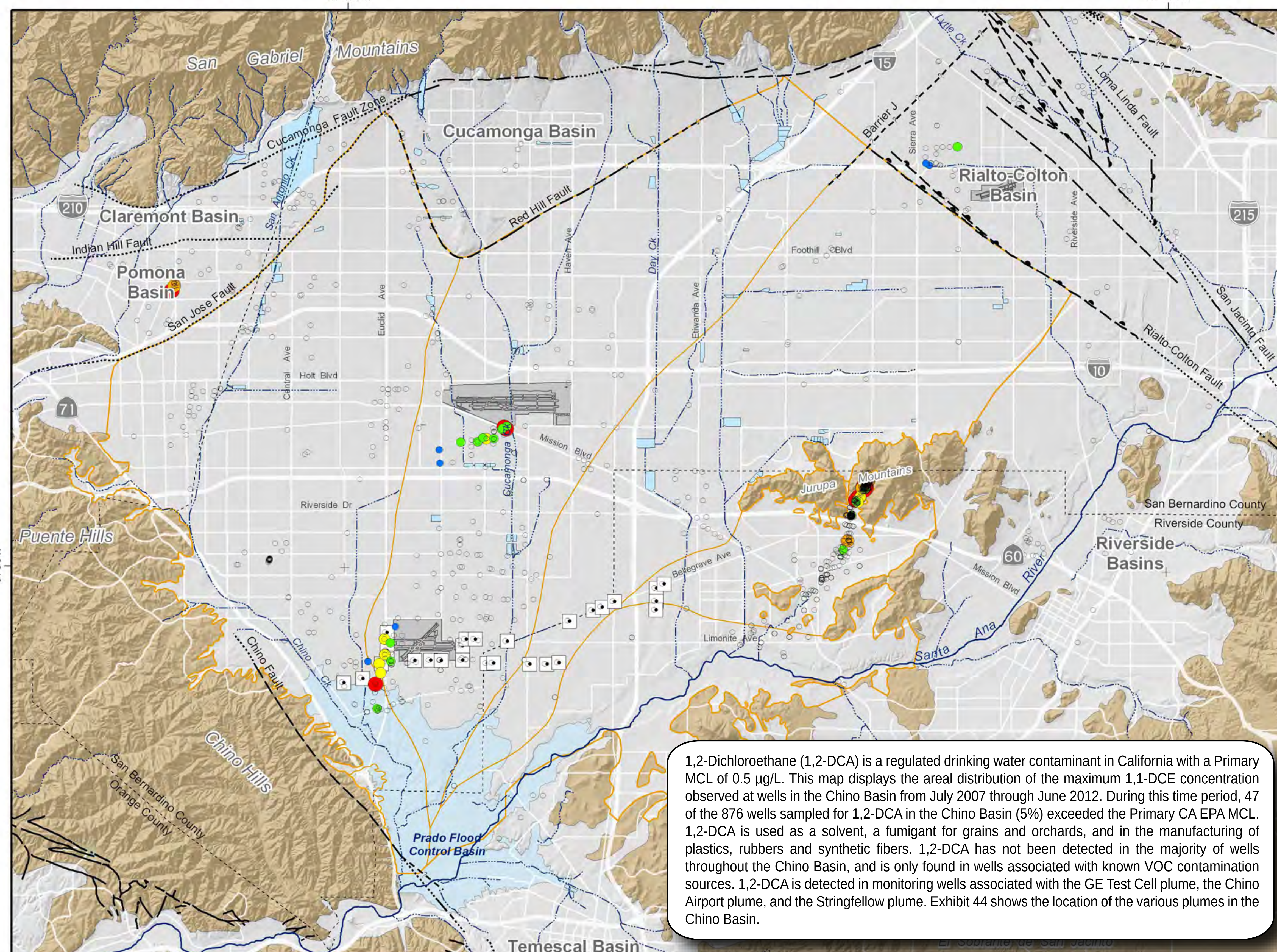

1,2-Dichloroethane (1,2-DCA) is a regulated drinking water contaminant in California with a Primary MCL of 0.5 µg/L. This map displays the areal distribution of the maximum 1,1-DCE concentration observed at wells in the Chino Basin from July 2007 through June 2012. During this time period, 47 of the 876 wells sampled for 1,2-DCA in the Chino Basin (5%) exceeded the Primary CA EPA MCL. 1,2-DCA is used as a solvent, a fumigant for grains and orchards, and in the manufacturing of plastics, rubbers and synthetic fibers. 1,2-DCA has not been detected in the majority of wells throughout the Chino Basin, and is only found in wells associated with known VOC contamination sources. 1,2-DCA is detected in monitoring wells associated with the GE Test Cell plume, the Chino Airport plume, and the Stringfellow plume. Exhibit 44 shows the location of the various plumes in the Chino Basin.

1,2-Dichloroethane (ug/L)

- ND
- < 0.25
- 0.25 - 0.50
- 0.5 - 1
- 1 - 2
- > 2

Primary CA MCL = 0.5 ug/L
Primary US EPA MCL = 5 ug/L

OBMP Management Zones

Chino Desalter Well

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain

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Date: 20121005
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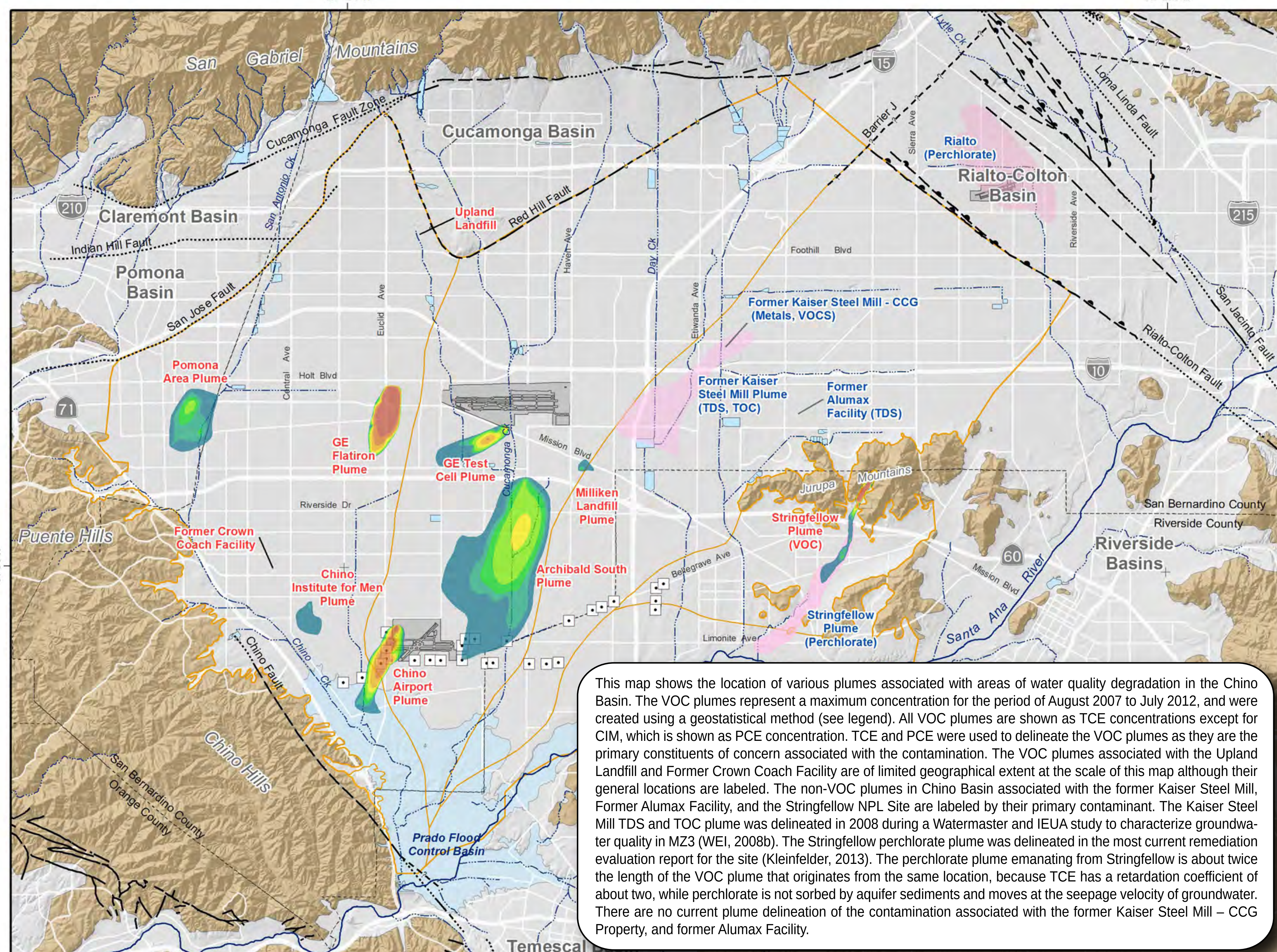
0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

1,2-Dichloroethane in Groundwater

Maximum Concentration (July 2007 to June 2012)

Exhibit 43



This map shows the location of various plumes associated with areas of water quality degradation in the Chino Basin. The VOC plumes represent a maximum concentration for the period of August 2007 to July 2012, and were created using a geostatistical method (see legend). All VOC plumes are shown as TCE concentrations except for CIM, which is shown as PCE concentration. TCE and PCE were used to delineate the VOC plumes as they are the primary constituents of concern associated with the contamination. The VOC plumes associated with the Upland Landfill and Former Crown Coach Facility are of limited geographical extent at the scale of this map although their general locations are labeled. The non-VOC plumes in Chino Basin associated with the former Kaiser Steel Mill, Former Alumax Facility, and the Stringfellow NPL Site are labeled by their primary contaminant. The Kaiser Steel Mill TDS and TOC plume was delineated in 2008 during a Watermaster and IEUA study to characterize groundwater quality in MZ3 (WEI, 2008b). The Stringfellow perchlorate plume was delineated in the most current remediation evaluation report for the site (Kleinfelder, 2013). The perchlorate plume emanating from Stringfellow is about twice the length of the VOC plume that originates from the same location, because TCE has a retardation coefficient of about two, while perchlorate is not sorbed by aquifer sediments and moves at the seepage velocity of groundwater. There are no current plume delineation of the contamination associated with the former Kaiser Steel Mill – CCG Property, and former Alumax Facility.

