

Well 17 DWSAP

# Drinking Water Source Assessment

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Water System

**Sacramento Suburban Water District**

Sacramento County

Water Source

**WELL 17 - OAKDALE**

Assessment Date

**September, 2002**

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California Department of Health Services  
Drinking Water Field Operations Branch  
Northridge Water District

<b>District No.</b> U9
<b>System No.</b> 3410024
<b>Source No.</b> 014
<b>PS Code</b> 3410024-014

## Assessment Summary

<b>District Name</b>	<u>Sacramento Suburban Water</u>	<b>District No.</b>	<u>U9</u>	<b>County</b>	<u>Sacramento</u>
<b>System Name</b>	<u>Sacramento Suburban Water District</u>			<b>System No.</b>	<u>3410024</u>
<b>Source Name</b>	<u>WELL 17 - OAKDALE</u>	<b>Source No.</b>	<u>014</u>	<b>PS Code</b>	<u>3410024-014</u>
<b>Completed by</b>	<u>Warren Jung</u>			<b>Date</b>	<u>September, 2002</u>

According to DHS records, this Source is Groundwater. This Assessment was done using the Default Groundwater System Method.

### Description of System and Source

The Sacramento Suburban Water District (now called the Northridge Service Area of the Sacramento Suburban Water District) water system is located in Sacramento County and serves potable water to the following communities; Antelope, Carmichael, portions of the city of Citrus Heights, Fair Oaks, Foothills Farms area, North Highlands, the former McClellan Air Force Base (McClellan Park) and the former military housing area known as Capehart Housing off of Watt Avenue. There are approximately 23,800 service connections serving a population of 83,500 in the Northridge Service Area.

There are two drinking water sources for the Sacramento Suburban Water District water system, groundwater and surface water. Groundwater is obtained from twenty-nine (29) currently active wells pumping from localized aquifers which are part of the Central Valley Aquifer System of California. These aquifers lie within the Fair Oaks Geologic Formation and the underlying Mehrten Geologic Formation. Surface water is obtained from Folsom Lake and is transported to the District via an underground transmission pipeline. The watershed/recharge area for these combined sources includes approximately 1,190,375 acres of the western slopes of the Central Sierra Nevada. The general land use can be characterized as primarily suburban residential with attendant commercial activity and light industrial concentrated in McClellan Business Park (former McClellan Air Force Base converted into an industrial park - 2000).

### Assessment Procedures

The assessment of the source WELL 17 - OAKDALE was conducted by the former Sacramento Suburban Water District with assistance from Montgomery Watson Harza. The following sources of information were used in the assessment:

District Water System files  
 Department of Health Services (DHS) files  
 Previous District Wells Studies  
 Past experiences on Well Information

### Contents of this Assessment

Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Assessment Summary
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Vulnerability Summary
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Source Location Form
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Delineation of Water Protection Zones
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Physical Barrier Effectiveness Checklist
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Source Data Sheet
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Inventory of Possible Contaminating Activities
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Vulnerability Ranking
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Assessment Map

## Vulnerability Summary

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Sacramento Suburban Water District System No. 3410024  
 Source Name WELL 17 - OAKDALE Source No. 014 PS Code 3410024-014

Completed by Warren Jung Date September, 2002

### THE FOLLOWING INFORMATION MUST BE INCLUDED IN THE SYSTEM CONSUMER CONFIDENCE REPORT

A source water assessment was conducted for the WELL 17 - OAKDALE  
 of the Sacramento Suburban Water District water system in September, 2002.

The source is considered most vulnerable to the following activities not associated with any detected contaminants:

Underground storage tanks - Confirmed leaking tanks

### Discussion of Vulnerability

There have been no contaminants detected in the water supply. However, the source is still considered vulnerable to activities located near the drinking water source, such as:

leaking underground storage tanks  
 automobile body/repair shops  
 chemical/petroleum pipeline  
 illegal activities/unauthorized dumping  
 sewer collection system  
 gas stations  
 dry cleaners  
 known contaminant plumes  
 metal plating/fabricating/finishing shops

A copy of the complete assessment may be viewed at:

Sacramento Suburban Water District  
 3701 Marconi Avenue  
 Suite 100  
 Sacramento, CA 95821

You may request a summary of the assessment be sent to you by contacting:

Warren Jung  
 District Engineer  
 916-972-7171  
 916-972-7639 (fax)

## Delineation of Water Protection Zones

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Sacramento Suburban Water District System No. 3410024  
 Source Name WELL 17 - OAKDALE Source No. 014 PS Code 3410024-014

Completed by WARREN JUNG Date February, 2002

### Method Used to Delineate Protection Zones

1. Calculated Fixed Radius

**X 2. Modified Calculated Fixed Radius** (Attach documentation for direction of ground water flow.)

3. More Detailed Methods

4. Arbitrary Fixed Radius (For use only by or permission of DHS)

Maximum Pumping Rate of Well (Q)	<u>1,200</u>	gallons/minute
	<u>1,936</u>	acre feet/year
	<u>84,320,400</u>	cubic feet/year
Effective Porosity	<u>0.20</u>	<input checked="" type="checkbox"/> Default Value
Screened Interval of Well	<u>300</u>	feet <input type="checkbox"/> Default Value

Direction of Ground Water Flow	<u>360.00</u>	degrees
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Protection Zone	Calculated Value	Minimum Value	Base Radius	Direction	Modified Distance
Zone A - 2 Year TOT*	946 Feet	600 Feet	946 Feet	upgradient	<b>1,419</b> Feet
				downgradient	<b>473</b> Feet
Zone B5 - 5 Year TOT*	1,496 Feet	1,500 Feet	1,496 Feet	upgradient	<b>2,243</b> Feet
				downgradient	<b>748</b> Feet
Zone B10 - 10 Year TOT*	2,115 Feet	0 Feet	2,115 Feet	upgradient	<b>3,173</b> Feet
				downgradient	<b>1,058</b> Feet

\*TOT = Time of Travel

**Physical Barrier Effectiveness (PBE)**

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Sacramento Suburban Water District System No. 3410024  
 Source Name WELL 17 - OAKDALE Source No. 014 PS Code 3410024-014

