Drinking Water Source Assessment

Water System

BURBANK-CITY, WATER DEPT.

Los Angeles County

Water Source

BURBANK OU WELL VO-1

Assessment Date

December, 2002

Assessment Completed By

City of Burbank

California Department of Health Services
Drinking Water Field Operations Branch
DHS Los Angeles District 7

District No.	**07**
System No.	**1910179**
Source No.	**023**
PS Code	**1910179-023**

Vulnerability Summary

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-1 **Source No.** 023 **PS Code** 1910179-023

Completed by City of Burbank **Date** December, 2002

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

A source water assessment was conducted for the **BURBANK OU WELL VO-1**

of the **BURBANK-CITY, WATER DEPT.** water system in **December, 2002** .

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Known Contaminant Plumes

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

Automobile - Repair shops
Chemical/petroleum pipelines
NPDES/WDR permitted discharges
Metal plating/ finishing/fabricating
Underground storage tanks - Confirmed leaking tanks

Discussion of Vulnerability

A plume of Volitile Organic Contaminants (VOCs) was discovered in the San Fernando Basin. The primary contaminants are trichloroethelyene (TCE) and perchloroethylene (PCE). Burbank was added to the Superfund National Priority List by EPA leading to the construction of the Burbank Operable Unit. This is a treatment plant using air stripping and granular activated carbon to remove the contaminants from the extracted groundwater.

Possible Contaminating Activities with the highest ranking for this well are:
Automobile Repair Shops. There are auto repair shops located within the A, B5, and B10 protection zones.
Petroleum pipeline. A crude oil transmission pipeline crosses the A, B5, and B10 zones.
NPDES permitted discharges. There are permitted dischargers within the B5 and B10 zones.
Metal plating. There are plating firms within the B5 and B10 zones.
Underground storage tanks -confirmed leaking. There were confirmed leaking underground storage tanks within the B5 and B10 protection zones.

Vulnerability Summary

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-1 **Source No.** 023 **PS Code** 1910179-023

Completed by City of Burbank **Date** December, 2002

A copy of the complete assessment may be viewed at:

Burbank Water and Power Department
164 W Magnolia Blvd
Burbank, CA 91502

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

Leighton Fong
Principal Civil Engineer
(818) 238-3500

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-1 **Source No.** 023 **PS Code** 1910179-023

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Known Contaminant Plumes (VH)	*	7	5	3	15
B5	Known Contaminant Plumes (VH)	*	7	3	3	13
B10	Known Contaminant Plumes (VH)	*	7	1	3	11
A	Automobile - Repair shops (H)		5	5	3	13
A	Chemical/petroleum pipelines (H)		5	5	3	13
A	NPDES/WDR permitted discharges (H)		5	5	3	13
B5	Metal plating/ finishing/fabricating (VH)		7	3	3	13
B5	Underground storage tanks - Confirmed leaking tanks (VH)		7	3	3	13
A	Automobile - Car washes (M)		3	5	3	11
A	Hardware/lumber/parts stores (M)		3	5	3	11
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	Storm Drain Discharge Points (M)		3	5	3	11
A	Transportation corridors - Freeways/state highways (M)		3	5	3	11
A	Transportation corridors - Railroads (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	Chemical/petroleum pipelines (H)		5	3	3	11
B5	Machine shops (H)		5	3	3	11
B5	NPDES/WDR permitted discharges (H)		5	3	3	11
B10	Automobile - Gas stations (VH)		7	1	3	11
B10	Dry cleaners (VH)		7	1	3	11
B10	Metal plating/ finishing/fabricating (VH)		7	1	3	11
B10	Plastics/synthetics producers (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 contaminant potentially associated with this activity has been detected in the water supply.**

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-1 **Source No.** 023 **PS Code** 1910179-023

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	RV/mini storage (L)		1	5	3	9
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
A	Wells - monitoring, test holes (L)		1	5	3	9
B5	Housing - high density [>1 house/0.5 acres] (M)		3	3	3	9
B5	Storm Drain Discharge Points (M)		3	3	3	9
B5	Transportation corridors - Freeways/state highways (M)		3	3	3	9
B5	Transportation corridors - Railroads (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 - Body shops (H)		5	1	3	9
B10	Automobile - Repair shops (H)		5	1	3	9
B10	Chemical/petroleum pipelines (H)		5	1	3	9
B10	Junk/scrap/salvage yards (H)		5	1	3	9
B10	Machine shops (H)		5	1	3	9
B10	NPDES/WDR permitted discharges (H)		5	1	3	9
A	Illegal activities/unauthorized dumping (H)		5	0	3	8
B5	Illegal activities/unauthorized dumping (H)		5	0	3	8
B10	Illegal activities/unauthorized dumping (H)		5	0	3	8

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

Explanation of Source Water Assessments and Definition of Terms

A source water assessment was recently completed for this drinking water source. The assessment identifies the vulnerability of the drinking water supply to contamination from typical human activities. The assessments are intended to facilitate and provide the basic information necessary for a local community to develop a program to protect the drinking water supply.

A summary of the complete assessment is provided here. For more information, contact the agency or individual that prepared the assessment (shown in summary). You may also contact the local Department of Health Services Drinking Water Field Operations Branch district office (http://www.dhs.ca.gov/ps/ddwem/technical/dwp/districtofficesmap.pdf). Additional information about assessments can be found at: http://www.dhs.ca.gov/ps/ddwem/dwsap/FAQ.htm

Terms used in this summary:

Source Water Assessment: An assessment is an evaluation of a drinking water source to determine the "possible contaminating activities" (PCAs) to which the source is most vulnerable. The assessment includes: a delineation of protection zones around the source; an inventory of the types of PCAs within the source protection zones; and an analysis to determine the PCAs to which the source is most vulnerable. The information is compiled into a report that includes a map, calculations, checklists, and a summary of the findings.

Possible Contaminating Activity (PCA): A PCA is a current or historic human activity that is an actual or potential origin of contamination for a drinking water source. PCAs include activities that use, store, produce or dispose of chemicals that have the potential to contaminate drinking water supplies. There are 110 types of PCAs in the California DWSAP program.

PCA Risk Ranking: Each type of PCA is assigned a risk ranking (Very High, High, Moderate, or Low). The risk ranking is based on the contaminant(s) typically associated with that PCA, the likelihood of release from that type of facility based on historical experience, and the mobility of the contaminant(s).

PCA Inventory: The PCA inventory is a review using local knowledge, databases, and on-site evaluations to identify the occurrence and approximate location of PCAs in the source water zones. The inventory for the basic DWSAP assessments is a presence-absence review. If a type of PCA occurs in a zone, a "Yes" is noted in the inventory for that zone, regardless of whether there is one or many of that type of facility within the zone. If a PCA has been associated with a contaminant detected in the water supply, a notation is made in the PCA inventory.

Source Water Zones or Areas: These are areas located around and typically adjacent to a drinking water source that have been identified as initial protection areas.

For groundwater sources, there are typically three concentric circular zones around a source (Zones A, B5 and B10). The sizes of the are determined based on characteristics of the source. PCAs located in the inner Zone A are considered more of a risk to the water supply than PCAs located in the middle Zone B5. Similarly, PCAs located in Zone B5 are considered more of a risk than PCAs located in the outer Zone B10.

For surface water sources, the watershed is defined as the overall protection area, and as an option, zones are defined closer to the source. Two types of zones are typically established. Zone A is the area within and near the surface water body and its tributaries. Zone B is an area within 2,500 feet of the intake, not including areas in Zone A. For surface water sources, PCAs located in Zone A are considered a greater threat than PCAs located in Zone B. PCAs located on the watershed outside of the zones are considered to be of less risk to the water supply. If zones have not been defined, PCAs are considered to be of equal risk regardless of location on the watershed.

Physical Barrier Effectiveness (PBE): The PBE for a source is an evaluation of the ability of the source and the surrounding area to prevent the movement of contaminants into the source. The PBE is based on the construction and operation features of the source, and the characteristics of the surrounding area. A source is assigned a PBE of Low, Moderate or High, where High indicates that the physical barriers of the source and site are very effective in preventing the movement of contaminants. By design, typical groundwater sources will have Moderate PBE, while typical surface water sources will have Low PBE. This is due to the greater exposure of surface water sources to contamination.

Vulnerability Ranking: The vulnerability ranking is a summary of the PCAs identified in the assessment prioritized by the risk that they pose to the water supply. The prioritization is based on the risk associated with a PCA, the zone in which it occurs, and the PBE of the source. In the vulnerability ranking, points are assigned as follows:

PCA risk ranking	Very High = 7	High = 5	Moderate = 3	Low = 1	Unknown in any zone = 0
Zone (Groundwater)	A = 5	B5 = 3	B10 = 1		
Zone (Surface water with zones)	A = 5	B = 3	Watershed = 1		
Zone (Surface water without zones)	Watershed = 5				
Physical Barrier Effectiveness	Low = 5	Moderate = 3	High = 1		

The points for each type of PCA in each zone are totaled to give a vulnerability score, and the PCAs are ranked in order from the highest score to the lowest score. PCAs associated with detected contaminants are ranked at the top, regardless of vulnerability score. By definition, groundwater sources are not considered vulnerable to PCAs with scores less than 8, and surface water sources are not considered vulnerable to PCAs with scores less than 11. It should be noted that the vulnerability ranking scores do not have a direct quantitative value. Rather, the points are used only to relatively rank the types of PCAs for an individual source.

Note: Some of the summaries do not include a vulnerability ranking. If the assessment was done on paper and the details were not entered into the database, the vulnerability ranking is not available here. In addition, alternate methods of determining vulnerability were allowed in some cases, and the vulnerability ranking is not in the database.

Vulnerability Summary: The source is considered most vulnerable to the PCAs with the highest score, and to PCAs associated with detected contaminants. These PCAs are noted in the vulnerability summary. Further details or discussion may be provided in the vulnerability discussion.

Drinking Water Source Assessment

Water System

BURBANK-CITY, WATER DEPT.

Los Angeles County

Water Source

BURBANK OU WELL VO-2

Assessment Date

December, 2002

Assessment Completed By

City of Burbank

California Department of Health Services
Drinking Water Field Operations Branch
DHS Los Angeles District 7

District No.	**07**
System No.	**1910179**
Source No.	**024**
PS Code	**1910179-024**

Vulnerability Summary

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-2 **Source No.** 024 **PS Code** 1910179-024

Completed by City of Burbank **Date** December, 2002

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

A source water assessment was conducted for the **BURBANK OU WELL VO-2**

of the **BURBANK-CITY, WATER DEPT.** water system in **December, 2002** .

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Known Contaminant Plumes

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

Metal plating/ finishing/fabricating

Discussion of Vulnerability

A plume of Volitile Organic Contaminants (VOCs) was discovered in the San Fernando Basin. The primary contaminants are trichloroethelyene (TCE) and perchloroethylene (PCE). Burbank was added to the Superfund National Priority List by EPA leading to the construction of the Burbank Operable Unit. This is a treatment plant using air stripping and granular activated carbon to remove the contaminants from the extracted groundwater.

Possible Contaminating Activity with the highest ranking for this well is metal plating. They are located in the A and B5 protection zones.

A copy of the complete assessment may be viewed at:

Burbank Water and Power Department
164 W Magnolia Blvd
Burbank, CA 91502

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

Leighton Fong
Principal Civil Engineer
(818) 238-3500

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-2 **Source No.** 024 **PS Code** 1910179-024

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Known Contaminant Plumes (VH)	*	7	5	3	15
B5	Known Contaminant Plumes (VH)	*	7	3	3	13
B10	Known Contaminant Plumes (VH)	*	7	1	3	11
A	Metal plating/ finishing/fabricating (VH)		7	5	3	15
A	Chemical/petroleum pipelines (H)		5	5	3	13
A	Machine shops (H)		5	5	3	13
A	NPDES/WDR permitted discharges (H)		5	5	3	13
B5	Metal plating/ finishing/fabricating (VH)		7	3	3	13
B5	Underground storage tanks - Confirmed leaking tanks (VH)		7	3	3	13
A	Hardware/lumber/parts stores (M)		3	5	3	11
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	Storm Drain Discharge Points (M)		3	5	3	11
A	Transportation corridors - Railroads (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	Machine shops (H)		5	3	3	11
B5	NPDES/WDR permitted discharges (H)		5	3	3	11
B10	Automobile - Gas stations (VH)		7	1	3	11
B10	Dry cleaners (VH)		7	1	3	11
B10	Plastics/synthetics producers (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 contaminant potentially associated with this activity has been detected in the water supply.**

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-2 **Source No.** 024 **PS Code** 1910179-024

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
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
A	Wells - monitoring, test holes (L)		1	5	3	9
B5	Automobile - Car washes (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	Storm Drain Discharge Points (M)		3	3	3	9
B5	Transportation corridors - Freeways/state highways (M)		3	3	3	9
B5	Transportation corridors - Railroads (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 - Body shops (H)		5	1	3	9
B10	Automobile - Repair shops (H)		5	1	3	9
B10	Chemical/petroleum pipelines (H)		5	1	3	9
B10	Junk/scrap/salvage yards (H)		5	1	3	9
B10	Machine shops (H)		5	1	3	9
B10	NPDES/WDR permitted discharges (H)		5	1	3	9
A	Illegal activities/unauthorized dumping (H)		5	0	3	8
B5	Illegal activities/unauthorized dumping (H)		5	0	3	8
B10	Illegal activities/unauthorized dumping (H)		5	0	3	8

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

Explanation of Source Water Assessments and Definition of Terms

A source water assessment was recently completed for this drinking water source. The assessment identifies the vulnerability of the drinking water supply to contamination from typical human activities. The assessments are intended to facilitate and provide the basic information necessary for a local community to develop a program to protect the drinking water supply.

A summary of the complete assessment is provided here. For more information, contact the agency or individual that prepared the assessment (shown in summary). You may also contact the local Department of Health Services Drinking Water Field Operations Branch district office (http://www.dhs.ca.gov/ps/ddwem/technical/dwp/districtofficesmap.pdf). Additional information about assessments can be found at: http://www.dhs.ca.gov/ps/ddwem/dwsap/FAQ.htm

Terms used in this summary:

Source Water Assessment: An assessment is an evaluation of a drinking water source to determine the "possible contaminating activities" (PCAs) to which the source is most vulnerable. The assessment includes: a delineation of protection zones around the source; an inventory of the types of PCAs within the source protection zones; and an analysis to determine the PCAs to which the source is most vulnerable. The information is compiled into a report that includes a map, calculations, checklists, and a summary of the findings.

