

## **4.11 PUBLIC SERVICES**

## 4.11 PUBLIC SERVICES

### SETTING

The following section describes existing water supply and wastewater treatment systems in Dixon and planned expansions of these services. The section also discusses existing police, emergency medical, fire protection, gas and electricity, and solid waste services, and school facilities serving the project site, and assesses potential impacts to these services from future site development.

### Water Supply and Distribution

#### *On-Site Wells*

The original Milk Farm commercial uses were served by four on-site wells, system numbers 48-541, 48-540, 48-703, and 48-539. The wells have been inactive since the Milk Farm restaurant and associated service stations closed. The pasture and row crops on the project site are currently irrigated with water delivered by the Solano Irrigation District (SID).

The applicant originally considered reactivating and improving the wells to serve the future highway commercial uses, but has now committed to obtaining water service from the City of Dixon.

#### *Existing Facilities and Service*

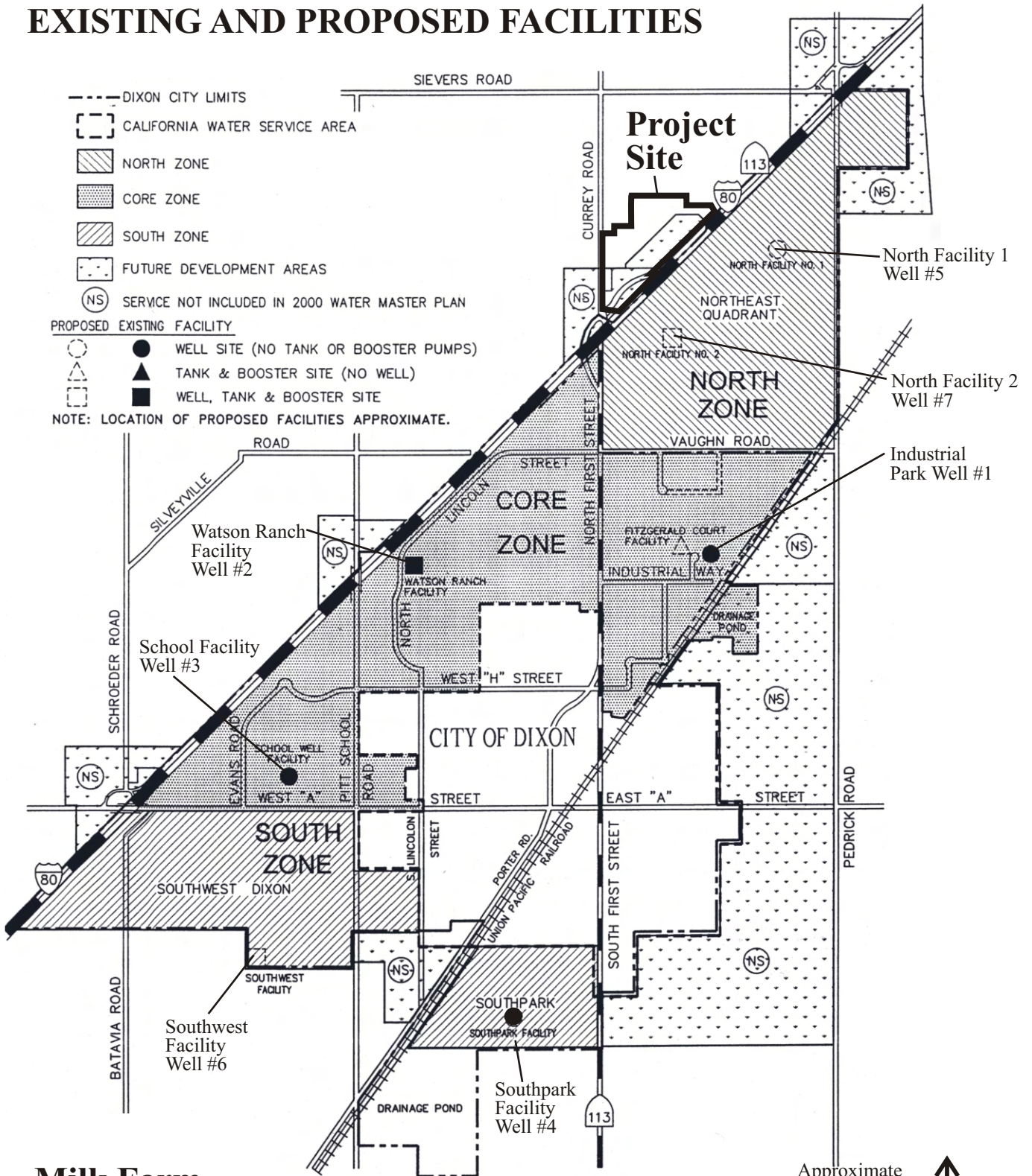
The 2000 Dixon-Solano Municipal Water Service (DSMWS) Master Plan describes the existing water facilities and planned improvements for the City (DSMWS, 2000). Below is a summary of the plan. The 2000 DSMWS Master Plan is currently being updated and may be adopted in mid-2005.

Dixon is served by two water purveyors: the DSMWS and the California Water Service Company (Cal Water). The DSMWS is a joint agreement between the City and the Solano Irrigation District. The agreement was adopted in 1984 and expires in 2009. The DSMWS serves recently constructed subdivisions and, by adopted policy, DSMWS will serve all new growth within the City of Dixon. As of 2004, DSMWS has approximately 1,800 customers (DSMWS, 2004). Cal Water serves the older downtown portion of the City and has approximately 3,000 customers (SCWA, 2004a).

**Water Supply Wells.** The DSMWS divides the City of Dixon into three service areas called the North Zone, the Core Zone, and the South Zone (Figure 4.11-1). Currently the Core and South zones are the only zones that have water service. The North Zone includes the NQSP, which will be served by newly constructed wells as development occurs. The project site is outside the North Zone in an area described by the DSMWS plan as “future development areas.”

# DIXON SOLANO MUNICIPAL WATER SERVICE DISTRICT EXISTING AND PROPOSED FACILITIES

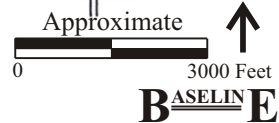
Figure 4.11-1



**Milk Farm  
Dixon, California**

Source: DSMWS 2000 Master Plan.

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Water is provided by DSMWS within the Core Zone by three wells located at: 1) the existing Watson Ranch subdivision near the Interstate 80 interchange with Pitt School Road (Watson Ranch); 2) near Tremont Elementary School on the west side of the City (School Well); and 3) at the industrial park off North First Street (Industrial Park Well) (Table 4.11-1). The Industrial Park Well off North First street is located closest to the project site.

In the South Zone, development of the Valley Glen project required construction of a new well (Valley Glen Well). That well was completed and began operation in December 2003.

The wells in the Core and South zones pump groundwater from aquifers at depths ranging from 800 to 1,500 feet below the ground surface. Three of the four wells (the Watson Ranch, School, and Valley Glen wells) have relatively high yields of 1,500 and 1,800 gallons per minute (gpm), equivalent to 2.16 and 2.59 million gallons per day (mgd), respectively. The fourth Well, Industrial Park Well, has a capacity of 690 gpm or 0.99 mgd (Table 4.11-1). Therefore, the four active wells have a capacity to produce a total of about 5,790 gpm, equivalent to about 8.33 mgd.

