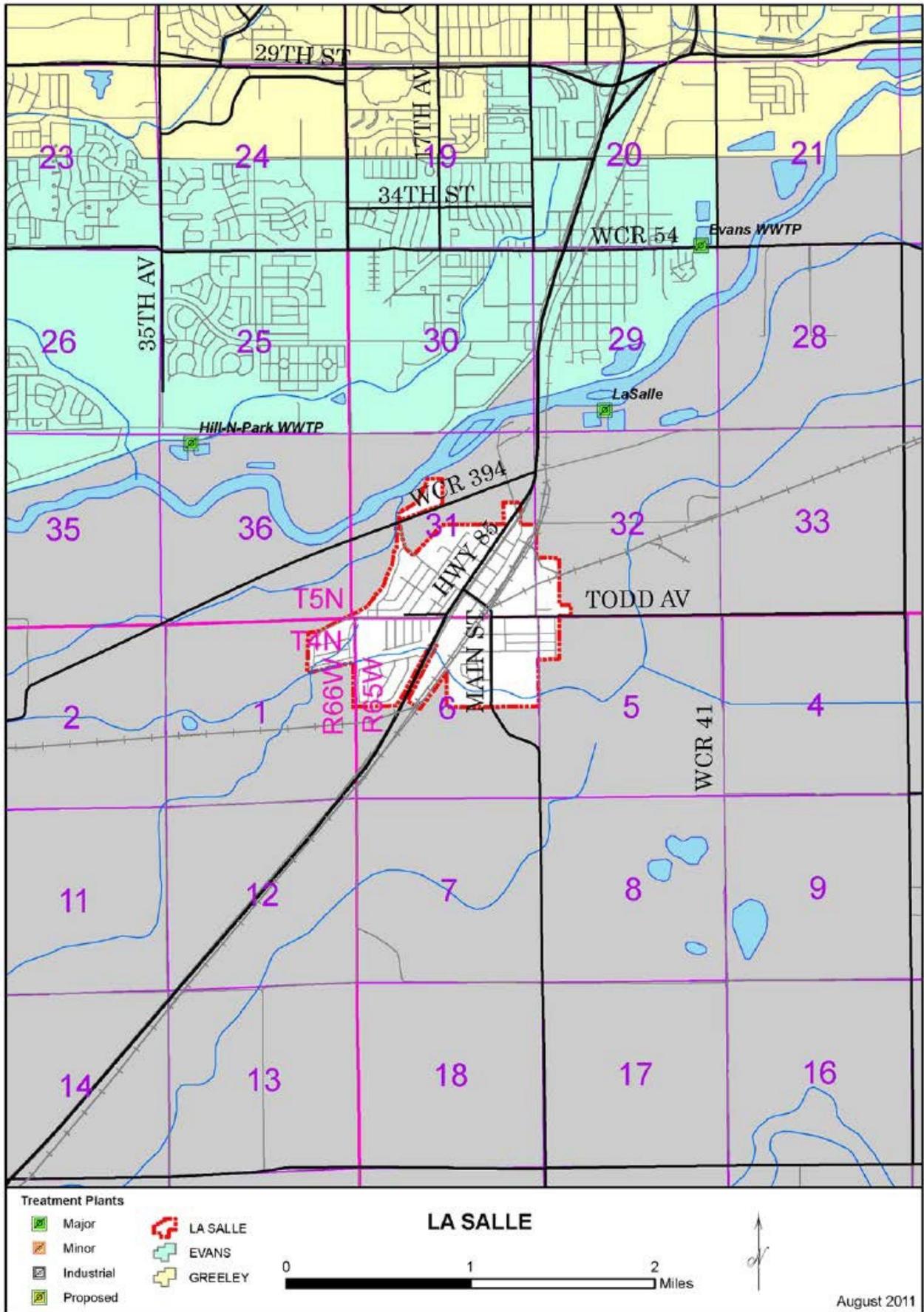
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	2040	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.46	0.131	0.180	0.193	0.2199	0.248	0.282	>2040	>2040
Organic (lbs/day BOD5)	1,841	494	683	732	829	938	1,066	>2040	>2040

Biosolids treatment and disposal: Sludge disposal will be needed at a later time from the aerated system.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-588058

Estimated 5-year construction needs: None



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Lochbuie*

Utility Plan Approved: Unapproved

CDPS Permit #: CO-0047198

Permit Expires: 8/31/2017 Administratively Extended

Description of Treatment Facilities: Extended aeration activated sludge plant with UV disinfection.

Treatment Facility Location: NW ¼, NW ¼, Section 29, T1N, R65W

Discharge Location: Lochbuie is permitted to discharge at two points along the Beebe Seep Canal – at the previous plant site located at the SE ¼, NW ¼, Section 31, T1N, R65W and also at the new plant site located at the NW ¼, NW ¼, Section 29, T1N, R65W.

Stream Segment Classification: Unclassified irrigation ditch.

Service Area Population:

Existing	2020	2025	2030	2035
13,500	15,500	18,500	21,800	25,000

Population includes Lochbuie and a portion of Bromley Park in Adams County.

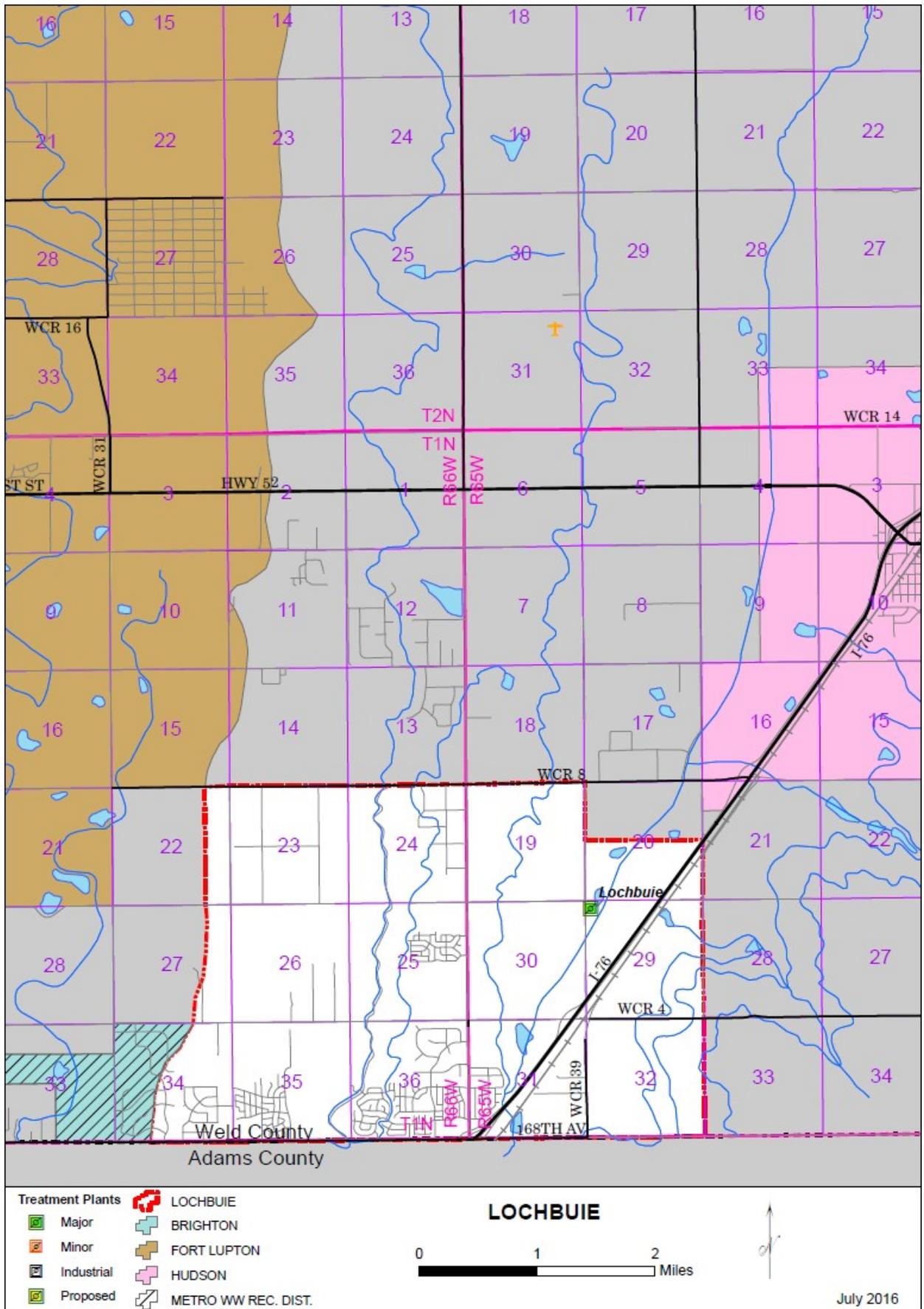
Capacities:

	Design Capacity	Existing Load	2015	2020	2025	2030	Year at 80% Design	Year at 95% Design
Flow (mgd)	2.0	1.05	1.00	1.5	2.0	2.2	2022	2025
Organic (lbs./day BOD ₅)	3,840	2,000	1,800	3,100	4,170	4,587	2020	2022

Biosolids treatment and disposal: Aerobic stabilization of biosolids, decanted and contract dewatered for land application.

Treatment level: Lochbuie is currently treating to water quality standards higher than permit requirements (nitrate and phosphate removal) per an agreement with FRICO, owner of the irrigation canal that Lochbuie discharges to.

Estimated 5-year construction needs: Upgrade to existing influent pump station, new grit removal system at headworks, new solids dewatering facility and potential upgrade to existing effluent UV system.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *City of Longmont*

Utility Plan Approved: On File, for reference only as the treatment facility is outside of NFRWQPA
Permit Expires: 11/30/2016

CDPS Permit #: CO-026671

Description of Treatment Facilities: Primary clarification, activated sludge with nitrification, secondary clarification, UV disinfection, anaerobic sludge digestion, sludge dewatering.

Treatment Facility Location: (Outside NFRWQPA planning area) N ½, NW ¼, Section 11, T2N, R69W

Discharge Location: (Outside NFRWQPA planning area) COSPSV03, Saint Vrain River Segment 03 in the NW ¼, Section 11, T2N, R69W.

Stream Segment Classification:

COSPSV03 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 1, Recreation E

Service Area Population:

Existing	2020	2025	2030	2035
94,800	97,890	106,000	113,000	116,076

Capacities:

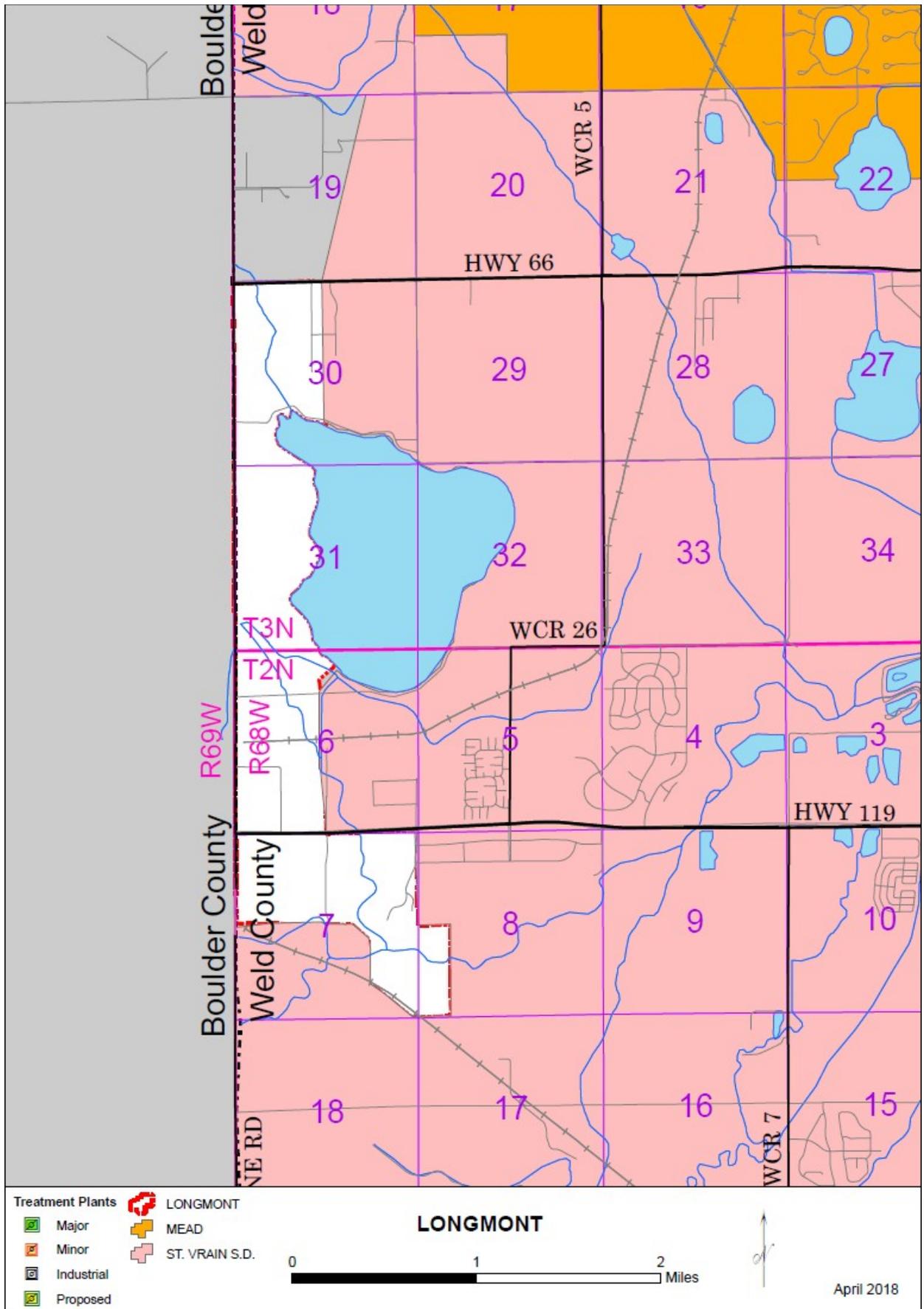
	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	13	7.0	10.5	11.2	12.0	12.0	>2025	>2025
Organic (lbs./day BOD ₅)	31,770	18,055	20,000	22,000	23,000	29,300	>2025	>2025

Biosolids treatment and disposal: Anaerobic digestion, dewatering and land application are used to treat and beneficially reuse biosolids.

Treatment level: The degree of treatment required and effluent limitations are contained in Permit #CO-026671. Ammonia limits were determined from an AMMTOX modeling analysis for the St. Vrain River basin.

Estimated 5-year construction needs: Five-year Capital Improvements Program and 10-year projection of needs include the following facility improvements:

- New nutrient removal facilities: \$30 million
- Methane reuse facilities to provide renewable fuel: \$7 million
- Additional anaerobic digester and dewatering expansion: \$10 million



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *City of Loveland*

Utility Plan Approved: September-2010

CDPS Permit #: CO-0026701

Permit Expires: 08/31/2020

Description of Treatment Facilities:

Preliminary Treatment: Channel Monster Grinder and Auger Pista Grit Concentrator Continuous Influent Flow metering

Primary Treatment Facilities: Two Primary Clarifiers

Secondary Treatment: Step Feed Activated Sludge System

Disinfection: Ultraviolet Light Disinfection

Solids Treatment: Rotary Drum WAS Thickening
Anaerobic Digestion

Current Plant Expansion Project

Site Application Approval No: 4666/ES.SA.03259 approved 6/28/2017

New System Design will be as follows:

Maximum Month Average Daily Flow Capacity – 12.0 million gallons per day (MGD)

Peak Hourly Flow Capacity - 20.3 million gallons per day (MGD)

Organic Loading Capacity (max. month average) - 27,150 lbs. BOD5/day

This approval also addresses the following facility modifications/improvements:

- Channel Monster Grinders replaced with Step Screens
- Addition of two (2) new anaerobic digesters
- Addition of a sludge holding tank
- Addition of a ferric chloride feed system
- Installation of appurtenances, including heating and gas handling equipment
- Various improvements to the piping, valves, channels, and flow control associated with the aeration basin pump station and UV disinfection system.

Other Recent Site Applications: Southside Lift Station & Forcemain (May 2016) & Interchange Lift Station (Extended in March 2016)

Treatment Facility Location: SE ¼, Section 19, T5N, R68W

Discharge Location: COSPBT04c, Big Thompson River Segment 4c

Stream Segment Classification:

COSPBT04c – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E (5/1 – 10/15), Recreation N (10/16 – 4/30)

Service Area Population:

Existing	2020	2025	2030	2035
72,794	82,924	94,463	107,608	122,581

Capacities:

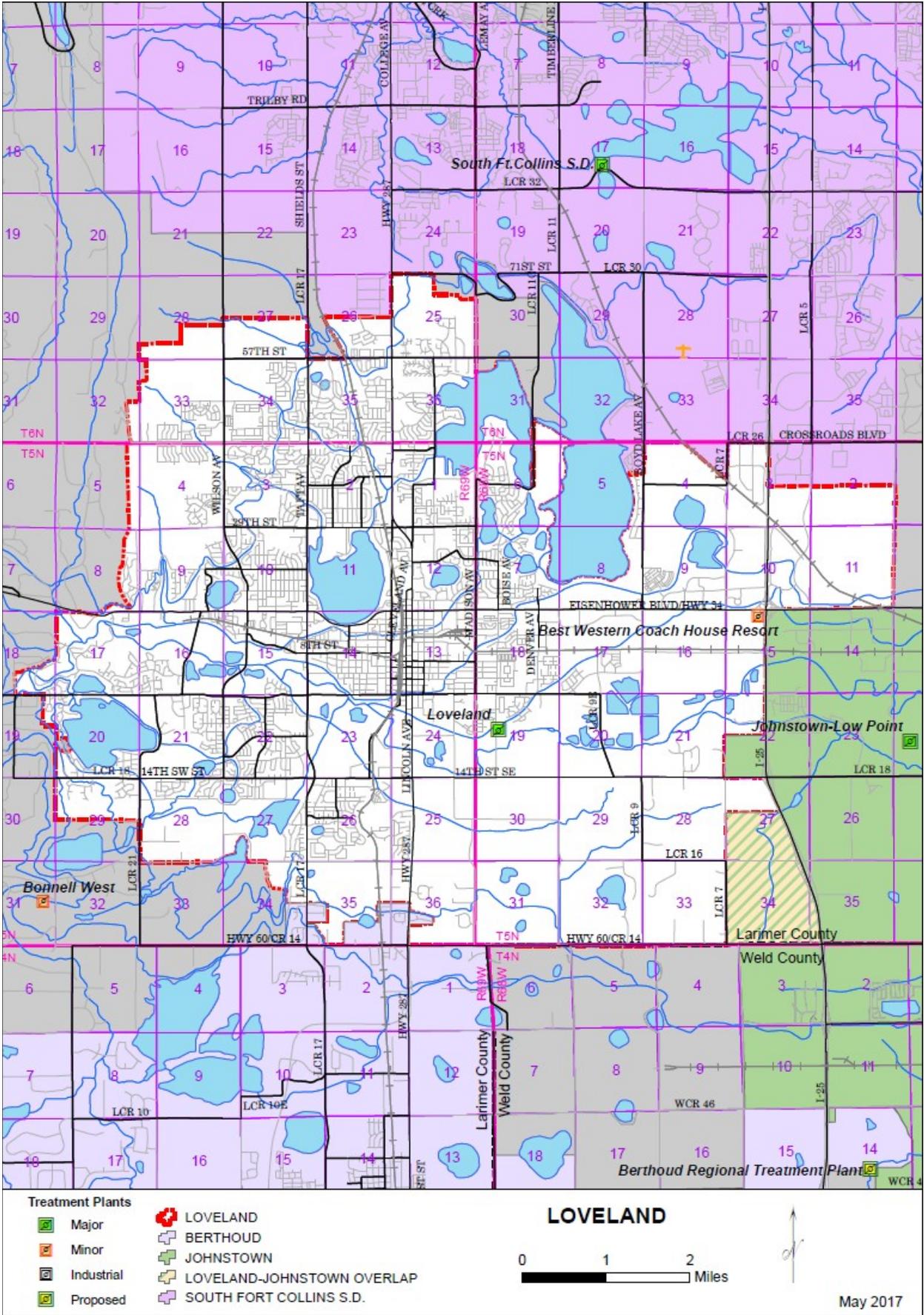
	Current Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	10	6.2	9.0	9.3	10.0	10.1	2018	2027
Organic (lbs/day BOD ₅)	20,236	15,296	19,000	20,500	21,700	26,000	2017	2019

Biosolids treatment and disposal: The biosolids treatment and disposal consists of Rotary Drum Thickening of the waste activated sludge (WAS), anaerobic digestion of primary and secondary sludges and contracted liquid sludge disposal on agricultural lands.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0026701.

Estimated 5-year construction needs: Capital improvements over the next 5 years will include projects associated with the following:

- New Digester Complex (underway)
- Nutrient removal, Aeration Basin and Final Clarifier improvements (underway)
- Hydraulic and Organic Design Limits Increase (underway)
- New Water Quality Laboratory Building
- Existing Digester(s) Complex Upgrades
- Primary Clarifier Odor Control



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Mead*

Utility Plan Approved: Conditional on 11/2006

CDPS Permit #: Main WWTF CO-0046876

Permit Expires: 4/30/2023

CDPS Permit #: Lake Thomas CO-0046868

Permit Expires: Termination Pending

Description of Treatment Facilities:

Main WWTF: Headworks with screening and grit removal, flow measurement, sequencing batch reactor, flow equalization, aerobic digestion, and UV disinfection.

Lake Thomas WWTF: Single un-aerated lagoon cell. System does not discharge to surface water. NOTE: The Lake Thomas WWTF filed to terminate the permit on November 6, 2018.

Treatment Facility Location:

Main WWTF: NE ¼, NW ¼, Section 14, T3N, R68W

Lake Thomas WWTF: SE ¼, SW ¼, Section 13, T3N, R68W

Discharge Location:

Main WWTF: COSPSV06, Unnamed tributary to St. Vrain Creek

Lake Thomas: COSPSV06, Unnamed tributary to Lake Thomas. *In July 2018, the Lake Thomas WWTF will complete improvements to eliminate groundwater and surface water discharge and will terminate its existing discharge permit. The system will function as a wastewater containment cell with an operation plan to pump and haul stored wastewater to the Mead WWTF. As noted above, Mead filed with the division to terminate the permit on November 6, 2018.*

Stream Segment Classification:

COSPSV06 – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E

Service Area Population:

Existing	2020	2025	2030	2035
4,386	4,785	5,335	5,948	6,632

Note: Approximately 1,319 people (446 homes) are utilizing septic systems for their wastewater disposal.

Capacities:

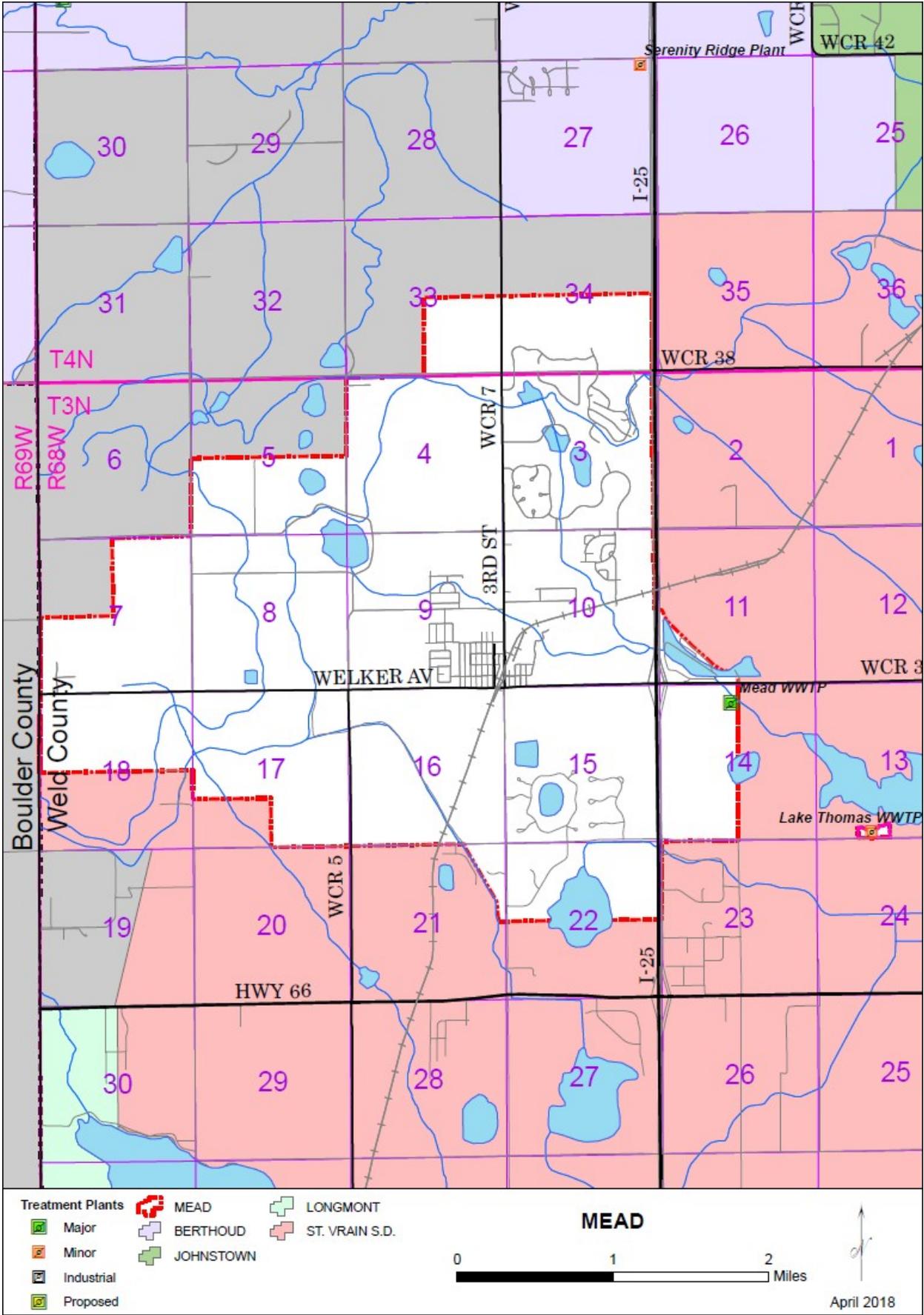
		Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Main	Flow (mgd)	0.499	0.223	0.245	0.274	0.307	0.343	2041	2050
	Organic (lbs/day BOD ₅)	1,286	439	496	574	622	760	2046	2053
Lake Thomas	Flow (mgd)	0.012	0.002	0*	0*	0*	0*	NA	NA
	Organic (lbs/day BOD ₅)	24	3.4						

*The Lake Thomas plant receives minimal flows and has not discharged since 1998. *In July 2018, the LTWWTF will complete improvements that will eliminate surface and groundwater discharges. Existing discharge permit will be terminated.*

Biosolids treatment and disposal: Main facility: Aerobic digestion with contract land application.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0046876 for the Main WWTF and Permit # CO-0046868 for the Lake Thomas WWTF (*Lake Thomas Permit will be terminated in July 2018*)

Estimated 5-year construction needs: The Town's 2017 Wastewater Master Plan identified approximately \$1,000,000 of sewer capital improvements over the next 5 years. Major projects include the Lake Thomas WWTF improvements, the North Creek Lift Station (NCLS) elimination project, and sanitary sewer replacement and rehabilitation projects in the downtown area.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Metro Wastewater Reclamation District* Utility Plan Approved: September-2010

CDPS Permit #: CO0048959 Permit Expires: April 30, 2021

Description of Treatment Facilities: Northern Treatment Plant (NTP): Influent Pumping, screening, grit removal, screening/grit washing and compacting, primary clarification, activated sludge treatment with biological nutrient removal, secondary clarification, flocculation/sedimentation, deep-bed filtration, and ultraviolet (UV) disinfection.

Treatment Facility Location: NE ¼, SW ¼, Section 31, T1N, R66W.

Discharge Location: COSPUS15, Upper South Platte River Segment 15.

Stream Segment Classification:

COSPUS15 – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population Projections (Population Equivalent):

Existing	2020	2025	2030	2035
78,900	190,500	225,000	255,500	209,200

Source: Metro Wastewater Reclamation District, 2013 Facility Plan Robert W. Hite Treatment Facility, March 2014

Design Capacities and Maximum Month Flow and Loading Projections:

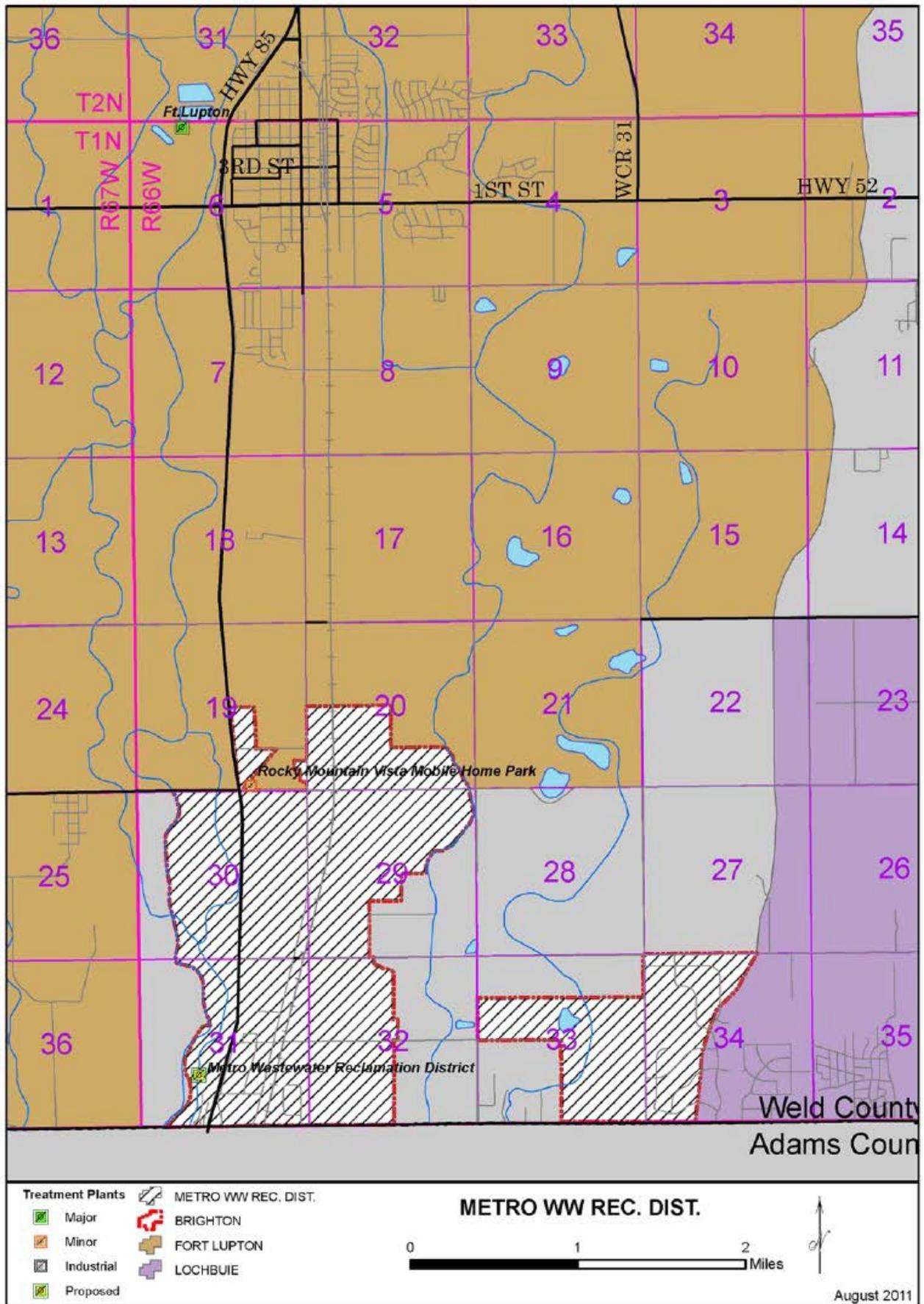
	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	28.8	4.3	10.9	13.1	14.7	15.7	2040	2046
Organic (lbs/day BOD ₅)	55,300	9,181	20,000	25,050	28,200	35,000	2040	2045

Source: Metro Wastewater Reclamation District Northern Treatment Plant Wastewater Utility Plan, June 2010

Biosolids treatment and disposal: Gravity thickening and fermentation of primary sludge (UFAT), rotating drum thickening of waste activated sludge, pre-and post-digestion storage, anaerobic digestion, biosolids dewatering, and land application or transport to private composter. Cogeneration for beneficial use of digester gas.

Treatment level: The NTP was designed to meet effluent limits listed in CDPS Permit CO0048959 issued by the Colorado Department of Public Health and Environment (CDPHE) on March 25, 2016.

Estimated 5-year construction needs: The Metro District does not anticipate NTP-associated construction in the next 5 years.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Milliken*

Utility Plan Approved: May-2016

CDPS Permit #: CO-0042528

Permit Expires: 07-31-2020

Description of Treatment Facilities: Extended aeration activated sludge treatment with secondary clarification and UV disinfection.

Treatment Facility Location: SW ¼, SE ¼, Section 1, T4N, R67W

Discharge Location: COSPBT05, Big Thompson River, SW ¼, SE ¼, Section 1, T4N, R67W.

