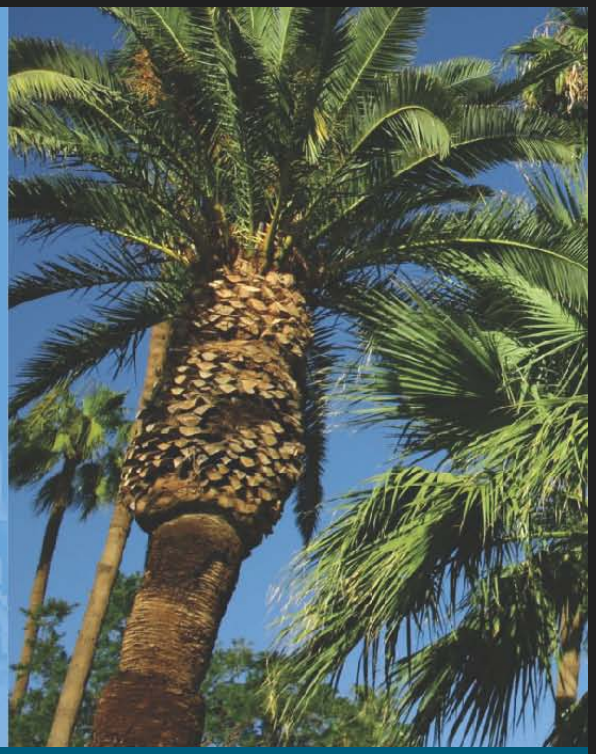


Los Angeles Gateway Region
Integrated Water Management Joint Powers Authority

Development of the

Integrated Regional Water Management Plan

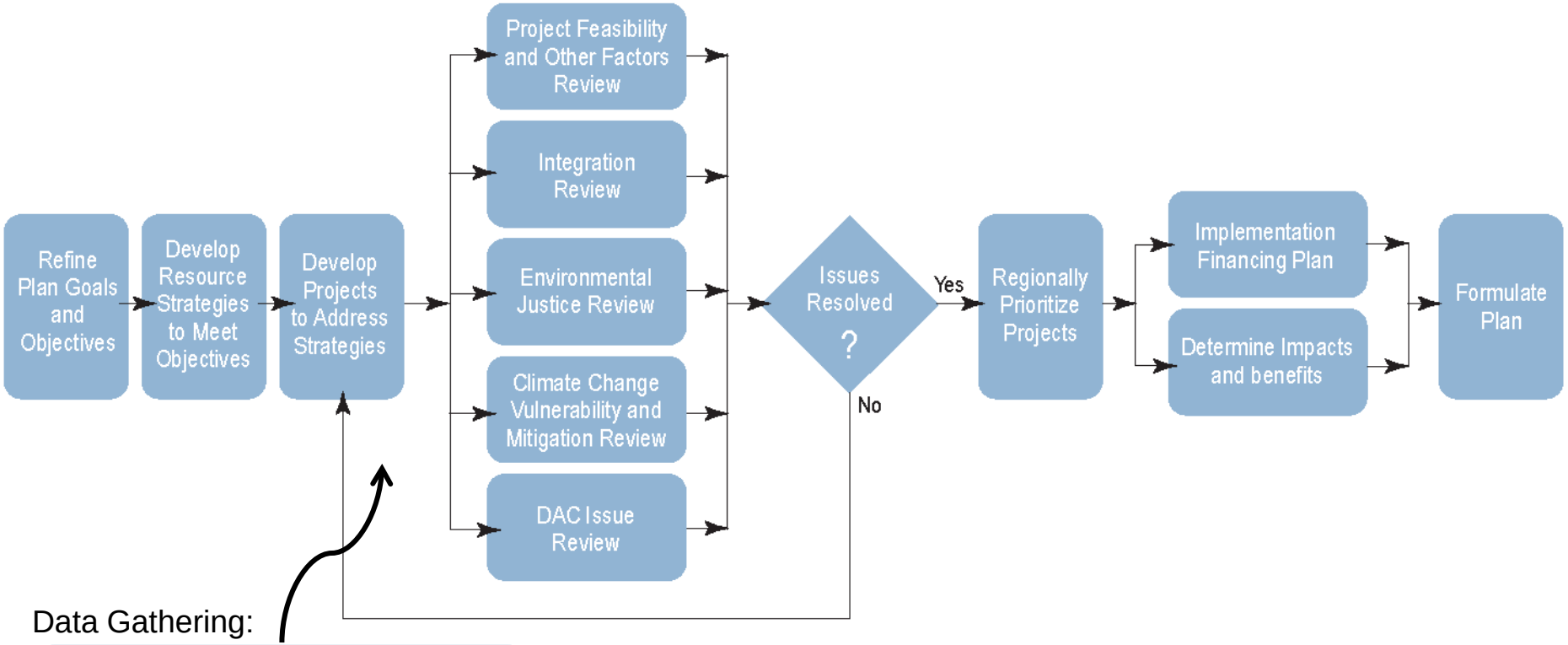
June 2012

GEI Consultants

Stakeholder Meeting Agenda

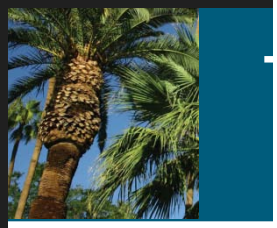
1. Introductions
2. Project Ranking Criteria and Weighting Factors
3. Water Balance Results
4. Storm Water Issues
5. Water Quality and Groundwater Update
6. In-kind Accounting Reminder
7. Next Steps
8. Questions

IRWMP Development Process:

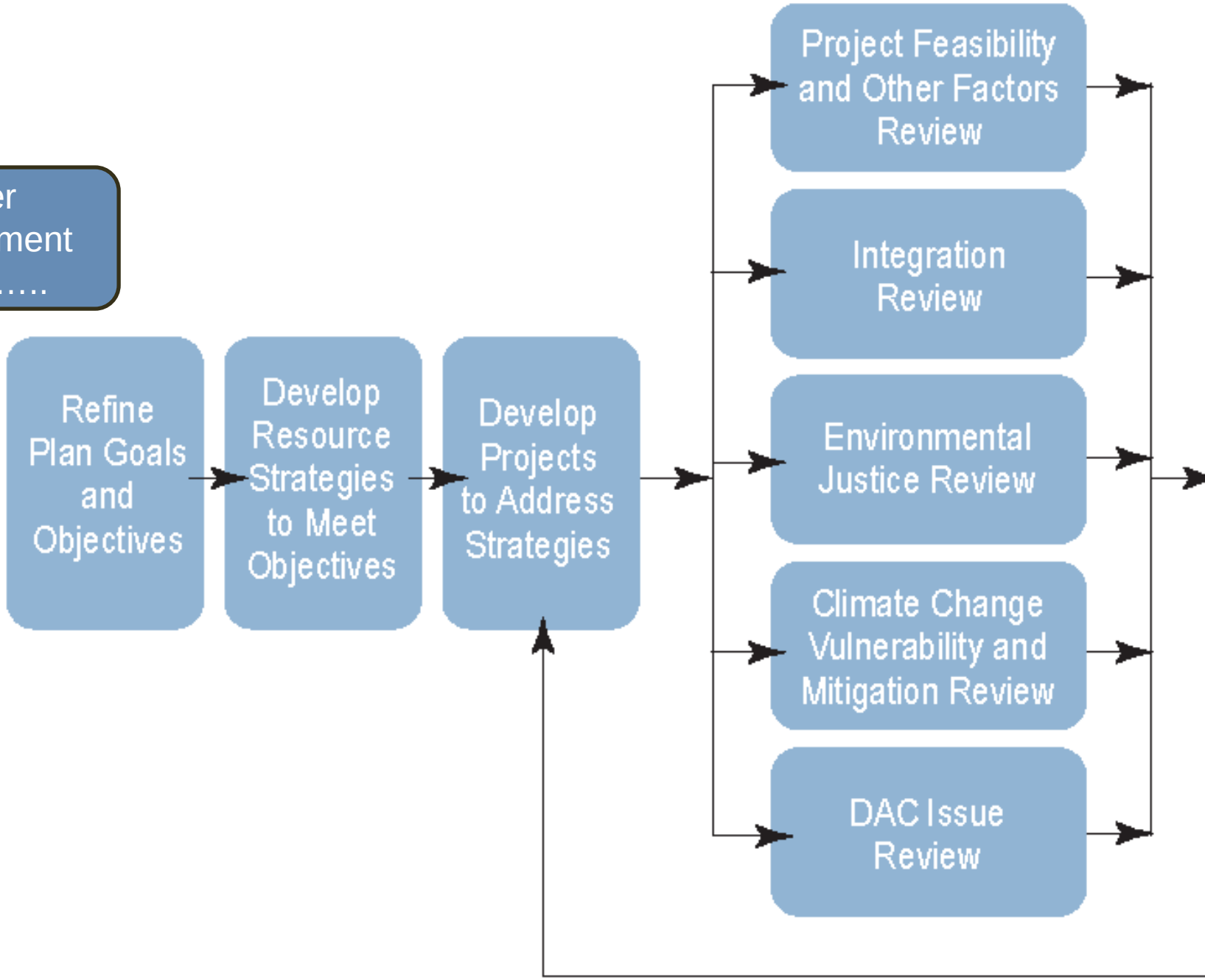


Data Gathering:

Water balance
Storm water Issues
Water quality data
Review groundwater monitoring



Water Management Issues…..



Project Ranking Criteria – Weighting Factors

- Choose relative importance of Project Ranking Criteria includes:
  - Regional Goals
  - Required IRWMP Criteria (DWR)
  - Other Factors from the Project Information Form
- Choose a Number : 1, 2, or 3 for the weighting factor

- See handout (Remember to put your name and agency at top..)

