



Suisun Valley Strategic Plan

Figure 2-6

Fire Districts


Legend

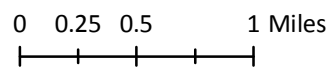
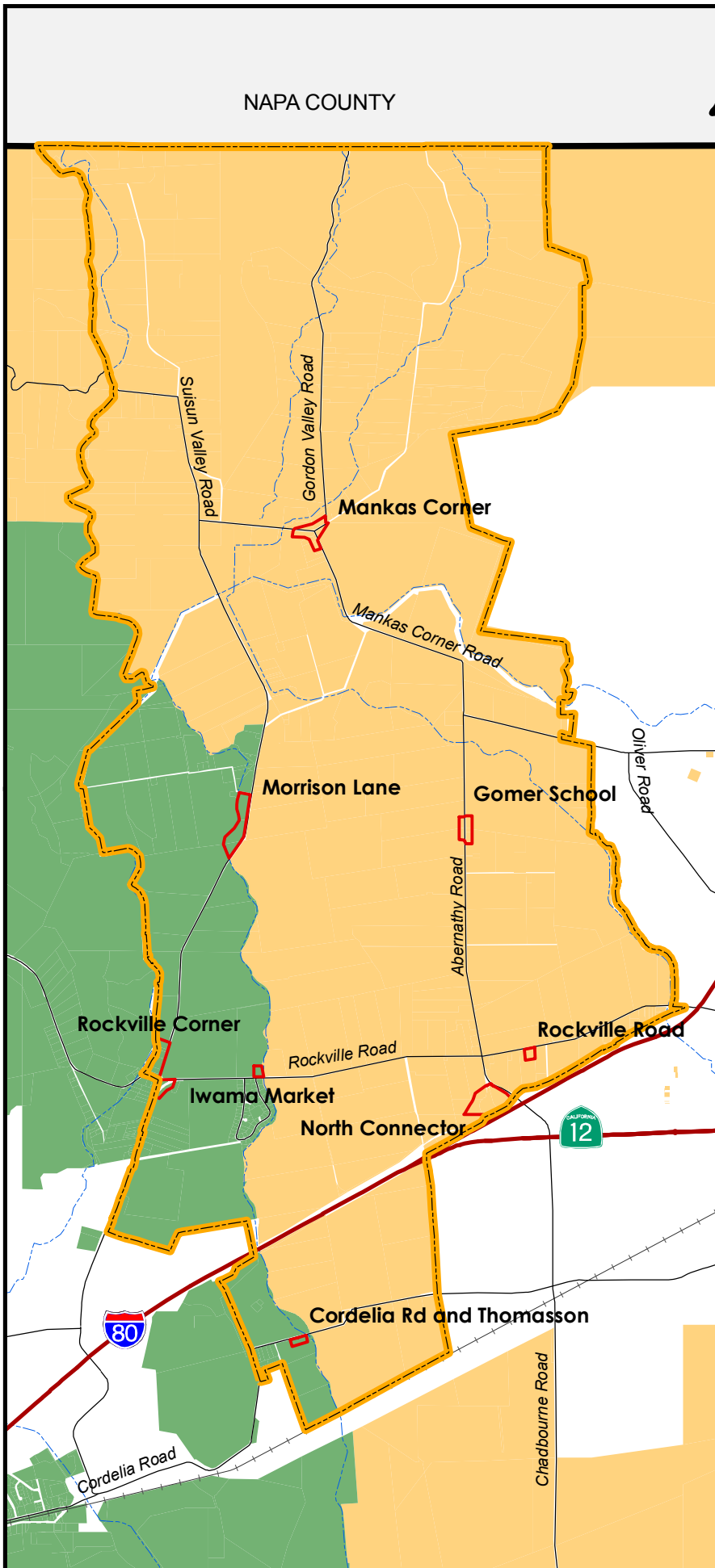
 Suisun Valley Strategic Plan Area

 Agricultural Tourist Centers

Fire Districts

 Cordelia Fire District

 Suisun Fire District



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Conversely, the Cordelia Fire District has a mandatory sprinkler requirement. Every new building in their district must have sprinklers. Commercial development must provide enough water to achieve 1,250 gallons per minute (gpm) for two hours at 20 pounds per square inch (psi) residual pressure. This can be accomplished through on-site storage capable of containing at least 150,000 gallons of water. The requirements for residential use include two sprinkler heads capable of supporting 17 gpm for 10 minutes. This could be accomplished with 5,000 gallons of on-site storage. It is possible that the required water storage could be shared among several adjacent properties through agreements. This report assumes that businesses and residences in each ATC can and will share the water storage tanks.

