

**City of Roseville**  
**Diamond Creek Well Project**

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**Initial Study/  
Mitigated Negative Declaration**

Prepared for

City of Roseville  
Department of Environment Utilities

Prepared by



February 2002

## MITIGATED NEGATIVE DECLARATION

**PROJECT TITLE:** Diamond Creek Well Project  
**PROJECT LOCATION:** The project site is located in the Diamond Creek subdivision, north of the intersection of Parkside Way and Northpark Drive, Roseville, CA 95747.  
**DATE:** February 1, 2002  
**PROJECT APPLICANT:** City of Roseville Department of Environmental Utilities  
**LEAD AGENCY:** City of Roseville Community Development Department  
**CONTACT PERSON:** Mark Morse, phone: (916) 774-5334

**PROJECT DESCRIPTION:** The project consists of construction of the Diamond Creek Well and Pump Station. The well and pump station site will be approximately 50 feet by 100 feet. When complete, the well and pump station will be used as back-up for existing water supplies during critically dry periods, potentially beginning as early as summer 2002. For a period of six months the well would also be used to gather information on whether the groundwater conditions in the vicinity of the well may be suitable for future Aquifer Storage and Recovery (ASR) operations. This will involve testing the well for both water injection and extraction, and monitoring volumes, water quality, and groundwater level changes during the test period.

### DECLARATION

The City of Roseville Environmental Coordinator has determined that the above project will have no significant effect on the environment and is therefore exempt from the requirement of an environmental impact report (EIR). The determination is based on the attached initial study and the following findings:

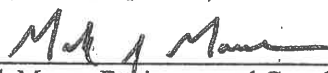
- a) *The project will not degrade environmental quality, substantially reduce habitat, cause a wildlife population to drop below self-sustaining levels, reduce the number or restrict the range of special-status species, or eliminate important examples of California history or prehistory.*
- b) *The project does not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.*
- c) *The project will not have impacts that are individually limited, but cumulatively considerable.*
- d) *The project will not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.*
- e) *No substantial evidence exists that the project will have a negative or adverse effect on the environment.*
- f) *The project incorporates all applicable mitigation measures identified in the initial study.*
- g) *This mitigated negative declaration reflects the independent judgment of the lead agency.*

Written comments shall be submitted no later than 30 days from the posting date. City Council determination on this Mitigated Negative Declaration is final.

Submit comments to:  
Mark Morse, Environmental Coordinator  
Roseville Community Development Dept.  
316 Vernon Street, #102  
Roseville, CA 95678

Posting Period: February 1<sup>st</sup> through March 4<sup>th</sup>, 2002

Initial Study prepared by:

  
\_\_\_\_\_  
Mark Morse, Environmental Coordinator  
Roseville Community Development Dept.

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# *Initial Study for the Diamond Creek Well Project Mitigated Negative Declaration*

## *1.0 Introduction*

This document supports the Mitigated Negative Declaration for the Diamond Creek Well Project. It contains five main sections as follows:

### 1.0 Location of the Project and Name of the Proponent

### 2.0 Project Description

This section contains a description of the proposed actions, including the phasing of construction, the equipment to be used, and processes to be undertaken during construction and operation. It also includes a description of the facilities to be built and the mitigation measures which are incorporated into the project design to avoid potential impacts.

### 3.0 Initial Study Checklist

This section provides the documentation that supports the findings contained in the Mitigated Negative Declaration. The checklist required in the CEQA 2001 guidelines is presented herein with impact assessment conclusions and supporting documentation.

### 4.0 Mitigation Measures

Mitigation Measures are presented in detail to mitigate identified potential significant impacts of the project.

### 5.0 Environmental Factors Potentially Affected

This section presents a summary of the environmental factors that may be affected and identifies whether these factors would be affected after mitigation.

Finally, the documents reviewed in preparation of the document are presented in the Bibliography.

## *2.0 Location of the Project and Name of the Proponent*

The proposed Diamond Creek Well will be located on Northpark Drive in the Diamond Creek Subdivision, City of Roseville, California (please see Figure 1, Project Location and Vicinity Map). The proponent is the City of Roseville Department of Environmental Utilities.

## *3.0 Project Description*

### *3.1 Introduction*

The project consists of construction of the Diamond Creek Well and Pump Station. The well and pump station site will be approximately 50 feet by 100 feet, and will be located on Northpark Drive within the proposed North School property in the City of Roseville. (Please see Figure 1, Project Location and Vicinity Map). The pump building will be approximately 20 feet from Northpark Drive and accessible by a driveway. (Please see Figure 2, Preliminary Site Plan for Diamond Creek Well and Figure 3, Example of Similar Building). The well and pump station will be used to back-up existing water supplies during critically dry periods, potentially beginning as early as Summer 2002. In addition, the facilities will be used to gather information on whether the groundwater conditions in the vicinity of the Diamond Creek Well may be suitable for future development of an Aquifer Storage and Recovery (ASR) program, as considered in the 1999 Water Forum Proposal Environmental Impact Report. This would involve testing the well for both water injection and extraction, and monitoring volumes, water quality, and groundwater level changes.

### *3.2 Proposed Actions*

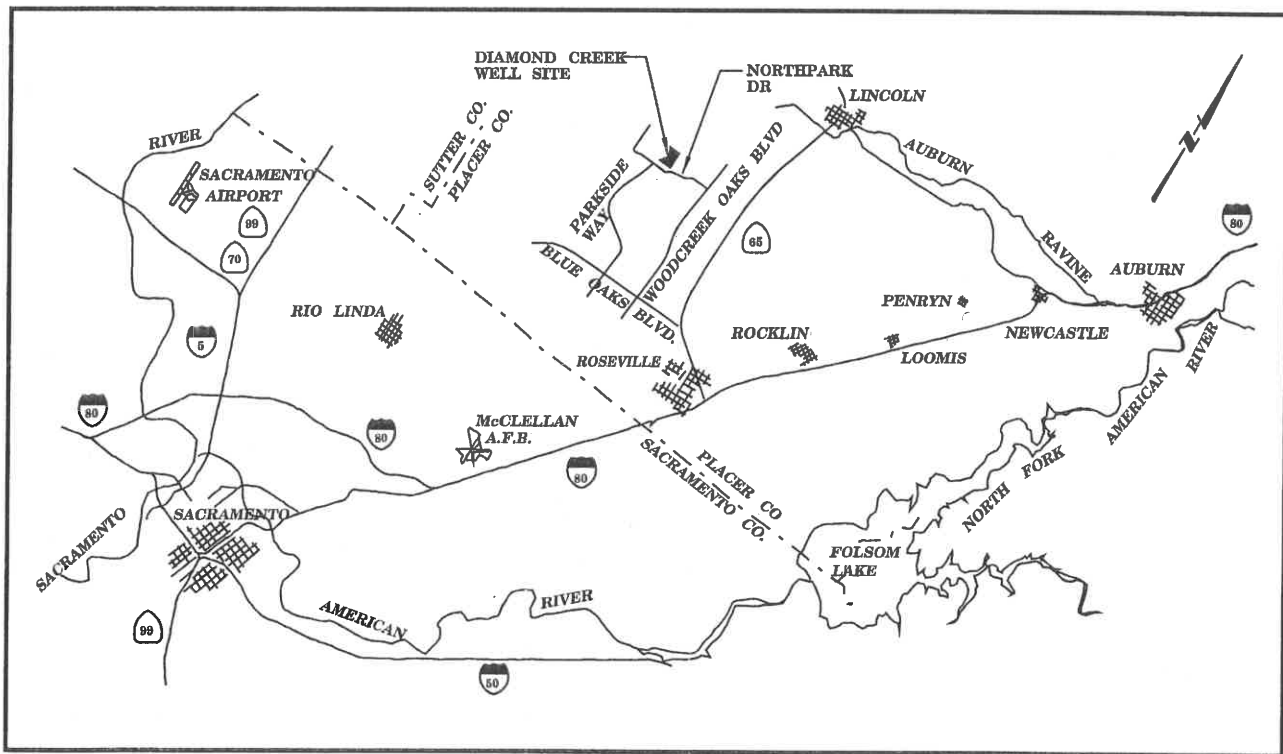
The development of the Diamond Creek Well would begin as early as March 2002, and would include a six-month construction and testing period. The components of the construction and operation are described in the following.