Possible Contaminating Activity (PCA): A PCA is a current or historic human activity that is an actual or potential origin of contamination for a drinking water source. PCAs include activities that use, store, produce or dispose of chemicals that have the potential to contaminate drinking water supplies. There are 110 types of PCAs in the California DWSAP program.

PCA Risk Ranking: Each type of PCA is assigned a risk ranking (Very High, High, Moderate, or Low). The risk ranking is based on the contaminant(s) typically associated with that PCA, the likelihood of release from that type of facility based on historical experience, and the mobility of the contaminant(s).

PCA Inventory: The PCA inventory is a review using local knowledge, databases, and on-site evaluations to identify the occurrence and approximate location of PCAs in the source water zones. The inventory for the basic DWSAP assessments is a presence-absence review. If a type of PCA occurs in a zone, a "Yes" is noted in the inventory for that zone, regardless of whether there is one or many of that type of facility within the zone. If a PCA has been associated with a contaminant detected in the water supply, a notation is made in the PCA inventory.

Source Water Zones or Areas: These are areas located around and typically adjacent to a drinking water source that have been identified as initial protection areas.

For groundwater sources, there are typically three concentric circular zones around a source (Zones A, B5 and B10). The sizes of the are determined based on characteristics of the source. PCAs located in the inner Zone A are considered more of a risk to the water supply than PCAs located in the middle Zone B5. Similarly, PCAs located in Zone B5 are considered more of a risk than PCAs located in the outer Zone B10.

For surface water sources, the watershed is defined as the overall protection area, and as an option, zones are defined closer to the source. Two types of zones are typically established. Zone A is the area within and near the surface water body and its tributaries. Zone B is an area within 2,500 feet of the intake, not including areas in Zone A. For surface water sources, PCAs located in Zone A are considered a greater threat than PCAs located in Zone B. PCAs located on the watershed outside of the zones are considered to be of less risk to the water supply. If zones have not been defined, PCAs are considered to be of equal risk regardless of location on the watershed.

Physical Barrier Effectiveness (PBE): The PBE for a source is an evaluation of the ability of the source and the surrounding area to prevent the movement of contaminants into the source. The PBE is based on the construction and operation features of the source, and the characteristics of the surrounding area. A source is assigned a PBE of Low, Moderate or High, where High indicates that the physical barriers of the source and site are very effective in preventing the movement of contaminants. By design, typical groundwater sources will have Moderate PBE, while typical surface water sources will have Low PBE. This is due to the greater exposure of surface water sources to contamination.

Vulnerability Ranking: The vulnerability ranking is a summary of the PCAs identified in the assessment prioritized by the risk that they pose to the water supply. The prioritization is based on the risk associated with a PCA, the zone in which it occurs, and the PBE of the source. In the vulnerability ranking, points are assigned as follows:

PCA risk ranking	Very High = 7	High = 5	Moderate = 3	Low = 1	Unknown in any zone = 0
Zone (Groundwater)	A = 5	B5 = 3	B10 = 1		
Zone (Surface water with zones)	A = 5	B = 3	Watershed = 1		
Zone (Surface water without zones)	Watershed = 5				
Physical Barrier Effectiveness	Low = 5	Moderate = 3	High = 1		

The points for each type of PCA in each zone are totaled to give a vulnerability score, and the PCAs are ranked in order from the highest score to the lowest score. PCAs associated with detected contaminants are ranked at the top, regardless of vulnerability score. By definition, groundwater sources are not considered vulnerable to PCAs with scores less than 8, and surface water sources are not considered vulnerable to PCAs with scores less than 11. It should be noted that the vulnerability ranking scores do not have a direct quantitative value. Rather, the points are used only to relatively rank the types of PCAs for an individual source.

Note: Some of the summaries do not include a vulnerability ranking. If the assessment was done on paper and the details were not entered into the database, the vulnerability ranking is not available here. In addition, alternate methods of determining vulnerability were allowed in some cases, and the vulnerability ranking is not in the database.

Vulnerability Summary: The source is considered most vulnerable to the PCAs with the highest score, and to PCAs associated with detected contaminants. These PCAs are noted in the vulnerability summary. Further details or discussion may be provided in the vulnerability discussion.

Drinking Water Source Assessment

Water System

BURBANK-CITY, WATER DEPT.

Los Angeles County

Water Source

BURBANK OU WELL VO-3

Assessment Date

December, 2002

Assessment Completed By

City of Burbank

California Department of Health Services
Drinking Water Field Operations Branch
DHS Los Angeles District 7

District No.	**07**
System No.	**1910179**
Source No.	**025**
PS Code	**1910179-025**

Vulnerability Summary

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-3 **Source No.** 025 **PS Code** 1910179-025

Completed by City of Burbank **Date** December, 2002

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

A source water assessment was conducted for the **BURBANK OU WELL VO-3**

of the **BURBANK-CITY, WATER DEPT.** water system in **December, 2002** .

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Known Contaminant Plumes

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

Metal plating/ finishing/fabricating

Discussion of Vulnerability

A plume of Volitile Organic Contaminants (VOCs) was discovered in the San Fernando Basin. The primary contaminants are trichloroethelyene (TCE) and perchloroethylene (PCE). Burbank was added to the Superfund National Priority List by EPA leading to the construction of the Burbank Operable Unit. This is a treatment plant using air stripping and granular activated carbon to remove the contaminants from the extracted groundwater.

Possible Contaminating Activity with the highest ranking for this well is metal plating. There is a plating firm within the A protection zone and one within the B10 zone.

A copy of the complete assessment may be viewed at:

Burbank Water and Power Department
164 W Magnolia Blvd
Burbank, CA 91502

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

Leighton Fong
Principal Civil Engineer
(818) 238-3500

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-3 **Source No.** 025 **PS Code** 1910179-025

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Known Contaminant Plumes (VH)	*	7	5	3	15
B5	Known Contaminant Plumes (VH)	*	7	3	3	13
B10	Known Contaminant Plumes (VH)	*	7	1	3	11
A	Metal plating/ finishing/fabricating (VH)		7	5	3	15
A	Automobile - Body shops (H)		5	5	3	13
A	NPDES/WDR permitted discharges (H)		5	5	3	13
B5	Automobile - Gas stations (VH)		7	3	3	13
B5	Dry cleaners (VH)		7	3	3	13
B5	Underground storage tanks - Confirmed leaking tanks (VH)		7	3	3	13
A	Hardware/lumber/parts stores (M)		3	5	3	11
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	Parks (M)		3	5	3	11
A	Storm Drain Discharge Points (M)		3	5	3	11
A	Transportation corridors - Railroads (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 - Repair shops (H)		5	3	3	11
B5	Chemical/petroleum pipelines (H)		5	3	3	11
B5	Machine shops (H)		5	3	3	11
B5	NPDES/WDR permitted discharges (H)		5	3	3	11
B10	Automobile - Gas stations (VH)		7	1	3	11
B10	Dry cleaners (VH)		7	1	3	11
B10	Metal plating/ finishing/fabricating (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	Medical/dental offices/clinics (L)		1	5	3	9

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

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-3 **Source No.** 025 **PS Code** 1910179-025

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Office buildings/complexes (L)		1	5	3	9
A	RV/mini storage (L)		1	5	3	9
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
A	Veterinary offices/clinics (L)		1	5	3	9
A	Wells - monitoring, test holes (L)		1	5	3	9
B5	Housing - high density [>1 house/0.5 acres] (M)		3	3	3	9
B5	Parks (M)		3	3	3	9
B5	Storm Drain Discharge Points (M)		3	3	3	9
B5	Transportation corridors - Freeways/state highways (M)		3	3	3	9
B5	Transportation corridors - Railroads (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 - Body shops (H)		5	1	3	9
B10	Automobile - Repair shops (H)		5	1	3	9
B10	Chemical/petroleum pipelines (H)		5	1	3	9
B10	Machine shops (H)		5	1	3	9
B10	NPDES/WDR permitted discharges (H)		5	1	3	9
B10	Photo processing/printing (H)		5	1	3	9
A	Illegal activities/unauthorized dumping (H)		5	0	3	8
B5	Illegal activities/unauthorized dumping (H)		5	0	3	8
B10	Illegal activities/unauthorized dumping (H)		5	0	3	8

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

Explanation of Source Water Assessments and Definition of Terms

A source water assessment was recently completed for this drinking water source. The assessment identifies the vulnerability of the drinking water supply to contamination from typical human activities. The assessments are intended to facilitate and provide the basic information necessary for a local community to develop a program to protect the drinking water supply.

A summary of the complete assessment is provided here. For more information, contact the agency or individual that prepared the assessment (shown in summary). You may also contact the local Department of Health Services Drinking Water Field Operations Branch district office (http://www.dhs.ca.gov/ps/ddwem/technical/dwp/districtofficesmap.pdf). Additional information about assessments can be found at: http://www.dhs.ca.gov/ps/ddwem/dwsap/FAQ.htm

Terms used in this summary:

Source Water Assessment: An assessment is an evaluation of a drinking water source to determine the "possible contaminating activities" (PCAs) to which the source is most vulnerable. The assessment includes: a delineation of protection zones around the source; an inventory of the types of PCAs within the source protection zones; and an analysis to determine the PCAs to which the source is most vulnerable. The information is compiled into a report that includes a map, calculations, checklists, and a summary of the findings.

Possible Contaminating Activity (PCA): A PCA is a current or historic human activity that is an actual or potential origin of contamination for a drinking water source. PCAs include activities that use, store, produce or dispose of chemicals that have the potential to contaminate drinking water supplies. There are 110 types of PCAs in the California DWSAP program.

PCA Risk Ranking: Each type of PCA is assigned a risk ranking (Very High, High, Moderate, or Low). The risk ranking is based on the contaminant(s) typically associated with that PCA, the likelihood of release from that type of facility based on historical experience, and the mobility of the contaminant(s).

PCA Inventory: The PCA inventory is a review using local knowledge, databases, and on-site evaluations to identify the occurrence and approximate location of PCAs in the source water zones. The inventory for the basic DWSAP assessments is a presence-absence review. If a type of PCA occurs in a zone, a "Yes" is noted in the inventory for that zone, regardless of whether there is one or many of that type of facility within the zone. If a PCA has been associated with a contaminant detected in the water supply, a notation is made in the PCA inventory.

Source Water Zones or Areas: These are areas located around and typically adjacent to a drinking water source that have been identified as initial protection areas.

For groundwater sources, there are typically three concentric circular zones around a source (Zones A, B5 and B10). The sizes of the are determined based on characteristics of the source. PCAs located in the inner Zone A are considered more of a risk to the water supply than PCAs located in the middle Zone B5. Similarly, PCAs located in Zone B5 are considered more of a risk than PCAs located in the outer Zone B10.

For surface water sources, the watershed is defined as the overall protection area, and as an option, zones are defined closer to the source. Two types of zones are typically established. Zone A is the area within and near the surface water body and its tributaries. Zone B is an area within 2,500 feet of the intake, not including areas in Zone A. For surface water sources, PCAs located in Zone A are considered a greater threat than PCAs located in Zone B. PCAs located on the watershed outside of the zones are considered to be of less risk to the water supply. If zones have not been defined, PCAs are considered to be of equal risk regardless of location on the watershed.

Physical Barrier Effectiveness (PBE): The PBE for a source is an evaluation of the ability of the source and the surrounding area to prevent the movement of contaminants into the source. The PBE is based on the construction and operation features of the source, and the characteristics of the surrounding area. A source is assigned a PBE of Low, Moderate or High, where High indicates that the physical barriers of the source and site are very effective in preventing the movement of contaminants. By design, typical groundwater sources will have Moderate PBE, while typical surface water sources will have Low PBE. This is due to the greater exposure of surface water sources to contamination.

Vulnerability Ranking: The vulnerability ranking is a summary of the PCAs identified in the assessment prioritized by the risk that they pose to the water supply. The prioritization is based on the risk associated with a PCA, the zone in which it occurs, and the PBE of the source. In the vulnerability ranking, points are assigned as follows:

PCA risk ranking	Very High = 7	High = 5	Moderate = 3	Low = 1	Unknown in any zone = 0
Zone (Groundwater)	A = 5	B5 = 3	B10 = 1		
Zone (Surface water with zones)	A = 5	B = 3	Watershed = 1		
Zone (Surface water without zones)	Watershed = 5				
Physical Barrier Effectiveness	Low = 5	Moderate = 3	High = 1		

The points for each type of PCA in each zone are totaled to give a vulnerability score, and the PCAs are ranked in order from the highest score to the lowest score. PCAs associated with detected contaminants are ranked at the top, regardless of vulnerability score. By definition, groundwater sources are not considered vulnerable to PCAs with scores less than 8, and surface water sources are not considered vulnerable to PCAs with scores less than 11. It should be noted that the vulnerability ranking scores do not have a direct quantitative value. Rather, the points are used only to relatively rank the types of PCAs for an individual source.

Note: Some of the summaries do not include a vulnerability ranking. If the assessment was done on paper and the details were not entered into the database, the vulnerability ranking is not available here. In addition, alternate methods of determining vulnerability were allowed in some cases, and the vulnerability ranking is not in the database.

Vulnerability Summary: The source is considered most vulnerable to the PCAs with the highest score, and to PCAs associated with detected contaminants. These PCAs are noted in the vulnerability summary. Further details or discussion may be provided in the vulnerability discussion.

Drinking Water Source Assessment

Water System

BURBANK-CITY, WATER DEPT.

Los Angeles County

Water Source

BURBANK OU WELL VO-4

Assessment Date

December, 2002

Assessment Completed By

City of Burbank

California Department of Health Services
Drinking Water Field Operations Branch
DHS Los Angeles District 7

District No.	**07**
System No.	**1910179**
Source No.	**026**
PS Code	**1910179-026**

Vulnerability Summary

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-4 **Source No.** 026 **PS Code** 1910179-026

Completed by City of Burbank **Date** December, 2002

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

A source water assessment was conducted for the **BURBANK OU WELL VO-4**

of the **BURBANK-CITY, WATER DEPT.** water system in **December, 2002** .