TABLE 4.11-1: Existing and Proposed Water Supply Wells, Dixon-Solano Municipal Water Service

Well	Name/ Location	Capacity (gpm)	Production (mgd)
<u>Existing</u>			
#1	Industrial Park	690	0.99
#2	Watson Ranch	1,500	2.16
#3	School Well	1,800	2.59
#4	Valley Glen	1,800	2.59
<u>Proposed</u>			
#5	North Facility 1	1,500	2.16
#6	Southwest	1,500	2.16
#7	North Facility 2	1,500	2.16

Source: DSMWS, 2000.

Cal Water provides water to the remainder of the City not served by DSMWS. Cal Water pumps water from eight wells, which have a capacity of approximately 5,760 gpm or 1.34 mgd. Annual water deliveries from 1999 to 2003 from DSMWS and Cal Water are summarized in Table 4.11-2 in acre-feet.<sup>1</sup> Total water supplied by the two companies equaled 3,623 acre-feet in 2003.

TABLE 4.11-2: Annual Water Consumption in Dixon (acre-feet)

Purveyor	1999	2000	2001	2002	2003
DSMWS	1,662	1,703	1,801	1,844	1,932
Cal Water	1,767	1,747	1,668	1,701	1,691
Total	3,429	3,450	3,469	3,545	3,623

Source: SCWA, 2004a; 2003 numbers (Ramirez, 2004 and Volpi, 2004).

<sup>1</sup> One acre-foot of water is equivalent to 325,853 gallons, or enough water to flood one acre to a depth of one foot.

**Water Treatment, Storage, and Distribution.** Current water quality regulations do not require groundwater to be disinfected or treated. To maintain residual disinfection levels in the DSMWS system, however, the water is chlorinated as it leaves the wells.

The DSMWS storage system includes two welded steel tanks. A 1.5-million gallon tank is located northwest of the Industrial Park Well (Figure 4.11-1). The tank is connected to the water distribution system through a pressure reducing valve. A second 800,000-gallon tank receives water directly from the Watson Ranch Well.

The DSMWS distribution system consists of water mains ranging in diameter from two to 12 inches. The pipelines in the distribution system are looped into a grid to provide redundant service routes and to feed high demand from more than one direction. In addition, there are currently three interconnections with the Cal Water system, at North First Street, at Rehrmann Drive, and in the Valley Glen area. They were installed to provide a backup in case either system experiences low system pressure or inadequate supplies (DSMWS, 2000).

**Water Demand.** Average daily water demand for specific types of land use has been estimated by DSMWS based on historic records (DSMWS, 2000). Water demand estimates for housing range from 400 to 600 gallons per day per unit. Commercial demand ranges from 2,880 gpd/acre for Neighborhood Commercial to 4,800 gallons per day per acre (gpd/acre) for Highway Commercial uses. Industrial activities use about 1,440 gpd/acre.

Actual flow rates in the system often exceed the average daily demand. DSMWS uses a peaking factor of between 1.7 to 3.4 times the daily demand. "Maximum month demand" is estimated to be 1.7 times the average daily demand, while "maximum hour peaking demand" has an estimated peaking factor of 3.4.

A major intermittent demand on the water system is providing water for fire protection. Fire flow requirements set by the Insurance Services Office (ISO) and the Dixon Fire Department range from 1,000 gallons per minute (gpm) for a three-hour period at a minimum pressure of 20 pounds per square inch for residential uses to 4,000 gpm for commercial and industrial uses. Fire flow is a large part of the short-term maximum flow rate and in Dixon it is the greater part of the required pumping capacity. As the City grows, however, the "maximum hour" water demand will become the critical criterion to meet (DSMWS, 2000).

### ***Planned Future Facilities and Service***

**Proposed Water Wells.** The 2000 DSMWS Master Plan proposes construction of three new wells in the growing North and South zones of the City (Table 4.11-2). Planned growth in the NQSP area in the North Zone will be served by two new wells with a capacity of 1,500 gpm, each. Well #5 (North Facility 1) would be located in the northeast corner of the NQSP area and Well #7 (North Facility 2) would be located just east of the Currey Road/Interstate 80 interchange, near the project site. A third well (#6, Southwest) would be constructed in the South Zone to serve the Southwest Specific Plan area. A fourth well (not in the DSMWS Master Plan) is being planned in the southeast (Brookfield area).

The application materials submitted for the proposed project indicate that the development would connect to the DSMWS water system by constructing a water pipeline under Interstate 80. The application states that: *“The initial point of connection to the DSMWS system will be in North First Street (SR 113). A future point of connection potentially could be established with the NQSP area once water infrastructure for the NQSP has been extended to the south Interstate 80 frontage.”*

The applicant does not intend to use DSMWS water to irrigate the agricultural portion of the project. The application states:

*Irrigation water for agricultural and landscape areas of the Milk Farm will be obtained from on-site wells or from the Solano Irrigation District (SID). The applicant will implement drip irrigation and other agricultural water conservation practices. The applicant is committed to participating in the SID’s conjunctive water use program to minimize impacts on local and regional aquifers. Water conservation practices, including the use of pervious paving, gray water, and other measures, also will be promoted at the Milk Farm site.*

In addition to the three new wells, the DSMWS Master Plan calls for the construction of three new steel water storage tanks. The 1.5-million gallon capacity tank at Fitzgerald Court within the industrial park off North First Street has been completed. Two sets of 750,000-gallon tanks are planned near Well #6 Southwest and near Well #7 (North Facility 2), south of the project site in the NQSP area. Another set of 750,000-gallon tanks is also planned (but not in the DSMWS Master Plan) in the Southeast (Brookfield) area.

The previous 1995 DSMWS Master Plan projected that the City would require a total of 13 new wells to serve growth outlined in the ultimate buildout of the City’s 1993 General Plan. The most recent DSMWS Master Plan (2000) notes that locating and operating this many wells may be problematic. The plan states that: *“In the future, providing adequately spaced,*

*high capacity wells in areas yielding good quality water, without adversely affecting, or being affected by, existing wells around Dixon, may prove difficult.”* Wells must be spaced apart a set distance, including spacing requirements of one-quarter mile for 1,500 gpm wells. In addition, locating new wells in the northeast and east areas of the City may be precluded due to high nitrate levels in the groundwater. The nitrate concentrations may be caused by a former slaughterhouse and several dairies in the area. The Master Plan states that the existing and proposed new wells will be adequate to meet General Plan growth through 2010, but recommends that the City investigate surface water supplies to meet ultimate water demand (DSMWS, 2000).

The DSMWS service area is within the larger SID service area; therefore, Dixon is eligible to use a share of SID’s surface water when necessary and available. Dixon has signed a contract to receive future supplies from the State Water Project (SWP) to be delivered through the North Bay Aqueduct. Dixon’s SWP contract is scheduled to begin with 300 acre-feet in the year 2016 and gradually increase by 300 acre-feet annually. The contract amount reaches a maximum of 1,500 acre-feet by 2020 and remains so each year thereafter. The City could initiate their SWP contract earlier with a five-year notice (SCWA, 2004a). However, Dixon currently has no transmission or treatment facilities to use water from the North Bay Aqueduct.