#### Clearing and Grading

Table 1. Construction Equipment and Phasing presents the equipment to be used in each phase of project construction. The construction site was cleared and roughly graded as part of the general site preparation for the construction of the surrounding Diamond Creek Subdivision. The final leveling of the site will be completed during an initial one-week period.



VICINITY MAP  
NOT TO SCALE



LOCATION MAP  
NOT TO SCALE



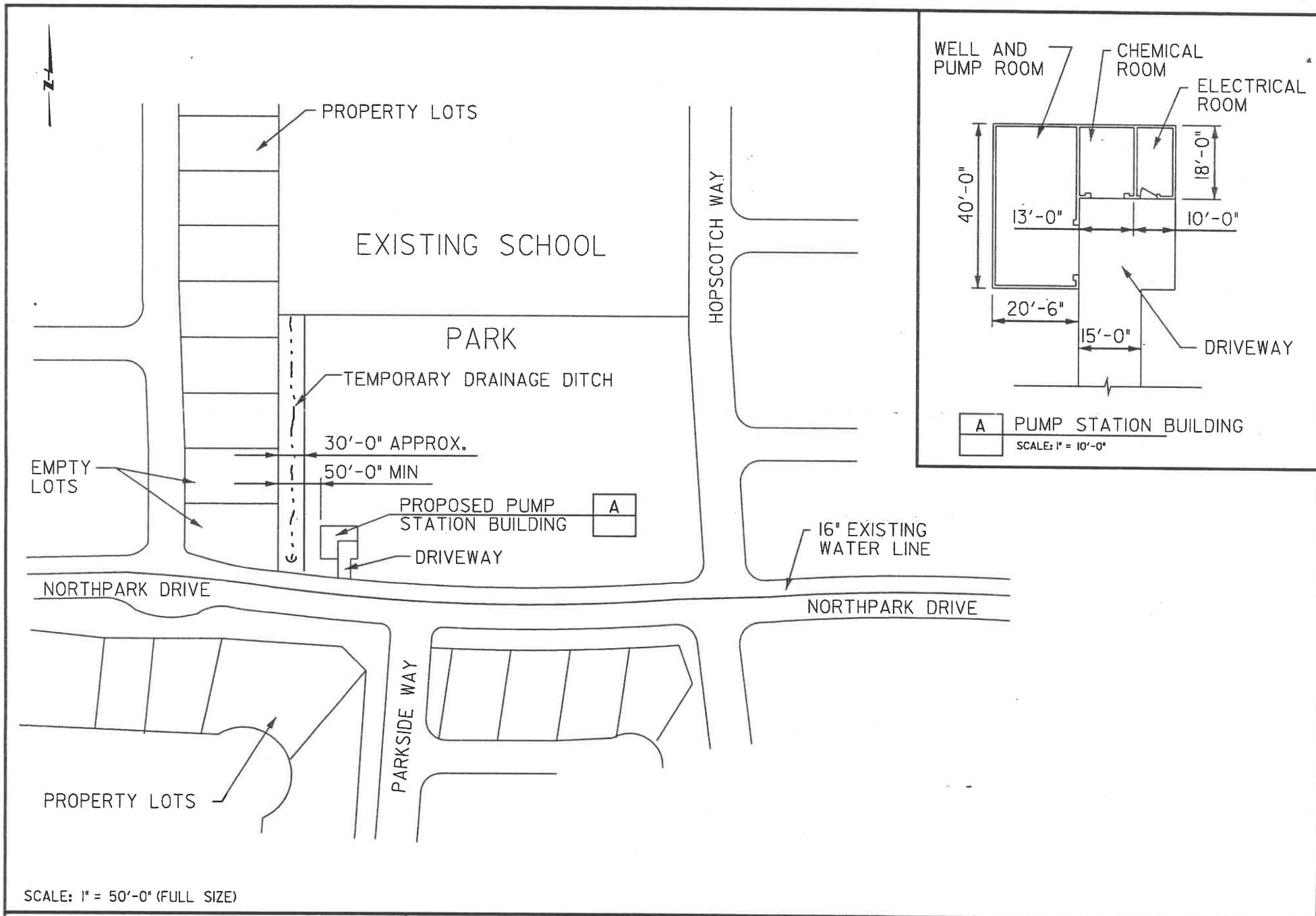
**MWH**  
MONTGOMERY WATSON HARZA

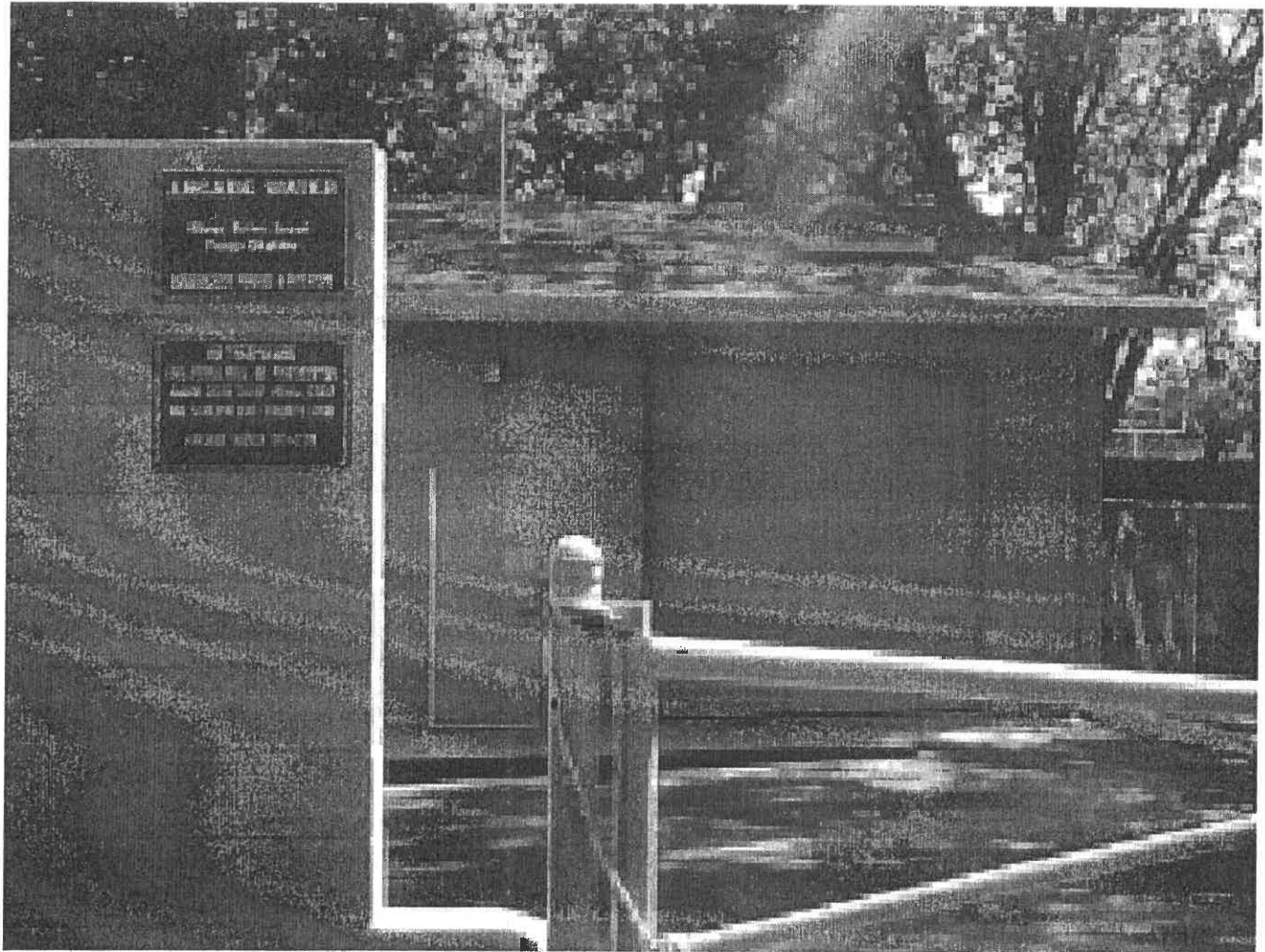
Sacramento,  
California

NEGATIVE DECLARATION FOR DIAMOND CREEK WELL  
CITY OF ROSEVILLE  
PROJECT LOCATION AND VICINTIY MAP

FIGURE

1





**MWH**  
MONTGOMERY WATSON HARZA

Sacramento,  
California

CITY OF ROSEVILLE  
THE DIAMOND CREEK WELL PROJECT  
EXAMPLE OF A SIMILIAR BUILDING

FIGURE

3



**Table 1: Construction Equipment and Phasing**

<b>Task and Description</b>	<b>EQUIPMENT</b>
<b>Clearing and Grubbing –1 week</b>	10 wheel dump truck (for short haul distances)
<b>Staging Construct stage area for equipment and office trailer</b>	Dozer
<b>Mobilization-1 week</b>	Loader
<b>Well Construction-8 weeks</b>	Drilling rig
	Water Truck
	Support pickups
	Rolloff bins for soil cuttings and Baker tanks for drilling water
	Geophysical logging truck
	Tractor-Trailers for delivery of: Well casing Well screens Filter pack
<b>Start Construction for Pump Building-14 weeks</b>	Back Hoe with fork lift attachment (for foundation)
Build up Subgrade	Formwork equipment
Construct formwork	Concrete trucks
Build up the walls	Boom truck
Install electrical equipment	
<b>Yard Piping-simultaneous with the above</b>	Excavator
Construct storm drain including manholes	Small crane or boom truck
Construct discharge piping	Back Hoe with fork lift attachment
Construct Electrical Conduits	
<b>Site Restoration-2 weeks</b>	Motor Grader (for finished grade)
Finish Grading	Skip Loader (for finished grade and/or landscaping)
Install driveway	Loader
Landscaping	Back Hoe with fork lift attachment
Clean Up and Demobilization	Bob Cat (for landscaping)

### Mobilization

The mobilization of equipment and materials will take place over a one-week period. Construction equipment will be transported to the site. This equipment will be stored onsite for the duration of the construction period. A site yard/staging area will be established, and a project trailer will be moved onto the construction site. A temporary fence will be installed around the construction site to assure public safety and site security.

### Well Construction and Testing

The construction of the well will take place over a period of 8 weeks and will require approximately 14 days of continuous (24-hour/day) drilling operations intermittently over a 4-6 week period. Twenty four-hour drilling operations are necessary to avoid caving of the borehole and possible loss of the well prior to completion. The well will be drilled to a depth of about 500 feet.

Pumping tests will then be carried out to evaluate the pump design parameters and to gather data on ASR suitability, including volumes, water quality, and groundwater levels. Four monitoring wells will be installed in the general vicinity of the Diamond Creek Well to measure groundwater levels during the ASR testing. These will be placed in public right-of-ways and will require minor ground disturbance in areas already cleared and graded for the Diamond Creek Subdivision.

Groundwater extracted from the production well during the testing will be discharged into the Northpark Drive stormwater facilities. The volume of groundwater discharged into the stormdrain will be regulated to assure that it is within the existing capacity of existing facilities.

Water discharged from the well will be tested before discharge and any water that does not meet regional Water Quality control Board standards for release into the stormwater system will be contained and treated onsite before discharge or will be transported offsite of treatment and disposal. This will apply to the ASR testing process as well. The materials excavated from the borehole will be stored on site, and then removed for offsite disposal at an approved site.

### Pump Station Construction

The construction of the pump station facilities will take place over a 14-week period. This includes constructing the building, driveway, landscaping, all mechanical piping and appurtenances, chlorination facility, electrical equipment, and instrumentation controls. The pump station will be tested and the extracted groundwater will be discharged into the Northpark Drive stormwater system.

## Demobilization

The construction demobilization will take place over a two-week period following the completion of the well and pump station. Construction equipment will be transported off site. The site yard/staging area will be broken down and the project trailer will be transported offsite and the construction fences will be removed. The area will be generally cleaned up to assure trash or unused materials are not left on or near the site.