Completed by WARREN JUNG Date February, 2002

Parameter	Possible Points	This Source	Score
<b>Type of Aquifer Confinement</b>			
1. Unconfined, Semi-confined, Fractured Rock, Unknown Aquifer	0	X	0
2. Confined	50		
<b>Aquifer Material (Unconfined Aquifers)</b>			
<b>Type of material within aquifer</b>			
1. Porous Media (Interbedded sands, silts, clays, gravels) with continuous clay layer minimum 25' thick above water table within Zone A	20		
2. Porous Media (Interbedded sands, silts, clays, gravels)	10	X	10
3. Fractured rock ( Low Physical Barrier Effectiveness - no further questions required)	0		
<b>Pathways of Contamination (All Aquifers)</b>			
<b>Presence of Abandoned or Improperly Destroyed Wells</b>			
1. Present within Zone A (2 year TOT distance)	Yes	0	
	No	5	X
	Unknown	0	
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0	X
	No	3	
	Unknown	0	
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0	X
	No	2	
	Unknown	0	
<b>Static Water Conditions (Unconfined Aquifers)</b>			
Depth to Static Water (DTW) <u>135</u> feet	0 to 20 feet	0	
	20 to 50 feet	2	
	50 to 100 feet	6	
	Greater than 100 feet	10	X
	Unknown	0	
<b>Well Operation (Unconfined Aquifers)</b>			
Depth to Uppermost Perforations (DUP) <u>220</u> feet			
Maximum Pumping Rate of Well (Q) <u>1200</u> gallons/minute			
Length of Screened Interval (H) <u>300</u> feet			
[DUP - DTW / Q/H] <u>21.25</u>	Less than 5	0	
	Between 5 and 10	5	
	Greater than 10	10	X
	Unknown	0	

## Physical Barrier Effectiveness (PBE)

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Sacramento Suburban Water District System No. 3410024  
 Source Name WELL 17 - OAKDALE Source No. 014 PS Code 3410024-014

Completed by WARREN JUNG Date February, 2002

Parameter		Possible Points	This Source	Score
<b>Well Construction (All Aquifers)</b>				
Sanitary Seal (Annular Seal) Depth <u>50</u> feet	None or less than 20 feet	0		
	Between 20 and 50 feet	6		
	50 feet or greater	10	<b>X</b>	<b>10</b>
	Unknown	0		
Surface Seal (concrete cap)	Not present or improperly constructed	0		
	Watertight, slopes away from well at least 2' laterally in all directions	4	<b>X</b>	<b>4</b>
	Unknown	0		
Flooding potential at well site	Subject to localized flooding (i.e. in low area or unsealed pit or vault) or within 100 year flood plain	0		
	Not subject to flooding	1	<b>X</b>	<b>1</b>
	Unknown	0		
Security at well site	Not secure	0		
	Secure	5	<b>X</b>	<b>5</b>
	Unknown	0		

Score	Effectiveness
0 to 35	Low
36 to 69	Moderate
70 to 100	High

Maximum Score = 70

Score	<u>55</u>
Effectiveness	<u>Moderate</u>

## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water    **District No.** U9    **County** Sacramento  
**System Name** Sacramento Suburban Water District    **System No.** 3410024  
**Source Name** WELL 17 - OAKDALE    **Source No.** 014    **PS Code** 3410024-014

**Completed by** Warren Jung    **Date** July, 2002

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Commercial/Industrial Activities</b>					
Automobile - Body shops (H)	Y	Y	N		
Automobile - Car washes (M)	N	N	N		
Automobile - Gas stations (VH)	N	Y	N		
Automobile - Repair shops (H)	Y	Y	N		
Boat services/repair/refinishing (H)	N	N	N		
Chemical/petroleum pipelines (H)	Y	Y	Y		
Chemical/petroleum processing/storage (VH)	N	N	N		
Dry cleaners (VH)	N	Y	Y		
Electrical/electronic manufacturing (H)	N	N	N		
Fleet/truck/bus terminals (H)	N	N	N		
Furniture repair/manufacturing (H)	N	N	N		
Home manufacturing (H)	N	N	N		
Junk/scrap/salvage yards (H)	N	N	N		
Machine shops (H)	N	N	N		
Metal plating/ finishing/fabricating (VH)	N	Y	N		
Photo processing/printing (H)	N	N	N		
Plastics/synthetics producers (VH)	N	N	N		
Research laboratories (H)	N	N	N		
Wood preserving/treating (H)	N	N	N		
Wood/pulp/paper processing and mills (H)	N	N	N		
Lumber processing and manufacturing (H)	N	N	N		
Sewer collection systems (H in Zone A, otherwise L)	Y	Y	Y		
Parking lots/malls [>50 spaces] (M)	Y	Y	Y		
Cement/concrete plants (M)	N	N	N		
Food processing (M)	N	N	N		
Funeral services/graveyards (M)	N	N	N		
Hardware/lumber/parts stores (M)	N	N	N		
Appliance/Electronic Repair (L)	N	N	N		
Office buildings/complexes (L)	N	N	N		
Rental Yards (L)	N	N	N		
RV/mini storage (L)	N	Y	N		

**Y = Yes      N = No      U = Unknown**

**\* = A contaminant potentially associated with this activity has been detected in the water supply.**

## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water      **District No.** U9      **County** Sacramento  
**System Name** Sacramento Suburban Water District      **System No.** 3410024  
**Source Name** WELL 17 - OAKDALE      **Source No.** 014      **PS Code** 3410024-014

**Completed by** Warren Jung      **Date** July, 2002

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Residential/Municipal Activities</b>					
Airports - Maintenance/fueling areas (VH)	N	N	N		
Landfills/dumps (VH)	N	N	N		
Railroad yards/maintenance/fueling areas (H)	N	N	N		
Septic systems - high density [>1/acre] (VH in Zone A, otherwise M)	N	N	N		
Sewer collection systems (H in Zone A, otherwise L)	Y	Y	Y		
Utility stations - maintenance areas (H)	N	N	N		
Wastewater treatment plants (VH in Zone A, otherwise H)	N	N	N		
Drinking water treatment plants (M)	N	N	N		
Golf courses (M)	N	N	N		
Housing - high density [>1 house/0.5 acres] (M)	Y	Y	Y		
Motor pools (M)	N	N	N		
Parks (M)	N	N	N		
Waste transfer/recycling stations (M)	N	N	N		
Apartments and condominiums (L)	Y	N	N		
Campgrounds/Recreational areas (L)	Y	N	Y		
Fire stations (L)	N	N	N		
RV Parks (L)	N	N	N		
Schools (L)	Y	N	N		
Hotels, Motels (L)	N	N	Y		
<b>Other Activities</b>					
NPDES/WDR permitted discharges (H)	N	N	N		
Underground Injection of Commercial/Industrial Discharges (VH)	N	N	N		
Historic gas stations (VH)	N	N	N		
Historic waste dumps/landfills (VH)	N	N	N		
Illegal activities/unauthorized dumping (H)	Y	Y	Y		
Injection wells/dry wells/ sumps (VH)	N	N	N		
Known Contaminant Plumes (VH)	N	Y	Y		
Military installations (VH)	N	Y	Y		
Mining operations - Historic (VH)	N	N	N		

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## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water      **District No.** U9      **County** Sacramento  
**System Name** Sacramento Suburban Water District      **System No.** 3410024  
**Source Name** WELL 17 - OAKDALE      **Source No.** 014      **PS Code** 3410024-014

