

# *Chapter 7*

## *Infrastructure*

### *Introduction*

The purpose of this chapter is to determine whether the major infrastructure systems operated by the City – potable water and sanitary sewer – have the capacity to serve future development. The irrigation water system, most of which is provided by private ditch companies, is described in the agriculture chapter. Roads are addressed in the transportation chapter.

### *Potable Water*

The City of Delta has water rights for 3,700 acre feet. Current peak demand is about 1,400 acre feet. As shown on Figure 7-1, the City limits have expanded beyond the City water service area, except for a small area south of the City limits that are within the City water service area. Areas outside the City water service area (including unincorporated parts of the county within the plan area and areas within the City limits) are served by Tri County Water Conservancy District, which provides water to 315 customers within the City. The City has an agreement with Tri County, which expires in 2011, concerning the boundaries of their respective service areas. The City's water tap fee is \$1,400 for a ¾ inch line plus a basic improvement fee of \$2,800.

The City appears to have enough water rights to sustain residential growth through and beyond the 2030 horizon of this Comprehensive Plan, even under the high growth alternative. However, one large industrial customer could tax the system's capacity, according to the Utilities Director.

### *Sanitary Sewer*

The City of Delta currently provides sewer service to most properties within the City limits, although a few customers are outside the City limits (See Figure 7-2). The sewer tap fee is \$5,100. In the western part of the City along the US 50 corridor, sewers extend only as far as 1400 Road. Existing City policy requires developers to pay for any sewer extensions to areas not currently served. The city does not have a pro-rating system whereby developers who pay for sewer extensions can recoup some of the cost when subsequent new development ties into extended sewer lines.

The capacity of the sewage treatment plant (STP) is 2.5 million gallons per day, and the plant currently operates at about 50 percent capacity. Under Colorado state law, planning for additional capacity must begin when an STP reaches 80 percent of capacity. The City is currently upgrading the plant to make it more efficient. Also, the City is doing a study to determine the capacity of the sewage collection system. According to the Utilities Director, it is likely that the study will find areas that need upgrading, which could result in enlarging or rerouting part of the collection system.

Based on state law, the City will have to begin planning for expanded STP capacity when the population increases to approximately 12,250, which would cause the plant to operate at about 80 percent capacity. If the City experiences slow growth (1 percent average annual) over the next 20 years, the current STP capacity will be adequate to handle additional effluent through the planning period of this Comprehensive Plan. If the City experiences moderate growth (3.6 percent average annual), the STP capacity will reach 80 percent before 2025. If the City experiences high growth (5.0 percent average annual), the STP capacity will reach 80 percent before 2020. (See Progress Report #2, Population Projections.)

By participating in a regional sewer study, the City is already planning for additional STP capacity. The recently completed study encompasses much of western Delta County, including the City of Delta, Cedaredge and Orchard City. Approximately 55 % of the county's population lives within the study area. The City is evaluating its options for participating in this long range project.

## *Storm Water*

The City has limited storm water drainage facilities (see Figure 7-4) and some localized flooding occurs due to the lack of drainage. New drainage lines are installed as new development takes place and long range drainage improvements are planned.

In 2013, if the population reaches 10,000, Delta will be required to comply with State and federal wp3 storm water regulations, which require some form of pretreatment before drainage is released into the rivers and washes.

## *Solid Waste*

The City provides waste disposal service, although it is in competition with private disposal services in certain areas of the City. The City service area is approximately the same as with the City boundaries as of 1993; residences are served exclusively by the City within this service area. For parts of the City outside the service area, residents have a choice to contract with the City or a private waste disposal service, but must contract with some entity. The City serves approximately 80 percent of the present City population. Commercial establishments anywhere within the City have a choice of contracting with the City or a private firm. The City now serves about 70 percent of commercial properties.

The City has an automated waste collection system. Waste is hauled to the Adobe Buttes Landfill, located about ten miles outside the City, which is owned by Delta County. According to the Utilities Director, the landfill has a large unused capacity.

## *Electrical Service*

The City of Delta provides electrical service to the majority of City residences and businesses. The city purchases power from the Municipal Energy Agency of Nebraska.