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Known Contaminant Plumes

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

Metal plating/ finishing/fabricating

Discussion of Vulnerability

A plume of Volitile Organic Contaminants (VOCs) was discovered in the San Fernando Basin. The primary contaminants are trichloroethelyene (TCE) and perchloroethylene (PCE). Burbank was added to the Superfund National Priority List by EPA leading to the construction of the Burbank Operable Unit. This is a treatment plant using air stripping and granular activated carbon to remove the contaminants from the extracted groundwater.

Possible Contaminating Activity with the highest ranking for this well is metal plating. There are plating firms within the A, B5, and B10 zones.

A copy of the complete assessment may be viewed at:

Burbank Water and Power Department
164 W Magnolia Blvd
Burbank, CA 91502

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

Leighton Fong
Principal Civil Engineer
(818) 238-3500

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-4 **Source No.** 026 **PS Code** 1910179-026

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Known Contaminant Plumes (VH)	*	7	5	3	15
B5	Known Contaminant Plumes (VH)	*	7	3	3	13
B10	Known Contaminant Plumes (VH)	*	7	1	3	11
A	Metal plating/ finishing/fabricating (VH)		7	5	3	15
A	NPDES/WDR permitted discharges (H)		5	5	3	13
B5	Automobile - Gas stations (VH)		7	3	3	13
B5	Dry cleaners (VH)		7	3	3	13
B5	Metal plating/ finishing/fabricating (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	Parks (M)		3	5	3	11
A	Storm Drain Discharge Points (M)		3	5	3	11
A	Transportation corridors - Railroads (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	Machine shops (H)		5	3	3	11
B5	NPDES/WDR permitted discharges (H)		5	3	3	11
B5	Photo processing/printing (H)		5	3	3	11
B10	Dry cleaners (VH)		7	1	3	11
B10	Metal plating/ finishing/fabricating (VH)		7	1	3	11
B10	Plastics/synthetics producers (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 contaminant potentially associated with this activity has been detected in the water supply.**

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-4 **Source No.** 026 **PS Code** 1910179-026

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Medical/dental offices/clinics (L)		1	5	3	9
A	Office buildings/complexes (L)		1	5	3	9
A	RV/mini storage (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
A	Veterinary offices/clinics (L)		1	5	3	9
A	Wells - monitoring, test holes (L)		1	5	3	9
B5	Hardware/lumber/parts stores (M)		3	3	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	Storm Drain Discharge Points (M)		3	3	3	9
B5	Transportation corridors - Railroads (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	Chemical/petroleum pipelines (H)		5	1	3	9
B10	Machine shops (H)		5	1	3	9
B10	NPDES/WDR permitted discharges (H)		5	1	3	9

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

Explanation of Source Water Assessments and Definition of Terms

A source water assessment was recently completed for this drinking water source. The assessment identifies the vulnerability of the drinking water supply to contamination from typical human activities. The assessments are intended to facilitate and provide the basic information necessary for a local community to develop a program to protect the drinking water supply.

A summary of the complete assessment is provided here. For more information, contact the agency or individual that prepared the assessment (shown in summary). You may also contact the local Department of Health Services Drinking Water Field Operations Branch district office (http://www.dhs.ca.gov/ps/ddwem/technical/dwp/districtofficesmap.pdf). Additional information about assessments can be found at: http://www.dhs.ca.gov/ps/ddwem/dwsap/FAQ.htm

Terms used in this summary:

Source Water Assessment: An assessment is an evaluation of a drinking water source to determine the "possible contaminating activities" (PCAs) to which the source is most vulnerable. The assessment includes: a delineation of protection zones around the source; an inventory of the types of PCAs within the source protection zones; and an analysis to determine the PCAs to which the source is most vulnerable. The information is compiled into a report that includes a map, calculations, checklists, and a summary of the findings.

Possible Contaminating Activity (PCA): A PCA is a current or historic human activity that is an actual or potential origin of contamination for a drinking water source. PCAs include activities that use, store, produce or dispose of chemicals that have the potential to contaminate drinking water supplies. There are 110 types of PCAs in the California DWSAP program.

PCA Risk Ranking: Each type of PCA is assigned a risk ranking (Very High, High, Moderate, or Low). The risk ranking is based on the contaminant(s) typically associated with that PCA, the likelihood of release from that type of facility based on historical experience, and the mobility of the contaminant(s).

PCA Inventory: The PCA inventory is a review using local knowledge, databases, and on-site evaluations to identify the occurrence and approximate location of PCAs in the source water zones. The inventory for the basic DWSAP assessments is a presence-absence review. If a type of PCA occurs in a zone, a "Yes" is noted in the inventory for that zone, regardless of whether there is one or many of that type of facility within the zone. If a PCA has been associated with a contaminant detected in the water supply, a notation is made in the PCA inventory.

Source Water Zones or Areas: These are areas located around and typically adjacent to a drinking water source that have been identified as initial protection areas.

For groundwater sources, there are typically three concentric circular zones around a source (Zones A, B5 and B10). The sizes of the are determined based on characteristics of the source. PCAs located in the inner Zone A are considered more of a risk to the water supply than PCAs located in the middle Zone B5. Similarly, PCAs located in Zone B5 are considered more of a risk than PCAs located in the outer Zone B10.

For surface water sources, the watershed is defined as the overall protection area, and as an option, zones are defined closer to the source. Two types of zones are typically established. Zone A is the area within and near the surface water body and its tributaries. Zone B is an area within 2,500 feet of the intake, not including areas in Zone A. For surface water sources, PCAs located in Zone A are considered a greater threat than PCAs located in Zone B. PCAs located on the watershed outside of the zones are considered to be of less risk to the water supply. If zones have not been defined, PCAs are considered to be of equal risk regardless of location on the watershed.

Physical Barrier Effectiveness (PBE): The PBE for a source is an evaluation of the ability of the source and the surrounding area to prevent the movement of contaminants into the source. The PBE is based on the construction and operation features of the source, and the characteristics of the surrounding area. A source is assigned a PBE of Low, Moderate or High, where High indicates that the physical barriers of the source and site are very effective in preventing the movement of contaminants. By design, typical groundwater sources will have Moderate PBE, while typical surface water sources will have Low PBE. This is due to the greater exposure of surface water sources to contamination.

Vulnerability Ranking: The vulnerability ranking is a summary of the PCAs identified in the assessment prioritized by the risk that they pose to the water supply. The prioritization is based on the risk associated with a PCA, the zone in which it occurs, and the PBE of the source. In the vulnerability ranking, points are assigned as follows:

PCA risk ranking	Very High = 7	High = 5	Moderate = 3	Low = 1	Unknown in any zone = 0
Zone (Groundwater)	A = 5	B5 = 3	B10 = 1		
Zone (Surface water with zones)	A = 5	B = 3	Watershed = 1		
Zone (Surface water without zones)	Watershed = 5				
Physical Barrier Effectiveness	Low = 5	Moderate = 3	High = 1		

The points for each type of PCA in each zone are totaled to give a vulnerability score, and the PCAs are ranked in order from the highest score to the lowest score. PCAs associated with detected contaminants are ranked at the top, regardless of vulnerability score. By definition, groundwater sources are not considered vulnerable to PCAs with scores less than 8, and surface water sources are not considered vulnerable to PCAs with scores less than 11. It should be noted that the vulnerability ranking scores do not have a direct quantitative value. Rather, the points are used only to relatively rank the types of PCAs for an individual source.

Note: Some of the summaries do not include a vulnerability ranking. If the assessment was done on paper and the details were not entered into the database, the vulnerability ranking is not available here. In addition, alternate methods of determining vulnerability were allowed in some cases, and the vulnerability ranking is not in the database.

Vulnerability Summary: The source is considered most vulnerable to the PCAs with the highest score, and to PCAs associated with detected contaminants. These PCAs are noted in the vulnerability summary. Further details or discussion may be provided in the vulnerability discussion.

Drinking Water Source Assessment

Water System

BURBANK-CITY, WATER DEPT.

Los Angeles County

Water Source

BURBANK OU WELL VO-5

Assessment Date

December, 2002

Assessment Completed By

City of Burbank

California Department of Health Services
Drinking Water Field Operations Branch
DHS Los Angeles District 7

District No.	**07**
System No.	**1910179**
Source No.	**027**
PS Code	**1910179-027**

Vulnerability Summary

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-5 **Source No.** 027 **PS Code** 1910179-027

Completed by City of Burbank **Date** December, 2002

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

A source water assessment was conducted for the **BURBANK OU WELL VO-5**

of the **BURBANK-CITY, WATER DEPT.** water system in **December, 2002** .

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Known Contaminant Plumes

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

Metal plating/ finishing/fabricating

Discussion of Vulnerability

A plume of Volitile Organic Contaminants (VOCs) was discovered in the San Fernando Basin. The primary contaminants are trichloroethelyene (TCE) and perchloroethylene (PCE). Burbank was added to the Superfund National Priority List by EPA leading to the construction of the Burbank Operable Unit. This is a treatment plant using air stripping and granular activated carbon to remove the contaminants from the extracted groundwater.

Possible Contaminating Activity with the highest ranking for this well is metal plating. There are plating firms within each of the three zones.

A copy of the complete assessment may be viewed at:

Burbank Water and Power Department
164 W Magnolia Blvd
Burbank, CA 91502

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

Leighton Fong
Principal Civil Engineer
(818) 238-3500

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-5 **Source No.** 027 **PS Code** 1910179-027

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Known Contaminant Plumes (VH)	*	7	5	3	15
B5	Known Contaminant Plumes (VH)	*	7	3	3	13
B10	Known Contaminant Plumes (VH)	*	7	1	3	11
A	Metal plating/ finishing/fabricating (VH)		7	5	3	15
A	NPDES/WDR permitted discharges (H)		5	5	3	13
A	Photo processing/printing (H)		5	5	3	13
B5	Automobile - Gas stations (VH)		7	3	3	13
B5	Dry cleaners (VH)		7	3	3	13
B5	Metal plating/ finishing/fabricating (VH)		7	3	3	13
B5	Plastics/synthetics producers (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	Parks (M)		3	5	3	11
A	Storm Drain Discharge Points (M)		3	5	3	11
A	Transportation corridors - Railroads (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 - Repair shops (H)		5	3	3	11
B5	NPDES/WDR permitted discharges (H)		5	3	3	11
B10	Airports - Maintenance/fueling areas (VH)		7	1	3	11
B10	Automobile - Gas stations (VH)		7	1	3	11
B10	Dry cleaners (VH)		7	1	3	11
B10	Metal plating/ finishing/fabricating (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 contaminant potentially associated with this activity has been detected in the water supply.**

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-5 **Source No.** 027 **PS Code** 1910179-027

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Office buildings/complexes (L)		1	5	3	9
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
A	Wells - monitoring, test holes (L)		1	5	3	9
B5	Drinking water treatment plants (M)		3	3	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	Storm Drain Discharge Points (M)		3	3	3	9
B5	Transportation corridors - Railroads (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 - Body shops (H)		5	1	3	9
B10	Chemical/petroleum pipelines (H)		5	1	3	9
B10	Machine shops (H)		5	1	3	9
B10	NPDES/WDR permitted discharges (H)		5	1	3	9
B10	Photo processing/printing (H)		5	1	3	9
A	Illegal activities/unauthorized dumping (H)		5	0	3	8
B5	Illegal activities/unauthorized dumping (H)		5	0	3	8
B10	Illegal activities/unauthorized dumping (H)		5	0	3	8

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

Explanation of Source Water Assessments and Definition of Terms

A source water assessment was recently completed for this drinking water source. The assessment identifies the vulnerability of the drinking water supply to contamination from typical human activities. The assessments are intended to facilitate and provide the basic information necessary for a local community to develop a program to protect the drinking water supply.

A summary of the complete assessment is provided here. For more information, contact the agency or individual that prepared the assessment (shown in summary). You may also contact the local Department of Health Services Drinking Water Field Operations Branch district office (http://www.dhs.ca.gov/ps/ddwem/technical/dwp/districtofficesmap.pdf). Additional information about assessments can be found at: http://www.dhs.ca.gov/ps/ddwem/dwsap/FAQ.htm

Terms used in this summary:

Source Water Assessment: An assessment is an evaluation of a drinking water source to determine the "possible contaminating activities" (PCAs) to which the source is most vulnerable. The assessment includes: a delineation of protection zones around the source; an inventory of the types of PCAs within the source protection zones; and an analysis to determine the PCAs to which the source is most vulnerable. The information is compiled into a report that includes a map, calculations, checklists, and a summary of the findings.

Possible Contaminating Activity (PCA): A PCA is a current or historic human activity that is an actual or potential origin of contamination for a drinking water source. PCAs include activities that use, store, produce or dispose of chemicals that have the potential to contaminate drinking water supplies. There are 110 types of PCAs in the California DWSAP program.

PCA Risk Ranking: Each type of PCA is assigned a risk ranking (Very High, High, Moderate, or Low). The risk ranking is based on the contaminant(s) typically associated with that PCA, the likelihood of release from that type of facility based on historical experience, and the mobility of the contaminant(s).

PCA Inventory: The PCA inventory is a review using local knowledge, databases, and on-site evaluations to identify the occurrence and approximate location of PCAs in the source water zones. The inventory for the basic DWSAP assessments is a presence-absence review. If a type of PCA occurs in a zone, a "Yes" is noted in the inventory for that zone, regardless of whether there is one or many of that type of facility within the zone. If a PCA has been associated with a contaminant detected in the water supply, a notation is made in the PCA inventory.

Source Water Zones or Areas: These are areas located around and typically adjacent to a drinking water source that have been identified as initial protection areas.

For groundwater sources, there are typically three concentric circular zones around a source (Zones A, B5 and B10). The sizes of the are determined based on characteristics of the source. PCAs located in the inner Zone A are considered more of a risk to the water supply than PCAs located in the middle Zone B5. Similarly, PCAs located in Zone B5 are considered more of a risk than PCAs located in the outer Zone B10.

For surface water sources, the watershed is defined as the overall protection area, and as an option, zones are defined closer to the source. Two types of zones are typically established. Zone A is the area within and near the surface water body and its tributaries. Zone B is an area within 2,500 feet of the intake, not including areas in Zone A. For surface water sources, PCAs located in Zone A are considered a greater threat than PCAs located in Zone B. PCAs located on the watershed outside of the zones are considered to be of less risk to the water supply. If zones have not been defined, PCAs are considered to be of equal risk regardless of location on the watershed.