## Construction Period Noise Attenuation Measures

The following noise attenuation measures will be employed during construction:

1. Noise control barriers will be furnished, installed and maintained at the site and will be removed upon the completion of the work. These barriers shall include fire retardant sound blankets specifically designed for drilling operations. The blankets shall be at least 20 feet in height from ground level and of a quality to effectively reduce noise from the drilling operation throughout the duration of the work.
2. Sound blankets shall be mounted on scaffolding, as required, around the entire work site. Blanketed access gates shall be installed around the rig mast up to and including the monkey board; the work platform; pumps; compressors; and other noisy equipment, as required.
3. The drill rig engine should be manufactured with sound attenuating enclosure or have a site-installed sound enclosure to reduce noise transmission to the surroundings.
4. All machinery and equipment to be used for construction will be equipped with noise devices such as mufflers, muffling sleeves, and spark arrestors or other suitable noise suppressor.
5. Electric power shall be used in lieu of internal combustion engine power wherever possible.
6. Air compressors shall be of a quiet type such as a "whisperized" compressor. Metal parts of the rig that come in contact with casing or drill pipe shall be protected by use of wood, rubber or other sound absorbent material, wherever possible.
7. Noisy equipment shall be kept as far as possible from noise sensitive site boundaries (west side of the site). Equipment shall be properly maintained to reduce noise from excessive vibration, faulty muffles, or other sources. No equipment shall be left idling unnecessarily.

8. Install signage as soon as possible to identify the site as a future city well and pump station site. The sign shall include the following information: the anticipated construction schedule; the anticipated schedule and duration of 24-hours drilling; and a contact phone number for additional information/noise complaints. The sign shall be maintained in a prominent location until construction is complete. It should be noted that the Environmental Utilities Department is pursuing implementation of this measure as soon as possible.

### Operation and ASR Testing

The well and pump station will be used to provide critical dry year water supply backup for the City of Roseville for periods of up to six months at a time, at a rate of approximately three million gallons per day. It will also be used to collect data on the suitability of the groundwater conditions in the area for ASR (which involves water injection during times of surplus, storage, and then recovery during drier conditions). The ASR testing typically involves two cycles of injection and subsequent extraction of water from the City's water distribution system. The first cycle typically consists of approximately 10 days of injection and 5 days of extraction. After the aquifer recovers, a second longer (20-day/10-day) cycle is conducted. During each cycle, water level and water quality monitoring data is collected to evaluate the system's performance. Depending upon the ASR testing at the Diamond Creek Well, the City of Roseville will consider including the Diamond Creek Well in a future Citywide ASR program. CEQA documentation for the ASR program will be conducted separately.

The water discharged from the well will be tested and any water that does not meet these standards will be contained and treated before discharge, or will be contained and transported offsite for treatment and disposal. This will apply to the water discharged from the ASR testing as well.

### *3.3 Project Objectives*

The City of Roseville's primary water supply source is surface water from the Folsom Reservoir on the American River. In 1997, the Department of Environmental Utilities supplied water to 66,901 persons through approximately 21,000 residential and 2,400 commercial water connections. The City's water needs have been steadily rising with deliveries increasing from 14,242 acre-feet (AF) in 1990, to 21,143 AF in 1996, with expected projections continuing to 54,900 acre-feet annually (AFA) by buildout (City of Roseville, 1992, 1993). The City provides this water from Folsom Reservoir through two sources; a water contract with the Central Valley Project for 32,000 AFA and purchased water rights water from Placer County Water Agency for 30,000 AFA. Acknowledging their total entitlements of 62,000 AFA, the City has agreed to limit its surface water supply to 54,900 AFA at 2030, consistent with the Sacramento Area Water Forum and the City's current General Plan buildout demand.