Combining the potable water and fire suppression systems would require a significant increase in the potable water distribution system, and is not recommended. Assuming the fire protection system is separate from the potable water system, disinfection of the entire fire supply would not be necessary. A 150,000 gallon storage tank should be adequate to provide fire protection for each grouping of businesses and residences within an ATC. This water supply could be provided from the most convenient source, and a circulation pump within the storage tank could be installed to maintain water quality. The required storage capacity to accommodate the fire demand could also be provided using a smaller tank located at each developed area.

Public Water System

One method to serve the Suisun Valley with water is to extend or replace existing water pipelines, as discussed in the following section. Costs associated with such extension or replacement are based the premise that new pipes would be placed within the City of Vallejo's Gordon Valley Line right-of-way, relying on wholesale potable water from the City of Fairfield, and assistance with potable water resale and non-potable water supply from SID. The most important aspect of this approach is the need for close coordination and cooperation among these agencies. It is essential that Solano County work with

the cities and SID to enable a potable water supply and infrastructure for the Suisun Valley.

Table 2-4 identifies the potential costs of extending a potable water pipeline along the Suisun Valley "loop" consisting of Suisun Valley Road, Mankas Corner Road, Abernathy Road, and Rockville Road. These improvements would be phased over time to supply priority destinations with water first. For example: Phase 1 would consist of replacing the line along the current Suisun Valley Road corridor from City of Fairfield point of connection to Morrison Lane. Phase 2 would consist of extending this line to Mankas Corner. Further phases would add connections to Gomer School, the North Connector, Iwama Market, and back to Rockville Corner, creating a looped system in the end. Other alternatives could also be created as needed to supply priority destinations with municipal potable water via a looped system. This would enable the construction of a larger system on a funds-available basis.

Well Water

Although groundwater is sometimes unreliable, individual wells may be the simplest method to provide water for some of the ATCs and most agricultural and residential uses throughout the Suisun Valley. Wells are allowed under current County policies and regulations. Well costs depend on the type of soil and distance to the water table at the well location. According to a local well driller¹, a typical well in the Suisun Valley would cost between \$20,000 and \$45,000. Exact cost depends on the depth of the well and the size of the casing. These costs include an initial drilling investigation, but do not include system piping. Each well, with reservoir, in the Suisun Valley is estimated to cost at least \$180,000 plus the cost of a pumping, treatment, and distribution system. These wells could possibly be shared with neighbors.

¹ Huckfeldt, Don. Contractor and owner. Huckfeldt Well Drilling. Napa, CA. August 6, 2009—Telephone conversation with Elizabeth Boyd of EDAW regarding typical costs of wells within Suisun Valley.



**Table 2-4
Water Infrastructure Costs**

Tool	Size	Typical Unit Cost*	Locations/ Centers Served	Number of Units	Total Cost
Water Pipeline	8-inch diameter	\$63 per linear foot	Fairfield Connection Valve to Rockville Corner	2,700 feet	\$170,200
Water Pipeline	6-inch diameter	\$45 per linear foot	Rockville Corner to Morrison Lane	8,500 feet	\$382,500
Storage Tank/ Reservoir	150,000 gallon reservoir	\$0.60 to \$1.00 per gallon	Rockville Corner ATC, Morrison Lane ATC	Two tanks	\$300,000
Total Phase 1 Cost					\$833,700
Water Pipeline	6-inch diameter	\$45 per linear foot	Morrison Lane to Mankas Corner	10,000 feet	\$450,000
Storage Tank/ Reservoir	150,000 gallon reservoir	\$0.60 to \$1.00 per gallon	Mankas Corner ATC	One tank	\$150,000
Total Phase 2 Cost					\$600,000
Water Pipeline	4-inch diameter	\$40 per linear foot	Mankas Corner to Gomer School	10,800 feet	\$432,000
Water Pipeline	4-inch diameter	\$40 per linear foot	Gomer School to existing line near Iwama Market	10,400 feet	\$416,000
Storage Tank/ Reservoir	150,000 gallon reservoir	\$0.60 to \$1.00 per gallon	Unknown	Additional tank	\$150,000
Total Additional Phase Cost					\$998,000
Total Pipeline Cost					\$1,850,600