VOC Concentration (ug/L)

- > 0 and ≤ 5
- > 5 and ≤ 10
- > 10 and ≤ 20
- > 20 and ≤ 50
- > 50 and ≤ 100
- > 100 and ≤ 200
- > 200 and ≤ 500
- > 500

The VOC plumes shown on this map are generalized illustrations of the estimated spatial extent of TCE or PCE, based on maximum concentration measured over the five-year period of August 2007 to July 2012. The VOC plume illustrations were created with the Geostatistical Analyst extension in ESRI's ArcView 10.1 using an ordinary kriging interpolation model with model input parameter estimation and optimization performed by semivariogram analysis in Golden Software's Surfer 8.09. Interpretations of plume extent and boundary delineation were made based on measured concentrations and local groundwater flow patterns as predicted by the Chino Basin groundwater flow model.

Other plumes (labeled by name and dominant contaminant)

OBMP Management Zones

Chino Desalter Well

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain

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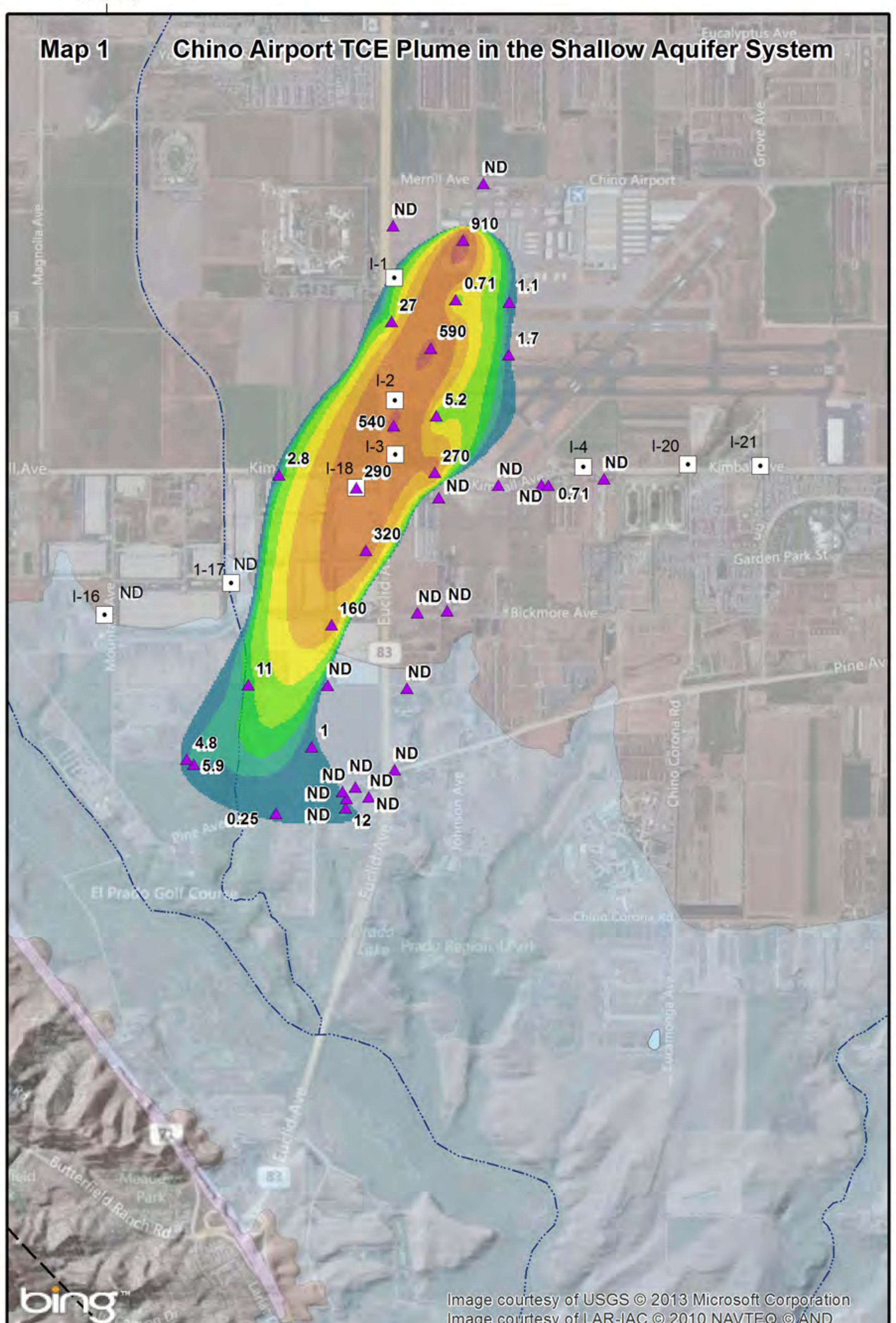
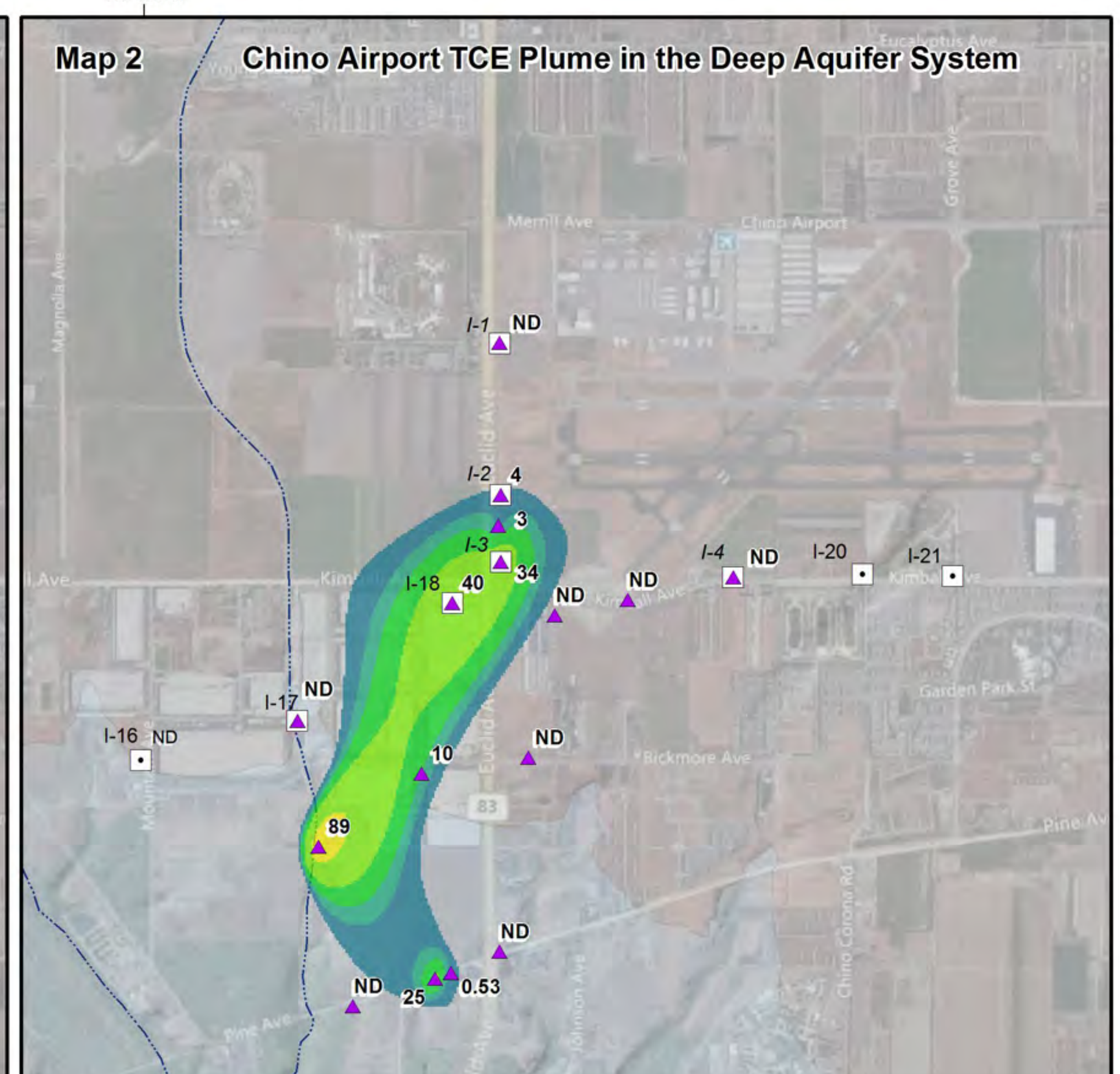
0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Delineation of Groundwater Contamination Plumes and Point Sources of Concern

Exhibit 44





These maps depict the TCE contamination of groundwater near the Chino Airport in the southern portion of Chino Basin. The County of San Bernardino, Department of Airports has been identified as the responsible party (RP) and has been conducting investigations of soil and groundwater contamination since 2003. The County has constructed and sampled nine shallow monitoring wells on the airport property and 45 depth-specific monitoring wells at fifteen locations offsite. Groundwater quality data have also been collected in this area by the Chino Basin Watermaster at private wells, and at one depth-specific monitoring well (HCMP-4)— and by the Chino Desalter Authority at the CCWF wells in the shallow aquifer (I-16, I-17, and I-18), Chino-I deep aquifer production wells (CDA-I-1, -2, -3, and -4), and deep aquifer zone testing during construction of the CCWF wells (I-16, I-17, and I-18).