Stream Segment Classification:

COSPBT05 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation N (10/16 to 4/30), Recreation P (5/1 to 10/15)

Service Area Population:

Existing	2020	2025	2030	2035
7200	7995	10394	13513	17568

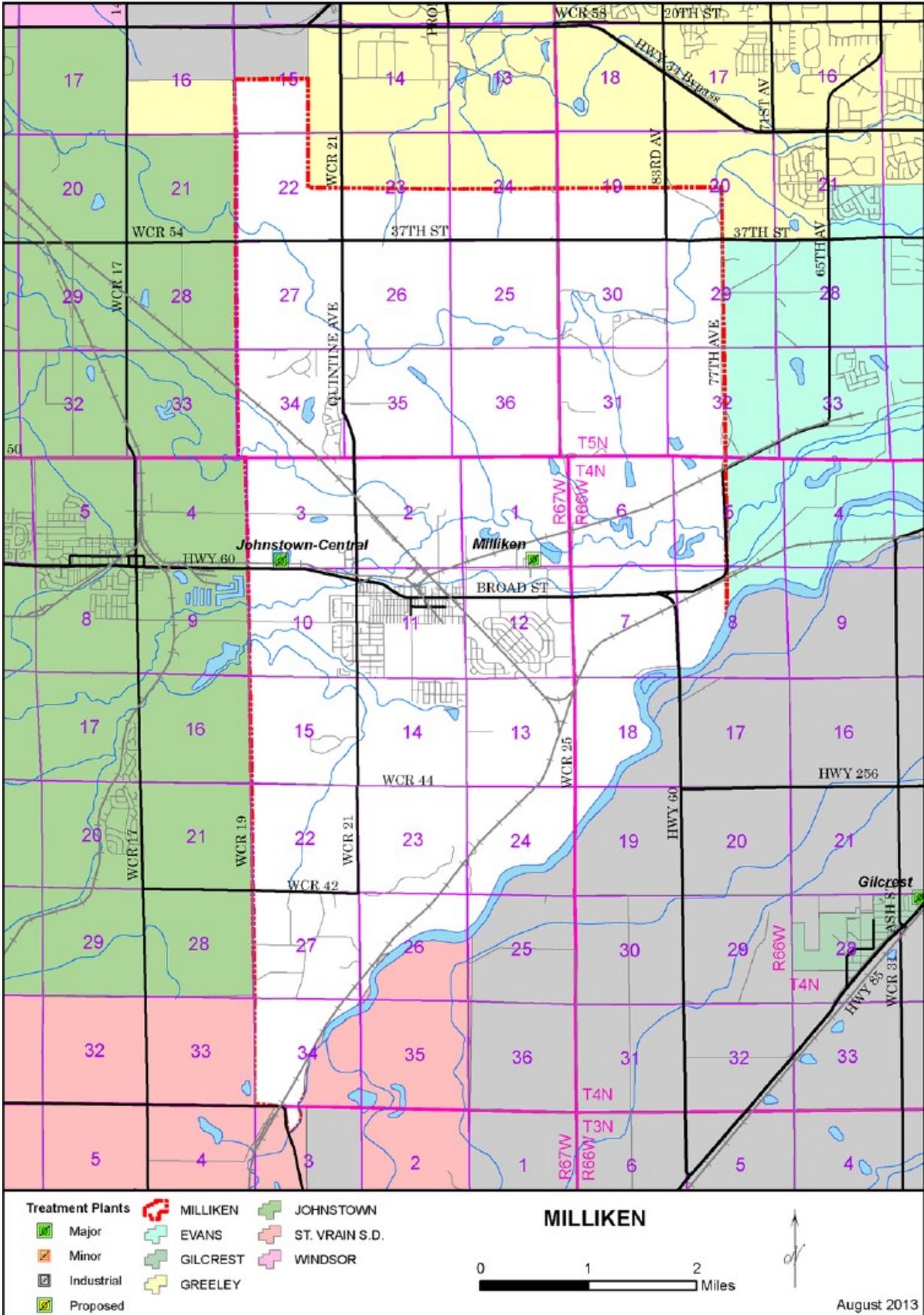
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.7	0.512	0.568	0.739	0.961	1.25	2018	2021
Organic (lbs/day BOD ₅)	2,000	1433	1,600	2080	2700	3500	2018	2021

Biosolids treatment and disposal: Four (4) Aerobic digesters and centrifuge dewatering. Composting off site.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0042528.

Estimated 5-year construction needs. Wastewater treatment plant expansion.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *City of Northglenn*

Utility Plan Approved: July-2012

CDPS Permit #: CO-0036757

Permit Expires: 03/31/2015 – Administratively Extended

Description of Treatment Facilities: Preliminary treatment (Headworks) followed by BNR-activated sludge treatment facility, secondary clarification, UV disinfection, and an effluent holding reservoir.

Treatment Facility Location: W ½, Section 36, T1N, R68W

Discharge Location(s): Bull Reservoir, Bull Canal, Thompson Ditch, or Big Dry Creek – COSPBD01.

Stream Segment Classification:

COSPBD01 – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation P

Service Area Population:

Existing	2020	2025	2030	2035
38892	42,029	44,212	46,638	48,959

Note: Total projections within the WUSA based on IGA constrained scenario. Existing and future projections do not include population projections within the Thornton Enclaves.

Capacities:

	Permitted Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Ave. Flow (mgd)	6.5	3.2	4.35	4.61	4.88	5.14	>2035	>2035
Organic (lbs./day BOD ₅)	12,650	5940	8,849	9,298	9,830	10,308	2035	>2035

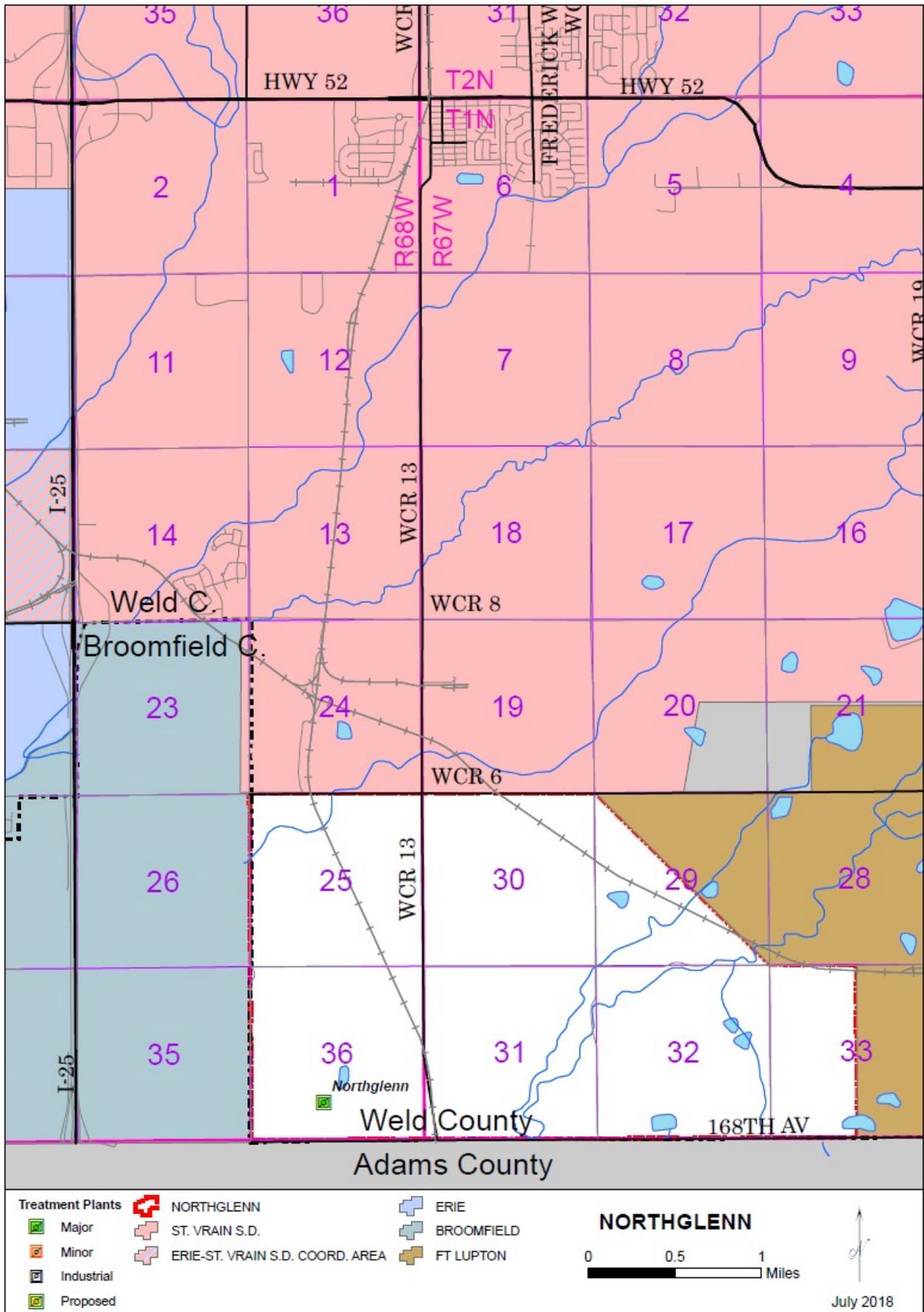
Note: Projections based on IGA constrained scenario.

Biosolids treatment and disposal: Biosolids are pumped to the East Biosolids Lagoon for storage and stabilization. They are removed from the lagoon once or twice a year and applied on agricultural land. Northglenn currently meets Class B biosolids requirements.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0036757.

Estimated 5-year construction needs: The following capital improvements are identified for the next 5 years:

- Lift Station A and Force Main improvements.
- Addition of a new UV bank and updating existing UV equipment. To be completed in 2019.
- Infiltration and inflow study.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Pierce*

Utility Plan Approved: Unapproved

CDPS Permit #: COX-631000

Permit Expires: 4/30/2012

CDPS Certification #: COX-631042

Administrative Extension

Description of Treatment Facilities: Influent lift station, Sequencing Batch Reactor, UV disinfection (chlorine backup disinfection).

Treatment Facility Location: NW ¼, SW ¼, Section 36, T8N, R66W

Discharge Location: Infiltration beds

Stream Segment Classification: NA

Service Area Population:

Existing	2020	2025	2030	2035
1,067	1,100	1,200	1,300	1,400

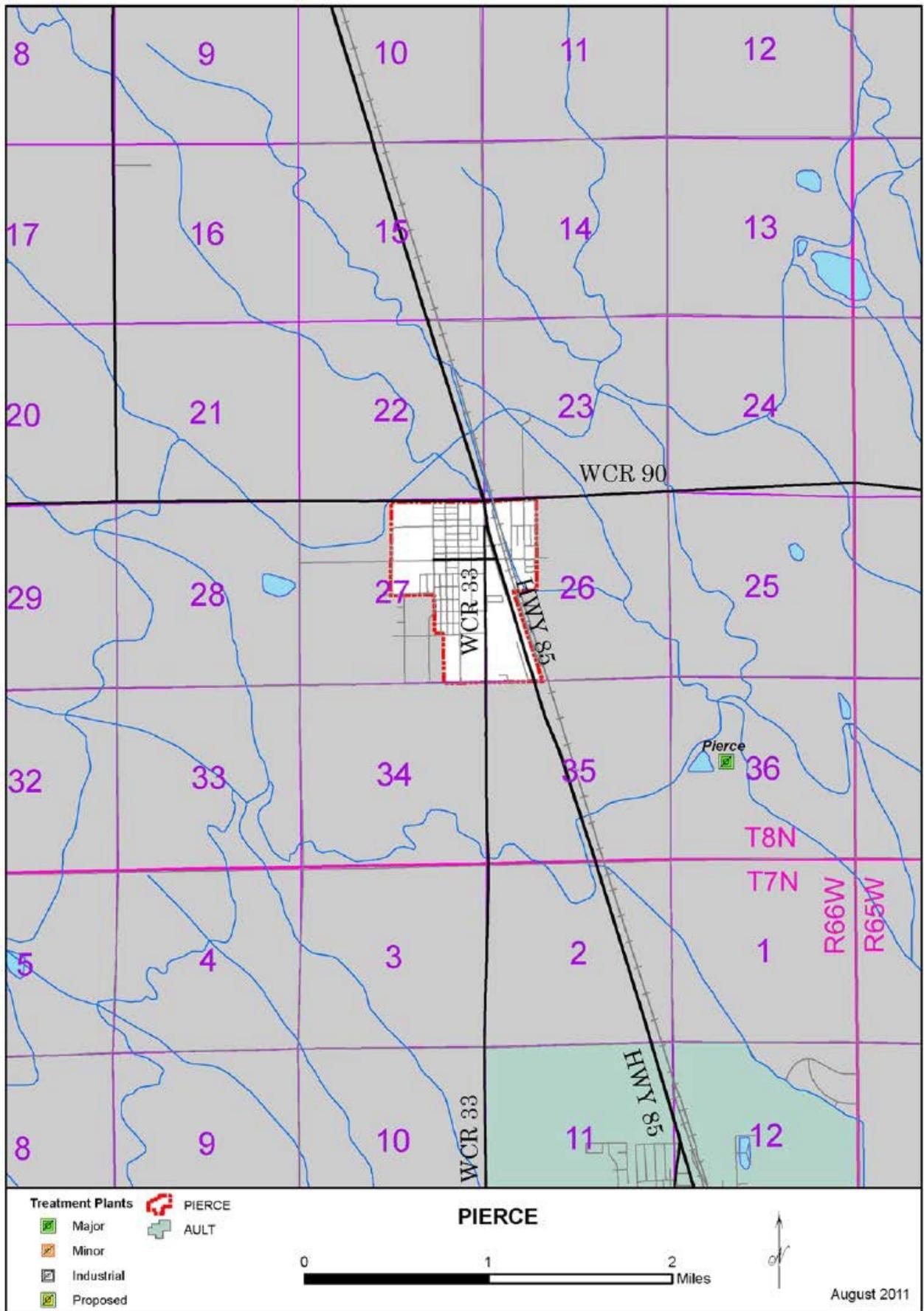
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.18	0.069	0.075	0.08	0.9	.1	2019	2023
Organic (lbs/day BOD ₅)	495	171	200	225	250	300	2019	2023

Biosolids treatment and disposal: NA

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COX-631042. Compliance limitations provided in Section V of General Permit COX-631000 and Section D of Permit Certification # COX-631042.

Estimated 5-year construction needs: The Towns waste water treatment facility is a newly constructed system and replaces the previous lagoon system. The design capacity of the new facility is sufficient to handle the wastewater needs through 2025.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Platteville*

Utility Plan Approved: December-2010

CDPS Permit #: CO-0040355

Permit Expires: 4/30/2023

Description of Treatment Facilities: Complete mix aerated pond followed by a partially mixed aerated lagoon, constructed wetland, chlorination and dechlorination.

Treatment Facility Location: NE ¼, SE ¼, Section 13, T3N, R67W

Discharge Location: COSPMS01a, Middle South Platte River Segment 1, north side of WCR 32 ½ in the SE ¼, NE ¼, Section 13, T3N, R67W.

Stream Segment Classification:

COSPMS01a – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
2956	3,151	3,498	3,882	4,310

Capacities:

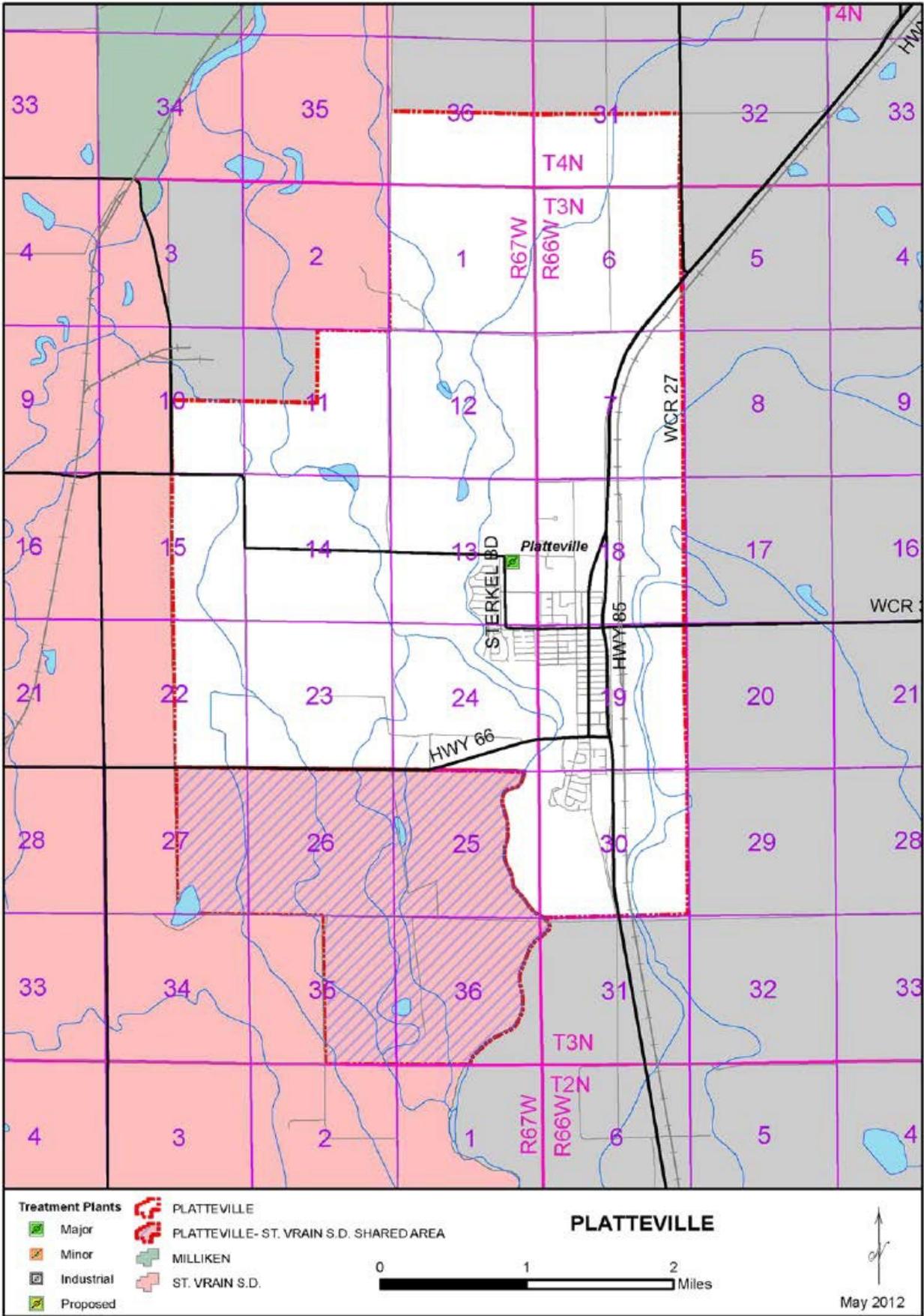
	Design Capacity	Existing Load	2020*	2025*	2030*	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.348	0.150	0.160	0.177	0.197	0.219	2046	2050
Organic (lbs/day BOD ₅)	871	400	426	473	525	583	>2043	>2047

*Projections represent residential flows.

Biosolids treatment and disposal: The town does not have biosolids treatment facilities. Removal of biosolids, when necessary, will be done by a licensed hauler.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0040355.

Estimated 5-year construction needs: In 2010 the Town completed a Utility Plan that outlines the approach the town will take to address future needs. It is anticipated that the Utility Plan will have to be amended in late 2018 or early 2019 to better reflect some revised growth projections and specify the type of future treatment options to be pursued. CDPHE issued a new permit in May 2018 with a compliance schedule since the lagoon system will not meet the new effluent ammonia and TIN permit limits without some additional mechanical treatment or modification. The Town will then proceed with a Site Application for a proposed mechanical facility to meet the compliance schedule deadline of 12/31/2022.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: **Resource Colorado Water and Sanitation Metropolitan District**

Utility Plan Amendment: 9/2008

CDPS Permit #: NA

Permit Expires: NA

Description of Treatment Facilities: The utility plan proposed the construction of a 0.30 mgd SBR facility which was never accomplished.

Treatment Facility Location: The proposed facility will be located in the NW ¼, NW ¼, Section 32, T3N, R64W.

Discharge Location: COSPMS05a, Box Elder Creek, Segment 5a of the Middle South Platte River Basin, in the NW ¼, NE ¼, Section 31, T3N, R64W.

Stream Segment Classification:

COSPMS05a – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation N, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
0	1,195	7,098	17,462	29,062

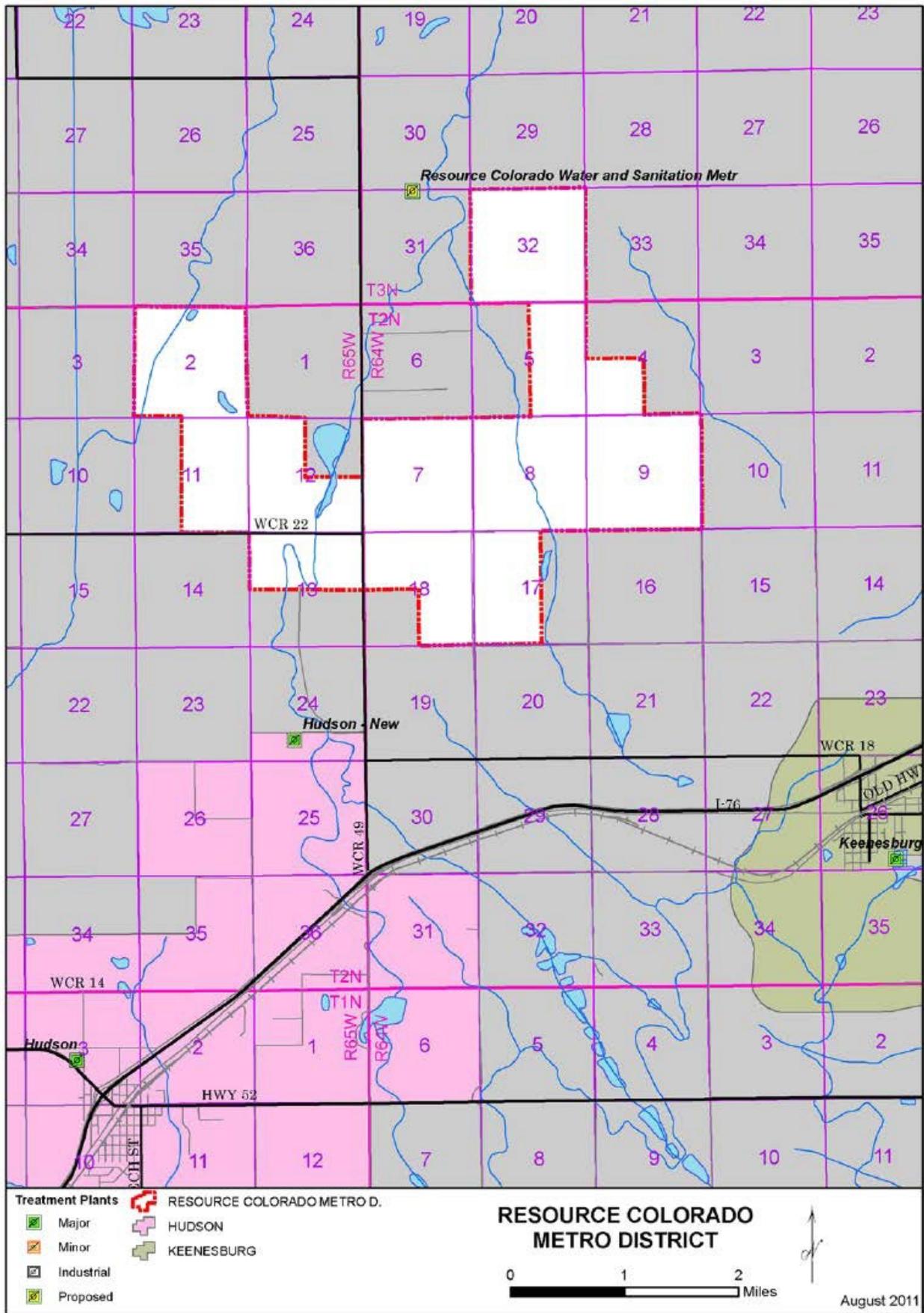
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.3	0	0.11	0.63	1.56	2.58	2016	2017
Organic (lbs./day BOD ₅)	976	0	275	1,576	3,903	6,435	2016	2017

Biosolids treatment and disposal: The first phase (0.30) facility will not dewater biosolids. Wet solids will be hauled off-site by a biosolids hauler/applicator for beneficial reuse at a permitted facility/site. As the treatment plant expands, the waste biosolids will be thickened and dewatered and then hauled off-site for beneficial reuse.

Treatment level: RCWSMD has only received Preliminary Effluent Limits (BOD, TSS, Fecal, E. coli, and Total Ammonia) from the CDPHE. Reuse will be used for irrigation of residential lawns and must meet Class 3 standards as listed in Regulation 84.

Estimated 5-year construction needs: District Board is in “inactive” status and will remain so until they deem necessary to re-activate the District. Until then, there are no plans for construction.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *St. Vrain Sanitation District* Utility Plan Approved: April-2012

CDPS Permit #: CO-0041700 Permit Expires: Administratively Extended

Description of Treatment Facilities: In mid-2013, the District put the new facility in operation. The new system consists of:

- A headworks with pumping station, screening and grit removal.
- Two 3 mgd capacity deep-basin oxidation ditches
- Two secondary clarifiers
- Ultraviolet light (UV) disinfection system
- An outfall pipe with direct discharge to St. Vrain Creek
- An ATAD biosolids treatment system

Treatment Facility Location: NW ¼, SE ¼, Section 31, T3N, R67W

Discharge Location: Upon startup of new facility discharge will be to St. Vrain Creek Segment 3, COSPSV03.

Stream Segment Classification:

COSPSV03 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 1, Recreation E

Service Area Population: estimated population equivalents

Existing	2023	2028	2033	2038
33,000	37,000	41,000	45,000	48,000

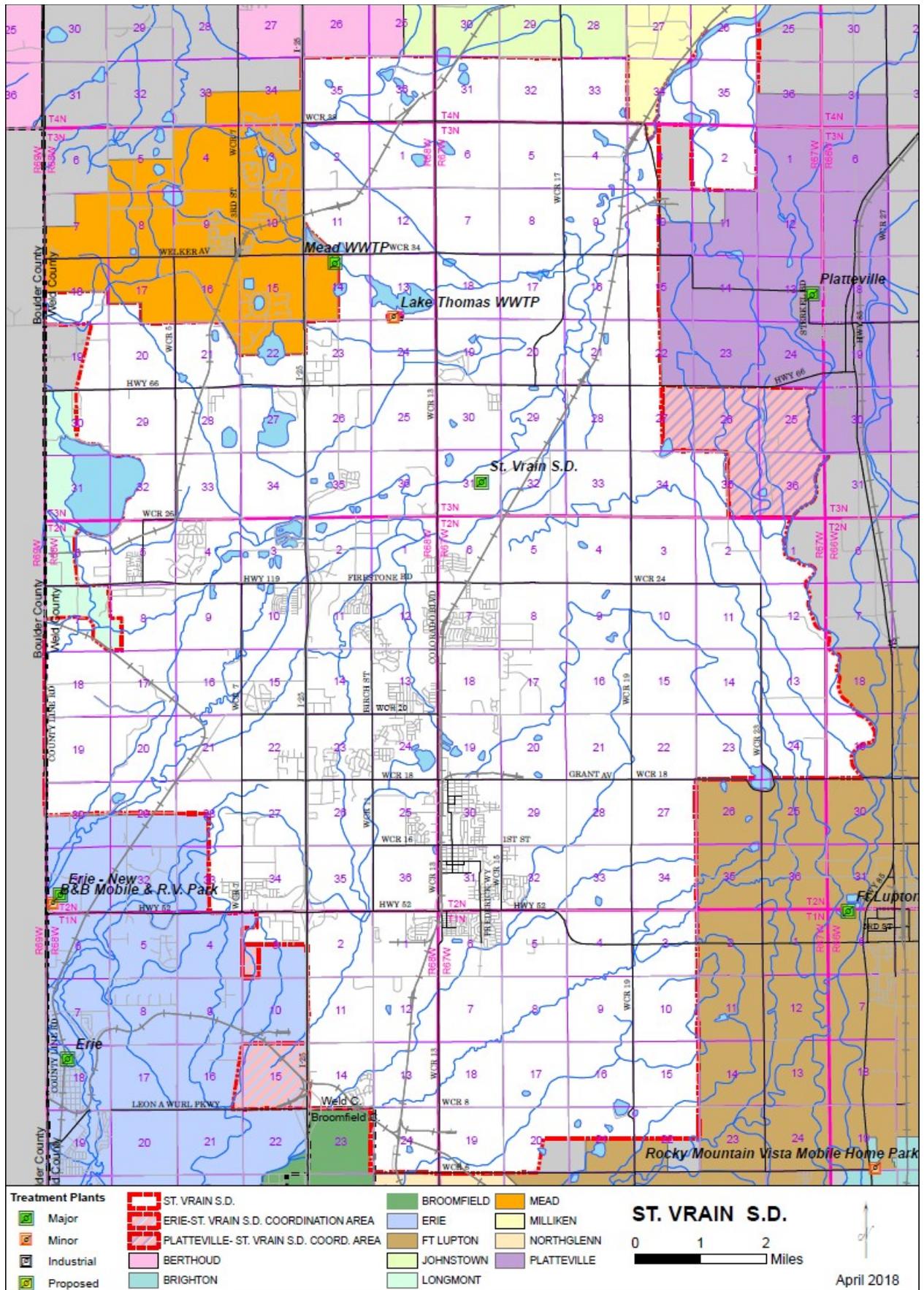
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	4.8	2.8	3.40	4.80	5.80	6.90	2032	2038
AADF	6.0	3.00	4.25	6.00	7.25	8.63		
MMDF								
Organic (lbs./day BOD ₅)	8,500	6,200	6,800	8,600	10,000	11,700	2028	2033
Avg. Ann. Max. Month	11,540	8,000	9,200	10,000	11,700	13,700		

Note: 2010 PEL document based on 10 year “Maximum Month” design flow of 6.0 MGD.

Biosolids treatment and disposal: Biosolids treatment will be accomplished using an Auto-thermal Aerobic Digester (ATAD). Biosolids are digested for the required time period to meet stabilization requirements. Once the solids are stabilized they are dewatered and land applied.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0041700
Estimated 5-year construction needs: Future collection system improvements and future plant expansions are outlined in the Utility Plan approved in January 2012.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Severance*

Utility Plan Approved: December-2010

Severance lagoon facility CDPS Permit#: COG-0589009

Permit Expires: 9/30/2018

Saddler Ridge Metro Dist. (SRMD) CDPS Permit#: COG-589107

Permit Expires: 9/30/2018

Description of Treatment Facilities: Severance lagoon facility: Gravity Grit Chamber; Aerated ponds followed by a stabilization pond followed by chlorination. SRMD facility: Equalization basin, anoxic basin, aerobic basin, Membrane bioreactor (MBR), and UV disinfection.

Treatment Facility Location: Severance lagoon facility: SE ¼, Section 2, T6N, R67W. SRMD facility: NE ¼, SE ¼, Section 9, T7N, R67W.

Discharge Location: Both facilities discharge to COSPCP13a (tributaries to the Cache la Poudre River). Severance lagoon facility: John Law Ditch, SE ¼, Section 2, R6N, R67W. SRMD facility: Tributary to the Black Hollow Slough, SE ¼, Section 9, T7N, R67W.

Stream Segment Classification:

COSPCP13a – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
3,350	4,537	5,562	6,567	7,582

Capacities:

	Design Capacity Lagoon	Design Capacity SRMD	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.155	0.05	0.1383	0.318	0.389	0.460	0.531	See note	See note
Organic (lbs./day BOD ₅)	388	100	345	795	973	1,151	1,329	See note	See note

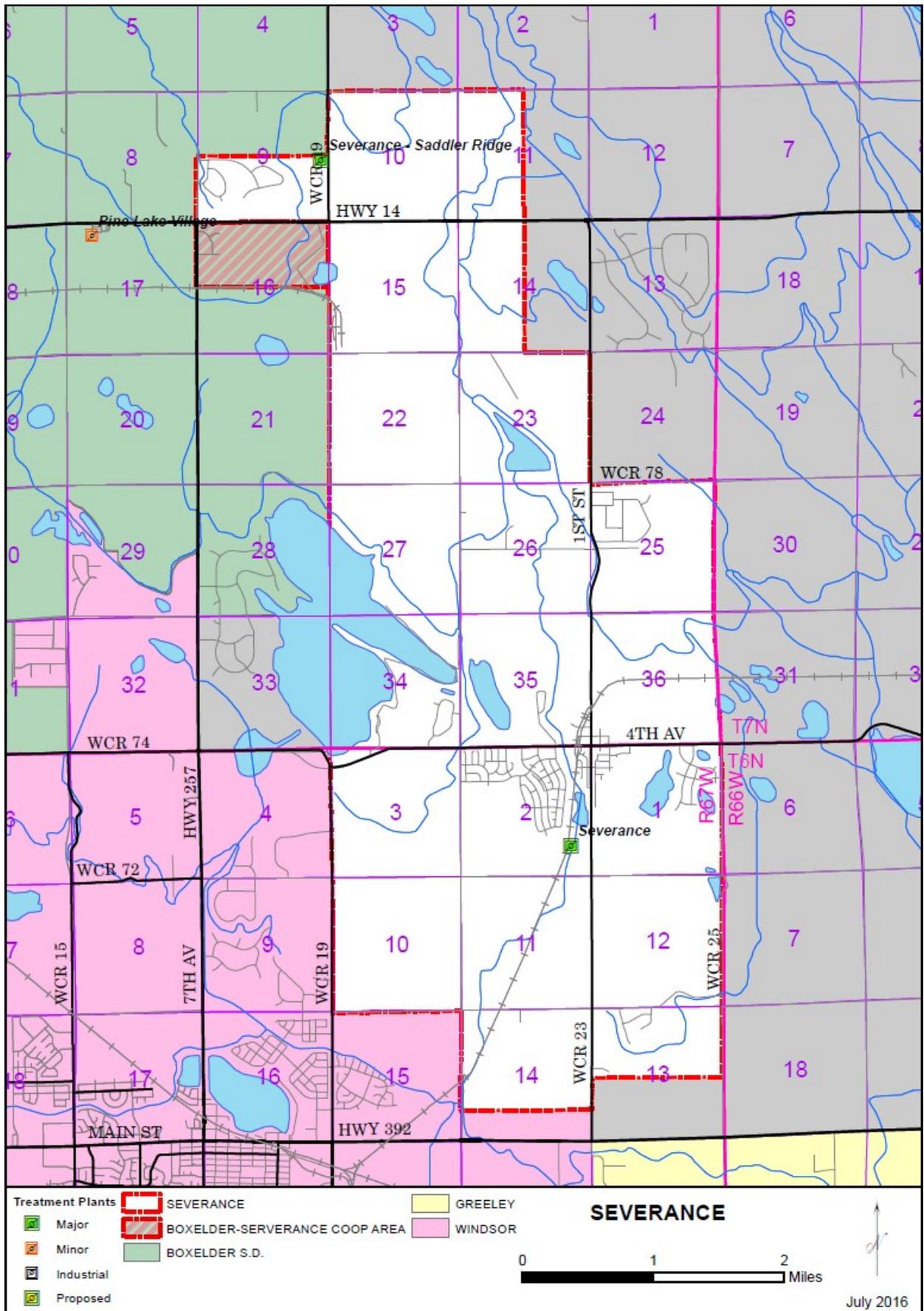
Note: An additional 1 mgd of capacity is available to the town through the Windsor East Side Trunk Sewer. The existing loads are based on averages for 2017 and include 21,800 gpd and 54 lbs/day going to Windsor.