### **Water Supply Assessment**

If the project site, including buildout of approximately 520,000 square feet of commercial space, were to be served by City domestic water in the future, it would be required to comply with provisions of state law (California Water Code Sections 10910-10915) that require inclusion of a water supply assessment in the environmental analysis, if certain thresholds are met. The purpose of the assessment is to demonstrate that a project can be served by an adequate water supply during normal and drought years. All projects that meet any of the following criteria (Water Code Section 10912) must include a water supply assessment:

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

- A mixed-use project that includes one or more of the projects specified in this subdivision.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

In addition, for public water systems that have fewer than 5,000 service connections, such as the DSMWS, a project means:

*... any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of ten percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of ten percent or more in the number of the public water system's existing service connections.*

DSMWS currently has approximately 2,000 service connections. The number of new connections needed to serve the project is unknown since individual uses have not yet been specified.

Future site development would exceed the threshold of "a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space." A water supply assessment has been prepared by DSMWS (2005). The assessment has been adopted by SID and the City. The assessment is an update of, and relies on much of the data and conclusions contained in a recent water supply assessment prepared for the NQSP area (DSMWS, 2003). The following is a summary of the water supply assessment.

The water supply assessment notes that the project site is located northeast of a channel ridge of Putah Creek in the hydrogeologic area known as the Putah Creek Fan. The area is the most permeable and productive aquifer in Solano County. The Putah Creek Fan is part of the Solano Subbasin of the Sacramento Valley Groundwater Basin as described by the California Department of Water Resources (DWR, 2003). This groundwater subbasin has not been identified as being overdrafted or projected to be overdrafted, nor has it been adjudicated.

The safe annual groundwater yield for the Putah Creek Fan was estimated by the U.S. Geological Survey to be approximately 40,000 acre-feet per year before surface irrigation from the Solano Project began in 1959 (USGS, 1960). This surface irrigation increased the recharge and decreased the pumping. It is assumed that an additional net recharge of approximately 10,000 acre-feet per year has occurred.



Solano Irrigation District currently pumps about 6,000 acre-feet of groundwater annually, and historically has pumped as much as 14,000 acre-feet (SID, 1995). As recommended in a 1988 groundwater report (SID, 1988), from 25,000 to 30,000 acre-feet should be pumped annually to augment supplies and avoid waterlogging of soils in the Putah Creek Fan area. Therefore, the District could extract an additional average of almost 20,000 acre-feet per year in the Putah Creek Fan (DSMWS, 2005).

The water supply assessment states that groundwater levels have remained reasonably constant in the Putah Creek Fan since the Solano Project was constructed and surface water supplies delivered to agricultural lands. There is a large amount of usable water stored in the existing aquifer, which provides the City of Dixon with a safety factor for needed water supplies during periods of drought. The average specific yield (the volume of water that will drain freely from an aquifer) is estimated at six percent for the Putah Creek Fan. The Putah Creek Fan north and west of Dixon includes an area of approximately 45 square miles. In this area, each 10-foot thickness below the groundwater table represents a volume of water of approximately 17,000 acre-feet. This groundwater supply is available during drought periods to meet the City of Dixon water supply needs. Groundwater levels will drop during droughts, but following recent droughts, water levels have recovered without any long-term impacts (DSMWS, 2005).

The water supply assessment report notes that the groundwater basin used by DSMWS is in no apparent overdraft condition and can provide enough water without exceeding its safe yield to serve the development proposed for the remainder of the DSMWS service area outlined in the DSMWS Water Master Plan. This includes the project site. The report concludes that there is a sufficient water supply to meet the demands of the proposed project, in addition to development of the NQSP area (including the Dixon Downs project) and the other proposed and assumed future developments and water users within the DSMWS Service Area for the next twenty years and more (DSMWS, 2005).

### **Wastewater Treatment and Collection**

The 1995 Wastewater Treatment and Disposal Updated Facilities Plan describes the existing wastewater facilities and planned improvements for the City (Dixon, 1995b). Below is a summary of the plan.

### *Existing Facilities and Service*

The Dixon wastewater service system is composed of a collection system that gathers effluent from the City into a 27-inch trunk sewer that transports the waste to the Dixon wastewater treatment plant, located approximately 3.5 miles south of the City center on Pedrick Road. A parallel system of 27-inch, 30-inch, and 42-inch trunk lines is currently under construction and should be completed by mid-2005. The plant facility consists of 13 facultative treatment ponds, a control building, and a land disposal area. The plant treats sewage to a secondary level. Disposal of sewage is accomplished by a combination of evaporation, percolation, and irrigation of adjacent farmland.

The facultative ponds do not have mechanical aeration equipment. Effluent is distributed to eleven primary ponds in proportion to each pond's surface water area so that the biochemical oxygen demand is balanced with the natural transfer of atmospheric oxygen. The eleven primary treatment ponds have a theoretical capacity of approximately 231 million gallons. According to the 1995 Facilities Plan, operation of the facultative ponds has not been problematic, except for excessive biochemical oxygen demand loads and related odors from certain industrial dischargers; occasional problems related to natural pond algae; and accumulations of non-petroleum grease and oil along the edges of the ponds (Dixon, 1995b).

Wastewater flows from the nine primary treatment ponds to two secondary treatment ponds. Effluent from the pond system is transferred to the adjacent land disposal area by gravity. The 120-acre disposal area includes a 40-acre parcel bordering Pedrick Road and an 80-acre parcel contiguous to and east of the 40-acre parcel. Since 1987, the 40-acre parcel has provided enough area for almost all disposal needs. Disposal of treated effluent on the 40-acre parcel is accomplished by spreading water in 30-foot wide furrows separated by low soil check berms. The wastewater discharge requirements permit issued to the City by the Regional Water Quality Control Board (RWQCB) in 1994 effectively limits disposal to three out of every four days during the non-rainy season (between April and October of each year).

The City added aerators to the existing primary treatment ponds to increase capacity in 2000. City wastewater flows into the plant, excluding rainfall and groundwater leakage, are estimated to be about 1.4 million gallons per day (mgd). However, the City currently operates under a RWQCB "cease and desist" order, and the RWQCB recognizes a 1.2-mgd capacity at the plant, which has a design capacity of 1.7 mgd. Thus, the treatment plant has no capacity left to serve new growth (DiGiorgio, 2004).

### ***Planned Future Facilities and Service***

The 1995 Updated Facilities Plan (Dixon, 1995b) projects that the future 2050 wastewater treatment and disposal needs for the City could be as high as approximately 7.5 mgd. The plan notes that future capacity could be accomplished by one of three methods: 1) all land disposal of effluent with wastewater treatment via aerated ponds; 2) summer land disposal and winter discharge into nearby Dickson Creek with wastewater treatment via oxidation ditches; or 3) year-round discharge into Dickson Creek with wastewater treatment via oxidation ditches plus effluent filters. Before deciding which long-term strategy would be most effective, the plan recommends that the City proceed with a Stage 1 short-term expansion of the treatment capacity. The short-term plan recommends a hybrid aerated pond/facultative pond system, which then could be converted to either an aerated pond system or oxidation ditch system (Dixon, 1995b).

Three years ago, the City completed an expansion project to enlarge the wastewater evaporation/percolation basins used for primary treatment and storage, which was followed by a project to upgrade the headworks (intake) facilities at the wastewater plant. The City currently operates under a RWQCB “cease and desist” order, which requires the City to expand the wastewater treatment disposal system to accommodate existing flows, prevent inundation from bypassed overflows, and allow a minimum of five years of growth with the annual flow consistent with 100-year winter storm conditions. Groundwater salt build-up is also an issue. The City is in the process of considering possible upgrades to the wastewater treatment and disposal system and soon must undertake design and implementation of system expansion (Dixon, 2004).