Physical Barrier Effectiveness (PBE): The PBE for a source is an evaluation of the ability of the source and the surrounding area to prevent the movement of contaminants into the source. The PBE is based on the construction and operation features of the source, and the characteristics of the surrounding area. A source is assigned a PBE of Low, Moderate or High, where High indicates that the physical barriers of the source and site are very effective in preventing the movement of contaminants. By design, typical groundwater sources will have Moderate PBE, while typical surface water sources will have Low PBE. This is due to the greater exposure of surface water sources to contamination.

Vulnerability Ranking: The vulnerability ranking is a summary of the PCAs identified in the assessment prioritized by the risk that they pose to the water supply. The prioritization is based on the risk associated with a PCA, the zone in which it occurs, and the PBE of the source. In the vulnerability ranking, points are assigned as follows:

PCA risk ranking	Very High = 7	High = 5	Moderate = 3	Low = 1	Unknown in any zone = 0
Zone (Groundwater)	A = 5	B5 = 3	B10 = 1		
Zone (Surface water with zones)	A = 5	B = 3	Watershed = 1		
Zone (Surface water without zones)	Watershed = 5				
Physical Barrier Effectiveness	Low = 5	Moderate = 3	High = 1		

The points for each type of PCA in each zone are totaled to give a vulnerability score, and the PCAs are ranked in order from the highest score to the lowest score. PCAs associated with detected contaminants are ranked at the top, regardless of vulnerability score. By definition, groundwater sources are not considered vulnerable to PCAs with scores less than 8, and surface water sources are not considered vulnerable to PCAs with scores less than 11. It should be noted that the vulnerability ranking scores do not have a direct quantitative value. Rather, the points are used only to relatively rank the types of PCAs for an individual source.

Note: Some of the summaries do not include a vulnerability ranking. If the assessment was done on paper and the details were not entered into the database, the vulnerability ranking is not available here. In addition, alternate methods of determining vulnerability were allowed in some cases, and the vulnerability ranking is not in the database.

Vulnerability Summary: The source is considered most vulnerable to the PCAs with the highest score, and to PCAs associated with detected contaminants. These PCAs are noted in the vulnerability summary. Further details or discussion may be provided in the vulnerability discussion.

Drinking Water Source Assessment

Water System

BURBANK-CITY, WATER DEPT.

Los Angeles County

Water Source

BURBANK OU WELL VO-6

Assessment Date

December, 2002

Assessment Completed By

City of Burbank

California Department of Health Services
Drinking Water Field Operations Branch
DHS Los Angeles District 7

District No.	**07**
System No.	**1910179**
Source No.	**028**
PS Code	**1910179-028**

Vulnerability Summary

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-6 **Source No.** 028 **PS Code** 1910179-028

Completed by City of Burbank **Date** December, 2002

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

A source water assessment was conducted for the **BURBANK OU WELL VO-6**

of the **BURBANK-CITY, WATER DEPT.** water system in **December, 2002** .

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Known Contaminant Plumes

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

Metal plating/ finishing/fabricating
Plastics/synthetics producers

Discussion of Vulnerability

A plume of Volitile Organic Contaminants (VOCs) was discovered in the San Fernando Basin. The primary contaminants are trichloroethelyene (TCE) and perchloroethylene (PCE). Burbank was added to the Superfund National Priority List by EPA leading to the construction of the Burbank Operable Unit. This is a treatment plant using air stripping and granular activated carbon to remove the contaminants from the extracted groundwater.

Possible Contaminating Activities with the highest ranking for this well are:
Metal plating. There are plating firms within the A, B5, and B10 protection zones.
Plastics producer. There is a plastics producer in the A zone.

A copy of the complete assessment may be viewed at:

Burbank Water and Power Department
164 W Magnolia Blvd
Burbank, CA 91502

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

Leighton Fong
Principal Civil Engineer
(818) 238-3500

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-6 **Source No.** 028 **PS Code** 1910179-028

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Known Contaminant Plumes (VH)	*	7	5	3	15
B5	Known Contaminant Plumes (VH)	*	7	3	3	13
B10	Known Contaminant Plumes (VH)	*	7	1	3	11
A	Metal plating/ finishing/fabricating (VH)		7	5	3	15
A	Plastics/synthetics producers (VH)		7	5	3	15
A	NPDES/WDR permitted discharges (H)		5	5	3	13
A	Photo processing/printing (H)		5	5	3	13
B5	Airports - Maintenance/fueling areas (VH)		7	3	3	13
B5	Automobile - Gas stations (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	Parks (M)		3	5	3	11
A	Storm Drain Discharge Points (M)		3	5	3	11
A	Transportation corridors - Railroads (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	NPDES/WDR permitted discharges (H)		5	3	3	11
B10	Airports - Maintenance/fueling areas (VH)		7	1	3	11
B10	Automobile - Gas stations (VH)		7	1	3	11
B10	Dry cleaners (VH)		7	1	3	11
B10	Metal plating/ finishing/fabricating (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	Office buildings/complexes (L)		1	5	3	9
A	Schools (L)		1	5	3	9

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

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-6 **Source No.** 028 **PS Code** 1910179-028

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Surface water - streams/lakes/rivers (L)		1	5	3	9
A	Transportation corridors - Roads/Streets (L)		1	5	3	9
A	Wells - monitoring, test holes (L)		1	5	3	9
B5	Construction/demolition staging areas (M)		3	3	3	9
B5	Contractor or government agency equipment storage yards (M)		3	3	3	9
B5	Drinking water treatment plants (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	Storm Drain Discharge Points (M)		3	3	3	9
B5	Transportation corridors - Railroads (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	Chemical/petroleum pipelines (H)		5	1	3	9
B10	Machine shops (H)		5	1	3	9
B10	NPDES/WDR permitted discharges (H)		5	1	3	9
B10	Photo processing/printing (H)		5	1	3	9
A	Illegal activities/unauthorized dumping (H)		5	0	3	8
B5	Illegal activities/unauthorized dumping (H)		5	0	3	8
B10	Illegal activities/unauthorized dumping (H)		5	0	3	8

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

Explanation of Source Water Assessments and Definition of Terms

A source water assessment was recently completed for this drinking water source. The assessment identifies the vulnerability of the drinking water supply to contamination from typical human activities. The assessments are intended to facilitate and provide the basic information necessary for a local community to develop a program to protect the drinking water supply.

A summary of the complete assessment is provided here. For more information, contact the agency or individual that prepared the assessment (shown in summary). You may also contact the local Department of Health Services Drinking Water Field Operations Branch district office (http://www.dhs.ca.gov/ps/ddwem/technical/dwp/districtofficesmap.pdf). Additional information about assessments can be found at: http://www.dhs.ca.gov/ps/ddwem/dwsap/FAQ.htm

Terms used in this summary:

Source Water Assessment: An assessment is an evaluation of a drinking water source to determine the "possible contaminating activities" (PCAs) to which the source is most vulnerable. The assessment includes: a delineation of protection zones around the source; an inventory of the types of PCAs within the source protection zones; and an analysis to determine the PCAs to which the source is most vulnerable. The information is compiled into a report that includes a map, calculations, checklists, and a summary of the findings.

Possible Contaminating Activity (PCA): A PCA is a current or historic human activity that is an actual or potential origin of contamination for a drinking water source. PCAs include activities that use, store, produce or dispose of chemicals that have the potential to contaminate drinking water supplies. There are 110 types of PCAs in the California DWSAP program.

PCA Risk Ranking: Each type of PCA is assigned a risk ranking (Very High, High, Moderate, or Low). The risk ranking is based on the contaminant(s) typically associated with that PCA, the likelihood of release from that type of facility based on historical experience, and the mobility of the contaminant(s).

PCA Inventory: The PCA inventory is a review using local knowledge, databases, and on-site evaluations to identify the occurrence and approximate location of PCAs in the source water zones. The inventory for the basic DWSAP assessments is a presence-absence review. If a type of PCA occurs in a zone, a "Yes" is noted in the inventory for that zone, regardless of whether there is one or many of that type of facility within the zone. If a PCA has been associated with a contaminant detected in the water supply, a notation is made in the PCA inventory.

Source Water Zones or Areas: These are areas located around and typically adjacent to a drinking water source that have been identified as initial protection areas.

For groundwater sources, there are typically three concentric circular zones around a source (Zones A, B5 and B10). The sizes of the are determined based on characteristics of the source. PCAs located in the inner Zone A are considered more of a risk to the water supply than PCAs located in the middle Zone B5. Similarly, PCAs located in Zone B5 are considered more of a risk than PCAs located in the outer Zone B10.

For surface water sources, the watershed is defined as the overall protection area, and as an option, zones are defined closer to the source. Two types of zones are typically established. Zone A is the area within and near the surface water body and its tributaries. Zone B is an area within 2,500 feet of the intake, not including areas in Zone A. For surface water sources, PCAs located in Zone A are considered a greater threat than PCAs located in Zone B. PCAs located on the watershed outside of the zones are considered to be of less risk to the water supply. If zones have not been defined, PCAs are considered to be of equal risk regardless of location on the watershed.

Physical Barrier Effectiveness (PBE): The PBE for a source is an evaluation of the ability of the source and the surrounding area to prevent the movement of contaminants into the source. The PBE is based on the construction and operation features of the source, and the characteristics of the surrounding area. A source is assigned a PBE of Low, Moderate or High, where High indicates that the physical barriers of the source and site are very effective in preventing the movement of contaminants. By design, typical groundwater sources will have Moderate PBE, while typical surface water sources will have Low PBE. This is due to the greater exposure of surface water sources to contamination.

Vulnerability Ranking: The vulnerability ranking is a summary of the PCAs identified in the assessment prioritized by the risk that they pose to the water supply. The prioritization is based on the risk associated with a PCA, the zone in which it occurs, and the PBE of the source. In the vulnerability ranking, points are assigned as follows:

PCA risk ranking	Very High = 7	High = 5	Moderate = 3	Low = 1	Unknown in any zone = 0
Zone (Groundwater)	A = 5	B5 = 3	B10 = 1		
Zone (Surface water with zones)	A = 5	B = 3	Watershed = 1		
Zone (Surface water without zones)	Watershed = 5				
Physical Barrier Effectiveness	Low = 5	Moderate = 3	High = 1		

The points for each type of PCA in each zone are totaled to give a vulnerability score, and the PCAs are ranked in order from the highest score to the lowest score. PCAs associated with detected contaminants are ranked at the top, regardless of vulnerability score. By definition, groundwater sources are not considered vulnerable to PCAs with scores less than 8, and surface water sources are not considered vulnerable to PCAs with scores less than 11. It should be noted that the vulnerability ranking scores do not have a direct quantitative value. Rather, the points are used only to relatively rank the types of PCAs for an individual source.

Note: Some of the summaries do not include a vulnerability ranking. If the assessment was done on paper and the details were not entered into the database, the vulnerability ranking is not available here. In addition, alternate methods of determining vulnerability were allowed in some cases, and the vulnerability ranking is not in the database.

Vulnerability Summary: The source is considered most vulnerable to the PCAs with the highest score, and to PCAs associated with detected contaminants. These PCAs are noted in the vulnerability summary. Further details or discussion may be provided in the vulnerability discussion.

Drinking Water Source Assessment

Water System

BURBANK-CITY, WATER DEPT.

Los Angeles County

Water Source

BURBANK OU WELL VO-7

Assessment Date

December, 2002

Assessment Completed By

City of Burbank

California Department of Health Services
Drinking Water Field Operations Branch
DHS Los Angeles District 7

District No.	**07**
System No.	**1910179**
Source No.	**029**
PS Code	**1910179-029**

Vulnerability Summary

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-7 **Source No.** 029 **PS Code** 1910179-029

Completed by City of Burbank **Date** December, 2002

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

A source water assessment was conducted for the **BURBANK OU WELL VO-7**

of the **BURBANK-CITY, WATER DEPT.** water system in **December, 2002** .

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Known Contaminant Plumes

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

Airports - Maintenance/fueling areas
Metal plating/ finishing/fabricating
Military installations
Plastics/synthetics producers
Underground storage tanks - Confirmed leaking tanks

Discussion of Vulnerability

A plume of Volitile Organic Contaminants (VOCs) was discovered in the San Fernando Basin. The primary contaminants are trichloroethelyene (TCE) and perchloroethylene (PCE). Burbank was added to the Superfund National Priority List by EPA leading to the construction of the Burbank Operable Unit. This is a treatment plant using air stripping and granular activated carbon to remove the contaminants from the extracted groundwater.

Possible Contaminating Activities with the highest ranking for this well are:
Airport. The Burbank Airport is within the A, B5, and B10 protection zones.
Metal plating. There are two plating firms within the B5 zone.
Military installation. The National Guard Armory is located in the A zone.
Plastics producer. There is a plastics producer in the A zone.
Underground storage tanks -confirmed leaking. There are confirmed leaking underground storage tanks within each of the protection zones.