Biosolids treatment and disposal: Removal of bio-solids, when necessary from the lagoon facility, will be done by a licensed hauler. The SRMD facility will also utilize a licensed hauler for removal and land application.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG- 0589009 for the lagoon facility and Permit #COG-589107 for the SRMD facility.

Estimated 5-year construction needs: The Town has signed an agreement with the Town of Windsor to treat wastewater from Severance in the future. As the Severance lagoon facility nears capacity, the Town will begin diverting flow into the trunk sewer which will be treated at the Windsor wastewater treatment facility. Presently users downstream of the Severance plant are flowing to the trunk sewer to Windsor.

Once the SRMD facility reaches 80% capacity, planning will begin for an onsite expansion to Phase II. As development warrants, a sewer collection pipeline will eventually be constructed from the existing Town lagoon system northward and ultimately to the SRMD. The length and timing of this pipeline will be development driven.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *South Ft. Collins Sanitation District*

Utility Plan Approved: March-2018

CDPS Permit #: CO-0020737

Permit Expires: 1/31/2018

Description of Treatment Facilities: Mechanical bar screens, dual vortex grit removal, influent pump station, Orbal oxidation ditch, secondary clarifiers, effluent filters, UV disinfection, and sludge thickening and dewatering of biosolids.

Treatment Facility Location: SW ¼, Section 17, T6N, R68W

Discharge Location: COSPCP22, Fossil Creek Reservoir in the SE ¼, Section 17, T6N, R68W.

Stream Segment Classification:

COSPCP22 – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E

Service Area Population:

Existing	2020	2025	2030	2035
44,257	49,593	60,352	73,341	85,805

Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	4.5	2.99	3.78	4.60	5.59	6.54	2020	2024
Organic (lbs/day BOD ₅)	12,800	7,000	8,197	9,975	12,121	14,181	2028	>2031

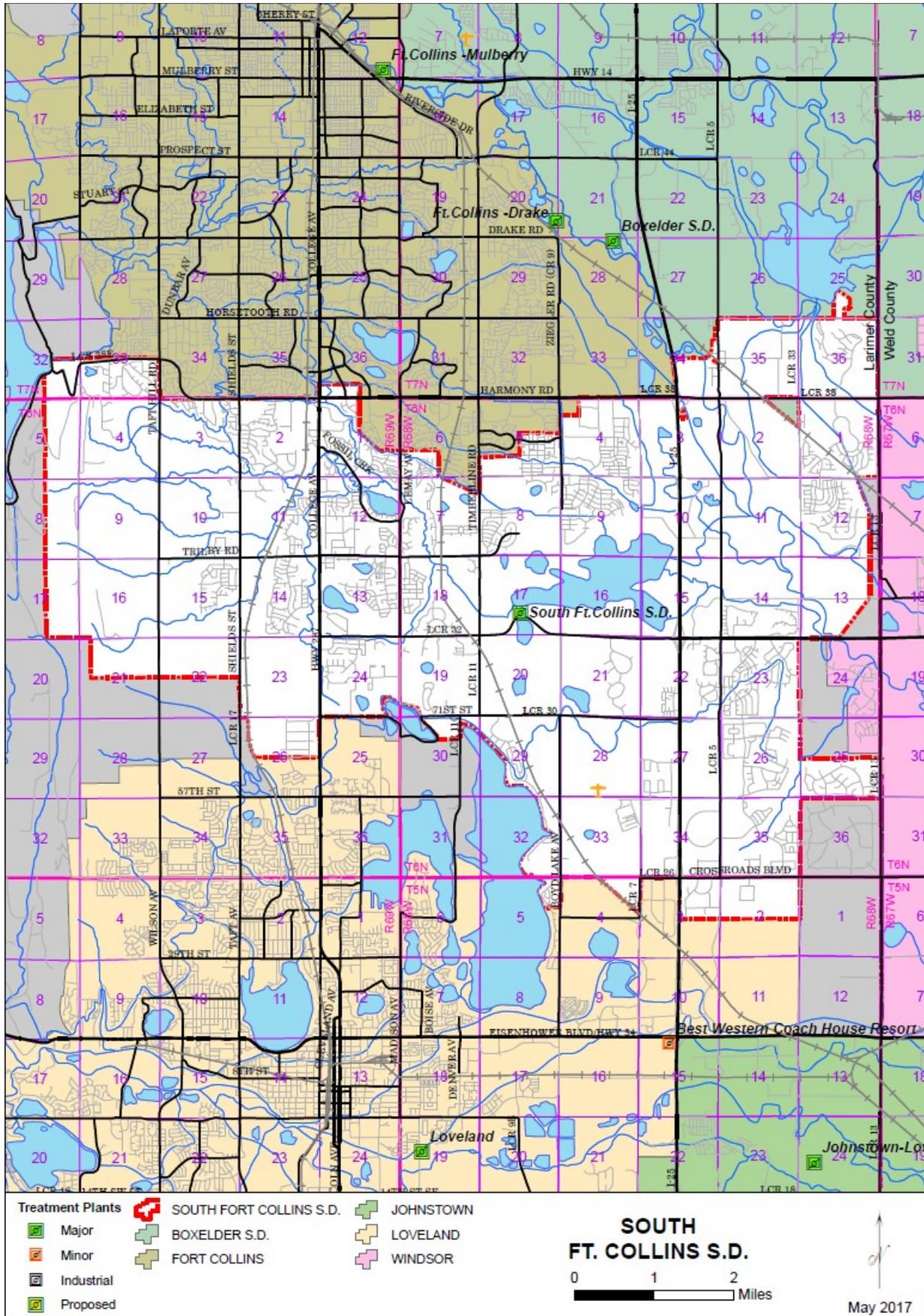
Biosolids treatment and disposal: Solids are dewatered using a centrifuge and disposed of in a landfill where it is used as top soil amendment.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0020737.

Estimated 5-year construction needs:

In 2016 the District completed construction on a new Headworks and dewatering facility. In 2018 the District begun design and construction on a two-phase project to address proposed nutrient limits, expanded treatment capacity, and a solids digestion process. Phase I includes a new step feed aeration basin capable of denitrification, an additional final clarifier, and the ATAD digestion process capable of producing a Class A Biosolids. This first of two phases will bring the treatment capacity to 6MGD and is expected to be completed in 2020. Phase II is projected to address the service area buildout by increasing final treatment capacity to

9MGD. This will be accomplished with additional liquid treatment capacity added to the step feed basin and additional digestion capability. Phase II is currently projected for 2035 depending on actual growth.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Upper Thompson Sanitation District*

Utility Plan Approved: February-2010

CDPS Permit #: CO-0031844

Permit Expires: 10/31/2016

Administrative Extension

Description of Treatment Facilities: Liquid: Activated sludge, secondary clarification, nitrification towers, tertiary filtration, chlorination, and dechlorination. Solids: Aerobic sludge digestion, centrifuge thickening, land application/land fill of solids.

Treatment Facility Location: SW ¼, NE ¼, Section 29, T5N, R72W

Discharge Location: COSPBT02, Big Thompson River Segment 2, NE ¼, Section 29, T5N, R72W.

Stream Segment Classification:

COSPBT02 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Cold 1, and Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
13,390 (2017 calculated summer equivalent)	13,440	13,520	13,610	13,700

Capacities:

Description	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Peak Month Flow (mgd)	2.0	1.43 (June 2017)	1.5	1.7	1.9	2.1	2024	2030
Associated Organic Loading (lbs./day BOD ₅)	4,450	2,540 (July 2017)	2,640	2,990	3,340	3,700	2033	>2035

Biosolids treatment and disposal: The District uses aerobic digestion and dewatered sludge to 15% or greater solids content. Sludge is hauled off-site by a contract hauler to land apply the biosolids (160 dry tons per year).

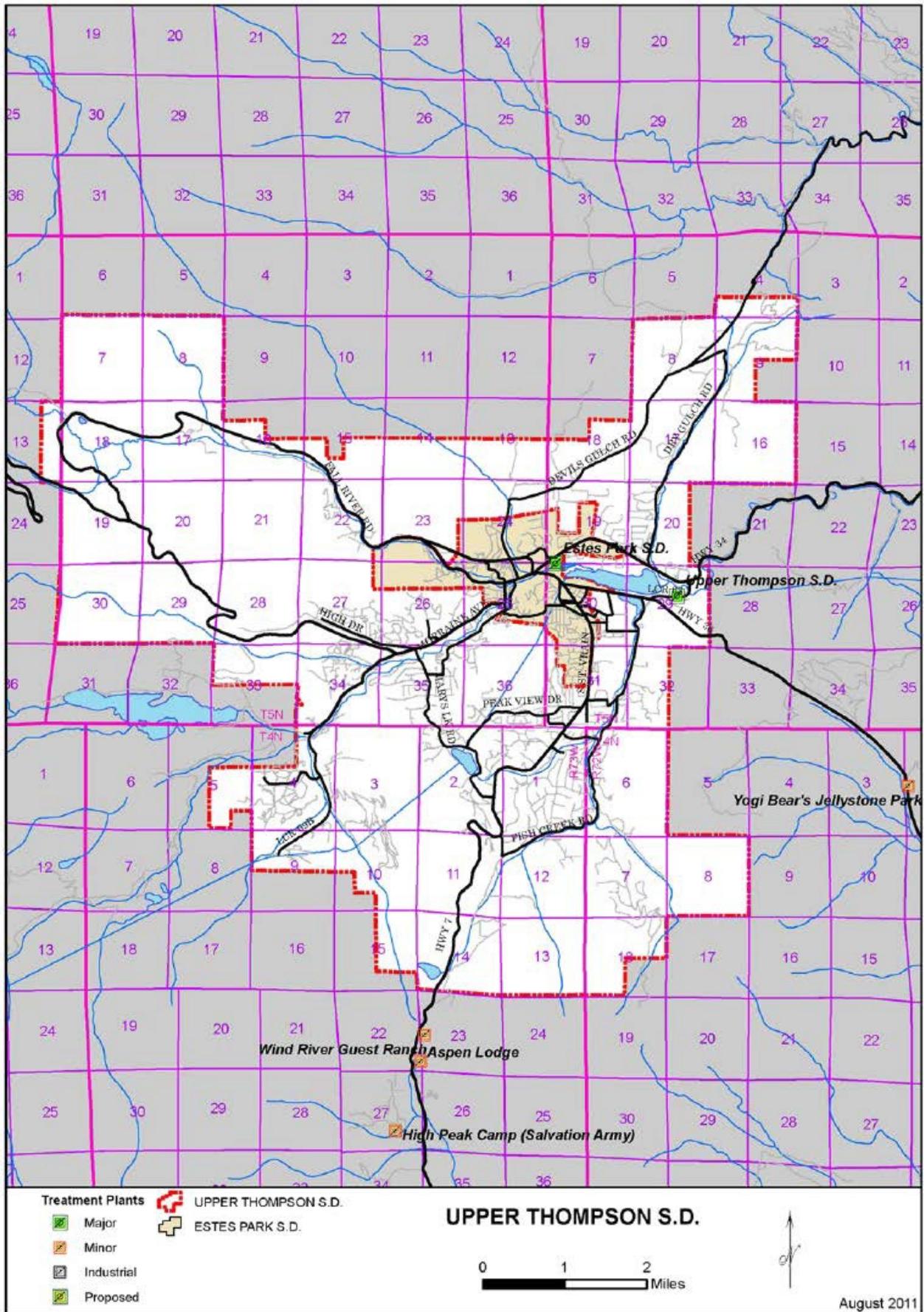
Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0031844.

Estimated 5-year construction needs:

Short-term capital improvement projects include the following:

- Operate existing aeration basins as biological nutrient removal (BNR) including nitrification/denitrification/phosphorus removal. Provide additional phosphorus removal using chemical addition. Monitor results for long term nutrient reduction.
- Replace existing sodium hypochlorite system with an ultraviolet (UV) disinfection system.
- Replace grit chamber and influent flow metering.
- Upgrade portions of the secondary treatment system.

In addition to the short-term improvements, the Utility Plan also outlines long term improvements planned by the District which include replacement of the existing WWTF with a new WWTF to meet upcoming nutrient, metal, and growth requirements.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Wellington*

Utility Plan Approved: January-2014

CDPS Permit #: CO-0046451

Permit Expires: 5/31/23

Description of Treatment Facilities: Extended aeration oxidation ditch system preceded by a headwork's with screening and grit removal and pumping station. Aeration basins are followed by two final clarifiers and UV disinfection. Biosolids are stabilized in an aerobic digester.

Treatment Facility Location: SE ¼, NW ¼, Section 10, T8N, R68W

Discharge Location: COSPCP13b, Boxelder Creek in the SE ¼, NW ¼, Section 10, T8N, R68W.

Stream Segment Classification:

COSPCP13b – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation N (9/16-5/14), Recreation P (5/15- 9/15)

Service Area Population: 2.5% - 5% growth

Existing	2020	2025	2030	2035
10,000	11,000	13,750	13,800	

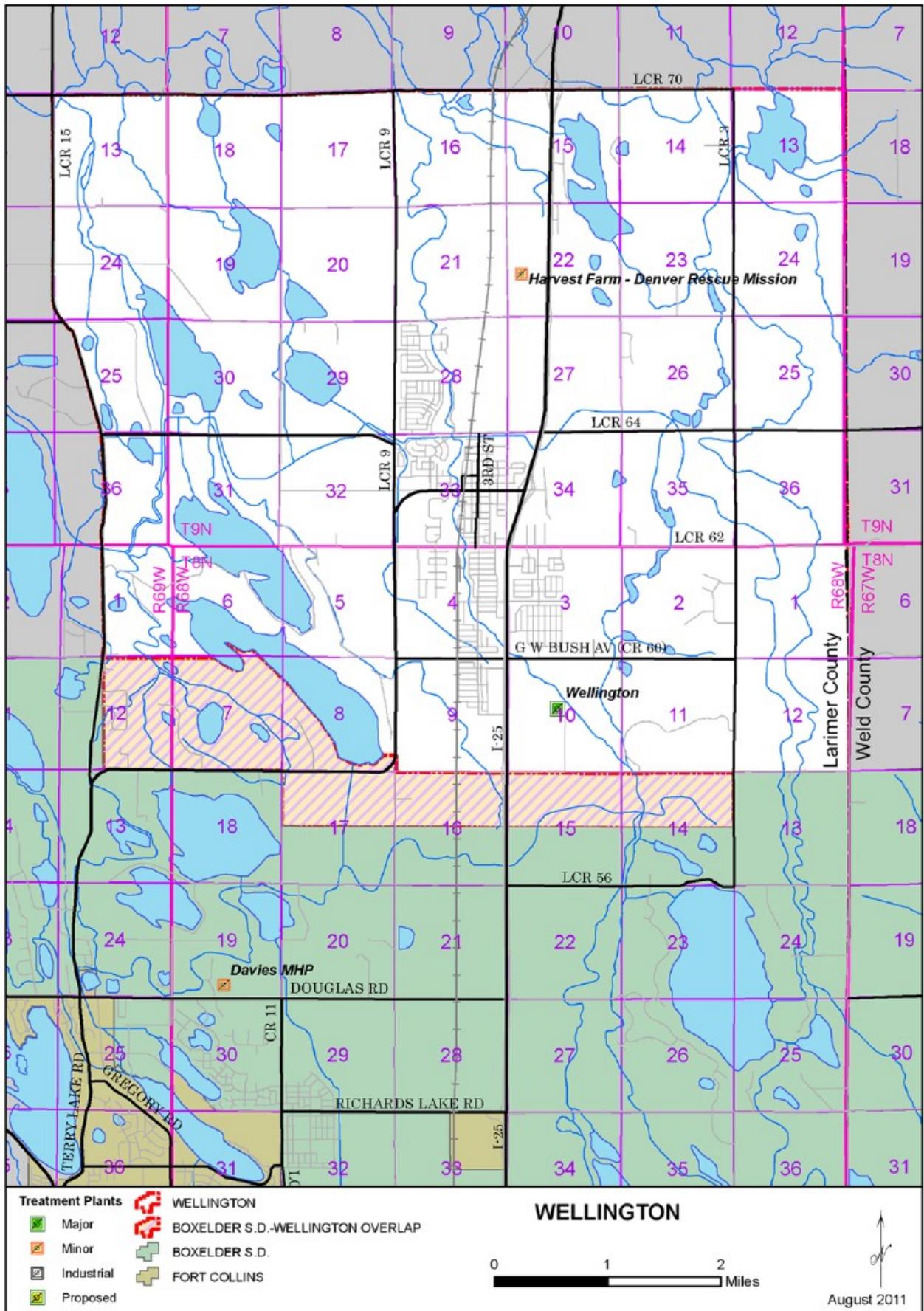
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.90	0.60	0.74	0.83	0.90	N/A	2022	2027
Organic (lbs/day BOD ₅)	2627	1840	2060	2308	2585	N/A		

Biosolids treatment and disposal: Aerobically digested and stabilized biosolids are dewatering using a belt press and aged on a drying bed. During warm weather months, biosolids are further stabilized through the AACD process (agitate air drying and curing) on the beds. Dried biosolids are disposed of on town property, surrounding sod farms. At this time Class B biosolids are being produced and disposed of by Veris Environmental.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0046451.

Estimated 5-year construction needs: The Plant was expanded in 2014 to provide additional capacity and solids handling ability.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *Town of Windsor*

Utility Plan Approved: 2/2010

CDPS Permit #: CO-0020320

Permit Expires: 5/31/2020

Description of Treatment Facilities: Headworks includes screening and grit removal. The headworks pump station discharges to two earthen-lined extended aeration activated sludge basins (biolac) providing biological and nitrification removal. De-nitrification is also occurring via on-off air cycling in the two aeration basins. In 2015-2016, as part of a Nutrient Grant Project, floating curtain walls were added to the front of the aeration basins to provide anaerobic zones for biological phosphorus removal. A new 200 horsepower high speed turbo blower was also installed for additional aeration capacity. Solids are removed from the flow stream in two settling clarifiers which are followed by a UV disinfection system. Biosolids are stabilized in an aerobic pond.

Treatment Facility Location: SE ¼, SE ¼, Section 34, T6N, R67W

Discharge Location: COSPCP12, Cache la Poudre River Segment 12 in the SE ¼, Section 34, T6N, R67W.

Stream Segment Classification:

COSPCP12 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 1, Recreation E

Service Area Population:

Existing	2020	2025	2030	2035
18,000	20,983	24,159	27,335	30,927

Capacities:

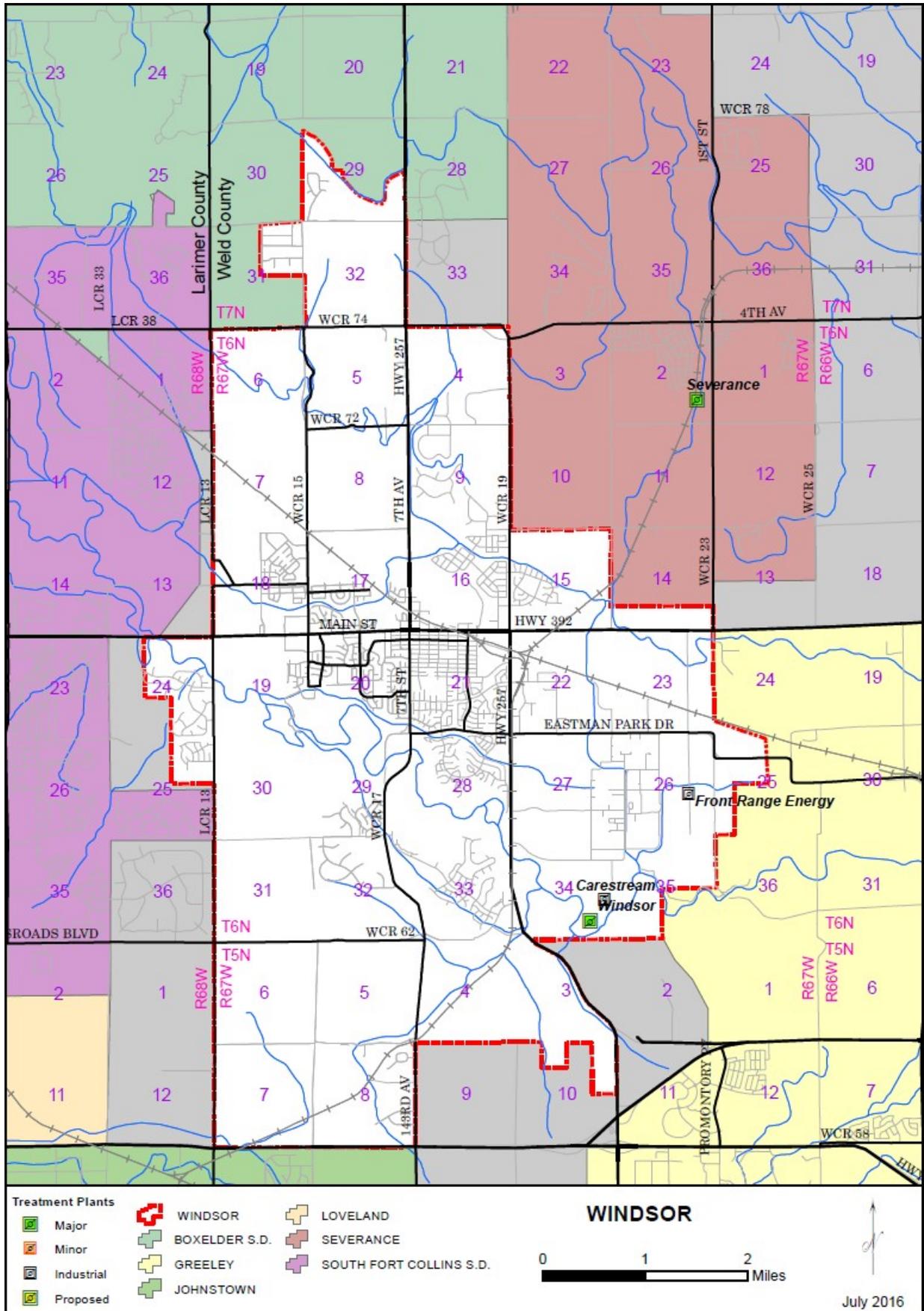
	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	2.8	1.5	2.04	2.40	2.79	3.26	2023	2029
Organic (lbs./day BOD ₅)	7,006	3,025	4,602	5,412	6,290	7,341	2027	2032

Note: projections include future flows from the Town of Severance.

Biosolids treatment and disposal: Stabilized biosolids are periodically dredged from the aerobic pond, dewatered, and air dried on-site prior to land application by a private contractor.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0020320.

Estimated 5-year construction needs: The Utility Plan approved in 2010 discussed long term improvements included the eventual expansion of the facility however the current facility will provide adequate capacity well into the planning period.



6.2 MINOR FACILITIES

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Abbey of St. Walburga*

Utility Plan Approved: March 2010

CDPS Permit #: COX622052

Permit Expired: 5/31/2012

Administratively Extended

Description of Treatment Facilities: Septic tank system with grease interceptor, anoxic tank, recirculating tank, advanced treatment pod filters, nitrate reduction, UV disinfection, and discharge to expanded infiltration gallery.

Treatment Facility Location: NE ¼, NW ¼, Section 8, T11N, R71W

Discharge Location: NE ¼, NW ¼, Section 8, T11N, R71W

Stream Segment Classification: Discharge to ground water

Service Area Population: There are currently approximately 30 full-time residents. Additionally, there are accommodations for 24 overnight guests and 30 day guests. Occasional special events can also equate to 150 additional visitors. The resulting total maximum daily population is 264 people though the actual number of persons present would routinely be much lower.

Capacities:

	Design Capacity	Existing Load (Avg)
Flow (mgd)	0.006	0.002
Organic (lbs/day BOD ₅)	21.37	4.35

Biosolids Treatment and disposal: Operator will ensure that biosolids are periodically trucked off site by a licensed contractor.

Treatment level: The expanded facility was designed based on Preliminary Effluent Limits received from CDPHE in October 2009. The new facility discharge permit was issued in August 2012.

Estimated 5-year construction needs: This facility has no further expansion plans at this time.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Dao House (Formally the Aspen Lodge)* Utility Plan Approved: Unapproved

CDPS Permit #: CO-0042820

Permit Expires: 01/31/12

Administrative Extension

Description of Treatment Facilities: Sequencing batch reactor and chlorine contact basin with lift station to plant.

Treatment Facility Location: SE ¼, SE ¼, Section 22, T4N, R73W

Discharge Location: Tahosa Creek, St. Vrain Creek sub-basin Segment 02, SE ¼, SE ¼, Section 22, T4N, R73W.

Stream Segment Classification:

COSPSV02a – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Cold 1, Recreation E, Water Supply

Service Area Population: Design PE = 300

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.021	Summer peak approximately 0.0139
Organic (lbs/day BOD ₅)	52	Not available

Biosolids treatment and disposal: Disposed of by Liquid Waste Management approximately once per month.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0042820.

Estimated 5-year construction needs: None

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: ***B & B Mobile Home & R.V. Park*** Utility Plan Approved: Unapproved

CDPS Permit #: COG-588000

Permit Expires: 5/31/2010

CDPS Facility #: COG-588107

Permit Expires: Administratively Extended

Description of Treatment Facilities: 15,000 gpd air-o-gest extended aeration plant, settling tank, and chlorine contact chamber.

Treatment Facility Location: SW ¼, SW ¼, Section 31, T2N, R68W

Discharge Location: Retention and evaporation pond, discharge to COSPBO10, Segment 10 Boulder Creek, SW ¼, SW ¼, Section 31, T2N, R68W.

Stream Segment Classification:

COSPBO10 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 1, Recreation E, Water Supply

Service Area Population: Existing Population = 110 residents

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.015	0.004
Organic (lbs/day BOD ₅)	30.1	12

Due to zoning restriction, the park has a limit of 55 homes and 2 residents per home. Because of this limit, populations and capacities are not expected to increase.

Biosolids treatment and disposal: Sludge will be disposed of by a liquid waste disposal company.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-588000.

Estimated 5-year construction needs: In order to meet more stringent ammonia limits for discharge to Boulder Creek, the discharger installed a sludge holding tank which will allow for better control of solids in the system. No other needs are anticipated.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: **Best Western Coach House Resort** (formerly Coach House Inn)

CDPS Permit #: COX634000 GW General Permit

Description of Treatment Facilities: Sequencing Batch Reactor Treatment Plant, Septic tanks, and absorption beds. A SBR package plant that incorporates a primary treatment tank (influent conditioning, grit removal, solids/sludge storage), an influent flow equalization and anoxic reactor, and a SBR reactor; an effluent polishing / equalization tank / chlorine contact tank; a groundwater infiltration system; and, an emergency generator.

Treatment Facility Location: SW ¼, SE ¼, Section 19, T1N, R66W

Discharge Location: Subsurface absorption beds

Stream Segment Classification: N/A

Service Area Population: 88 hotel rooms

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.0332	0.0151
Organic (lbs/day BOD ₅)	216	44

Treatment level: The facility design must be based upon the Preliminary Effluent Limits (PELs) that were issued to Mr. Larry Adams on September 2, 2010.

Estimated 5-year construction needs: This facility has considered the possibility of connecting to the City of Loveland's collection system at some point in the future however no definite plans have been established.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: ***Bonnell West Homeowners Association***

CDPS Permit #: Not issued, site approval #4071

Description of Treatment Facilities: Total evaporative, aerated lagoon system.

Treatment Facility Location: NE ¼, Section 31, T5N, R69W

Discharge Location: N/A

Stream Segment Classification: N/A

Service Area Population: Currently serving approximately 120 taps.

Capacities:

	Design Capacity	Existing Load
Flow (gpd)	28,160	Not available
Organic (lbs/day BOD ₅)	Not available	Not available

Treatment level: No permit issued.

Estimated 5-year construction needs: The Association is considering different options for replacement of aerators.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: ***Buckhorn Methodist Camp***

Utility Plan Approved: Unapproved

CDPS Permit #: Not issued, site approval #4374

Permit Expires: N/A

Description of Treatment Facilities: There are a total of four septic systems on the site. The site approval covers Elkhorn Lodge/dining hall that is served by septic tanks and a soil absorption field which was installed in 1998-99. There is also a smaller septic system that served the bath house which was lost in the 2012 fire and is currently not in operation. There is a system that serves the main cabins and houses. A new retreat lodge is under construction which had its septic system installed in 2017.

Treatment Facility Location: SW ¼, SE ¼, Section 2, T7N, R71W

Discharge Location: SW ¼, SE ¼, Section 2, T7N, R71W

Stream Segment Classification: N/A – discharge to groundwater

Service Area Population: The camp averages 100 guests per week in the summer.

Capacities:

	Design Capacity	Existing Load
Flow (gpd)	6,375*	Not available
Organic (lbs/day BOD ₅)	31.5*	Not available

*facility for the lodge/dining hall

Treatment level: No permit issued.

Estimated 5-year construction needs: None

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: **Annunciation Heights Camp and Retreat Center** (Previously Covenant Heights)

Utility Plan Approved: October-2014

PEL # 200395

CDPS Permit #: COG-589141

Permit Expiration: 9/30/2018

Description of Treatment Facilities: New mechanical wastewater treatment facility consisting of: influent screening, sample point, preliminary treatment (septic tank), secondary treatment using multi-pass - textile filter system with pre and post anoxic tanks, chemical addition for alkalinity and carbon feed), tertiary denitrification with textile filters, and UV disinfection.

Treatment Facility Location: SE1/4 of the NW 1/4 of Section 35: TSR 4, Range 73 in Larimer County.

Discharge Location: Tahosa Creek. 40°16'18" North, 105°32'9" West

Stream Segment Classification:

COSPSV02a – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Cold 1, Recreation E, and Water Supply

Service Area Population: There are 10 residents, 15 non-transients and an occupancy limit of 250. The population will be in a constant state of flux. The camp is looking to run year around. Weekends with have higher numbers than week days.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.0171	Not available
Organic (lbs/day BOD ₅)	45.8 lbs./day	Not available

Per: #ES13.SA.00418

Treatment level: The degree of treatment required and effluent limitations are outlined in Preliminary Effluent Limits issued March 27, 2014 #200395

Estimated 5-year construction needs: No new construction planned for the next 5 years.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: **Crystal Lakes Water and Sewer Association**

Utility Plan Approved: 5-19-14

CDPS Permit #: UNK

Permit Expiration: N/A

Description of Treatment Facilities: The proposed is an SBR treatment process treating an average daily flow of 5,000 gpd and a maximum month flow of 6,000 gpd with subsurface discharge to groundwater. The proposed treatment process will meet ground water discharge standards at the point of discharge.

Treatment Facility Location: Parcel 4012106003 in Larimer County, 40°51'20.28"N, 105°37'28.62W.

Discharge Location: The proposed discharge method for the Crystal Lakes 11th Filing WWTP is a groundwater discharge through subsurface infiltration.

Stream Segment Classification: The proposed discharge is located in the Cache la Poudre watershed, USGS hydrologic unit code 10190007. The closest surface water is the North Fork of the Cache la Poudre River. According to the USGS and EPA, cadmium, lead, copper, selenium, temperature, and E. coli impair the Cache la Poudre watershed.

Service Area Population: The 2010 Census indicates homes in Red Feather Lakes, Colorado, have an average family size of 2.24 people per household. Assigning this population density to the existing 221 vaults, the maximum service area population is 495 people. Larimer County estimated that the year-round occupancy was about 25 percent of residents due to the quantity of seasonal residences. In assigning this occupancy factor to Crystal Lakes, the current estimated year-round service area population is approximately 124 people. The maximum build-out population of the service area is estimated to reach 1,915 people, with the year-round population approaching 479 people.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.005	Not available
Organic (lbs/day BOD ₅)	15.0 lbs./day	Not available

Source: Crystal Lakes Utility Plan approved 5-19-14

Treatment level: The degree of treatment required and effluent limitations are outlined in Preliminary Effluent Limits issued December 11, 2013, PE L #200402.

Estimated 5-year construction needs: No new construction planned for the next 5 years.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Davies Mobile Home Park*

CDPS Permit #: COX - 621000

Permit Expires: 4/30/2012

CDPS Certification #: COX – 621009

Administrative Extension

Description of Treatment Facilities: Series of six septic tanks, a lift station, and soil absorption bed.

Treatment Facility Location: SW ¼, SE ¼, Section 19, T8N, R68W

Discharge Location: SW ¼, SE ¼, Section 19, T8N, R68W

Stream Segment Classification: N/A

Service Area Population: 26 taps, approximately 50-54 people

Capacities:

	Design Capacity	Existing Load
Flow (gpd)	6,825	4,000
Organic (lbs/day BOD ₅)	27.5	<10

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COX-621000 for facility # COX-621009.

Estimated 5-year construction needs: No construction needs anticipated.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Eden Valley Institute*

Utility Plan Approved: June-2013

CDPS Permit #: CO 0048985

Permit Expires: 12/31/2020

Description of Treatment Facilities: MBBR utilizing plastic media with aeration.

Treatment Facility Location: NE ¼, SE ¼, Section 27, T06N, R71W.

Discharge Location: Unnamed tributary to Buckhorn Creek COSPBT06

Stream Segment Classification:

COSPBT06 – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E

Service Area Population: N/A

Existing	2020	2025	2030	2035
54	104	104	104	104

Population includes full time residents and daily visitors.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.015	0.008
Organic (lbs/day BOD ₅)	31	9

Biosolids treatment and disposal: Anaerobic sludge digestion. Disposal of biosolids by a contract management company.

Treatment level: Treatment level as denoted in permit # CO-0048985

Estimated 5-year construction needs: The proposed system described above will allow for the facility to meet current discharge permit limits as well as accommodate projected growth. No additional construction needs are projected for the next 5 years.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Fox Acres*

Utility Plan Approved: May-2015

CDPS Permit #: CO0049019

Permit Expires: 03/31/2023

CDPS Facility #: COG-589075

Permit Expires: 7/31/2004

Administratively Extended

Description of Treatment Facilities: A new wastewater plant has been installed with screening, sequencing batch reactor (activated sludge, sodium hypochlorite disinfection, sodium bisulfite de-chlorination, and aerated sludge holding.

Treatment Facility Location: SE ¼, SW ¼, Section 22, T10N, R73W

Discharge Location: COSPCP08, Columbine Creek tributary to the North Fork Cache la Poudre in the SE ¼, SW ¼, Section 22, T10N, R73W.