Project Ranking Criteria – Weighting Factors -1

	Criteria	How Well Does the Project Meet the Criteria?	Factor Weight	Total Points	Reviewer Comments
		0-5	*1-3*		
Regional Goals	Identify and address the water dependent natural resources needs of the Gateway Region Watersheds.			0	
	Protect and enhance water quality. *Objectives: Attain required TMDL levels in accordance with their individual schedules; Effectively reduce major sources of pollutants and environmental stressors in the region.*			0	
	Optimize and ensure water supply reliability. *Objectives: Continue and enhance water use efficiency measures to meet 20X2020 per capita water use targets; Expand regional water recycling facilities and recycled water distribution to help provide reliable water sources;Systematically upgrade aging water infrastructure in the Region.*		3	0	
	Coordinate and integrate water resource management.			0	
	Provide stewardship of the Region's water dependent natural resources through enhancement of amenities and infrastructure. *Objective: Create habitat, open space, and water-based recreational opportunities in the Region.*			0	
	Manage flood and storm waters to reduce flood risk and water quality impacts. *Objective: Install or optimize water monitoring to effectively manage storm water in the Region. Obtain, manage, and assess water resources data and information.*			0	

Project Ranking Criteria – Weighting Factors - 2

Factors	Relation to Resource Management Strategies (*How well does the project contribute to the diversification of the water management portfolio?)*			0	
	Benefits to DAC Water Issues (*How well does the project help address critical water related needs of DACs within the IRWM region?)*			0	
	Cost Effectiveness and Economic Feasibility *(Is the project cost effective? How economically feasible is the project? http://www.water.ca.gov/economics/downloads/Guidebook_June_08/EconGuidebook.pdf)*			0	
	Timeliness - Project Status *(Is the project ready to proceed?)*			0	
	Technical Feasibility of Project *(In examining the methods, materials, or equipment used in the project, are there sufficient data to indicate the project will result in a successful outcome?*			0	
	Permitting *(Status of Permitting)*			0	
	Project Costs and Funding *(Are project costs developed and reasonable? Is there a funding plan?)*			0	
	Provides multiple benefits			0	
	Integration with local land use planning			0	
	Provides regional benefits			0	

Project Ranking Criteria – Weighting Factors - 3

Requirements	Environmental Justice *(How well does the project redress inequitable distribution of environmental burdens (and access to environmental goods?)*			0	
	State Program Preferences *(How well does the project meet State Program Preferences DWR Guidelines Section F?)*			0	
	Statewide Priorities *Def: How well does the project meet listed statewide priorities (DWR Guidelines Table 1).*			0	
	Climate Change Adaption *(How well does the project adapt to climate change?)*			0	
	Greenhouse Gas Emissions Contribution- Project *(How well does the project assist in reducting GHG emission?)*			0	
	Greenhouse Gas Emissions -Support to Renewable Energy *(How well does the project support renewable energy for the purposes of reducing GHG emsisions?)*			0	
TOTAL PROJECT SCORE				0	
Can this project be integrated with other projects? If so, which project(s)?					

Questions?

GATEWAY REGION WATER BALANCE - UPDATE

Sources: Reports

- 2010 Urban Water Management Plans for Water Suppliers within the Gateway Region
- City of Bellflower Municipal Water System 2011 Annual Report
- Gateway Regional Water Conservation Alliance Report
- Los Angeles LAFCO Municipal Service Review Report
- Maywood Mutual Water Company #1, #2, and #3's written response to comments from the March 5, 2011 public hearing on the results of Maywood Water Quality Assessment
- Southern California Association of Governments (SCAG)
- Water Replenishment District of Southern California Monthly Production Summary (Acre-feet) for 2004-2010

Sources: Water Suppliers Contacted

- Bellflower-Somerset Mutual Water Company
- City of Bellflower
- City of Compton
- City of Downey
- City of Huntington Park
- City of La Habra Heights
- City of Lakewood
- City of Maywood
- City of Paramount
- City of Santa Fe Springs
- City of Signal Hill
- City of South Gate
- City of Vernon
- City of Whittier
- Long Beach Water Department
- Orchard Dale Water District
- Pico Rivera Water Authority
- City of Norwalk

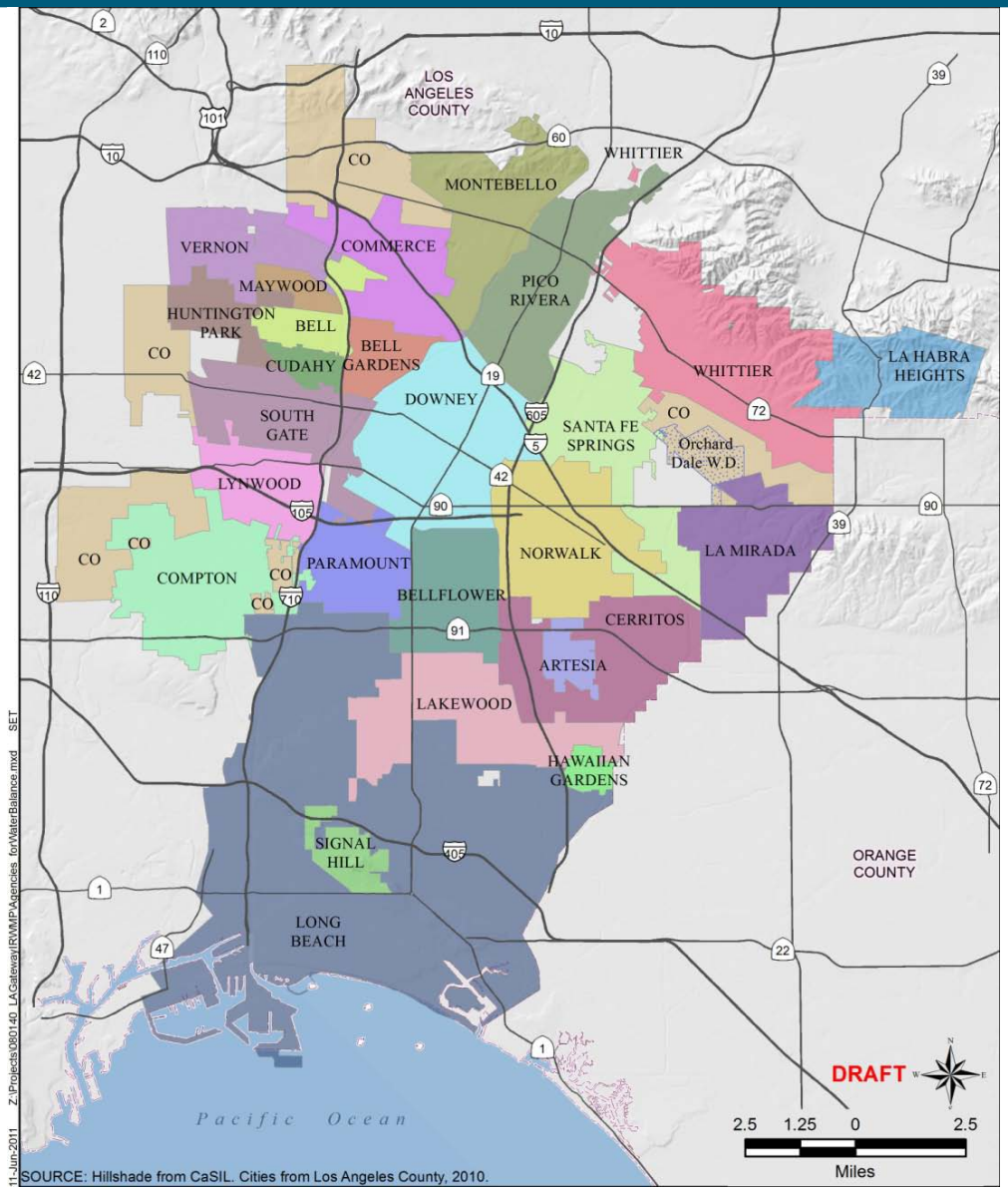
Methodology: Part 1

- Data was extracted from the 2010 UWMPs for every water purveyor within in the Gateway Region:
  - Supply and demand from 2010 through 2030 in 5-year increments
  - Supply and demand multiple-dry years from 2015 through 2030 in 5-year increments

Methodology: Part 2

- Missing data were filled in using other sources:
  - SCAG city population forecasts
  - CBMWD water sales forecasts
  - MWD water sales forecasts
  - WRD production totals for 2010
  - Supply and demand forecasts from the Municipal Services Review Report
- Assumptions
  - Drought demands are 5% greater than average demands
  - Groundwater supplies during drought conditions are equal to the existing water rights

Areas Included in Water Balance



Water Balance: Average Year Water Supply/Demand

Acre-Feet/Year	2010	2020	2030
Supply			
Surface Water	0	0	0
Groundwater	197,200	207,100	211,000
Imported Water	83,100	114,100	114,200
Recycled Water	12,500	29,700	32,200
Other	100	0	5,000
Total Supply	**292,900**	**350,900**	**362,400**
Total Demand	**288,400**	**337,100**	**348,400**
Difference	**+4,500**	**+13,800**	**+14,000**

Note: Values are rounded to the nearest 100 ac-ft/yr. Totals may not add due to rounding.

UWMP Average Year Assumptions

- Water service area generally built-out.
- Conservation measures fully implemented by 2030.
- Capital improvement projects involving water use efficiency and water supply completed by 2030.
- Recycled water projects completed by 2030.
- Recycled water gradually replaces potable water for uses such as landscaping and irrigation by 2030.

Water Balance: Supply/Demand - Drought Conditions

Acre-Feet/Year	2015	2020	2025	2030
Drought Supply				
Groundwater	207,400	208,600	208,900	210,000
Imported	107,000	108,400	106,000	107,300
Recycled	18,100	28,100	30,300	30,600
Other	0	0	5,000	5,000
Drought Supply Total	**332,500**	**345,100**	**350,100**	**352,900**
Drought Demand	**331,300**	**335,200**	**339,900**	**344,900**
Difference	**+1,200**	**+9,900**	**+10,200**	**+8,000**

Note: Values are rounded to the nearest 100 ac-ft/yr. Totals may not add due to rounding.