The city also has an agreement with the Delta-Montrose Electric Association (DMEA), which delineates the area served by the City and the area served by DMEA. Figure 7- 3 shows the electrical service area of the City and portions of the City served by DMEA.

The agreement between the City and DMEA is nearly 20 years old and expires in October 2009. As shown on Figure 7-3, much of the area within the current City limits is outside the City electrical service area, although part of the service area extends beyond the current City limits. The discrepancy between the present municipal boundary and the electrical service area is likely due to the recent annexations not anticipated when the current agreement between the city and DMEA was originally negotiated. The City will have an opportunity to include the area within the present City limits in its electrical service area when the new agreement is negotiated in 2009.

The City is currently upgrading the electrical transmission system. An additional substation and two distribution circuits are scheduled for completion by 2009.

## ***Desired Future Condition, Policies and Action Items***

### ***Desired Future Condition***

Sanitary sewer, water, irrigation, and drainage systems are designed, sized and located in appropriate areas to support existing development and future growth areas as specified in this Comprehensive Plan. The City of Delta owns and operates its water supply system, providing high quality water for residents and businesses.

### ***Policies and Action Items***

***Policy 1***– New development shall pay the full cost of extending water and sewer service, including lines/lift stations adequately sized to serve additional development projected to occur in the future.

***Policy 2***– The City of Delta should allow the expansion of its water service area to correspond to new growth areas identified on the future land use map.

***Policy 3***– The City of Delta should allow the expansion of its sewer service area to correspond to new growth areas identified on the future land use map.

***Policy 4***– The following principles should be considered by the City of Delta when evaluating the expansion or relocation of the sewage treatment plant: (1) cost to the City and to customers; (2) the ability to best serve future growth areas as well as the existing service area; and (3) the impact on preserving the rural character. An action item to implement this policy is:

1. Conduct a detailed engineering study to determine the best alternative to expand or relocate the sewage treatment plant.
2. Continue to pursue funding for sewer expansion.

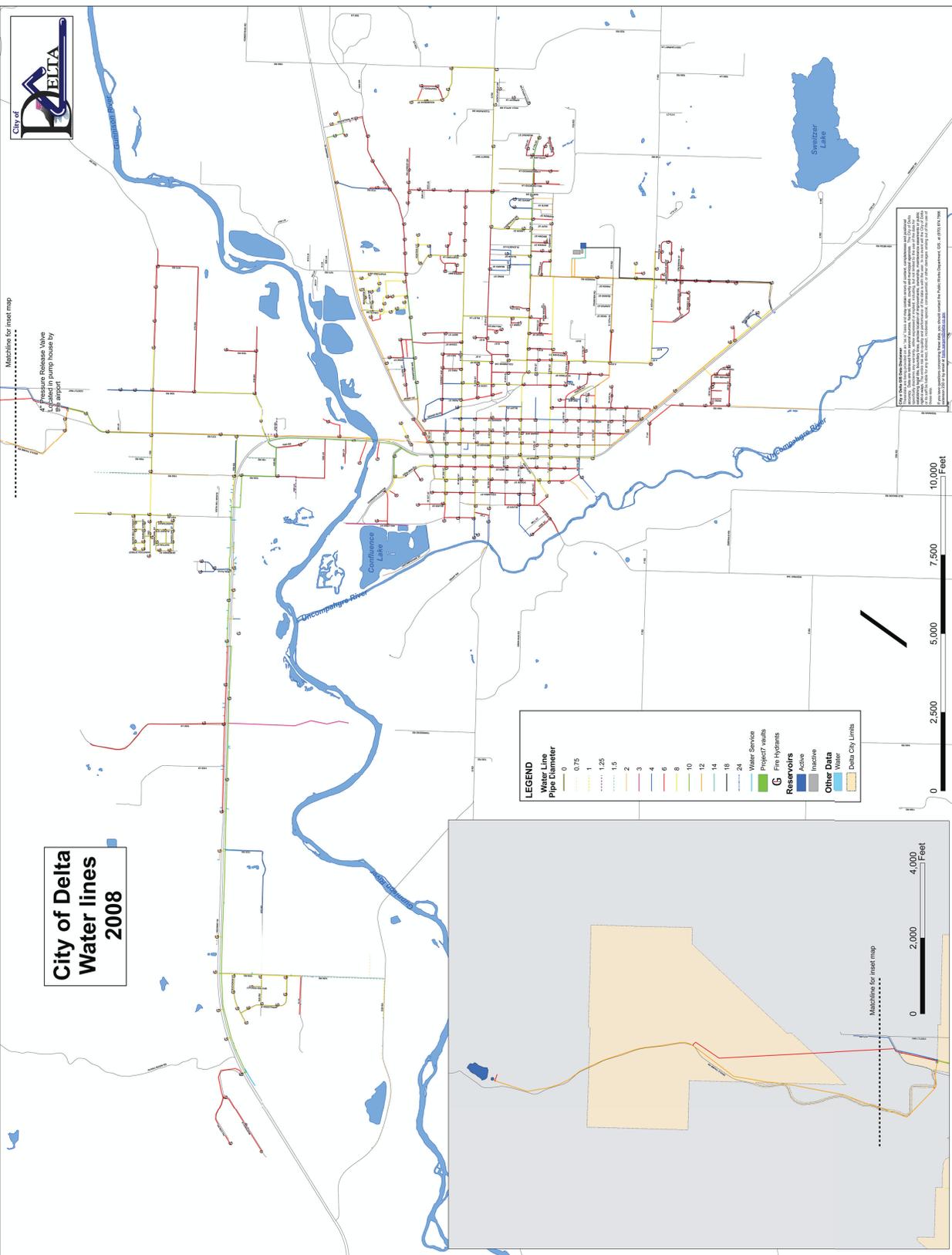
*Policy 5*– Consider additional water storage and conservation, depending upon future supply and demand.