Stream Segment Classification:

COSPCP08 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Cold 2, Recreation E, Water Supply

Service Area Population:

Existing	Build-out Potential
91 units built	230 total units

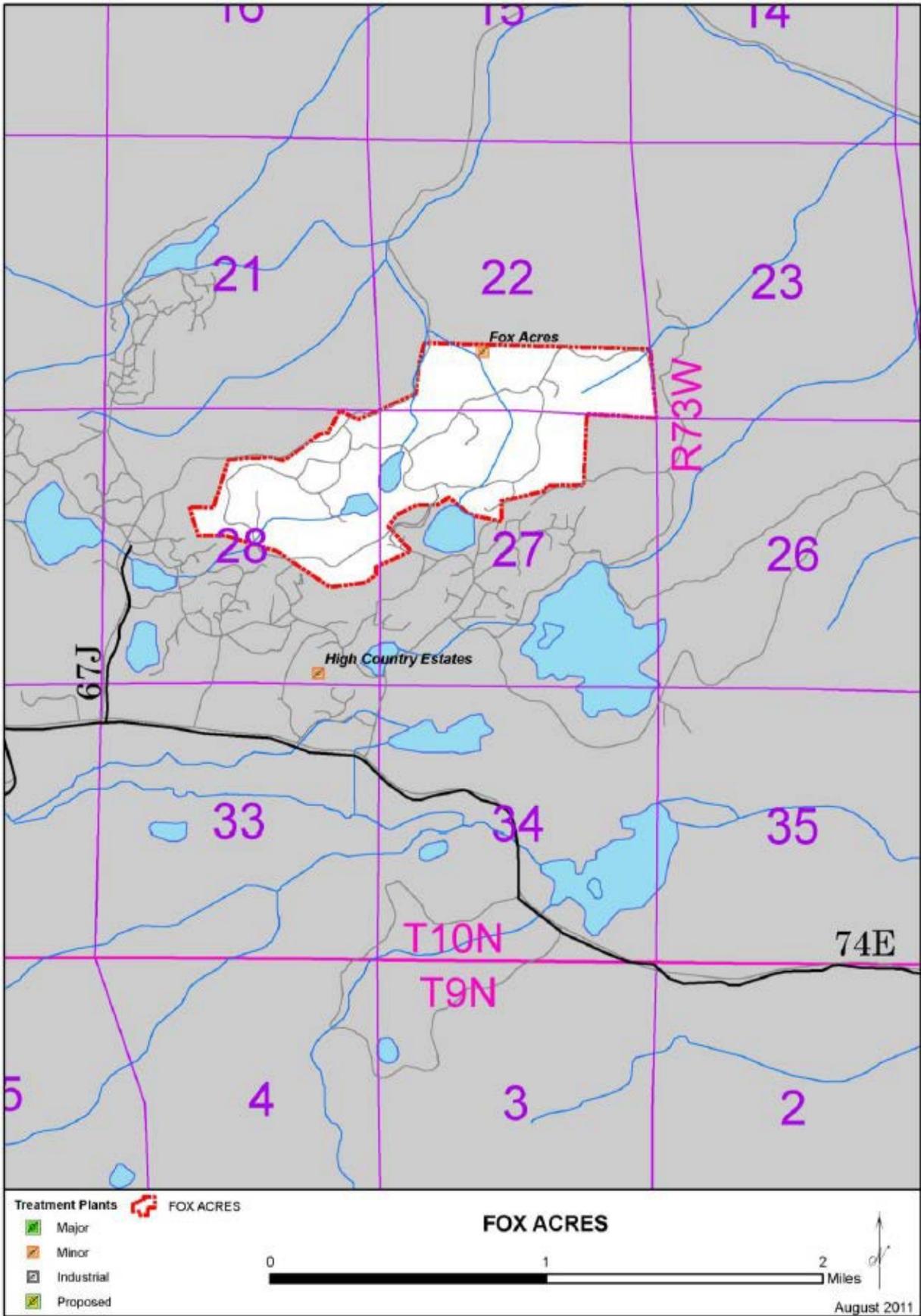
Capacity:

	Design Capacity	Proposed Capacity	Existing Load (Average Summer)	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.081	0.081	0.0114	>2030*	>2030*
Organic (lbs/day BOD ₅)	160	160	56.0	>2030*	>2030*

Biosolids treatment and disposal: The proposed system will stabilize waste solids in the aerobic digestion basin prior to land application by a contract hauler.

Treatment level: The expanded facility was designed based on Preliminary Effluent Limits received from CDPHE in April 2015.

Estimated 5-year construction needs: In 2015 Fox Acres received approval of a Site Application that would expand the capacity of the facility to 0.081 mgd and 160 lbs/day BOD₅, and improve effluent quality in order to meet permit requirements. This expansion would include the addition of a Sequence Batch Reactor plant followed by sodium hypochlorite disinfection and sodium bisulfite de-chlorination.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Galeton Water & Sanitation District*

Utility Plan Approved: December-2017

CDPS Permit #: CO-0043320

Permit Expires: 4/30/2021

Description of Treatment Facilities: The new plant to be constructed in 2018 is a package wastewater treatment plant designed with separate zones for flow equalization, sludge storage, denitrification, aeration, clarification, and disinfection. Equipment provided includes: manual bar screen, transfer airlift pumps, coarse bubble diffusers, waste sludge airlift pumps, main plant blowers, decanting airlifts, control panel, and disinfection.

Treatment Facility Location: SE ¼, NE ¼, Section 6, T6N, R64W

Discharge Location: COSPMS03a, Willow Creek, a tributary to Lone Tree Creek and the South Platte River.

Stream Segment Classification:

COSPMS03a – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
103	105	108	111	113

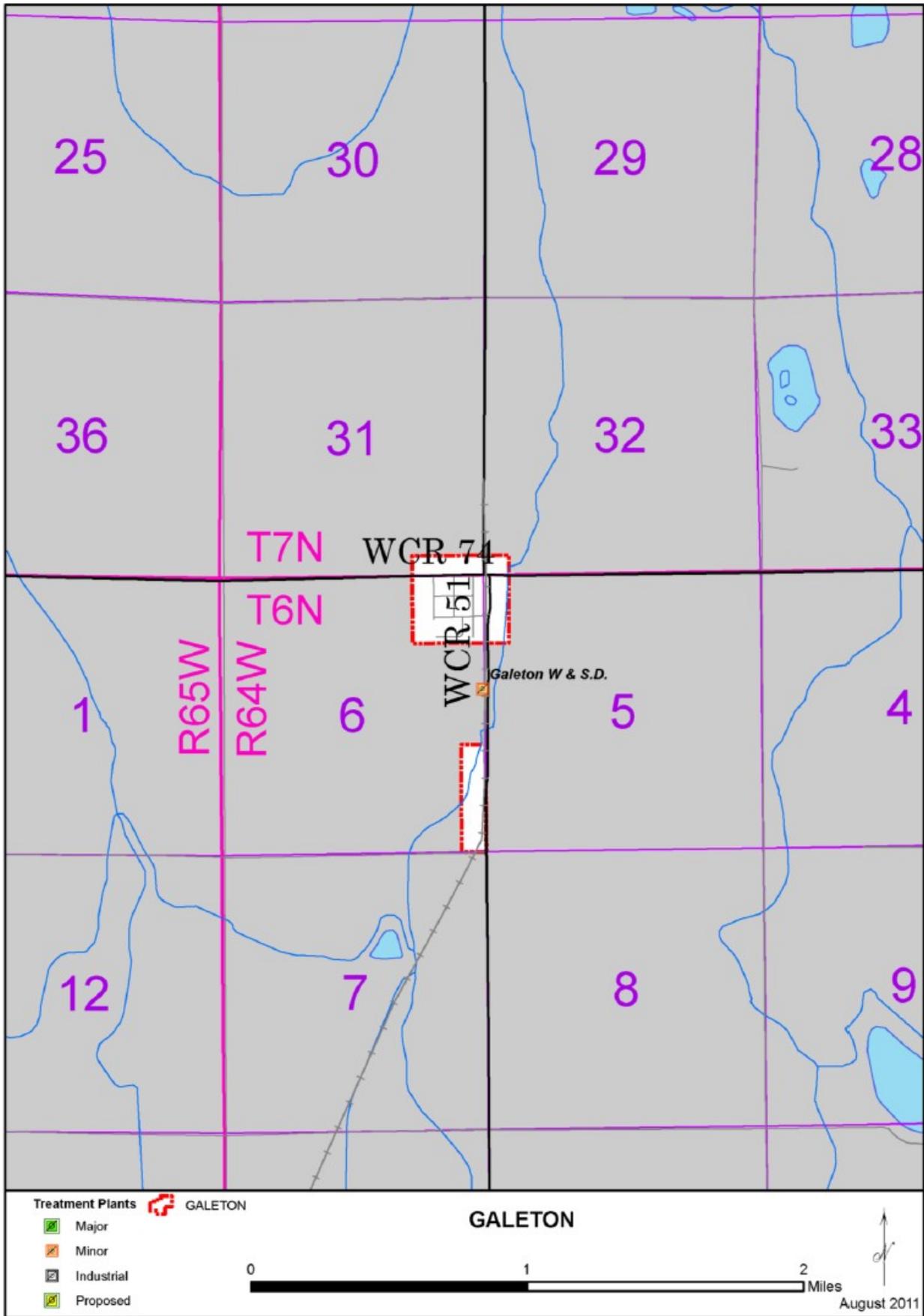
Capacities:

	Design Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.0113	0.0113	0.0126	0.0128	0.0130	0.0132	NA	NA
Organic (lbs/day BOD ₅)	38.5	38.2	38.4	39.1	39.8	40.4	NA	NA

Biosolids treatment and disposal: Remove and disposal

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0043320.

Estimated 5-year construction needs: RG & Assoc., LLC has been retained by Galeton, since the Feb. 2014 issuance of the Notice of Violation / Cease & Desist, for the purpose of complying with the terms & conditions of this order, including assisting the system in obtaining the necessary funding for the installation of an upgraded WWTF. To date, the District has not been able to secure funding for the treatment plant improvements, and therefore no construction has taken place.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Glacier View Meadows
 Water and Sewer Association*

Utility Plan Approved: Conditional October-2007

CDPS Permit #: CO-00046442 - 12th filing

CDPS Permit #: COX-631000

Permit Expires: 4/30/2012

Facility #: COX-631020 - system for the 4th, 7th, and upper 8th filings

Description of Treatment Facilities: 12th filing - septic tanks and leach fields; 4th, 7th, and upper 8th filings – individual septic tanks, sequencing batch reactor, chlorination, and infiltration gallery.

Treatment Facility Location: 12th filing - NE ¼, SE ¼, Section 36, T9N, R72W; 4th, 7th, and upper 8th filings – SE ¼, SW ¼, Section 13, T9N, R72W.

Discharge Location: 12th filing - NE ¼, SE ¼, Section 36, T9N, R72W; 4th, 7th, and upper 8th filings – SE ¼, SW ¼, Section 13, T9N, R72W.

Stream Segment Classification: N/A

Service Area Population: 12th filing - Design PE: 130; 4th, 7th, and upper 8th filings – Design PE: 358.

Capacities:

12th Filing

	Design Capacity	Existing Load
Flow (gpd)	6,500	Not available*
Organic (lbs/day BOD ₅)	9.76	Not available*

* Currently only a small number of homes contributing flow to this system
 4th, 7th, and upper 8th Filing

	Design Capacity	Existing Load
Flow (gpd)	30,000	Not available*
Organic (lbs/day BOD ₅)	72	Not available*

- Data Not available

Biosolids treatment and disposal: Biosolids from the SBR facility will be stabilized in the anaerobic chamber. All biosolids will be hauled to the City of Ft. Collins wastewater treatment plant for disposal.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit # CO-00046442 for the 12th filing and Permit # COX-631000 and Certification # COX-631020 for the 4th, 7th, and upper 8th filings.

Estimated 5-year construction needs: The Association currently does not have a discharge permit for the drinking water treatment system which may need to be addressed in the next few years.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Town of Grover*

Utility Plan Approved: June-2010

CDPS Permit #: COX 621050

Permit Expires: 4/30/2012 Administratively Extended

Description of Treatment Facilities Influent lift station, headworks including screening and flow measurement, aerated equalization tank, anoxic tank, integrated fixed film activated sludge system (IFAS), secondary clarifier, disinfection utilizing sodium hypochlorite, and evaporation/infiltration pond.

Treatment Facility Location: NW ¼, NW ¼, of Section 4, T10N, R61W

Discharge Location: NW ¼, NW ¼, of Section 4, T10N, R61W

Stream Segment Classification: N/A – groundwater discharge

Service Area Population:

Existing	2020	2025	2030	2035
154	176	188	201	NA

Capacities:

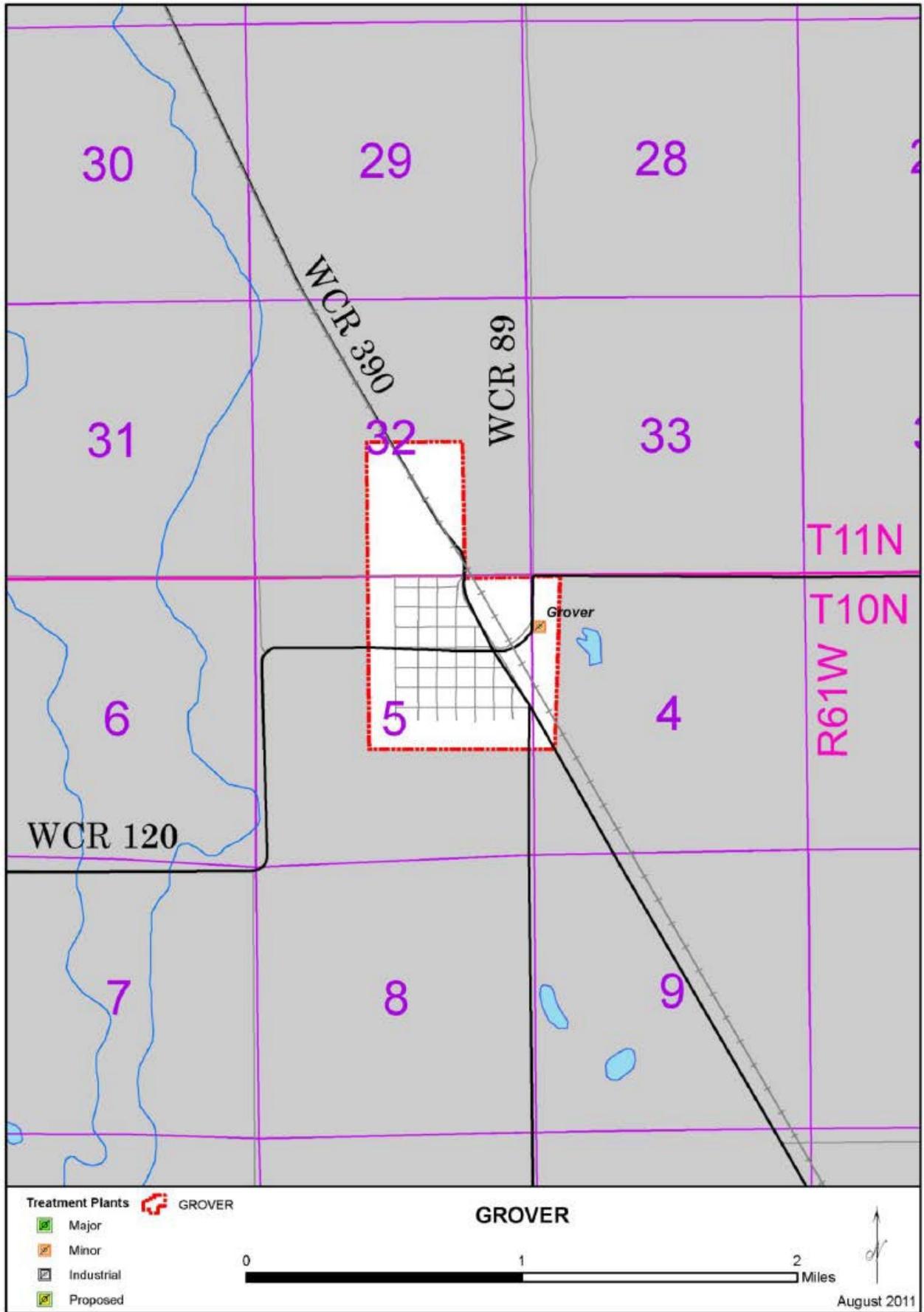
	Capacity	Existing Load	2020	2025	2030	2035	Year at 80% Design	Year at 95% Design
Flow (mgd)	0.025	0.012	0.014	0.0175	0.0187	0.025	>2020	>2030
Organic (lbs/day BOD ₅)	52	25.6	34.2	36.5	39.0	44.0	>2020	>2030

*Not Available

Biosolids treatment and disposal: Land application

Treatment level: The proposed facility was designed based on Preliminary Effluent Limits received from CDPHE in April 2010.

Estimated 5-year construction needs: In 2010 the Town received Site Application approval from CDPHE for a new treatment facility (described above) which was completed with Start Up occurring in April of 2013.



NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Harvest Farm – Denver Rescue Mission* Utility Plan Approved: Unapproved

CDPS Permit #: Not issued, site approval #4428

Description of Treatment Facilities: Septic tanks with aerobic treatment units, chlorination, dechlorination and absorption fields.

Treatment Facility Location: NW ¼, SW ¼, Section 22, T9N, R68W

Discharge Location: NW ¼, SW ¼, Section 22, T9N, R68W

Stream Segment Classification: N/A

Service Area Population: The facility was designed for an average of 50 campers with the potential of expanding to 100 campers in the future.

Capacities:

	Design Capacity	Existing Load
Flow (gpd)	1,500	Not available
Organic (lbs/day BOD ₅)	6	Not available

Treatment level: No permit issued.

Estimated 5-year construction needs: Not available.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Hemingway Lodge at Eagles Nest* Utility Plan Approved: Unapproved

CDPS Permit #: COX-621050

Permit Expires: 4/30/2012 Administratively Extended

Description of Treatment Facilities: Lift stations, septic tanks, and soil absorption field.

Treatment Facility Location: Septic tanks: SE ¼, NW ¼, Section 18, T4N, R61W. Soil absorption field: NW ¼, NW ¼, Section 18, T4N, R61W.

Discharge Location: NW ¼, NW ¼, Section 18, T4N, R61W.

Stream Segment Classification: N/A

Service Area Population: The lodge consists of a total of 16 bedrooms plus a three-bedroom caretaker's house.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.00495	0.001
Organic (lbs/day BOD ₅)	12.5	N/A

Biosolids treatment and disposal: NA

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COX-621050 (Formerly COX-0046639).

Estimated 5-year construction needs: None

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Hidden View Estates*

Utility Plan Approved: December-2007

CDPS Permit #: CO0048861

Permit Expires: 3/2023

Description of Treatment Facilities: Individual septic tanks for each lot, three cell Sequence Batch Reactor (SBR) system, post equalization tank, duplex pumps, flow measurement, and UV disinfection.

Treatment Facility Location: SE ¼, SE ¼, Section 1, T5N, R70W.

Discharge Location: COSPBT07, Buckhorn Creek.

Stream Segment Classification:

COSPBT07 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Cold 1, Recreation E, Water Supply

Service Area Population:

Existing	2020	2025	2030	2035
23	81*	81*	81*	81*

*Potential population at build-out.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.008	.005
Organic (lbs/day BOD ₅)	12.7	9.5

Biosolids Treatment and Disposal: Solids will be hauled off site for disposal at a larger facility.

Treatment Level: The degree of treatment required and effluent limitations are outlined in Permit #CO0048861.

Estimated 5-year Construction Needs: Only 14 of the existing 23 homes are connected to the community system. The County has opted to allow the remaining homes within the HOA currently served by an ISDS to remain until such time as replacement or repair of the ISDS is required. At that time, the individual homeowners will be required to tie into the community system.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: **High Country Estates**

Utility Plan Approved: Unapproved

CDPS Permit #: Not issued, site application approval #3696.

Description of Treatment Facilities: Individual septic tanks with common leach field.

Treatment Facility Location: SE ¼, SE ¼, Section 28, T10N, R73W

Discharge Location: SE ¼, SE ¼, Section 28, T10N, R73W

Stream Segment Classification: N/A

Service Area Population: 25 residences and 4 commercial properties.

Capacities:

	Design Capacity	Existing Load
Flow (gpd)	7,600	Not available
Organic (lbs/day BOD ₅)	17	Not available

Treatment level: No permit issued.

Estimated 5-year construction needs: Not available.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: **High Peak Camp (Salvation Army)**

Utility Plan Approved: January-2018

CDPS Permit #: COX-632099

Description of Treatment Facilities: Activated sludge plant with 3 polishing ponds and leach fields.

Treatment Facility Location: NW ¼, SE ¼, Section 27, T4N, R73W

Discharge Location: NW ¼, SE ¼, Section 27, T4N, R73W

Stream Segment Classification: N/A

Service Area Population: High Peak Camp Current Monthly Population in 2015
 (Special Use Review Submittal, 2015)

Month	Staff	Guests	Total Average
January	5	23	28
February	5	33	38
March	5	38	43
April	5	56	61
May	9	87	96
June	45	87	132
July	50	148	196
August	38	122	160
September	7	120	127
October	5	46	51
November	5	9	22
December	5	0	5

Capacities:

	Design Capacity	Existing Load
Flow (gpd)	17,000	6,066
Organic (lbs/day BOD ₅)	44	18.4

Treatment level: As defined in permit.

Estimated 5-year construction needs: None

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Laramie River Guest Ranch*

Utility Plan Approved: Unapproved

CDPS Permit #: COX – 621010

Permit Expires: 5/31/2012 Administratively Extended

CDPS Certification #: COX - 621011

Description of Treatment Facilities: Septic tank / leach field system

Treatment Facility Location: SW ¼, Section 17, T11N, R76W

Discharge Location: To subsurface percolation adjacent to the Laramie River in the NW ¼, SW ¼, Section 17, T11N, R76W.

Stream Segment Classification: N/A

Service Area Population: Maximum summer capacity 50 people per week. Typical summer population is approximately 25 guest and 20 staff per week.

Capacities:

	Design Capacity	Existing Load
Flow (gpd)	4,100	Approximately 1,400 gpd during peak summer usage
Organic (lbs/day BOD ₅)	6	Not available

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COX – 621000 for facility #COX-621011.

Estimated 5-year construction needs: None

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Magic Sky Ranch Girl Scout Camp*

Utility Plan Approved: Unapproved

CDPS Permit #: CO-0047317

Permit Expires: 8/31/2020

Description of Treatment Facilities: Septic system with recirculating tank and recirculating sand filter, UV disinfection, and constructed wetlands.

Treatment Facility Location: SE ¼, NW ¼, Section 4, T9N, R72W.

Discharge Location: COSPCP09, South Lone Pine Creek

Stream Segment Classification:

COSPCP09 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Cold 1, Recreation E, Water Supply

Service Area Population: 352 (4 – Residential / 348 – Transient)

Capacities:

	Design Capacity	Existing Load
Flow (gpd)	13,000	932
Organic (lbs/day BOD ₅)	31	.75

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0047317.

Estimated 5-year construction needs: None

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Mountain (formerly Pingree Park) Campus, Colorado State University*
Utility Plan Approved: May-2011

CDPS Permit #: COG-620000
CDPS Facility #: COG-620056

Permit Expires: 5/31/00 - Administratively Extended
Permit Expires: 5/31/00 - Administratively Extended

Description of Treatment Facilities: Influent lift station, anoxic treatment tank, aerobic treatment zone, secondary clarifiers, tertiary treatment including flocculation, sedimentation, and filtration, UV disinfection, and effluent disposal through leach field.

Treatment Facility Location: SW ¼, SW ¼, Section 16, T7N, R73W

Discharge Location: Groundwater, leach field in the SW ¼, SW ¼, Section 16, T7N, R73W, in the South Fork of the Cache la Poudre River alluvium.

Stream Segment Classification: N/A

Service Area Population: The campus has an existing bed count of 281, and averages 100 persons per night. All populations are seasonal (May through October). With the construction of the future proposed buildings, the campus population is estimated to be 562. The dining hall is currently the limiting factor in campus occupancy and water usage, however the dining hall will be expanded after construction of an expanded or replacement wastewater treatment plant anticipated in 2020.

Capacities:

	Design Capacity	Current Permitted Capacity	Existing Load	2020 Proposed Capacity
Flow (mgd)	0.010	0.020	0.0100	0.039
Organic (lbs/day BOD ₅)	100	148	41	50

Biosolids treatment and disposal: Sludge is hauled at the end of the season by a licensed hauler to the City of Ft. Collins wastewater treatment plant in Ft. Collins.

Treatment level: The existing facility (upgraded in 2015) was designed based on Preliminary Effluent Limits received from CDPHE in November 2009.

Estimated 5-year construction needs: In 2017 CSU conducted master planning for the campus and commissioned a Wastewater Treatment Alternatives Analysis, completed in 2018. CSU has requested funding for an expanded or replacement wastewater treatment facility. New Preliminary Effluent Limits were issued by CDPHE on February 6, 2018. Construction of the expanded or replacement wastewater treatment facility is anticipated to commence in 2020.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Pine Lake Village*

Utility Plan Approved: Unapproved

CDPS Permit #: COX621077 (formerly COX621008)

Permit Expires: 4/30/2012
Administratively Extended

Description of Treatment Facilities: The treatment facility consists of an 18,000 gallon three chamber septic tank. The fluids from the third chamber are dispersed to the leach field. The leach field consists of 4 – 100' x 100' leach beds. Using a diverter box 2 beds are active at all times. Standard practice is to rotate leach beds every 3 months. Prior to the fluids reaching the leach beds, screening catches any solids from going into the leach beds.

Treatment Facility Location: 7200 E Hwy 14, Weld County, Colorado.

Discharge Location: Discharge location (i.e. leach fields) is on site.

Stream Segment Classification: Groundwater

Service Area Population: Existing Population = 34 mobile homes – approximately 75 people.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.015	0.004
Organic (lbs/day BOD ₅)	30.1	12

Biosolids treatment and disposal: Approximately 2 times per year the septic tanks are pumped via a certified pumper – Pro Septic out of Fort Collins. Reports are sent to the State on a yearly basis.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COX-621077

Estimated 5-year construction needs: New inspection wells to determine whether limits laid out by the division's new regulation can be met. The modification request was sent to the WQCD May 2018.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Prairie School District*

Utility Plan Approved: May 2012

CDPS Permit #: COX632060

Permit Expires: Administratively Extended

Description of Treatment Facilities: (Proposed) Two dual chamber septic tanks (3,250 and 2,500 gallon) with auto siphoning and absorption field. New Compliance monitoring wells.

Treatment Facility Location: E1/2, SE1/4 of Section 36. T8N, R58W in Weld County.

Discharge Location: Subsurface to groundwater, Section 36, T8N, R58W.

Stream Segment Classification: N/A

Service Area Population: 204

Existing	2020	2025	2030	2035
210	210	210	210	210

Population includes students, staff, and residents.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.00435	.0012
Organic (lbs/day BOD ₅)	21	4.2

Biosolids treatment and disposal: Annual septic tank cleaning.

Treatment level: Ground water monitoring wells

Estimated 5-year construction needs: No additional construction needs are projected for the next 5 years.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *River Glen Homeowners Association*

Utility Plan Approved: June-2013

CDPS Permit #: CO-0029742 “Plant taken out of service”

Description of Treatment Facilities: Pump Station and Force Main to Berthoud

Treatment Facility Location: SE ¼, Section 27, T4N, R69W

Discharge Location: Berthoud WWTP outfall

Stream Segment Classification: See Berthoud Point Source Data Section

Service Area Population: Existing population approximately 151. 64 of the approved 65 lots have been built. The Riverside subdivision consisting of 45 lots has been tied to the River Glen facility. 21 of these lots have been platted with 4 lots currently contributing flows. A total of 109 lots could contribute flows to the system.

Capacities:

	Design Capacity	Existing Load	Year at 80% Design
Flow (mgd)	0.029	0.014	> 2015
Organic (lbs/day BOD ₅)	52	19.6	> 2015

Biosolids treatment and disposal: NA

Treatment level: NA

Estimated 5-year construction needs: The HOA is prepared a Utility Plan and has entered into an IGA with Berthoud for the purpose of sending wastewater to Berthoud for treatment and eliminating the onsite lagoons system. This was completed in 2015.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *New Vision Mobile Home Community* Utility Plan Approved: June 2008

CDPS Permit #: Certification # COX-631056 Permit Expires: Administratively Continued

Description of Treatment Facilities: Septic tanks, Sequencing Batch Reactor, chlorination, and effluent infiltration pond.

Treatment Facility Location: SW ¼, SE ¼, Section 19, T1N, R66W.

Discharge Location: To groundwater, SW ¼, SE ¼, Section 19, T1N, R66W.

Stream Segment Classification: N/A

Service Area Population:

Existing	2020	2025	2030	2035
216*	216	216	216	216

*Population is based on the full capacity of the mobile home park which is 64 mobile homes plus a manager's house. There are no plans for expansion.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.0151	0.009
Organic (lbs/day BOD ₅)	44	30

Biosolids treatment and disposal: Biosolids will be stabilized in the anaerobic chamber and will require removal by a licensed hauler a maximum of five times per year. Existing septic tanks will remain in use and will also be pumped and hauled as needed.

Treatment level: A discharge permit has been issued for this facility. Design and construction for the facility was based on Design Approval from the Water Quality Control Division issued in 2013

Estimated 5-year construction needs: None, the current facility was constructed and permitted in 2013. The facility is in compliance with its Discharge Permit. There are no plans for expansion or process changes.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Shambhala Mountain Center* Utility Plan Approved: April-2010

CDPS Permit #: COG-630000 Permit Expired: 10/31/2015

CDPS Facility #: COX-630037, COX-631055 Administratively Extended

Description of Treatment Facilities: Grease interceptors, influent pump station, bar screen, influent flow measurement, influent conditioning/sludge storage chamber, anoxic chamber, sequencing batch reactors (SBR), chlorination, and discharge to groundwater.

Treatment Facility Location: NE ¼, NE ¼, Section 23, T9N, R73W

Discharge Location: NE ¼, NE ¼, Section 23, T9N, R73W, in the Elkhorn Creek drainage of the Cache la Poudre River watershed.

Stream Segment Classification: N/A – discharge to groundwater.

Service Area Population: Construction of the SBR plant will serve a population of 650 during peak months (June to September).

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.033	Not available
Organic (lbs/day BOD ₅)	117	Not available

Biosolids treatment and disposal: Biosolids will be digested, removed and disposed of by a contract hauler.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-630000 for facility #COX-630037.

Estimated 5-year construction needs: In 2011 the Center received Site Application approval for the expansion of the treatment facility to a design flow capacity of 0.033 mgd and 117 lbs. BOD₅/day. In addition, the existing polishing pond/lagoon has been converted to an infiltration basin. The capacity of the new SBR facility allowed for the connection of additional existing building(s) to the central treatment system in a phased approach. It is planned that all buildings will eventually be served by the central system. The construction of new 8-inch sewer line and 4-inch laterals to existing buildings will connect an additional thirteen (13) buildings to the central treatment facility was completed in November 2018. These buildings were OWTS and their associated septic tanks and infiltration fields will be removed from service. Similarly, an additional six (6) buildings that were connected to the WWTP – SBR at startup in 2012, will be connected to the new eight (8) inch sewer line project mentioned above as well, and those existing septic tanks and infiltration fields will be removed from service too.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Sky Ranch Lutheran Camp*

Utility Plan Approved: Unapproved

CDPS Permit #: Not issued, site application #4719

Description of Treatment Facilities: 15,000 gpd septic tanks with recirculating sand filter and ultraviolet disinfection.

Treatment Facility Location: NW ¼, NE ¼, Section 17, T7N, R73W

Discharge Location: COSPCP02a, to Beaver Creek, tributary to the South Fork Cache la Poudre River in NW ¼, NE ¼, Section 17, T7N, R73W.

Stream Segment Classification:

COSPCP02a – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Cold 1, Recreation E, Water Supply

Service Area Population: The population at the camp is not to exceed 250 people, including staff and visitors. On average, occupancy is less than 200 people.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.015	Not available
Organic (lbs/day BOD ₅)	93	Not available

Estimated 5-year construction needs: None at this time

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Sunrise Ranch – Emissaries of Devine Light*

CDPS Permit #: COG-630000

Permit Expires: 10/31/2015

CDPS Facility #: COG-630052

Administratively Extended

Description of Treatment Facilities: A lined aerated lagoon and unlined finishing pond with discharge to groundwater.

Treatment Facility Location: NW ¼, NE ¼, Section 34, T6N, R70W

Discharge Location: NW ¼, NE ¼, Section 34, T6N, R70W

Stream Segment Classification:

COSPBT06 – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E

Service Area Population: The system receives waste from the Sunrise Ranch complex only. Three houses and a farm located within the complex are on a separate septic waste system.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.034	0.0066
Organic (lbs/day BOD ₅)	70	16.69

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-630000 for facility #COX-630052.

Estimated 5-year construction needs: None

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Weld County School District RE-3J, Weld Central High School*

Utility Plan Approved: N/A

CDPS Permit #: COG-589000

Permit Expires: 09/30/2018

CDPS Facility #: COG-589005

Description of Treatment Facilities: A package plant consisting of 2 aeration basins, 2 clarifiers, and UV disinfection. To be decommissioned in 2019 with sewer service provided by Town of Keenesburg.

Treatment Facility Location: NE ¼, NE ¼, Section 11, T1N, R64W

Discharge Location: Lowline Canal Ditch, NE ¼, NE ¼, Section 11, T1N, R64W.

Stream Segment Classification: Unclassified

Service Area Population:

Existing	2020	2025	2030	2035
1,500	1,700	N/A	N/A	N/A*

*Service now provided by the Town of Keenesburg

Capacities:

	Design Capacity	Existing Load (avg. annual)
Flow (mgd)	0.015	0.006
Organic (lbs/day BOD ₅)	77	30.8

Biosolids treatment and disposal: Biosolids removal hauled by private contractor.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-589000 for facility # COG-589005.

Estimated 5-year construction needs: The facility is evaluating options that would allow it to consistently meet lower BOD and TSS effluent to levels outlined in the permit. Planning in process examines installing ultrafiltration following the treatment system. Also, they are examining the feasibility of discharging to the Keenesburg facility.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Minor Point Source Inventory Data

Operating Agency: *Yogi Bear's Jellystone Park*

CDPS Permit #: COG-0630049

Permit Expired: 10/31/2015

CDPS Facility #: COG-0630049

Administratively Extended

Description of Treatment Facilities: Extended aeration activated sludge plant with polishing / infiltration pond (approximately 3,600 sq. ft. in area by 4 ft. deep), and chlorine contact equalization basin.

Treatment Facility Location: SW ¼, NW ¼, Section 2, T4N, R72W.

Discharge Location: To infiltration galleries in the Little Thompson River drainage, SW ¼, NW ¼, Section 2, T4N, R72W.