The multiple depth groundwater quality monitoring at wells in and south of the Chino Airport has allowed for TCE to be characterized horizontally and vertically. TCE has been detected in both the shallow unconfined aquifer system (see Map 1) and the deeper confined aquifer system (see Map 2). TCE is more thoroughly characterized in the shallow aquifer system than in the deep aquifer system.

Image courtesy of LAR-IAC © 2010 NAVTEQ © AND

117°40'0"W

TCE Concentration (ug/L)

- > 0 and ≤ 5
- > 5 and ≤ 10
- > 10 and ≤ 20
- > 20 and ≤ 50
- > 50 and ≤ 100
- > 100 and ≤ 200
- > 200 and ≤ 500
- > 500

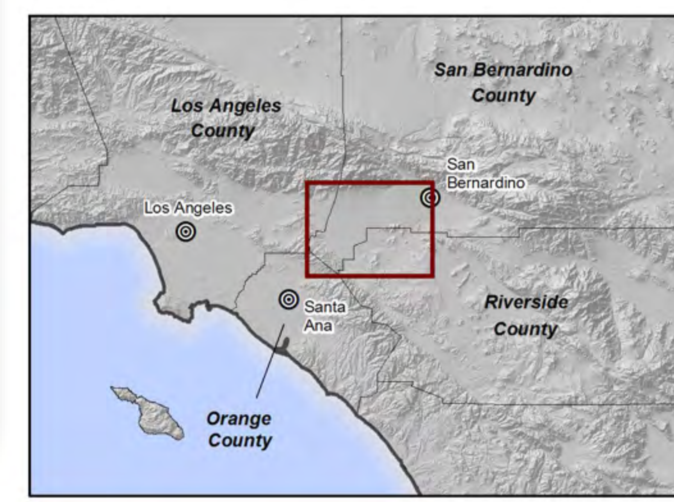
The VOC plumes shown on this map are generalized illustrations of the estimated spatial extent of TCE, based on maximum concentration measured over the five-year period of August 2007 to July 2012. The VOC plume illustrations were created with the Geostatistical Analyst extension in ESRI's ArcView 10.1 using an ordinary kriging interpolation model with model input parameter estimation and optimization performed by semivariogram analysis in Golden Software's Surfer 8.09. Interpretations of plume extent and boundary delineation were made based on measured concentrations and local groundwater flow patterns as predicted by the Chino Basin groundwater flow model.

5 Wells & Maximum TCE Concentration (ug/L) for August 2007 to July 2012.

Chino Desalter Well

Streams & Flood Control Channels

Flood Control & Conservation Basins



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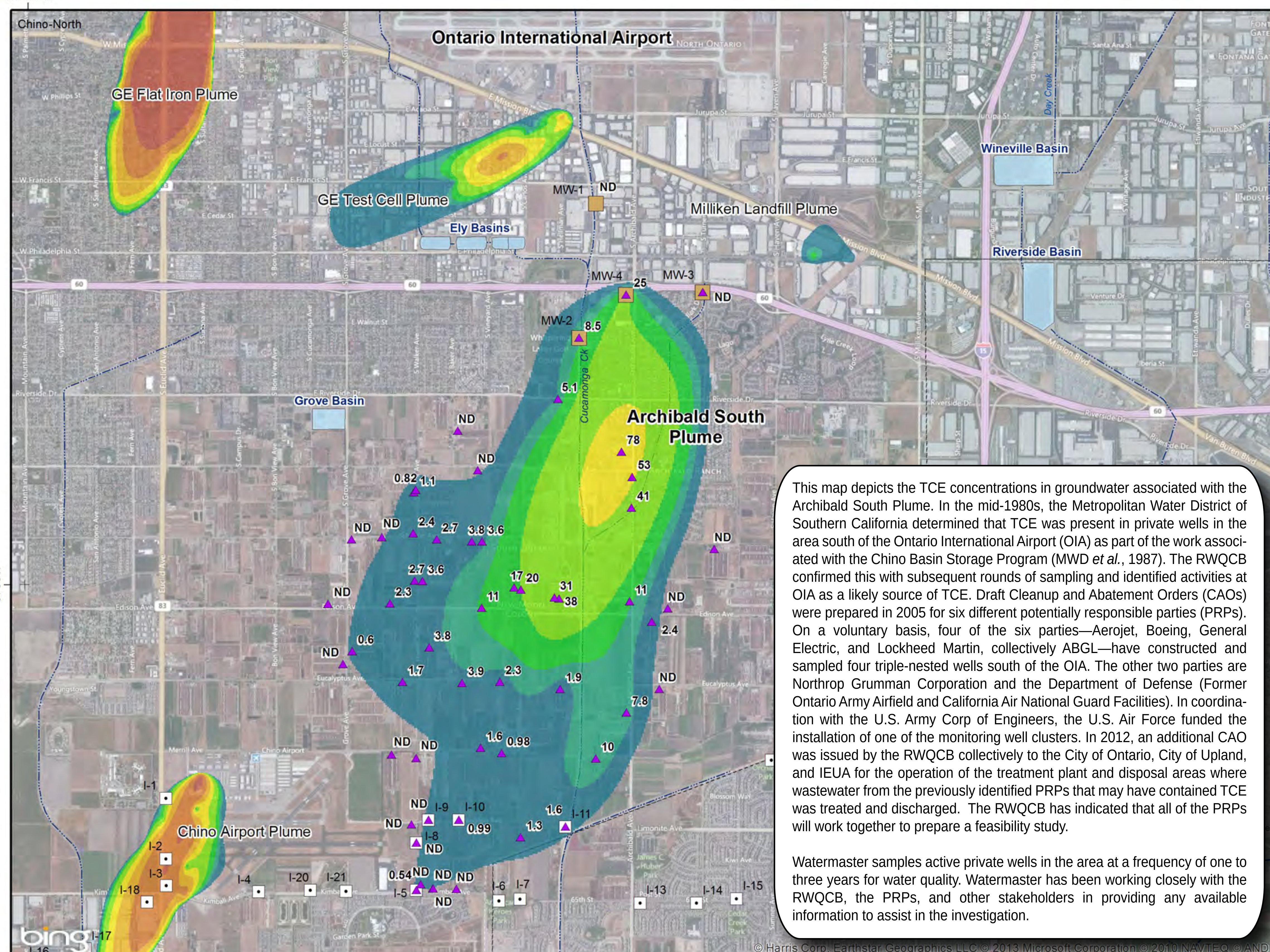
0 0.5 1 1.5 Miles

0 0.25 0.5 1 1.5 2 KM

2012 State of the Basin
Groundwater Quality

Chino Airport TCE Plume
Shallow and Deep Aquifers

Exhibit 45



This map depicts the TCE concentrations in groundwater associated with the Archibald South Plume. In the mid-1980s, the Metropolitan Water District of Southern California determined that TCE was present in private wells in the area south of the Ontario International Airport (OIA) as part of the work associated with the Chino Basin Storage Program (MWD *et al.*, 1987). The RWQCB confirmed this with subsequent rounds of sampling and identified activities at OIA as a likely source of TCE. Draft Cleanup and Abatement Orders (CAOs) were prepared in 2005 for six different potentially responsible parties (PRPs). On a voluntary basis, four of the six parties—Aerojet, Boeing, General Electric, and Lockheed Martin, collectively ABGL—have constructed and sampled four triple-nested wells south of the OIA. The other two parties are Northrop Grumman Corporation and the Department of Defense (Former Ontario Army Airfield and California Air National Guard Facilities). In coordination with the U.S. Army Corp of Engineers, the U.S. Air Force funded the installation of one of the monitoring well clusters. In 2012, an additional CAO was issued by the RWQCB collectively to the City of Ontario, City of Upland, and IEUA for the operation of the treatment plant and disposal areas where wastewater from the previously identified PRPs that may have contained TCE was treated and discharged. The RWQCB has indicated that all of the PRPs will work together to prepare a feasibility study.

Watermaster samples active private wells in the area at a frequency of one to three years for water quality. Watermaster has been working closely with the RWQCB, the PRPs, and other stakeholders in providing any available information to assist in the investigation.

TCE Concentration (ug/L)

- > 0 and ≤ 5
- > 5 and ≤ 10
- > 10 and ≤ 20
- > 20 and ≤ 50
- > 50 and ≤ 100
- > 100 and ≤ 200
- > 200 and ≤ 500
- > 500

The VOC plumes shown on this map are generalized illustrations of the estimated spatial extent of TCE, based on maximum concentration measured over the five-year period of August 2007 to July 2012. The VOC plume illustrations were created with the Geostatistical Analyst extension in ESRI's ArcView 10.1 using an ordinary kriging interpolation model with model input parameter estimation and optimization performed by semivariogram analysis in Golden Software's Surfer 8.09. Interpretations of plume extent and boundary delineation were made based on measured concentrations and local groundwater flow patterns as predicted by the Chino Basin groundwater flow model.