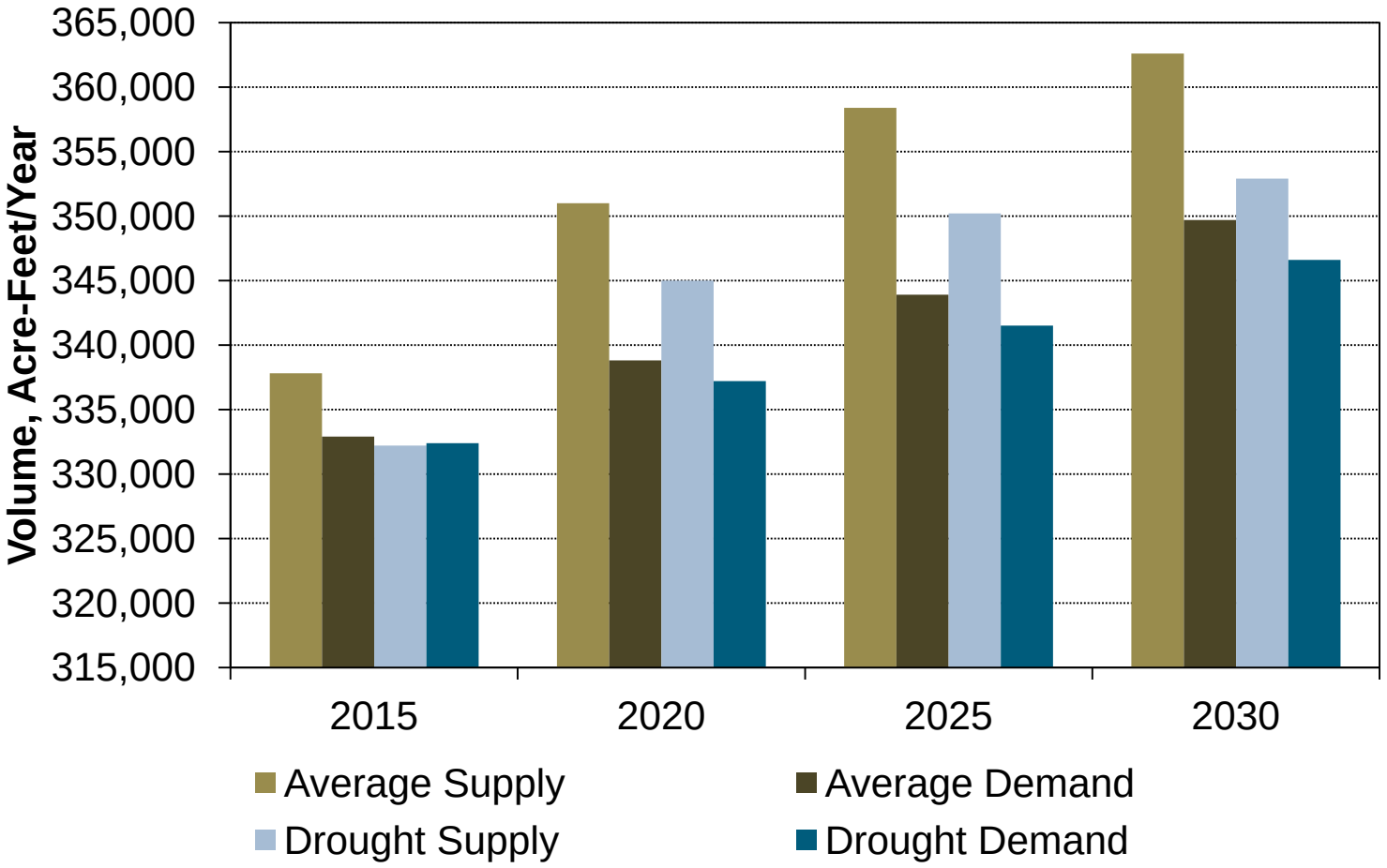
UWMP Assumptions for Drought Conditions

- Same as average year assumptions.
- Current and future recycled water projects will be operating at 100% capacity by 2030.
- Current groundwater supplies stable enough for water suppliers to withdraw 100% of water right during drought conditions.
- Central Basin Judgment allows 20% carryover and 10% exceedence provisions for groundwater.
- Wholesale providers have enough supply during drought conditions for water suppliers to provide 100% contracted water.

Effects of Drought Condition Assumptions

- Average Demand vs. Drought Conditions Supply
  - 2030 surplus reduced to <1% of drought demand (compare with 4% of average year demand)
- Drought Conditions without Recycled Water Supply
  - 2030 deficit of 7% of drought demand
- Drought Conditions vs. Average Year Groundwater Supply
  - 2030 surplus reduced to 1.7% of drought demand (compare with 1.8% of average demand)

Water Balance: Supply/Demand – Average/Drought



Questions?

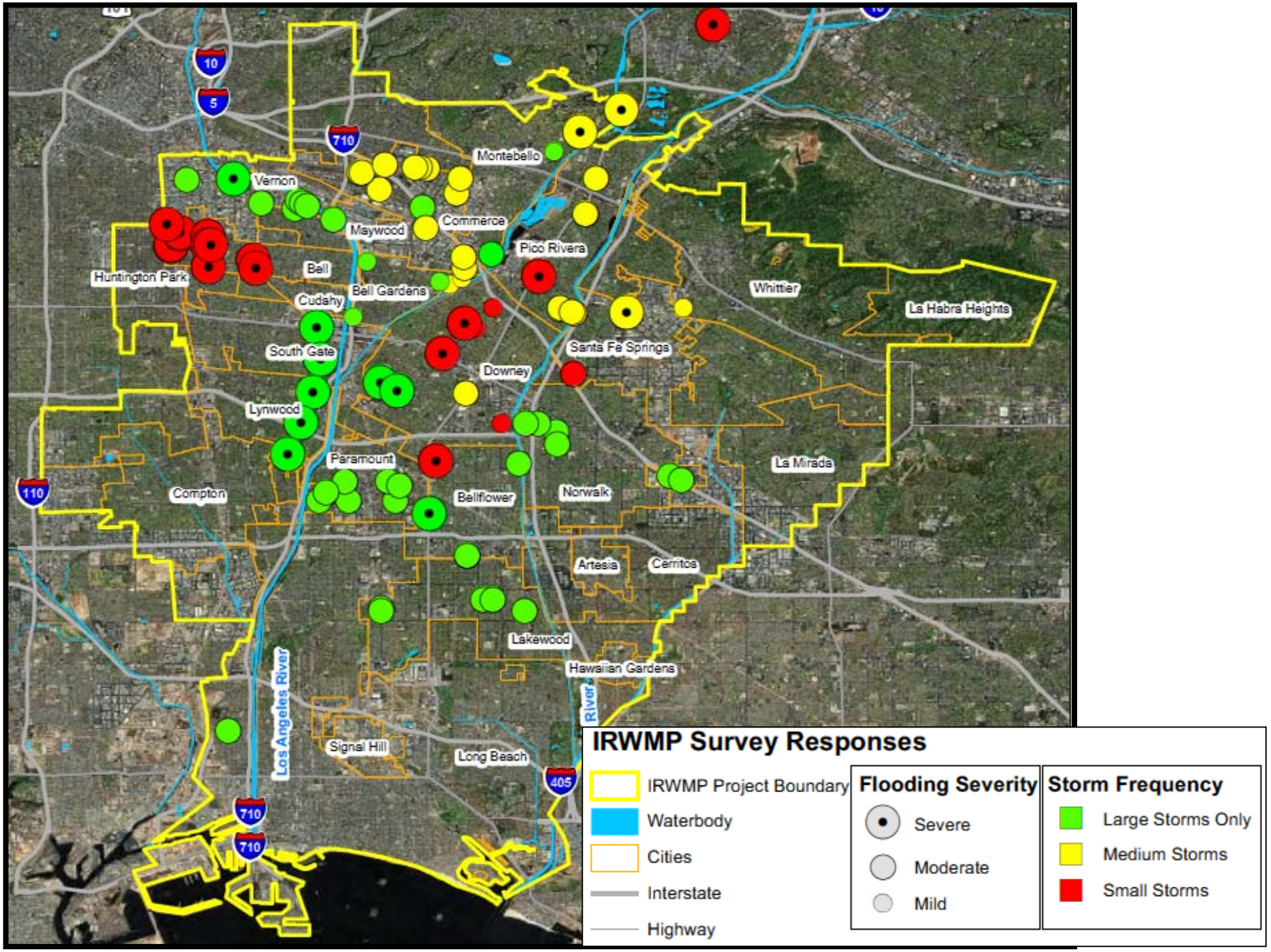
Stormwater Issues

- Two major components of stormwater analysis:
  1. Flooding
  2. Stormwater quality