Vulnerability Summary

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-7 **Source No.** 029 **PS Code** 1910179-029

Completed by City of Burbank **Date** December, 2002

A copy of the complete assessment may be viewed at:

Burbank Water and Power Department
164 W Magnolia Blvd
Burbank, CA 91502

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

Leighton Fong
Principal Civil Engineer
(818) 238-3500

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-7 **Source No.** 029 **PS Code** 1910179-029

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Known Contaminant Plumes (VH)	*	7	5	3	15
B5	Known Contaminant Plumes (VH)	*	7	3	3	13
B10	Known Contaminant Plumes (VH)	*	7	1	3	11
A	Airports - Maintenance/fueling areas (VH)		7	5	3	15
A	Metal plating/ finishing/fabricating (VH)		7	5	3	15
A	Military installations (VH)		7	5	3	15
A	Plastics/synthetics producers (VH)		7	5	3	15
A	Underground storage tanks - Confirmed leaking tanks (VH)		7	5	3	15
A	NPDES/WDR permitted discharges (H)		5	5	3	13
A	Photo processing/printing (H)		5	5	3	13
B5	Airports - Maintenance/fueling areas (VH)		7	3	3	13
B5	Automobile - Gas stations (VH)		7	3	3	13
B5	Underground storage tanks - Confirmed leaking tanks (VH)		7	3	3	13
A	Construction/demolition staging areas (M)		3	5	3	11
A	Housing - high density [>1 house/0.5 acres] (M)		3	5	3	11
A	Parks (M)		3	5	3	11
A	Storm Drain Discharge Points (M)		3	5	3	11
A	Transportation corridors - Railroads (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	NPDES/WDR permitted discharges (H)		5	3	3	11
B10	Airports - Maintenance/fueling areas (VH)		7	1	3	11
B10	Automobile - Gas stations (VH)		7	1	3	11
B10	Metal plating/ finishing/fabricating (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	Hotels, Motels (L)		1	5	3	9

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

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name BURBANK OU WELL VO-7 **Source No.** 029 **PS Code** 1910179-029

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Office buildings/complexes (L)		1	5	3	9
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
A	Wells - monitoring, test holes (L)		1	5	3	9
B5	Drinking water treatment plants (M)		3	3	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	Storm Drain Discharge Points (M)		3	3	3	9
B5	Transportation corridors - Railroads (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	Machine shops (H)		5	1	3	9
B10	NPDES/WDR permitted discharges (H)		5	1	3	9
B10	Photo processing/printing (H)		5	1	3	9
A	Illegal activities/unauthorized dumping (H)		5	0	3	8
B5	Illegal activities/unauthorized dumping (H)		5	0	3	8
B10	Illegal activities/unauthorized dumping (H)		5	0	3	8

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

Explanation of Source Water Assessments and Definition of Terms

A source water assessment was recently completed for this drinking water source. The assessment identifies the vulnerability of the drinking water supply to contamination from typical human activities. The assessments are intended to facilitate and provide the basic information necessary for a local community to develop a program to protect the drinking water supply.

A summary of the complete assessment is provided here. For more information, contact the agency or individual that prepared the assessment (shown in summary). You may also contact the local Department of Health Services Drinking Water Field Operations Branch district office (http://www.dhs.ca.gov/ps/ddwem/technical/dwp/districtofficesmap.pdf). Additional information about assessments can be found at: http://www.dhs.ca.gov/ps/ddwem/dwsap/FAQ.htm

Terms used in this summary:

Source Water Assessment: An assessment is an evaluation of a drinking water source to determine the "possible contaminating activities" (PCAs) to which the source is most vulnerable. The assessment includes: a delineation of protection zones around the source; an inventory of the types of PCAs within the source protection zones; and an analysis to determine the PCAs to which the source is most vulnerable. The information is compiled into a report that includes a map, calculations, checklists, and a summary of the findings.

Possible Contaminating Activity (PCA): A PCA is a current or historic human activity that is an actual or potential origin of contamination for a drinking water source. PCAs include activities that use, store, produce or dispose of chemicals that have the potential to contaminate drinking water supplies. There are 110 types of PCAs in the California DWSAP program.

PCA Risk Ranking: Each type of PCA is assigned a risk ranking (Very High, High, Moderate, or Low). The risk ranking is based on the contaminant(s) typically associated with that PCA, the likelihood of release from that type of facility based on historical experience, and the mobility of the contaminant(s).

PCA Inventory: The PCA inventory is a review using local knowledge, databases, and on-site evaluations to identify the occurrence and approximate location of PCAs in the source water zones. The inventory for the basic DWSAP assessments is a presence-absence review. If a type of PCA occurs in a zone, a "Yes" is noted in the inventory for that zone, regardless of whether there is one or many of that type of facility within the zone. If a PCA has been associated with a contaminant detected in the water supply, a notation is made in the PCA inventory.

Source Water Zones or Areas: These are areas located around and typically adjacent to a drinking water source that have been identified as initial protection areas.

For groundwater sources, there are typically three concentric circular zones around a source (Zones A, B5 and B10). The sizes of the are determined based on characteristics of the source. PCAs located in the inner Zone A are considered more of a risk to the water supply than PCAs located in the middle Zone B5. Similarly, PCAs located in Zone B5 are considered more of a risk than PCAs located in the outer Zone B10.

For surface water sources, the watershed is defined as the overall protection area, and as an option, zones are defined closer to the source. Two types of zones are typically established. Zone A is the area within and near the surface water body and its tributaries. Zone B is an area within 2,500 feet of the intake, not including areas in Zone A. For surface water sources, PCAs located in Zone A are considered a greater threat than PCAs located in Zone B. PCAs located on the watershed outside of the zones are considered to be of less risk to the water supply. If zones have not been defined, PCAs are considered to be of equal risk regardless of location on the watershed.

Physical Barrier Effectiveness (PBE): The PBE for a source is an evaluation of the ability of the source and the surrounding area to prevent the movement of contaminants into the source. The PBE is based on the construction and operation features of the source, and the characteristics of the surrounding area. A source is assigned a PBE of Low, Moderate or High, where High indicates that the physical barriers of the source and site are very effective in preventing the movement of contaminants. By design, typical groundwater sources will have Moderate PBE, while typical surface water sources will have Low PBE. This is due to the greater exposure of surface water sources to contamination.

Vulnerability Ranking: The vulnerability ranking is a summary of the PCAs identified in the assessment prioritized by the risk that they pose to the water supply. The prioritization is based on the risk associated with a PCA, the zone in which it occurs, and the PBE of the source. In the vulnerability ranking, points are assigned as follows:

PCA risk ranking	Very High = 7	High = 5	Moderate = 3	Low = 1	Unknown in any zone = 0
Zone (Groundwater)	A = 5	B5 = 3	B10 = 1		
Zone (Surface water with zones)	A = 5	B = 3	Watershed = 1		
Zone (Surface water without zones)	Watershed = 5				
Physical Barrier Effectiveness	Low = 5	Moderate = 3	High = 1		

The points for each type of PCA in each zone are totaled to give a vulnerability score, and the PCAs are ranked in order from the highest score to the lowest score. PCAs associated with detected contaminants are ranked at the top, regardless of vulnerability score. By definition, groundwater sources are not considered vulnerable to PCAs with scores less than 8, and surface water sources are not considered vulnerable to PCAs with scores less than 11. It should be noted that the vulnerability ranking scores do not have a direct quantitative value. Rather, the points are used only to relatively rank the types of PCAs for an individual source.

Note: Some of the summaries do not include a vulnerability ranking. If the assessment was done on paper and the details were not entered into the database, the vulnerability ranking is not available here. In addition, alternate methods of determining vulnerability were allowed in some cases, and the vulnerability ranking is not in the database.

Vulnerability Summary: The source is considered most vulnerable to the PCAs with the highest score, and to PCAs associated with detected contaminants. These PCAs are noted in the vulnerability summary. Further details or discussion may be provided in the vulnerability discussion.

Drinking Water Source Assessment

Water System

BURBANK-CITY, WATER DEPT.

Los Angeles County

Water Source

WELL VO-8 (OLD BURBANK WELL 10)

Assessment Date

December, 2002

Assessment Completed By

City of Burbank

California Department of Health Services
Drinking Water Field Operations Branch
DHS Los Angeles District 7

District No.	**07**
System No.	**1910179**
Source No.	**004**
PS Code	**1910179-004**

Vulnerability Summary

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name WELL VO-8 (OLD BURBANK WELL **Source No.** 004 **PS Code** 1910179-004

Completed by City of Burbank **Date** December, 2002

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

A source water assessment was conducted for the **WELL VO-8 (OLD BURBANK WELL 10)**

of the **BURBANK-CITY, WATER DEPT.** water system in **December, 2002** .

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Known Contaminant Plumes

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

Metal plating/ finishing/fabricating
Plastics/synthetics producers

Discussion of Vulnerability

A plume of Volitile Organic Contaminants (VOCs) was discovered in the San Fernando Basin. The primary contaminants are trichloroethelyene (TCE) and perchloroethylene (PCE). Burbank was added to the Superfund National Priority List by EPA leading to the construction of the Burbank Operable Unit. This is a treatment plant using air stripping and granular activated carbon to remove the contaminants from the extracted groundwater.

Possible Contaminating Activities with the highest ranking for this well are:
Metal plating. There is a plating firm within the A protection zone.
Plastics producer. There is a plastics producer in the A protection zone.

A copy of the complete assessment may be viewed at:

Burbank Water and Power Department
164 W Magnolia Blvd
Burbank, CA 91502

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

Leighton Fong
Principal Civil Engineer
(818) 238-3500

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name WELL VO-8 (OLD BURBANK WELL **Source No.** 004 **PS Code** 1910179-004

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Known Contaminant Plumes (VH)	*	7	5	3	15
B5	Known Contaminant Plumes (VH)	*	7	3	3	13
B10	Known Contaminant Plumes (VH)	*	7	1	3	11
A	Metal plating/ finishing/fabricating (VH)		7	5	3	15
A	Plastics/synthetics producers (VH)		7	5	3	15
A	NPDES/WDR permitted discharges (H)		5	5	3	13
A	Photo processing/printing (H)		5	5	3	13
B5	Automobile - Gas stations (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	Drinking water treatment plants (M)		3	5	3	11
A	Housing - high density [>1 house/0.5 acres] (M)		3	5	3	11
A	Parks (M)		3	5	3	11
A	Storm Drain Discharge Points (M)		3	5	3	11
A	Transportation corridors - Railroads (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	NPDES/WDR permitted discharges (H)		5	3	3	11
B10	Airports - Maintenance/fueling areas (VH)		7	1	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	Apartments and condominiums (L)		1	5	3	9
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
A	Wells - monitoring, test holes (L)		1	5	3	9

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

Vulnerability Ranking

District Name DHS Los Angeles District 7 **District No.** 07 **County** Los Angeles

System Name BURBANK-CITY, WATER DEPT. **System No.** 1910179

Source Name WELL VO-8 (OLD BURBANK WELL **Source No.** 004 **PS Code** 1910179-004

Completed by City of Burbank **Date** December, 2002

The following PCAs were identified in the assessment and are listed in priority order based on risk to the water supply. Refer to the last page for more information.

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
B5	Construction/demolition staging areas (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	Storm Drain Discharge Points (M)		3	3	3	9
B5	Transportation corridors - Railroads (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	Machine shops (H)		5	1	3	9
B10	NPDES/WDR permitted discharges (H)		5	1	3	9
A	Illegal activities/unauthorized dumping (H)		5	0	3	8
B5	Illegal activities/unauthorized dumping (H)		5	0	3	8
B10	Illegal activities/unauthorized dumping (H)		5	0	3	8

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

Explanation of Source Water Assessments and Definition of Terms

A source water assessment was recently completed for this drinking water source. The assessment identifies the vulnerability of the drinking water supply to contamination from typical human activities. The assessments are intended to facilitate and provide the basic information necessary for a local community to develop a program to protect the drinking water supply.

A summary of the complete assessment is provided here. For more information, contact the agency or individual that prepared the assessment (shown in summary). You may also contact the local Department of Health Services Drinking Water Field Operations Branch district office (http://www.dhs.ca.gov/ps/ddwem/technical/dwp/districtofficesmap.pdf). Additional information about assessments can be found at: http://www.dhs.ca.gov/ps/ddwem/dwsap/FAQ.htm

Terms used in this summary:

Source Water Assessment: An assessment is an evaluation of a drinking water source to determine the "possible contaminating activities" (PCAs) to which the source is most vulnerable. The assessment includes: a delineation of protection zones around the source; an inventory of the types of PCAs within the source protection zones; and an analysis to determine the PCAs to which the source is most vulnerable. The information is compiled into a report that includes a map, calculations, checklists, and a summary of the findings.

Possible Contaminating Activity (PCA): A PCA is a current or historic human activity that is an actual or potential origin of contamination for a drinking water source. PCAs include activities that use, store, produce or dispose of chemicals that have the potential to contaminate drinking water supplies. There are 110 types of PCAs in the California DWSAP program.

PCA Risk Ranking: Each type of PCA is assigned a risk ranking (Very High, High, Moderate, or Low). The risk ranking is based on the contaminant(s) typically associated with that PCA, the likelihood of release from that type of facility based on historical experience, and the mobility of the contaminant(s).

PCA Inventory: The PCA inventory is a review using local knowledge, databases, and on-site evaluations to identify the occurrence and approximate location of PCAs in the source water zones. The inventory for the basic DWSAP assessments is a presence-absence review. If a type of PCA occurs in a zone, a "Yes" is noted in the inventory for that zone, regardless of whether there is one or many of that type of facility within the zone. If a PCA has been associated with a contaminant detected in the water supply, a notation is made in the PCA inventory.

Source Water Zones or Areas: These are areas located around and typically adjacent to a drinking water source that have been identified as initial protection areas.

For groundwater sources, there are typically three concentric circular zones around a source (Zones A, B5 and B10). The sizes of the are determined based on characteristics of the source. PCAs located in the inner Zone A are considered more of a risk to the water supply than PCAs located in the middle Zone B5. Similarly, PCAs located in Zone B5 are considered more of a risk than PCAs located in the outer Zone B10.

For surface water sources, the watershed is defined as the overall protection area, and as an option, zones are defined closer to the source. Two types of zones are typically established. Zone A is the area within and near the surface water body and its tributaries. Zone B is an area within 2,500 feet of the intake, not including areas in Zone A. For surface water sources, PCAs located in Zone A are considered a greater threat than PCAs located in Zone B. PCAs located on the watershed outside of the zones are considered to be of less risk to the water supply. If zones have not been defined, PCAs are considered to be of equal risk regardless of location on the watershed.

Physical Barrier Effectiveness (PBE): The PBE for a source is an evaluation of the ability of the source and the surrounding area to prevent the movement of contaminants into the source. The PBE is based on the construction and operation features of the source, and the characteristics of the surrounding area. A source is assigned a PBE of Low, Moderate or High, where High indicates that the physical barriers of the source and site are very effective in preventing the movement of contaminants. By design, typical groundwater sources will have Moderate PBE, while typical surface water sources will have Low PBE. This is due to the greater exposure of surface water sources to contamination.