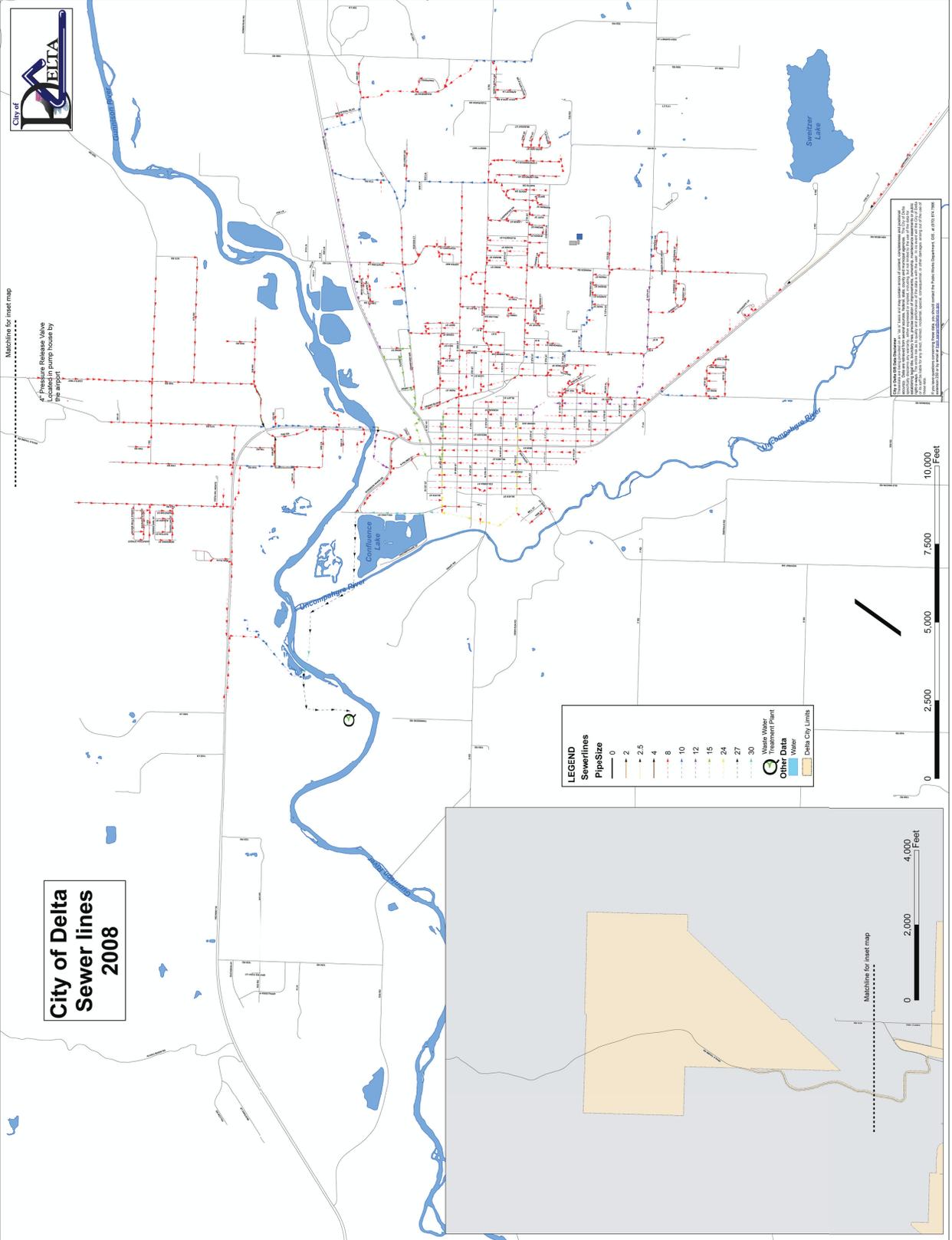
*Policy 6*– In 2013, if the population reaches 10,000, Delta will be required to comply with State and federal wp3 Stormwater Regulations.