- ABGL Monitoring Wells
- Wells & TCE Concentration (ug/L)
- Chino Desalter Well
- Streams & Flood Control Channels
- Flood Control & Conservation Basins

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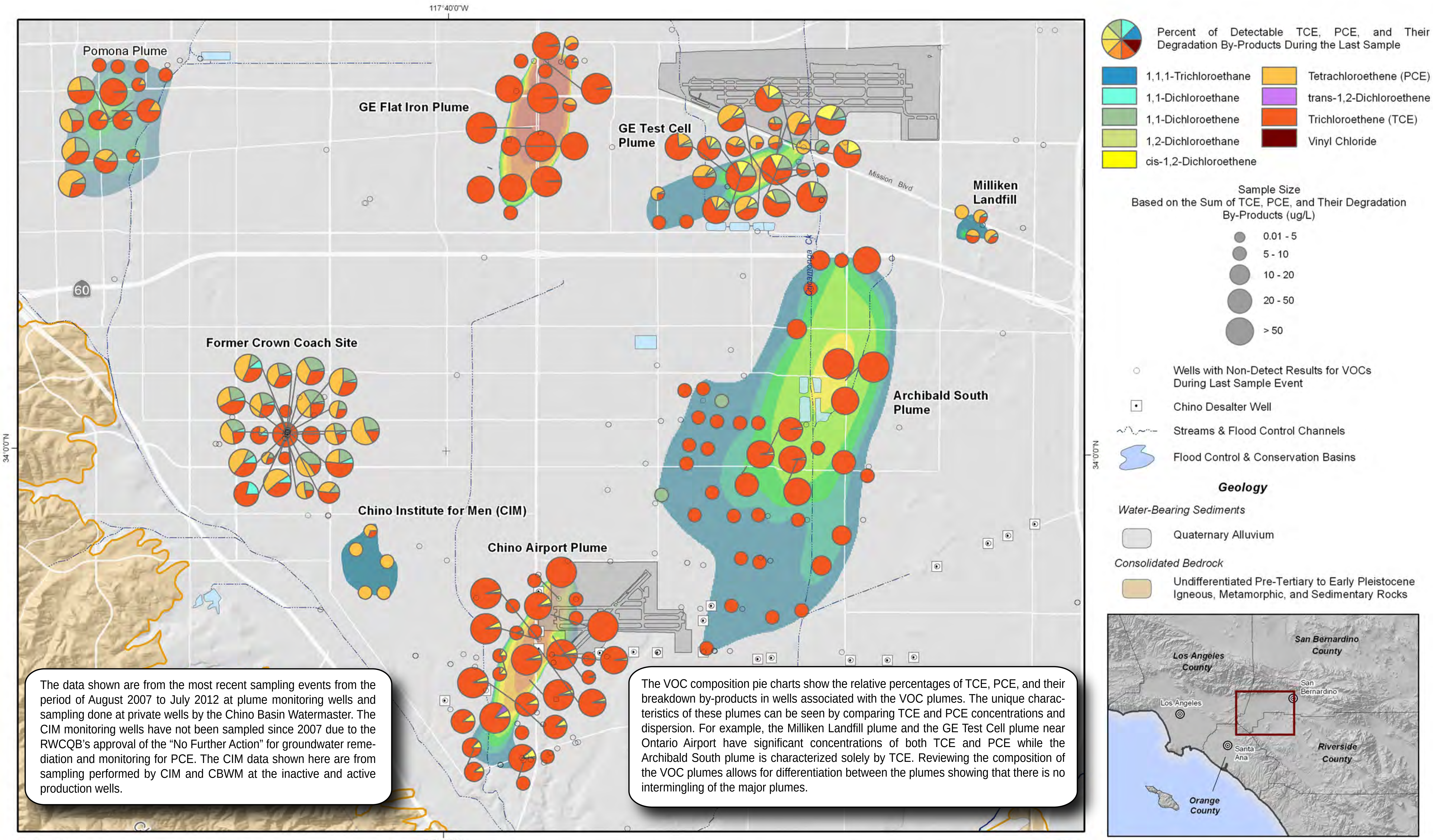
0 0.5 1 1.5 Miles
0 0.25 0.5 1 1.5 2 KM

2012 State of the Basin
Groundwater Quality

Archibald South TCE Plume

Exhibit 46



The data shown are from the most recent sampling events from the period of August 2007 to July 2012 at plume monitoring wells and sampling done at private wells by the Chino Basin Watermaster. The CIM monitoring wells have not been sampled since 2007 due to the RWCQB's approval of the "No Further Action" for groundwater remediation and monitoring for PCE. The CIM data shown here are from sampling performed by CIM and CBWM at the inactive and active production wells.

The VOC composition pie charts show the relative percentages of TCE, PCE, and their breakdown by-products in wells associated with the VOC plumes. The unique characteristics of these plumes can be seen by comparing TCE and PCE concentrations and dispersion. For example, the Milliken Landfill plume and the GE Test Cell plume near Ontario Airport have significant concentrations of both TCE and PCE while the Archibald South plume is characterized solely by TCE. Reviewing the composition of the VOC plumes allows for differentiation between the plumes showing that there is no intermingling of the major plumes.

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0 0.5 1 1.5 2 Miles

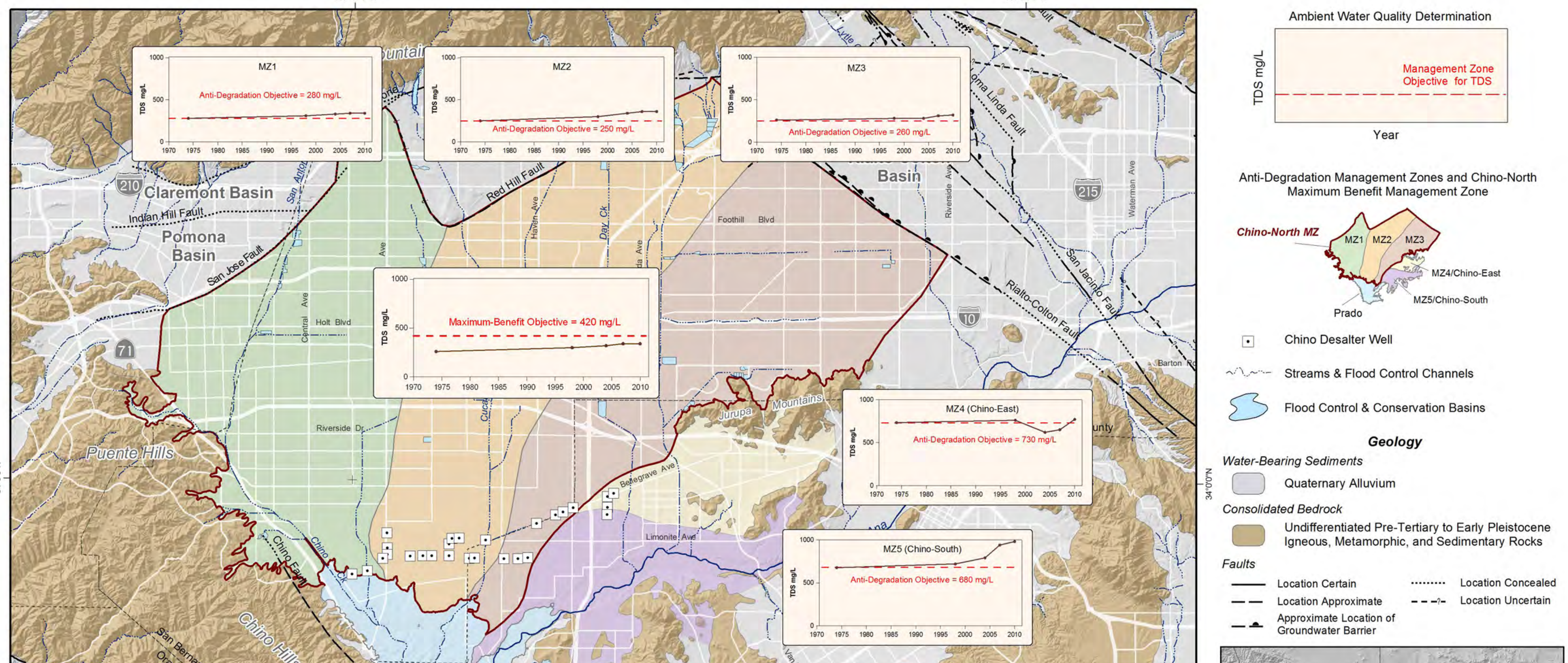
0 0.5 1 1.5 2 2.5 Kilometers

2012 State of the Basin
Groundwater Quality

VOC Composition Charts

Wells Within and Adjacent to VOC Plumes

Exhibit 47



The ambient water quality (AWQ) of management zones (MZs) in the Santa Ana Region are computed on a triennial basis and compared with the groundwater quality objectives in the Basin Plan (RWQCB, 2004) to determine whether a MZ has assimilative capacity for TDS and nitrate. In the Chino Basin, the Chino-North MZ maximum-benefit objective is used for compliance by the RWQCB. The Chino-North is MZ1, MZ2, and MZ3 combined upgradient of Prado Basin, and the Chino-North maximum-benefit objective is higher than the anti-degradation objectives for MZ1, MZ2, and MZ3. If the Watermaster and IEUA do not implement specific projects and programs termed the "Maximum-Benefit Commitments" (Table 5-8 in the Basin Plan), than the anti-degradation objectives would be used by the RWQCB for compliance purposes.