In late September 2004, the City submitted a revised Waste Discharge Report to the RWQCB that proposes construction of new evaporation/percolation ponds on land one to two miles south and east of the existing disposal areas, where test wells showed hot spots of high salt concentrations in groundwater. The City application notes that effluent applied in this area would not further degrade groundwater. If the RWQCB agrees and approves the application, the City would prepare an environmental analysis, and the City plant would be approved for an interim capacity of about 1.8 mgd (DiGiorgio, 2004).

### **Police, Emergency Medical, and Fire Protection Services**

Police protection services for the project site would be provided by the Dixon Police Department, which currently has a staff of 24 sworn and 4.5 non-sworn employees and is supplemented by reserve officers and volunteers. The City of Dixon is divided into three sectors for deployment and beat responsibilities. The patrol division includes 15 positions, four of which are sergeants and eleven are police officers. The police station is located

downtown at 201 West A Street, approximately 2.3 miles from the site. Current response time for Code 1 calls is five to six minutes throughout the City (Mort, 2004).

Fire protection services would be provided by the Dixon Fire Department. The Dixon Fire Department serves the City of Dixon and the Dixon Fire Protection District, which includes 320 square miles of unincorporated area outside of the City. The department provides basic fire protection services, as well as emergency medical services and code compliance (nuisance and weed abatement, graffiti removal, etc.). The fire department provides both basic life support and advanced life support service. The department's paramedic engine is currently staffed with one firefighter/paramedic and one fire engineer 24 hours each day. Funding for this program is provided by Medic Ambulance, the County Tobacco Settlement Fund, and the City. The conditions of the fire department's permit to provide paramedic services include provisions that they must be on-scene in under seven minutes from the time of dispatch or be subject to fines.

The fire department operates out of one station at 205 Ford Way, approximately 1.6 miles south of the project site. The department is staffed by 18 full-time, two clerical, 40 volunteer, and one code compliance personnel. Equipment consists of four engines, one ladder truck, three water tenders, one rescue squad, three command vehicles, and two utility vehicles.

### **Gas and Electrical Utilities**

Natural gas and electricity are provided in the Dixon area by Pacific Gas and Electric (PG&E). PG&E serves the project site from existing electrical and gas lines in Dixon. PG&E already provides electrical service to the site.

### **Solid Waste Collection and Disposal**

Dixon's solid waste collection and disposal service is provided by Dixon Sanitary Service. Solid waste is trucked to the Hay Road Landfill approximately eight miles south of the City. The 640-acre landfill has a total capacity of approximately 28.2 million cubic yards, and has used only about 18 percent of the capacity (CIWMB, 2004).

The City of Dixon, as with all the jurisdictions in California, has been mandated to reduce its overall waste stream going to the landfill by 50 percent by the year 2000. As of 2002, the City's waste stream reduction was 66 percent, achieved primarily through implementation of the separated yard waste program in 1995. The City, through its franchise waste hauler, Dixon Sanitary Service, a subsidiary of Norcal, also encourages recycling of newspaper, office paper, cardboard, plastics, glass, aluminum, steel, motor oil, and hazardous

materials. The recycling center, located at First and C streets, is operated by Dixon Sanitary Service (Dixon, 2004).

### Schools

The Dixon Unified School District consists of one high school (Dixon High), one middle school (C.A. Jacobs Intermediate), four elementary schools (Tremont, Anderson, Silveyville, and Getchen Higgins), and one continuation school (Maine Prairie). Enrollment at Dixon High in grades 9 through 12 for 2002-2003 was 1,126 students. Enrollment at Maine Prairie Continuation School (also grades 9-12) was 76 students. Enrollment at C.A. Jacobs Intermediate was 638 students and enrollment at Tremont, Anderson, Silveyville, and Getchen Higgins elementary schools were 610, 362, 432, and 689, respectively. Total enrollment in the Dixon Unified School District was 3,933 students in 2002-2003 (Ed-Data, 2004).

## REGULATORY FRAMEWORK

### Dixon General Plan Policies

The Dixon General Plan includes several policies relevant to public services and facilities, and energy issues (Dixon, 1993). The policies applicable to future development at the project site are identified in the Public Services and Facilities and Natural Environment Elements:

Dixon General Plan Policies	Project Consistency
GENERAL	
<p>1: The City shall create a system of public service provision which will:</p> <ul style="list-style-type: none"> <li>• Support and encourage a contiguous pattern of land use, and discourage premature development;</li> <li>• Maintain or improve current service standards; and</li> <li>• Minimize potential environmental, fiscal and social impacts.</li> </ul>	<p>The project is consistent with this policy because it is contiguous to existing development (the Wal-Mart is across Interstate 80), and service standards would be retained through extension or expansion of facilities, paid in part by the project. Subsequent development plans for the project would be required to reduce potential environmental, fiscal, and social impacts.</p>

Dixon General Plan Policies	Project Consistency
<p>2: New development shall pay its fair share of the costs of all required public facilities and services by means of adequate mitigation fees. An equitable basis for allocating costs between new development and existing areas will be defined where capital improvements raise the quality of existing service or remedies an existing problem in service provision. However, the premature upgrading and replacement of all types of facilities and equipment caused by new growth will be the responsibility of the new development.</p> <p>3: The City shall ensure that public facilities are planned to promote economic development consistent with the overall General Plan and its specific economic development policies.</p> <p>4: The City shall encourage and control growth to the extent that local service networks can support it.</p> <p>5: The City shall establish an equitable means of financing facility expansions/capital improvements, and link decisions regarding such expansions and improvements to the policies of the General Plan.</p>	<p>The project is consistent with this policy because subsequent development plans would be required to pay their fair share of the costs to extend and expand services, such as water and wastewater, to the site through updated “hook up” fees or other mitigation fees.</p> <p>The project is consistent with this policy because highway commercial growth has been planned by the City for this location and it is contiguous to the planned employment center at the Northeast Quadrant Specific Plan.</p> <p>The City is planning the expansion of public facilities to accommodate economic development in the area, including the Dixon Downs project.</p> <p>The City has planned development at the Milk Farm site and service networks are being expanded in anticipation of substantial growth in the project area.</p>
<b>WATER FACILITIES</b>	
<p>9: The City shall ensure that the significant increases in water demand generated by new development will be met in a timely, cost-effective and environmentally sound manner. Achieving this policy will require a variety of improvements, including:</p> <ul style="list-style-type: none"> <li>• Installing new water mains; and</li> <li>• Increasing storage and treatment capacity.</li> </ul> <p>10: The City shall coordinate development activity with the water purveyors to ensure that adequate domestic, commercial/industrial, and fire flow requirements are met.</p>	<p>The project is consistent with this policy because new water wells are planned at the Northeast Quadrant Specific Plan and future development would contribute to their construction cost.</p> <p>The project is consistent with this policy because a water supply analysis has been completed by the water purveyors (Dixon-Solano Municipal Water Service District and Solano Irrigation District); the analysis indicates adequate water is available and it will meet fire flows.</p>

