



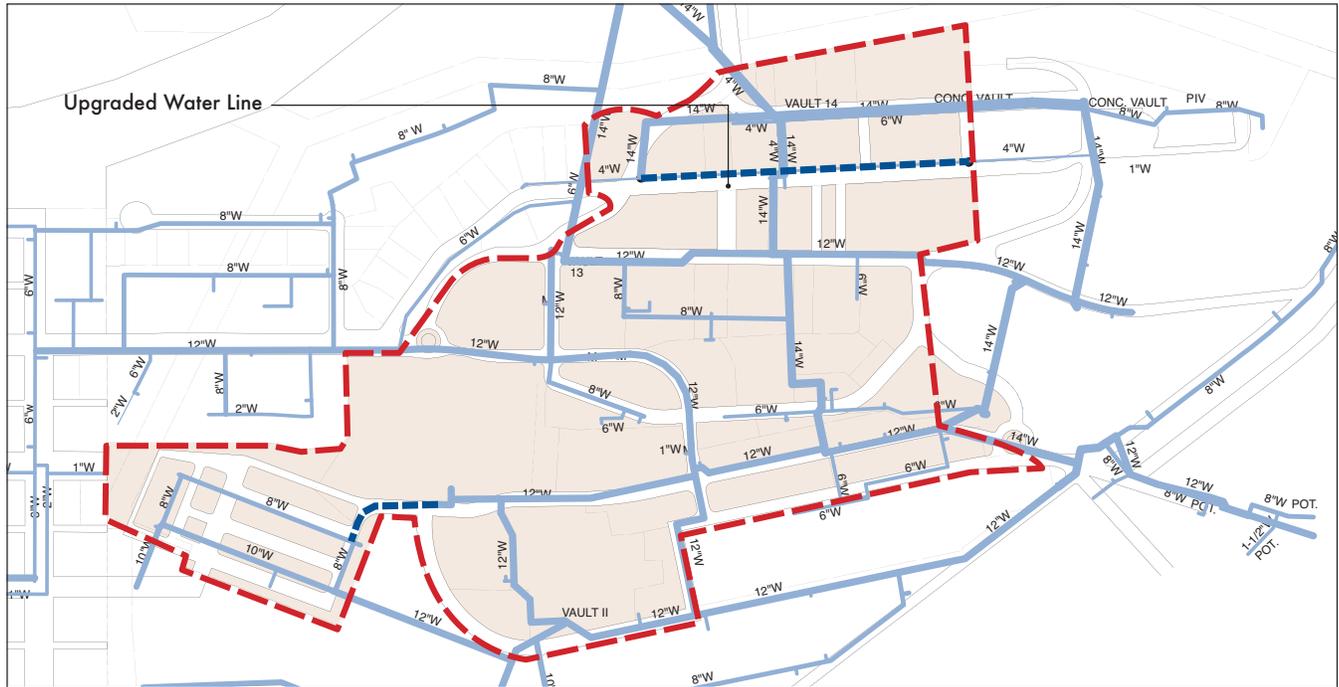
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## Introduction

The California Government Code requires a specific plan to include text and diagrams that specify “The proposed distribution, location, extent, and intensity of major components of public and private sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan.” This Chapter of the LAMUSP fulfills this requirement and facilitates orderly development by identifying the “backbone” utility infrastructure needed to support the proposed level of development.

The City of Benicia provides its residents with infrastructure and public facilities through the use of several agencies and service providers. By working together, these agencies and service providers are able to supply the city, including the Arsenal, with services such as water, sewer, natural gas, electricity, and solid waste disposal.

The proposed LAMUSP will add a considerable amount of development, as well as residents, to the city, and it is important to ensure that this development will be served adequately with necessary infrastructure and facilities.



**Water Supply**

The Solano County Water Agency (SCWA) is the County agency responsible for providing wholesale, untreated water supply to cities, districts, and state agencies within its boundaries, including the City of Benicia. In compliance with State law, SCWA and the City each have submitted an Urban Water Management Plan to the State Department of Water Resources. The City is committed to using all of its resources efficiently, including water. The City actively participates in regional and integrated water management planning efforts through the SCWA. The Countywide efforts focus on integrating all aspects of water resource management including water supply, water quality, wastewater treatment/recycling, flood control, watershed planning, and environmental programs. The City and County planning efforts are set in the broader context of state and regional planning efforts, such as the Solano Agencies Integrated Regional Water Management Plan and the Bay Area Integrated Regional Water Management Plan.

The City’s primary water supply comes from two surface water bodies, the Sacramento Delta and Lake Berryessa. The Delta provides approximately 80 percent of the City’s water, with the remaining 20 percent being supplied by Lake Berryessa. Additionally, Lake Herman can be used as an emergency source of surface water, should the need arise.