Stream Segment Classification: N/A, discharge to groundwater.

Service Area Population: Existing average population approximately 400/day at peak summer capacity.

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	0.010	0.006 (at peak summer usage)
Organic (lbs/day BOD ₅)	22.7	Not available

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-0630049.

Estimated 5-year construction needs: None.

6.3 INDUSTRIAL FACILITIES

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Industrial Major Point Source Inventory Data

Operating Agency: **In-Bev Anheuser-Busch**

Utility Plan Approved: Unapproved

CDPS Permit #: CO-0039977

Permit Expires: 5/31/2013

Administrative Extension

Description of Treatment Facilities: Wastewater is land applied by center pivot systems and used as irrigation water. Before application, wastewater is stored in agitated storage tanks. Stormwater runoff collection ponds with pumpback capability collect irrigation runoff and prevent its discharge from the property. Each pond also has an emergency spillway where runoff could be discharged.

Treatment Facility Location: SW ¼, Section 29, T8N, R67W

Discharge Location: The Nutri-Turf land application site is located in Section 19, SE ¼ of Section 20, Sections 21, 22, and 29, and the NW ¼, NE ¼, and SE ¼ of Section 30, and the NW ¼, NE ¼, and SW ¼ of Section 32, T8N, R67W.

Note: To date there have been no discharges to receiving water since operations began.

Stream Segment Classification:

COSPCP13a – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, Water Supply

Capacities: Currently apply to 1,734 irrigated acres and 52 winter storage basins

Biosolids treatment and disposal: None

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0039977.

Estimated 5-year construction needs: Potential addition of 560 acres and 53 additional basins.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Industrial Major Point Source Inventory Data

Operating Agency: **Opal Foods (formerly Boulder Valley Poultry)**

Utility Plan Approved: Unapproved

CDPS Permit #: COG-600000

Permit Expired: N/A (Under the Ag program)

CDPS Facility #: COG-600112

Description of Treatment Facilities: Not available

Treatment Facility Location: S ½, NE ¼ & SE ¼, Section 13, T2N, R63W

Discharge Location: COSPMS03a, Segment 3a of the Middle South Platte, S ½, NE ¼ & SE ¼, Section 13, T2N, R63W, unnamed tributary which leads to Sand Creek.

Stream Segment Classification:

COSPMS03a – Designation: Use Protected; Classifications: Agriculture, Aquatic Life Warm 2, Recreation E, and Water Supply

Capacities:

	Design Capacity	Existing Load
Flow (gpm)	Average 5.5	Average 5.5
Organic (lbs/day BOD ₅)	Not available	Not available

Biosolids treatment and disposal: Plant has permitted land for disposal.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-600000.

Estimated 5-year construction needs: NA

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Industrial Point Source Inventory Data

Operating Agency: *Carestream*

Utility Plan Approved: Unapproved

CDPS Permit #: CO-0032158

Permit Expires: 6/30/2020

Description of Treatment Facilities: The Industrial WWTF is comprised of two completely mixed, partially aerated bio-cells. The bio-cells are followed by two solids settling cells (operated individually in parallel). The settling cells are followed by three pressurized down flow, multi-media rapid sand filters for final polishing. Backwash from the rapid sand filters is routed back to the head of the settling cells.

Treatment Facility Location: NW ¼, Section 35, T6N, R67W

Discharge Location: COSPCP12, Cache la Poudre River Segment 12.

Stream Segment Classification:

COSPCP12 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 1, Recreation E

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	1.8	0.64
Organic (lbs/day BOD ₅)	Approx. 600	250

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0032158.

Estimated 5-year construction needs: None

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Industrial Point Source Inventory Data

Operating Agency: *Colorado Parks and Wildlife – Bellvue Hatchery*

Utility Plan Approved: Unapproved

CDPS Permit #: COG-130010

Permit Expires: 3/31/2016
Administratively Extended

Description of Treatment Facilities: The facility is a state trout hatchery and rearing unit, with two lined settling ponds at 300,000 gallons each. They are alternated every two months, with the full pond being drained and flushed out of all sediments while the other pond begins collecting clean flows for two months. All raceway and trough cleaning sediments bypass these two ponds and are sent directly to the two acre-foot ponds at the Watson Unit.

Treatment Facility Location: 4930 RIST CANYON Rd; Laporte, Colorado 80535

Discharge Location: COSPCP10B - Panther Creek, which flows into Segment 10 of the Cache la Poudre River, Section 36, T8N, R70W.

Stream Segment Classification:

COSPCP10B – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Cold 2, Water, Recreation E, Water Supply

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	3.0	1.44 average (May-Oct) 0.864 average (Nov.-Apr.)

No flow increases are projected.

Biosolids treatment and disposal: On site disposal from dredging.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-130010.

Estimated 5-year construction needs: No construction planned. No operational changes planned.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Industrial Point Source Inventory Data

Operating Agency: *Colorado Parks and Wildlife – Poudre Hatchery*

Utility Plan Approved: Unapproved

CDPS Permit #: COG-130008

Permit Expires: 3/31/2016
Administratively Extended

Description of Treatment Facilities: The facility is a state fish rearing unit. Fish are currently raised in concrete raceways. A settling pond is used to remove solids.

Treatment Facility Location: 38915 Poudre Canyon Rd, Bellvue, CO 80512

Discharge Location: COSPCP02A – Cache la Poudre River, Section 32, T9N, R74W.

Stream Segment Classification:

COSPCP02A – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Cold 1, Recreation E, Water Supply

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	14.0	10.25

Flows will likely reduce to 7-8 mgd with the pipeline repairs that were completed in August of 2005.

Biosolids treatment and disposal: See above.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-130008

Estimated 5-year construction needs: None

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Industrial Point Source Inventory Data

Operating Agency: *Colorado Parks and Wildlife – Watson Hatchery*

Utility Plan Approved: Unapproved

CDPS Permit #: COG-130009

Permit Expires: 3/31/2016
Administratively Extended

Description of Treatment Facilities: The facility is a state fish hatchery and rearing unit. As of June 2000, the production was at 300,000 fish (120,000 ib) annually. Effluent water is “treated” with two sediment ponds. Each settling pond is approximately 2 acre feet. Bellvue Hatchery cleaning effluent has been delivered to the Watson’s settling ponds for treatment since August 1, 1998. Flows are intermitted each week with estimate total additional flow increases intermittently of 200-500 gpm for 15-30 minute periods 3-6 times per day Monday – Friday each week.

Treatment Facility Location: 4936 W. County Road 52E Bellvue, CO

Discharge Location: COSPCP10B - Segment 10 Cache la Poudre River, Section 30, T8N, R69W.

Stream Segment Classification:

COSPCP10B – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Cold 2, Water, Recreation E, Water Supply

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	23.0	19.0 max

No flow increases are projected.

Biosolids treatment and disposal: Biosolids are dredged every 8-10 years and stored on site.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #COG-130009.

Estimated 5-year construction needs: No new operational or construction changes are planned at this time.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Industrial Point Source Inventory Data

Operating Agency: *Front Range Energy*

Utility Plan Approved: Unapproved

CDPS Permit #: CO-0047635

Permit Expires: 6/30/2020

Description of Treatment Facilities: Groundwater is drawn from wells and treated via nanofiltration prior to being sent into the ethanol production process, the reverse osmosis (RO) system, and the cooling tower system. The treatment of the combined waste stream prior to discharge is limited to chemical dechlorination and pH adjustment.

Treatment Facility Location: 31375 Great Western Drive, Windsor, CO 80550,
Latitude: 40.45667° N, Longitude: 104.857879° W

Discharge Location: COSPCP12, Cache la Poudre River Segment 12.

Stream Segment Classification:

COSPCP12 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 1, Recreation E

Capacities:

	Design Capacity	Existing Load (Average)
Flow (mgd)	0.482	0.35
Organic (lbs/day BOD ₅)	Not available	Not available

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0047635.

Estimated 5-year construction needs: No current plans for expansion
Leprino Foods

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Industrial Point Source Inventory Data

Operating Agency: **JBS Swift – Lone Tree Facility**

Utility Plan Approved: Unapproved

CDPS Permit #: CO-0027707

Permit Expires: 11/30/2017
Administrative Extension

Description of Treatment Facilities: Four anaerobic lagoons, biological nutrient activated sludge system, two final clarifiers, chlorination and dechlorination or channeled directly through two polishing ponds. There is also a pretreatment plant that pretreats wastewater at the packing plant to remove BOD₅, suspended solids, fats, oil, and grease to produce a saleable byproduct and reduce the load on the treatment plant.

Treatment Facility Location: SE ¼, Section 31, T6N, R64W

Discharge Location: COSPMS05a, Lone Tree Creek just upstream of the confluence with the South Platte River, SE ¼, Section 31, T6N, R64W

Stream Segment Classification:

COSPMS05a – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 2, Recreation N, Water Supply

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	5.2	2.196
Organic (lbs/day BOD ₅)	18,754	54,000

Biosolids treatment and disposal: Waste activated sludge and primary sludge is currently being Presses and hauled by A1 Organics.

Residuals Disposal: Preferred Cartage provides hauling off site for land application and for composting.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0027707.

Estimated 5-year construction needs: None anticipated.

NFRWQPA 2018 WATER QUALITY PLAN UPDATE
Industrial Point Source Inventory Data

Operating Agency: *Leprino Foods – Greeley Plant WWTF*

Utility Plan Approved: Unapproved

CDPS Permit #: CO0048860

Permit Expires: 10/31/2016
 Administratively Extended

Description of Treatment Facilities: Flow equalization, pH control, dissolved air flotation, activated sludge treatment, stream testing and diversion, facultative solids holding, solids dewatering & digestion, and soil amendment hauling.

(All domestic wastewater will be treated by the City of Greeley.)

Treatment Facility Location: NW ¼, Section 9, T5N, R65W

Discharge Location: COSPCP12, Cache la Poudre River

Stream Segment Classification:

COSPCP12 – Designation: Reviewable; Classifications: Agriculture, Aquatic Life Warm 1, Recreation E

Capacities:

	Design Capacity	Existing Load
Flow (mgd)	Tier 1 – 0.513 Tier 2 – 1.69 Tier 3 – 2.83	Tier 3
Organic (lbs/day BOD ₅)	Approx. 36,000	Approx. 40,000

Biosolids treatment and disposal: Biosolids will be pressed and dewatered on site and the facility will have the option of land applying or composting.

Treatment level: System design is based on preliminary effluent limits developed by the Colorado Department of Public Health and Environment. Final effluent limits will be determined in the permit.

Estimated 5-year construction needs: Tier 1 of the wastewater facility was completed in 2011. This tier will accommodate the first two phases at the production facility. Recent production facility expansions provide flows within Tier 3. Future construction needs revolve around nutrient removal.

7. APPENDICES

A. UTILITY PLAN POLICY

**North Front Range Water Quality Planning Association
Utility Plan Policy**

Approved December 11, 2008

Purpose:

Wastewater Utility Plans are planning tools that can assist wastewater utilities in planning for wastewater collection system and treatment system changes. Utility plans are critical in determining how wastewater service will be provided to urbanized portions of the region and special case locations that have a permitted wastewater treatment facility. These plans will help to simplify and streamline the process by which utilities seek site approvals and 208 plan amendments through the NFRWQPA. The goal of the NFRWQPA is to have all public permitted wastewater treatment systems in the NFRWQPA region obtain an approved utility plan from the Association.

Policy:

Beginning January 1, 2008, the NFRWQPA will require that all public wastewater treatment agencies submitting any of the following:

- site application (for new or expanded domestic treatment works, interceptors not eligible for certification, and lift stations)
- plan amendment request including service area boundary change
 - district formation and designation

have an accepted or conditionally accepted Utility Plan prior to formal consideration of the Association as a whole. Consideration by the Association as a whole of any of the three options above will be done sequentially either at the same or different meeting of the Association. Other agencies, not falling into these categories (non-public entities such as mobile home parks, HOAs, or camp grounds), will include utility plan information in conjunction with the submittal of any of the above listed requests.

The NFRWQPA will not require public permitted wastewater treatment systems within the region to obtain an approved utility plan if there is not a need to:

- change the treatment plant capacity
- modify the service area
- upgrade the treatment works

The NFRWQPA has developed a Utility Plan Guidance document to assist agencies in developing their plan that outlines what information is needed. Included in this guidance document is the acceptance procedure the Association uses to accept or conditionally accept plans, which includes time estimates required for the entire process.

The amount of detail included in the plans will vary depending on facility complexity and size. Major wastewater providers will be expected to provide all minimum information as recommended by the guidance. The utility planning process will remain flexible for minor wastewater providers. However, sufficient planning information must be shown so there will not be negative water quality effects caused by any proposed new facility, facility expansion, or change to service area.

Plans will be reviewed by the Utility Plan Review Committee. The Committee will be made up of Association representatives appointed by the Executive Committee. An effort will be made by the Executive Committee to appoint members that represent the diverse makeup of the association including small communities, large communities, special districts, and counties.

B. UTILITY PLAN GUIDANCE

Utility Plan Guidance document provided via the association's website. http://www.nfrwqpa.org/up_guidance.shtml

North Front Range Water Quality Planning Association Utility Plan Guidance

Approved	June 22, 2000
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ABSTRACT

TITLE North Front Range Water Quality Planning Association Utility Plan Guidance

AUTHOR **Utility Plan Review Committee**

SUBJECT Wastewater Utility Plan Guidance Manual

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ABSTRACT This guidance document provides necessary information and direction to utility departments, consultants, planners or wastewater managers for producing a Wastewater Utility Plan.

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EXECUTIVE SUMMARY

This guidance document provides the necessary information and direction to develop Wastewater Utility Plans. The document provides detailed technical information specifically targeting utility departments, consultants, planners, or wastewater managers who need to produce Wastewater Utility Plans. Utility Plans should be consistent with the guidance contained herein.

The new Wastewater Utility Plans will meet multiple wastewater management documentation needs as detailed in this guidance document. Utility Plans are critical in determining how wastewater service will be provided to urbanized portions of the region and special case locations that have a permitted wastewater treatment facility. The long-term goal is to have a Wastewater Utility Plan for permitted wastewater treatment systems in the North Front Range Water Quality Planning Association (NFRWQPA) region.

This guidance identifies two types of wastewater management service areas termed the 20-year Wastewater Utility Service Area (WUSA) and the Ultimate Planning Area (UPA). Those entities developing Utility Plans should use these service area concepts. Each Wastewater Utility Plan should identify specific service areas and describe how these areas will be served in context with meeting all required water quality limits.

This technical guidance document details who needs to complete a Utility Plan, the role of the water quality management agency, timing schedules, and documentation requirements. A number of logical steps in this process are outlined that increase the effectiveness and efficiency of wastewater management planning within the NFRWQPA region.

Important definitions are provided early in the guidance document, since these definitions are critical in understanding the guidance recommendations. The definitions are consistent with definitions contained in the Colorado site approval process. The site approval regulation should be referenced for additional definitions.

Long-range wastewater service areas are called Ultimate Planning Areas (UPAs). The portion of the UPA beyond the urban growth boundary is based on approved local comprehensive plans, comprehensive long-range Utility Plans, or the area a wastewater provider intends to serve at ultimate development. UPAs can extend significantly beyond the 20-year planning horizon. NFRWQPA planning areas and wastewater utility service areas can be modified through flexibility provisions of the plan amendment process.

Utility Plans will need to meet the requirements of the Colorado Department of Public Health and Environment site approval regulation number 22. The definitions used in the site application regulation define terms used in any Utility Plan. Utility Plans that have been recognized or conditionally recognized by the NFRWQPA will be used in the site

approval process. As part of the state Water Quality Act, site approvals are needed for construction or expansion of wastewater treatment works, lift stations, and major interceptor lines.

Utility Plans document the wastewater management strategy for a wastewater treatment facility (greater than 2,000 gallons per day capacity) and the associated planning area. All Utility Plans should contain a defined set of minimum information (location, sizing, staging, service area, process system, effluent quality, and financial arrangements) outlined in Chapter V of this guidance document and respond to appropriate state or federal requirements. The checklist of recommended documentation needs for utility planning should be followed in the preparation a new Utility Plan.

The primary goal in establishing Wastewater Utility Plans is to provide reasonable, feasible, and economical wastewater service to areas designated for development within the NFRWQPA watersheds. Utility Plans should consider the water quality impact the treatment system will have on receiving waters. The Utility Plan should include any strategy for meeting all applicable water quality standards and classifications, while quantifying the potential impact a discharger may have on other dischargers.

PREAMBLE

Wastewater Utility Plans are planning tools that can assist wastewater utilities in planning for wastewater collection system and treatment system changes. The North Front Range Water Quality Planning Association (NFRWQPA) has assembled this document to provide guidance to utilities in its region. Beginning January 1, 2008, the NFRWQPA will request that all public wastewater treatment agencies submitting a site application, plan amendment request (including service area boundary change), or district formation and designation, have in place a current Utility Plan which has been recognized or conditionally recognized by NFRWQPA prior to the request. Other agencies not falling into this category will include Utility Plan information in conjunction with any of the above listed requests. These plans will simplify and ease the process by which utilities may seek Site Approvals from Colorado Department of Public Health and Environment's Water Quality Control Division and 208 plan amendments from NFRWQPA.

1. INTRODUCTION

Purpose of Guidance Document

Wastewater Utility Plans are designed to replace 201 facility plans.

This guidance document provides the necessary information and direction to utility departments, consultants, planners, or wastewater managers that need to produce a Wastewater Utility Plan. Utility Plans should be consistent with the guidance contained in this

document. Wastewater Utility Plans, as referenced in the *Areawide Water Quality Management Plan (208 Plan)*; replace the current 201 facility plans.

The new Wastewater Utility Plans will meet multiple wastewater management documentation needs including, but not limited to, the following four basic functions:

- Serve as the primary support document to amend the *Areawide Water Quality Management Plan*.
- Serve as the primary support document for a site approval.
- Provide necessary background and planning information needed by the Water Quality Control Division in the discharge permitting process.
- Serve as a support document for a revolving loan application.

Utility Plans are intended to be broader in scope than 201 facility plans, with the recognition that the amount of detail will vary between plans, depending on facility complexity and size. Some additional support documentation may be required by the

Colorado Department of Public Health and Environment, Water Quality Control Division in the site approval, permitting, and loan processes.

Utility Plans are critical in determining how wastewater service will be provided to urbanized portions of the region. This includes small locales requiring centralized services or specialized sites requiring a wastewater treatment plant with a capacity >2000 gallons/day (i.e., church camp, truck stop, and restaurant). The Utility Plan level of detail will be kept flexible to accommodate both major and minor wastewater providers.

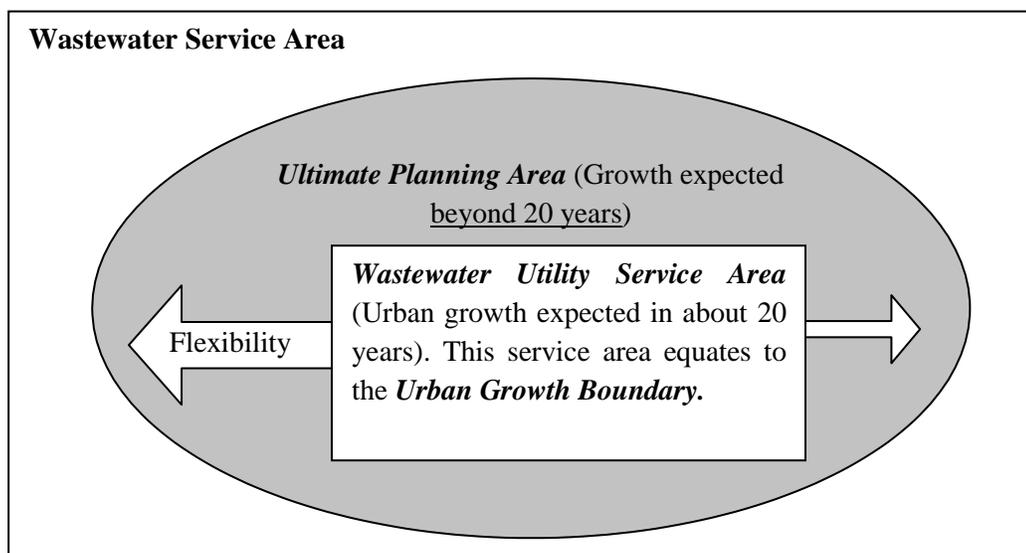
a) General Review and Recognition

The review and acceptance of Wastewater Utility Plans, associated with designated service areas that are prepared according to this guidance is a responsibility of the NFRWQPA. Utility Plans may be accepted by NFRWQPA at any regularly scheduled meeting.

The guidance directions included herein were developed in cooperation with the Water Quality Control Division. While the Division intends to use Utility Plans as source information in its various processes, the acceptance by NFRWQPA does not preclude the Division from requiring additional documentation. This guidance document contains the wastewater planning information needed in the development of Utility Plans to be incorporated by reference into the Areawide Water Quality Management Plan.

b) Geographic Context

The 208 Plan processes define how wastewater service and water quality attainment can be achieved within specific geographies. While a wastewater service area may extend into adjacent watersheds, the basic geographic unit for Wastewater Utility Planning will be the watershed. Additionally, regional water quality planning will be driven by the watershed approach.



The 208 Plan can identify and map two types of wastewater management service areas termed Wastewater Utility Service Areas (WUSAs) and Ultimate Planning Areas (UPAs) as this information is provided and Utility Plans are prepared and accepted. Entities developing Utility Plans as outlined in this guidance document should use the service area concepts of Wastewater Utility Service Areas and Ultimate Planning Areas.

Each Wastewater Utility Plan should identify a specific service area and describe how this area will be served in context with meeting all required water quality limits. WUSAs should include the area requiring urban area services through the 20-year planning horizon.

Areas requiring urban area services beyond the planning horizon are identified as UPAs. These areas should be included in a locally approved comprehensive plan or similarly approved plan. As development patterns change, UPAs can be converted to 20-year planning areas when the needs have been identified. Modifying the urban growth boundary is a local planning responsibility.

c) Who Needs to Complete Wastewater Utility Plans?

Wastewater treatment facilities or plants with a permitted discharge greater than 2,000 gallons per day, as issued through the Colorado Discharge Permit System (CDPS), should complete a Wastewater Utility Plan or set of plans, as appropriate, if their service area is growing.

d) What is the Role of Management Agencies?

Management agencies, as historically designated in the NFRWQPA 208 Plan, are those entities with land control authority. The management agencies and associated operating agencies decide on the need for and specific characteristics of wastewater treatment

processes and the details of implementation within specified parameters. Generally, wastewater treatment facility operating agencies will have primary responsibility for developing Utility Plans. Management agencies are responsible for review of Utility Plans developed by associated operating agencies. When the management agency and operating agency are the same, the Utility Plan will be considered as being developed by the management agency.

Management agencies are associated with all wastewater treatment facilities in the NFRWQPA region. Generally, counties are management agencies for most minor wastewater providers. Otherwise, municipalities or other general-purpose governments are management agencies.

Management agencies may be individual municipal governments, general-purpose governments holding National Pollutant Discharge Elimination System (NPDES) discharge permits or other special districts responsible for planning and approving permitted facilities. Management agencies are designated by the governor as recommended by the planning and

regulatory agencies. Management and operating agencies may have the following authority related to utility planning:

- a) Carry out appropriate portions of the *Areawide 208 Plan*.
- b) Facilitate coordination between adjacent service entities as to which can best serve a new area.
- c) Directly or by contract, plan for, design, and construct new wastewater treatment works, including plant and collection system.
- d) Operate and maintain new and existing wastewater treatment works.
- e) Accept and utilize grants, loans, and funds from other sources for wastewater treatment management purposes.
- f) Raise revenues, including the assessment of wastewater treatment charges.
- g) Facilitate implementation of the wastewater treatment management plan, with each participating community paying its proportionate share of treatment costs.
- h) Accept industrial wastewater for treatment and manage pretreatment programs.

e) When Will Wastewater Utility Plans be Needed?

Wastewater Utility Plans meeting minimum recommendations outlined in the Areawide 208 Plan and detailed in this guidance document should be prepared for all major wastewater collection and/or treatment service providers (service providers). For existing major service providers, the development and review of Utility Plans should be completed as soon as possible and should be linked to the five-year permit renewal cycle as necessary. It is anticipated that some service providers will not complete a Utility Plan. Additionally, some wastewater collection system providers may not complete a Utility Plan. If there is no reason to change the treatment plant capacity, modify the service area, or upgrade the treatment works, a Utility Plan may not be necessary. However, any significant changes to the treatment works or service area for these systems will require a Utility Plan for review by NFRWQPA.

The utility planning process will remain flexible for minor wastewater providers. However, *sufficient planning information* must be shown so there will *not be negative water quality effects caused by any proposed new facility, facility expansion or change to service area.*

f) First Steps in Starting a Utility Plan

Recommended first steps in preparing a Wastewater Utility Plan are outlined below.

- a) Determine the type and intended use of the Utility Plan:
 - 1) Existing wastewater treatment plant, interceptor, or lift station - no upgrade anticipated within five years
 - 2) Existing wastewater treatment plant, interceptor or lift station – upgrade necessary within five years;
 - 3) Existing wastewater treatment plant, interceptor or lift station – site approval in progress; or
 - 4) New wastewater treatment works.

- b) Determine who needs to be involved in the development of a Utility Plan and the general level of involvement in the process: They may include, but are not limited to, the following:
 - 1) NFRWQPA;
 - 2) Management agency;
 - 3) Operating agency (mandatory);
 - 4) Local governments;
 - 5) Special districts;
 - 6) Technical support group(s) (e.g., consultant company, technical experts);
 - 7) Citizen groups, homeowner associations, and the general public;
 - 8) Industries (either through pretreatment program or direct within service area);

- 9) Watershed association;
 - 10) State agencies (e.g. Water Quality Control Division, State Engineer, Colorado Division of Wildlife); and
 - 11) Federal agencies (e.g. U.S. Army Corp of Engineers, Federal Fish and Wildlife Service).
- c) Collect all existing documentation and compare to outline to determine missing elements or areas requiring revision for new Utility Plan.
- d) Make preliminary contact with potential key informational contacts (Table 1) to;
- 1) Obtain information needed in the Utility Plan process; and
 - 2) Determine issues or problems that need to be addressed during the Utility Plan process.
- e) Develop a Utility Plan process schedule and begin.

Table 1 Key contacts

Level	Contacts	Types of Information
Planning Agency	Regional Planning Agency Staff	Guidance documents, maps of service areas, urban growth boundary, population and employment projections, wastewater flows, water quality assessments, wastewater management policies, monitoring information, committee contacts
Local Government	Planning and zoning department; local health department	Urban growth boundary; comprehensive plans; zoning; development plans
Management/ Operating Agency	General-purpose government as a management agency or a watershed association as the management agency	Wastewater strategy; existing permits; watershed plans; TMDLs, facility plans; existing infrastructure plans
State Agencies	Water Quality Control Division staff including watershed coordinator, permit writer (existing permit), revolving loan staff (if potentially	Regulations (i.e., site approval); effluent limits; permits; wasteload allocations, water rights, loan requirements, air quality permit

Level	Contacts	Types of Information
	interested in state loan); State Engineer	requirements, stormwater management plan requirements, biosolids
Federal Agencies	U.S. Army Corp of Engineers, Federal Fish and Wildlife Service, Environmental Protection Agency, and potentially others	Wetlands, floodplains, biosolids application, endangered species, national environmental protection act (NEPA)

g) Wastewater Treatment Work Planning

The Utility Plan or set of plans can be applied to one or more existing or proposed wastewater treatment works. In some cases, joint Utility Plans between wastewater providers may be appropriate because of management requirements or to meet water quality goals. A Wastewater Utility Plan document or set of documents provides basic planning information for wastewater treatment works to:

Utility Plans will provide information for watershed planning efforts.

- a) Meet requirements of the site approval regulations as adopted by the Colorado Water Quality Control Commission (Regulation 22).
- b) Provide sufficient information to amend the regional 208 Plan related to water quality assessments, watershed management, and wastewater management strategies.
- c) Provide wastewater treatment works or plant information, discharge data or other relevant documentation that are required in the preparation of total maximum daily loads, wasteload allocations, and/or other watershed planning efforts.
- d) Provide wastewater treatment works or plant information to assist in preparing discharge permits or applying for loans.
- e) Assure that boundaries between adjacent 20-year and Ultimate Planning Areas, when identified by a wastewater provider, do not overlap unless these overlap areas are incorporated into established memorandums of understanding (MOU).
- f) Assure that the management and operating responsibilities, as outlined in the 208 Plan, can be met by both major and minor wastewater service providers.

Boundaries between adjacent wastewater utility service areas cannot overlap

h) Wastewater Utility Plan Documents

A Wastewater Utility Plan can be a set of linked documents, provided all linked documents are filed in the reference library as the *final Utility Plan*.

A Wastewater Utility Plan may consist of one report (document) or a number of separate utility reports prepared by the same agency or a combination of agencies. Multiple documents can provide separate geographical detail and/or facility detail, or they separately meet the goals of the

Wastewater Utility Plan. Multiple documents must be submitted to NFRWQPA as a set, including all appropriate maps, when the Utility Plan is first submitted for acceptance. Thereafter, only those documents that are updated, amended, or otherwise changed need be submitted for acceptance. The Utility Plan report or set of documents and all subsequent support documentation will be filed and maintained by NFRWQPA as the final Utility Plan for a specified treatment plant.

Final Utility Plans, accepted by NFRWQPA, should be updated periodically (please refer to Chapter VII). A database will be maintained by NFRWQPA on final Utility Plans and any supplemental documents.

i) Documentation Sign-off

Utility Plans and any subsequent amendments will have an associated sign-off form. The site approval process identifies a list of agencies which are given an opportunity to make a recommendation on an application for construction of new, modified, or expanded domestic wastewater treatment plants. Those agencies identified in the site approval process should sign-off on all Utility Plans reviewed and accepted by NFRWQPA. These signature agencies will also have the opportunity to attach and file any comments with their signature. This sign-off form is titled *Local Agency Utility Plan Acceptance or Conditional Acceptance Form (Table 2)*. Original sign-off forms will be kept on file at NFRWQPA.

**Table 2: Local Agency Utility Plan Acceptance or
Conditional Acceptance Form**

Entity Name

Local Agency Utility Plan Acceptance or Conditional Acceptance Form

1. _____ Signature: _____
Typed or Printed Name
Management Agency: _____
Date: _____ Approve: _____ Disapprove: _____
Comments:

2. _____ Signature: _____
Typed or Printed Name
Local Health Agency: _____
Date: _____ Approve: _____ Disapprove: _____
Comments:

3. _____ Signature: _____
Typed or Printed Name
Other State or Federal Agency: _____
Date: _____ Approve: _____ Disapprove: _____
Comments:

4. _____ Signature: _____
Typed or Printed Name
208 Agency: North Front Range Water Quality Planning Association
Date: _____ Approve: _____ Disapprove: _____
Comments:

2. IMPORTANT DEFINITIONS

Comprehensive Plan - A Comprehensive Plan is a document that guides the physical land use development of an area. It is comprehensive in that it considers and coordinates the many inter-related aspects of development such as land use, transportation, utilities and public facilities, parks, and open spaces.

Design Capacity - The rated capacity (capability of a treatment plant to meet effluent limitations). This rated capacity shall be given in million gallons per day (MGD) and organic loading in pounds BOD₅ per day. This rated capacity is identified in the discharge permittee's permit; or for proposed facilities it will be specified when the permit has been issued.

Major Wastewater Provider - Major wastewater providers serve over 200 residential equivalents and the permitted wastewater treatment facility has a design capacity greater than 50,000 gallons per day. The treatment plant does not qualify as a minor treatment facility.

Management Agency - Any public agency designated for wastewater management responsibilities in an Area-wide Water Quality Management Plan prepared under Section 208 of the Federal Act and certified by the Governor. Such designation shall be considered final only upon the agency's acceptance of its responsibilities as outlined in the appropriate 208 Plan.

Minor Wastewater Provider - Minor wastewater providers generally serve less than 200 residential equivalents. The permitted wastewater treatment plant has a design capacity not exceeding 50,000 gallons per day and the facility does not plan to increase its capacity beyond 50,000 gallons per day within the 20-year planning horizon.

NEPA Requirements – The National Environmental Policy Act establishes requirements for Environmental Assessments and Environmental Impact Statements.

Non-discharging Wastewater Treatment Works – Some wastewater treatment works that do not discharge to surface or groundwater can be designated by the Water Quality Control Division as non-discharging and do not require a permit to operate.

Planning Agency – The NFRWQPA is the designated planning agency for Larimer and Weld Counties.

Ultimate Planning Areas (UPA) – It is the intent of NFRWQPA that wastewater service areas identified in the Areawide Water Quality Management Plan (208 Plan) be based on the urban growth boundary and any additional potential service area identified by approved local comprehensive plans, comprehensive long-range utility plans or the area a wastewater provider intends to serve at ultimate development. Ultimate Planning Areas are either equal in total land area to Wastewater Utility Service Areas (WUSA) or

larger. Consequently, no Ultimate Planning Area can be smaller than a WUSA. The portion of the Ultimate Planning Area beyond the urban growth boundary is not expected to require urban services until after 20 years from the time a utility plan is completed. However, this portion of the Ultimate Planning Area can be converted into WUSA as needed through the plan amendment process.

Urban – Land developed in residential, employment, service, and other uses in proximity to each other so as to afford convenience, access, and community. Residential densities in excess of one dwelling unit per acre and served by either central water or sewer services, or both, are considered urban in nature. The exception occurs where dwellings are clustered to preserve open space in conjunction with an open space plan, or in accordance with an approved Wastewater Utility Plan.

Urban Area – The land area that has been developed at densities and in character with the definition of urban and which requires central water and sewer as well as other infrastructure and service needs.

Urban Growth Boundary – Defined through an MOU between a county and a municipality as the land area planned to urbanize within a specific timeframe. This land area is planned by local governments to need urban services and utilities before the year 2020 or other time horizon established by the MOU.

Utility Plan – Complete set of documents or single document that meets the minimum Utility Plan requirements and is accepted or conditionally accepted by NFRWQPA.

Wastewater Utility Service Area (WUSA) – A WUSA is defined as the portion of the Ultimate Planning Area defined by the Urban Growth Boundary. A WUSA requires urban services through the 20-year planning horizon. These service areas are mapped and approved as part of the Areawide Water Quality Management Plan. WUSAs can be modified through the flexibility provisions in the plan amendment process.

3. WASTEWATER SERVICE AREA CONCEPTS

Major Service Areas

Major wastewater utility service areas exceed 200 residential equivalents with a plant design capacity >50,000 gallons/day.