Recent studies have documented the city's need for improvements in the City's water supply, treatment, and distribution system to meet projected future demands (Water

System Study, Spink Corporation, 1993 and Water System Study Review, CH2M Hill, 1994). The continued growth in north and west Roseville, requires additional backup water supply capacity for critical dry years.

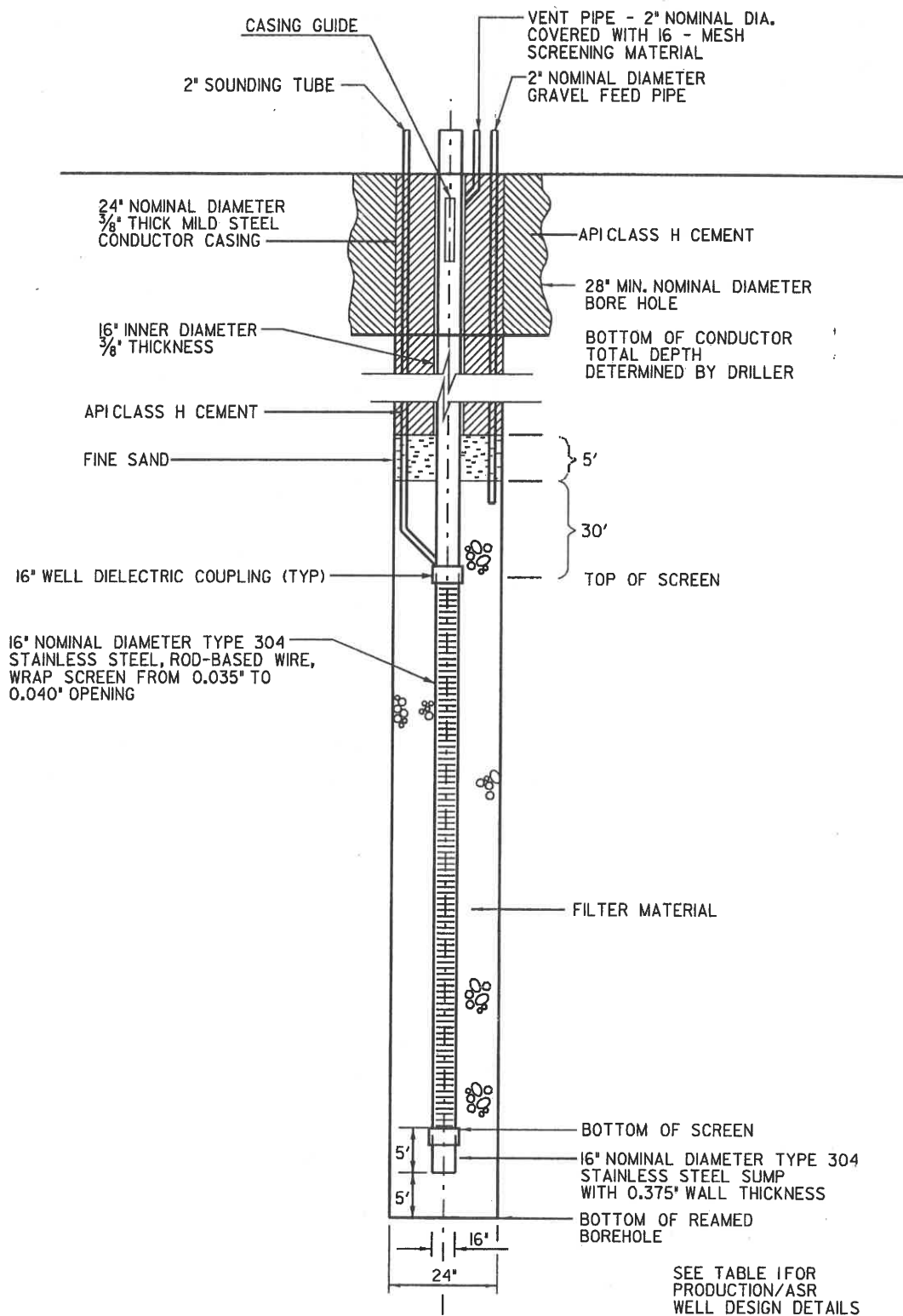
The City has identified five new potential well sites and intends to construct the first proposed well, Diamond Creek Well, with aquifer storage and recovery capabilities, on the North School Park site located in Diamond Creek south of an adjoining elementary school. The well site would contain a pump building housing the groundwater production well, pumps, piping and electrical controls for the pump station, and a chlorination facility. Although the Diamond Creek Well will have ASR capabilities and will be used for an ASR pilot study to determine the feasibility of implementing an ASR Program for the city, it will not be operated as an ASR facility until such time that the ASR program has been developed and undergone CEQA review. The Diamond Creek Well project includes and this CEQA document and analyzes the ASR pilot study. If determined feasible, the ASR program will be developed using data obtained during the pilot study and will receive separate project level environmental review under CEQA.

### *3.4 Facility Description*

#### Water Well

The well will be designed for water production and injection. In a production/recovery mode, the well will supply treated potable groundwater to the distribution system. When converting to an ASR storage mode, the well will serve as a conduit for injection of groundwater returned from the distribution system. The target production and storage zone for ASR is the Mehrten Formation, which contains andesitic sand and gravel lenses interbedded with clay. An exploratory borehole will be drilled to determine the depth of the aquifer and the appropriate screen intervals for the well and other construction details. It is expected the well will be screened from approximately 200 to 350 feet below the existing ground surface. (Please see Figure 4, Production Well Section). The borehole and filter pack will be designed and drilled to accommodate a well casing approximately 16 inches in diameter, and a stainless steel wirewrap screen approximately 12 inches in diameter. An electric pump and motor will sit above the well and be enclosed in the pump station building.

The layout of the pump site will allow the City of Roseville operation and maintenance staff to monitor the performance of the well, collect water quality samples, and access it for maintenance when necessary. The City will normally monitor the well operation by using remote monitoring and control capability of a Supervisory Control and Data Acquisition system (SCADA). It will occasionally be necessary for City staff to visit the well on site and perform minor maintenance. Every few years the well may require rehabilitation, in which case heavy equipment and a construction crew will be required on site for a few days to pull the well pump and access the well for cleaning.



Negative Declaration for Diamond Creek Well  
City of Roseville  
Figure 4 - Production Well Section

Not To Scale

## Pump Station

The pump station facilities will include the civil, mechanical, architectural, structural, electrical, and instrumentation aspects of the project. The civil aspect of the project involves the finished grading, access, and drainage of the site. The pump station will be accessed from a driveway from Northpark Drive.

The mechanical piping for the pump station will be configured to allow the Diamond Creek Well to operate as a production or ASR storage well. The preliminary design calls for 12 inch and 10 inch steel piping. The discharge piping will connect the wellhead to the existing 16 inch water line in Northpark Drive. The discharge piping will be enclosed in the pump station building.

The piping configuration will also allow for the system to flush or pump to waste "well discharge water" to the stormdrain for a period of time after the well turns on or after conversion from recharge to recovery mode of operation. The flush water from the well would be routed from the pump station building to a manhole located behind the building and eventually tie into the existing storm drain facility in Northpark Drive.

The pump station building will be approximately 30 feet wide by 40 feet long and 16 feet high. The building will be designed to meet applicable codes and standards.

Architecturally the pump station building will be designed as a concrete masonry block building. Skylights will be provided in the pump station to provide natural light and also serve as an access hatch for the removal of equipment with the use of a crane.