- History, magnitude and occurrence

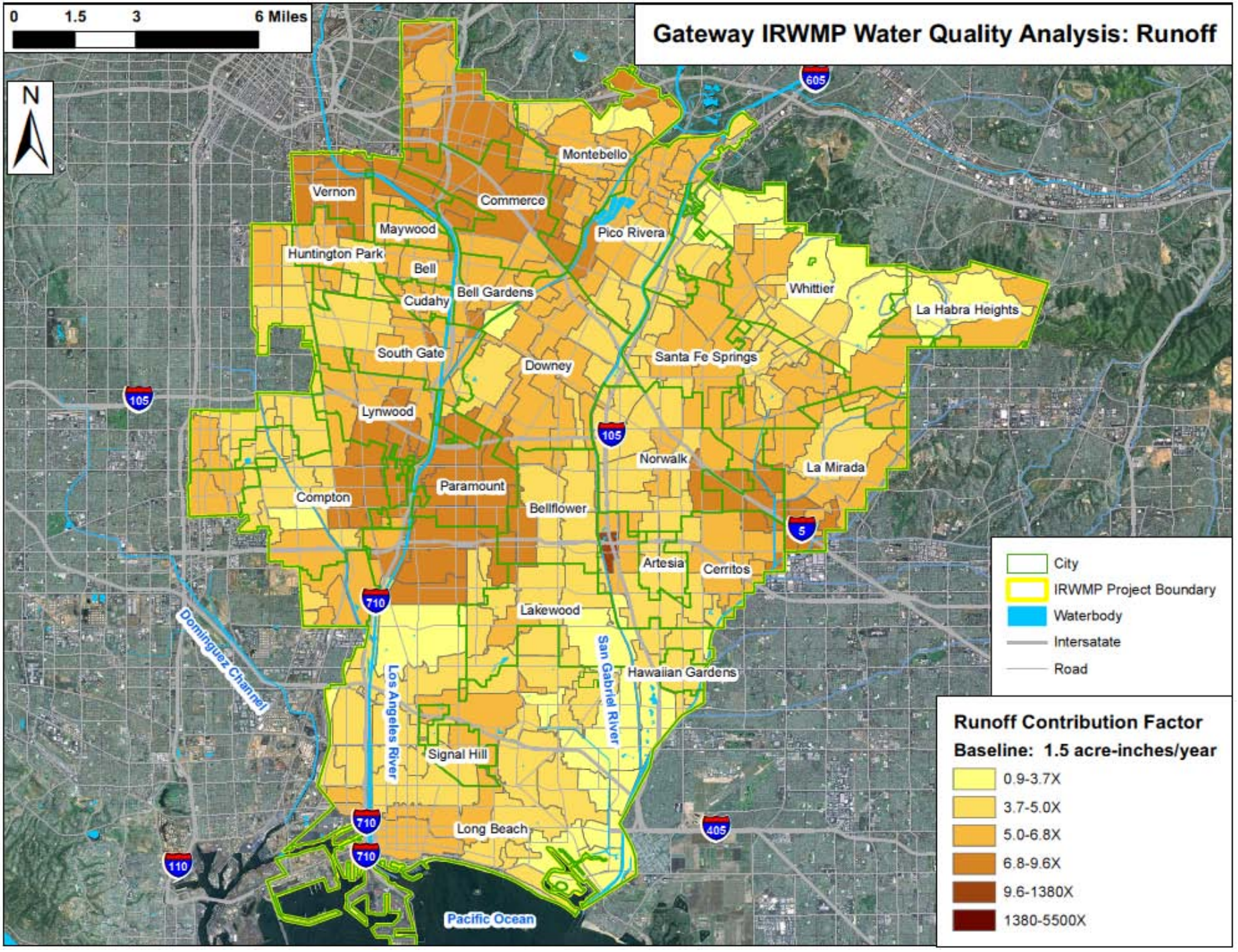
Flooding Issues

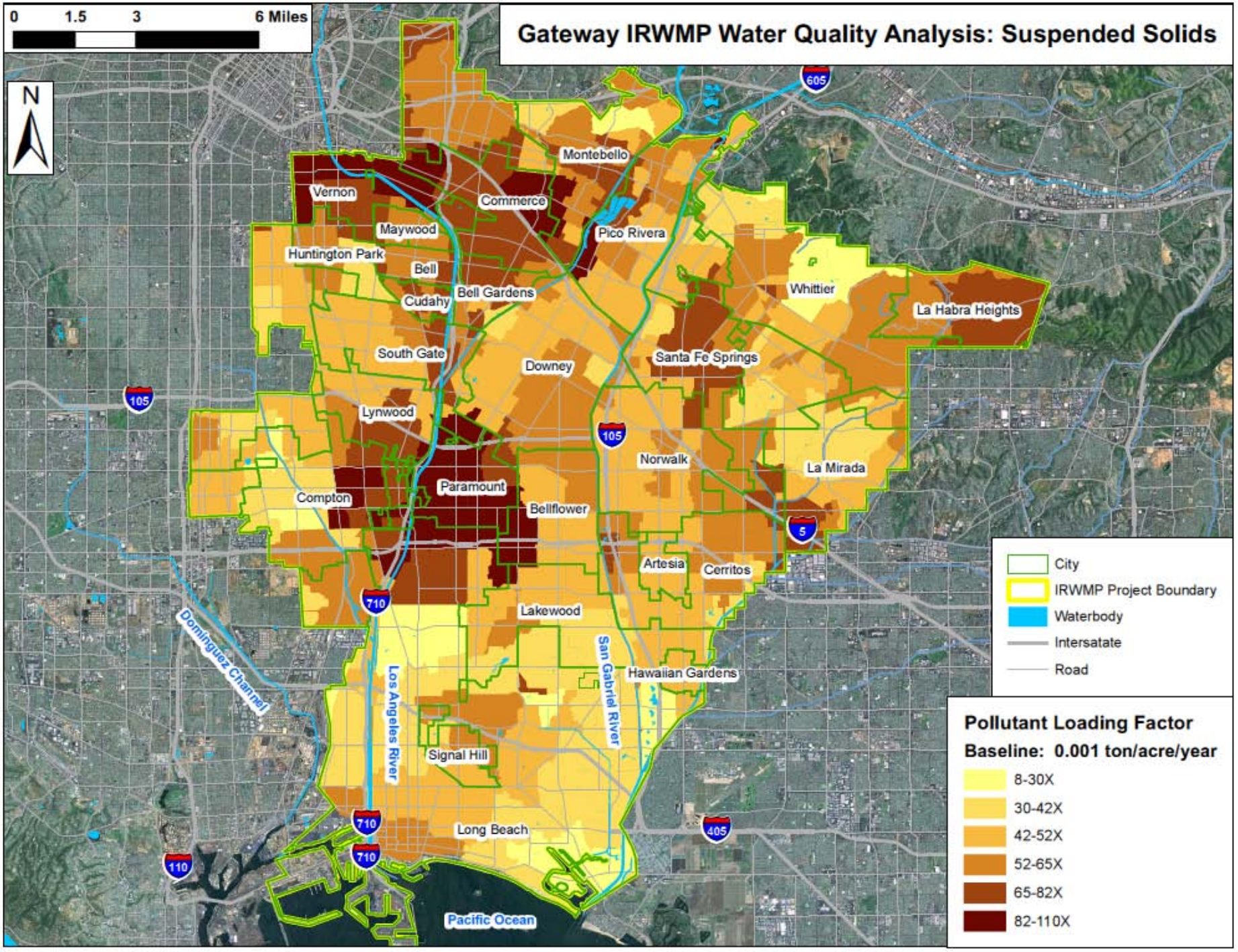
- Flooding issues analysis based on stakeholder web survey
- Good participation in survey
  - Responses from 17 agencies
  - 70 locations reported (addresses)
- Input based on Magnitude and Frequency
  - Magnitude: Mild, Moderate, or Severe
  - Frequency: Large storms only, or small storms?

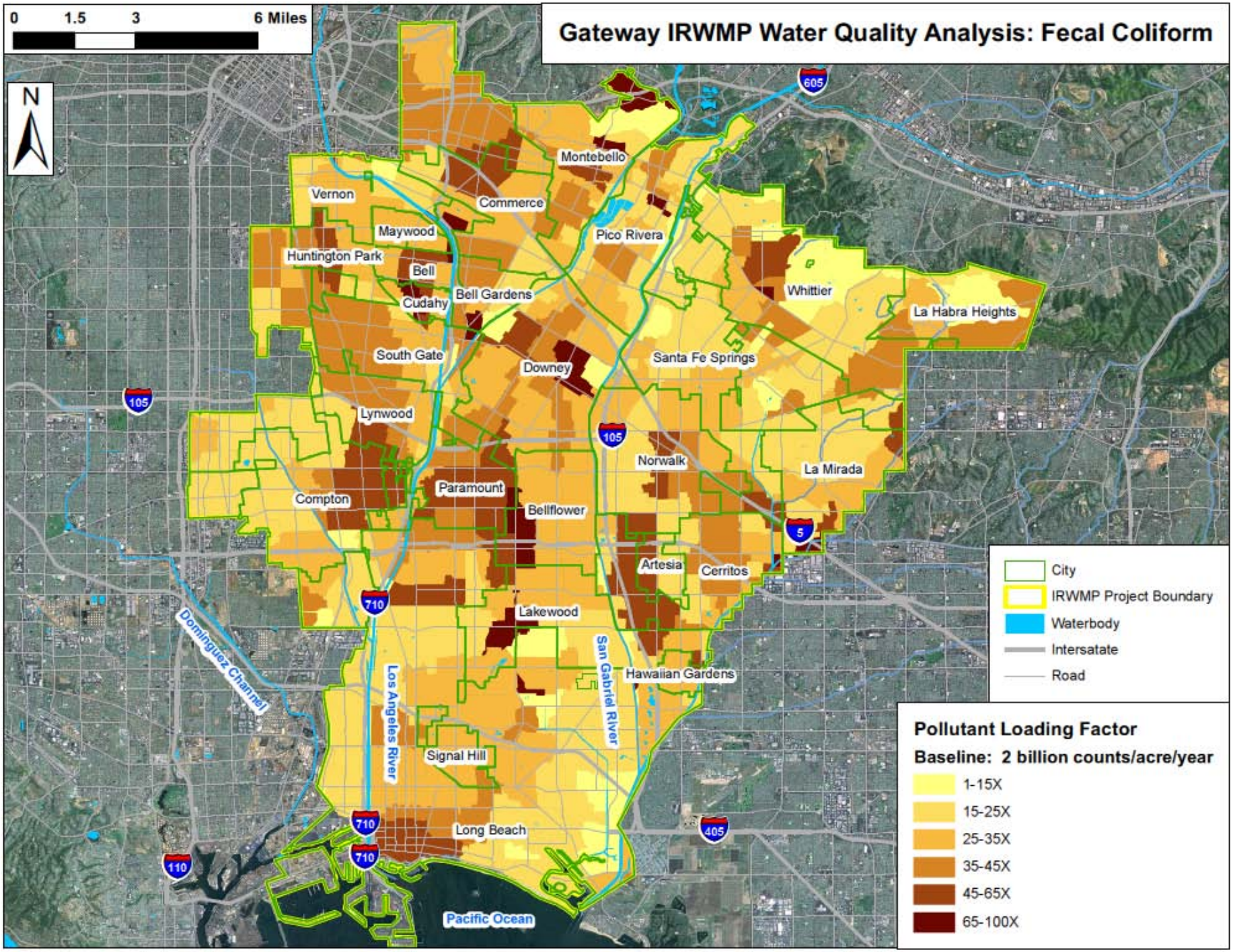

IRWMP Survey Responses
IRWMP Project Boundary
Waterbody
Cities
Interstate
Highway
Flooding Severity
Severe
Moderate
Mild
Storm Frequency
Large Storms Only
Medium Storms
Small Storms
Montebello
Vernon
Maywood
Commerce
Pico Rivera
Whittier
La Habra Heights
Huntington Park
Bell
Bell Gardens
Cudahy
South Gate
Santa Fe Springs
Downey
Lynwood
Paramount
La Mirada
Compton
Bellflower
Norwalk
Artesia
Cerritos
Lakewood
Hawaiian Gardens
Los Angeles River
Signal Hill
Long Beach
10
5
710
110
405

Stormwater Quality Issues

- SW Quality issues analysis based on modeling
- Quantified potential for IRWMP areas to generate stormwater runoff and pollutants
- Robust existing model from LA County DPW
  - Hydrology, water quality, and land use
  - LSPC (Loading Simulation Program C++)
- Long-term simulation (1998-2006)
  - Runoff -- Nutrients (N and P)
  - Solids/sediment -- Metals (Cu, Zn, and Pb)
  - Fecal coliform