Vulnerability Ranking: The vulnerability ranking is a summary of the PCAs identified in the assessment prioritized by the risk that they pose to the water supply. The prioritization is based on the risk associated with a PCA, the zone in which it occurs, and the PBE of the source. In the vulnerability ranking, points are assigned as follows:

PCA risk ranking	Very High = 7	High = 5	Moderate = 3	Low = 1	Unknown in any zone = 0
Zone (Groundwater)	A = 5	B5 = 3	B10 = 1		
Zone (Surface water with zones)	A = 5	B = 3	Watershed = 1		
Zone (Surface water without zones)	Watershed = 5				
Physical Barrier Effectiveness	Low = 5	Moderate = 3	High = 1		

The points for each type of PCA in each zone are totaled to give a vulnerability score, and the PCAs are ranked in order from the highest score to the lowest score. PCAs associated with detected contaminants are ranked at the top, regardless of vulnerability score. By definition, groundwater sources are not considered vulnerable to PCAs with scores less than 8, and surface water sources are not considered vulnerable to PCAs with scores less than 11. It should be noted that the vulnerability ranking scores do not have a direct quantitative value. Rather, the points are used only to relatively rank the types of PCAs for an individual source.

Note: Some of the summaries do not include a vulnerability ranking. If the assessment was done on paper and the details were not entered into the database, the vulnerability ranking is not available here. In addition, alternate methods of determining vulnerability were allowed in some cases, and the vulnerability ranking is not in the database.

Vulnerability Summary: The source is considered most vulnerable to the PCAs with the highest score, and to PCAs associated with detected contaminants. These PCAs are noted in the vulnerability summary. Further details or discussion may be provided in the vulnerability discussion.

Drinking Water Source Assessment

Water System

BURBANK-CITY, WATER DEPT.

Los Angeles County

Water Source

WELL 07

Assessment Date

October, 2002

California Department of Health Services
Drinking Water Field Operations Branch
City of Burbank

District No.	**P3**
System No.	**1910179**
Source No.	**002**
PS Code	**01N/14W-11Q01 S**

Assessment Summary

District Name: City of Burbank | District No.: P3 | County: Los Angeles

System Name: BURBANK-CITY, WATER DEPT. | System No.: 1910179

Source Name: WELL 07 | Source No.: 002 | PS Code: 01N/14W-11Q01 S

Completed by: Leighton Fong | Date: October, 2002

Description of System and Source

The City of Burbank water system is located in Los Angeles County and serves the City of Burbank. There are approximately 26,600 service connections serving a population of 104,000.

The drinking water source for the City of Burbank's water system is local ground water from the San Fernando Basin located in Upper Los Angeles River Area. The Watershed for the source includes approximately 328,500 acres. General land use is urban residential.

An additional water supply is imported surface water from the Colorado River and the California Aqueduct which the City purchases from the Metropolitan Water District of Southern California.

Assessment Procedures

The assessment of the source WELL 07 was conducted by the Burbank Water and Power Department. The following sources of information were used in the assessment: water system files, DHS files, Industrial Discharge records, business and telephone directories.

Procedures used to conduct the assessment include: compile well data, delineate well zones using Mapping Tool (swap.ice.ucdavis.edu), inventory possible contaminating activities(PCA), map PCAs, develop vulnerability ranking using TurboSWAP(developed by DHS).

Contents of this Assessment

Yes ☒	No ☐	**Assessment Summary**
Yes ☒	No ☐	**Vulnerability Summary**
Yes ☐	No ☒	**Source Location Form**
Yes ☒	No ☐	**Delineation of Ground Water Protection Zones**
Yes ☒	No ☐	**Physical Barrier Effectiveness Checklist**
Yes ☐	No ☒	**Source Data Sheet**
Yes ☒	No ☐	**Inventory of Possible Contaminating Activities**
Yes ☒	No ☐	**Vulnerability Ranking**
Yes ☒	No ☐	**Assessment Map**

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Summary

District Name City of Burbank District No. P3 County Los Angeles

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 07 Source No. 002 PS Code 01N/14W-11Q01 S

Completed by Leighton Fong Date October, 2002

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

A source water assessment was conducted for the **WELL 07**

of the **BURBANK-CITY, WATER DEPT.** water system in **October, 2002**

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Known Contaminant Plumes

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

Automobile- Gas stations
Metal plating/ finishing/fabricating
Plastics/synthetics producers
Underground storage tanks - Confirmed leaking tanks

Discussion of Vulnerability

A plume of Volitile Organic Contaminants (VOCs) was discovered in the San Fernando Basin. The primary contaminants are trichloroethelyene (TCE) and perchloroethylene (PCE). Burbank was added to the Superfund National Priority List by EPA leading to the construction of the Burbank Operable Unit. This is a treatment plant using air stripping and granular activated carbon to remove the contaminants from the extracted groundwater.

Possible Contaminating Activities with the highest ranking for this well are:
Automobile-Gas Station. There are gasoline stations within the A protection zone.
Metal plating. There are plating firms within the A, B5, and B10 zones.
Plastics producer. There is a plastics producer in the A zone.
Underground storage tanks -confirmed leaking. There are confirmed leaking underground storage tanks within the A, B5, and B10 protection zones.

A copy of the complete assessment may be viewed at:

Burbank Water and Power Department
164 W Magnolia Blvd
Burbank, CA 91502

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

Leighton Fong
Principal Civil Engineer
(818) 238-3500

Drinking Water Source Assessment and Protection (DWSAP) Program

Delineation of Ground Water Protection Zones

District Name City of Burbank District No. P3 County Los Angeles

System Name BURBANK-CITY. WATER DEPT. System No. 1910179

Source Name WELL 07 Source No. 002 PS Code 01N/14W-11Q01 S

Completed by Leighton Fong Date July, 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)	1,200	gallons/minute	
	1,936	acre feet/year	
	84,320,400	cubic feet/year	
Effective Porosity	0.20		[X] Default Value
Screened Interval of Well	185	feet	[ ] Default Value

Protection Zone	Calculated Value	Minimum Value	Radius of Protection Zone
Zone A - 2 Year TOT*	1,204 Feet	600 Feet	**1,204** Feet
Zone B5 - 5 Year TOT*	1,904 Feet	1,000 Feet	**1,904** Feet
Zone B10 - 10 Year TOT*	2,693 Feet	1,500 Feet	**2,693** Feet

Drinking Water Source Assessment and Protection (DWSAP) Program

Physical Barrier Effectiveness (PBE)

District Name: City of Burbank | District No.: P3 | County: Los Angeles

System Name: BURBANK-CITY, WATER DEPT. | System No.: 1910179

Source Name: WELL 07 | Source No.: 002 | PS Code: 01N/14W-11Q01 S

Completed by: Leighton Fong | Date: July, 2002

Parameter		Possible Points	This Source	Score
Type of Aquifer Confinement				
1. Unconfined, Semi-confined, Fractured Rock, Unknown Aquifer		0	X	0
2. Confined		50		
Aquifer Material (Unconfined Aquifers) 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	X	10
3. Fractured rock (Low Physical Barrier Effectiveness - no further questions required)		0		
Pathways of Contamination (All Aquifers) Presence of Abandoned or Improperly Destroyed Wells				
1. Present within Zone A (2 year TOT distance)	Yes	0		
	No	5		
	Unknown	0	X	0
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0		
	No	3		
	Unknown	0	X	0
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0		
	No	2		
	Unknown	0	X	0
Static Water Conditions (Unconfined Aquifers)				
Depth to Static Water (DTW) 95 feet	0 to 20 feet	0		
	20 to 50 feet	2		
	50 to 100 feet	6	X	6
	Greater than 100 feet	10		
	Unknown	0		
Well Operation (Unconfined Aquifers)				
Depth to Uppermost Perforations (DUP) 64 feet				
Maximum Pumping Rate of Well (Q) 1200 gallons/minute				
Length of Screened Interval (H) 185 feet				
	Less than 5	0	X	0
[DUP - DTW / Q/H] -4.78	Between 5 and 10	5		
	Greater than 10	10		
	Unknown	0		

Physical Barrier Effectiveness (PBE)

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 07 Source No. 002 PS Code 01N/14W-11Q01 S

Parameter		Possible Points	This Source	Score
Well Construction (All Aquifers)				
Sanitary Seal (Annular Seal) Depth 0 feet	None or less than 20 feet	0	X	0
	Between 20 and 50 feet	6		
	50 feet or greater	10		
	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	X	4
	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	X	1
	Unknown	0		
Security at well site	Not secure	0		
	Secure	5	X	5
	Unknown	0		

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

Maximum Score = 70

Score 26

Effectiveness Low

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name: City of Burbank | District No.: P3 | County: Los Angeles

System Name: BURBANK-CITY, WATER DEPT. | System No.: 1910179

Source Name: WELL 07 | Source No.: 002 | PS Code: 01N/14W-11Q01 S

Completed by: Leighton Fong | Date: July, 2002

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

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 07 Source No. 002 PS Code 01N/14W-11Q01 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Residential/Municipal Activities					
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 if in Zone A, otherwise M)	N	N	N		
Sewer collection systems (H, if in Zone A, otherwise L)	N	N	N		
Utility stations - maintenance areas (H)	Y	N	N		
Wastewater treatment plants (VH in Zone A, otherwise H)	N	N	Y		
Drinking water treatment plants (M)	Y	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	Y		
Waste transfer/recycling stations (M)	N	Y	Y		
artments and condominiums (L)	Y	Y	Y		
ampgrounds/ Recreational areas (L)	N	N	N		
Fire stations (L)	N	N	N		
RV Parks (L)	N	N	N		
Schools (L)	N	N	Y		
Hotels, Motels (L)	N	N	Y		
Other Activities					
NPDES/WDR permitted discharges (H)	Y	Y	Y		
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)	U	U	U		
Injection wells/ dry wells/ sumps (VH)	N	N	N		
Known Contaminant Plumes (VH)	Y	Y	Y	*	EPA Superfund site, TCE, PCE detected
Military installations (VH)	N	N	N		
Mining operations - Historic (VH)	N	N	N		
Mining operations - Active (VH)	N	N	N		
ining - Sand/Gravel (H)	N	N	N		
Wells - Oil, Gas, Geothermal (H)	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)

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 07 Source No. 002 PS Code 01N/14W-11Q01 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other Activities					
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)	U	U	U		
Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)	U	U	U		
Underground storage tanks - Not yet upgraded or registered tanks (H)	U	U	U		
Underground storage tanks - Upgraded and/or registered - active tanks (L)	U	U	U		
Above ground storage tanks (M)	N	N	N		
Wells - Water supply (M)	Y	N	N		
Construction/demolition staging areas (M)	N	N	N		
ntractor or government agency equipment storage ards (M)	N	N	N		
Dredging (M)	N	N	N		
Transportation corridors - Freeways/state highways (M)	Y	Y	Y		
Transportation corridors - Railroads (M)	Y	Y	Y		
Transportation corridors - Historic railroad right-of-ways (M)	N	N	N		
Transportation corridors - Road Right-of-ways (herbicide use areas) (M)	N	N	N		
Transportation corridors - Roads/ Streets (L)	Y	Y	Y		
Hospitals (M)	N	N	N		
Storm Drain Discharge Points (M)	Y	Y	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		
Artificial Recharge Projects - Spreading Basins (potable water) (L)	N	N	N		
Artificial Recharge Projects - Spreading Basins ıon-potable water) (M)	N	N	N		
edical/dental offices/clinics (L)	Y	Y	Y		

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)

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 07 Source No. 002 PS Code 01N/14W-11Q01 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other Activities					
Veterinary offices/clinics (L)	N	N	N		
Surface water - streams/ lakes/rivers (L)	Y	Y	Y		
Wells - monitoring, test holes (L)	Y	Y	Y		

Y = Yes N = No U = Unknown

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

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Ranking

District Name: City of Burbank | District No.: P3 | County: Los Angeles

System Name: BURBANK-CITY, WATER DEPT. | System No.: 1910179

Source Name: WELL 07 | Source No.: 002 | PS Code: 01N/14W-11Q01 S

Completed by: Leighton Fong | Date: October, 2002

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Known Contaminant Plumes (VH)	*	7	5	5	17
B5	Known Contaminant Plumes (VH)	*	7	3	5	15
B10	Known Contaminant Plumes (VH)	*	7	1	5	13
A	Automobile- Gas stations (VH)		7	5	5	17
A	Metal plating/ finishing/fabricating (VH)		7	5	5	17
A	Plastics/synthetics producers (VH)		7	5	5	17
A	Underground storage tanks - Confirmed leaking tanks (VH)		7	5	5	17
A	Automobile- Body shops (H)		5	5	5	15
A	Automobile- Repair shops (H)		5	5	5	15
A	Chemical/petroleum pipelines (H)		5	5	5	15
A	Electrical/electronic manufacturing (H)		5	5	5	15
A	Fleet/truck/bus terminals (H)		5	5	5	15
A	Lumber processing and manufacturing (H)		5	5	5	15
A	Machine shops (H)		5	5	5	15
A	Machine shops (H)		5	5	5	15
A	NPDES/WDR permitted discharges (H)		5	5	5	15
A	Photo processing/printing (H)		5	5	5	15
A	Utility stations - maintenance areas (H)		5	5	5	15
B5	Metal plating/ finishing/fabricating (VH)		7	3	5	15
B5	Underground storage tanks - Confirmed leaking tanks (VH)		7	3	5	15
A	Automobile- Car washes (M)		3	5	5	13
A	Drinking water treatment plants (M)		3	5	5	13
A	Food processing (M)		3	5	5	13
A	Housing - high density (>1 house/0.5 acres) (M)		3	5	5	13
A	Storm Drain Discharge Points (M)		3	5	5	13
A	Transportation corridors - Freeways/state highways (M)		3	5	5	13
A	Transportation corridors - Railroads (M)		3	5	5	13
A	Wells - Water supply (M)		3	5	5	13
B5	Automobile- Body shops (H)		5	3	5	13
B5	Automobile- Repair shops (H)		5	3	5	13

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

Vulnerability Ranking

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 07 Source No. 002 PS Code 01N/14W-11Q01 S