The pump station building will also house a chlorination facility to add chlorine to the well water before it enters the distribution system. The chlorine is added to the well water as part of a sodium hypochlorite solution. The chlorination facility generates this solution on site by using salt, electricity, and water. Because the concentration of the solution is sufficiently diluted, the generation equipment does not require special handling or containment. Adequate ventilation of the chlorination facility would expel and dilute the generated hydrogen gas during the formation of the sodium hypochlorite solution. The initial construction may include the use of commercially available Sodium Hypochlorite solution until the decision is made to go into production. This would entail the use of chemical tanks and offloading capabilities to handle up to 500 gallons of up to 12 percent solution Hypochlorite. During operations this may require chemical deliveries by truck weekly.

The pump station will include electrical equipment, including the pump, automatic valves, lighting, and chlorination facility. Electric power will be provided using facilities already available on Northpark Drive. There will not be emergency backup power available onsite. If ever necessary, a trailer-mounted diesel generator will be pulled to the site and parked in the driveway for temporary power. The electrical equipment is controlled by the instrumentation design. The instrumentation and control system would provide local control and monitoring at the well site. The system also provides remote monitoring and control capability by using a SCADA.

## Pump Station Architectural Design

The pump station building will be soundproofed to meet the City's exterior noise level standards. The building, the driveway, and parking area will be designed to blend in with the surrounding homes. The building roof, driveway, doors and windows, and landscaping will be designed to be consistent with nearby houses to the extent feasible. A photo of a similar building is presented in Figure 3, Example of Similar Building.

### *4.0 Initial Study Checklist*

The Initial Study Checklist is presented in accordance with the CEQA Environmental Checklist Form. The Environmental Checklist Form requires the Lead Agency to answer a series of questions regarding the effects of the project on the environment, as follows.

	Potentially Significant Impact	Potentially Significant Unless Mitigation	Less Than Significant Impact	No Impact
<b>I. AESTHETICS - Would the project:</b>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### **I. AESTHETICS**

#### **Question a.**

The proposed project will be located within a residential subdivision now under construction. Many two-story homes are completed; others are near completion. The area is slightly undulating to level. The views beyond the subdivision in the location of



the project are obstructed by the two-story homes, and by the elementary school to the north. Therefore, the pump station building, driveway, and parking area will not affect a scenic vista.

**Question b.**

The proposed project will be constructed on a site already substantially cleared and graded for the surrounding Diamond Creek Subdivision. There are no scenic resources on or adjacent to the site that will be damaged.

**Question c.**

The pump station building, which will be approximately 16 feet high, and the driveway and parking area will be designed to blend in with the surrounding homes. The building roof, driveway, doors and windows, and landscaping will be designed to be consistent with nearby houses to the extent feasible. An example of a similar building is provided in Figure 3, Example of Similar Building.

There is a six-foot fence along the western side of the park property providing some shielding of the well and pumping stations facilities from adjacent housing. Vegetation will be planted between the building and Northpark Drive to further blend the facilities with the rest of the Diamond Creek Subdivision.

**Question d.**

Nighttime lighting will be required for approximately 14 days when 24-hour drilling operations are required. Related lighting impacts are considered short term and less than significant. Thereafter, the street lighting will be sufficient for nighttime safety and security on the site. The pump station building will have outdoor lights with on/off switches. The lights will be used infrequently, only when nighttime maintenance is required. After the well drilling is complete, there will be no equipment or materials used on the site during operation that would cause glare during the day or night. For these reasons, the effects of the project on light and glare will be less-than-significant.

**Conclusion:** As no impact is foreseen as a result of the project no mitigation measures are required.

## **II. AGRICULTURE RESOURCES**

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

## II. AGRICULTURE RESOURCES

### Question a. and b.

The proposed project will be constructed on property that has been developed for the Diamond Creek Subdivision. The site has been cleared and roughly graded. The surrounding land uses include residences, a future park, and a school.

### Question c.

See answer "a" above. In addition, the City of Roseville will be monitoring any effects the pumping of the well may have on adjacent water wells, including those serving agriculture. As a part of the project, the City will either extend the depths of any affected wells, or construct deeper replacement wells. Therefore, these potential effects on agriculture are considered less-than-significant.

**Conclusion:** As no impact is foreseen as a result of the project no mitigation measures are required.

## III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan?                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

### III. AIR QUALITY

#### Questions a. and b.

Air quality standards in the relevant section of the Sacramento Valley Air Basin (SVAB) for PM<sub>10</sub> and ozone are consistently exceeded; the Sacramento Region is a designated nonattainment area (because it violates the State ozone standard); and the current maximum ozone concentrations in Placer county exceed the Air Resources Board 8-hour Designation Value of 0.103 for the Sacramento Region.

Air emissions from project operation are too small to calculate and are therefore considered to be less than significant. Air emissions from construction operations, including CO, ROG, NOx, SOx, and PM<sub>10</sub> emissions from construction equipment and vehicles have been calculated and are shown in Tables 2 Vehicle Emissions by Construction Phase, Table 3 Equipment Emissions by Construction Phase, and Table 4 Daily and Total Emissions, and Table 5 Emissions Significance Criteria. The entire air quality analysis is presented in Appendix A. Total emissions for all pollutants are well below the levels that would result in a significant impact. Although a less than significant impact is foreseen, dust control mitigations are recommended during construction to ensure that no fugitive dust is released. The construction and operation of water wells is consistent with the applicable air quality plan and will not obstruct its implementation. It has been determined that because the computation of emissions from construction operations would have a less than significant effect on air quality, the proposed project would not conflict with or obstruct implementation of the State Implementation Plan (SIP).

#### Mitigation Measure III-3: Perform Dust Control

##### Question c. and d.

The construction and operation of the Diamond Creek Well and Pump Station will utilize small amounts of petroleum products and water treatment chemicals. All of these materials will be maintained within the pump station building, and will not be accessible to the public.

### Question e.

The operation of the proposed project will produce minor chemical odors that will be limited to one room within the pump station building. The pump station building will not be accessible to the public.

**Conclusion:** Following mitigation, project impacts to air quality will be less than significant.

Table 2. Vehicle Emissions by Construction Phase

Pollutant	Preliminary		Well Construction		Pump Building Construction		Total
	Daily	Total	Daily	Total	Daily	Total	
	(lbs/day or lbs)						
CO	2.50	12.5	8.22	295.95	0.94	7.52	316
ROG	0.38	1.90	0.99	35.85	0.14	1.12	39
NOx	2.95	14.75	5.34	188.70	1.11	8.88	212
SOx							
PM <sub>10</sub>	0.34	1.70	0.68	24.50	0.13	1.04	27
Notes: All roundtrips are short, assumed at 20 miles each. All speeds averaged to 35 mph. All travel is assumed to occur on paved roads. Does not include commuting trips and those to haul equipment to and from the site.							

Table 3. Equipment Emissions by Construction Phase

Pollutant	Preliminary		Well Construction		Pump Building and Yard Piping		Restoration		Total
	Daily	Total	Daily	Total	Daily	Total	Daily	Total	
	(lbs/day or lbs)								
CO	5.58	27.91	10.73	382.98	15.63	108.74	10.15	27.64	547.26
ROG	2.28	11.41	3.52	126.26	5.75	42.67	4.14	11.28	191.63
NOx	19.60	98.02	55.09	1,994.93	54.33	382.72	36.39	101.95	2,577.63
SOx	2.05	10.25	4.35	159.54	5.19	36.96	3.72	10.44	217.19
PM <sub>10</sub>	11.84	59.22	2.29	84.25	6.26	36.32	13.34	59.71	239.50

Table 4. Daily and Total Emissions by Construction Phase

Pollutant	Preliminary		Well Construction		Pump Building and Yard Piping		Restoration		Total
	Daily	Total	Daily	Total	Daily	Total	Daily	Total	
	(lbs/day or lbs)								
CO	8	40	19	679	17	116	10	28	863
ROG	3	13	5	162	6	44	4	11	230
NOx	23	113	60	2,184	55	392	36	102	2,790
SOx	2	10	4	160	5	37	4	10	217
PM <sub>10</sub>	12	61	3	109	6	37	13	60	267

Table 5. Emissions Significance Criteria

Pollutant	Construction		Operations
	(lbs/day)	(lbs/qtr.)	(lbs/day)
ROG	190 <sup>1</sup>	12,500 <sup>2</sup>	135 <sup>3</sup>
NOx	250 <sup>4</sup>	12,500 <sup>2</sup>	135 <sup>3</sup>
PM <sub>10</sub> <sup>5</sup>	225	20,250	225
<sup>1</sup> There are 65 working days per quarter. <sup>2</sup> One quarter of the <i>de minimis</i> threshold of 25 tons/year. <sup>3</sup> Averaged weekly. <sup>4</sup> Increase by 30% of the ROG value. <sup>5</sup> Increase by 50% of the corresponding SCAQMD particulate matter limits.			