**Completed by** Warren Jung      **Date** July, 2002

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Other Activities</b>					
Mining operations - Active (VH)	N	N	N		
Mining - Sand/Gravel (H)	N	N	N		
Wells - Oil, Gas, Geothermal (H)	N	N	N		
Salt Water Intrusion (H)	N	N	N		
Recreational area - surface water source (H)	N	N	N		
Underground storage tanks - Confirmed leaking tanks (VH)	Y	Y	Y		
Underground storage tanks - Decommissioned - inactive tanks (L)	N	N	N		
Underground storage tanks - Non-regulated tanks [tanks smaller than regulatory limit] (H)	N	N	N		
Underground storage tanks - Not yet upgraded or registered tanks (H)	N	N	N		
Underground storage tanks - Upgraded and/or registered - active tanks (L)	N	N	N		
Above ground storage tanks (M)	N	N	N		
Wells - Water supply (M)	Y	Y	Y		
Construction/demolition staging areas (M)	N	N	N		
Contractor or government agency equipment storage yards (M)	N	N	N		
Dredging (M)	N	N	N		
Transportation corridors - Freeways/state highways (M)	N	N	N		
Transportation corridors - Railroads (M)	N	N	Y		
Transportation corridors - Historic railroad right-of-ways (M)	N	N	N		
Transportation corridors - Road Right-of-ways [herbicide use areas] (M)	Y	Y	Y		
Transportation corridors - Roads/Streets (L)	Y	Y	Y		
Hospitals (M)	N	N	N		
Storm Drain Discharge Points (M)	N	N	Y		
Storm Water Detention Facilities (M)	N	N	N		
Artificial Recharge Projects - Injection wells [potable water] (L)	N	N	N		
Artificial Recharge Projects - Injection wells [non-potable water] (M)	N	N	N		

**Y = Yes      N = No      U = Unknown**  
**\* = A contaminant potentially associated with this activity has been detected in the water supply.**

## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water    **District No.** U9    **County** Sacramento  
**System Name** Sacramento Suburban Water District    **System No.** 3410024  
**Source Name** WELL 17 - OAKDALE    **Source No.** 014    **PS Code** 3410024-014

**Completed by** Warren Jung    **Date** July, 2002

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Other Activities</b>					
Artificial Recharge Projects - Spreading Basins [potable water] (L)	N	N	N		
Artificial Recharge Projects - Spreading Basins [non-potable water] (M)	N	N	N		
Medical/dental offices/clinics (L)	N	<b>Y</b>	N		
Veterinary offices/clinics (L)	N	<b>Y</b>	N		
Surface water - streams/lakes/rivers (L)	N	N	<b>Y</b>		
Wells - monitoring, test holes (L)	N	N	N		

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## Vulnerability Ranking

**District Name** Sacramento Suburban Water      **District No.** U9      **County** Sacramento

**System Name** Sacramento Suburban Water District      **System No.** 3410024

**Source Name** WELL 17 - OAKDALE      **Source No.** 014      **PS Code** 3410024-014

**Completed by** Warren Jung      **Date** September, 2002

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Underground storage tanks - Confirmed leaking tanks (VH)		7	5	3	15
A	Automobile - Body shops (H)		5	5	3	13
A	Automobile - Repair shops (H)		5	5	3	13
A	Chemical/petroleum pipelines (H)		5	5	3	13
A	Illegal activities/unauthorized dumping (H)		5	5	3	13
A	Sewer collection systems (H in Zone A, otherwise L)		5	5	3	13
A	Sewer collection systems (H in Zone A, otherwise L)		5	5	3	13
B5	Automobile - Gas stations (VH)		7	3	3	13
B5	Dry cleaners (VH)		7	3	3	13
B5	Known Contaminant Plumes (VH)		7	3	3	13
B5	Metal plating/ finishing/fabricating (VH)		7	3	3	13
B5	Military installations (VH)		7	3	3	13
B5	Underground storage tanks - Confirmed leaking tanks (VH)		7	3	3	13
A	Housing - high density [>1 house/0.5 acres] (M)		3	5	3	11
A	Parking lots/malls [>50 spaces] (M)		3	5	3	11
A	Transportation corridors - Road Right-of-ways [herbicide use areas] (M)		3	5	3	11
A	Wells - Water supply (M)		3	5	3	11
B5	Automobile - Body shops (H)		5	3	3	11
B5	Automobile - Repair shops (H)		5	3	3	11
B5	Chemical/petroleum pipelines (H)		5	3	3	11
B5	Illegal activities/unauthorized dumping (H)		5	3	3	11
B10	Dry cleaners (VH)		7	1	3	11
B10	Known Contaminant Plumes (VH)		7	1	3	11
B10	Military installations (VH)		7	1	3	11
B10	Underground storage tanks - Confirmed leaking tanks (VH)		7	1	3	11
A	Apartments and condominiums (L)		1	5	3	9
A	Campgrounds/Recreational areas (L)		1	5	3	9
A	Schools (L)		1	5	3	9
A	Transportation corridors - Roads/Streets (L)		1	5	3	9

\* = A contaminant potentially associated with this activity has been detected in the water supply.

## Vulnerability Ranking

District Name Sacramento Suburban Water District No. U9 County Sacramento

System Name Sacramento Suburban Water District System No. 3410024

Source Name WELL 17 - OAKDALE Source No. 014 PS Code 3410024-014

Completed by Warren Jung Date September, 2002

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
B5	Housing - high density [>1 house/0.5 acres] (M)		3	3	3	9
B5	Parking lots/malls [>50 spaces] (M)		3	3	3	9
B5	Transportation corridors - Road Right-of-ways [herbicide use areas] (M)		3	3	3	9
B5	Wells - Water supply (M)		3	3	3	9
B10	Chemical/petroleum pipelines (H)		5	1	3	9
B10	Illegal activities/unauthorized dumping (H)		5	1	3	9

\* = A contaminant potentially associated with this activity has been detected in the water supply.

Well 56A DWSAP

# Drinking Water Source Assessment

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Water System

**Arcade WD - North Highlands**

Sacramento County

Water Source

**WELL 56A**

Assessment Date

**March, 2003**

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California Department of Health Services  
Drinking Water Field Operations Branch  
Arcade Water District

<b>District No.</b> U9
<b>System No.</b> 3410025
<b>Source No.</b> 015
<b>PS Code</b> 3410025-015

## Assessment Summary

<b>District Name</b>	<u>Sacramento Suburban Water</u>	<b>District No.</b>	<u>U9</u>	<b>County</b>	<u>Sacramento</u>
<b>System Name</b>	<u>Arcade WD - North Highlands</u>			<b>System No.</b>	<u>3410025</u>
<b>Source Name</b>	<u>WELL 56A</u>	<b>Source No.</b>	<u>015</u>	<b>PS Code</b>	<u>3410025-015</u>
<b>Completed by</b>	<u>Warren Jung</u>			<b>Date</b>	<u>March, 2003</u>

According to DHS records, this Source is Groundwater. This Assessment was done using the Default Groundwater System Method.

### Description of System and Source

The Arcade Water District (now called the Arcade Service Area of the Sacramento Water District) water system is located in Sacramento County and serves potable water to the following communities; Town & Country and North Highlands. There are approximately 22,600 service connections serving a population of 89,000 in the Arcade Service Area.