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
B5	Boat services/repair/ refinishing (H)		5	3	5	13
B5	Chemical/petroleum pipelines (H)		5	3	5	13
B5	Lumber processing and manufacturing (H)		5	3	5	13
B5	Machine shops (H)		5	3	5	13
B5	Machine shops (H)		5	3	5	13
B5	NPDES/WDR permitted discharges (H)		5	3	5	13
B5	Wood/pulp/paper processing and mills (H)		5	3	5	13
B10	Dry cleaners (VH)		7	1	5	13
B10	Metal plating/ finishing/fabricating (VH)		7	1	5	13
B10	Underground storage tanks - Confirmed leaking tanks (VH)		7	1	5	13
A	Apartments and condominiums (L)		1	5	5	11
A	Medical/dental offices/clinics (L)		1	5	5	11
A	RV/mini storage (L)		1	5	5	11
A	Rental Yards (L)		1	5	5	11
A	Surface water - streams/ lakes/rivers (L)		1	5	5	11
A	Transportation corridors - Roads/ Streets (L)		1	5	5	11
A	Wells - monitoring, test holes (L)		1	5	5	11
B5	Food processing (M)		3	3	5	11
B5	Hardware/lumber/parts stores (M)		3	3	5	11
B5	Housing - high density (>1 house/0.5 acres) (M)		3	3	5	11
B5	Storm Drain Discharge Points (M)		3	3	5	11
B5	Transportation corridors - Freeways/state highways (M)		3	3	5	11
B5	Transportation corridors - Railroads (M)		3	3	5	11
B5	Waste transfer/recycling stations (M)		3	3	5	11
B10	Automobile- Body shops (H)		5	1	5	11
B10	Automobile- Repair shops (H)		5	1	5	11
B10	Chemical/petroleum pipelines (H)		5	1	5	11
B10	Machine shops (H)		5	1	5	11
B10	Machine shops (H)		5	1	5	11
B10	NPDES/WDR permitted discharges (H)		5	1	5	11
B10	Wastewater treatment plants (VH in Zone A, otherwise H)		5	1	5	11
A	Illegal activities/ unauthorized dumping (H)		5	0	5	10

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

Vulnerability Ranking

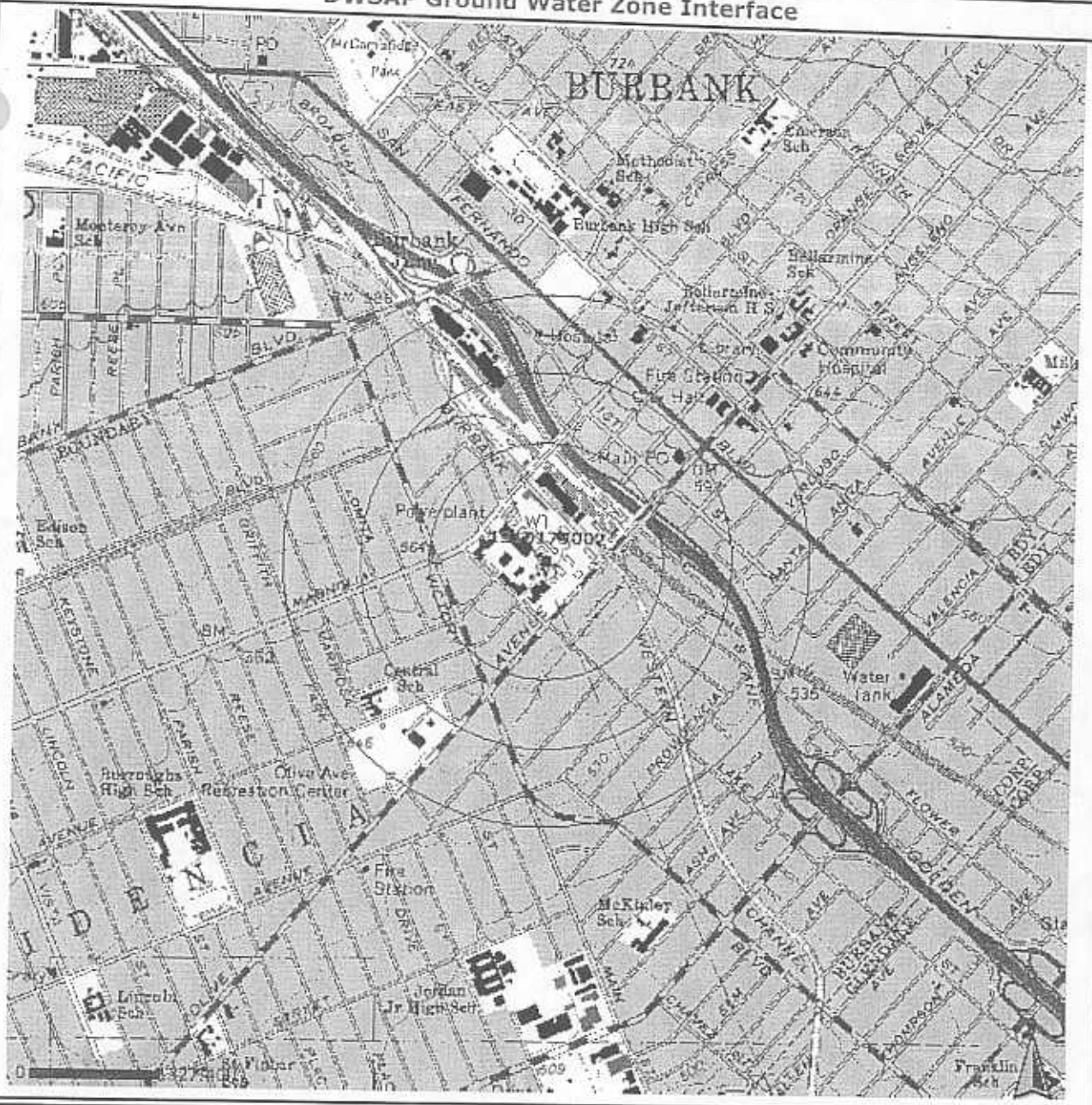
System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 07 Source No. 002 PS Code 01N/14W-11Q01 S

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)		5	0	5	10
A	Underground storage tanks - Not yet upgraded or registered tanks (H)		5	0	5	10
B5	Illegal activities/ unauthorized dumping (H)		5	0	5	10
B5	Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)		5	0	5	10
B5	Underground storage tanks - Not yet upgraded or registered tanks (H)		5	0	5	10
B10	Illegal activities/ unauthorized dumping (H)		5	0	5	10
B10	Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)		5	0	5	10
B10	Underground storage tanks - Not yet upgraded or registered tanks (H)		5	0	5	10
B5	Apartments and condominiums (L)		1	3	5	9
B5	Medical/dental offices/clinics (L)		1	3	5	9
B5	Office buildings/complexes (L)		1	3	5	9
B5	Surface water - streams/ lakes/rivers (L)		1	3	5	9
B5	Transportation corridors - Roads/ Streets (L)		1	3	5	9
B5	Wells - monitoring, test holes (L)		1	3	5	9
B10	Automobile- Car washes (M)		3	1	5	9
B10	Food processing (M)		3	1	5	9
B10	Housing - high density (>1 house/0.5 acres) (M)		3	1	5	9
B10	Parking lots/malls (>50 spaces) (M)		3	1	5	9
B10	Parks (M)		3	1	5	9
B10	Storm Drain Discharge Points (M)		3	1	5	9
B10	Transportation corridors - Freeways/state highways (M)		3	1	5	9
B10	Transportation corridors - Railroads (M)		3	1	5	9
B10	Waste transfer/recycling stations (M)		3	1	5	9

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

DWSAP Ground Water Zone Interface



Well Identification Information					
Well Number	**Longitude ***	**Latitude ***	**GPS'd**	* Well location coordinates have been rounded to 3 decimal places due to security concerns.	
1910179002	-118.314	34.177	Yes		
System Number	**System Name**	**Source Number**	**Source Name**	**District Number/Name**	**County Number/Name**
1910179	BURBANK-CITY, WATER DEPT.	002	WELL 07	07/Hollywood	19/Los Angeles County
Well Zone Delineation Information					
Media Type	**System Type**	**Effective Porosity (n)**	**Screened Interval (h)**	**Pumping Capacity (q)**	**Azimuth of Flow (a)**
Porous Media	All Other System	.20	185	1350 gpm	0 - No Translation
Radii Measures					
Defaults Used	**R2**	**R5**	**R10**		
No	1276 ft	2021 ft	2858 ft		

Drinking Water Source Assessment

Water System

BURBANK-CITY, WATER DEPT.

Los Angeles County

Water Source

WELL 15

Assessment Date

December, 2002

California Department of Health Services
Drinking Water Field Operations Branch
City of Burbank

District No.	**P3**
System No.	**1910179**
Source No.	**009**
PS Code	**01N/14W-14B08 S**

Assessment Summary

District Name: City of Burbank | District No.: P3 | County: Los Angeles

System Name: BURBANK-CITY, WATER DEPT. | System No.: 1910179

Source Name: WELL 15 | Source No.: 009 | PS Code: 01N/14W-14B08 S

Completed by: Leighton Fong | Date: December, 2002

Description of System and Source

The City of Burbank water system is located in Los Angeles County and serves the City of Burbank. There are approximately 26,600 service connections serving a population of 104,000.

The drinking water source for the City of Burbank's water system is local ground water from the San Fernando Basin located in Upper Los Angeles River Area. The Watershed for the source includes approximately 328,500 acres. General land use is urban residential.

An additional water supply is imported surface water from the Colorado River and the California Aqueduct which the City purchases from the Metropolitan Water District of Southern California.

Assessment Procedures

The assessment of the source WELL 15 was conducted by the Burbank Water and Power Department. The following sources of information were used in the assessment: water system files, DHS files, Industrial Discharge records, business and telephone directories.

Procedures used to conduct the assessment include: compile well data, delineate well zones using Mapping Tool (swap.ice.ucdavis.edu), inventory possible contaminating activities(PCA), map PCAs, develop vulnerability ranking using TurboSWAP(developed by DHS).

Contents of this Assessment

Yes [X]	No [ ]	**Assessment Summary**
Yes [X]	No [ ]	**Vulnerability Summary**
Yes [ ]	No [X]	**Source Location Form**
Yes [X]	No [ ]	**Delineation of Ground Water Protection Zones**
Yes [X]	No [ ]	**Physical Barrier Effectiveness Checklist**
Yes [ ]	No [X]	**Source Data Sheet**
Yes [X]	No [ ]	**Inventory of Possible Contaminating Activities**
Yes [X]	No [ ]	**Vulnerability Ranking**
Yes [X]	No [ ]	**Assessment Map**

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Summary

District Name: City of Burbank | District No.: P3 | County: Los Angeles

System Name: BURBANK-CITY, WATER DEPT. | System No.: 1910179

Source Name: WELL 15 | Source No.: 009 | PS Code: 01N/14W-14B08 S

Completed by: Leighton Fong | Date: December, 2002

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

A source water assessment was conducted for the WELL 15

of the BURBANK-CITY, WATER DEPT. water system in December, 2002.

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply:

Known Contaminant Plumes

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

Automobile- Gas stations
Metal plating/ finishing/fabricating
Underground storage tanks - Confirmed leaking tanks

Discussion of Vulnerability

A plume of Volitile Organic Contaminants (VOCs) was discovered in the San Fernando Basin. The primary contaminants are trichloroethelyene (TCE) and perchloroethylene (PCE). Burbank was added to the Superfund National Priority List by EPA leading to the construction of the Burbank Operable Unit. This is a treatment plant using air stripping and granular activated carbon to remove the contaminants from the extracted groundwater.

Possible Contaminating Activities with the highest ranking for this well are:

Automobile-Gas Station. There are gasoline stations within the A protection zone.

Metal plating. There are metal plating firms within the A, B5, and B10 protection zones.

Underground storage tanks -confirmed leaking. There were confirmed leaking underground storage tanks within the A, B5, and B10 protection zones.

A copy of the complete assessment may be viewed at:

Burbank Water and Power Department
164 W Magnolia Blvd
Burbank, CA 91502

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

Leighton Fong
Principal Civil Engineer
(818) 238-3500

Drinking Water Source Assessment and Protection (DWSAP) Program

Delineation of Ground Water Protection Zones

District Name City of Burbank District No. P3 County Los Angeles

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 15 Source No. 009 PS Code 01N/14W-14B08 S

Completed by Leighton Fong Date July, 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)	800	gallons/minute	
	1,290	acre feet/year	
	56,213,600	cubic feet/year	
Effective Porosity	0.20		[X] Default Value
Screened Interval of Well	106	feet	[ ] Default Value

Protection Zone	Calculated Value	Minimum Value	Radius of Protection Zone
Zone A - 2 Year TOT*	1,299 Feet	600 Feet	**1,299** Feet
Zone B5 - 5 Year TOT*	2,054 Feet	1,000 Feet	**2,054** Feet
Zone B10 - 10 Year TOT*	2,905 Feet	1,500 Feet	**2,905** Feet

Drinking Water Source Assessment and Protection (DWSAP) Program

Physical Barrier Effectiveness (PBE)

District Name: City of Burbank | District No.: P3 | County: Los Angeles

System Name: BURBANK-CITY, WATER DEPT. | System No.: 1910179

Source Name: WELL 15 | Source No.: 009 | PS Code: 01N/14W-14B08 S

Completed by: Leighton Fong | Date: July, 2002

Parameter		Possible Points	This Source	Score
Type of Aquifer Confinement				
1. Unconfined, Semi-confined, Fractured Rock, Unknown Aquifer		0	X	0
2. Confined		50		
Aquifer Material (Unconfined Aquifers) 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	X	10
3. Fractured rock (Low Physical Barrier Effectiveness - no further questions required)		0		
Pathways of Contamination (All Aquifers) Presence of Abandoned or Improperly Destroyed Wells				
1. Present within Zone A (2 year TOT distance)	Yes	0		
	No	5		
	Unknown	0	X	0
2. Present within Zone B5 (2 -5 year TOT distance)	Yes	0		
	No	3		
	Unknown	0	X	0
3. Present within Zone B10 (5-10 year TOT distance)	Yes	0		
	No	2		
	Unknown	0	X	0
Static Water Conditions (Unconfined Aquifers)				
Depth to Static Water (DTW) 85 feet	0 to 20 feet	0		
	20 to 50 feet	2		
	50 to 100 feet	6	X	6
	Greater than 100 feet	10		
	Unknown	0		
Well Operation (Unconfined Aquifers)				
Depth to Uppermost Perforations (DUP) 153 feet				
Maximum Pumping Rate of Well (Q) 800 gallons/minute				
Length of Screened Interval (H) 106 feet				
	Less than 5	0		
[DUP - DTW / Q/H] 9.01	Between 5 and 10	5	X	5
	Greater than 10	10		
	Unknown	0		

Physical Barrier Effectiveness (PBE)

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 15 Source No. 009 PS Code 01N/14W-14B08 S