#### IV. BIOLOGICAL RESOURCES -- Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service?

☐ ☐ ☐ ☒

- |  |  |
|--|--|
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plan, policies, or regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service?                    | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?                                   | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?  | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?  | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |

#### IV. BIOLOGICAL RESOURCES

##### Questions a. through f.

The proposed project will be constructed on property that has been developed for the Diamond Creek Subdivision. The site is surrounded by new homes, a new school, and by cleared and graded land that will be developed into a park and additional homes. There are no biological resources on the property.

**Conclusion:** As no impact is foreseen as a result of the project no mitigation measures are required.

#### V. CULTURAL RESOURCES--Would the project:

- |   |  |
|---|--|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> |
|---|--|

- b) Cause a substantial adverse change in the significance of an archaeological resources pursuant to Section 15064.5? ☐ ☐ ☐ ☒
- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ☐ ☒ ☐ ☐
- d) Disturb any human remains, including those interred outside of formal cemeteries? ☐ ☒ ☐ ☐

## V. CULTURAL RESOURCES

### Questions a. through d.

No known paleontological, archaeological, historic, or unique geologic sites exist at the well site. In addition, ground disturbing activities would be limited to the existing well boreholes and would not extend into the surrounding areas, thereby avoiding any subsurface cultural resources or human remains, should any exist in the well site vicinity.

The proposed project will be constructed on property that has already been developed for the Diamond Creek Subdivision. The site has been cleared and graded and is surrounded by new homes, a new school, and by cleared and graded land that will be developed into a park and additional homes. There are no historic resources on the property.

However, development of the well could expose previously undiscovered archaeological resources during construction activities. Cultural resources exposed during construction, excavation, or related project activities could be damaged, destroyed, or removed from their cultural context. Therefore, potential construction impacts on previously undiscovered archaeological resources are considered potentially significant.

**Mitigation Measure V-1: Halt work if cultural resources are discovered.**

**Mitigation Measure V-2: Halt work if human remains are discovered.**

**Conclusion:** following mitigation, project impacts to cultural resources will be less than significant.

## VI. GEOLOGY AND SOILS -- Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: ☐ ☐ ☐ ☒

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| ii) Strong seismic ground shaking?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| iv) Landslides?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18- 1-B of the Uniform Building Code (1994), creating substantial risks to life or property?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

## VI. GEOLOGY AND SOILS

### Question a. i, ii, iii

Regional active and potentially active faults are approximately 35 miles away. All project components will be designed for Seismic Zone 3, in accordance with the provisions of the Uniform Building Code for the area, and the Sacramento area is a low earthquake hazard zone.

### Question b. and c.

Construction of the project will involve excavation, grading, and some soil disturbance in the construction area. The site is flat and has already been graded and prepared for construction. Therefore project construction will not significantly alter site topography.



To reduce any erosion impacts due to construction to an insignificant level, the following mitigation measures should be implemented:

**Mitigation Measure VI-1:** Prepare erosion and sedimentation control plan

**Question d.**

No project components would be placed on soils that are expansive or would result in landslides.

**Question e.**

This question is not applicable to the project.

**Conclusion:** following mitigation, project impacts to soils and geology will be less than significant.

**VI. HAZARDS AND HAZARDOUS MATERIALS--** Would the project:

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ☐ ☐ ☐ ☒
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☐ ☒
- h) Expose people or structures to a significant risk of loss injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? ☐ ☐ ☐ ☒

## VII. HAZARDS AND HAZARDOUS MATERIALS

### Questions a. through h.

The proposed project would utilize minor amounts of water treatment chemicals. Therefore, no hazards or hazardous conditions will be created by the proposed project. The proposed method of onsite chlorine generation minimizes health and safety risks

**Conclusion:** As no impact from hazards and hazardous materials is foreseen as a result of the project no mitigation measures are required.

## VIII. HYDROLOGY AND WATER QUALITY-- Would the project:

- a) Violate any water quality standards or waste discharge requirements? ☐ ☐ ☒ ☐
- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted? ☐ ☐ ☒ ☐
- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? ☐ ☐ ☐ ☒

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on-or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Otherwise substantially degrade water quality?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of failure of a levee or dam?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

## VIII. HYDROLOGY AND WATER QUALITY

### Question a.

The proposed project includes substantial testing to assure that mixing of groundwater aquifers is avoided, and to assure the water pumped from the Diamond Creek Well can be treated to achieve drinking water standards. There are no known sources of groundwater contamination in the immediate vicinity of the proposed well. In addition, water discharged from the pumping tests will be tested and then discharged into the existing storm drain system on Northpark Drive, in compliance with standards established by the Regional Water Quality Control Board. Any water pumped from the well that does not meet these standards will be treated onsite or will be contained and transported offsite for appropriate treatment and disposal.

## Question b.

The amount of water to be extracted will be small when compared to the annual recharge for the groundwater basin, and the additional pumping will occur infrequently. The Diamond Creek Well will utilize a deep confined aquifer, the Merhten Formation rather than the shallow, unconfined aquifer that is typically used by private wells. The shallow aquifer is referred to as the Fair Oaks Formation. The Merhten Formation is preferred for high production municipal and industrial wells since this has the least potential to affect private domestic water wells. Most private domestic wells in Placer County are completed in the upper unconfined aquifer, the Fair Oaks Formation, because of cost and because the water quality is good.

The ASR pump testing component of the project would only result in short term ground water extraction and is being implemented to further the objectives of the Groundwater Management Element of the Water Forum Proposal (WFP). If successful, the ASR testing will provide some of the information necessary to later implement the conjunctive use objectives of the WFP, which will eventually maintain acceptable groundwater levels and avoid undesirable effects. In addition, the conjunctive use program elements of the WFP were evaluated in the October 15, 1999, *Final Water Forum Proposal Environmental Impact Report*, and determined to have less-than-significant impacts on the environment.

The potential for the Diamond Creek Well to affect existing water wells was evaluated in some detail through modeling using "The North American River and Sacramento County Combined Integrated Groundwater and Surface Water Model (IGSM)". This model was originally developed for the American River Water Resources Investigation (ARWRI) conducted by the U. S. Bureau of Reclamation (USBR) and later updated by the American River Basin Cooperating Agencies (ARBCA) for their Regional Water Master Plan effort. The version of IGSM used for this project originates from the ARWRI version of the model used for the "Draft Water Forum Solution Model" developed for the Sacramento Area Water Forum.

The IGSM is a finite element, quasi three-dimensional, multi-layered model that integrates surface water and groundwater on a monthly time step. The IGSM was developed for use as a regional planning tool for large areas influenced by both surface water and groundwater. The model takes into consideration that when pumping occurs from an aquifer, a concentrated localized cone of depression is formed around the well. The shape and depth of the localized cone of depression depends on many factors, including: 1) pumping rates; 2) nearby streams or wells; 3) the amount of water stored in the aquifer; 4) ease of water movement within the aquifer; and 5) whether the aquifer is confined or unconfined.