If a wastewater provider serves over 200 residential equivalents and the permitted wastewater treatment facility has a design capacity greater than 50,000 gallons per day, the associated WUSA will be classified as major. Utility Plans for major wastewater providers serving major WUSAs are expected to provide all minimum information as recommended by this guidance document. The *208 Plan* will continue to establish the boundaries between

WUSAs to assure that there are no overlaps of service areas. Utility Plans that contain overlapping service areas cannot be accepted by NFRWQPA unless an Intergovernmental Agreement or Memorandum of Understanding is in place between the entities establishing the process for service in the overlap area. Overlap issues must be resolved through local planning processes prior to being submitted to NFRWQPA for acceptance.

The shape or contiguity of a major wastewater utility service area is defined through local planning processes.

Minor Service Areas

Minor wastewater providers generally serve fewer than 200 residential equivalents with a maximum treatment plant capacity of 50,000 gallons/ day.

If a wastewater provider serves fewer than 200 residential equivalents and the permitted wastewater treatment facility has a maximum design capacity of 50,000 gallons per day, then the associated WUSA will be classified as minor. If the minor wastewater provider plans to increase its plant capacity beyond 50,000 gallons per day

within the 20-year planning horizon, then a new and more detailed Utility Plan should be prepared before this expansion can occur.

The shape or contiguity of minor WUSAs not defined by the extent of urban development can be identified through the Utility Planning process. These systems may be isolated wastewater treatment facilities that are not contiguous with the extent of urban development. The accepted minor WUSA may or may not match the property owned by a minor wastewater provider. Utility Plans for minor wastewater providers that serve minor WUSAs may not have to meet all guidance requirements. The minimum information requirements for minor Utility Plans will remain flexible in this guidance document. Minimum requirements will be determined by NFRWQPA on a case-by-case basis.

Wastewater service providers serving minor WUSAs should have active wastewater treatment facility discharge permits. Wastewater service providers with inactive wastewater facilities or permits will not be shown in the *208 Plan*, and they will not be

required to complete Utility Plans. Service areas for inactive or non-discharging wastewater treatment works will be dealt with on a case-by-case basis. However, any minor facility being re-issued a discharge permit by the Water Quality Control Division will be treated as a new facility and will be requested to complete a Utility Plan before being incorporated into the *208 Plan*.

For minor facilities or minor WUSAs, the facility capacity and service area is established based only on the area intended to be served and on the current facility sizing as approved in a site application or discharge permit. The minor WUSA and facility design capacities are assumed to remain less than 50,001 gallons per day capacity.

Service areas for some minor wastewater service areas may not be contained within the urban growth boundary.

Minor treatment facilities that expand capacity beyond 50,000 gallons/day will be classified as major treatment facilities

If a management agency or operating agency expands its wastewater treatment facility above the maximum 50,000 gallons per day capacity, the treatment plant will be treated as a major facility. The minor WUSA and the UPA for the minor treatment facility will be assumed equal in area unless amended.

Ultimate Planning Areas

Long-range wastewater service areas are called Ultimate Planning Areas (UPA). No UPA can be smaller than a WUSA. The portion of the UPA beyond the urban growth boundary is based on approved local comprehensive plans, comprehensive long-range Utility Plans, or the area a wastewater provider intends to serve at ultimate development. In some cases, the UPA may represent the total amount of urban area needed for a projected longer-term population or the ultimate build-out of a utility service area.

Ultimate Planning Areas are either equal to Wastewater Utility Service Areas (WUSA) or larger.

Since WUSAs and UPAs recognize different geographies, the growth density assumptions may also be different for the two areas. Wastewater providers are expected to provide their own density assumptions and flow projections consistent with local comprehensive plans for UPA's.

Ultimate Planning Areas may represent the ultimate build-out of a service area.

Wastewater Utility Service Area

A planning area designation amendment must precede an expansion of a utility service area, if the proposed utility service area extends beyond the accepted planning area boundary.

The WUSA is defined as the portion of the Ultimate Planning Area requiring urban service through the 20-year planning horizon. This area cannot be larger than the identified UPA. The primary goal in establishing WUAs and Wastewater Utility Plans is to provide reasonable, feasible, and economical

wastewater service to an area designated for urban development. Utility Plans should consider the water quality impact the treatment and collection system will have on receiving water and provide a strategy for meeting all applicable water quality standards and classification, while minimizing the potential impact one may have on another.

A service area is usually defined by urbanized areas requiring services within a planning period of approximately 20 years. These areas are established with the intention of encouraging contiguous and orderly development of utility infrastructure. These areas may be the result of municipal boundaries, legal boundaries of sanitation districts, or hydrologic boundaries. The boundaries should be consistent with the local comprehensive plans and the adopted extent of urban development. By including such areas within a WUSA, the entities assume the responsibility of providing service to that area within a reasonable time frame.

Basic principles relative to water quality need to be considered when establishing service boundaries. These principles include, but are not limited to, such factors as gravity systems preferred over lift stations, standard engineering practices, reasonable management and financial practices, and facility and collection system master planning.

The establishment of a WUSA must be based on adequate long term planning information. Wastewater Utility Plans must address, at a minimum, the following factors for the WUSA over a 20-year planning period.

- The identified service area.
- Population datasets, forecasts, and land use status.
- Collection system requirements.
- Treatment facility requirements.
- Sequence and timing of capital projects.
- Rates and fees necessary to finance improvements when required.
- The entity requesting the amendment must also submit, at a minimum, the following current information:
 - ✓ Population
 - ✓ Peak and average flow
 - ✓ Peak and average loading
 - ✓ Inflow / infiltration
 - ✓ Treatment capacity, hydraulic and organic
 - ✓ NPDES permit requirement and constraints

WUSAs can be modified through the flexible provisions in the Plan Amendment Process. WUSA designations will be mapped and maintained as part of the Areawide Water Quality Management Plan.

Sometimes, property is included within a provider's WUSA or UPA even though it has not yet been annexed or included in the provider's legal boundaries. Until that happens, the provider does not have legal jurisdiction over the property. While property within a provider's WUSA or UPA is expected to be served by that provider, if the property has not been annexed or included, other providers may be able to serve the property. Evaluation of options for service must include referral to the affected local land use entities and consistency with any applicable intergovernmental agreements or other arrangements between the responsible local governments and existing providers.

Wastewater Utility Service Area Conflicts

As stated earlier, overlapping service areas cannot be accepted unless an agreement is in place to establish the process for service in the overlap area. When service area conflicts arise that cannot be resolved the following process will be followed. The approved service area, prior to conflict, will not be changed until the entities have reasonably attempted to resolve the service area in dispute. A watershed association and NFRWQPA staff may provide appropriate technical assistance to help resolve planning area overlap issues through a utility technical support process. Technical support by NFRWQPA staff will only be provided on a request basis. If conflict resolution cannot be achieved on a timely basis, then one or both entities having a conflict can take the issue directly to the Association for recommendation. In these instances, the following guideline will be observed:

- Each entity shall make a presentation, not to exceed 30 minutes, outlining the pros and cons for that entity to provide service. Following the presentation, there will be an opportunity for public comment (limited to five minutes each) followed by questions and discussion from the membership. The entities in conflict will not be allowed to participate in the questions and discussion period except to respond to specific questions from the membership.
- Each member entity, except those involved in the conflict, shall evaluate and recommend the entity that can best provide service based on, but not limited to, the following:
 - ✓ Available and current planned treatment systems
 - Current capacity
 - Planned capacity, sequence, staging
 - History of discharge (violations)
 - Potential impact of effluent discharge on receiving waters
 - Environmental impact
 - Location and site information
 - Type of process treatment
 - Flood plain
 - ✓ Available and planned collection systems
 - Gravity versus lift stations
 - Current capacity

- Planned capacity, sequence, staging
- Route location relative to water quality
- ✓ Economic strength and reasonableness to provide service
 - How is service to the area funded?
 - How are improvements funded?
 - Will this deplete reserves?
- ✓ Long term impact on surrounding entities
- ✓ Requests for wastewater service
- ✓ Protection of water quality and groundwater
- ✓ Referrals from affected local land use entities
- ✓ Consistency with any applicable intergovernmental agreements or other arrangements between the responsible local governments and existing providers

The entity that is recommended by the majority of the membership shall be approved by NFRWQPA. All affected Utility Plans should then be amended to reflect the preferred service option including changes to the WUSA or UPA. These changes will be done through the review process established in this document.

Wastewater Utility Service to Non-urban Areas

Wastewater Utility Service Areas (WUSA) can have land areas designated as non-urban wastewater planning areas.

Wastewater service to non-urban areas, which can include such uses as designated open space, permanent non-urban wastewater served developments, agricultural or special use; which may not be economically served by centralized service in the *near-term*; will require other management solutions. Non-urban wastewater

planning areas may be designated by the land use planning agency as permanent non-urbanized areas that are to be permanently served by individual sewage disposal systems or on-site systems with a design capacity of 2,000 gallons/day or less. Wastewater planning areas may also be designated by the land use planning agency as permanent non-service areas (open space, agricultural areas, and low density non-urban with no more than one residence or structure per 35 acres).

Interim non-urban areas that do not require centralized services may be served by on-site systems in the interim period.

Interim non-urban areas can also be designated as being expected to eventually urbanize and require centralized services. Wastewater Utility Plans should address how these interim non-urban areas within the UPA planning area will be served. An estimate should be included in the report on when urban service requirements will be available or required.

Management agencies are required to identify a method to evaluate water quality effects related to on-site treatment and disposal systems located within designated Ultimate Planning Areas or Wastewater Utility Service Areas.

The nonpoint source management agency, watershed association, or other responsible management agency that has assumed responsibility for non-urban wastewater planning should be identified. Unless otherwise specified, the county should be considered as the nonpoint source management agency. This management entity should be requested to provide an appropriate method or methods to evaluate water quality effects related to large lot developments served by individual sewage disposal systems within *non-urban* wastewater service areas. The Wastewater Utility Plan will need to map large lot developments located in service areas.

4. RELATIONSHIP TO SITE APPROVAL PROCESS

The Colorado Department of Public Health and Environment Regulation # 22 (Regulations for the Site Approval Process), as approved and amended from time to time, is used as a reference. Utility Plans should meet the requirements of Regulation #22. The definitions used in the site application regulation should be used to define terms used in any Utility Plan. Utility Plans that have been accepted or conditionally accepted by NFRWQPA will be used in the site approval process by NFRWQPA

Site approvals are needed for construction or expansion of wastewater treatment works, lift stations, and major interceptor lines.

As part of the state Water Quality Act, site approvals are needed for construction or expansion of wastewater treatment works, lift stations, and major interceptor lines. Final action on site applications is a function of the Water Quality Control Division after a review by appropriate local entities. The state act lists three items for the division to evaluate:

1. the long-range comprehensive plan for the area as it affects water quality and any approved regional water quality management plan for the area;
2. management of the facility on the proposed site to minimize the potential adverse impact on water quality; and
3. consolidation of wastewater treatment facilities whenever feasible (Water Quality Control Division guidance).

The Colorado Water Quality Control Commission refined these criteria to ensure that:

- existing treatment works are not overloaded when connecting new lift stations or interceptors;
- proposed treatment works are planned and constructed in a timely manner as needed;
- proposed treatment works are developed considering the local long-range comprehensive plan for the area as it affects water quality and any approved regional water quality management plan for the area;
- proposed treatment works or interceptor protect water supplies;
- proposed treatment works or interceptor have been properly reviewed by all necessary local, state, and federal government agencies and planning agencies;

Operating agencies must certify that the treatment works will not be overloaded by the addition of wastewater flow from new lift stations or interceptors.

- proposed location will have no foreseeable adverse effects on the public health, welfare, and safety;
- applicants will provide for adequate operational management, including legal authority and financial capabilities;
- proposed treatment works be located so that they are not unnecessarily endangered by natural hazards; and
- objectives of other water quality regulations will not be adversely affected.

The site approval regulation allows:

In the interest of facilitating a more effective and timely review of proposed new and expanded domestic wastewater treatment works, each planning agency may establish and implement a coordinated review and comment process to carry out the provisions of this regulation in coordination with its water quality planning responsibilities. Where a planning agency wishes to establish such a coordinated process, the Division may enter into an agreement with the planning agency specifying the procedures for this coordinated process. The intent is to establish a single process 1) to meet these site approval requirements, and 2) to meet the requirements for amendments to the water quality management plan. The process should be designed so that a new or expanded domestic wastewater treatment works which is approved as part of the water quality management plan may be concurrently deemed to also meet the requirements of these site approval regulations at the time of its inclusion in the plan. Under such a coordinated process, the Division retains final authority for approval or denial of each project which is regulated under these site approval regulations.

NFRWQPA has not, at this time, entered into an agreement with the Water Quality Control Division that specifies procedures for this type of coordinated process. However, the Wastewater Utility Plans are designed to meet the requirements of a 208 Plan amendment, the site application process, and to provide the planning information needed by the Division in the permitting process and in the revolving loan program.

UPAs will be used in the review of site approvals where it is necessary to size facilities such as interceptors based on a planning horizon that extends beyond 20 years to provide cost-effective service. In general, treatment facilities and lift stations should be staged to provide for 10-year capacity increments, but may be staged for shorter (e.g. interim lift stations) or longer periods with appropriate economic justification. Consequently, interceptors and lift stations can be located within designated UPA.

However, wastewater infrastructure designed to only serve UPAs will **not** be used in the site approval process or to meet other appropriate regulatory requirements.

Wastewater infrastructure designed to serve areas within the WUSA can be physically sited within UPAs, which are outside of the urban growth boundary. Since interceptors are often sized to last beyond 20 years, they may have excess capacity more appropriate to ultimate build-out of a designated area.

Interceptors may be staged for ultimate build-out with appropriate economic or right-of-way justification.

5. UTILITY PLANNING FOR WASTEWATER TREATMENT AND CONVEYANCE FACILITIES

A. General Requirements

Utility Plans document the wastewater management strategy for a wastewater treatment facility (greater than 2,000 gallons per day capacity) and the associated planning area. All Utility Plans will contain a defined set of minimum information (location, sizing, staging, service area, process system, effluent quality, and financial arrangements) and respond to appropriate state or federal requirements.

Utility Plans for minor facilities or minor WUSA may be approved even though they do not meet all of the recommended planning elements provided sufficient planning is completed to show that potential long-term adverse water quality effects from any proposed new facility or facility expansion will be minimized. Utility Plans will provide planning documentation for both the designated utility service area and planning area, with the utility service area having the maximum level of information.

Utility Plans define location, sizing, staging, service area, process system, effluent quality, financial arrangements and appropriate state or federal requirements.

The primary goals in establishing Wastewater Utility Plans are to provide reasonable, feasible, and economical wastewater service to an area designated for development within the NFRWQPA. Utility Plans should consider the water quality impact the treatment system will have on receiving waters. The Utility Plan should include any strategy for meeting all applicable water quality standards and classifications while estimating the potential impact a discharger may have on other dischargers.

Information in a Utility Plan is used in the *208 Plan* process to document the best method of providing wastewater service while meeting water quality goals through the 20-year planning horizon. Wastewater Utility Plans can also function to define service beyond the 20-year planning horizon. Wastewater Utility Plans are not applied to water supply, nonpoint source, or stormwater service areas.

The NFRWQPA will maintain a reference set of accepted Utility Plans developed by management agencies or operating agencies for all wastewater treatment facilities with an active discharge permit. The siting and expansion of direct industrial discharges will be identified in the *208 Plan* under special provisions. Direct industrial dischargers who also process domestic wastewater will be encouraged to develop Wastewater Utility Plans. Any wasteload allocation or total maximum daily load analysis included in a Utility Plan will be based on population and employment forecasts and wastewater flow estimates developed through acceptable alternate projections.

The following pages in this section provide an organizational structure (outline) for 208 Utility Planning. The structure discussed hereinafter provides information on the intended content of the various sections in the report. The basic report outline is as follows:

OUTLINE FOR UTILITY PLANNING

- I. EXECUTIVE SUMMARY**
- II. INTRODUCTION**
- III. EXISTING CONDITIONS**
- IV. FUTURE CONDITIONS**
- V. RECEIVING STREAM WATER QUALITY**
- VI. WASTEWATER TREATMENT SYSTEM IMPROVEMENTS**
- VII. SYSTEM MANAGEMENT AND FINANCIAL PLAN**
- VIII. APPENDICES:**

Each Section (or Chapter) in the report is discussed below:

SECTION I. EXECUTIVE SUMMARY

The report summary should answer seven basic questions in a brief manner (typically 3 to 4 pages or less). The basic questions include: 1) **Who** is doing the project, 2) **What** is being planned, 3) **Why** is the project being contemplated, 4) **Where** will the project be located, 5) **When** will the project be started and completed, 6) **How much** will the project cost, and 7) **How** will the project be **funded**. Additionally, where treatment facilities are concerned, a site layout map should be provided; and where interceptor sewers or lift stations are concerned, a location map with infrastructure highlighted.

In cases where planning is accomplished and no immediate projects are proposed, provide a summary of future planned projects with a timeline.

The intent is that the basic content of the report can be obtained by reading a few pages in the Executive Summary. The subsequent sections then provide detail on each question answered.

SECTION II. INTRODUCTION

The introductory section of the report should introduce the owner/entity preparing the report that includes a brief history, County location, and adjacent neighbors who also provide wastewater services.

The introduction should also address any deviations from the Utility Plan format and supporting information such as additional studies that have been performed which are in the appendices or any information that is not available that would typically be included such as Preliminary Effluent Limits (PELs), Infiltration/Inflow studies, etc.

SECTION III. EXISTING CONDITIONS

This section contains a broad range of information regarding the entity and its current situation regarding zoning, population, Service Area, and existing collection and treatment facilities. All information regarding future conditions and treatment schemes are covered in later sections.

1. Current Planning in Area. This subsection will cover information regarding current land uses and zoning in the Service Area. Typically, excerpts of local planning and zoning are included in Appendix H and are summarized herein with exhibits. The text should delineate who the land use management agency is and note that service areas not annexed are under County Planning jurisdiction. The existing Wastewater Utility Service Area (WUSA) map is included and discussed in relation to the current Growth Management Area (GMA). Site Application 1-mile and 5-mile maps can be included here if a site application is to be provided with or immediately following submittal of the report.

The existing population history is discussed. Populated areas in the entity's service area that are not served are differentiated here so that a "sewered" population number is derived for use in determining per-capita unit flow contributions. Other flow contributors to the system are mentioned here, including commercial and industrial concerns. Any industries contributing more than 5% of the average flow or load should be discussed in terms of "significant industrial" contributors, and their SIC classification should be provided.

2. Current Wastewater Flows and Loads.

(a) Flows. Provide a history (five years minimum) of influent flow records. This information should provide a good basis for an "existing average daily flow" volume. Additionally, the daily peak flow rates should be derived from daily flow records. If this is not possible, determination of current (and future) peak flowrates should be made using information available in Regulation #43 - OWTS and WQCD Design Manual DR-1, Chapter 2, along with information provided in Section IV hereinafter.

The report should present the derivation of current per capita flow rates on an average daily (and Peak, if possible) basis. This information can be used to quickly analyze general Infiltration/Inflow (I&I) levels into the system. The EPA guideline for potentially excessive I/I on an average daily flow basis is 120 gallons per capita per day (gpcd) basis (with industrial flows accounted for). The peak wet weather flow guideline is 260 gpcd. If the values are below these levels, further investigation of I/I is generally unwarranted. If there is any previous information on I/I in the area, it should be included in the appendices (APP. O).

The current average and peak per capita flow rates are also used in conjunction with future population figures to develop future flows for planning and design purposes.

(b) Loads. Provide a five-year history of loadings to the Treatment System including at a minimum; 1) BOD, 2) TSS, 3) Ammonia, 4) Total Inorganic Nitrogen and 5) Phosphorus plus any other constituents of concern. The information should be summarized by year including concentrations and total loadings in pounds/day. For the organic, solids, and nutrient loadings, it is helpful to compare the influent concentrations and unit loadings (lbs/capita/day) to typical values to verify that the system is typical or to identify any areas of concern.

If there is no historical information for a system, some sampling should be accomplished and presented in the report to bench mark the system against typical values.

3. Existing Wastewater Treatment System.

(a) Current Effluent Limitations. In the text provide a summary of the current design capacity of the system (flow and load) as listed in the permit and the effluent requirements which the system is supposed to be meeting. Provide the issuance date of the current permit and when it expires (provide a copy of the permit in Appendix G). Note the point of compliance for the system. Additionally, discuss any concerns or problems with the current permit in relation to the existing system.

(b) Description of the Existing Treatment System. Describe that condition and capacity of each unit process in the facility process train. This helps to point out short comings in the current system and shows the capacity limiting processes. This section should describe any physical problems (equipment) with the existing system. Provide a process schematic of the system (a site layout map is also good information to include).

(c) Performance of the Existing System. Provide history of the performance of the system regarding permitted constituents (three years minimum). This is best provided graphically as it provides a visual representation the winter/summer and average performance condition. The limit can be shown on each graph. In this section discuss the existing systems problems with achieving compliance, if any.

(d) Bio-Solids Management Program. Provide a description of the current bio-solids treatment and disposal process used at the facility. If it is a lagoon system, provide information on the last time the lagoons were cleaned. Note any concerns or problems

with the current system going forward. Note that the NFRWQPA promotes the beneficial use of bio-solids and has a policy which is discussed below:

Biosolids Policy

Although there are other legal means of disposing of biosolids (such as incineration and land filling) neither method benefits Colorado as does recycling. Burning biosolids consumes huge amounts of energy and pollutes the air, while burying them takes up valuable space in local landfills. Recycling biosolids is clearly the preferred method for disposal.

NFRWQPA recognizes and supports the economic and environmental benefits of recycling biosolids, and appropriate policy documents will recognize the value of biosolids recycling. The biosolids positions are as follows:

- Public health and environmental quality are protected under federal and state biosolids regulations. The NFRWQPA encourages member governments not to adopt local public health regulations for biosolids that are more stringent or restrictive than federal or state regulations.*
- The NFRWQPA encourages the practical and beneficial land application of biosolids in the region. Member governments with land use authority should regulate biosolids disposal through the zoning and platting process. Local regulations should focus on transportation, aesthetics, and land use issues.*

The biosolids policy will be used by the NFRWQPA staff in the site approval process as defined in the 208 Plan.

(e) Need for Improvements. After having reviewed the existing system from mechanical, capacity, and performance standpoint, provide a discussion of the need for a project to keep the entity in compliance going forward. Discuss compliance with either the existing system or the need for new process(s) or a new treatment facility, all of which are presented and discussed in Section VI of this report.

3. Existing Collection System.

(a) Layout. Describe the existing interceptor sewer collection system. Provide information on alignment (map) and sizes within the WUSA. In the discussion, show drainage basins (areas) and note any known condition or capacity issues or I/I issues. On the mapping, show the location of the existing Lift Stations and note station nomenclature.

(b) Lift Stations. For each lift station, note in the report the station's capacity, percent utilization, alarm system, emergency situation protocols, and emergency power generator or other arrangements.

(c) Need for Existing Collection System Improvements (Repairs). Based on the discussion of the current collection system condition and capacities, note any improvements that need to occur to provide current adequate service to existing customers. If these needs will occur down the road, estimate the time frame at which they will occur (exclusive of growth issues which will be discussed in Section IV).

(d) Pretreatment Program. The U.S. EPA administers the National Pretreatment Program under the General Pretreatment Regulations, first adopted in 1978. These regulations, amended in 1981 and again in 1988, establish specific requirements that both wastewater treatment facilities and industries must comply with to reduce industrial pollutant discharges. The *General Pretreatment Regulations* require that any wastewater treatment facility designed to treat over five million gallons a day of wastewater, or receives significant discharges from industrial sources, must develop a local pretreatment program conforming to EPA regulations. Management and operating agencies must meet specific requirements under the *General Pretreatment Regulations*. Utilities should indicate whether they have an EPA approved pretreatment program.

Discuss the entity's pretreatment program and the industries included in the program. Summarize the quantities of flows and loads from the industries to the treatment system and the pretreatment requirements of each industry. Provide a copy of pretreatment program summary in Appendix G.

SECTION IV. FUTURE CONDITIONS

1. Population and Land Use Projections. Using a 20-year planning horizon, delineate the area to be served by the entity and land uses in that area (comprehensive plan reference). The Utility Plan can recognize two types of wastewater service areas: Wastewater Utility Service Areas (WUSAs) and Ultimate Planning Areas (UPAs). WUSAs are defined as those areas within the region that require urban services through the 20-year planning horizon or any subsequent modification to the urban growth boundary or planning horizon. Ultimate Planning Areas are based on existing local comprehensive plans, comprehensive long-range Utility Plans, or the area a wastewater provider intends to provide with service at ultimate development. UPAs are either equal to WUSAs or larger. Consequently, no UPA can be smaller than a WUSA.

The foundation of water quality planning is the forecast of expected wastewater treatment needs, which is tied to future population levels. Forecasts define wastewater flow rates and the capacity needed to treat the projected volume of wastewater. Forecasts for utility service areas and planning areas are included in the *208 Plan*.

The areas used for the population forecasting are within WUSAs. Associated wastewater flow projections will be generated from this area data, and they will be directly related to WUSAs, but not necessarily to UPAs.

The 208 Plan may use equivalency processes to convert population data sets to WUSAs for selected planning years (five year intervals) through the 20-year planning period for use with longer-term potential development within UPAs. Wastewater Utility Plans can show alternative projections and flows for WUSAs. A number of factors can cause differences in projections. The Utility Plan will need to list the appropriate factors and discuss how these factors alter projections.

Wastewater Utility Plans will need to provide their own projections and flows for UPAs or WUSAs beyond the 20-year period. Forecasts for WUSAs will be used in the site approval process and to meet other appropriate regulatory requirements. As necessary for cost-effective utility service, UPA forecasts (that go beyond 20 years) may be used to size wastewater infrastructure (e.g., the size of an interceptor, land area needed for a treatment facility or lift station site). These forecasts will be so referenced in the site approval or other appropriate regulatory processes.

2. Flow and Load Forecasts. Based upon the population forecasts generated in the previous sub-section, derive the future flows and loads for 20-year planning purposes.

(a) Wastewater Flow Characterization. Population projections through the 20-year planning horizon in the 208 Plan will be linked to each WUSA and to each area designated for interim or permanent non-urban wastewater service. The 208 Plan will predict wastewater flows in five-

year increments through 20 years for major and minor WUSAs and for non-urban service areas defined by management agencies at the watershed level. Wastewater flow projections maintained in the 208 Plan will be adjusted for future years using available discharge monitoring reports (DMRs), when available.

(b) Infiltration and Inflow Analysis (I&I) If preliminary figures presented in Section III indicated potentially excessive I&I flows, further analyses may be required by the Water Quality Control Division for some treatment works. The Utility Plan should contain any I&I study results, if appropriate for the facility (Appendix O). Unit flow allowances for I&I should be reviewed when projecting future flows.

(c) Typical Wastewater Flow Contributions for Planning. If a current unit flow history cannot be developed from recent data, typical values may be used to derive design flows. Table 3 below provides some planning factors used to estimate wastewater flows. These numbers are provided for guidance and other factors can be used, provided they are identified within the Utility Plan. The *208 Plan* recommends using a residential wastewater flow factor of 85 gallons/person/day, which includes a 10 gallon/person/day inflow and infiltration component.

The *208 Plan* also recognizes a wastewater flow generated by employment with the regional average at 50 gallons/employee/day. Generally, this 85/50 wastewater flow factor calculation provides a good projection and the numbers have been verified using the daily and monthly reports submitted to the Water Quality Control Division. Lacking employment data, a factor of 100 gallons/person/day as a residential equivalent can provide, generally, comparable projections.

Table 3 Factors used in the 208 Plan to estimate wastewater flow

Types of Use	Average Wastewater Flow
General Population	
Single or Multi-family Equivalence – Regional	85 gallons/day/person
General Employment	
General Employment – Regional	50 gallons/day/person
Household Equivalent (Residential development without employment)	
Households	250 gallons/household/day
Site Specific Planning Averages (gallons/day/person)	
Stores, Offices, Small Business – Employees	25
Stores, Offices, Small Business – Guests	8
Hotels/Motels – Employees	50
Hotels/Motels - Guests (24-hrs)	20
Cabins - Guests (24-hrs)	50
Dining Facilities (Per Meal)	10
Schools (no showers) - day use (8-hrs)	12
Schools (showers) - day use (8-hrs)	25
Tourist/Trailer Camps – Employees	50
Tourist/Trailer Camps - Guests (24-hrs)	85
Recreational Facilities – Employees	50
Recreational Facilities – Guests	20

The Plan should clearly delineate the design average daily flow, peak hour flowrate, and the maximum month average flow (used for sizing). Refer to the Regulation #43 – OWTS and WQCD Design Manual DR-1 for further direction on design values. Note that a maximum peaking factor of 5.0 (or less) is generally applied to small treatment systems or special use sites (e.g., church camps, restaurants, day camps).

It is recommended that wastewater treatment plants be designed for a 20-year period and to have a projected 20-year design capacity that is 20 percent greater than the projected average flow at the end of the 20-year period. This 20 percent capacity can be identified for 30-day maximum month or annual average. Local population projections used to generate wastewater flow projections should be documented and differences between regional projections and local projections explained.

(d) Design Loadings for Constituents of Concern. As with flow, a similar process is used for determining the future loadings for organics,

nutrients, and other constituents of concern. If an adequate data history is not available (from Section III) for derivation of future loads, typical values may be used. The source of the typical values must be referenced and be compatible with Regulation #43 – OWTS and WQCD Design Manual DR-1 unless otherwise justified.

3. Future Interceptor Collection System Alignments.

(a) Provide a map of future extensions of the current interceptor sewer system which illustrates how the entity will provide sewer service to the entire Service Area. The Map should show interceptor alignment with general line sizing. If growth is envisioned beyond the current service area boundary, show future changes to the WUSA Map and discuss whether the entity will file Plan Amendment as a part of the planning process. Utility Plans must locate existing and planned lift stations to serve areas defined within WUSAs or located in UPAs. Existing facilities and facilities to be built within two years should be shown at a specific location.

(b) The Map discussed above should show the location of future Lift Stations, and the text should discuss the sizing range for the Stations if possible.

(c) The report should summarize all future collection system and pump station improvements and provide a generalized time frame for when these improvements might occur based upon current planning and growth projections. Cost estimates should be provided for improvements that are deemed necessary within the next five years. These improvements and costs would be presented as “near term” projects along with any near term treatment system improvements.

SECTION V. RECEIVING STREAM WATER QUALITY

1. Watershed Identification

(a) Water Quality Limited Segments. For all treatment facilities, the Utility Plan should identify whether the receiving waterbody (or any downstream waterbody affected by the discharge) is currently water quality limited. This applies to all constituents discharged or to be discharged by the facility. Additionally, if there is a potential for water quality limited segment within a 10-year period, based on the current 305(b) report, modeling, or other water quality data, this should be included in the Utility Plan.

If the discharge quality is/will be controlled by a water quality limited waterbody, then an identification of the constituent(s) of concern and source identification of water quality limited designation (e.g., 303(d) list, 305(b) report or watershed association planning and implementation effort) needs to be included in the Utility Plan. The Utility Plan must identify any wasteload allocation (concentration, poundage and/or other alternatives) by constituent(s) as they apply to the treatment plant. Therefore, the Utility Plan should contain:

- For treatment plants that will not be built or expanded for 10 or more years, a general discussion of the constituents to be controlled and the availability of allocations for the waterbody are sufficient. Exact concentration or poundage estimates are not necessary unless there is a conflict with an existing total maximum daily load (TMDL) or wasteload allocation (WLA).
- For wastewater treatment plants to be built or expanded within the next 10 years, a recommended treatment technology and treatment plant configuration to meet the projected discharge permit limitations and a listing of alternative technologies for consideration. The Utility Plan must provide documentation that achieving the projected effluent limitations is technically and economically feasible.

(a) Watershed Issues. Utility Plans should document any watershed programs and implementation strategies. Since the watershed protection approach is advocated in the 208 Plan, the Utility Plan will need to address how a wastewater management plan fits into the watershed program.

(b) Map of Watershed Basin. From 208 plan or reference PEL document.

2. Total Maximum Daily Loads or Waste Load Allocations. Utility Plans should document any approved or proposed total maximum daily load studies or wasteload allocations. The receiving waters need to be checked against the Water Quality Control Division's 303(d) List and the 305(b) Report. Wasteload allocation requirements can

affect effluent limits and treatment options

3. Future Level of Treatment Required.

(a) Current Permit. Provide a copy of current discharge permit in Appendix and summarize current effluent requirements here.

(b) Preliminary Effluent Limits (PELs). Provide a copy of the PEL document prepared by the WQCD. The Utility Plan shall list the effluent discharge quality necessary to meet receiving water quality classifications and standards, including:

Provide the WQCD recommended effluent discharge quality (PELs).

Present a list of projected discharge permit limitations based on state effluent standards (copy of PELs from Water Quality Control Division), receiving water classifications and established water quality standards; discharge quality necessary to meet any total maximum daily loads or wasteload allocations as listed or recognized in the *208 Plan* for time horizon identified in the plan; and any other effluent limits recommended in the *208 Plan* and/or necessary to meet state requirements.

SECTION VI. WASTEWATER TREATMENT SYSTEM IMPROVEMENTS

1. Development and Screening of Alternatives.

(a) Optimization. Discuss the feasibility of optimizing the performance of the existing facility to meet future required effluent limits presented in Section V above.

(b) Regional Consolidation Opportunities. The Wastewater Utility Plan should identify opportunities for wastewater treatment system consolidation. Often, larger wastewater treatment facilities can provide service more effectively while providing a higher degree of treatment than can be achieved through smaller treatment facilities. While large facilities do not always provide better water quality treatment, consolidation of facilities can eliminate smaller treatment facilities, which may not be financially capable of operating properly and may be exceeding their discharge permits. The decision for facility consolidation is determined in the Utility Planning process and is based on economics, cost effectiveness, operations, water quality impacts, physical constraints, and water rights. Any consolidation analysis must be consistent with the Water Quality Control Division policy on consolidation. Refer to Regulation #22 –Site Location & Design Approval and WQCD Design Manual DR-1.

(c) Wastewater Reuse Opportunities. The Utility Plan should explore any opportunities for wastewater reuse for non-potable uses, future potable use, or as a method for additional pollutant removal, as appropriate. The Utility Plan should identify those situations where reuse can be used to fulfill water rights and augmentation plans. The Utility Plans should identify any reuse considerations as part of the alternative analysis. If reuse is not an option, this should be clearly stated in the Utility Plan documents.