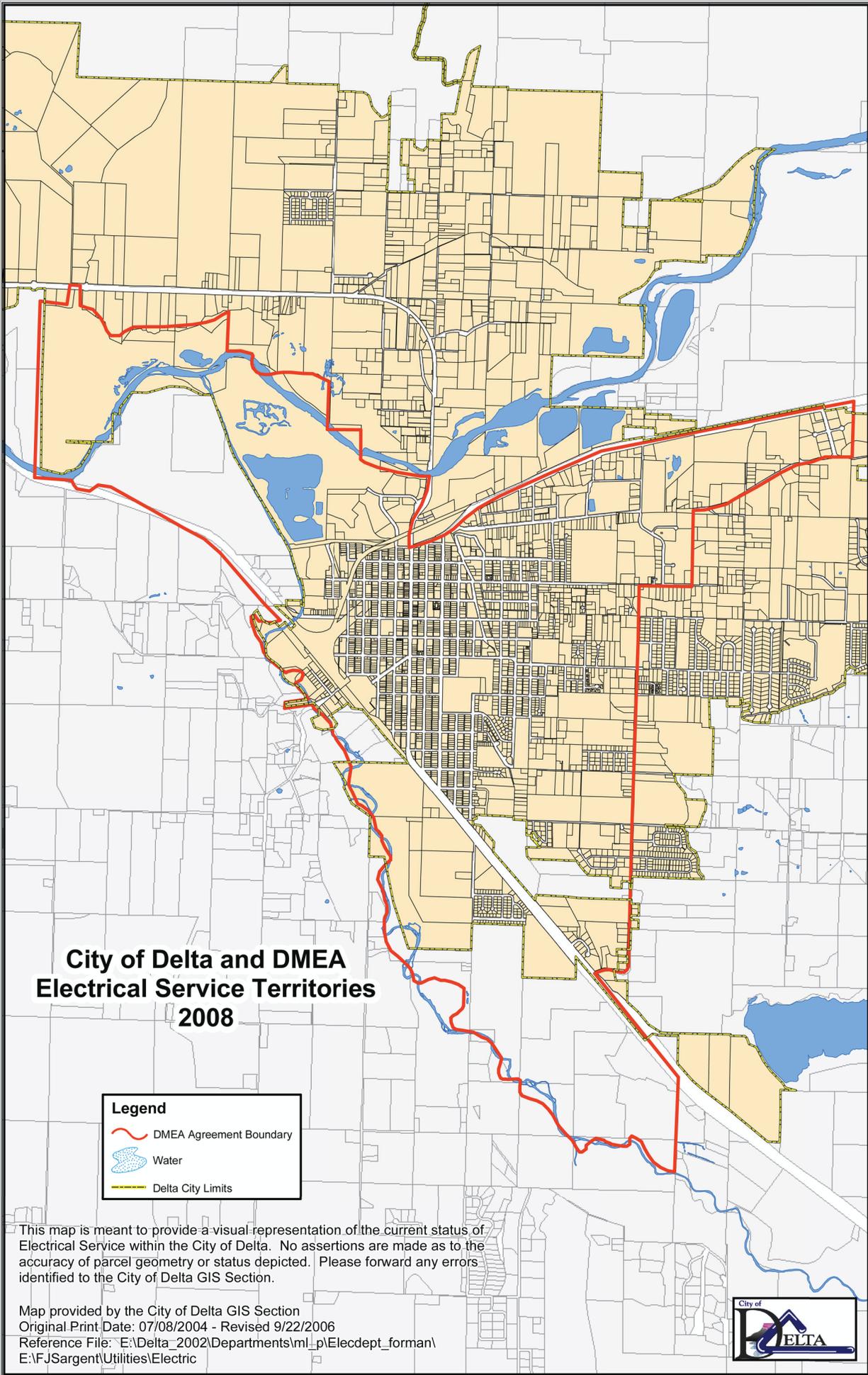
## *Delta Comprehensive Plan 1997*

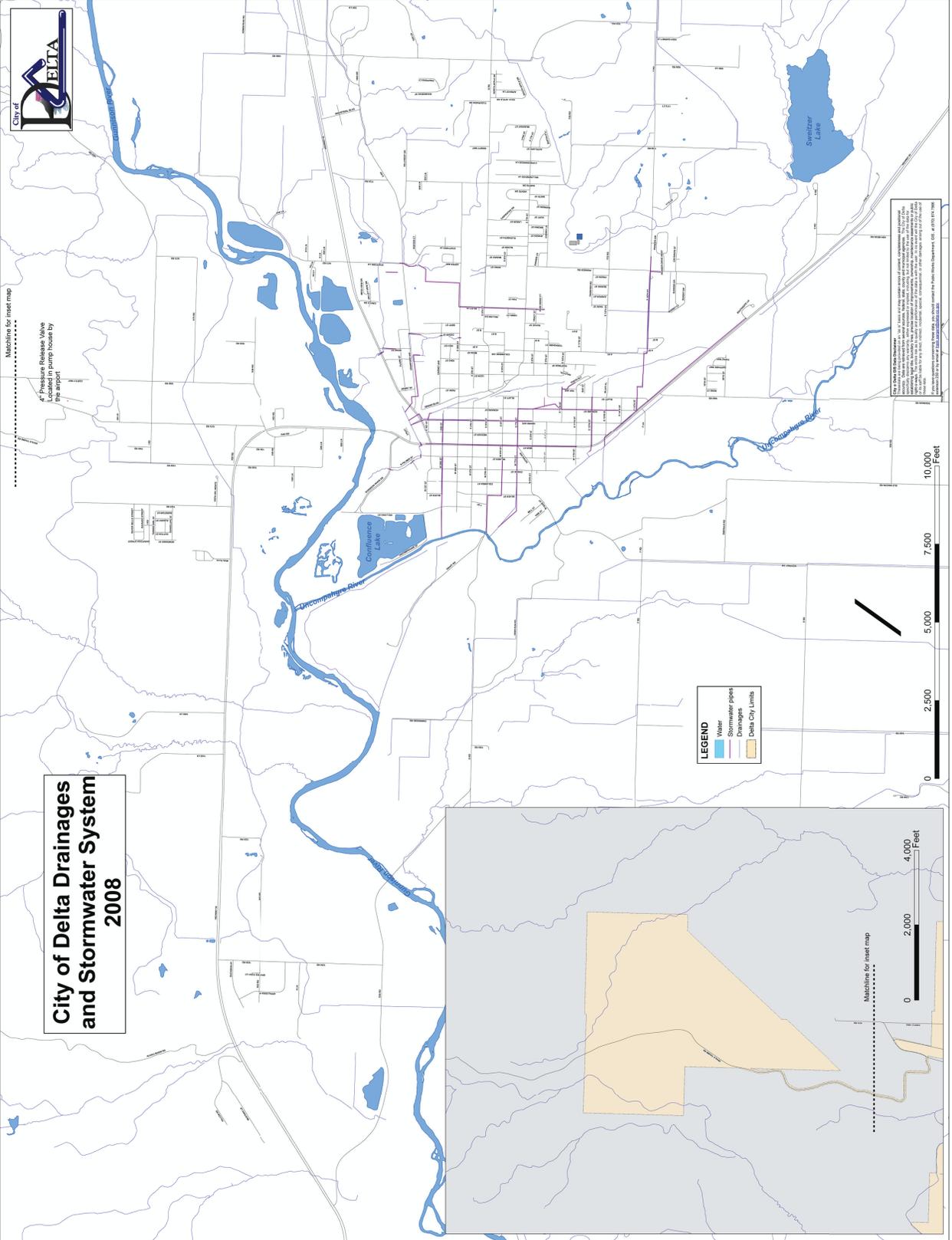
<b>Section Two: Utilities</b>	<b>Status</b> (C=completed, I=incomplete, P=in progress)
<b>Goals</b>	
Continue to provide utilities in adequate amounts, reliability, economically, and in environmentally acceptable manner	<b>P</b>
<b>Guidelines</b>	
Facilitate resource management in all utility resources	<b>CP</b>
Improve efforts for coordination and integration of utilities throughout utility planning	<b>P</b>
Adapt the services and programs of each utility to the needs of the businesses and residents of the City	<b>CP</b>
Utilize progressive management techniques and business practices to plan for, operate, and maintain the City utility system	<b>P</b>
Maintain systems and plants to serve all consumers of City services	<b>P</b>
Promote the reuse of products and by-products of utility resources	<b>P</b>
Coordinate long-range planning between emergency service providers and utilities	<b>P</b>