Shown here are time-series of ambient TDS concentration for the anti-degradation MZs and for the Chino-North MZ. TDS AWQ determinations were made for 1973, 1997, 2003, 2006, and 2009 (WEI, 2000, 2005b, 2008a, and 2011b). The current (2009) AWQ determination for TDS in Chino-North is 340 mg/L. The maximum-benefit TDS objective for Chino-North is 420 mg/L. Therefore, there is 80 mg/L of assimilative capacity (WEI, 2011b). If the current TDS AWQ were to exceed the maximum-benefit objective there would be a mitigation requirement for the recharge and direct use of recycled water. The more recent increases in TDS AWQ determinations are due to the expansion of monitoring programs in the Chino Basin and are not due to an increase in TDS concentrations in the Basin. The next AWQ TDS concentration will be determined in 2014.

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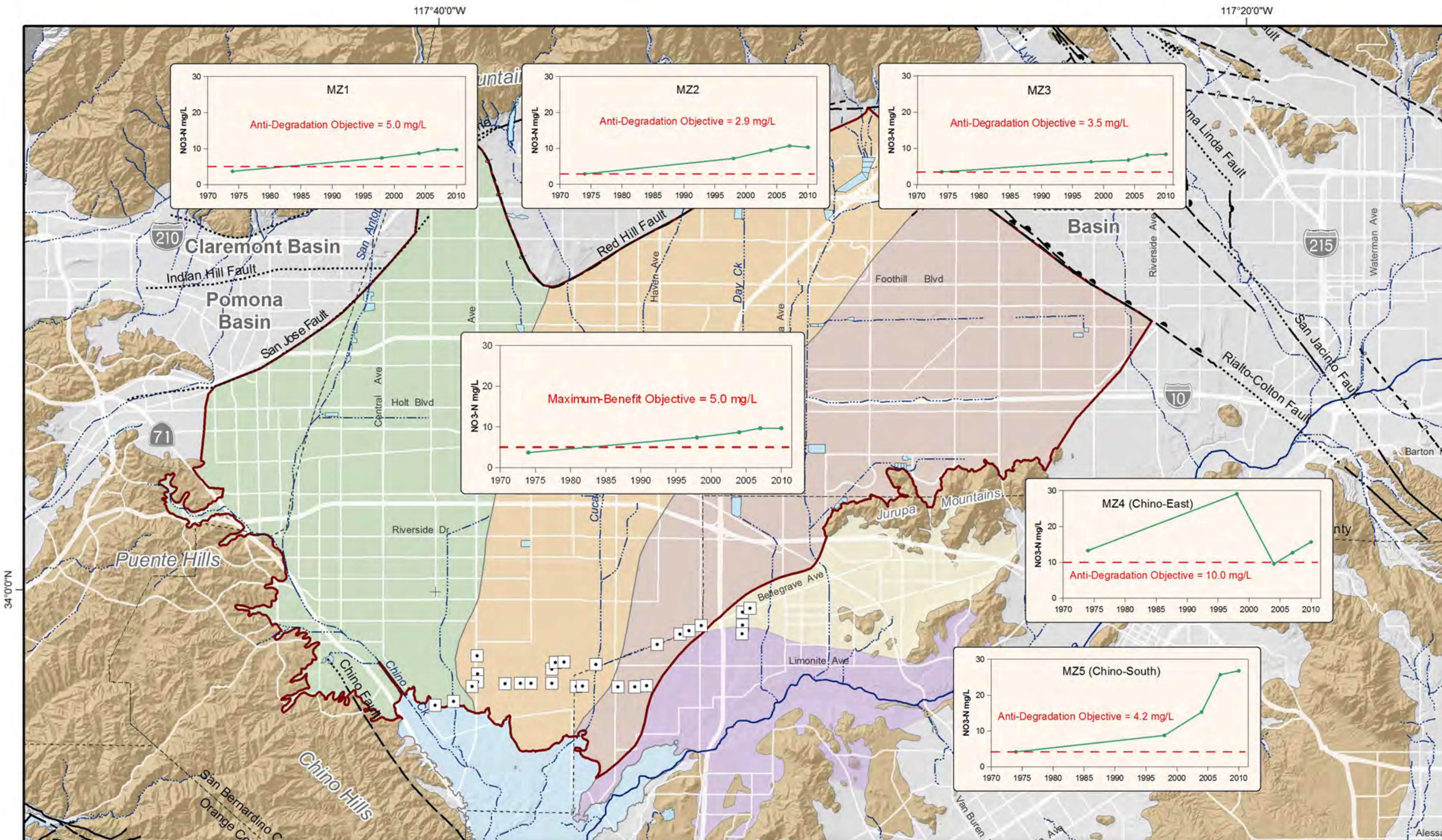
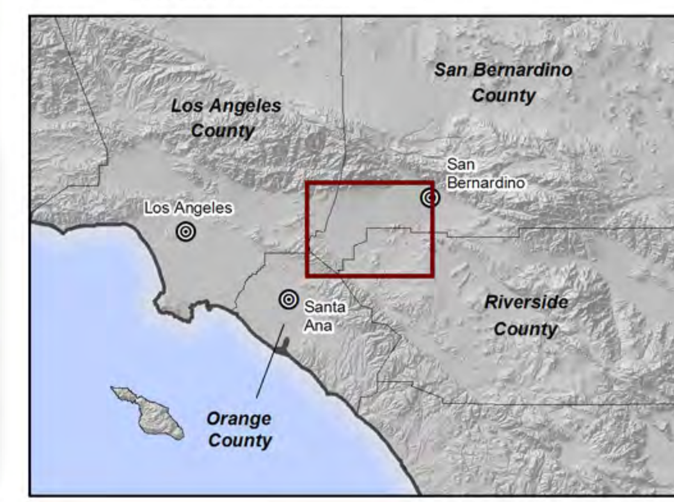
0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Trends in Ambient Water Quality Determinations for Total Dissolved Solids (TDS) By Management Zone

Exhibit 48





The ambient water quality (AWQ) of management zones (MZs) in the Santa Ana Region are computed on a triennial basis and compared with the groundwater quality objectives in the Basin Plan (RWQCB, 2004) to determine whether a MZ has assimilative capacity for TDS and nitrate. In the Chino Basin, the Chino-North MZ maximum-benefit objective is used for compliance by the RWQCB. The Chino-North is MZ1, MZ2, and MZ3 combined upgradient of Prado Basin, and the Chino-North maximum-benefit objective is higher than the anti-degradation objectives for MZ1, MZ2, and MZ3. If the Watermaster and IEUA do not implement specific projects and programs termed the “Maximum Benefit Commitments” (Table 5-8 in the Basin Plan), than the anti-degradation objectives would be used by the RWQCB for compliance purposes.

Shown here are time-series of ambient NO3-N concentration for the anti-degradation MZs and for the Chino-North MZ. NO3-N AWQ determinations were made for 1973, 1997, 2003, 2006, and 2009 (WEI, 2000, 2005b, 2008a, and 2011b). The current (2009) AWQ determination for NO3-N in Chino-North is 9.5 mg/L. The maximum-benefit NO3-N objective for Chino-North is 5.0 mg/L. Therefore, there is no assimilative capacity for NO3-N (WEI, 2011b). The more recent increases in NO3-N AWQ determinations are due to the expansion of monitoring programs in the Chino Basin and are not due to an increase in NO3-N concentrations in the Basin. The next AWQ NO3-N concentration will be determined in 2014.

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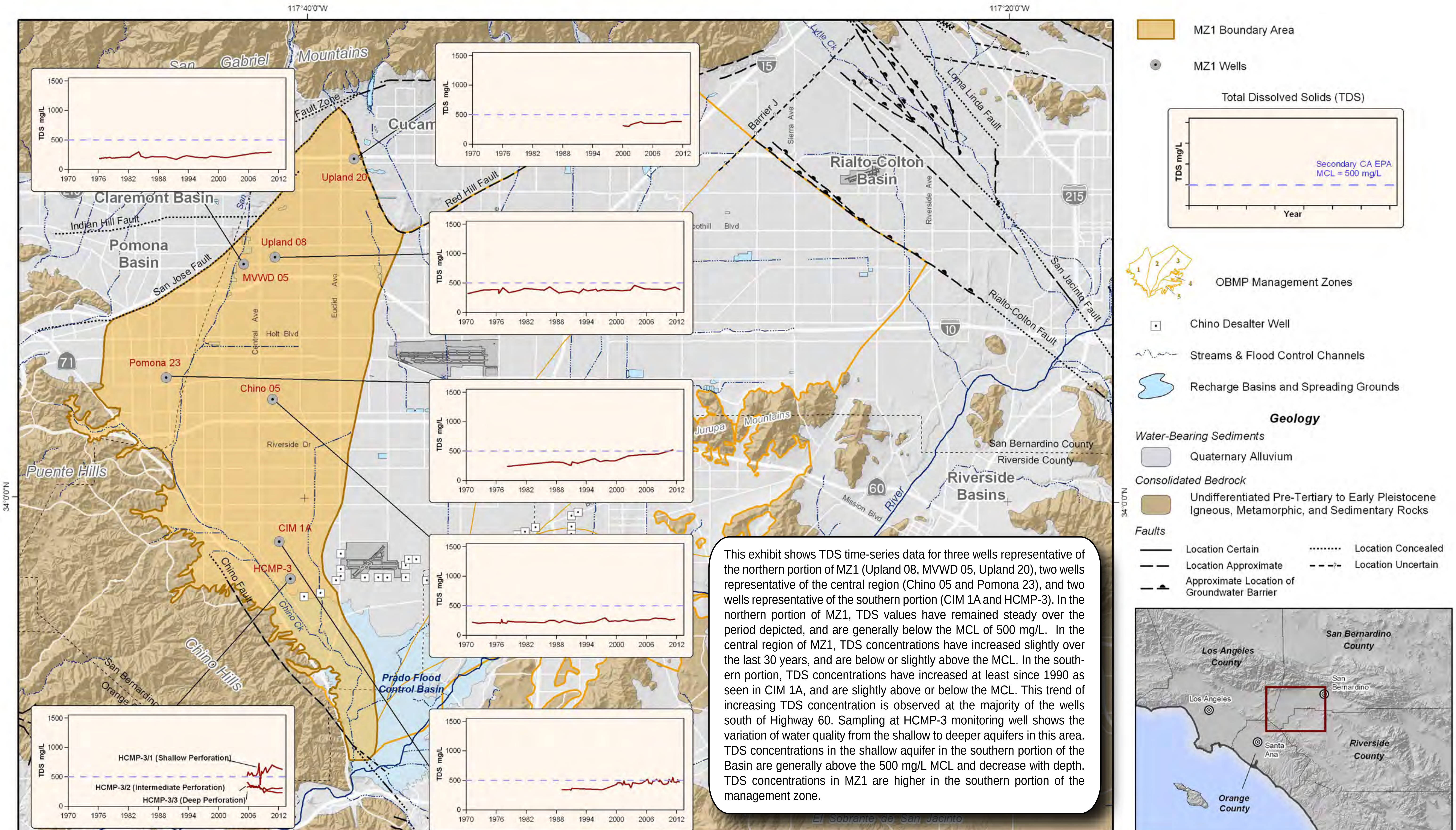
0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Trends in Ambient Water Quality Determinations for Nitrate as Nitrogen (NO3-N) By Management Zone