The modeling for the Diamond Creek well used an extraction at a rate of 1,500 gallons per minute (the assumed production rate) and considered a period of six months (March to August) during a two-year drought period (1976-1977). This was considered to be a reasonable worst-case scenario.

The modeling results showed minor changes in groundwater levels in existing wells in the area. A three-foot reduction in the groundwater level was shown within the nearest existing well, the Fiddymment Ranch well. This well is located on Fiddymment Road in the southwest quarter of Section 18 (approximately one mile southwest of the Diamond Creek well site). Other existing wells are two miles or greater away from the Diamond Creek well. The modeling shows a one-foot reduction in groundwater levels two miles from the proposed well. Existing wells' yield or energy consumption would not be altered with a three or one-foot reduction in groundwater levels and therefore this amount of reduction is generally not considered significant according to engineering Best Management Practice (BMP) in the basin. Therefore this is considered to be a less than significant impact.

**Questions c. and d.**

The proposed project will be constructed within a residential development, Diamond Creek Subdivision, which includes engineered stormwater drainage. The pump station building, driveway, and parking area will contribute minor amounts of runoff to the stormwater drainage system on Northpark Drive. A limited amount of runoff expected from the site, and existing stormwater facilities have adequate capacity to accommodate the runoff.

**Question e.**

The stormwater drainage system on Northpark Drive was designed to accommodate runoff from the site of the proposed Diamond Creek Well and Pump Station.

**Question f.**

Any changes in the groundwater level will be minor and will not cause degradation of groundwater quality or increase in the rate of movement of groundwater contaminants.

The project will be designed to produce backup water that will be treated on site as necessary to meet the applicable drinking water standards. There will be groundwater discharged into the stormwater system on Northpark Drive during the testing phase of the Diamond Creek Well and Pump Station. This discharge will comply with the Regional Water Quality Control Board standards for release into the stormwater drain.

**Question g.**

The site of the proposed project is not within a flood hazard area, and does not include the construction of housing.

**Question h.**

The proposed project does not include actions or facilities that could cause flooding, or could affect levees or dams.

**Question i.**

The level nature and location of the site of the proposed project precludes the potential for inundation by seiche, tsunami, or mudflow.

**Question j.**

The site's location is inland and precludes the occurrence of these impacts.

**Conclusion:** As no impact is foreseen as a result of the project no mitigation measures are required.

**IX. LAND USE AND PLANNING – Would the project:**

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**IX. LAND USE AND PLANNING**

**Question a. and c.**

The proposed project will utilize a small piece of vacant property within the Diamond Creek Subdivision. There are no linear elements that would divide the community. The property is surrounded by newly constructed homes, by homes that are currently under construction, by a newly constructed school, and by vacant property that will be developed as a park. There are no applicable HCPs or NCCPs.

**Question b.**

The proposed project will be located within the Diamond Creek Subdivision on property designated P/QP Public/Quasi Public in the North Roseville Specific Plan and P/QP, School/Park/Fire Station in the City of Roseville Zoning Ordinance. These designations allow and provide for the well and pumping station use and the North Roseville Specific Plan includes the well and pump station, along with the elementary school immediately to the north, and the park that will be developed on currently vacant land adjacent to the project site. See section XI. Noise, for a discussion of project consistency with the City's Noise ordinance.

**Conclusion:** As no impact is foreseen as a result of the project no mitigation measures are required.

**X. MINERAL RESOURCES – Would the project:**

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**X. MINERAL RESOURCES**

**Question a.**

The proposed project site does not contain known mineral resources.

**Question b.**

The proposed project site is not located in the vicinity of any locally important mineral recovery site.

**Conclusion:** As no impact to mineral resources is foreseen as a result of the project no mitigation measures are required.

**XI. NOISE – Would the project result in:**

- |   |                          |                                     |                                     |                          |
|---|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Exposure of persons to or generation of excessive Groundborne vibration or groundborne noise levels?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ☐ ☐ ☐ ☒
- f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? ☐ ☐ ☐ ☒

## **XI. NOISE**

### **Questions a. and c.**

The adjacent residential lots directly west of the project site are approximately 50 feet away from the well and the pumping station. Drilling operations will take place over a 4-6 week period. During this time there will be approximately 14 days of intermittent continuous 24-hour drilling operations. This is necessary in order to avoid caving of the borehole and possible loss of the well prior to completion. Noise levels at 50 feet away from the drilling location are estimated at 55-65 dBA.

The nighttime construction noise and effects on adjacent occupied homes will be limited through the use of acoustical screening as described in the project description in section 3.2. However, although all feasible noise mitigations have been included in the project, anticipated noise levels may exceed the levels stipulated in Noise Element of the City's General Plan and Chapter 9.24 of Title 9 of the City of Roseville Municipal Code (70 dB Maximum Level for daytime and 65 dB for nighttime). To allow for exceedence of City noise standards, mitigation measure XI-1 is proposed which requires the project obtain an exception to the noise ordinance for construction noise. With implementation of mitigation measure XI-1, the resulting temporary noise impacts would be considered less than significant.

With the exception of nighttime drilling operations, daytime construction activities will produce similar noise levels to that associated with the home construction that is continuing in the area, and the timing of construction activities during the day will comply with the City's Noise Ordinance. The long term operation of the well and pump station will comply with the City of Roseville Noise Ordinance because the pump station building will be soundproofed to meet the City's exterior noise level standards, as noted in the project description in section 3.2.

### **Mitigation Measure XI-1: Obtain a Noise Ordinance Exception for Construction Noise**

#### **Question b.**

Post drilling, the proposed construction activities, testing, and operation do not generate substantial groundborne vibration or noise.



**Question d. and e.**

The project site is not located within an airport land use plan, and is not within two miles from an airport or active private airstrip.

**Conclusion:** Following mitigation, project impacts to noise will be less than significant.

**XII. POPULATION AND HOUSING -- Would the project:**

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**XII. POPULATION AND HOUSING**

**Question a. and c.**

The Diamond Creek Well and Pump Station will be used as backup to the existing City of Roseville supplies from Folsom Reservoir during critical dry years. The well will not be used to provide a significant amount of additional consumptive water beyond the supplies already available from Folsom Reservoir. Therefore, the project will not substantially change existing water supplies, demands, or uses, and therefore will not affect population growth either directly or indirectly. The ASR testing component of the proposed project will gather information that will be necessary to future planning for a future Citywide ASR program. The potential effects on population growth of the future ASR program will be evaluated separately by the City of Roseville.

**Question b.**

The proposed project will occupy a small vacant property within a residential subdivision. Therefore, the project will not displace existing housing.

**Conclusion:** As no impacts to population and housing are foreseen from the project, no mitigation measures are required.

### XIII. PUBLIC SERVICES

- a) Would the project 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 public services:
- |                             |                          |                          |                          |                                     |
|-----------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
|                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Fire protection?         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii) Police protection?      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii) Schools?               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv) Parks?                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| v) Other Public Facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

### XIII. PUBLIC SERVICES

#### Questions a. through d.

The operation of the Diamond Creek Well and Pump Station will not be labor intensive, therefore, will not substantially increase the City staff that operates and maintains the City's water supply and treatment system. Therefore, no increases are expected in the demand for the kinds of public services that would support new residents, such as schools, utilities, parks, fire, or police protection. Furthermore, the project facilities will be secure within the proposed building, and will not substantially increase the demand for police and fire protection.

**Conclusion:** As no impacts to public services are foreseen from the project, no mitigation measures are required.

### XIV. RECREATION

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
|  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

☐ ☐ ☐ ☒

#### XIV. RECREATION

##### Question a.

There will not be water supply benefits that will remove obstacles to population growth or cause an increase the use of existing recreational facilities.

##### Question b.

The proposed project does not include recreational facilities or require construction or expansion of recreational facilities.