Reuse is an efficient means of preserving water resources in areas where those resources need to be protected. Reuse of wastewater for water rights or augmentation purposes should be carefully reviewed in relation to downstream water supplies as related to potential health hazards and environmental risks. The quantity and quality of wastewater for reuse should be determined during the planning process.

(d) Feasible Treatment Alternatives (New System and/or Upgrading). Discuss alternatives for meeting future treatment requirements which can include new and/or upgraded facilities. This typically involves three alternatives; though there are occasions where the system is relatively new and just needs to be upgraded with the next planned phase, in which case it is essentially the only alternative. A general description of each option should be provided which contains sufficient information to differentiate each from the other.

2. Alternatives Evaluation. For proposed new or upgraded wastewater treatment works, the Utility Plan needs to provide alternatives analyses. The Utility Plan

needs to list the criteria used to select a preferred alternative as discussed below. Additionally, the selection of a preferred alternative should have a public review and comment component. Alternatives evaluation should include:

- (a) Monetary Costs:
 - (i) Capital Costs
 - (ii) Annual Operation & Maintenance (O&M) Costs
 - (iii) 20-Year Present Worth Valuation
- (b) Energy Costs comparisons
- (c) Reliability with Respect to Effluent Compliance
- (d) Ease of Implementation (Constructability)
- (e) Environmental Issues: (Wetlands, Flood Plain, Soils, etc).

Wetlands - *If the Utility Plans will have any effect on wetlands, then the NFRWQPA wetland policy should be considered in the planning process. Wetlands can have ecological and societal values, which make them an important regional resource. NFRWQPA supports the concept of wetlands protection, and all NFRWQPA plans will recognize the value of wetlands as part of the planning process. In recognition of this regional concept, NFRWQPA adopted the following position.*

The adopted regional wetland policy states ... no net loss of wetland functions within the NFRWQPA region.

The NFRWQPA wetland policy is: no net loss of wetland functions should occur within the region, and cost-effective use of wetlands in urban design should be encouraged. Development within a designated or delineated wetland should occur only when no other alternative exists. Wetland mitigation

should consist of replacement wetlands of a similar type and quality, as determined by appropriate scientific analysis, which results in an equal (at the minimum) replacement of lost wetland functions. Wetland replacement within the same hydrologic watershed as defined in the 208 Plan is the preferred compensatory mitigation measure.

3. **Plan Selection.** The report author should use a form of matrix analysis to compare the alternatives both in terms of monetary and non-monetary factors. The resulting analysis provides an alternative to be selected and implemented. The report should provide justification of the plan selected and discuss this process. The NFRWQPA review committee discourages the naming of specific manufacturers in this process where more than one company can provide equipment for the process being selected.

(a) **Plan Selection Matrix or Other Process.** Provide discussion of costs comparisons and non-monetary factors of each alternative.

(b) **Selected Plan Description.** For the plan selected, describe the improvements in more detail and discuss:

- (i) Near term/long term treatment capabilities.
- (ii) Biosolids Treatment and solids management plan.

(iii) Green Elements to be incorporated into Project. The term “green” refers to alternative technologies which result in water or energy efficiencies for the treatment facilities. The Utility Plan should explore opportunities for green elements and identify those situations where green elements have been installed or are planned for installation. If green elements are not an option, this should also be stated in the Utility Plan. In addition, projects seeking Clean Water State Revolving Fund support may be required to direct a portion of their capitalization grant towards projects that address green infrastructure, water efficiency, energy efficiency, or other environmentally innovative activities. These green elements might include such things as:

- Installing or retrofitting water efficient devices
- Installing energy efficient technology:
 - Cogeneration
- Renewable energy projects:
 - Solar power
 - Wind power
 - Biodiesel production
 - Enhanced production of biogas
- Energy management planning
- Projects that achieve a 20% reduction in energy consumption
- Equipment and collection system upgrades including:
 - Installing variable-frequency drives
 - Upgrading to energy efficient motors and motor systems
 - Heating, cooling, lighting, and ventilation system upgrades
- Collection system Infiltration/Inflow (I/I) detection equipment
- Construction of US Building Council LEED certified building or renovation of an existing WWTF building
- Reuse facilities
- Integrated Planning with other Utilities

Additional information on water and energy efficiencies for wastewater facilities can be found at:

www.epa.gov/region9/waterinfrastructure/howto.html or at
http://water.epa.gov/grants_funding/cwsrf/Green-Project-Reserve.cfm.

(iv) Emergency Standby Power System. Discuss provisions for providing power under emergency conditions including the automated control and alarm notification system.

(v) Odor Control Considerations. Odor control should be considered an important component of the system design and alternative selection process. The Utility Plan should include any odor control studies, strategies, or abatement programs. Some wastewater treatment facilities are required to meet odor control regulations.

(vi) Air Quality requirements. Some wastewater treatment plants are identified as stationary sources; consequently, wastewater treatment plants with a

design capacity of 10 million gallons per day or greater may require an air quality permit. The Water Quality Control Division should be contacted for air quality permitting requirements. The Utility Plan should identify any air quality permitting requirements.

(vii) Site – Stormwater Management Plan. Some wastewater treatment plants may be required to prepare a stormwater management plan as part of the stormwater permitting requirements. The Water Quality Control Division should be contacted for stormwater permitting requirements. The Utility Plan should include the approved stormwater management plan, if applicable.

(viii) Provide a site layout map and Schematic of the system.

(ix) Site - Characteristics. The site approval process for new wastewater treatment works and new lift stations requires evidence of the suitability of the site. The site must be characterized in relation to floodplains and other natural hazards. Specifically, the Utility Plan must identify flood hazard issues and geological suitability issues related to the proposed site (or site envelope) and the measures to be taken to mitigate any identified problems or risks. For all new sites, a soil testing report should be attached to the Utility Plan.

The utility plan must include location of treatment works (site foot-print) and related infrastructure.

(x) NEPA Components. If a wastewater provider intends to apply for a state revolving loan, the requirements of the National Environmental Protection Act (NEPA) apply to the planning and review process (40 CFR, Parts 1500-1517). Integrating the NEPA process early in the planning stages ensures that decisions reflect environmental values, avoid potential delays later in the process, and reduce conflicts. The NEPA process can result in the preparation of an Environmental Assessment or an Environmental Impact Statement. The Utility Plan should reference any NEPA processes that are or may be required to implement the wastewater management strategy.

4. Record of Public Participation in Plan Selection Process. Provide discussion of public meetings, dates, and public hearings held to discuss the proposal with the public. If a public hearing was held for the purpose of using SRF funds, provide minutes of that meeting in the Appendix (N).

SECTION VII. SYSTEM MANAGEMENT AND FINANCIAL PLAN

1. Wastewater Management Plan. The Utility Plan must identify the management agency, associated watershed association, if applicable, and operating agency(ies), along with applicable management agency agreements or other memorandums of understanding. Utility Plans should include maps of collection and other associated special districts. Key contact(s) with the management agency will need to be listed in the Utility Plan. The Utility Plan should also reference special control regulations or other water quality regulations specific to the WUSA or UPA. The Utility Plan may need to list any special rules or regulations applicable to the service area, along with external service contracts and other operational or management agreements.

(a) Management Structure. Describe the organizational structure of the entity (city, town or District) and indicate whether it is a management agency (Land Use) or operational agency (operations only). Summarize the ordinances under which the system is controlled.

(b) Provisions for Operation and Maintenance. Discuss who will operate the system and what level of operator license will be required by the State. Describe the entities' ability to hire and maintain operations staff for the conveyance and treatment facilities. If the entity is to contract operations to others, discuss the requirements and legal arrangements that have been made and the ability of the entity to pay for those services.

(c) Emergency Response Protocols. Describe the emergency operating sequence for the system in the event of power failure, flood, or other catastrophic event. What back up plans have been put in place to maintain adequate operation? Do all lift stations and treatment facilities have back up emergency power and remote alarm telemetry?

(d) Provide an Implementation Schedule for the Project. Provide an estimated schedule of events for through project start-up with target dates as they are currently planned such as:

- i. Utility Plan approval
- ii. Site Application Approval
- iii. Design Approval
- iv. Bidding Date
- v. Construction Completion Date
- vi. Project Start Up

2. Arrangements for Implementation.

(a) Provide documentation of Site Ownership or Site Control for the life of

the project.

(b) Provide copies of Intergovernmental Agreements (IGAs) as may be necessary for this project or previous agreements which are still active going forward. Summarize here and include copies in Appendix I.

3. Financial Management Plan. Wastewater treatment agencies need a financial management plan which addresses, at the minimum, the following items:

- rate and charge structures;
- financial solvency should project growth not occur;
- institutional arrangements to guarantee payment of charges from large connectors (over 10 percent of the projected revenue) and from other governmental connectors;
- interest in applying for a state revolving loan to finance any infrastructure or improvements;
- significant industrial user(s) under pretreatment regulations, arrangements for meeting pretreatment responsibilities; and
- industrial or commercial sewer connections with the potential to overload the treatment plant hydraulically or with organic loading, a description of the methods for controlling rates of flow to the treatment facility.

(a) Discuss the proposed method of financing the project and work that has been accomplished to date to conclude financing. If the project will be cash funded by the Owner, provide a written statement certifying that the funds exist and have been escrowed for this project. This will be signed off by those in control of the funds. If bonding the project, delineate the amount of funds to be borrowed, the term of the loan, and the annual payment to be made with "coverage" included.

(b) Using the financial figures presented above, indicate how this will impact the current typical residential user charges on monthly basis. Provide estimated figures for near term (0-5 years) monthly residential user fees, and long term (over 10 years) monthly cost should be provided (also include in the executive summary).

(c) State Interest in Applying for a State Revolving Funding (SRF) loan to finance the project. It is a good idea to contact the State Financial Services group early on to see what funds are available before completing the Utility Plan. You must be on the Priority List to be considered, and there must be funds available before you are awarded an SRF loan. Another requirement of the SRF application process is that you conduct a formal Public Hearing to discuss the project and costs. The minutes of that meeting must be included with this Utility Plan when submitted to the NFRWQPA for review.

GENERAL: Minimum Graphic / Mapping Requirements

Mapping requirements may differ between minor and major Wastewater Utility Plans. Both electronic (AutoCAD or ESRI – current versions) and hard copy maps will be acceptable for NFRWQPA review. They must be of a large enough scale and clear enough to adequately illustrate the necessary features. The minimum features to be included on maps include, but are not limited to, drainage basin and watershed, service area (WUSA and UPAs), treatment plant or treatment works, lift stations, interceptors, water features (stream segments, lakes, reservoirs), discharge point, water well fields, sanitary sewer tributary areas (if available), and local comprehensive plan features. Mapped features should be consistent with the site approval regulations. U.S. Geological Survey topographic maps at the 1:24,000 scale may be used for mapping most features, if ESRI program mapping is not available.

The Wastewater Utility Service Area map must show the WUSAs and, if desired, the UPA (or more than one plant operated as a coordinated system, e.g. satellite plants). For WUSA and UPAs, the Utility Plan maps should identify areas to be served by gravity sewers and identify those areas served through one or more major lift stations. Adjacent WUSAs and UPAs should be mapped to ensure that there are no overlapping areas.

6. UTILITY PLAN OUTLINE FORMAT

The following is the **Suggested Outline** for the report. A checklist form is provided at the end of the document (follows page 48).

2015 - OUTLINE FOR UTILITY PLANNING

I. EXECUTIVE SUMMARY

1. Who is doing the project
2. What is being planned (near term and long term)
3. Why is the project(s) being proposed
4. Where will the project(s) take place
5. When will the project(s) occur (Implementation Schedule)
6. How much will the project(s) cost (capital costs and monthly user fees)
7. How will the project(s) be funded
8. Site/System Exhibit(s)

II. INTRODUCTION

1. General background of the Entity preparing the report
2. General Format of Utility Plan and Supporting Information

III. EXISTING CONDITIONS

1. Current General Planning of Area
 - a. Land Use Management
 - b. Zoning
 - c. Current Wastewater Utility Service Area
 - d. Population
2. Current Wastewater Loads and Flows
 - a. Flow History (three years minimum)
 - i. Averages, Peaks and Unit Volumes
 - ii. Assessment of Infiltration / Inflow
 - b. Historical wastewater loadings (three years minimum)
 - i. Biochemical Oxygen Demand (BOD)
 - ii. Suspended Solids (TSS)
 - iii. Ammonia (NH₃)
 - iv. Other Constituents of Concern
3. Existing Wastewater Treatment System
 - a. Current Effluent Limitations
 - b. Description of Existing Treatment System
 - i. Schematic of system
 - c. Performance of Existing System (three years minimum)
 - i. For Constituents of Concern: BOD, TSS, NH₃, Etc
 - d. Bio-solids Management Program
 - e. Need for Improvements
4. Existing Collection System

- a. Interceptor System
 - i. Layout and Condition Discussion
 - ii. Service Area Map with Interceptor System & Lift Stations
- b. Existing Lift Stations
 - i. Locations (on map in ii. above)
 - ii. Capacities and % Utilization
 - iii. Emergency Response Protocols
 - iv. Emergency Power Availability
- c. Need for Improvements to Existing Collection System
- d. Pretreatment Program

IV. FUTURE CONDITIONS

- 1. Population and Land Use Projections
- 2. Flow and Load Forecasts
 - a. Flow Characterization
 - b. Design Loadings for Constituents of Concern
- 3. Future Collection System Interceptor Alignments
 - a. Interceptor Layout, Sizing & Changes to Current Service Area
 - b. Location and Size of Future Lift Stations
 - c. Timeline Staging of Future Collection System Improvements

V. RECEIVING STREAM WATER QUALITY

- 1. Watershed Identification
 - a. Watershed Issues: 303d & M&E Segments
 - b. Basin Map (from 208 or PEL)
- 2. TMDL'S and/or Waste Load Allocations
- 3. Future Level of Treatment Required
 - a. Current Permit
 - b. Preliminary Effluent Limits (PELs)

VI. WASTEWATER TREATMENT SYSTEM IMPROVEMENTS

- 1. Development and Screening of Alternatives
 - a. Feasibility of Optimizing Existing Facilities – to Meet PELs
 - b. Regional Consolidation Opportunities
 - c. Wastewater Re-Use Opportunities
 - d. Feasible Treatment Alternatives (new or upgrading)
- 2. Treatment Alternatives Discussion:
 - a. Monetary Costs
 - i. Capital Costs
 - ii. Annual Operating Costs
 - b. Energy Costs for Comparison
 - c. Reliability with Respect to Effluent Compliance
 - d. Ease of Implementation
 - e. Environmental Issues – wetlands, flood plan, etc.
- 3. Plan Selection

- a. Plan Selection Matrix or Process
 - i. Monetary & Non-Monetary Evaluations
- b. The Selected Plan - Description
 - i. Treatment Capabilities – Initial & Future
 - ii. Biosolids Treatment & Disposal Process
 - iii. Green Elements to be incorporated
 - iv. Emergency Standby Power System
 - v. Odor Control Considerations
 - vi. Air Quality requirements
 - vii. Site Storm Water Management Plan
 - viii. Site Layout and Schematic of System
- 4. Record of Public Participation in Plan Selection

VII. SYSTEM MANAGEMENT AND FINANCIAL PLAN

- 1. Wastewater Management Plan
 - a. Management Structure of the Entity
 - b. Provisions for Operation and Maintenance
 - c. Emergency Response Protocols
 - d. Proposed Implementation Schedule
- 2. Arrangements for Plan Implementation
 - a. Control of Site – Ownership Documentation
 - b. Intergovernmental Agreements – as necessary
- 3. Financial Management Plan
 - a. Financing for Proposed Project
 - b. User Charge Rate Studies
 - i. Residential User Charge Rates: Initial – Long Term
 - c. Interest In State Revolving Loan Fund (SRF)
 - i. State Intentions to seek SRF Funds
 - ii. Requires Formal Public Hearing and Minutes of Meeting in Appendix.

APPENDICES:

- A. Reports and Special Studies
- B. Legal Description of Site and Deed or Tax Payment Record for Site
- C. Copies of Agency Contact Letters – transmittal letters
- D. Special Surveys (Environmental or Endangered Species)
- E. Site Characterization: Wetlands, Flood Plain, Soils Reports, Geology
- F. Copy of PEL report
- G. Copy of Current Effluent Permit Requirements
- H. Planning and Zoning Information (Excerpts from local Comp Plan)
- I. Copies of Intergovernmental Agreements (IGA's)
- J. User Charge Studies
- K. Air Quality Permit
- L. Odor Control Studies or Plans

- M. Site Storm water Management Plan - Permit
- N. Minutes of Public Hearing and/or Record of Public Meetings
- O. Infiltration / Inflow Studies

Distribution and Number of Copies

Copies of all final or interim Utility Plans, with associated maps, will be distributed to NFRWQPA and other review agencies by the submitting entity. The number of copies varies, depending on the utility plan area. Generally, the minimum distribution of copies will follow Table 4.

Table 4 Minimum Distribution of Copies

Agency	Number of Copies
NFRWQPA	2 hard copies (1 review and 1 permanent file copy following approval) and 1 electronic copy
WQCD	Determined by WQCD
NFRWQPA Utility Plan Review Team	1 per team member (as determined by NFRWQPA staff)
Other Sign-off Agencies	As determined by Table 2

7. RECOMMENDED UTILITY PLAN ACCEPTANCE POLICY

General Criteria

Only accepted and conditionally accepted Utility Plans will be referenced in the 208 Plan.

Accepted and conditionally accepted Utility Plans will be referenced in the *208 Plan* and these plans will represent the preferred wastewater management strategy for the Wastewater Utility Service Area and the Ultimate Planning Area. Accepted and conditionally accepted Utility Plans will be used in the site approval process, as *208 Plan* amendments, and to meet other appropriate regulatory requirements.

Utility Plans or a set of Utility Plan documents can be submitted to NFRWQPA at any time. Utility Plans submitted to NFRWQPA should address any locally adopted watershed objectives and wastewater management strategies. Formal action by a management agency is required before consideration of a Utility Plan by NFRWQPA.

NFRWQPA will take formal action on presented documents following a completed review by the Utility Plan Review Committee. NFRWQPA can make one of the following three recommendations related to Utility Plan acceptance:

- accept;
- conditionally accept with the conditions listed; or
- refer back to the Utility Plan submitting agency and/ or the designated management agency for additional actions, analyses or information.

A NFRWQPA Utility Plan Review Team will be established from members and alternates. The review team will have a maximum of six participants per Utility Plan. Participation on the review team will be confirmed by NFRWQPA action. Review team membership can be altered as needed to facilitate reviews. The review team will check the Utility Plan or set of Utility Plans for consistency with adopted policy and minimum requirements. The review team will summarize findings for NFRWQPA at a regularly scheduled meeting. The submitting agency will distribute copies of the Utility Plan or set of Utility Plans to those jurisdictions who will be required to sign the Wastewater Utility Plan Acceptance Form (Table 2) that will be kept on file at NFRWQPA. These signature entities may also submit comments, which will be considered by the Review Team and NFRWQPA at the time of the review.

Update and Amendment Criteria

Approved Utility Plans will require updates or amendments periodically in order to provide current planning information.

Updates:

A Utility Plan update is a revision to a previously approved plan and includes an overall update of the information in the entire plan. Updates shall provide overall current planning information throughout the document including current information for the following:

- descriptions of treatment facilities and collection system along with plans for modifications
- permit information including permitted flow and load
- 20-year flow and loading projections
- 20-year population projections
- 20-year financial information
- Wastewater Utility Service Area (WUSA) descriptions
- identification of projects requiring site application approvals

The Utility Plan Format Checklist should be used for updates to ensure that all required elements have been addressed.

Amendments:

In general, amendments will be more limited in scope than the changes provided in an update. Amendments should clearly define what portions of the previous plan have changed. When submitting amendments, agencies should consider whether other portions of the plan will be affected by the proposed change (i.e. whether the financial information will be effected by a decision to expand a facility earlier than previously planned.) Examples of modifications that would be covered by a Utility Plan amendment would include such things as:

- a change in the design capacity of a planned WWTP expansion
- a change in the timing of a planned WWTP expansion
- the addition of a lift station to accommodate development short term

Submitting agencies will be provided options for the format of updates and amendments. These options should be discussed with NFRWQPA staff prior to development and submittal to ensure efficient reviews. For minor changes the update or amendment should be submitted as a “track changes” document showing what information is being replaced in the currently approved plan. For more substantial changes, replacement sections/chapters can be provided. For these types of changes, it is helpful to include notes at the beginning of each section that explain how and where this section will fit into the existing plan. In some cases, the number and amount of changes will be significant enough to warrant a full replacement document. For all options the submitting

agencies should include a cover letter that outlines the format of the submittal, what information has been modified, and a brief justification for the modifications. In addition, the Executive Summary section of the plan should be modified to provide information on when the original Utility Plan was approved and the timing and scope of all amendments and updates, including the one being proposed.

Once the update or amendment has been approved by NFRWQPA a final copy of the revised Utility Plan and appendices (hard copy and electronic copy) will need to be submitted and kept on file at the NFRWQPA office. This final copy shall be a cohesive document which includes the amended/updated information along with any previously approved portions of the plan and appendices that are still relevant.

Renewal Frequency

It is recommended that all entities review their plans every five years and determine whether an amendment or update is needed. Any significant revision and re-adoption of a local comprehensive plan or other local long-range wastewater management plan may also require a review and re-acceptance of the associated Wastewater Utility Plan. Management agencies shall notify NFRWQPA of any re-adoption or significant update of their local comprehensive plan.

Submittal and Acceptance Procedure

- The following procedure will apply to the NFRWQPA review and acceptance of Utility Plans. Submitting agency contacts NFRWQPA staff to discuss number and format of copies to be delivered.
- Utility Plan delivered to NFRWQPA.
- As appropriate, NFRWQPA staff distributes review copies to team members, and the submitting agency distributes copies to other sign-off agencies.
- Meeting scheduled within 60 days of distribution to review interim or final Utility Plan with review team members, the submitter of the Utility Plan, and other interested agencies. Notice will be sent to the membership identifying the meeting schedule. Other interested agencies will be requested to identify any issues or concerns prior to this review meeting (generally a 30-day response time). For updates and amendments, the review team will be given the flexibility to determine whether a meeting is necessary.
- At the review meeting, (or individually for minor updates and amendments) the review team will mark-off a checklist of minimum requirements, assure that there are no overlapping service areas,

review assumptions, and provide any appropriate comments.

- Based on the review team comments and comments from other interested agencies, NFRWQPA staff will prepare a written response and recommendation for inclusion in the following NFRWQPA meeting agenda.
- NFRWQPA and other appropriate agencies acknowledge acceptance, conditional acceptance, or refer back the Utility Plan at the NFRWQPA meeting. Based on the action, the appropriate sign-off forms will be filled out following the meeting.
- Once the plan has been approved by NFRWQPA, a final copy (hard copy and electronic copy) will need to be submitted and kept on file at the NFRWQPA office.

8. REFERENCES

North Front Range Water Quality Planning Association - Areawide Water Quality Management Plan Updates

Larimer-Weld Regional Council of Governments - Areawide Water Quality Management Plan Update - 1985

Colorado Department of Public Health and Environment, Water Quality Control Commission – Regulation No. 22 – Site Location and Design Approval Regulations for Domestic Wastewater Treatment Works

Colorado Water Quality Control Division – Policy No. 5 – Consolidation of Domestic Wastewater Treatment Works

EPA Website: Water and Energy Efficiency in Water and Wastewater Facilities.
www.epa.gov/region9/waterinfrastructure/howto.html

Colorado Department of Public Health and Environment, Water Quality Control Division - Categorical Green Projects List – Clean Water State Revolving Fund (July 2012)

UTILITY PLANNING OUTLINE CHECKLIST

Date: _____

Entity: _____

Page No.

	EXECUTIVE SUMMARY		Page No.
I.	EXECUTIVE SUMMARY		
	1. Who is doing the project	_____	
	2. What is being planned (near term/long term)	_____	
	3. Why is the project being proposed	_____	
	4. Where will the project(s) take place	_____	
	5. When will the project(s) occur - (Implementation Schedule)	_____	
	6. How much will the project(s) cost (Capital, O&M and User Fees)	_____	
	7. How will the projects(s) be funded	_____	
	8. Site / System Exhibits	_____	
II.	INTRODUCTION		
	1. General Background of Entity	_____	
	2. General Format of Report & supporting Information	_____	
III.	EXISTING CONDITIONS		
	1. Current General Planning of Area	_____	
	a. Land Use Management	_____	
	b. Zoning _____	_____	
	c. Current Wastewater WUSA	_____	
	d. Current Service Population	_____	
	2. Current Wastewater Flows and Loads	_____	
	a. Flow History (3 Yrs)	_____	
	i. Averages, Peaks & Unit Volumes	_____	
	ii. Assessment of Infiltration / Inflow (I&I)	_____	
	b. Historical Wastewater Loadings (3 Yrs)	_____	
	i. Biochemical Oxygen Demand (BOD)	_____	
	ii. Suspended Solids (TSS)	_____	
	iii. Ammonia (NH3)	_____	

	IV. Other Constituents of Concern	
	3. Existing Wastewater Treatment system	
	<u>a. Current Effluent Limitations</u>	
	<u>b. Description of Existing Treatment System</u>	
	<u>i. System Schematic</u>	
	<u>c. Performance of Existing System (3 yrs)</u>	
	<u>i. Constituents of Concern - BOD, TSS, NH3, P, etc</u>	
	<u>d. Current Biosolids Management Program</u>	
	<u>e. Need for Improvements</u>	
	4. Existing Collection System	
	<u>a. Interceptor System</u>	
	<u>i. Layout and Condition</u>	
	<u>ii. Service Area Map with Interceptors & Lift Stations</u>	
	<u>b. Existing Lift Stations</u>	
	<u>i. Location on WUSA Map (above)</u>	
	<u>ii. Capacities and (Percent Utilization)</u>	
	<u>iii. Emergency Response Protocols (Telemetry)</u>	
	<u>iv. Emergency Power Availability</u>	
	<u>c. Summarize Need for Improvements to Existing Collection System</u>	
	<u>d. Entity Pretreatment Program Discussion</u>	
IV.	FUTURE CONDITIIONS	
	1. Population and Land Use Projections	
	2. Flow and Load Forecasts	
	<u>a. Flow Characterization</u>	
	<u>b. Design Loadings for Constituents of Concern</u>	
	3. Future Collection System Interceptor Alignments	
	<u>a. Future Interceptor Layout, Sizing & WUSA Changes</u>	
	<u>b. Location and Sze of Future Lift Stations</u>	
	<u>c. Timeline for Staging future Collection System Improvements.</u>	

V.	RECEIVING STREAM WATER QUALITY	
	1. Watershed Identifications	
	<u>a. Watershed Issues: 303d and/or M&E Listing</u>	
	<u>b. Basin Map (showing location of discharge)</u>	
	2. TMDLs and/or Waste Load Allocations	
	3. Future Level of Treatment Required	
	<u>a. Current Permit</u>	
	<u>b. Preliminary Effluent Limits (PELs)</u>	
VI.	WASTEWATER TREATMENT SYSTEM IMPROVEMENTS	
	1. Development and Screening of Alternatives	
	<u>a. Feasibility of Optimizing Existing Facilities - To Meet Limits</u>	
	<u>b. Regional Consolidation Opportunities</u>	
	<u>c. Wastewater Re-Use Opportunities</u>	
	<u>d. Feasible Treatment Alternatives (New or Upgrading)</u>	
	2. Treatment Alternatives Discussion	
	<u>a. Monetary Costs</u>	
	<u>i. Capital Costs</u>	
	<u>ii. Annual Operation & Maintenance Costs</u>	
	<u>b. Energy Use for Comparison</u>	
	<u>c. Reliability with Respect to Effluent Compliance</u>	
	<u>d. Ease of Implementation</u>	
	<u>e. Environmental Issues - wetlands, flood plain, etc.</u>	
	3. Plan Selection	
	<u>a. Plan Selection Matrix or Process</u>	
<u>i. Monetary and Non-Monetary Evaluations</u>		
<u>b. The Selected Plan</u>		
<u>i. Treatment Capabilities - Initial & Future</u>		
<u>ii. Biosolids Treatment and & Disposal Process</u>		
<u>iii. Green Elements to be Incorporated</u>		

	<u>iv. Emergency Standby Power System</u> <u>v. Odor Control Considerations</u> <u>vi. Air Quality Requirements</u> <u>vii. Site Storm Water Management Plan</u> <u>viii. Site Layout and Schematic of System</u>	
	4. Record of Public Participation in Plan Selection.	
VII.	SYSTEM MANAGEMENT AND FINANCIAL PLAN	
	1. Wastewater Management Plan	
	<u>a. Management Structure of the Entity</u> <u>b. Provisions for Operation and Maintenance</u> <u>c. Emergency Response Protocols</u> <u>d. Proposed Implementation Schedule</u>	
	2. Arrangements for Plan Implementation	
	<u>a. Control of Site- Ownership Documentation</u> <u>b. Intergovernmental Agreements - As Necessary</u>	
	3. Financial Management Plan	
	<u>a. Financing for Proposed Project</u> <u>b. User Charge Rate Studies</u>	
	<ul style="list-style-type: none"> i. Residential User Charge Rates: Initial - Long term 	
	<u>c. Interest in State Revolving Loan Fund (SRF)</u>	
	<ul style="list-style-type: none"> i. State Intentions to Seek SRF Funds ii. Formal Public Hearing Record and Minutes In App. 	

APPENDICES		
A.	Reports and Special Studies	
B.	Legal Description of Site and Deed (or Tax Payment Record for Site)	
C.	Copies of Agency Contact Letters - Transmittal Letters	
D.	Special Surveys (Environmental or Endangered Species)	
E.	Site Characterization: Wetlands, Flood Plain, Soils Reports, Geology	
F.	Copy of Preliminary Effluent Limits (PELs) Report	
G.	Copy of Current Effluent Permit Requirements	
H.	Planning and Zoning Information	
I.	Copies of Intergovernmental Agreements (IGAs)	
J.	User Charge Studies	
K.	Air Quality Permit	
L.	Odor Control Studies or Plans	
M.	Site Storm Water Management Plan - Permit	
N.	Minutes of Public Hearing and/or Record of Public Meetings	
O.	Infiltration / Inflow Studies	

C. SITE LOCATION AND DESIGN APPROVAL REVIEW POLICY

**North Front Range Water Quality Planning Association
Site Location and Design Approval Review Policy**

Approved: September 23, 2010

Purpose:

The Site Location and Design Approval process is a somewhat complicated and time-consuming process as outlined in Regulation 22, (5 CRS 1002-22) *Site Location and Design Approval Regulation for Domestic Wastewater Treatment Works*. It requires, prior to the State Water Quality Control Division's final review and approval, that the Application for Site Location Approval (Site Application) be submitted to various local agencies for review and recommendations. Those agencies include the county, city or town, local health authority, and the 208 water quality planning agency. These agencies must review the Site Application and offer comments on it to ensure that it meets the requirements of local long-range plans related to water quality, public health protection, land use, and sound engineering. This policy will outline the procedure used by the North Front Range Water Quality Planning Association (Association) to review and comment on submitted Site Applications. This review includes the need, in most cases, for a Utility Plan, which is critical to ensuring present, and future wastewater needs are met.

Policy:

The Site Application process applies to the proposed construction or expansion of all domestic wastewater treatment works, inclusive of treatment plants, interceptor sewers, and lift stations. Site Application forms for the different categories of projects and the regulations may be obtained from the Colorado Department of Public Health and Environment (CDPHE), Water Quality Control Division's (Division) website at www.cdphe.state.co.us. Each county should be contacted for their procedural requirements for submittal of the Site Application packets. In both Larimer and Weld Counties, the coordinating agency for the submittal process is the Department of Health and Environment. Please contact the individual Health Departments for assistance and directions on submitting the Site Application.

The Association is responsible for assuring that Site Applications for all proposed projects submitted for review protect the quality of waters in the Larimer-Weld region and are consistent with the Areawide Water Quality Management Plan. In order to meet this responsibility, the Association requires that all public wastewater treatment agencies submitting a Site Application for a new or expanded domestic treatment works, interceptors not eligible for certification, or lift stations, have in place a current Utility Plan. This Utility Plan will need to be accepted or conditionally accepted by the Association prior to consideration of the Site Application. Other agencies, not falling into this category (non-public entities such as mobile home parks, HOAs, or campgrounds), will include utility plan information in conjunction with the submittal of any of the above listed Site Applications.

In addition, anyone seeking the recommendation for approval of a project by the Association should be prepared to make a presentation to the Association at a regular meeting if requested.

In regard to Site Applications, the areas of greatest concern to the Association include the following:

- The Association seeks assurance that the applicant has the necessary management capability to be accountable for long-term operation and maintenance of the facility in order to avoid operational problems that could potentially impair water quality. It is desirable that the owner and operator of the facility be a legally constituted organization capable of meeting the financial and managerial obligations as indicated in Regulation 22. This should include proof that facility operators have appropriate credentials. If a homeowners' association or other non-governmental organization proposes to own or operate the facility, their articles of incorporation must be reviewed by the Association.
- The owner of the facility must demonstrate that they have the financial and operational resources to provide proper management, operations and maintenance, meet capital construction requirements, and perform major repairs. A description of financial management arrangements assuring the availability of necessary funds must be included.
- The engineering design must provide for the protection of both surface and ground waters that may be impacted by the facility. The design presented to the Association should be the final conceptual design and should demonstrate that the facilities are appropriate for anticipated flows and, in the case of treatment plants, provide the necessary level of treatment.
- The Site Application and data must demonstrate that the planned facility will meet discharge permit limitations, provide for overflow control, protect ground waters, and provide standby power and pumping capacity redundancy, if appropriate.
- The planned facility must be consistent with the Areawide Water Quality Management Plan (Plan). The Plan discourages proliferation of treatment facilities and evaluates the combined effects of discharges on a given stream. For a new treatment plant, the Site Application must demonstrate that the use of existing treatment facilities is not possible and that a new discharge will not adversely affect existing discharges. If the facility is not consistent with the Plan, it must be modified to achieve consistency or the Plan must be amended. If a Plan amendment is required, the required procedure for approval of an amendment must be followed. (Refer to the Areawide Water Quality Management Plan Amendment Process.)

Application Submittal: Complete application packets should be submitted to NFRWQPA and all other review agencies as determined by Regulation 22. All complete packets will include the proper CDPHE application form, CDPHE Site Application checklist, required elements as per the specific section of Regulation 22, and additional information as necessary to address the list of concerns above. Please refer to Regulation 22 Guidance document, also located on the Division's website, for further explanations. For most application (with the exception of Amendment Applications) an approved Utility Plan is

required for consideration of the application by NFRWQPA Upon receipt of the Site Application, the Association's Manager will review the packet for completeness. An approved Utility Plan will contain much of the required Site Application information and can be used in the submittal packet and referenced in the Site Application checklist.