Exhibit 49



This exhibit shows TDS time-series data for three wells representative of the northern portion of MZ1 (Upland 08, MVWD 05, Upland 20), two wells representative of the central region (Chino 05 and Pomona 23), and two wells representative of the southern portion (CIM 1A and HCMP-3). In the northern portion of MZ1, TDS values have remained steady over the period depicted, and are generally below the MCL of 500 mg/L. In the central region of MZ1, TDS concentrations have increased slightly over the last 30 years, and are below or slightly above the MCL. In the southern portion, TDS concentrations have increased at least since 1990 as seen in CIM 1A, and are slightly above or below the MCL. This trend of increasing TDS concentration is observed at the majority of the wells south of Highway 60. Sampling at HCMP-3 monitoring well shows the variation of water quality from the shallow to deeper aquifers in this area. TDS concentrations in the shallow aquifer in the southern portion of the Basin are generally above the 500 mg/L MCL and decrease with depth. TDS concentrations in MZ1 are higher in the southern portion of the management zone.

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Date: 20121001
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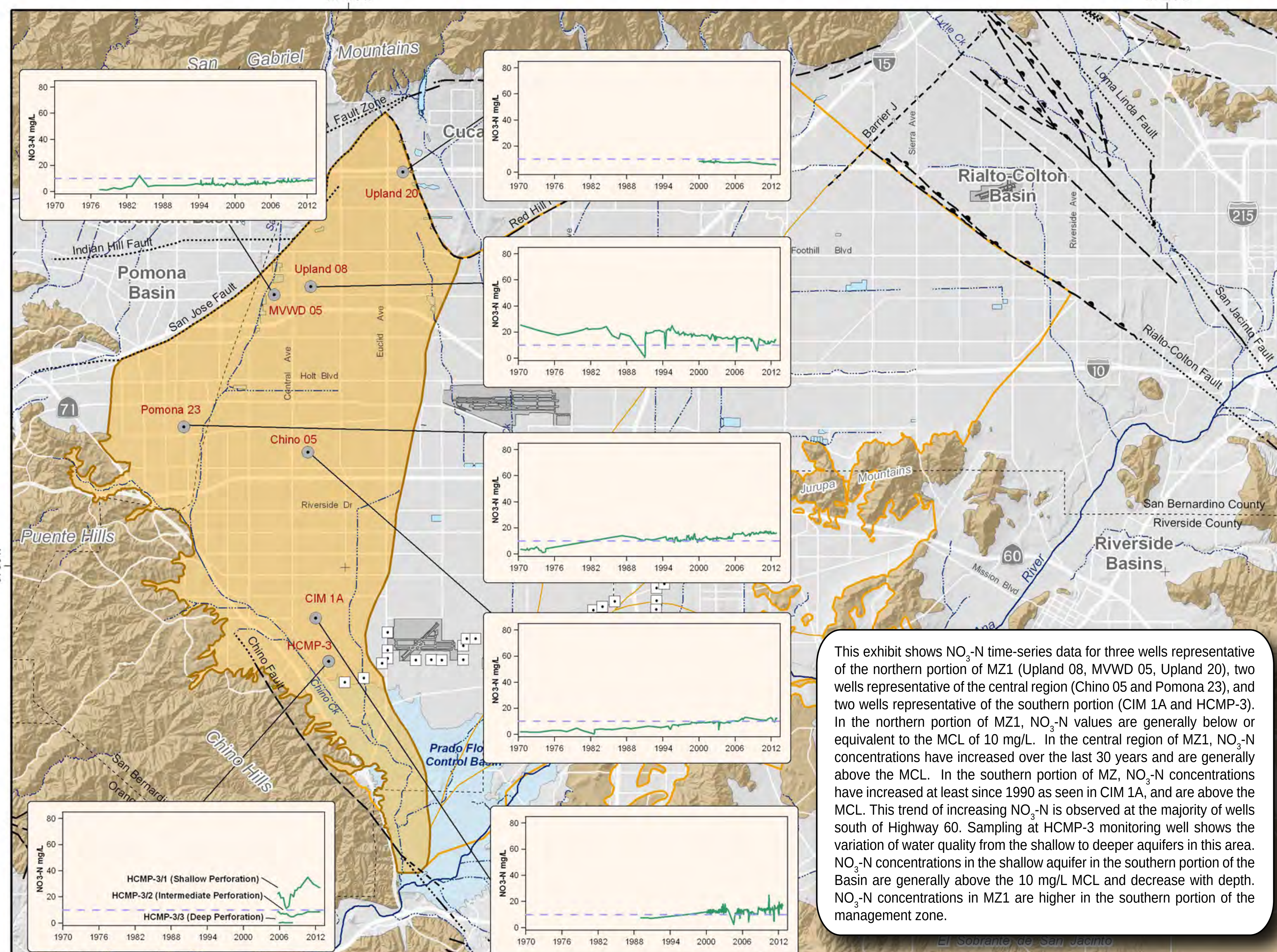
0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Chino Basin Management Zone 1

Trends in Total Dissolved Solids Concentrations

Exhibit 50

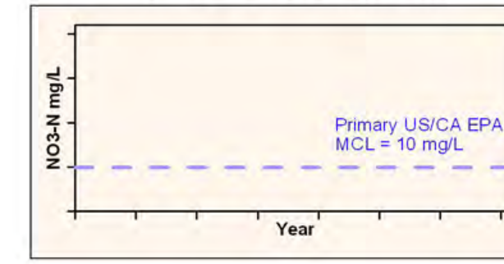


This exhibit shows NO_3-N time-series data for three wells representative of the northern portion of MZ1 (Upland 08, MVWD 05, Upland 20), two wells representative of the central region (Chino 05 and Pomona 23), and two wells representative of the southern portion (CIM 1A and HCMP-3). In the northern portion of MZ1, NO_3-N values are generally below or equivalent to the MCL of 10 mg/L. In the central region of MZ1, NO_3-N concentrations have increased over the last 30 years and are generally above the MCL. In the southern portion of MZ, NO_3-N concentrations have increased at least since 1990 as seen in CIM 1A, and are above the MCL. This trend of increasing NO_3-N is observed at the majority of wells south of Highway 60. Sampling at HCMP-3 monitoring well shows the variation of water quality from the shallow to deeper aquifers in this area. NO_3-N concentrations in the shallow aquifer in the southern portion of the Basin are generally above the 10 mg/L MCL and decrease with depth. NO_3-N concentrations in MZ1 are higher in the southern portion of the management zone.