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Dixon General Plan Policies	Project Consistency
<p><b>11:</b> The City shall ensure that water improvements and service will continue to be financed with impact fees and service charges.</p> <p><b>12:</b> The City shall ensure that development does not exceed the capacity of the local water supply systems.</p> <p><b>13:</b> The City shall encourage development which incorporates water conservation features in structures and landscaping.</p> <p><b>14:</b> The City shall link growth to the current and projected water supply.</p>	<p>Subsequent development plans for the project would be required to pay their fair share of the costs to extend and expand water service to the site through updated water impact fees.</p> <p>As noted above, the water supply analysis indicates adequate water supplies are available for the project.</p> <p>The applicant has agreed to implement specific forms of water conservation and subsequent development plans for the project would be required to adopt water conservation plans.</p> <p>The water supply analysis completed for this and other projects, e.g., Dixon Downs, indicates there are adequate water supplies to serve growth in the area.</p>
<b>SANITARY SEWERAGE FACILITIES</b>	
<p><b>6:</b> The City shall ensure that the significant increases in sewage treatment and disposal capacity requirements generated by new development will be provided in a timely, cost-effective and environmentally sound manner. Achieving this policy will require a variety of improvements, including:</p> <ul style="list-style-type: none"> <li>• Installing major new conveyances;</li> <li>• Expansion of existing sewage treatment capacity; and</li> <li>• Expansion of existing effluent disposal facilities.</li> </ul> <p><b>7:</b> The City shall ensure that development does not exceed the capacity of the local wastewater treatment facilities.</p>	<p>As noted in the analysis of wastewater treatment capacity in this section of the EIR, the City's existing treatment plant and disposal area is planned for expansion to serve this project and other planned commercial and residential growth. The project is consistent with this policy because subsequent development applications would be required to prove that there is adequate capacity at the City's plant before approval is granted. The City has applied to the Regional Water Quality Control Board for an amended waste discharge permit to allow disposal in an expanded area.</p> <p>Subsequent development applications associated with the project would be required to prepare a wastewater services plan to prove that there is adequate capacity at the City's plant before approval is granted.</p>

Dixon General Plan Policies	Project Consistency
<p><b>8:</b> The City shall direct development to those areas which can be efficiently served either by existing wastewater treatment facilities or by one or more satellite plants (to serve areas that the existing wastewater treatment plant cannot readily serve.)</p>	<p>The project is consistent with this policy because the City General Plan has already designated the project area for growth, and the City has determined that growth in the northeast area of the City will be served by planned expansion of the existing treatment plant, not construction of a satellite plant.</p>
<p><b>PUBLIC SAFETY (POLICE AND FIRE PROTECTION)</b></p>	
<p><b>26:</b> The City shall ensure that development within the Dixon Planning Area does not exceed the capability of the Dixon Police Department to provide an adequate level of police protection.</p>	<p>Subsequent development applications associated with the project would be required to meet and confer in good faith with the Dixon Police Chief to verify that the existing capabilities of the police department are able to provide adequate police protection to the project.</p>
<p><b>28:</b> The City shall ensure that new development incorporates street layouts which provide adequate emergency access, distinct street names, and visible address markings.</p>	<p>As part of normal development application review, the Dixon Police Department routinely reviews site design to ensure that this policy is met.</p>
<p><b>29:</b> The City shall ensure that development within the Dixon Planning Area does not exceed the capability of the Dixon Fire Department to provide an adequate level of fire protection.</p>	<p>Subsequent development applications that include buildings over three stories would be subject to further environmental review to verify that the existing staffing and equipment capabilities of the fire department are able to provide adequate fire protection to the project.</p>
<p><b>30:</b> The City shall ensure that the water system will provide flow adequate for fire suppression for the types of structures and uses anticipated prior to approving new development. New commercial and industrial structures will be limited to locations where water supply is adequate for fire suppression. Where water supply in existing subdivided areas do not meet current standards for fire flow, improvement measures will be pursued.</p>	<p>A water supply analysis has been completed by the water purveyors (Dixon-Solano Municipal Water Service District and Solano Irrigation District) that indicates adequate water is available to meet fire flows. In addition, the project would not be allowed to use the on-site pond to meet fire flows because of the unreliability of the source.</p>



4.11 Public Services

Dixon General Plan Policies	Project Consistency
<p><b>31:</b> The City shall strive to maintain the following fire protection standards:</p> <ul style="list-style-type: none"> <li>• Engine response time consistent with ISO criteria;</li> <li>• A firefighter staffing level consistent with the type of fire department and ISO standards for communities similar to Dixon in relationship to actual needs;</li> <li>• A requirement for built-in protection for commercial building in excess of 4,000 square feet;</li> <li>• The spacing of fire stations consistent with recommended ISO standards, with each station on an adequate site, with the appropriate firefighting equipment; and</li> <li>• Water storage and distribution systems capable of providing 4,000 gallons per minute of sustained flow for at least two hours.</li> </ul> <p><b>32:</b> The City shall require proponents of new development projects to contribute to the maintenance of an adequate level of public safety within the community, generally through the payment of the appropriate impact fees.</p>	<p>As noted above, subsequent development applications would be subject to further environmental review to verify that the existing staffing and equipment capabilities of the fire department are able to provide adequate fire protection to the project.</p> <p>The project would be required to pay the standard fire and police protection development fees that have been adopted by the City.</p>
<b>CONSERVATION OF NATURAL RESOURCES</b>	
<p><b>20:</b> The City shall encourage the development of structures which incorporate features that reduce energy consumption. Examples of energy conservation design include the use of solar heating systems, the use of external shading devices and an increase in the amount of insulation. Both passive and active solar heating systems will be encouraged, and new homes should be designed for the best possible solar access.</p>	<p>The project applicant has agreed to implement several specific measures that would reduce energy consumption, including the design, construction, and operation of buildings to meet a minimum “silver rating” of the U.S. Green Building Council’s current Leadership in Energy and Environmental Design rating system.</p>

Dixon General Plan Policies	Project Consistency
<p>22: The City shall encourage recycling, reclamation and conservation programs (including water conservation), along with other programs aimed at conserving natural resources.</p>	<p>The applicant has agreed to implement several specific measures during site development that would encourage recycling and reclamation, including implementing an aggressive recycling program for glass, plastic, aluminum, and paper and promoting water conservation practices, such as the use of pervious paving, gray water, and other measures.</p>

## IMPACTS AND MITIGATION MEASURES

### Significance Criteria

Based on the Environmental Checklist in Appendix G of the CEQA Guidelines, a proposed project could be considered to have significant impacts on utilities and service systems if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Not have sufficient water supplies available to serve the project from existing entitlements and resources, and new or expanded entitlements would be needed.
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments.
- Not be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs.
- Not comply with federal, state, and local statutes and regulations related to solid waste.

A project could also have significant impacts if it would “result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable

service ratios, response times or other performance objectives” for any of the following public services:

- Fire protection;
- Police protection;
- Schools;
- Parks; or
- Other public facilities.

In addition, Appendix F of the CEQA Guidelines requires EIRs to include “a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.”

### **Impacts Determined to Be Less than Significant**

- **Schools.**

Future site development does not include any housing and would not generate any school age children that could impact the local schools.

- **Parks.**

Future site development does not include any housing and so it would not increase demands for local park and recreation facilities.

- **Other public facilities.**

No other public facilities, such as libraries, would be significantly impacted by future site development since the project does not include housing.

### **Impacts Determined to Be Potentially Significant**

- Water supply;
- Wastewater treatment facilities;
- Fire protection;
- Police protection;
- Landfill/solid waste;
- Energy;
- Storm water drainage (discussed in Section 4.3, Hydrology and Water Quality).