Parameter		Possible Points	This Source	Score
Well Construction (All Aquifers)				
Sanitary Seal (Annular Seal) Depth 0 feet	None or less than 20 feet	0	X	0
	Between 20 and 50 feet	6		
	50 feet or greater	10		
	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	X	4
	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	X	1
	Unknown	0		
Security at well site	Not secure	0		
	Secure	5	X	5
	Unknown	0		

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

Maximum Score = 70

Score 31

Effectiveness Low

Drinking Water Source Assessment and Protection (DWSAP) Program

Inventory of Possible Contaminating Activities (PCA Inventory)

District Name: City of Burbank | District No.: P3 | County: Los Angeles

System Name: BURBANK-CITY, WATER DEPT. | System No.: 1910179

Source Name: WELL 15 | Source No.: 009 | PS Code: 01N/14W-14B08 S

Completed by: Leighton Fong | Date: October, 2002

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

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 15 Source No. 009 PS Code 01N/14W-14B08 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Residential/Municipal Activities					
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 if in Zone A, otherwise M)	N	N	N		
Sewer collection systems (H, if in Zone A, otherwise L)	N	N	N		
Utility stations - maintenance areas (H)	Y	N	N		
Wastewater treatment plants (VH in Zone A, otherwise H)	N	N	Y		
Drinking water treatment plants (M)	Y	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	Y		
Apartments and condominiums (L)	Y	Y	Y		
Campgrounds/ Recreational areas (L)	N	N	N		
Fire stations (L)	N	N	Y		
RV Parks (L)	N	N	N		
Schools (L)	N	Y	N		
Hotels, Motels (L)	N	N	Y		
Other Activities					
NPDES/WDR permitted discharges (H)	Y	Y	Y		
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)	U	U	U		
Injection wells/ dry wells/ sumps (VH)	N	N	N		
Known Contaminant Plumes (VH)	Y	Y	Y	*	EPA Superfund Site, TCE, PCE detected
Military installations (VH)	N	N	N		
Mining operations - Historic (VH)	N	N	N		
Mining operations - Active (VH)	N	N	N		
Mining - Sand/Gravel (H)	N	N	N		
Wells - Oil, Gas, Geothermal (H)	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)

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 15 Source No. 009 PS Code 01N/14W-14B08 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other Activities					
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)	U	U	U		
Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)	U	U	U		
Underground storage tanks - Not yet upgraded or registered tanks (H)	U	U	U		
Underground storage tanks - Upgraded and/or registered - active tanks (L)	U	U	U		
Above ground storage tanks (M)	N	N	N		
Wells - Water supply (M)	Y	Y	N		
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)	Y	Y	Y		
Transportation corridors - Railroads (M)	Y	Y	Y		
Transportation corridors - Historic railroad right-of-ways (M)	N	N	N		
Transportation corridors - Road Right-of-ways (herbicide use areas) (M)	N	N	N		
Transportation corridors - Roads/ Streets (L)	Y	Y	Y		
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		
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)	Y	Y	Y		

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)

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 15 Source No. 009 PS Code 01N/14W-14B08 S

PCA (Risk Ranking)	PCA in Zone A	PCA in Zone B5	PCA in Zone B10	*	Comments
Other Activities					
Veterinary offices/clinics (L)	N	N	N		
Surface water - streams/ lakes/rivers (L)	Y	Y	Y		
Wells - monitoring, test holes (L)	Y	Y	Y		

Y = Yes N = No U = Unknown

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

Drinking Water Source Assessment and Protection (DWSAP) Program

Vulnerability Ranking

District Name: City of Burbank District No.: P3 County: Los Angeles

System Name: BURBANK-CITY, WATER DEPT. System No.: 1910179

Source Name: WELL 15 Source No.: 009 PS Code: 01N/14W-14B08 S

Completed by: Leighton Fong Date: October, 2002

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
A	Known Contaminant Plumes (VH)	*	7	5	5	17
B5	Known Contaminant Plumes (VH)	*	7	3	5	15
B10	Known Contaminant Plumes (VH)	*	7	1	5	13
A	Automobile- Gas stations (VH)		7	5	5	17
A	Metal plating/ finishing/fabricating (VH)		7	5	5	17
A	Underground storage tanks - Confirmed leaking tanks (VH)		7	5	5	17
A	Automobile- Body shops (H)		5	5	5	15
A	Automobile- Repair shops (H)		5	5	5	15
A	Chemical/petroleum pipelines (H)		5	5	5	15
A	Electrical/electronic manufacturing (H)		5	5	5	15
A	Machine shops (H)		5	5	5	15
A	Machine shops (H)		5	5	5	15
A	NPDES/WDR permitted discharges (H)		5	5	5	15
A	Photo processing/printing (H)		5	5	5	15
A	Utility stations - maintenance areas (H)		5	5	5	15
B5	Metal plating/ finishing/fabricating (VH)		7	3	5	15
B5	Plastics/synthetics producers (VH)		7	3	5	15
B5	Underground storage tanks - Confirmed leaking tanks (VH)		7	3	5	15
A	Automobile- Car washes (M)		3	5	5	13
A	Drinking water treatment plants (M)		3	5	5	13
A	Food processing (M)		3	5	5	13
A	Housing - high density (>1 house/0.5 acres) (M)		3	5	5	13
A	Transportation corridors - Freeways/state highways (M)		3	5	5	13
A	Transportation corridors - Railroads (M)		3	5	5	13
A	Wells - Water supply (M)		3	5	5	13
B5	Automobile- Body shops (H)		5	3	5	13
B5	Automobile- Repair shops (H)		5	3	5	13
B5	Boat services/repair/ refinishing (H)		5	3	5	13
B5	Chemical/petroleum pipelines (H)		5	3	5	13
B5	Lumber processing and manufacturing (H)		5	3	5	13

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

Vulnerability Ranking

System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 15 Source No. 009 PS Code 01N/14W-14B08 S

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
B5	Machine shops (H)		5	3	5	13
B5	Machine shops (H)		5	3	5	13
B5	NPDES/WDR permitted discharges (H)		5	3	5	13
B5	Wood/pulp/paper processing and mills (H)		5	3	5	13
B10	Dry cleaners (VH)		7	1	5	13
B10	Metal plating/ finishing/fabricating (VH)		7	1	5	13
B10	Underground storage tanks - Confirmed leaking tanks (VH)		7	1	5	13
A	Apartments and condominiums (L)		1	5	5	11
A	Medical/dental offices/clinics (L)		1	5	5	11
A	RV/mini storage (L)		1	5	5	11
A	Rental Yards (L)		1	5	5	11
A	Surface water - streams/ lakes/rivers (L)		1	5	5	11
A	Transportation corridors - Roads/ Streets (L)		1	5	5	11
A	Wells - monitoring, test holes (L)		1	5	5	11
B5	Food processing (M)		3	3	5	11
B5	Hardware/lumber/parts stores (M)		3	3	5	11
B5	Housing - high density (>1 house/0.5 acres) (M)		3	3	5	11
B5	Parks (M)		3	3	5	11
B5	Transportation corridors - Freeways/state highways (M)		3	3	5	11
B5	Transportation corridors - Railroads (M)		3	3	5	11
B5	Wells - Water supply (M)		3	3	5	11
B10	Automobile- Body shops (H)		5	1	5	11
B10	Automobile- Repair shops (H)		5	1	5	11
B10	Chemical/petroleum pipelines (H)		5	1	5	11
B10	Machine shops (H)		5	1	5	11
B10	Machine shops (H)		5	1	5	11
B10	NPDES/WDR permitted discharges (H)		5	1	5	11
B10	Wastewater treatment plants (VH in Zone A, otherwise H)		5	1	5	11
A	Illegal activities/ unauthorized dumping (H)		5	0	5	10
A	Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)		5	0	5	10
A	Underground storage tanks - Not yet upgraded or registered tanks (H)		5	0	5	10
B5	Illegal activities/ unauthorized dumping (H)		5	0	5	10

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

Vulnerability Ranking

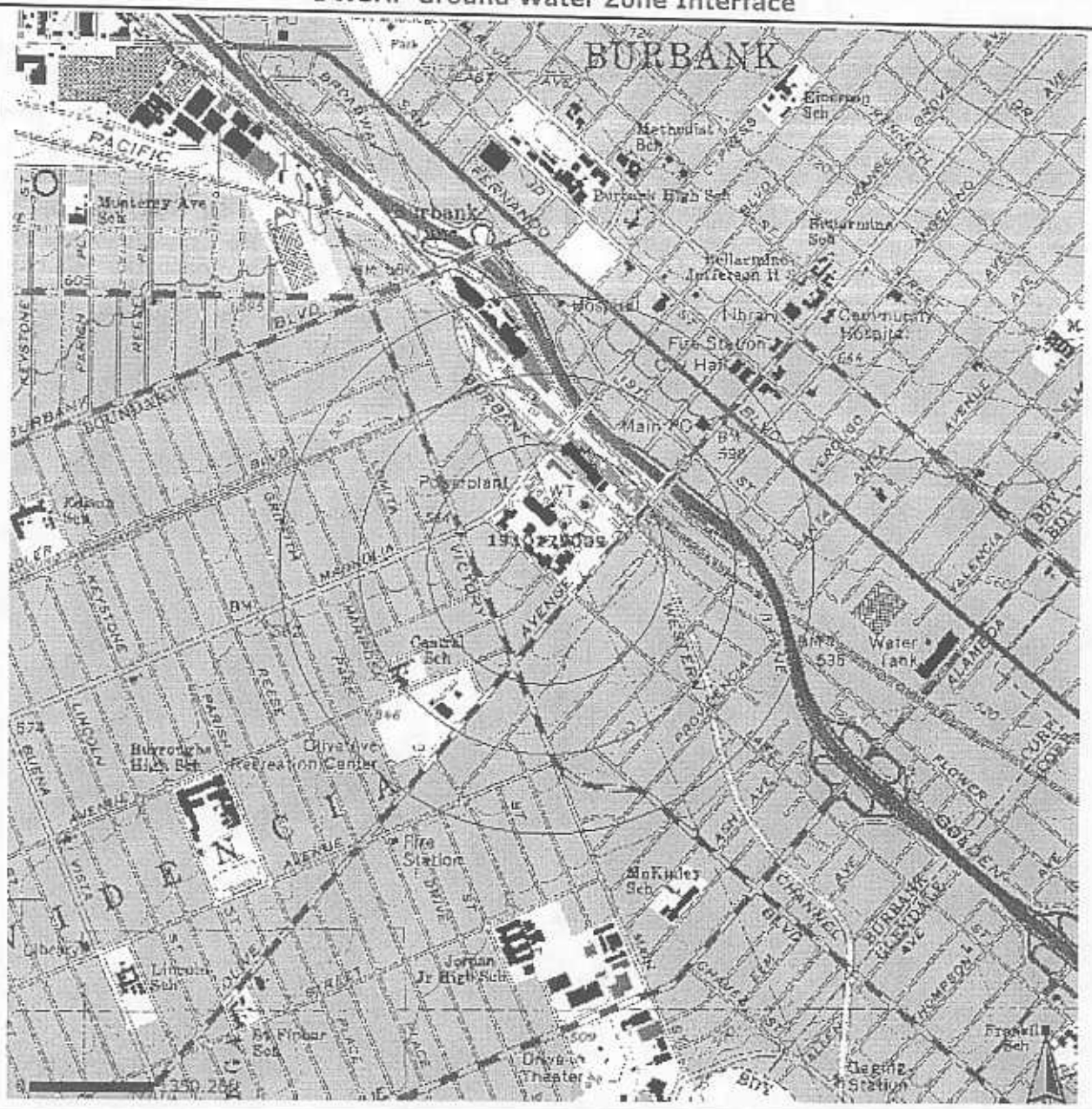
System Name BURBANK-CITY, WATER DEPT. System No. 1910179

Source Name WELL 15 Source No. 009 PS Code 01N/14W-14B08 S

Zone	PCA (Risk Ranking)	*	PCA Risk Points	Zone Points	PBE Points	Vulnerability Score
B5	Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)		5	0	5	10
B5	Underground storage tanks - Not yet upgraded or registered tanks (H)		5	0	5	10
B10	Illegal activities/ unauthorized dumping (H)		5	0	5	10
B10	Underground storage tanks - Non-regulated tanks (tanks smaller than regulatory limit) (H)		5	0	5	10
B10	Underground storage tanks - Not yet upgraded or registered tanks (H)		5	0	5	10
B5	Apartments and condominiums (L)		1	3	5	9
B5	Medical/dental offices/clinics (L)		1	3	5	9
B5	Office buildings/complexes (L)		1	3	5	9
B5	Schools (L)		1	3	5	9
B5	Surface water - streams/ lakes/rivers (L)		1	3	5	9
B5	Transportation corridors - Roads/ Streets (L)		1	3	5	9
B5	Wells - monitoring, test holes (L)		1	3	5	9
B10	Automobile- Car washes (M)		3	1	5	9
B10	Food processing (M)		3	1	5	9
B10	Funeral services/graveyards (M)		3	1	5	9
B10	Housing - high density (>1 house/0.5 acres) (M)		3	1	5	9
B10	Parking lots/malls (>50 spaces) (M)		3	1	5	9
B10	Parks (M)		3	1	5	9
B10	Transportation corridors - Freeways/state highways (M)		3	1	5	9
B10	Transportation corridors - Railroads (M)		3	1	5	9
B10	Waste transfer/recycling stations (M)		3	1	5	9

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

DWSAP Ground Water Zone Interface



Well Identification Information					
Well Number	**Longitude ***	**Latitude ***	**GPS'd**	* Well location coordinates have been rounded to 3 decimal places due to security concerns.	
1910179009	-118.315	34.176	Yes		
System Number	**System Name**	**Source Number**	**Source Name**	**District Number/Name**	**County Number/Name**
1910179	BURBANK-CITY, WATER DEPT.	009	WELL 15	07/Hollywood	19/Los Angeles County
Well Zone Delineation Information					
Media Type	**System Type**	**Effective Porosity (n)**	**Screened Interval (h)**	**Pumping Capacity (q)**	**Azimuth of Flow (a)**
Porous Media	All Other System	.20	106	800 gpm	0 - No Translation
Radii Measures					
Defaults Used	**R2**	**R5**	**R10**		
No	1299 ft	2054 ft	2907 ft		