MZ1 Boundary Area

MZ1 Wells

Nitrate as Nitrogen (NO3-N)



OBMP Management Zones

Chino Desalter Well

Streams & Flood Control Channels

Recharge Basins and Spreading Grounds

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

Location Certain

Location Approximate

Approximate Location of Groundwater Barrier

Location Concealed

Location Uncertain

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Date: 20121001

File: Exhibit_51.mxd

0 1 2 3 4 5 Miles

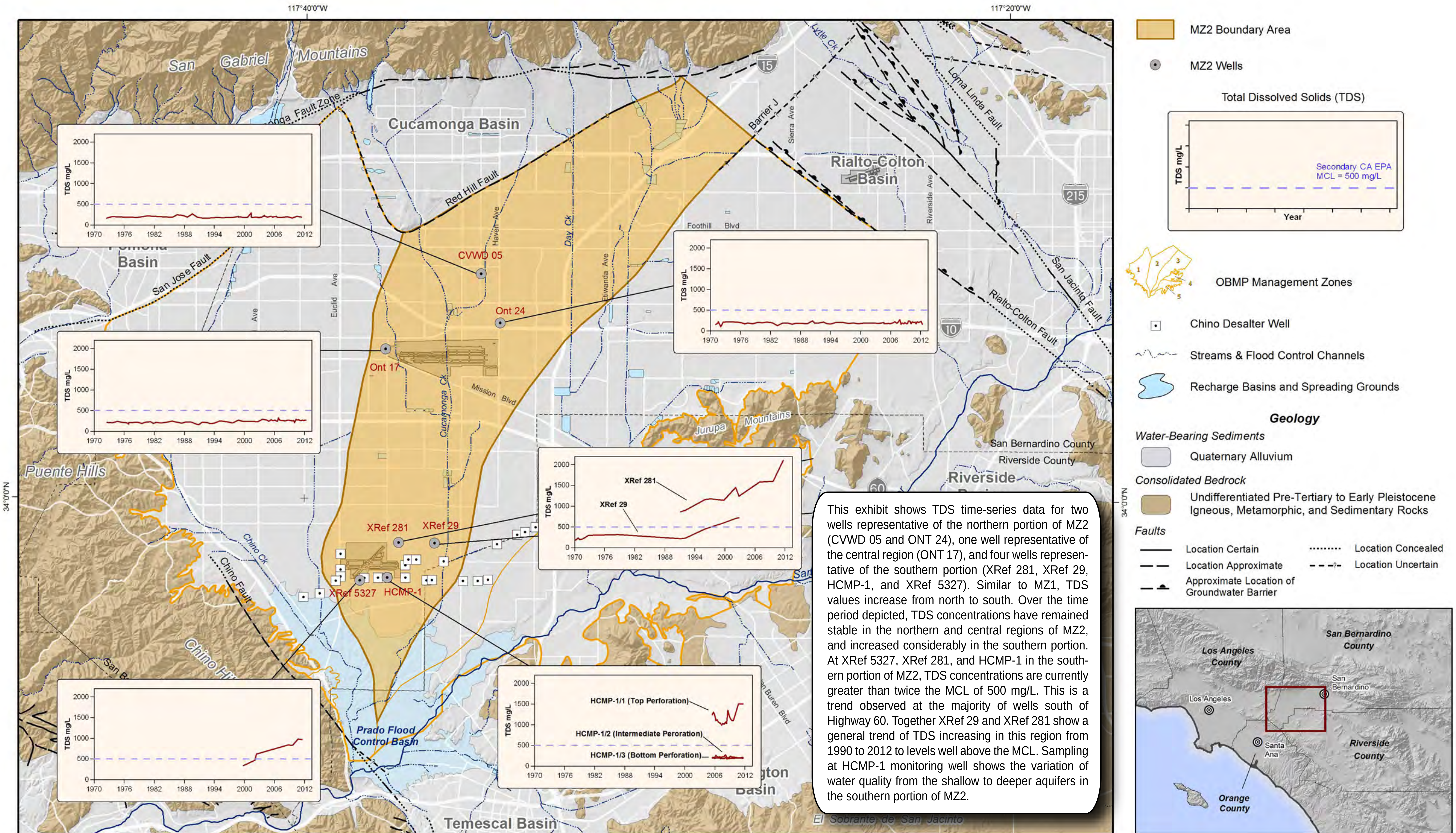
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Chino Basin Management Zone 1

Trends in Nitrate as Nitrogen Concentrations

Exhibit 51



This exhibit shows TDS time-series data for two wells representative of the northern portion of MZ2 (CVWD 05 and ONT 24), one well representative of the central region (ONT 17), and four wells representative of the southern portion (XRef 281, XRef 29, HCMP-1, and XRef 5327). Similar to MZ1, TDS values increase from north to south. Over the time period depicted, TDS concentrations have remained stable in the northern and central regions of MZ2, and increased considerably in the southern portion. At XRef 5327, XRef 281, and HCMP-1 in the southern portion of MZ2, TDS concentrations are currently greater than twice the MCL of 500 mg/L. This is a trend observed at the majority of wells south of Highway 60. Together XRef 29 and XRef 281 show a general trend of TDS increasing in this region from 1990 to 2012 to levels well above the MCL. Sampling at HCMP-1 monitoring well shows the variation of water quality from the shallow to deeper aquifers in the southern portion of MZ2.

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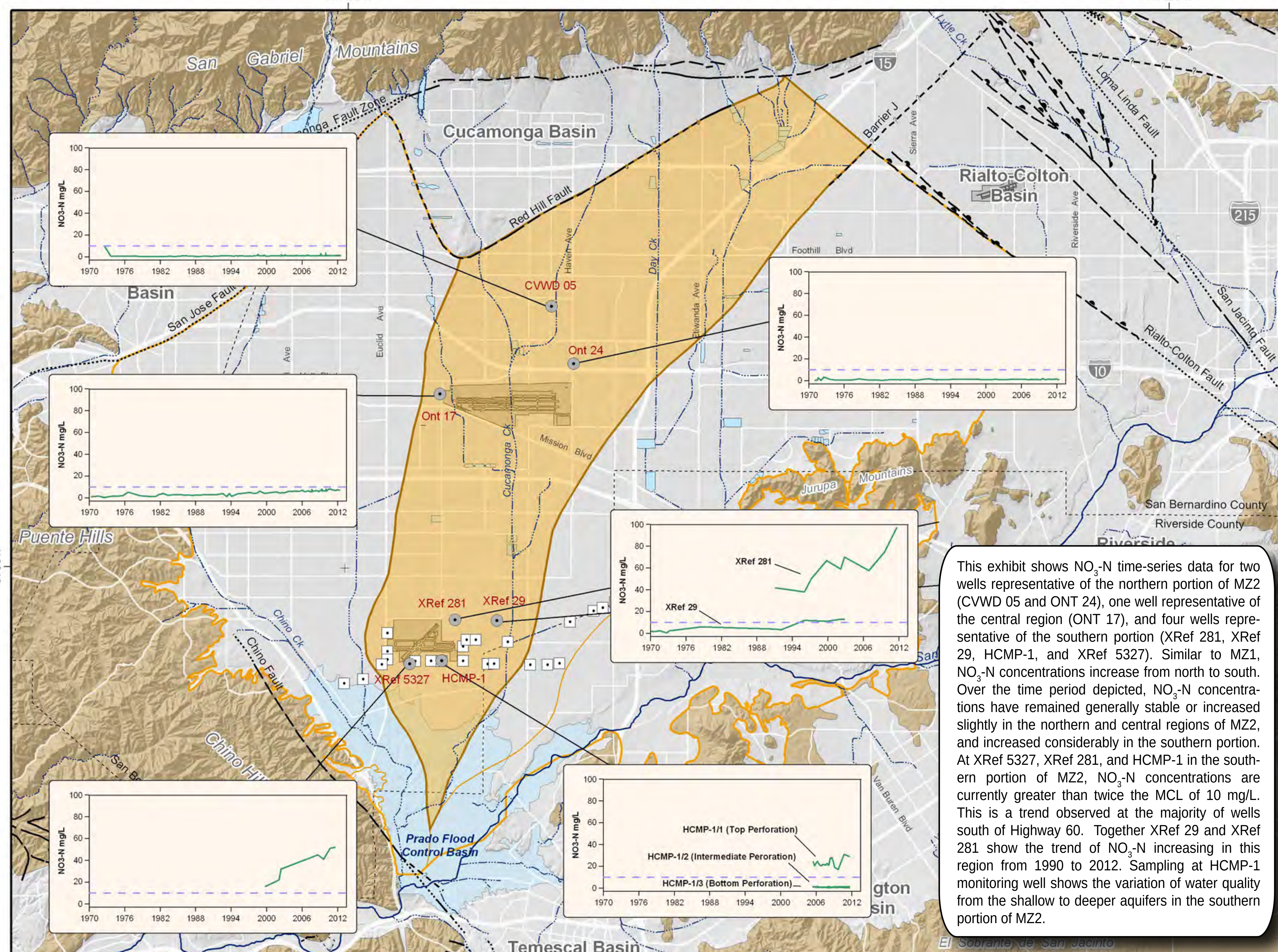
0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Chino Basin Management Zone 2

Trends in Total Dissolved Solids Concentrations

Exhibit 52



This exhibit shows NO_3-N time-series data for two wells representative of the northern portion of MZ2 (CVWD 05 and ONT 24), one well representative of the central region (ONT 17), and four wells representative of the southern portion (XRef 281, XRef 29, HCMP-1, and XRef 5327). Similar to MZ1, NO_3-N concentrations increase from north to south. Over the time period depicted, NO_3-N concentrations have remained generally stable or increased slightly in the northern and central regions of MZ2, and increased considerably in the southern portion. At XRef 5327, XRef 281, and HCMP-1 in the southern portion of MZ2, NO_3-N concentrations are currently greater than twice the MCL of 10 mg/L. This is a trend observed at the majority of wells south of Highway 60. Together XRef 29 and XRef 281 show the trend of NO_3-N increasing in this region from 1990 to 2012. Sampling at HCMP-1 monitoring well shows the variation of water quality from the shallow to deeper aquifers in the southern portion of MZ2.