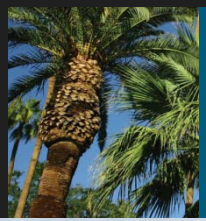

Gateway IRWMP Water Quality Analysis: Runoff
0 1.5 3 6 Miles
N
Montebello
Vernon
Commerce
Maywood
Pico Rivera
Huntington Park
Bell
Bell Gardens
Cudahy
Whittier
La Habra Heights
South Gate
Downey
Santa Fe Springs
Lynwood
Norwalk
La Mirada
Paramount
Compton
Bellflower
Artesia
Cerritos
Lakewood
Dominguez Channel
Los Angeles River
San Gabriel River
Hawaiian Gardens
Signal Hill
Long Beach
Pacific Ocean
605
105
710
5
405
110
City
IRWMP Project Boundary
Waterbody
Intersatate
Road
Runoff Contribution Factor
Baseline: 1.5 acre-inches/year
0.9-3.7X
3.7-5.0X
5.0-6.8X
6.8-9.6X
9.6-1380X
1380-5500X


Gateway IRWMP Water Quality Analysis: Suspended Solids
0 1.5 3 6 Miles
N
Montebello
Vernon
Commerce
Maywood
Pico Rivera
Huntington Park
Bell
Bell Gardens
Cudahy
Whittier
La Habra Heights
South Gate
Downey
Santa Fe Springs
Lynwood
Norwalk
La Mirada
Paramount
Compton
Bellflower
Artesia
Cerritos
Lakewood
Dominguez Channel
Los Angeles River
San Gabriel River
Hawaiian Gardens
Signal Hill
Long Beach
Pacific Ocean
605
105
710
5
405
110
City
IRWMP Project Boundary
Waterbody
Intersatate
Road
Pollutant Loading Factor
Baseline: 0.001 ton/acre/year
8-30X
30-42X
42-52X
52-65X
65-82X
82-110X


Gateway IRWMP Water Quality Analysis: Fecal Coliform
0 1.5 3 6 Miles
N
Montebello
Vernon
Commerce
Maywood
Pico Rivera
Huntington Park
Bell
Bell Gardens
Cudahy
Whittier
La Habra Heights
South Gate
Downey
Santa Fe Springs
Lynwood
Norwalk
La Mirada
Paramount
Compton
Bellflower
Artesia
Cerritos
Lakewood
Dominguez Channel
Los Angeles River
San Gabriel River
Hawaiian Gardens
Signal Hill
Long Beach
Pacific Ocean
605
105
710
5
405
110
City
IRWMP Project Boundary
Waterbody
Intersatate
Road
Pollutant Loading Factor
Baseline: 2 billion counts/acre/year
1-15X
15-25X
25-35X
35-45X
45-65X
65-100X

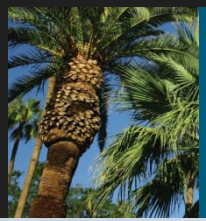
Stormwater Issues

- Next Steps:
  1. Generate memo with results and discussion
  2. Consultant team will integrate memo into IRWMP
  3. Stormwater issues will be a component of project ranking/prioritization



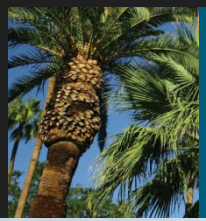
Water Quality Compilation – Purpose

- Provide Overall Assessment of Regional Water Quality
- Create Baseline from Which Strategies and Projects that *"Protect and Improve Water Quality"* Can Ultimately be Developed
- Evaluate Data Gaps and the Adequacy of the Existing Ground Water Monitoring Network



Water Quality Compilation – Scope

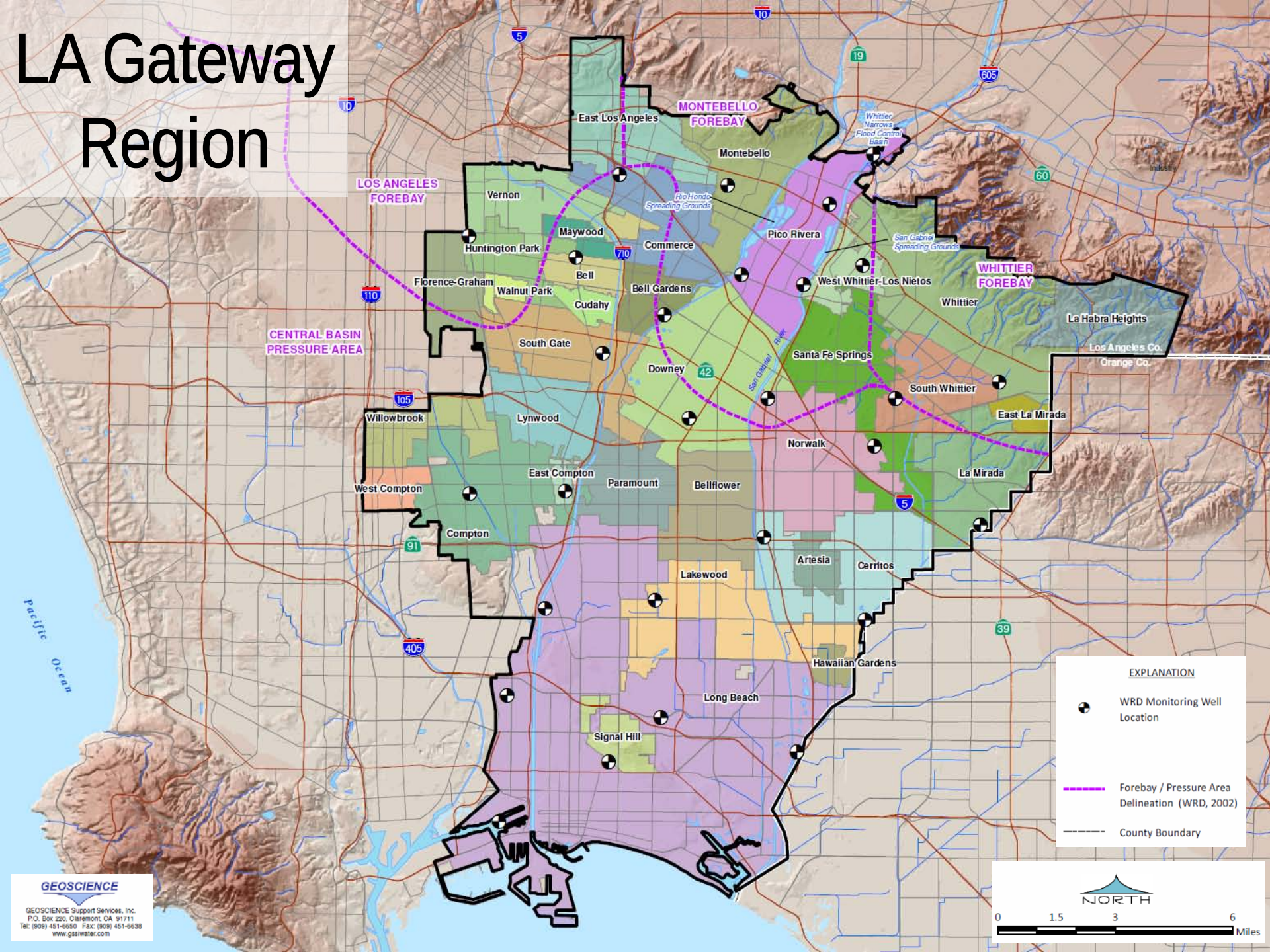
- Query Readily Available Databases
- Compile Data into Relational Format
- Review Water Quality Data
- Evaluate Monitoring Network



Water Quality – Sources of Data

1. California Department of Public Health
2. Water Replenishment District of Southern California
3. USGS / National Water Information System
4. State Water Resources Control Board – GeoTracker
5. U.S. Environmental Protection Agency

LA Gateway Region



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Water Quality Regulatory Exceedances (2002-2012)

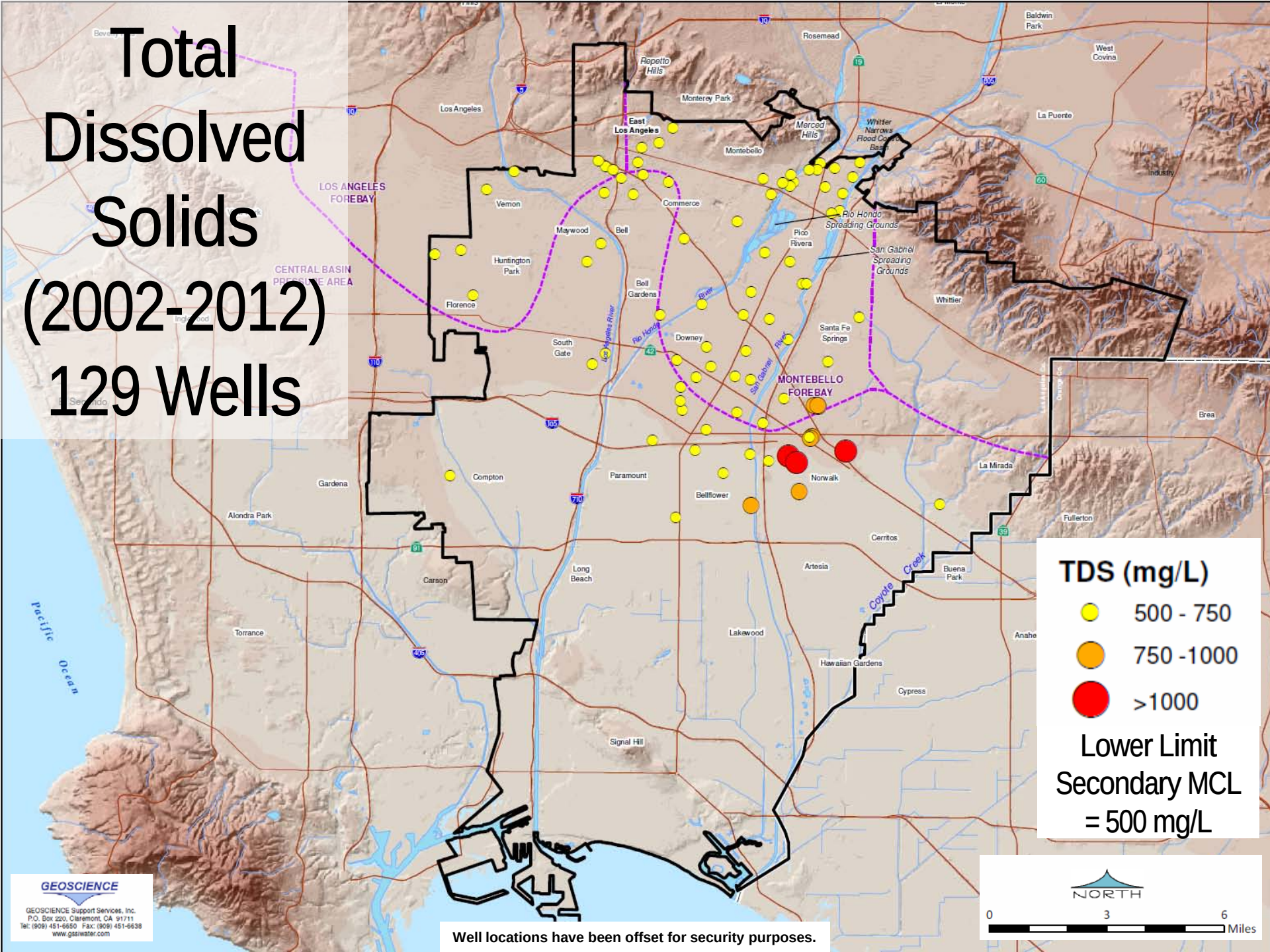
Water Quality Constituent Group	Number of Wells With Results Greater than Minimum Regulatory Level
General Physical	520
Inorganics	57
Nitrate / Nitrite	8
Regulated Synthetic Organic Chemical	5
Regulated Volatile Organic Compound	101
Federal Unregulated	1
Trihalomethanes	2
Radiological	13
Other	95
TOTAL	**802**