There are two drinking water sources for the Arcade Water District water system, groundwater and surface water. Groundwater is obtained from sixty-five (65) currently active wells pumping from localized aquifers which are part of the Central Valley Aquifer System of California. These aquifers lie within the Fair Oaks Geologic Formation and the underlying Mehrten Geologic Formation. Surface water is obtained from Folsom Lake and is transported to the District via an underground transmission pipeline. The watershed/recharge area for these combined sources includes approximately 1,190,375 acres of the western slopes of the Central Sierra Nevada. The general land use can be characterized as primarily suburban residential with attendant commercial activity.

### Assessment Procedures

The assessment of the source WELL 16 - INACTIVE was conducted by the former Arcade Water District with assistance from Montgomery Watson Harza. The following sources were used in the assessment:

District Water System Files  
 Department of Health Services (DHS) Files  
 Previous District Well Studies  
 Past Experience on Well Information

### Contents of this Assessment

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Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Source Location Form
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Delineation of Water Protection Zones
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Physical Barrier Effectiveness Checklist
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Source Data Sheet
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Inventory of Possible Contaminating Activities
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Vulnerability Ranking
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Assessment Map

### Comments

dry cleaners  
 underground storage tanks  
 automobile gas stations  
 known contaminant plumes  
 chemical/petroleum processing/storage  
 military installation

## Vulnerability Summary

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Arcade WD - North Highlands System No. 3410025  
 Source Name WELL 56A Source No. 015 PS Code 3410025-015

Completed by Warren Jung Date March, 2003

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### THE FOLLOWING INFORMATION MUST BE INCLUDED IN THE SYSTEM CONSUMER CONFIDENCE REPORT

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A source water assessment was conducted for the WELL 56A  
 of the Arcade WD - North Highlands water system in March, 2003.

The source is considered most vulnerable to the following activities not associated with any detected contaminants:

Underground storage tanks - Confirmed leaking tanks

### Discussion of Vulnerability

There have been no contaminants detected in the water supply. However, the source is still considered vulnerable to activities located near the drinking water source, such as:

illegal activities/unauthorized dumping  
 dry cleaners  
 underground storage tanks - confirmed leaking tanks  
 automobile gas stations  
 sewer collection system

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A copy of the complete assessment may be viewed at:

Sacramento Suburban Water District  
 3701 Marconi Avenue  
 Suite 100  
 Sacramento, CA 95821

You may request a summary of the assessment be sent to you by contacting:

Warren Jung  
 District Engineer  
 916-972-7171  
 916-972-7639 (fax)

## Delineation of Water Protection Zones

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Arcade WD - North Highlands System No. 3410025  
 Source Name WELL 56A Source No. 015 PS Code 3410025-015

Completed by Warren Jung Date September, 2002

### Method Used to Delineate Protection Zones

#### **X 1. Calculated Fixed Radius**

2. Modified Calculated Fixed Radius (Attach documentation for direction of ground water flow.)
3. More Detailed Methods
4. Arbitrary Fixed Radius (For use only by or permission of DHS)

Maximum Pumping Rate of Well (Q)	<u>2,500</u>	gallons/minute
	<u>4,033</u>	acre feet/year
	<u>175,667,500</u>	cubic feet/year
Effective Porosity	<u>0.20</u>	<input checked="" type="checkbox"/> Default Value
Screened Interval of Well	<u>255</u>	feet <input type="checkbox"/> Default Value

Protection Zone	Calculated Value	Minimum Value	Radius of Protection Zone
Zone A - 2 Year TOT*	1,481 Feet	600 Feet	<b>1,481</b> Feet
Zone B5 - 5 Year TOT*	2,341 Feet	1,000 Feet	<b>2,341</b> Feet
Zone B10 - 10 Year TOT*	3,311 Feet	1,500 Feet	<b>3,311</b> Feet

\*TOT = Time of Travel

## Physical Barrier Effectiveness (PBE)

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Arcade WD - North Highlands System No. 3410025  
 Source Name WELL 56A Source No. 015 PS Code 3410025-015

Completed by Warren Jung Date March, 2003

Parameter	Possible Points	This Source	Score	
<b>Type of Aquifer Confinement</b>				
1. Unconfined, Semi-confined, Fractured Rock, Unknown Aquifer	0	<b>X</b>	<b>0</b>	
2. Confined	50			
<b>Aquifer Material (Unconfined Aquifers)</b> Type of material within aquifer				
1. Porous Media (Interbedded sands, silts, clays, gravels) with continuous clay layer minimum 25' thick above water table within Zone A	20			
2. Porous Media (Interbedded sands, silts, clays, gravels)	10	<b>X</b>	<b>10</b>	
3. Fractured rock ( Low Physical Barrier Effectiveness - no further questions required)	0			
<b>Pathways of Contamination (All Aquifers)</b> Presence of Abandoned or Improperly Destroyed Wells				
1. Present within Zone A (2 year TOT distance)	Yes	0		
	No	5	<b>X</b>	
	Unknown	0		
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0		
	No	3	<b>X</b>	
	Unknown	0		
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0		
	No	2	<b>X</b>	
	Unknown	0		
<b>Static Water Conditions (Unconfined Aquifers)</b>				
Depth to Static Water (DTW) <u>0</u> feet	0 to 20 feet	0		
	20 to 50 feet	2		
	50 to 100 feet	6		
	Greater than 100 feet	10		
	Unknown	0	<b>X</b>	<b>0</b>
<b>Well Operation (Unconfined Aquifers)</b>				
Depth to Uppermost Perforations (DUP) <u>250</u> feet				
Maximum Pumping Rate of Well (Q) <u>2500</u> gallons/minute				
Length of Screened Interval (H) <u>255</u> feet				
[DUP - DTW / Q/H] <u>25.50</u>	Less than 5	0		
	Between 5 and 10	5		
	Greater than 10	10	<b>X</b>	<b>10</b>
	Unknown	0		

## Physical Barrier Effectiveness (PBE)

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Arcade WD - North Highlands System No. 3410025  
 Source Name WELL 56A Source No. 015 PS Code 3410025-015

Completed by Warren Jung Date March, 2003

Parameter		Possible Points	This Source	Score
<b>Well Construction (All Aquifers)</b>				
Sanitary Seal (Annular Seal) Depth <u>190</u> feet	None or less than 20 feet	0		
	Between 20 and 50 feet	6		
	50 feet or greater	10	<b>X</b>	<b>10</b>
	Unknown	0		
Surface Seal (concrete cap)	Not present or improperly constructed	0		
	Watertight, slopes away from well at least 2' laterally in all directions	4	<b>X</b>	<b>4</b>
	Unknown	0		
Flooding potential at well site	Subject to localized flooding (i.e. in low area or unsealed pit or vault) or within 100 year flood plain	0		
	Not subject to flooding	1	<b>X</b>	<b>1</b>
	Unknown	0		
Security at well site	Not secure	0		
	Secure	5	<b>X</b>	<b>5</b>
	Unknown	0		