**Conclusion:** As no impacts to recreation are foreseen from the project, no mitigation measures are required.

#### XV. TRANSPORTATION/TRAFFIC -- Would the project:

- a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

☐ ☐ ☐ ☒

- b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

☐ ☐ ☐ ☒

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

☐ ☐ ☐ ☒

- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

☐ ☐ ☐ ☒

- e) Result in inadequate emergency access?

☐ ☐ ☐ ☒

- f) Result in inadequate parking capacity?

☐ ☐ ☐ ☒

- g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

☐ ☐ ☐ ☒

## **XV. TRANSPORTATION/TRAFFIC**

### **Questions a., b. and e.**

The construction of the proposed project involves a limited number of vehicle trips and equipment use within an area that is currently being developed for housing. The number of construction related trips for the 26-week duration is estimated at on average 1 round trip every day. Vehicles would use Route 65, Blue Oaks Blvd., and Woodcreek Oaks Boulevard for access. The operation and maintenance of the well and pump station facilities will not be labor intensive, and require infrequent visits by City staff and the delivery of water treatment chemicals and other materials. Therefore, the project will not cause increases in traffic, or contribute to congestion, reductions in the level of service standards or increased safety risks.

### **Question c.**

The proposed project will be only approximately 16 feet high and will not be located near an airport or airstrip.

### **Question d.**

The well and pump station facilities will be housed in a small building along Northpark Drive. There will be limited visits to the facility by City staff, and infrequent use of maintenance equipment.

### **Question f.**

The facilities will include sufficient parking for maintenance staff, and there will be infrequent need for City staff to visit the facilities.

**Conclusion:** As no impacts to transportation/traffic are foreseen from the project, no mitigation measures are required.

## **XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:**

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

☐ ☐ ☐ ☒

- b) 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?

☐ ☐ ☐ ☒

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| c) 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?                                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in a determination by the wastewater treatment Provider, which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

## **XVI. UTILITIES AND SERVICE SYSTEMS**

### **Question a.**

The project will be designed to produce backup water that will be treated on site as necessary to meet the applicable drinking water standards. There will be groundwater discharged into the stormwater system on Northpark Drive during the testing phase of the Diamond Creek Well and Pump Station. This discharge will comply with the Regional Water Quality Control Board standards for release into the stormwater drain. The water discharged from the well will be tested and any water that does not meet these standards will be contained and treated before discharge, or will be contained and transported offsite for treatment and disposal.

### **Question b.**

The proposed project will provide a backup supply of water during critical dry years. The City of Roseville's existing water and wastewater treatment facilities will not need to be expanded because this will not increase the City's water supply.

### **Question c.**

As described in section 3.2, the volume of groundwater discharged into the Northpark Drive stormwater facilities will be regulated to assure that it is within the existing capacity of existing facilities

**Question d.**

New or expanded entitlements will not be required because of the nature of the proposed project. The facilities will provide backup water supply for the City of Roseville and will not consume water.

**Question e.**

The proposed project facilities will not increase the demand for wastewater treatment because: 1) the volume of water to be pumped during testing will be small, and will likely not require treatment prior to being discharged into the storm water drain on Northpark Drive; and 2) the project will provide backup water supply during critical dry years, and will not increase water supply or the demand for wastewater treatment.

**Question f. and g.**

The proposed project will not generate substantial solid waste.

**Conclusion:** As no impacts to utilities and service systems are foreseen from the project, no mitigation measures are required.

**XVII. MANDATORY FINDINGS OF SIGNIFICANCE**

- |  |                          |                                     |                                     |                          |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

beings, either directly or indirectly?

**Question a.**

As discussed in section V. Cultural Resources, the Proposed Project may affect unknown cultural resources within the project area. Mitigation has been proposed in order to reduce these potential impacts to a less than significant level. No potentially significant impacts were identified for biological resources.

**Question b.**

When project impacts are considered along with, or in combination with other impacts, the project-related impacts are less than significant. The Proposed Project will not add substantially to any cumulative effects. Mitigation measures have been incorporated into the project to reduce project-related impacts to a less than significant level.

**Question c.**

The project does not have environmental effects that could cause substantial adverse effects on human beings, either directly or indirectly. This Initial Study incorporates mitigation measures that will reduce impacts to a less-than-significant level and ensure that potential impacts to human beings are minimized to the extent feasible.

## *5.0 Environmental Factors Potentially Affected and Environmental Determination*

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following page.

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Aesthetics  | <input type="checkbox"/> Agriculture Resources         | <input checked="" type="checkbox"/> Air Quality   |
| <input type="checkbox"/> Biological Resources  | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Hazards & Hazardous Materials   | <input type="checkbox"/> Hydrology/Water Quality       | <input type="checkbox"/> Land Use/Planning        |
| <input type="checkbox"/> Mineral Resources   | <input checked="" type="checkbox"/> Noise              | <input type="checkbox"/> Population/Housing       |
| <input type="checkbox"/> Public Services   | <input type="checkbox"/> Recreation                    | <input type="checkbox"/> Transportation/Traffic   |
| <input type="checkbox"/> Utilities/Service Systems <input type="checkbox"/> Mandatory Findings of Significance |  |   |

No I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

Yes✓ I find that although the proposed project **COULD** have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because the mitigation measures described in this initial study have been added to the project. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

No I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

I find that the proposed project **MAY** have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or is "potentially significant unless mitigated." An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

No I find that although the proposed project could have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because all potentially significant effects: a) Have been analyzed adequately in an earlier EIR pursuant to applicable standards; and b) Have been avoided or mitigated pursuant to an earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Mark J. Morse

Date

1-31-02

Printed  
Name

Mark J. Morse

Title

Environmental Coordinator



## 6.0 *Mitigation Measures Included in Project to Avoid Impacts*

### **Mitigation Measure III-3:** Perform Dust Control

The following dust control measures should be incorporated into construction contract documents:

- Regularly water construction area during soil disturbance to prevent dust.
- Trucks hauling dirt, debris, and other dust-generating material should be covered.
- Stockpiles of soil should be covered or watered as necessary to prevent dust from wind.

### **Mitigation Measure V-1:** Halt work if cultural resources are discovered

If concentrations of prehistoric or historic period cultural materials are encountered, all work in the vicinity of the find(s) should halt until a qualified archeologist is retained, evaluates the material, and makes recommendations for further action. Prehistoric materials might include flaked stone tools (projectile points, knives, scraping tools). Historic materials might include stone footings or walls, or debris of glass, metal, and/or ceramic refuse.

### **Mitigation Measure V-2:** Halt work if human remains are encountered

If human remains are encountered, all work should stop in the vicinity of the bone and the County Coroner should be notified immediately. At the same time, a qualified archeologist should be contacted to evaluate the scientific significance of the finds. The procedures outlined in Appendix K of CEQA should be followed, if human burials are judged to be of Native American origin. Human burials are generally associated with occupation sites, which are characterized by locally darkened sediments or "midden".

### **Mitigation Measure VI-1:** Prepare erosion and sedimentation control plan

The following measures should be implemented to protect and restore graded and newly seeded areas during construction and to guard against silt laden runoff leaving the site or entering the storm drain system:

- Clearly mark grading areas and no equipment or vehicles shall disturb slopes or drainages outside the grading area.
- Implement temporary erosion control measure including temporary revegetation with annual grasses and straw bales around storm drain inlets.

- After completion of backfilling, or for graded areas that will be exposed for extended periods of time (exceeding 45 days during wet weather), temporary or permanent revegetation or cover shall be initiated.
- Provide adequate protection to all newly seeded areas including the installation of approved temporary fences to prevent trespassing and damage, as well as erosion control until the end of the correction of defects period.
- The proposed erosion and sediment control features shall be included in construction plans, and incorporated into construction contract documents.

**Mitigation Measure XI-1:** Obtain a Noise Ordinance Exception for Construction Noise

Prior to construction, the project shall obtain an exception for construction noise in accordance with city of Roseville Municipal Code Section 9.24.160.

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