Drinking Water Quality Regulatory Exceedances

- 18 Constituents with 10 or Greater Regulatory Exceedances Between 2002-2012
- Top 5 Selected for Example
  - Color
  - Iron
  - Manganese
  - TDS
  - 1,4-Dioxane

Water Quality Constituent	Minimum Regulatory Level	Maximum Sample Concentration	Reporting Units	Number of Wells With Results Greater than Minimum Regulatory Level
GENERAL PHYSICAL				
CHLORIDE	250	2,600	MG/L	4
COLOR	15	300	UNITS	49
FOAMING AGENTS (MBAS)	0.5	1.3	MG/L	5
IRON	300	33,000	UG/L	72
MANGANESE	50	3,900	UG/L	92
ODOR THRESHOLD @ 60 C	3	26	TON	32
PH, LABORATORY	8.5	9.1		27
SPECIFIC CONDUCTANCE	900	7,300	US	69
SULFATE	250	620	MG/L	17
TOTAL DISSOLVED SOLIDS	500	7,000	MG/L	129
TURBIDITY, LABORATORY	5	150	NTU	24
INORGANICS				
ALUMINUM	200	2,300	UG/L	14
ARSENIC	10	53	UG/L	19
CADMIUM	5	9.5	UG/L	1
CYANIDE	150	3,600	UG/L	1
FLUORIDE (F) (NATURAL-SOURCE)	2	6	MG/L	6
LEAD	15	110	UG/L	7
MERCURY	2	3.7	UG/L	2
NICKEL	100	250	UG/L	1
PERCHLORATE	6	22	UG/L	6
NITRATE / NITRITE				
NITRATE (AS NO3)	45	59	MG/L	4
NITRATE + NITRITE (AS N)	10,000	13,000	UG/L	2
NITRITE (AS N)	1,000	2,000	UG/L	2
REGULATED SYNTHETIC ORGANIC CHEMICAL				
DI(2-ETHYLHEXYL)PHTHALATE	4	40	UG/L	4
ETHYLENE DIBROMIDE (EDB)	0.05	0.13	UG/L	1
REGULATED VOLATILE ORGANIC COMPOUND				
1,1-DICHLOROETHYLENE	6	64	UG/L	9
1,2-DICHLOROETHANE	0.5	11	UG/L	10
CARBON TETRACHLORIDE	0.5	6.5	UG/L	12
CIS-1,2-DICHLOROETHYLENE	6	11	UG/L	1
TETRACHLOROETHYLENE	5	95	UG/L	41
TRICHLOROETHYLENE	5	65	UG/L	28
FEDERAL UNREGULATED				
METHYL-TERT-BUTYL-ETHER (MTBE)	5	6.4	UG/L	1
TRIHALOMETHANES				
TOTAL TRIHALOMETHANES	80	96	UG/L	2
RADIOLOGICAL				
GROSS ALPHA	15	32.3	PCI/L	12
URANIUM (PCI/L)	20	30.6	PCI/L	1
OTHER				
1,4-DIOXANE	1	10.5	UG/L	71
FORMALDEHYDE	0.1	97	MG/L	2
N-NITROSODIMETHYLAMINE (NDMA)	0.01	78	UG/L	16
RADON 222	300	474	PCI/L	5
VANADIUM	50	66	UG/L	1

Total Dissolved Solids (2002-2012) 129 Wells



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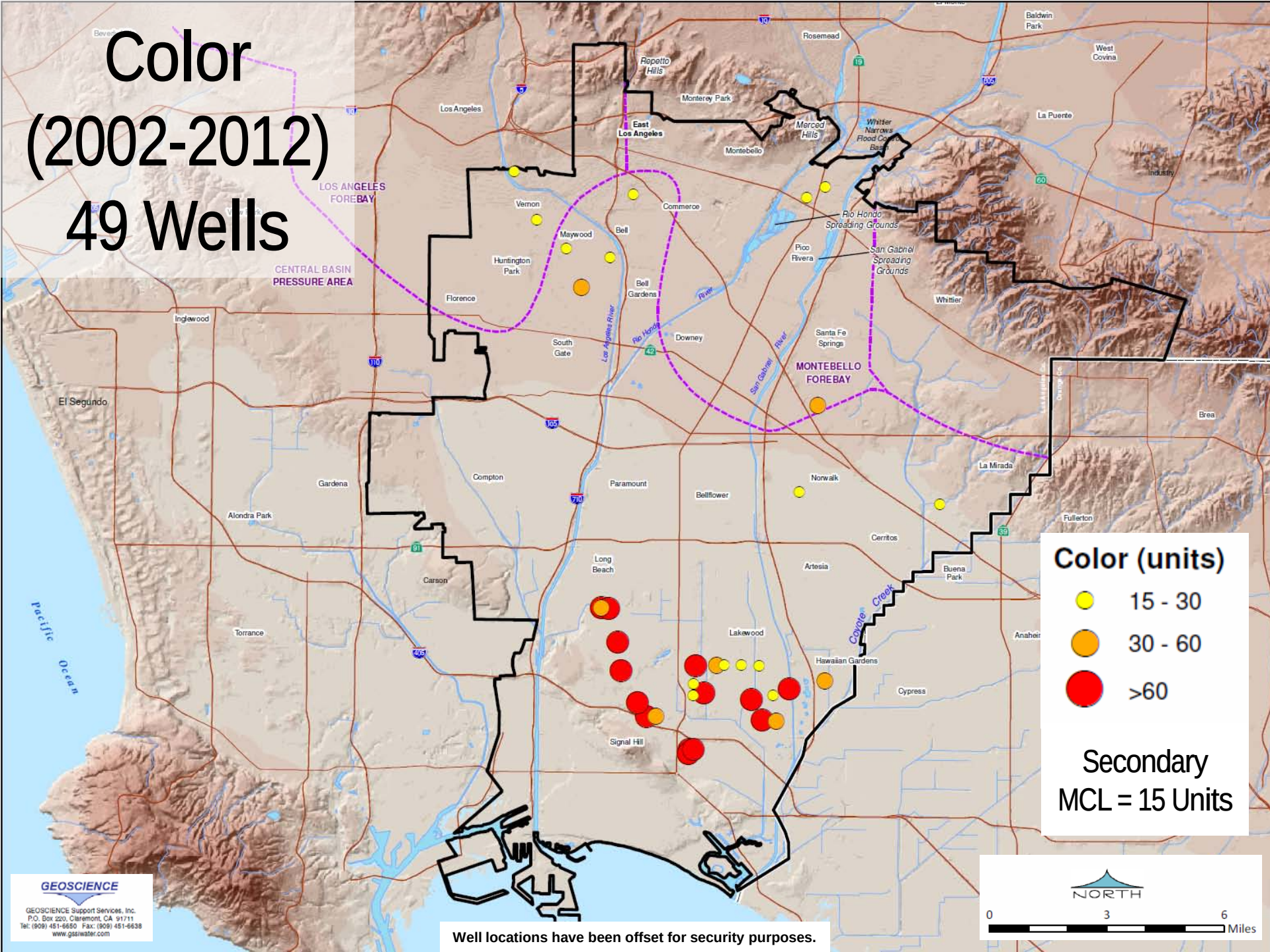
Well locations have been offset for security purposes.