Score	Effectiveness
0 to 35	Low
36 to 69	Moderate
70 to 100	High

Maximum Score = 70

Score	<u>50</u>
Effectiveness	<u>Moderate</u>

## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water    **District No.** U9    **County** Sacramento  
**System Name** Arcade WD - North Highlands    **System No.** 3410025  
**Source Name** WELL 56A    **Source No.** 015    **PS Code** 3410025-015

**Completed by** Warren Jung    **Date** March, 2003

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Commercial/Industrial Activities</b>					
Automobile - Body shops (H)	Y	N	N		
Automobile - Car washes (M)	N	N	N		
Automobile - Gas stations (VH)	N	Y	Y		
Automobile - Repair shops (H)	Y	Y	Y		
Boat services/repair/refinishing (H)	N	N	N		
Chemical/petroleum pipelines (H)	N	N	N		
Chemical/petroleum processing/storage (VH)	N	N	N		
Dry cleaners (VH)	N	Y	Y		
Electrical/electronic manufacturing (H)	N	N	N		
Fleet/truck/bus terminals (H)	N	N	N		
Furniture repair/manufacturing (H)	N	N	N		
Home manufacturing (H)	N	N	N		
Junk/scrap/salvage yards (H)	N	N	N		
Machine shops (H)	N	N	N		
Metal plating/ finishing/fabricating (VH)	N	N	N		
Photo processing/printing (H)	N	N	N		
Plastics/synthetics producers (VH)	N	N	N		
Research laboratories (H)	N	N	N		
Wood preserving/treating (H)	N	N	N		
Wood/pulp/paper processing and mills (H)	N	N	N		
Lumber processing and manufacturing (H)	N	N	N		
Sewer collection systems (H in Zone A, otherwise L)	Y	Y	Y		
Parking lots/malls [>50 spaces] (M)	N	N	N		
Cement/concrete plants (M)	N	N	N		
Food processing (M)	N	Y	N		
Funeral services/graveyards (M)	N	N	N		
Hardware/lumber/parts stores (M)	N	N	N		
Appliance/Electronic Repair (L)	N	N	N		
Office buildings/complexes (L)	N	N	N		
Rental Yards (L)	N	N	N		
RV/mini storage (L)	Y	Y	N		

**Y = Yes      N = No      U = Unknown**

**\* = A contaminant potentially associated with this activity has been detected in the water supply.**

## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water      **District No.** U9      **County** Sacramento  
**System Name** Arcade WD - North Highlands      **System No.** 3410025  
**Source Name** WELL 56A      **Source No.** 015      **PS Code** 3410025-015

**Completed by** Warren Jung      **Date** March, 2003

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Residential/Municipal Activities</b>					
Airports - Maintenance/fueling areas (VH)	N	N	N		
Landfills/dumps (VH)	N	N	N		
Railroad yards/maintenance/fueling areas (H)	N	N	N		
Septic systems - high density [>1/acre] (VH in Zone A, otherwise M)	N	N	N		
Sewer collection systems (H in Zone A, otherwise L)	Y	Y	Y		
Utility stations - maintenance areas (H)	N	N	N		
Wastewater treatment plants (VH in Zone A, otherwise H)	N	N	N		
Drinking water treatment plants (M)	N	N	N		
Golf courses (M)	N	N	N		
Housing - high density [>1 house/0.5 acres] (M)	Y	Y	Y		
Motor pools (M)	N	N	N		
Parks (M)	N	Y	N		
Waste transfer/recycling stations (M)	N	N	Y		
Apartments and condominiums (L)	Y	Y	Y		
Campgrounds/Recreational areas (L)	N	N	N		
Fire stations (L)	N	N	N		
RV Parks (L)	N	N	N		
Schools (L)	Y	Y	Y		
Hotels, Motels (L)	N	N	N		
<b>Other Activities</b>					
NPDES/WDR permitted discharges (H)	N	N	N		
Underground Injection of Commercial/Industrial Discharges (VH)	N	N	N		
Historic gas stations (VH)	N	N	N		
Historic waste dumps/landfills (VH)	N	N	N		
Illegal activities/unauthorized dumping (H)	Y	Y	Y		
Injection wells/dry wells/ sumps (VH)	N	N	N		
Known Contaminant Plumes (VH)	N	N	N		
Military installations (VH)	N	Y	Y		
Mining operations - Historic (VH)	N	N	N		

**Y = Yes      N = No      U = Unknown**

**\* = A contaminant potentially associated with this activity has been detected in the water supply.**

## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water    **District No.** U9    **County** Sacramento  
**System Name** Arcade WD - North Highlands    **System No.** 3410025  
**Source Name** WELL 56A    **Source No.** 015    **PS Code** 3410025-015

**Completed by** Warren Jung    **Date** March, 2003

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Other Activities</b>					
Mining operations - Active (VH)	N	N	N		
Mining - Sand/Gravel (H)	N	N	N		
Wells - Oil, Gas, Geothermal (H)	N	N	N		
Salt Water Intrusion (H)	N	N	N		
Recreational area - surface water source (H)	N	N	N		
Underground storage tanks - Confirmed leaking tanks (VH)	<b>Y</b>	<b>Y</b>	<b>Y</b>		
Underground storage tanks - Decommissioned - inactive tanks (L)	N	N	N		
Underground storage tanks - Non-regulated tanks [tanks smaller than regulatory limit] (H)	N	N	N		
Underground storage tanks - Not yet upgraded or registered tanks (H)	N	N	N		
Underground storage tanks - Upgraded and/or registered - active tanks (L)	N	<b>Y</b>	N		
Above ground storage tanks (M)	N	N	N		
Wells - Water supply (M)	N	<b>Y</b>	<b>Y</b>		
Construction/demolition staging areas (M)	N	N	N		
Contractor or government agency equipment storage yards (M)	N	N	N		
Dredging (M)	N	N	N		
Transportation corridors - Freeways/state highways (M)	N	N	N		
Transportation corridors - Railroads (M)	N	N	N		
Transportation corridors - Historic railroad right-of-ways (M)	N	N	N		
Transportation corridors - Road Right-of-ways [herbicide use areas] (M)	<b>Y</b>	<b>Y</b>	<b>Y</b>		
Transportation corridors - Roads/Streets (L)	<b>Y</b>	<b>Y</b>	<b>Y</b>		
Hospitals (M)	N	N	N		
Storm Drain Discharge Points (M)	N	N	N		
Storm Water Detention Facilities (M)	N	N	N		
Artificial Recharge Projects - Injection wells [potable water] (L)	N	N	N		
Artificial Recharge Projects - Injection wells [non-potable water] (M)	N	N	N		

**Y = Yes      N = No      U = Unknown**

**\* = A contaminant potentially associated with this activity has been detected in the water supply.**

## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water    **District No.** U9    **County** Sacramento  
**System Name** Arcade WD - North Highlands    **System No.** 3410025  
**Source Name** WELL 56A    **Source No.** 015    **PS Code** 3410025-015