### **Anticipated Future Impact 4.11-1**

**Future site development would create demand for approximately 135,000 gallons per day of domestic water, with a peak demand of 459,000 gallons per day of water. To provide water during peak periods, the Dixon-Solano Municipal Water Service would be required to construct substantial infrastructure improvements, such as additional municipal wells and storage facilities. This is a potentially significant impact.**

The 2000 DSMWS Master Plan includes projections of water demand for individual areas of the City. However, the areas northwest of Interstate 80, including the project site, were not included in the water demand calculations for the 15-year General Plan period of 1996-2010. The project site was included with "Future Residential" designated lands on the east side of the City, which are designated in the General Plan as lands to be developed after 2010, after specific plans have been prepared and/or the General Plan has been updated.

The 2000 DSMWS Master Plan is being updated at the time of this writing and may be adopted by the City and the DSMWS board in mid-2005. Based on the preliminary work on the updated plan, the project site can be served by the two wells (North Facility 1 and 2) that are proposed in the NQSP area. However, the capacity of the two wells would need to be increased from 1,500 gallons per minute (gpm) to 1,800 gpm to serve the project site and other growth in the vicinity (Daniels, 2004). The project site would be connected to the water system in the NQSP area by two 12-inch water pipelines constructed under Interstate 80, forming a loop system. Additionally, to serve the project site and other growth in the area, storage would have to be increased from one planned one-million gallon tank to two one-million gallon tanks. The planned pumping station capable of pumping 2,000 gpm would be adequate to serve the project site and the area (Daniels, 2004).

New water connection fees will be adopted based on the updated DSMWS Master Plan. The existing fee structure is based on individual water meter connections, but since the project site and the NQSP include many large parcels with an unknown number of meters, a new methodology may be adopted to set fees based on actual calculated water demand or on a per-acre basis (Daniels, 2004).

The 2000 DSMWS Master Plan estimates a water demand for Highway Commercial uses of 4,500 gpd for an undeveloped gross acre of land. Applying this demand factor, development of the project site of approximately 30 acres would generate an average daily water demand of 135,000 gpd. Using a peaking factor of 3.4 to calculate a "maximum hour peaking demand," the project would demand 459,000 gpd at peak periods.

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The applicant has agreed to incorporate several water-related measures into the project to reduce water demand, including:

- Contract with the Dixon-Solano Municipal Water Service to provide domestic water service to the Milk Farm or redevelop or develop on-site wells.
- Participate in Solano Irrigation District's conjunctive water use program.
- Promote water conservation practices, including the use of pervious paving, gray water, and other measures.
- Construct parking area stalls with eco-pavers or a similar surface that promotes drainage.
- Retain a specialist to determine the physical and chemical properties of soils, including the range of likely water infiltration rates.

##### ***Anticipated Future Mitigation Measure 4.11-1a***

*The applicant shall pay a fair share of the costs of the improvements outlined in the updated DSMWS Master Plan, as reflected in the updated connection fee schedule prior to site development. The applicant shall pay a fair share of the costs of additional well and storage construction to serve the area. The applicant shall construct two 12-inch water lines under Interstate 80 to connect a loop system with the water system being developed in the NQSP.*

##### ***Anticipated Future Mitigation Measure 4.11-1b***

*Prior to the approval of any future development plan for any component of the project, a Water Demand and Conservation Plan shall be prepared and approved by the City Engineering and Community Development departments. The plan shall be coordinated with the required Farmland Irrigation and Water Conservation Plan (see Mitigation Measure 4.11-2, below). The plan shall include, but is not limited to, the following specific components:*

- *A water budget for all proposed private and public uses within the project site, including irrigation of landscaping and operation of water features such as the lake;*
- *An infrastructure plan for providing the amount of water that is required, with a requirement that any additional cost burden associated with this infrastructure would be borne by the applicant/developer;*
- *A stated goal and conservation plan for reducing projected on-site water consumption by 15 percent;*
- *The water conservation plan shall include specific measures to minimize the use of high water use landscaping (turf, water features) by requiring, for example, installation of drought tolerant landscaping;*
- *The water conservation plan shall include specific measures that require conservation programs in resort hotel operations, similar to the U.S. EPA Water Alliances for*

- Voluntary Efficiency (WAVE) program, such as offering guests an option of receiving no new daily towels and bedding;*
- *A detailed proposal of how future site development can participate in Solano Irrigation District's conjunctive water use program, including specific design features that would help to replenish groundwater such as the use of pervious paving materials, use of collected gray water, and other measures.*

Implementation of these mitigation measures would reduce this anticipated future impact to a less-than-significant level.

### **Anticipated Future Impact 4.11-2**

**Future site development proposes to use either on-site well water or surface water supply from Solano Irrigation District for irrigation of the project's 25-acre agricultural area and for on-site landscaping. Adequate water supply may not be available. This is a potentially significant impact.**

Future irrigation of the 25 acres of intensive cropland and orchards would occur with water delivered from SID. The pasture and cropland on the project site currently receive SID water.

Assuming that the project's farmland would require irrigation during the growing season of an average of 3.0 acre-feet of water per acre per year (DWR, 1994), a total of approximately 24.4 million gallons annually would be needed. This agricultural water demand would be equal to approximately 135,000 gallons per day on average for a six month growing season. Peak daily water demand for the irrigated crops during the hottest days of the summer could be twice the daily average.

The applicant has agreed to incorporate several water-related measures into the future site development plan, including: "Implement drip irrigation and other agricultural water conservation practices." SID staff has recommended several measures to ensure efficient water use, which are included in the measure, below (Fuschlin, 2005).

#### ***Anticipated Future Mitigation Measure 4.11-2***

*A Farmland Irrigation and Water Conservation Plan shall be prepared and approved by the City prior to any planting of crops and construction of facilities. The plan shall include a water budget for irrigation of the cropland and orchards and project landscaping areas during different times of the year. The plan shall include a goal of 0.75 to 0.85 water distribution uniformity for furrow irrigated crops, consistent with standards of the Irrigation Training and Research Center, Cal Poly, San Luis Obispo ([www.itrc.org](http://www.itrc.org)). Buried drip irrigation*

*systems should be limited to no more than one-eighth mile in length. Orchards shall be irrigated with micro-spray. The plan shall recommend additional water conservation measures that can improve overall water efficiency, especially during peak summer irrigation periods.*

Implementation of this mitigation measure would reduce this anticipated future impact to a less-than-significant level.

### **Anticipated Future Impact 4.11-3**

**Future site development would conservatively create demand for approximately 81,250 gpd of dry weather wastewater treatment and a demand for 219,375 gpd of wet weather treatment. This is a potentially significant impact.**

The City of Dixon's Wastewater Treatment and Disposal Updated Facilities Plan (Dixon, 1995) estimates an average dry weather wastewater demand for commercial uses of 1,500 gpd for an undeveloped gross acre of land. Applying this demand factor, development of the project site of approximately 30 acres would generate an average daily wastewater demand of 45,000 gpd. However, this estimate appears to be low compared to the estimated water demand for commercial land of 4,500 gpd per acre contained in the 2000 DSMWS Master Plan. Wastewater demand is normally less than water demand, but is usually about 50 to 90 percent of water demand, depending on the amount of landscaping, but not one-third of water demand (DiGiorgio, 2004).

To provide a worst-case estimate of anticipated future wastewater demand for the project site, a second estimate has been prepared for a hypothetical mix of land uses based on the conceptual development for the project site. It is assumed that a hotel/conference center/wellness center would be developed along with a mix of specialty retail, restaurants, and automobile related service uses.