Water is treated at the City’s water treatment plant which was constructed in 1971. Originally, the treatment plant was only designed to treat six million gallons per day, but this capacity has since been expanded to allow for the treatment of up to twelve million gallons of water per day. Once water has been treated, it is then distributed into the City throughout a network of pipes ranging from four inches to thirty-six inches in diameter.

**Key**

- Study Area
- Existing Water
- Proposed Water



The Public Works Department provides treated water to customers within the City for both residential and non-residential uses, as well as providing untreated water to the Valero Refinery for industrial uses. Total treated water usage by the City of Benicia in 2004 was approximately 5,600 acre-feet per year, with residential usage making up roughly 4,000 of the 5,600 acre-feet.

**Key**

- Study Area
- Existing Wastewater
- Proposed Wastewater

Major improvements to the water treatment plant will be completed by January 2007. These thirteen million dollars of modifications were necessary to increase the plant’s reliability, flexibility, and redundancy to allow for the effective treatment of twelve million gallons per day throughout the year. Additionally, 7 million dollars of upgrades to the distribution system, including a new 3 million gallon water storage reservoir and pump station, are currently under way. With these improvements, the treatment system will be capable of serving future needs within the LAMUSP area provided development follows the direction of the 1999 General Plan. However, it may be necessary to upgrade distribution lines within the project area to accommodate new development.

**Wastewater Collection and Treatment**

Wastewater collection, treatment, and disposal services are currently provided by the City’s Public Works Department. The wastewater system is made up of approximately 150 miles of piping, and utilizes 24 lift stations throughout the network. The system is capable of processing 4.5 million gallons of wastewater per day, and provides primary and secondary treatment.

The City’s treatment facility first opened in 1958, but has undergone several renovations throughout its lifespan. The most recent of these renovations occurred in 2000, providing 30 million dollars in upgrades. With this improved system, the



wastewater treatment facility will be capable of serving future needs within the LAMUSP area provided that development follows the direction of the 1999 General Plan. It is possible that collection system upgrades will be needed within the Arsenal to accommodate new development.

**Key**

- Study Area
- Existing Storm Drain
- Proposed Storm Drain
- Proposed Stormwater Detention Areas

**Storm Drainage**

The City’s drainage needs are met by various creeks and tributaries that drain the majority of runoff into Suisun Bay and the Carquinez Strait. The most prominent drainage watersheds are made up of Sulphur Springs Creek, Paddy Creek, and Lake Herman, all of which drain into the strait south of Benicia.

Runoff from urban areas enters the storm drains and is carried out to the strait. In order to reduce contamination levels from urban areas, development within the Arsenal should employ sustainable drainage systems that use natural filtration before transferring runoff out to the bay. It is possible to create more natural drainage systems using techniques such as bio swales, permeable concrete and paving, as well as landscaped areas that can be used to break up paved surfaces. The City has adopted a Storm Water Management Plan that includes best management practices for the implementation of such systems.

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### **Solid Waste Disposal**

Solid waste disposal service is necessary to provide a clean and safe environment, and this service is currently provided by a private company that is not affiliated with the City. The company offering service to the City and its residents is Allied Waste, and is already serving the LAMUSP area's existing residents and businesses. Allied Waste offers solid waste and recycling services, and operates out of Contra Costa County.

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### **Energy**

Energy services and utilities available within Benicia are provided by Pacific Gas and Electric. Electricity and natural gas is available throughout the City, and service is currently provided to the LAMUSP area. New development within the plan area may require additional electricity transmission lines or new piping for natural gas, but the increased development is not expected to have a significant impact on these utilities.

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### **Emergency Services**

Benicia has recently seen a decline in the number of crimes committed per year. Prior to 2005, the City was experiencing almost 600 serious crimes per year, but that number dropped to 292 in 2006. The Police Department offers services and outreach programs such as D.A.R.E., a Family Resource Center, Project Child Safe, and several others that have played a role in creating and maintaining a safe environment throughout the City. Average response time to emergency calls is approximately five minutes; however, the department would like to see response times with a five minute maximum, not average. While new development of the Arsenal would add additional residents and commercial space, it is anticipated to have only a minor impact on police services.

Fire services are provided by the City, and consist of two fully staffed fire stations. The City's Fire Department is a full service organization which offers two divisions providing different services to the community. These are the Operations/Administration and the Fire and Life Safety Division. The department staffs two fire engines and one paramedic rescue unit on a daily basis, and also offers many outreach programs to promote public safety. These programs include Fire Extinguisher Training, a Home Smoke Detector Program, a Junior Firefighter-Explorer Program, and various other services that help make the Department available to the public.

The closest station to the Arsenal is located at 150 Military West, and responds to approximately 1,500 calls per year. The average response time for the department is between four and five minutes. While new development in the plan area would create additional demand for the fire department, it is anticipated to have only a minor overall impact.

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