**Completed by** Warren Jung    **Date** March, 2003

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Other Activities</b>					
Artificial Recharge Projects - Spreading Basins [potable water] (L)	N	N	N		
Artificial Recharge Projects - Spreading Basins [non-potable water] (M)	N	N	N		
Medical/dental offices/clinics (L)	N	Y	N		
Veterinary offices/clinics (L)	N	N	N		
Surface water - streams/lakes/rivers (L)	N	Y	Y		
Wells - monitoring, test holes (L)	N	N	N		

**Y = Yes      N = No      U = Unknown**  
**\* = A contaminant potentially associated with this activity has been detected in the water supply.**

## Vulnerability Ranking

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Arcade WD - North Highlands System No. 3410025  
 Source Name WELL 56A Source No. 015 PS Code 3410025-015

Completed by Warren Jung Date March, 2003

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Underground storage tanks - Confirmed leaking tanks (VH)		7	5	3	15
A	Automobile - Body shops (H)		5	5	3	13
A	Automobile - Repair shops (H)		5	5	3	13
A	Illegal activities/unauthorized dumping (H)		5	5	3	13
A	Sewer collection systems (H in Zone A, otherwise L)		5	5	3	13
A	Sewer collection systems (H in Zone A, otherwise L)		5	5	3	13
B5	Automobile - Gas stations (VH)		7	3	3	13
B5	Dry cleaners (VH)		7	3	3	13
B5	Military installations (VH)		7	3	3	13
B5	Underground storage tanks - Confirmed leaking tanks (VH)		7	3	3	13
A	Housing - high density [>1 house/0.5 acres] (M)		3	5	3	11
A	Transportation corridors - Road Right-of-ways [herbicide use areas] (M)		3	5	3	11
B5	Automobile - Repair shops (H)		5	3	3	11
B5	Illegal activities/unauthorized dumping (H)		5	3	3	11
B10	Automobile - Gas stations (VH)		7	1	3	11
B10	Dry cleaners (VH)		7	1	3	11
B10	Military installations (VH)		7	1	3	11
B10	Underground storage tanks - Confirmed leaking tanks (VH)		7	1	3	11
A	Apartments and condominiums (L)		1	5	3	9
A	RV/mini storage (L)		1	5	3	9
A	Schools (L)		1	5	3	9
A	Transportation corridors - Roads/Streets (L)		1	5	3	9
B5	Food processing (M)		3	3	3	9
B5	Housing - high density [>1 house/0.5 acres] (M)		3	3	3	9
B5	Parks (M)		3	3	3	9
B5	Transportation corridors - Road Right-of-ways [herbicide use areas] (M)		3	3	3	9
B5	Wells - Water supply (M)		3	3	3	9
B10	Automobile - Repair shops (H)		5	1	3	9
B10	Illegal activities/unauthorized dumping (H)		5	1	3	9

\* = A contaminant potentially associated with this activity has been detected in the water supply.

Well 73 DWSAP

# Drinking Water Source Assessment

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Water System

**Arcade WD - Town & Country**

Sacramento County

Water Source

**WELL 73 - RIVER WALK / NETP EAST**

Assessment Date

**October, 2002**

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California Department of Health Services  
Drinking Water Field Operations Branch  
Arcade Water District

<b>District No.</b>	<b>U9</b>
<b>System No.</b>	<b>3410001</b>
<b>Source No.</b>	<b>065</b>
<b>PS Code</b>	<b>3410001-065</b>

## Assessment Summary

**District Name** Sacramento Suburban Water    **District No.** U9    **County** Sacramento  
**System Name** Arcade WD - Town & Country    **System No.** 3410001  
**Source Name** WELL 73 - RIVER WALK / NETP EAST    **Source No.** 065    **PS Code** 3410001-065

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**Completed by** Warren Jung    **Date** October, 2002

According to DHS records, this Source is Groundwater. This Assessment was done using the Default Groundwater System Method.

### Description of System and Source

The Arcade Water District (now called the Arcade Service Area of the Sacramento Water District) water system is located in Sacramento County and serves potable water to the following communities; Town & Country and North Highlands. There are approximately 22,600 service connections serving a population of 89,000 in the Arcade Service Area.

There are two drinking water sources for the Arcade Water District water system, groundwater and surface water. Groundwater is obtained from sixty-five (65) currently active wells pumping from localized aquifers which are part of the Central Valley Aquifer System of California. These aquifers lie within the Fair Oaks Geologic Formation and the underlying Mehrten Geologic Formation. Surface water is obtained from Folsom Lake and is transported to the District via an underground transmission pipeline. The watershed/recharge area for these combined sources includes approximately 1,190,375 acres of the western slopes of the Central Sierra Nevada. The general land use can be characterized as primarily suburban residential with attendant commercial activity.

### Assessment Procedures

The assessment of the source WELL 73 was conducted by the former Arcade Water District with assistance from Montgomery Watson Harza. The following sources were used in the assessment:

District Water System Files  
 Department of Health Services (DHS) Files  
 Previous District Well Studies  
 Past Experience on Well Information

### Contents of this Assessment

Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Assessment Summary
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Vulnerability Summary
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Source Location Form
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Delineation of Water Protection Zones
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Physical Barrier Effectiveness Checklist
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Source Data Sheet
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Inventory of Possible Contaminating Activities
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Vulnerability Ranking
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Assessment Map

## Vulnerability Summary

District Name Sacramento Suburban Water District No. U9 County Sacramento

System Name Arcade WD - Town & Country System No. 3410001

Source Name WELL 73 - RIVER WALK / NETP EAST Source No. 065 PS Code 3410001-065

Completed by Warren Jung Date October, 2002

### THE FOLLOWING INFORMATION MUST BE INCLUDED IN THE SYSTEM CONSUMER CONFIDENCE REPORT

A source water assessment was conducted for the WELL 73 - RIVER WALK / NETP EAST  
of the Arcade WD - Town & Country water system in October, 2002.

The source is considered most vulnerable to the following activities not associated with any detected contaminants:

Illegal activities/unauthorized dumping  
Recreational area - surface water source  
Sewer collection systems

### Discussion of Vulnerability

There have been no contaminants detected in the water supply. However, the source is still considered vulnerable to activities located near the drinking water source, such as:

illegal activities/unauthorized dumping  
sewer collection system

A copy of the complete assessment may be viewed at:

Sacramento Suburban Water District  
3701 Marconi Avenue  
Suite 100  
Sacramento, CA 95821

You may request a summary of the assessment be sent to you by contacting:

Warren Jung  
District Engineer  
916-972-7171  
916-972-7639 (fax)

## Delineation of Water Protection Zones

**District Name** Sacramento Suburban Water    **District No.** U9    **County** Sacramento  
**System Name** Arcade WD - Town & Country    **System No.** 3410001  
**Source Name** WELL 73 - RIVER WALK / NETP EAST    **Source No.** 065    **PS Code** 3410001-065