* Source: AECOM Water 2009, estimated based on bids for nearby projects



Suisun Valley Strategic Plan

Figure 2-7

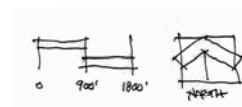
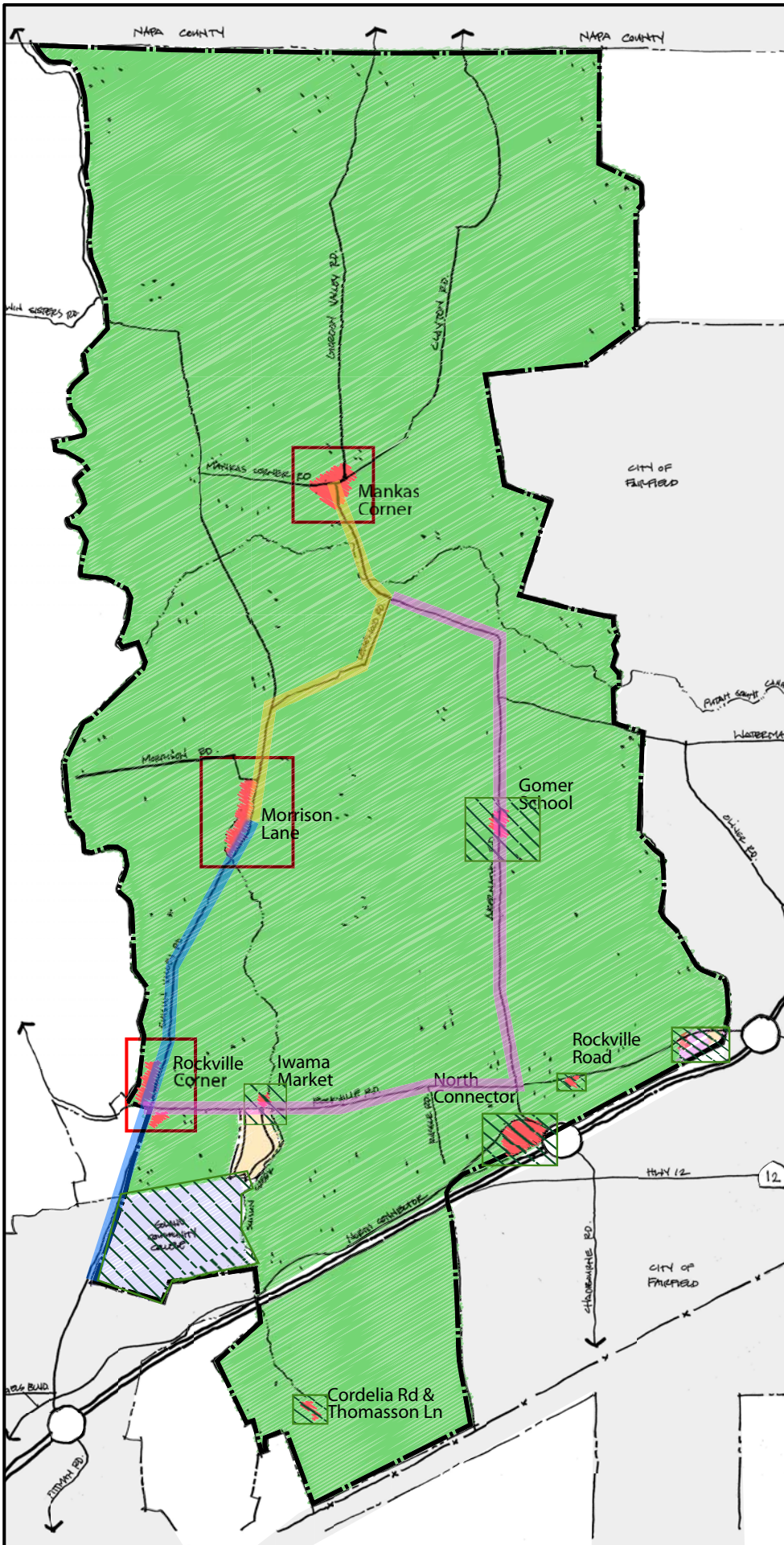
Potable Water Infrastructure Phases

Legend

- Phase 1
- Phase 2
- Additional Phases
- Primary Focus Service Areas
- Additional Service Areas

Land Use Designations

- Agriculture
- Traditional Community - Residential
- Neighborhood Commercial
- Service Commercial
- Public/Quasi-Public
- Neighborhood Agricultural/Tourist Center



2/02/10