Using detailed demand factors, this hypothetical mix of specific land uses for the project site would create an average dry weather wastewater demand of 81,250 gallons per day (gpd) (Table 4.11-3). Hotel wastewater generation is assumed to be 175 gpd per room based on an industry study (Redlin and DeRoos, 1990). Wastewater demand for the other commercial uses is based on generation rates from Sacramento County for infill development. Service and retail uses would be expected to generate approximately 0.1 gpd per square foot, and restaurants would generate 1.0 gpd per square foot (Sacramento, 1990).

TABLE 4.11-3: Estimated Dry and Wet Weather Wastewater Treatment Demand for Future Site Development

Use	Assumed Wastewater Treatment Demand per Unit <sup>1</sup>	Average Dry Weather Demand	Average Wet Weather Demand (2.7 factor)
(gallons per day)			
Hotel/Conference Center			
– Hotel (assume 70 rooms)	175 per room	12,250	33,075
– Conference Center (assume 20,000 sf)	0.1 per sf	2,000	5,400
– Restaurant (assume 5,000 sf)	1.0 per sf	5,000	13,500
– Wellness facility/spa (assume 20,000 sf)	0.1 per sf	2,000	5,400
Subtotal		21,250	57,375
Highway Commercial			
– Specialty Retail (assume 380,000 sf)	0.1 per sf	38,000	102,600
– Restaurants (assume 20,000 sf)	1.0 per sf	20,000	54,000
– Auto related uses (service stations) (assume 20,000 sf)	0.1 per sf	2,000	5,400
TOTAL		81,250	219,375

Source: BASELINE; Sacramento, 1990; Redlin and DeRoos, 1990.

<sup>1</sup> If four acres of the project were designated for research and development/industrial use, the wastewater generation would be less.

Peak flows into a municipal wastewater system occur during and following the rainy season and during abnormally wet years. Wet weather flows are calculated to take into account storm water flows. A typical design peaking factor of 2.7 is used for a wastewater treatment plant capacity the size of Dixon's (about 1.7 mgd), excluding the infiltration and inflow of rainwater into the system due to pipeline leaks (Dixon, 1995b). Thus, the peak wastewater demand flows during wet weather for future site development would be approximately 219,375 gpd, assuming a 2.7 peaking factor.

As noted above in the "Setting" discussion, average dry weather flows into the City's wastewater treatment plant currently average 1.4 mgd. Thus, a future site development demand of 0.081 mgd would represent a three percent increase in wastewater demand for the City plant. The wet weather flows for the plant are estimated to be 5.3 mgd, assuming a 2.7 wet weather peaking factor and adding the infiltration and inflow of 1.3 mgd of rainwater into the system due to pipeline leaks (Dixon, 1995b). Wet weather flows from the project would represent a four percent increase.



However, the City currently operates under a RWQCB “cease and desist” order, and the RWQCB recognizes a 1.2-mgd capacity at the plant due to disposal issues. Thus, the treatment plant has no capacity left to serve new growth, including development of the project site, until additional capacity for disposal is approved by the RWQCB and constructed.

Future development could connect into the wastewater system that is being planned for the racetrack/entertainment complex in the eastern portion of the Northeast Quadrant Specific Plan area. The Dixon Downs project is planning an 18-inch gravity flow pipe, which would connect to an existing 21-inch wastewater pipe at Vaughn Road and Fitzgerald Way. However, the Dixon Downs 18-inch pipe may not be big enough to handle future flows from the project site and other projects in the area, such as the proposed Flying J truck stop at Interstate 80/Pedrick Road interchange. The Dixon Downs 18-inch pipe may need to be sized to a 21-inch pipe, and future site development may also require installation of a pump north of Interstate 80 (DiGiorgio, 2004). Alternatively, the project site may be connected to the existing City wastewater system near the recently constructed Wal-Mart in the western portion of the NQSP area. The western portion of the NQSP area would feed into the same 27-inch trunk pipeline at Vaughn Road and Fitzgerald Way.

The applicant has agreed to incorporate several wastewater-related measures into future site development plans, including entering into a wastewater services agreement with the City of Dixon, using the standard city wastewater connection and service fee schedule, prior to the initiation of site grading.

#### ***Anticipated Future Mitigation Measure 4.11-3***

*Prior to the approval of any future development plan for any component of the project site, applicant shall submit a Wastewater Services Plan to the Dixon Engineering and Community Development departments for approval. The plan shall include, but not be limited to, the following components:*

- *A projection of wastewater demand for the application based on rates for each specific use and square footage for average and peak daily flows;*
- *Specific measures to reduce wastewater generation on the site by 15 percent, such as the use of low-flow toilets and showers, and the re-use of gray water generated by uses on the site instead of allowing it to enter the City wastewater collection system;*
- *Detailed plans for how the project site would be connected to the existing City of Dixon wastewater collection system;*
- *A financing plan that indicates how the costs of constructing the infrastructure would be paid for by the applicant;*

- *A written verification from the Regional Water Quality Control Board and/or the City that indicates there is capacity at the City's wastewater treatment plant and disposal area to serve the project;*
- *A commitment that the applicant will pay sewer impact fees in effect at the time of the application.*

Implementation of the mitigation measure above would reduce this anticipated future impact to a less-than-significant level.

#### **Anticipated Future Impact 4.11-4**

**Future site development would create additional demand for fire and police protection services. This is a potentially significant impact.**

Future site development would increase demand for police service calls. In 2004, the Dixon Police Department responded to 17,999 calls for service, or about 49 calls per day. With a population of 16,325, this translates into 1.10 annual call per capita or 3.42 calls per dwelling unit. For the future anticipated commercial space of the project site, the demand for police service can be calculated by converting the square footage of the Highway Commercial space into a "dwelling unit equivalent," which is the same methodology used when a city adopts impact fees to pay for police services for new residential and non-residential development. It is assumed that one "dwelling unit equivalent" is equal to 1,600 square feet of non-residential space, based on a study conducted for a similar small town in California (Hughes, Hess & Associates, 1992).

The site's anticipated commercial space of 520,000 square feet (equivalent to 325 dwelling units) would be expected to generate an additional 1,113 annual calls, or approximately 3.1 calls per day. The 1,008 service calls represent an increase of approximately six percent over the number of police calls recorded in 2004.

The Dixon police chief has indicated that future project impacts to police services would be difficult to estimate at this time, since the future development is conceptual (Mort, 2004). Service calls to commercial uses vary widely, e.g., a mini-market could generate more calls than a big box store or a conference center. To accurately predict police service demands, plans for on-site private security and surveillance would need to be ascertained.

Current response times for Code 1 calls are five to six minutes throughout the City. The Police Department does not have any current deficiencies in terms of staffing and equipment. Development of the project site would not create the need for an additional police "beat," but the cumulative effect on the Department of City approval of numerous

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medium-size development projects (Mort, 2004) could be significant. The police chief indicates that the addition of 1,113 additional calls per year along with other proposed development in the City will cause a need for additional staffing (Mort, 2005).

Future site development would be expected to generate additional fire incident service calls, including emergency medical services. As noted above in the “Setting” section, the Dixon Fire Department serves the City of Dixon as well as the Dixon Fire Protection District, which includes 320 square miles of unincorporated area outside of the City.

In 2003, the Dixon Fire Department responded to 1,888 calls for service, or about 5.2 calls per day (Table 4.11-4). Approximately 64 percent of the calls were from the City, with 36 percent from the unincorporated area within the fire district. With a population of 16,325 for the City, this translates into 0.12 annual call per capita for City residents or 0.37 call per dwelling unit. Slightly more than one-half (51.6 percent) of all service calls were for emergency medical services.