**Completed by** Warren Jung    **Date** September, 2002

**Method Used to Delineate Protection Zones**

- 1. Calculated Fixed Radius

**X 2. Modified Calculated Fixed Radius** (Attach documentation for direction of ground water flow.)

- 3. More Detailed Methods
- 4. Arbitrary Fixed Radius (For use only by or permission of DHS)

Maximum Pumping Rate of Well (Q)	<u>4,000</u>	gallons/minute
	<u>6,452</u>	acre feet/year
	<u>281,068,000</u>	cubic feet/year
Effective Porosity	<u>0.20</u>	<input checked="" type="checkbox"/> Default Value
Screened Interval of Well	<u>240</u>	feet <input type="checkbox"/> Default Value

Direction of Ground Water Flow	<u>242.00</u>	degrees
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Protection Zone	Calculated Value	Minimum Value	Base Radius	Direction	Modified Distance
Zone A - 2 Year TOT*	1,931 Feet	600 Feet	1,931 Feet	upgradient	<b>2,896</b> Feet
				downgradient	<b>965</b> Feet
Zone B5 - 5 Year TOT*	3,053 Feet	1,500 Feet	3,053 Feet	upgradient	<b>4,579</b> Feet
				downgradient	<b>1,526</b> Feet
Zone B10 - 10 Year TOT*	4,317 Feet	0 Feet	4,317 Feet	upgradient	<b>6,476</b> Feet
				downgradient	<b>2,159</b> Feet

\*TOT = Time of Travel

## Physical Barrier Effectiveness (PBE)

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Arcade WD - Town & Country System No. 3410001  
 Source Name WELL 73 - RIVER WALK / NETP EAST Source No. 065 PS Code 3410001-065

Completed by Warren Jung Date October, 2002

Parameter	Possible Points	This Source	Score
<b>Type of Aquifer Confinement</b>			
1. Unconfined, Semi-confined, Fractured Rock, Unknown Aquifer	0	<b>X</b>	<b>0</b>
2. Confined	50		
<b>Aquifer Material (Unconfined Aquifers)</b> Type of material within aquifer			
1. Porous Media (Interbedded sands, silts, clays, gravels) with continuous clay layer minimum 25' thick above water table within Zone A	20		
2. Porous Media (Interbedded sands, silts, clays, gravels)	10	<b>X</b>	<b>10</b>
3. Fractured rock ( Low Physical Barrier Effectiveness - no further questions required)	0		
<b>Pathways of Contamination (All Aquifers)</b> Presence of Abandoned or Improperly Destroyed Wells			
1. Present within Zone A (2 year TOT distance)	Yes	0	
	No	5	<b>X</b>
	Unknown	0	
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0	
	No	3	<b>X</b>
	Unknown	0	
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0	
	No	2	<b>X</b>
	Unknown	0	
<b>Static Water Conditions (Unconfined Aquifers)</b>			
Depth to Static Water (DTW) <u>61</u> feet	0 to 20 feet	0	
	20 to 50 feet	2	
	50 to 100 feet	6	<b>X</b>
	Greater than 100 feet	10	
	Unknown	0	
<b>Well Operation (Unconfined Aquifers)</b>			
Depth to Uppermost Perforations (DUP) <u>230</u> feet			
Maximum Pumping Rate of Well (Q) <u>4000</u> gallons/minute			
Length of Screened Interval (H) <u>240</u> feet	Less than 5	0	
	Between 5 and 10	5	
	Greater than 10	10	<b>X</b>
	Unknown	0	
	[DUP - DTW / Q/H] <u>10.14</u>		

## Physical Barrier Effectiveness (PBE)

District Name Sacramento Suburban Water District No. U9 County Sacramento  
 System Name Arcade WD - Town & Country System No. 3410001  
 Source Name WELL 73 - RIVER WALK / NETP EAST Source No. 065 PS Code 3410001-065

Completed by Warren Jung Date October, 2002

Parameter		Possible Points	This Source	Score
<b>Well Construction (All Aquifers)</b>				
Sanitary Seal (Annular Seal) Depth <u>180</u> feet	None or less than 20 feet	0		
	Between 20 and 50 feet	6		
	50 feet or greater	10	<b>X</b>	<b>10</b>
	Unknown	0		
Surface Seal (concrete cap)	Not present or improperly constructed	0		
	Watertight, slopes away from well at least 2' laterally in all directions	4	<b>X</b>	<b>4</b>
	Unknown	0		
Flooding potential at well site	Subject to localized flooding (i.e. in low area or unsealed pit or vault) or within 100 year flood plain	0		
	Not subject to flooding	1	<b>X</b>	<b>1</b>
	Unknown	0		
Security at well site	Not secure	0		
	Secure	5	<b>X</b>	<b>5</b>
	Unknown	0		

Score	Effectiveness
0 to 35	Low
36 to 69	Moderate
70 to 100	High

Maximum Score = 70

Score	<u>56</u>
Effectiveness	<u>Moderate</u>

## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water    **District No.** U9    **County** Sacramento  
**System Name** Arcade WD - Town & Country    **System No.** 3410001  
**Source Name** WELL 73 - RIVER WALK / NETP EAST    **Source No.** 065    **PS Code** 3410001-065

**Completed by** Warren Jung    **Date** September, 2002

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Commercial/Industrial Activities</b>					
Automobile - Body shops (H)	N	N	N		
Automobile - Car washes (M)	N	N	N		
Automobile - Gas stations (VH)	N	N	Y		
Automobile - Repair shops (H)	N	N	Y		
Boat services/repair/refinishing (H)	N	N	Y		
Chemical/petroleum pipelines (H)	N	N	Y		
Chemical/petroleum processing/storage (VH)	N	N	N		
Dry cleaners (VH)	N	N	Y		
Electrical/electronic manufacturing (H)	N	N	Y		
Fleet/truck/bus terminals (H)	N	N	N		
Furniture repair/manufacturing (H)	N	N	N		
Home manufacturing (H)	N	N	N		
Junk/scrap/salvage yards (H)	N	N	N		
Machine shops (H)	N	N	N		
Metal plating/ finishing/fabricating (VH)	N	N	N		
Photo processing/printing (H)	N	N	N		
Plastics/synthetics producers (VH)	N	N	N		
Research laboratories (H)	N	N	Y		
Wood preserving/treating (H)	N	N	N		
Wood/pulp/paper processing and mills (H)	N	N	N		
Lumber processing and manufacturing (H)	N	N	N		
Sewer collection systems (H in Zone A, otherwise L)	Y	Y	Y		
Parking lots/malls [>50 spaces] (M)	Y	Y	Y		
Cement/concrete plants (M)	N	N	N		
Food processing (M)	N	N	N		
Funeral services/graveyards (M)	N	N	N		
Hardware/lumber/parts stores (M)	N	N	Y		
Appliance/Electronic Repair (L)	N	N	N		
Office buildings/complexes (L)	N	N	N		
Rental Yards (L)	N	N	N		
RV/mini storage (L)	N	N	N		