Coordinate the City's three mile plan policies with those of the County	<b>P</b>
<b>Actions</b>	
Complete a capital improvements program for all utility infrastructure	<b>P</b>
Study incentives for alternative systems of supply and management for conservation purposes	<b>P(ongoing)</b>
Keep current the agreements in place for service of utilities in the Delta service area	<b>P</b>
Enforce the requirement that new developments complete utility plans	<b>P</b>

<b>Section Two: Utilities</b>	<b>Status</b> (C=completed, I=incomplete, P=in progress)
Encourage utilities to attend the Delta County utility coordination meetings	<b>PI</b>
Encourage utilities to respond to requests for plat review during the development process	<b>P</b>
Coordinate and renegotiate, if deemed necessary, service area agreements with annexation policies and actions.	<b>P</b>
<b>Section Seven: Solid Waste</b>	
<b>Goals</b>	
Strive to create a solid waste system which include all components of an environmentally sound and efficient process of source reduction, recycling and reuse in cooperation with Delta County	<b>P</b> (efforts underway re countywide program)
<b>Guidelines</b>	
Advocate recycling to decrease trash volumes and recycle reusable materials	Evaluate cost of pickup/recycle <b>I</b>
<b>Actions</b>	
Coordinate with the County to increase the efficiency of trash hauling	<b>PI</b>
Encourage City-sponsored composting project at the wastewater treatment plant through education	<b>PI</b>
Educate the community on source reduction	<b>I</b>
Encourage purchase of recycled products	<b>I</b>
Develop recycling center	<b>I</b>









**City of Delta Drainages  
and Stormwater System  
2008**



Matchline for next map  
 Pressure Release Valve  
 Located in pump house by  
 the airport

**LEGEND**  
 Water Bodies  
 Watermain Pipes  
 Drainages  
 Delta City Limits

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 Feet

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