Color (2002-2012) 49 Wells



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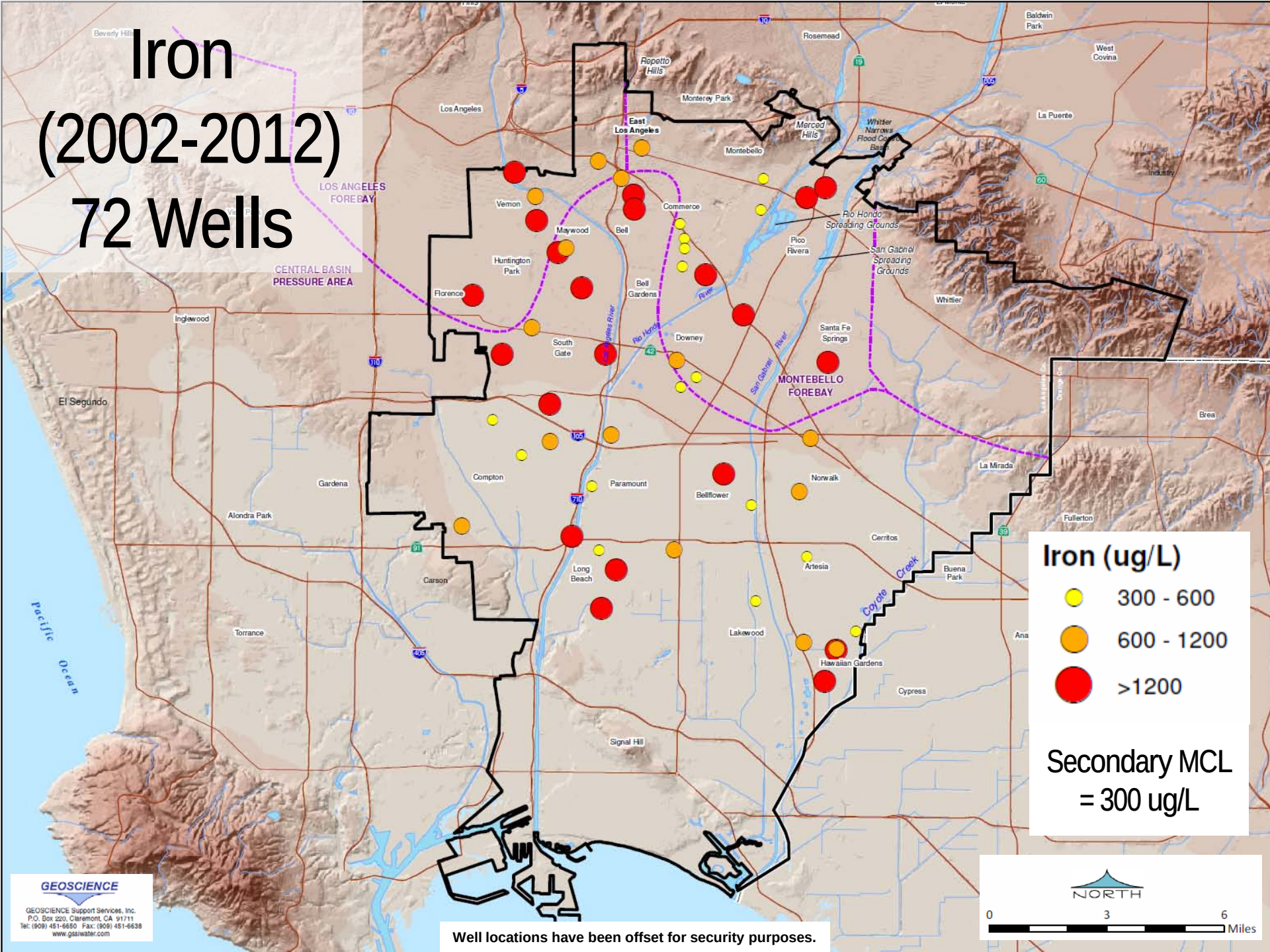
Iron (2002-2012) 72 Wells



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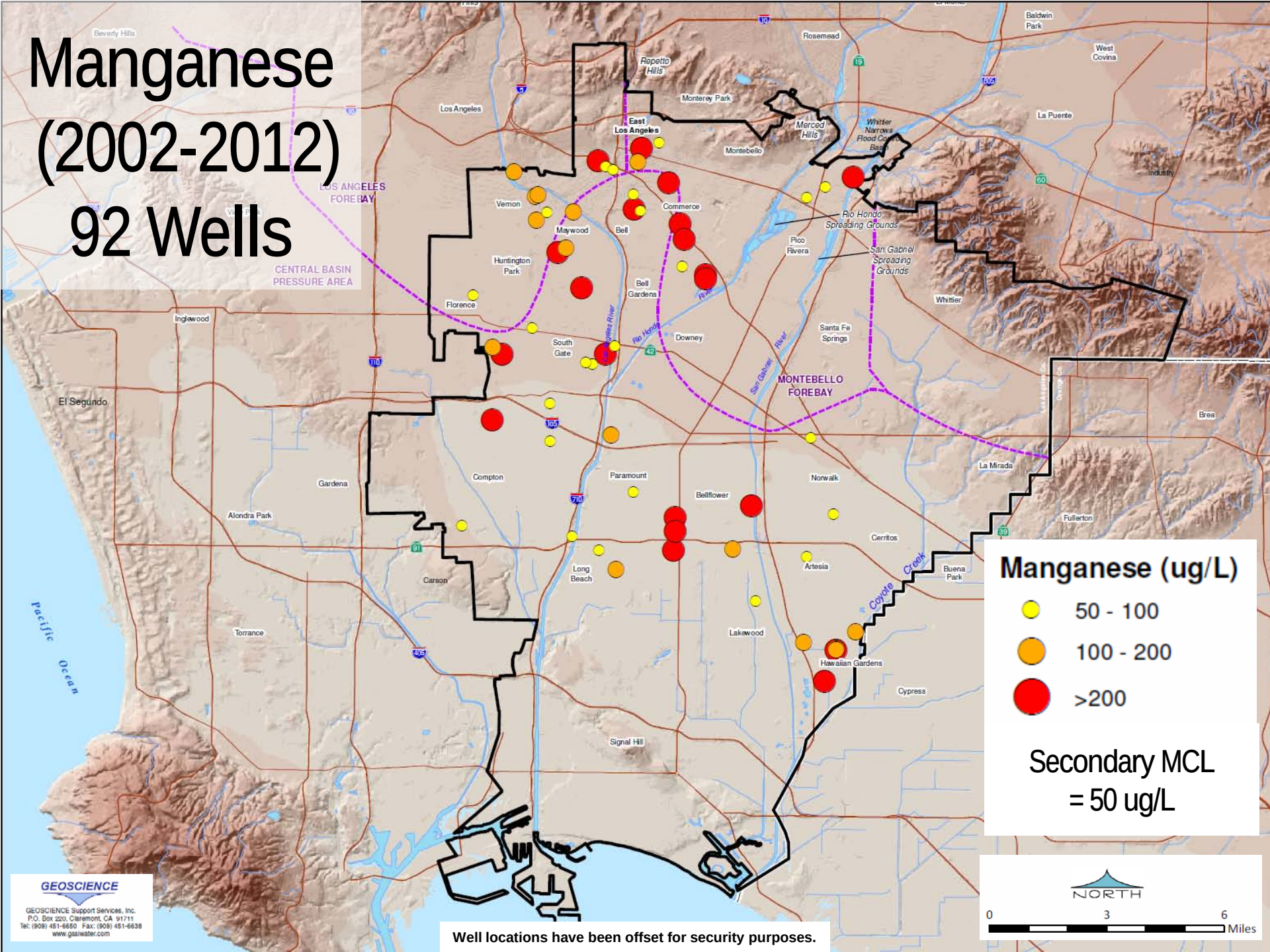
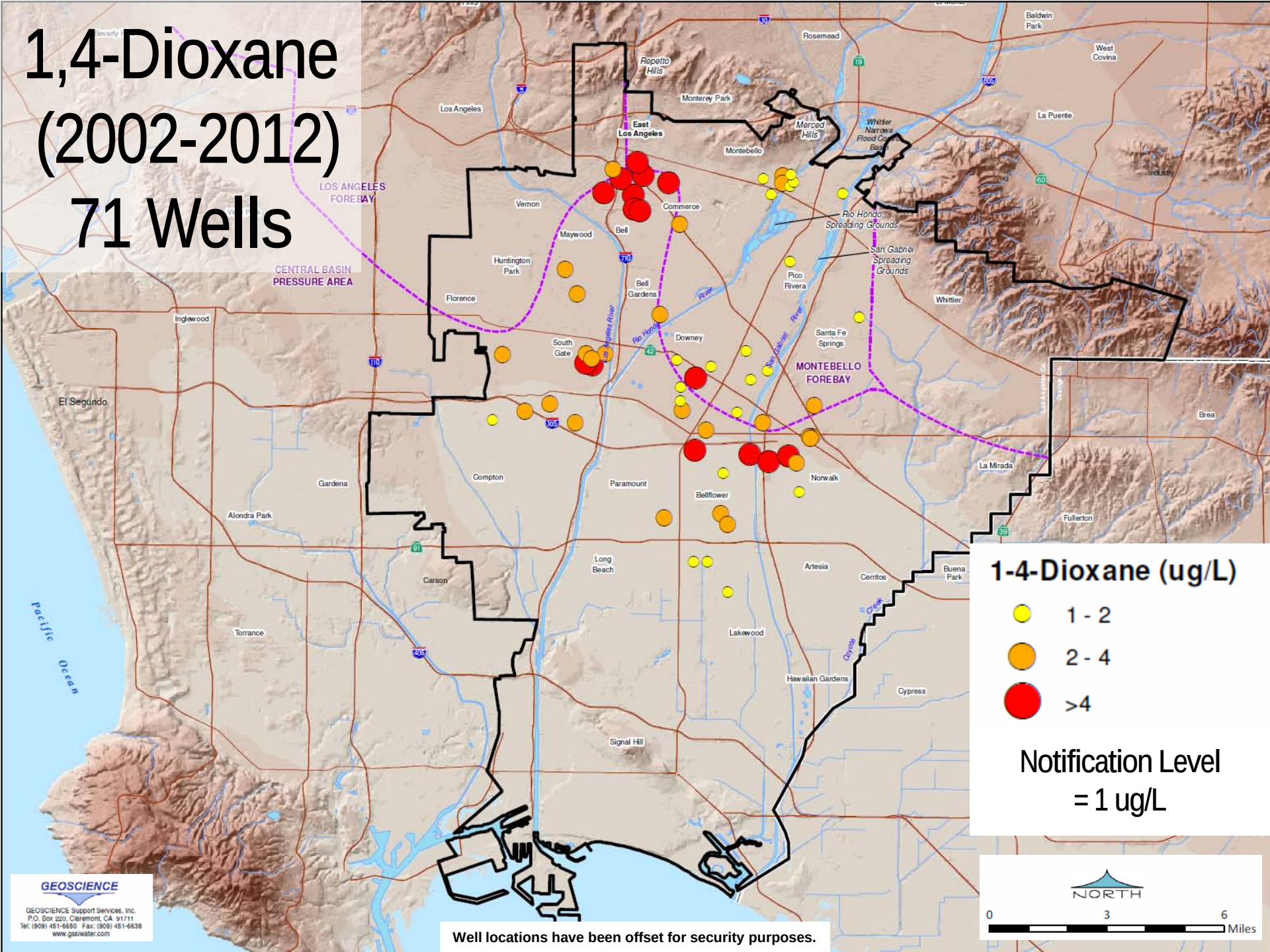
Manganese (2002-2012) 92 Wells