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## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water    **District No.** U9    **County** Sacramento  
**System Name** Arcade WD - Town & Country    **System No.** 3410001  
**Source Name** WELL 73 - RIVER WALK / NETP EAST    **Source No.** 065    **PS Code** 3410001-065

**Completed by** Warren Jung    **Date** September, 2002

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Residential/Municipal Activities</b>					
Airports - Maintenance/fueling areas (VH)	N	N	N		
Landfills/dumps (VH)	N	N	N		
Railroad yards/maintenance/fueling areas (H)	N	N	N		
Septic systems - high density [>1/acre] (VH in Zone A, otherwise M)	N	N	N		
Sewer collection systems (H in Zone A, otherwise L)	Y	Y	Y		
Utility stations - maintenance areas (H)	N	N	N		
Wastewater treatment plants (VH in Zone A, otherwise H)	N	N	N		
Drinking water treatment plants (M)	N	N	N		
Golf courses (M)	N	N	N		
Housing - high density [>1 house/0.5 acres] (M)	Y	Y	Y		
Motor pools (M)	N	N	N		
Parks (M)	N	Y	Y		
Waste transfer/recycling stations (M)	N	N	N		
Apartments and condominiums (L)	N	N	Y		
Campgrounds/Recreational areas (L)	N	N	N		
Fire stations (L)	N	N	N		
RV Parks (L)	N	N	N		
Schools (L)	Y	Y	Y		
Hotels, Motels (L)	N	N	N		
<b>Other Activities</b>					
NPDES/WDR permitted discharges (H)	N	N	N		
Underground Injection of Commercial/Industrial Discharges (VH)	N	N	N		
Historic gas stations (VH)	N	N	N		
Historic waste dumps/landfills (VH)	N	N	N		
Illegal activities/unauthorized dumping (H)	Y	Y	Y		
Injection wells/dry wells/ sumps (VH)	N	N	N		
Known Contaminant Plumes (VH)	N	N	N		
Military installations (VH)	N	N	N		
Mining operations - Historic (VH)	N	N	N		

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**System Name** Arcade WD - Town & Country    **System No.** 3410001  
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**Completed by** Warren Jung    **Date** September, 2002

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Other Activities</b>					
Mining operations - Active (VH)	N	N	N		
Mining - Sand/Gravel (H)	N	N	N		
Wells - Oil, Gas, Geothermal (H)	N	N	N		
Salt Water Intrusion (H)	N	N	N		
Recreational area - surface water source (H)	Y	Y	Y		
Underground storage tanks - Confirmed leaking tanks (VH)	N	N	Y		
Underground storage tanks - Decommissioned - inactive tanks (L)	N	N	N		
Underground storage tanks - Non-regulated tanks [tanks smaller than regulatory limit] (H)	N	N	N		
Underground storage tanks - Not yet upgraded or registered tanks (H)	N	N	N		
Underground storage tanks - Upgraded and/or registered - active tanks (L)	N	N	Y		
Above ground storage tanks (M)	N	N	N		
Wells - Water supply (M)	Y	Y	Y		
Construction/demolition staging areas (M)	N	N	N		
Contractor or government agency equipment storage yards (M)	N	N	N		
Dredging (M)	N	N	N		
Transportation corridors - Freeways/state highways (M)	N	N	N		
Transportation corridors - Railroads (M)	N	N	N		
Transportation corridors - Historic railroad right-of-ways (M)	N	N	N		
Transportation corridors - Road Right-of-ways [herbicide use areas] (M)	Y	Y	Y		
Transportation corridors - Roads/Streets (L)	Y	Y	Y		
Hospitals (M)	N	N	N		
Storm Drain Discharge Points (M)	N	N	Y		
Storm Water Detention Facilities (M)	N	N	N		
Artificial Recharge Projects - Injection wells [potable water] (L)	N	N	N		
Artificial Recharge Projects - Injection wells [non-potable water] (M)	N	N	N		

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## Inventory of Possible Contaminating Activities (PCA Inventory)

**District Name** Sacramento Suburban Water    **District No.** U9    **County** Sacramento

**System Name** Arcade WD - Town & Country    **System No.** 3410001

**Source Name** WELL 73 - RIVER WALK / NETP EAST    **Source No.** 065    **PS Code** 3410001-065

**Completed by** Warren Jung    **Date** September, 2002

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
<b>Other Activities</b>					
Artificial Recharge Projects - Spreading Basins [potable water] (L)	N	N	N		
Artificial Recharge Projects - Spreading Basins [non-potable water] (M)	N	N	N		
Medical/dental offices/clinics (L)	N	N	Y		
Veterinary offices/clinics (L)	N	N	Y		
Surface water - streams/lakes/rivers (L)	Y	Y	Y		
Wells - monitoring, test holes (L)	N	N	N		

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## Vulnerability Ranking

District Name Sacramento Suburban Water District No. U9 County Sacramento

System Name Arcade WD - Town & Country System No. 3410001

Source Name WELL 73 - RIVER WALK / NETP EAST Source No. 065 PS Code 3410001-065

Completed by Warren Jung Date October, 2002

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Illegal activities/unauthorized dumping (H)		5	5	3	13
A	Recreational area - surface water source (H)		5	5	3	13
A	Sewer collection systems (H in Zone A, otherwise L)		5	5	3	13
A	Sewer collection systems (H in Zone A, otherwise L)		5	5	3	13
A	Housing - high density [>1 house/0.5 acres] (M)		3	5	3	11
A	Parking lots/malls [>50 spaces] (M)		3	5	3	11
A	Transportation corridors - Road Right-of-ways [herbicide use areas] (M)		3	5	3	11
A	Wells - Water supply (M)		3	5	3	11
B5	Illegal activities/unauthorized dumping (H)		5	3	3	11
B5	Recreational area - surface water source (H)		5	3	3	11
B10	Automobile - Gas stations (VH)		7	1	3	11
B10	Dry cleaners (VH)		7	1	3	11
B10	Underground storage tanks - Confirmed leaking tanks (VH)		7	1	3	11
A	Schools (L)		1	5	3	9
A	Surface water - streams/lakes/rivers (L)		1	5	3	9
A	Transportation corridors - Roads/Streets (L)		1	5	3	9
B5	Housing - high density [>1 house/0.5 acres] (M)		3	3	3	9
B5	Parking lots/malls [>50 spaces] (M)		3	3	3	9
B5	Parks (M)		3	3	3	9
B5	Transportation corridors - Road Right-of-ways [herbicide use areas] (M)		3	3	3	9
B5	Wells - Water supply (M)		3	3	3	9
B10	Automobile - Repair shops (H)		5	1	3	9
B10	Boat services/repair/refinishing (H)		5	1	3	9
B10	Chemical/petroleum pipelines (H)		5	1	3	9
B10	Electrical/electronic manufacturing (H)		5	1	3	9
B10	Illegal activities/unauthorized dumping (H)		5	1	3	9
B10	Recreational area - surface water source (H)		5	1	3	9
B10	Research laboratories (H)		5	1	3	9

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