Categories of Site Applications:

1. SITE APPLICATION FOR CONSTRUCTION OF NEW DOMESTIC TREATMENT WORKS – Refer to Diagram #1 (Utility Plan required)

This process will be used in evaluating applications submitted for the construction of new domestic wastewater treatment works as per section 22.4 of Regulation 22. The Manager will evaluate the Site Application packet for completeness and for consistency with the Areawide Water Quality Management Plan and with the accepted Utility Plan. The Manager will also verify that all other review agencies (as determined by Regulation 22) have received a copy of the Site Application packet for review and comment. The Site Application will then be summarized and placed on the agenda for consideration at the next Association meeting.

Once the Association has made a decision on the Site Application, the Manager will sign the Site Application, including that decision, and return the original Site Application to the applicant. A copy of the completed application along with the information packet will be kept on file at the Association's office.

If the Site Application is not consistent with one or both of the above mentioned plans, the Manager will contact the applicant and attempt to resolve the outstanding issues prior to consideration by the Association. If all outstanding issues are not resolved, the Manager will summarize the Site Application and at the applicant's request place it on the agenda for consideration at the next Association meeting.

2. SITE APPLICATIONS FOR INCREASING OR DECREASING THE DESIGN CAPACITY OF EXISTING DOMESTIC WASTEWATER TREATMENT WORKS WHERE CONSTRUCTION HAS TAKEN PLACE OR WILL TAKE PLACE - Refer to Diagram #2 (Utility Plan required)

This process will be used in evaluating applications submitted for increasing or decreasing the design capacity of existing domestic wastewater treatment works where construction has taken place or will take place as per section 22.5 of Regulation 22. The Manager will evaluate the Site Application packet for completeness and for consistency with the Areawide Water Quality Management Plan and with the accepted Utility Plan. The Manager will also verify that all other review agencies (as determined by Regulation 22) have received a copy of the Application packet for review and comment. The Site Application will then be summarized and placed on the agenda for consideration at the next Association meeting. If the Manager determines that there is consistency with both plans and there are no other concerns or questions with the Site Application, a

recommendation will be made to the general body of the Association to send to the Division a recommendation for approval of the Site Application.

Once the Association has made a decision on the Site Application, the Manager will then sign the Site Application, including the decision, and return the original Site Application to the applicant. A copy of the completed application along with the information packet will be kept on file at the Association's office.

If the Site Application is not consistent with one or both of the above mentioned plans, the Manager will contact the applicant and attempt to resolve the outstanding issues prior to consideration by the Association. If all outstanding issues are not resolved, the Manager will summarize the Site Application and at the applicant's request place it on the agenda for consideration at the next Association meeting.

**3. CERTIFICATION PROCEDURES FOR ELIGIBLE INTERCEPTOR SEWERS
- Refer to Diagram #3 (Utility Plan required)**

This process will be used in evaluating requests submitted for certification of eligible interceptor sewers as per section 22.6 of Regulation 22. As described in Regulation 22, the certification process is available in those circumstances where the treatment entity has adequate treatment capacity, or has site location approval for sufficient additional capacity to treat the projected total flow and the projected total flow would still be under their discharge permit flow limitations, where applicable, after the interceptor sewer is completed. Additionally, the proposed project must be capable of carrying the projected flows from the applicable service area, and be consistent with the Areawide Water Quality Management Plan and the local Planning Agency's recommendations. If the above items are not met, the agency will be required to go through the Site Application process (see section 4 below).

If the proposed interceptor meets the certification requirements, the Manager will evaluate the packet for completeness and for consistency with the Areawide Water Quality Management Plan and the accepted Utility Plan. If it is consistent with both plans the Manager will certify the proposed interceptor to the Division. The Association will be advised of such a certification by the Manager at the next regular meeting.

If the proposed interceptor is not consistent with an approved Utility Plan, the proposal will be referred to the Association for consideration. The Manager will contact the applicant to resolve outstanding issues prior to consideration by the Association. The Manager will summarize the certification request and at the applicant's request place it on the agenda for consideration at the next Association meeting. The Manager will forward to the Division any certification/recommendation made by the Association. A copy of the certification/recommendation will be sent to the applicant. A copy of the request along with the information packet and certification/recommendation will be kept on file at the Association's

office.

4. SITE APPLICATION PROCEDURES FOR INTERCEPTOR SEWERS NOT ELIGIBLE FOR CERTIFICATION AND LIFT STATIONS - Refer to Diagram #4 (Utility Plan required)

This process will be used in evaluating applications submitted for interceptor sewers not eligible for certification and lift stations as per section 22.7 of Regulation 22. The Manager will evaluate the Site Application packet submitted for completeness and for consistency with the Areawide Water Quality Management Plan and with the accepted Utility Plan. The Manager will also verify that all other review agencies (as determined by Regulation 22) have received a copy of the packet for review and comment.

If the Manager determines that there is consistency with both Plans and there are no other concerns or questions with the Site Application, a recommendation will be made to the Division to approve the Site Application. The Association will be advised of such a recommendation by the Manager at the next regular meeting.

If the Site Application is not consistent with one or both of the above mentioned plans, the Manager will contact the applicant and attempt to resolve the outstanding issues. If outstanding issues are resolved, the application will be processed as indicated above. If all outstanding issues are not resolved, the Manager will summarize the Site Application and at the applicant's request place it on the agenda for consideration at the next Association meeting.

The Manager will sign the Site Application, along with the recommendation of the Association, and return the original to the applicant. A copy of the completed application along with the information packet will be kept on file at the Association's office.

5. SITE APPLICATION PROCEDURES FOR AMENDMENT OF AN EXISTING SITE LOCATION APPROVAL - Refer to Diagram #5 (Utility Plan not required)

This process will be used in evaluating applications submitted for amendment to existing site location approvals as per section 22.8 of Regulation 22. An application to amend an existing site location approval will be required when entities are proposing the specific types of minor changes listed in section 22.8 of Regulation 22. The Manager will evaluate the Site Application packet for completeness and for consistency with the Areawide Water Quality Management Plan. The Manager will verify that all other review agencies (as determined by Regulation 22) have received a copy of the packet for review and comment.

If the Manager determines that there is consistency with the Areawide Water Quality Management Plan and there are no other concerns or questions with the Site Application, the Site Application will be reviewed for consistency with an

approved Utility Plan. If the Site Application is consistent with an approved Utility Plan a recommendation will be made to the Division to approve the Site Application. The Association will be advised of such a recommendation by the Manager at the next regular meeting.

If the Site Application is not consistent with the approved Utility Plan or there is no approved Utility Plan for the treatment entity, the Site Application will be referred to the Association for consideration. The Manager will contact the applicant and attempt to resolve the outstanding issues prior to consideration by the Association. The Manager will then summarize the Site Application and place it on the agenda for consideration at the next Association meeting. The Manager will submit any recommendations from the Association directly to the Division. A copy of the recommendation will be sent to the applicant. A copy of the application along with the information packet and recommendation will be kept on file at the Association's office.

Note: The Association will have 15 working days to provide comments to the Division on this type of Site Application. Should additional time be needed, the Association will make a written extension request to the Division.

The entire review and approval process, may take from three to six months (including Utility Plan reviews) so Utility Plans and Site Applications should be submitted at the earliest opportunity to help avoid delays in the final approval of the project. If there are any questions regarding this review process, the Association should be contacted for clarification and consultation at the earliest possible point in the project development.

Diagram 1

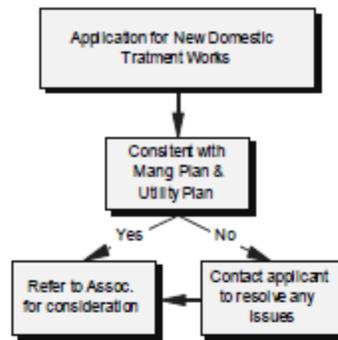


Diagram 2

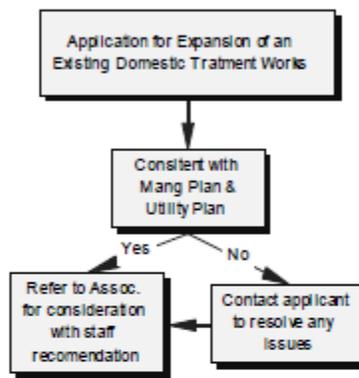


Diagram 3

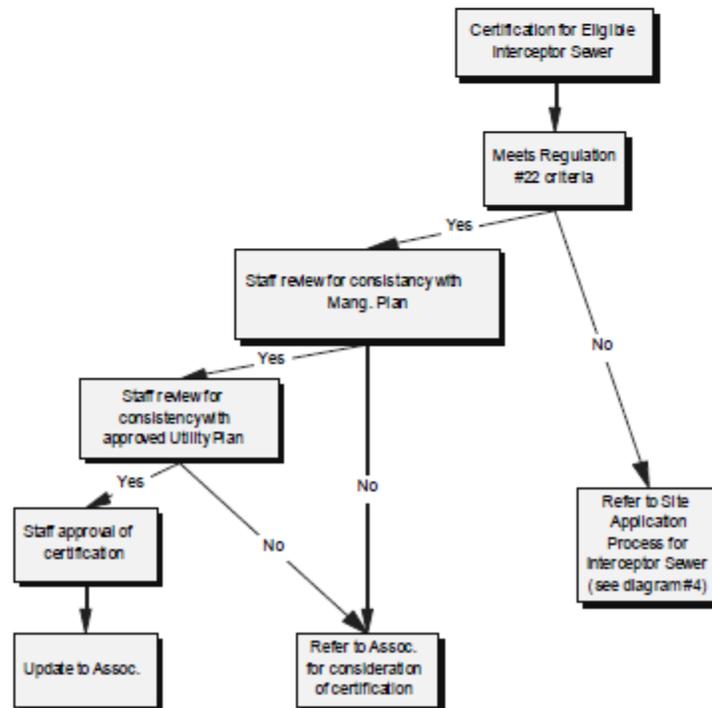


Diagram 4

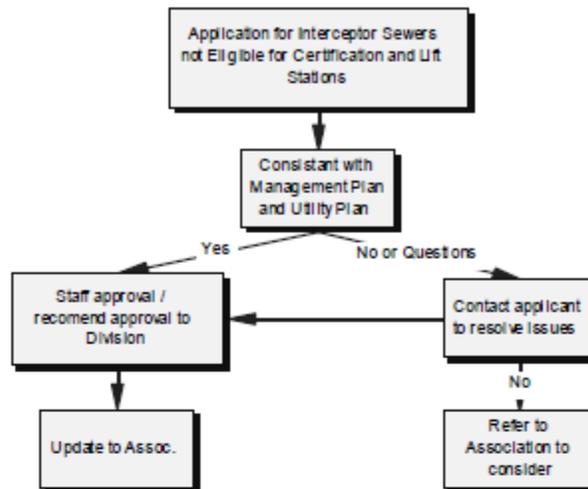
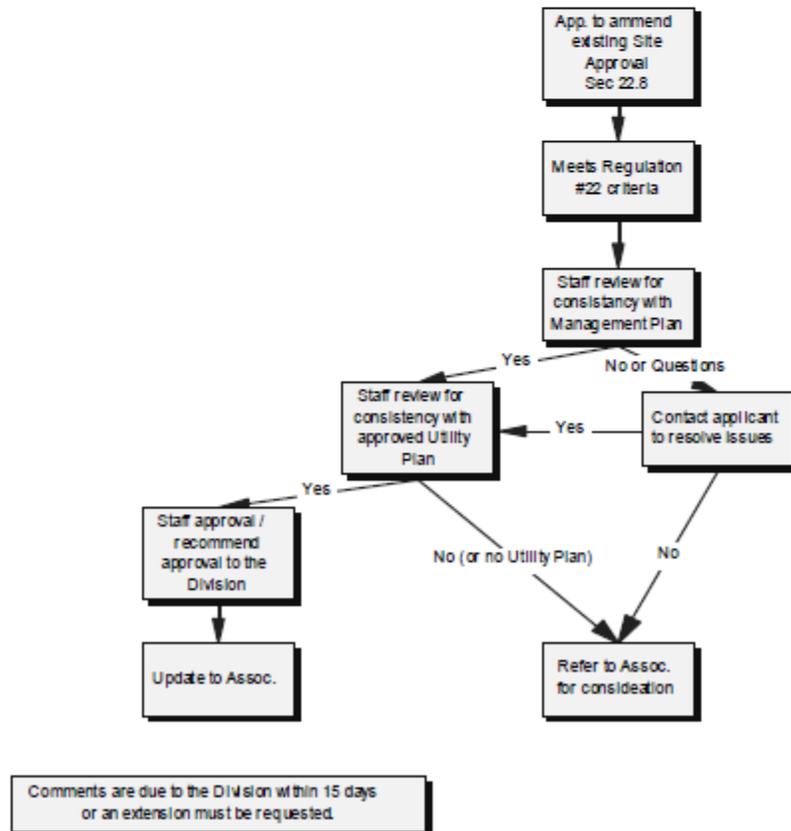


Diagram 5



D. PLAN AMENDMENT PROCESS

AREAWIDE WATER QUALITY MANAGEMENT PLAN AMENDMENT PROCESS

(Revised and Approved June 28, 2007)

The Areawide Water Quality Management Plan (Regional Plan) adopted by the North Front Range Water Quality Planning Association (NFRWQPA) details the regional considerations for protection of water quality. In so doing, it projects growth and development trends in the area and establishes a rational plan for accommodating growth. A plan objective is to avoid unacceptable adverse environmental impacts which might be caused by allowing wastewater services to be provided through numerous entities for facilities in an uncoordinated fashion. The Regional Plan amendment process is designed to maintain flexibility in the plan so that unanticipated events can be accommodated when it is shown to be in the best interests of the region. These events include site approvals for new facilities and service area boundary changes. For site approvals, the Site Approval Application Review Process must be pursued in conjunction with the plan amendment process.

When new domestic wastewater treatment works (i.e. treatment facilities, lift stations, or interceptors) are proposed which are not identified in the Regional Plan or when expansions or modifications of existing facilities are proposed which would allow them to serve a greater population than that specified by the Regional Plan, State regulations indicate that the Regional Plan should be amended to incorporate those proposed facility changes before Site Approval can be granted. Amendment of the Regional Plan adds time to the site approval process, but the added time can be minimized by expeditious pursuit of a plan amendment as soon as possible prior to submission of the site approval application.

Also, any significant modification of the service area boundaries of an existing Operations Agency or any formation of a new Operations Agency requires an amendment of the Regional Plan. A new agency must be listed as a designated Operations Agency, and the service area boundaries must be consistent with what is delineated in the Regional Plan in order for review and approval of siting of new wastewater collection and treatment facilities according to State Regulations. An application for a plan amendment should be submitted to NFRWQPA by the responsible Management Agency.

The following Regional Plan amendment process details the criteria for determining whether a given project would require no amendment, a minor amendment, or a major amendment, and it presents the amendment procedure. An applicant should be aware of this procedure and the supplemental information and processing time it requires.

A. Determination of Amendment Requirement

1. The local coordinator to whom the proposal is first submitted will make the preliminary determination as to whether a minor or major plan amendment is required. The local coordinator will normally be the representative of Larimer or Weld County who has the responsibility for facilitating local review.
2. The local coordinator may refer the project to the NFRWQPA Manager for consultation and concurrence if there is any question on the amendment requirement.
3. The NFRWQPA has the final responsibility of determining the plan amendment requirements.

B. Basis for Determination

1. No plan amendment will be necessary if the proposed project is in conformance with the Regional Plan.
2. A plan amendment will not normally be required when:
 - a. The project proposes changes in treatment process for improving water quality that do not increase the capacity of the treatment plant.
 - b. The project is a pumping station to serve an area that is within the approved service area of the applying Operations Agency, with the population to be served already included in the Regional Plan projections.
 - c. The project proposes a minor adjustment in service area boundaries involving less than 10 acres.
3. A minor amendment will normally be deemed necessary if the proposed project involves providing sewerage service which meets one of the following:
 - a. The amount of sewage generated and served through a treatment facility, pump station, or interceptor is less than 50,000 gpd (population equivalent of 667 people based on 75 gpcd).
 - b. The addition of more than 10 but less than 160 acres to a service area.
 - c. The addition of an area to a defined service area that does not cause an increase of projected population greater than 667 people.

Minor amendments are changes for which water quality impacts or major conflicts are not anticipated and must be agreed upon by the Management Agency, NFRWQPA, and the State Water Quality Control Division.

4. An amendment will be considered major if it involves a proposal to serve a new area or provide increased capacity more than that stated above for a minor amendment. These major amendments warrant the highest level of attention and priority as stated in the "Continuing Planning Process for Water Quality Management in Colorado" adopted by the State Water Quality Control Commission.

C. Amendment Procedure

1. Upon initial submittal of a site approval application to the appropriate County, or the submittal of a plan amendment application to NFRWQPA by the responsible Management Agency, a determination of whether the application is complete will be made first, generally within 30 days of submittal. Those deemed incomplete will be returned to the applicant.
2. Once an application is found to be complete, the decision on whether a plan amendment is necessary and whether it is major or minor will be made. If an amendment is required, it will be drafted by NFRWQPA within 30 days.
3. During the next 60 days the draft amendment will be circulated by NFRWQPA to the project sponsor, applicant Management Agency, local jurisdiction planning and health departments, other potentially affected management and operations agencies, and the State Geologist; and comments will be requested.
4. All amendments will be scheduled for review and discussion by the NFRWQPA in a public meeting at the next available opportunity.
5. For a minor amendment the NFRWQPA will decide whether to approve it at that public meeting.
6. For a major amendment, the NFRWQPA will schedule a public hearing at its next meeting and decide whether to approve the proposal.
7. Approved plan amendments will be submitted to the Water Quality Control Division (WQCD) for their concurrence. The plan will then be submitted to the WQCC on a semi-annual basis on May 1 and November 1 of each year. To meet these submittal dates, the required submittal dates to the NFRWQPA for a complete request for a major plan amendment are January 1 and July 1 of each year.

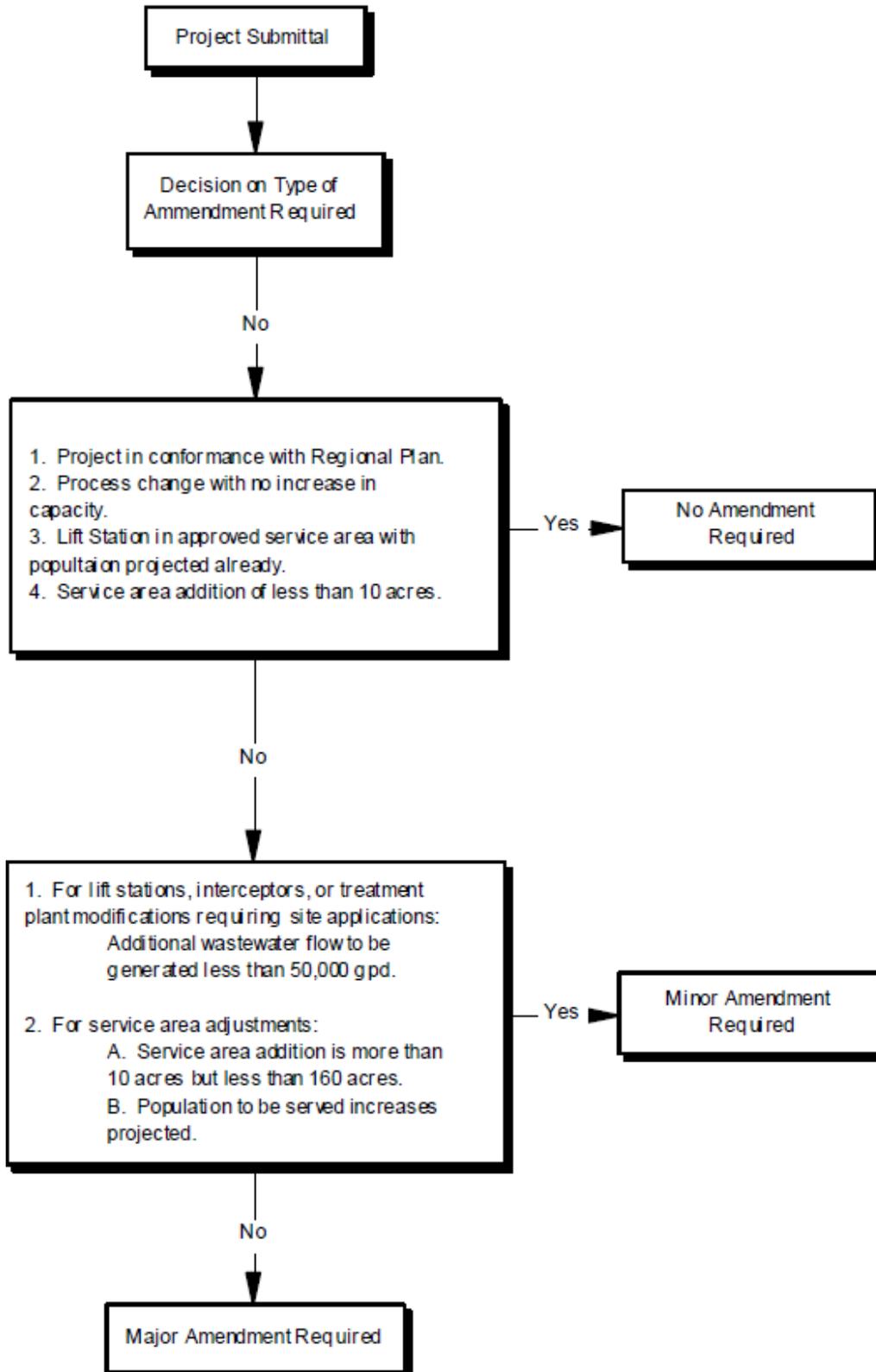
D. Project Information Necessary for Amendment

The following list of information must be submitted for a project (where applicable) to allow determination of whether a plan amendment is necessary and to permit preparation and processing of the amendment. Most of this required information is also necessary to process a site approval application. (See list included in Site Approval Process.)

1. Beginning January 1, 2008, all public wastewater treatment agencies submitting a plan amendment request (including a service area boundary change) will be requested to have in place a current utility plan which has been recognized or conditionally recognized by the NFRWQPA prior to the request. Other agencies not falling into this category will include utility plan information in conjunction with a plan amendment request.
2. Location of the proposed facility, geographical area it is intended to serve by specific delineation of projected service area boundaries on a map, and the existing population of the proposed service area and the 10 and 20 year population projections.
3. Design hydraulic and organic loading capacity of the proposed facility and the expected initial flows and loadings and the projected flows and loading in 10 and 20 years.
4. The names of existing sewer service entities within 5 miles of the proposed service area and facility, a map indicating their boundaries, and direction of gravity flow from the proposed area.
5. Estimated construction costs for the proposed facility, and an estimate of the cost differential between building the proposed facility and the least costly alternative for connecting to an existing facility including a map indicating construction required to accomplish any such connection.
6. A letter from all existing sanitation districts or other sewer service entities within 5 miles stating the feasibility of providing service to the service area and the justification for not connecting to an existing facility where feasible.
7. Identification of other permittees discharging to the same receiving water body and downstream discharges on main streams and any effect the proposed discharge would have on any of them.
8. Proximity to the nearest domestic drinking water source or diversion down gradient from the discharge.
9. Proposed permit effluent limits as developed by the Water Quality Control Division of the State Department of Health for any discharge.
10. Analysis of treatment alternatives considered and a detailed justification for choosing the proposed alternative in terms of surface and/or groundwater quality and other environmental impacts and economic and institutional considerations.
11. Institutional arrangements such as contract and/or covenant terms for all users. This must include Articles of Incorporation and By-laws for homeowners groups to include powers and authority to insure proper operation and maintenance of the facility for its projected life.

12. Management capabilities for controlling the wastewater throughout and maintaining treatment within the capacity limitations of the facility on a continuous long-term basis. This would include user contracts, operating agreements, pretreatment requirements, etc.
13. Potential for water reuse including water rights limitation and any water augmentation plan.
14. Present population and flow commitments of existing facilities to which the development will connect.
15. An indication as to how this project relates to existing and envisioned facilities and the needs of a regional service area for the entire drainage basin.
16. For service area additions, a map delineating the additional area requested and a report on the reasons that this area would best be served by the entity requesting the expansion of their service area. The service agency requesting an amendment to its wastewater utility service area must provide adequate long term planning information including, at a minimum, the following factors over a 20 year planning period.
 - The identified service area.
 - Population datasets, forecasts and land use status.
 - Collection system requirements.
 - Treatment facility requirements.
 - Sequence and timing of capital projects.
 - Rates and fees necessary to finance improvements when required.
 - The entity requesting the amendment must also submit, at a minimum, the following current information:
 - ✓ Population
 - ✓ Peak and average flow
 - ✓ Peak and average loading
 - ✓ Inflow / infiltration
 - ✓ Treatment capacity, hydraulic and organic
 - ✓ NPDES permit requirement and constraints

PLAN AMENDMENT PROCESS



PLAN AMENDMENT PROCESS FLOW CHART

- I. Decision on Amendment
 - A. Local Coordinator for County makes preliminary decision on need for plan amendment.
 - B. NFRWQPA confirms decision.

- II. Type of Amendment Required
 - A. No amendment required:
 - 1. If project is in conformance with Regional Plan.
 - 2. For a change in treatment process to improve water quality while not increasing plant capacity.
 - 3. If project is a lift station within approved service area to serve population included in Regional Plan population projections.
 - 4. For an adjustment in service area boundary less than 10 acres.
 - B. Amendment required for lift stations or interceptors or treatment plant modifications requiring site applications and not consistent with Regional Plan.
 - 1. Minor amendment required if project to generate less than 50,000 gpd of wastewater.
 - 2. Major amendment if low to be generated is greater than 50,000gpd.
 - C. Amendment required for service area adjustments.
 - 1. Minor amendment required if additional area added to service area of more than 10 acres but less than 160 acres or projected population increase is less than 667 people.
 - 2. Major amendment required if additional area is larger than 160 acres or has projected population of greater than 667 people.

- III. Amendment Procedure
 - A. Determination is made whether site approval or plan amendment application is complete within 30 days of submittal. Those not complete are returned to applicant.
 - B. Determination of what type of plan amendment is required is made and amendment drafted within 30 days.
 - C. Draft amendment is circulated for comment to all concerned entities during next 60 days.
 - D. Amendment is scheduled for review at next NFRWQPA meeting following comment period.
 - E. Decision on minor amendments can be made at the review meeting.
 - F. For major amendments, a public hearing is noticed for the next NFRWQPA meeting and the decision made after the hearing.
 - G. Approved amendments are submitted to the WQCD for concurrence. If approval by the WQCC is required, amendments are submitted to the WQCC semi-annually on May 1 and November 1. Complete applications for major plan amendments should be submitted by January 1 or July 1 to meet the respective WQCC dates of May 1 and November 1.

E. SECTION 208 PLANNING REQUIREMENTS

SECTION 208 PLANNING REQUIREMENTS

Regional Planning Elements That Need To Be Kept Current	Location Of Information In Update
<p>Facility needs - Discharge facility needs are those capital improvements, collection systems, purchases, and construction programs for wastewater treatment, which will result in a change in degree or method of treatment or an increase in capacity. These needs, covering a minimum period of five years with a 20-year planning horizon, must be identified in the regional plan and be supported by population and/or employment projections, degree of treatment requirements, and facility timing criteria. New facilities must be consistent with the service area, location, and capacity identified in the plan or in other locally adopted plans. The plan identifies regional priorities for facility construction, improvement, or expansion.</p>	<p>This information is located in the specific data sheets developed for each Management / Operating Agency. A brief summary of the needs are provided and in many cases includes a reference to the Utility Plan for that agency which provides more detailed information regarding needs.</p>
<p>Facility location - The regional plan locates existing and proposed (20-year planning horizon) municipal and industrial wastewater treatment facilities. The plan lists the stream segment to which a discharge occurs or is expected to occur. Stream segments are consistent with prevailing state stream classifications.</p>	<p>This information is located in the specific data sheets developed for each Management / Operating Agency. In addition the treatment facility locations are mapped and are shown on the Wastewater Utility Service Area maps for each Agency.</p>
<p>Capacity -The capacity of a waste treatment facility is based upon design criteria. The plan shall identify the allowable organic and hydraulic throughput of the treatment works for existing conditions as well as projected needs through a 20-year planning horizon. The units of measure for allowable organic and hydraulic throughput must be consistent with discharge permit requirements.</p>	<p>This information is located in the specific data sheets developed for each Management / Operating Agency.</p>
<p>Timing of expansion facilities - The Colorado Water Quality Control Act requires that domestic wastewater treatment works permittees "initiate engineering and financial planning for expansion of the sewage treatment works whenever throughput and treatment reach 80 percent of design capacity" and "commence construction of such sewage treatment works expansion whenever throughput and treatment reach 95 percent of design capacity." The regional plan identifies the existing throughput, treatment design capacity and years in which the facility is expected to reach 80/95% of design capacity.</p>	<p>This information is located in the specific data sheets developed for each Management / Operating Agency.</p>
<p>Population and/or employment projections - Population and/or employment projections are to be based on the best available information. Projections as adopted by the planning agencies and supported by the management agencies will determine the 20-year size of the service area and capacity of new or expanded treatment facilities.</p>	<p>This information is located in the specific data sheets developed for each Management / Operating Agency. More detailed information regarding projections can also be found in the agency specific Utility Plans which are referenced in the data sheets.</p>
<p>Service area - The service area for a wastewater treatment facility is that area to which the facility provides wastewater service, is required to provide service, or will provide service when the facility reaches design capacity. It must be consistent with an adopted regional plan. Service areas in the Denver metropolitan region are governed by an adopted urban growth boundary.</p>	<p>Wastewater Utility Service Area (WUSA) maps are provided for each Management / Operating Agency. In addition, a GIS layer containing these areas is provided to all member and partner agencies for planning purposes.</p>

SECTION 208 PLANNING REQUIREMENTS

<p>Level of treatment - Prevailing stream standards, classifications and regulations will determine the level of treatment. Treatment levels established by the Division will be listed for existing and proposed facilities, which have gone through the site approval process. Recommended changes to treatment levels based on approved TMDLs may be listed in the plan.</p>	<p>Chapter 3 discusses the overall water quality for the region and references the established standards. In addition, the data sheet for each Management / Operating Agency identifies the discharge location, the current classifications associated with that segment, and references the treatment level identified in the current discharge permit.</p>
<p>Social, environmental and economic impacts of carrying out the plan - The plan should contain information on the costs and benefits of carrying out the plan in sufficient detail as to be able to identify the costs to management and operating agencies. Other social, environmental and economic information will be provided, as appropriate.</p>	<p>The data sheets for each Management / Operating Agency identify approved Utility Plan for each agency. These plans contain detailed information about the costs and impacts of planned improvements for the service areas.</p>
<p>Permit conditions - The major factors in permit conditions for a municipality is determined by effluent limitations. These limitations are subject to the prevailing stream classifications, standards and regulations. Water quality management plans can identify appropriate special permit requirements.</p>	<p>The data sheets for each Management / Operating Agency identify the current permit for each facility. In addition, the current stream standards for the discharge location are also identified.</p>
<p>TMDLs/Wasteload allocations - The results of a TMDL/wasteload allocation, that has been approved by the Environmental Protection Agency, may be assigned to an individual discharger as an effluent limit contained in a State discharge permit. Water quality management plans may assist in determine the need for and completion of TMDL/wasteload allocation studies by: 1) evaluating stream flow, water quality, and existing and projected wastewater discharges; 2) documenting the need for such studies; 3) recommending priorities for conduction TMDL/wasteland allocation studies; 4) making recommendations regarding actual conduct of such studies, including institutional and financial arrangements for carrying out the studies; and 5) coordinating and recommending the most politically acceptable means for allocating wasteloads among multiple dischargers, where appropriate; and 6) providing planning agency recommendations, where appropriate.</p>	<p>This Update provides reference to specific TMDLs/Wasteload allocations that have been completed for the South Platte Basin by the WQCD. A web link is provided in Chapter 3 to the table(s) delineating the TMDLs for specific stream segments.</p>
<p>Nonpoint Source and Storm Water Information - The plan should update nonpoint source and storm water information of a regional interest as it becomes available either through wasteload allocation studies, stream sampling projects, municipal control programs, or stormwater permit program's The plan may identify nonpoint source elements, priority watersheds, best management practices, watershed restoration strategies, stormwater management programs and other watershed-oriented information.</p>	<p>Chapter 2 discusses the statewide nonpoint source and stormwater program activities and the NFRWQPA participation in these activities.</p>
<p>Management Agency Review - The designated planning agency is responsible for recommending each designated management agency within its planning area to be identified in each plan update.</p>	<p>A current list of Management Agencies is provided in Chapter 1.</p>
<p>Watershed Restoration Plans - The plan should identify information that may be applicable to a specific watershed restoration strategy.</p>	<p>Watershed activities for the region are discussed in Chapter 4.</p>

SECTION 208 PLANNING REQUIREMENTS

<p>Source Water Assessment and Protection (SWAP) - The plan may identify information applicable to source water assessment and protection efforts under the Safe Drinking Water Act.</p>	<p>Chapter 2 discussed the Statewide Water Quality Management Plan which includes the Source Water Assessment and Protection program.</p>
<p>Links to Other Water Quality Related Programs - The plan may provide links, including strategies and recommendations, to other water quality related programs (e.g., Drinking Water, Superfund, Brownfield redevelopment, Endangered Species Act).</p>	<p>Chapter 2 discussed the Statewide Water Quality Management Plan which includes links to program.</p>
<p>Partnerships - The plan can identify other water quality partnerships in addition to management agencies. These partnerships may include, but are not limited to watershed associations, conservancy districts, river and/or lake protection groups and agencies.</p>	<p>The Update includes a discussion of Watershed Initiatives in Chapter 4. In addition, other water quality related activities conducted on a statewide level are discussed in Chapter 2.</p>
<p>Water Quality Analysis and Assessment - The plan may include specific water quality and environmental analysis and assessment results from special studies and efforts of management agencies or other appropriate partnerships.</p>	<p>The Update does not contain specific water quality analysis or assessment information.</p>
<p>Standards and Classifications - The plan may contain recommendations related to potential changes to water quality classifications and standards.</p>	<p>The Update does not contain recommendations for changes to water quality classifications or standards.</p>
<p>Regional Water Quality Policies - The plan may contain regional water quality or environmental policies, implementation guidelines and recommendations adopted by local government officials in the planning region.</p>	<p>The policies and guidance documents used by NFRWQPA are included as Appendices A-D</p>

F. GIS DATA

GIS data provided on DVD or flash drive.