TABLE 4.11-4: Dixon Fire Department Calls for Service in 2003

Type of Call	City	District	Total
Fire	95	120	215 (11%)
Emergency medical service	720	256	976 (52%)
Hazardous materials	18	6	24 (1%)
Vehicle accidents	37	36	73 (4%)
Aid	106	0	106 (6%)
All other calls	240	254	494 (26%)
Total Number	1,216 (64%)	672 (36%)	1,888 (100%)

Source: City of Dixon, 2003.

As with police services, demand for fire service calls for the project can be estimated by converting the square footage of the Highway Commercial space into a “dwelling unit equivalent,” assuming one “dwelling unit equivalent” is equal to 1,600 square feet of non-residential space. The anticipated future site development of 520,000 square feet of commercial space (equivalent of 325 dwelling units) would be expected to generate an additional 120 calls annually, or approximately 0.3 call daily. The 120 service calls represent an increase of approximately six percent over the number of fire service calls recorded in 2003. The cumulative effect of an additional 120 calls for service per year along with other proposed development in the City will cause a need for additional staffing (Dorris, 2005).

The Dixon fire chief also indicates that development of the project site would increase fire inspection and emergency medical services demands, and the additional demands could be accommodated by the fire department. The department receives a portion of the

property tax revenues collected by the City, and there would be no financial impact to the department if the project site were annexed into the City and developed. Response time to the project site cannot be determined until the Fire Department reviews the design or layout of future site development (Dorris, 2004).

Future site development would be required to meet all of the building requirements of the fire department, which are based on the 1997 California Building and Fire codes. Project site development would be required to provide fire hydrants within the site spaced at 300-foot intervals and provide sprinklers in buildings over 4,000 square feet in size, depending on occupancy.

The project site includes a five-acre retention pond, which is envisioned to serve as a project water feature, a fire-flow reservoir, and provide at least 46 acre-feet of flood storage volume. However, the fire department would not allow the applicant to rely on the on-site five-acre pond for fire fighting flows associated with future site development. Insurance companies do not allow any credit for ponds because they are too unreliable. Ponds are often not maintained adequately and may be drained (Dorris, 2004).

The height of future buildings on the project site may be of concern for the fire department. The fire department has a 105-foot ladder truck that can protect structures up to three stories in height. If future development proposes buildings, such as a hotel, higher than three stories, the project would be required to provide enhanced built-in fire protection. Any structures over three stories would also require the fire department to re-evaluate their staffing capabilities (Dorris, 2004).

The City of Dixon collects police and fire protection development impact fees to fund expansion of police and fire facilities required to serve future growth. The current impact fees that would apply to future site development are \$0.15, and \$0.73, per square foot of Highway Commercial space for police facilities and fire facilities, respectively. Based on 520,000 square feet of development, fees of approximately \$78,000 for police facilities and \$379,600 for fire facilities would be collected by the City.

***Anticipated Future Mitigation Measure 4.11-4a***

*Prior to the approval of any future development plan for any component at the project site, the applicant shall meet and confer in good faith with the Dixon Police Chief to verify that the existing capabilities of the Police Department are able to provide adequate police protection to the project, taking into account the proposed level of on-site private security and surveillance and the specific types of uses that are proposed. The applicant shall develop a method to pay for the project's fair share of additional staffing costs.*

***Anticipated Future Mitigation Measure 4.11-4b***

*Prior to the approval of any future development plan that includes building structures higher than three stories, further environmental review shall be conducted to specifically determine if existing Dixon Fire Department staffing and equipment capabilities are adequate to serve the development.*

***Anticipated Future Mitigation Measure 4.11-4c***

*The proposed five-acre pond shall not be used to provide fire flows for future site development. Adequate fire protection water shall be provided by the DSMWS water delivery system in accordance with Dixon Fire Department standards.*

***Anticipated Future Mitigation Measure 4.11-4d***

*Prior to the approval of any future development, the applicant shall develop a security loss prevention plan with each business operation, to be approved by the Police Chief. The applicant shall meet and confer in good faith with the Dixon Fire Chief to verify that existing capabilities of the fire department are able to provide adequate fire protection to the project. The applicant shall develop a method to pay for the project's fair share of additional staffing costs.*

Implementation of the mitigation measures above would reduce this anticipated future impact to a less-than-significant level.

**Anticipated Future Impact 4.11-5**

**Future site development would create additional demand for energy, including natural gas and electricity, and solid waste collection service. This is a potentially significant impact.**

The project site is currently served with electrical service and natural gas by Pacific Gas and Electric, and by the Dixon Sanitary Service, a private waste disposal company that provides collection and transfer services for solid waste generated within the City of Dixon. There are no constraints from PG&E in terms of extending service to the site and no constraints in terms of landfill capacity at the local Hay Road Landfill. Solid waste collection and disposal service is provided to the site by Dixon Sanitary Service, which can adequately serve the project site. The City of Dixon has adopted Ordinance 9409, which requires all new projects to allocate a space for collecting and loading of recyclable materials (Jensen, 2004).

To evaluate overall energy demand of a project, Appendix F of the California Environmental Quality Act (CEQA) Guidelines states that: *“In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.”* The appendix lists several *“potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal”* and notes that EIRs *“should explain why certain measures were incorporated in the project and why other measures were dismissed.”* Potential energy conservation measures cited in the CEQA Guidelines include:

- The potential siting, orientation, and design to minimize energy consumption, including transportation energy.
- The potential for reducing peak energy demand.
- Alternative fuels (particularly renewable ones) or energy systems.
- Energy conservation which could result from recycling efforts.

The applicant has made environmental commitments for future development, as described in Chapter 3, Project Description, including using the U.S. Green Building Council’s current Leadership in Energy and Environmental Design (LEED) rating system as a set of design standard benchmarks. In addition, commitments have been made regarding wastewater connection and service fees, and recycling.

***Anticipated Future Mitigation Measure 4.11-5a***

*For future site development, the design, construction, and operation of buildings over 5,000 gross square feet of occupied space shall meet a minimum “silver rating” of the U.S. Green Building Council’s current Leadership in Energy and Environmental Design rating system.*

***Anticipated Future Mitigation Measure 4.11-5b***

*Prior to the approval of any future development plan for any component of the project site, a Recycling Plan shall be prepared and submitted to the City and the Solano County Environmental Health Division that addresses recycling for all related demolition, construction, and operation of new uses on the project site. The plan shall include the following components:*

- *A requirement that, during future construction, contractors responsible for demolition of existing structures and construction of new facilities shall separate recyclable materials (i.e., wood, scrap metal, asphalt, concrete, cardboard) from the construction and demolition debris in such a way as to avoid landfill disposal of these recyclable materials.*

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- *Details for implementing an aggressive Recycling Plan that requires, at a minimum, all components of future development to provide containers for recycling glass, plastic, paper, cardboard, green waste, food waste, and aluminum and ensure that adequate and conveniently located space is provided for the necessary recycled material storage containers to be used by the project.*
- *An overall goal of the Recycling Plan to recycle at least 50 percent of all waste materials generated during construction and during subsequent operation of each component of future site development.*
- *A detailed monitoring program to monitor the progress of meeting the 50 percent recycling goal, with annual reports submitted to the City and to the Solano County Environmental Health Division for approval.*

Implementation of the mitigation measures above would reduce this anticipated future impact to a less-than-significant level.