1,4-Dioxane (2002-2012) 71 Wells



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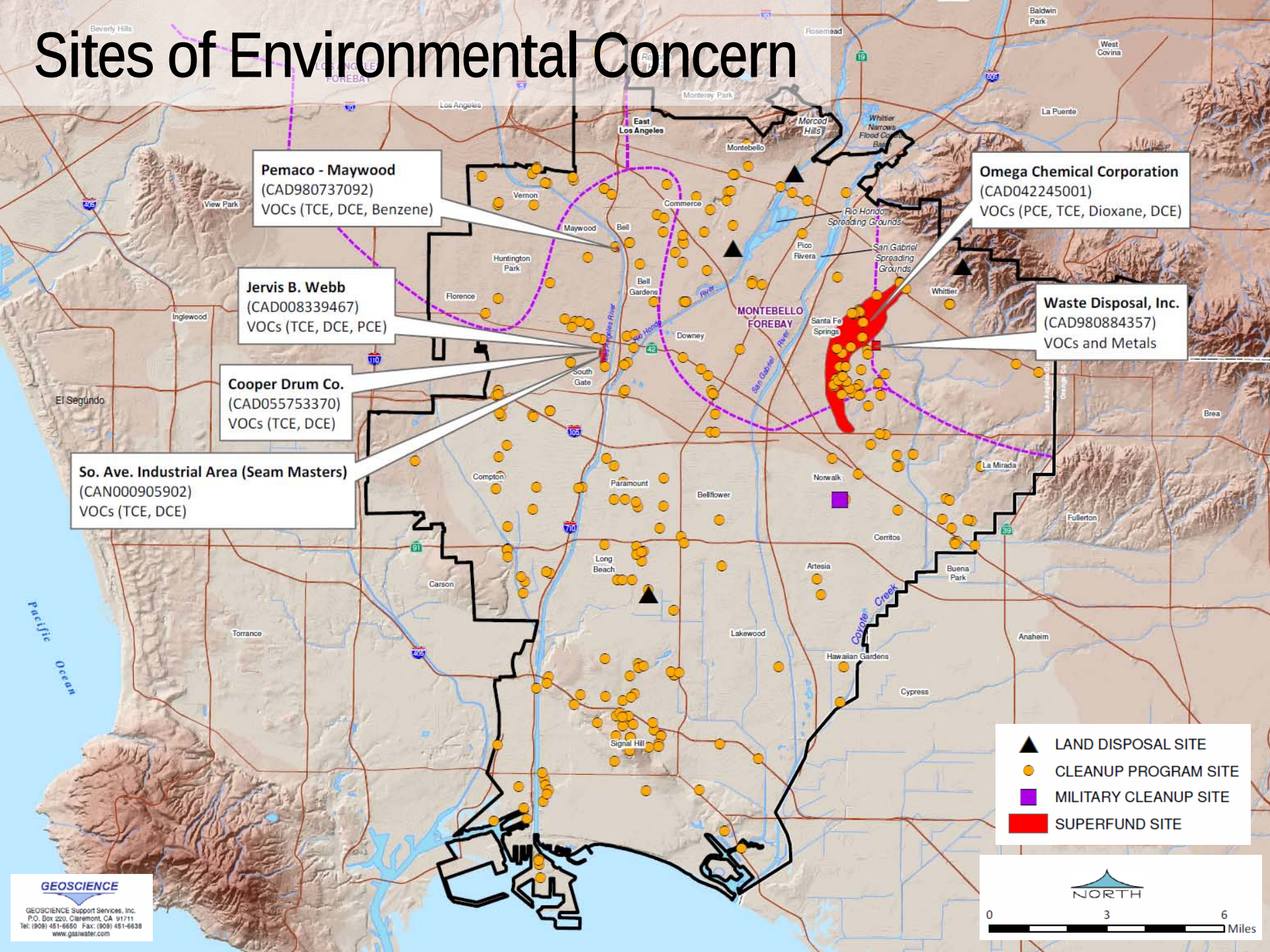
Well locations have been offset for security purposes.

Sites of Environmental Concern



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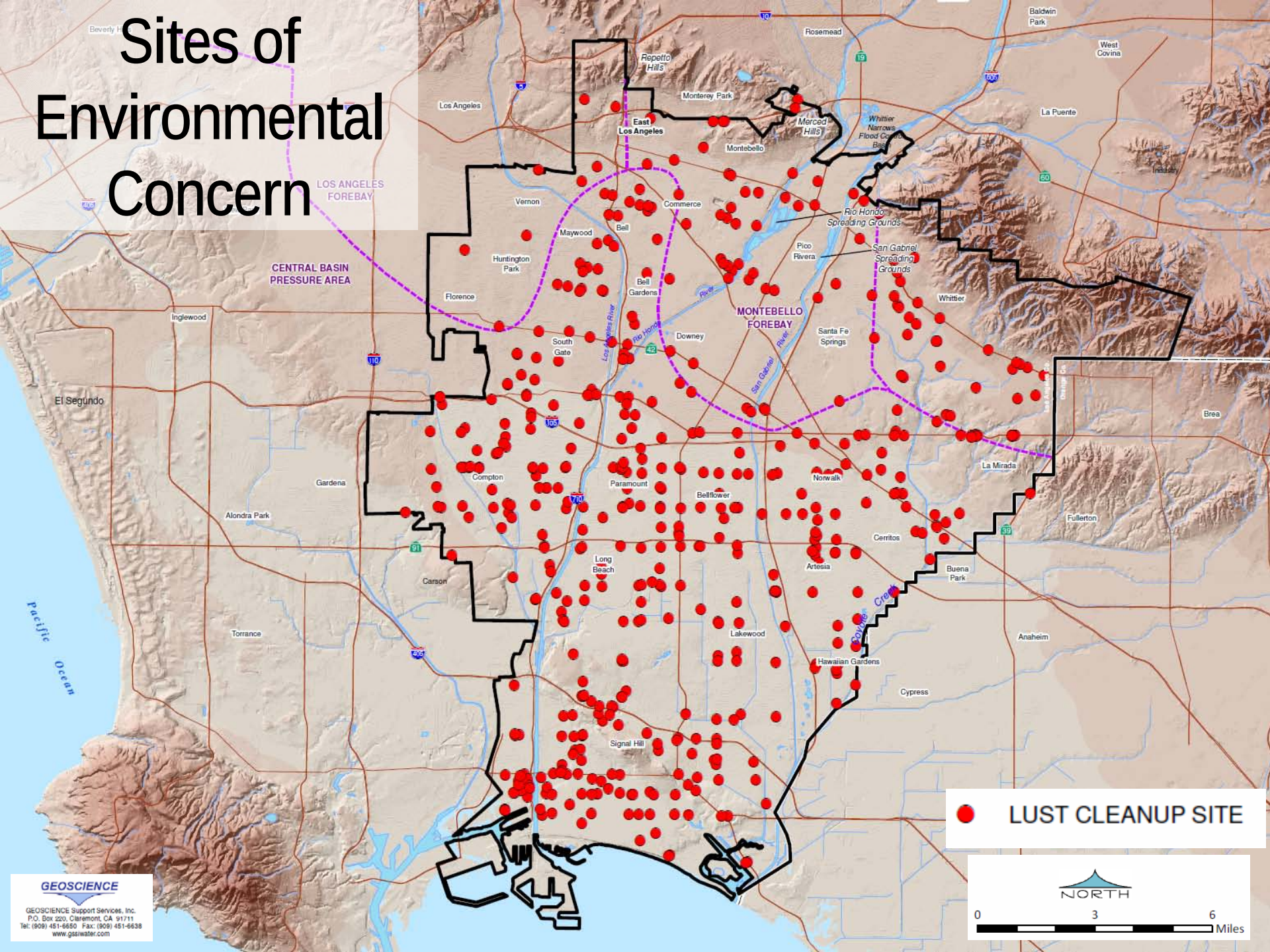
Sites of Environmental Concern



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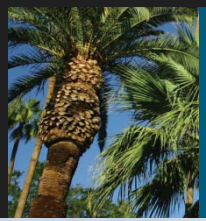
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com



Ground Water Quality Data Compilation- Status

- Date Releases Not Secured for Following Purveyors:
  - Lynwood Park MWC
  - Sativa LA County WD
  - Walnut Park MWC
  - City of Montebello
  - La Habra Heights County WD
  - City of Huntington Park
  - Tract 349 Water Company
  - Maywood MWC #2
- Next Steps?
  - Augment Data with Remaining Purveyor Data, As Necessary
  - Incorporate WRD Monitoring Well Water Quality Data
  - Evaluate Monitoring Network (USGS & WRD Networks)

In-kind Work Accounting

GWMA In-Kind Expense Rate Certification

Date: _____

Name: _____

Title: _____

Organization: _____

Address: _____

Phone: _____

Email: _____

I hereby certify that I am a paid employee of _____
actively represent that organization in the Gateway IRWMP pr
participation for that organization would constitute In-Kind expe
development.

My hourly charge rate for that organization, including related o

_____

My electronic signature is _____

Signature:_____ Date:_____

Gateway IRWMP In-Kind Timesheet

Name:_____

Organization:_____

Period:_____

Date mm/dd/yy	Hours*	Task	Description of Work**
TOTAL IN-KIND HOURS	0		

*nearest 1/2 hour
**if meeting, give purpose

I certify this accounting as true and correct,

_____
Signature

Note: Electronic signature must be on file

In-Kind Accounting

- Fill out the “GWMA In-Kind Expense Rate Certification” form.
- Provide a copy of your pay stub or other evidence that authenticates your hourly pay rate that you provided in the rate certification form above. This too only needs to be done once. Please block out and obscure any social security numbers, etc. not needed to verify your pay rate.
- Fill out the “Gateway IRWMP In-kind Timesheet” Task numbers and corresponding descriptions of those tasks are provided with the timesheet. Timesheets can be submitted monthly but not less than once every quarter
- Send all three items above to Bill:
  - Scanning and e-mailing them to *GatewayIRWMP@geiconsultants.com*
  - Mailing them to GEI Consultants, Inc., 2868 Prospect Park Drive, Suite 400, Rancho Cordova, CA 95670
  - Or bringing them to any Stakeholder Meeting.

Next Steps

- Finish data collection
- Report on issues
- Finalize criteria for ranking
- Collect and Develop Projects and Project Concepts

- Next Stakeholders Meeting August 9
- NO JULY MEETING

Shortcut to Gateway IRWMP Project Information Form_distributed.pdf.lnk