MZ2 Boundary Area

MZ2 Wells

Nitrate as Nitrogen (NO3-N)

NO3-N mg/L

Primary US/CA EPA MCL = 10 mg/L

Year

OBMP Management Zones

Chino Desalter Well

Streams & Flood Control Channels

Recharge Basins and Spreading Grounds

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

Location Certain
Location Approximate
Approximate Location of Groundwater Barrier
Location Concealed
Location Uncertain

Los Angeles County
San Bernardino County
Riverside County
Orange County
Los Angeles
San Bernardino
Santa Ana

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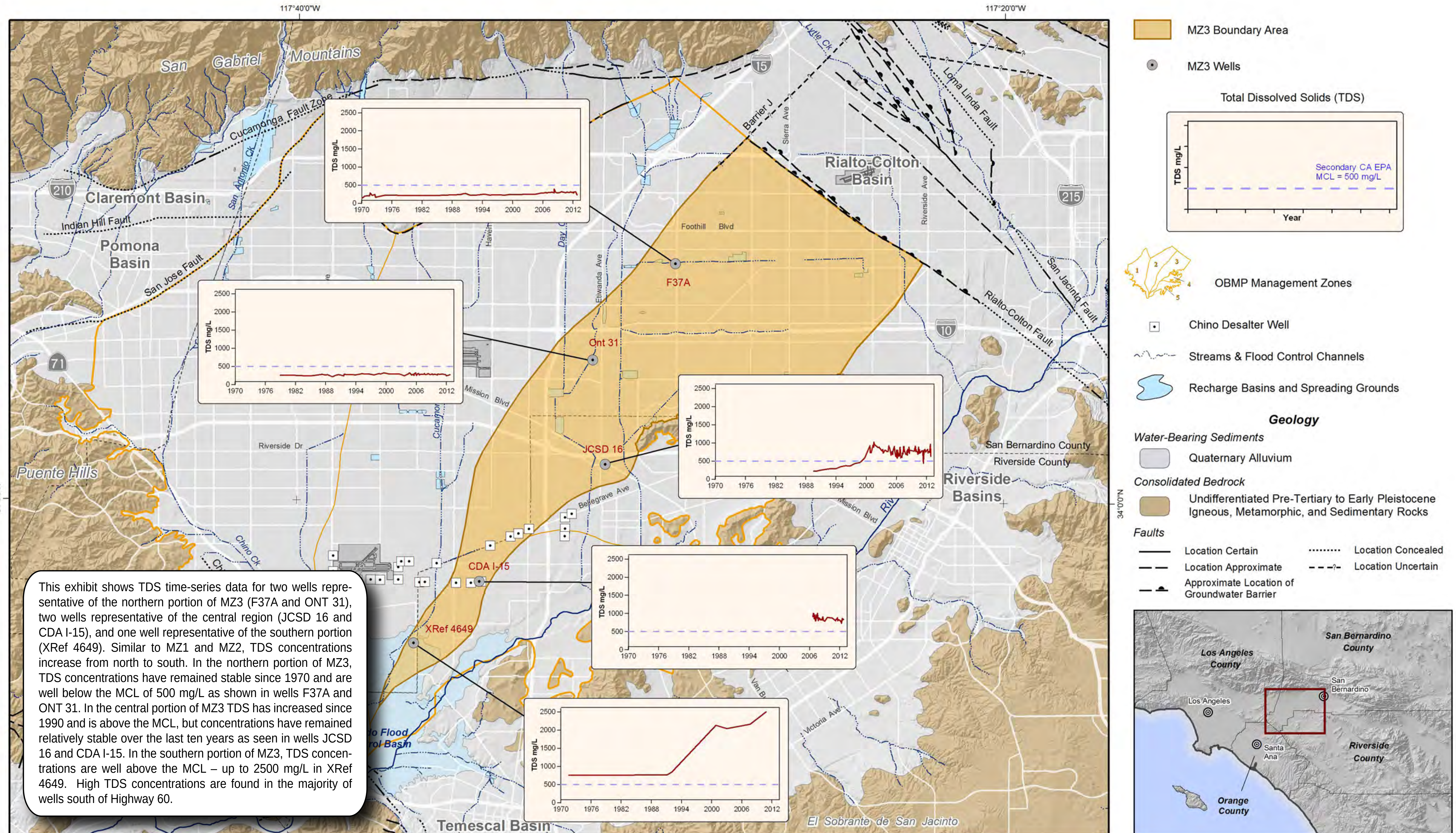
0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Chino Basin Management Zone 2

Trends in Nitrate as Nitrogen Concentrations

Exhibit 53



This exhibit shows TDS time-series data for two wells representative of the northern portion of MZ3 (F37A and ONT 31), two wells representative of the central region (JCSD 16 and CDA I-15), and one well representative of the southern portion (XRef 4649). Similar to MZ1 and MZ2, TDS concentrations increase from north to south. In the northern portion of MZ3, TDS concentrations have remained stable since 1970 and are well below the MCL of 500 mg/L as shown in wells F37A and ONT 31. In the central portion of MZ3 TDS has increased since 1990 and is above the MCL, but concentrations have remained relatively stable over the last ten years as seen in wells JCSD 16 and CDA I-15. In the southern portion of MZ3, TDS concentrations are well above the MCL – up to 2500 mg/L in XRef 4649. High TDS concentrations are found in the majority of wells south of Highway 60.

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WILDERMUTH ENVIRONMENTAL INC.
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Lake Forest, CA 92630
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Author: VMW
Date: 20121001
File: Exhibit_54.mxd

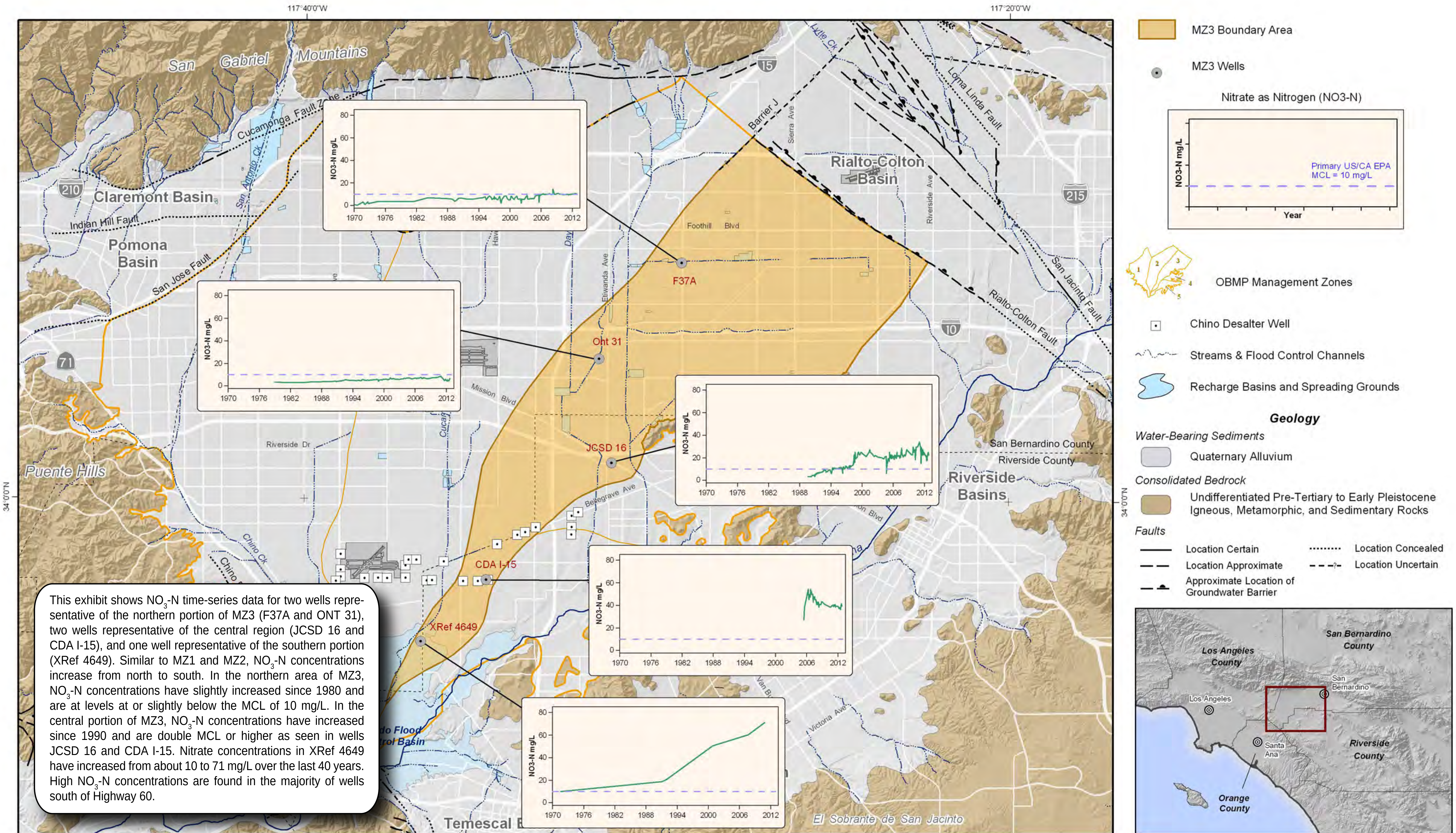
0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Chino Basin Management Zone 3

Trends in Total Dissolved Solids Concentrations

Exhibit 54



This exhibit shows NO_3-N time-series data for two wells representative of the northern portion of MZ3 (F37A and ONT 31), two wells representative of the central region (JCSD 16 and CDA I-15), and one well representative of the southern portion (XRef 4649). Similar to MZ1 and MZ2, NO_3-N concentrations increase from north to south. In the northern area of MZ3, NO_3-N concentrations have slightly increased since 1980 and are at levels at or slightly below the MCL of 10 mg/L. In the central portion of MZ3, NO_3-N concentrations have increased since 1990 and are double MCL or higher as seen in wells JCSD 16 and CDA I-15. Nitrate concentrations in XRef 4649 have increased from about 10 to 71 mg/L over the last 40 years. High NO_3-N concentrations are found in the majority of wells south of Highway 60.

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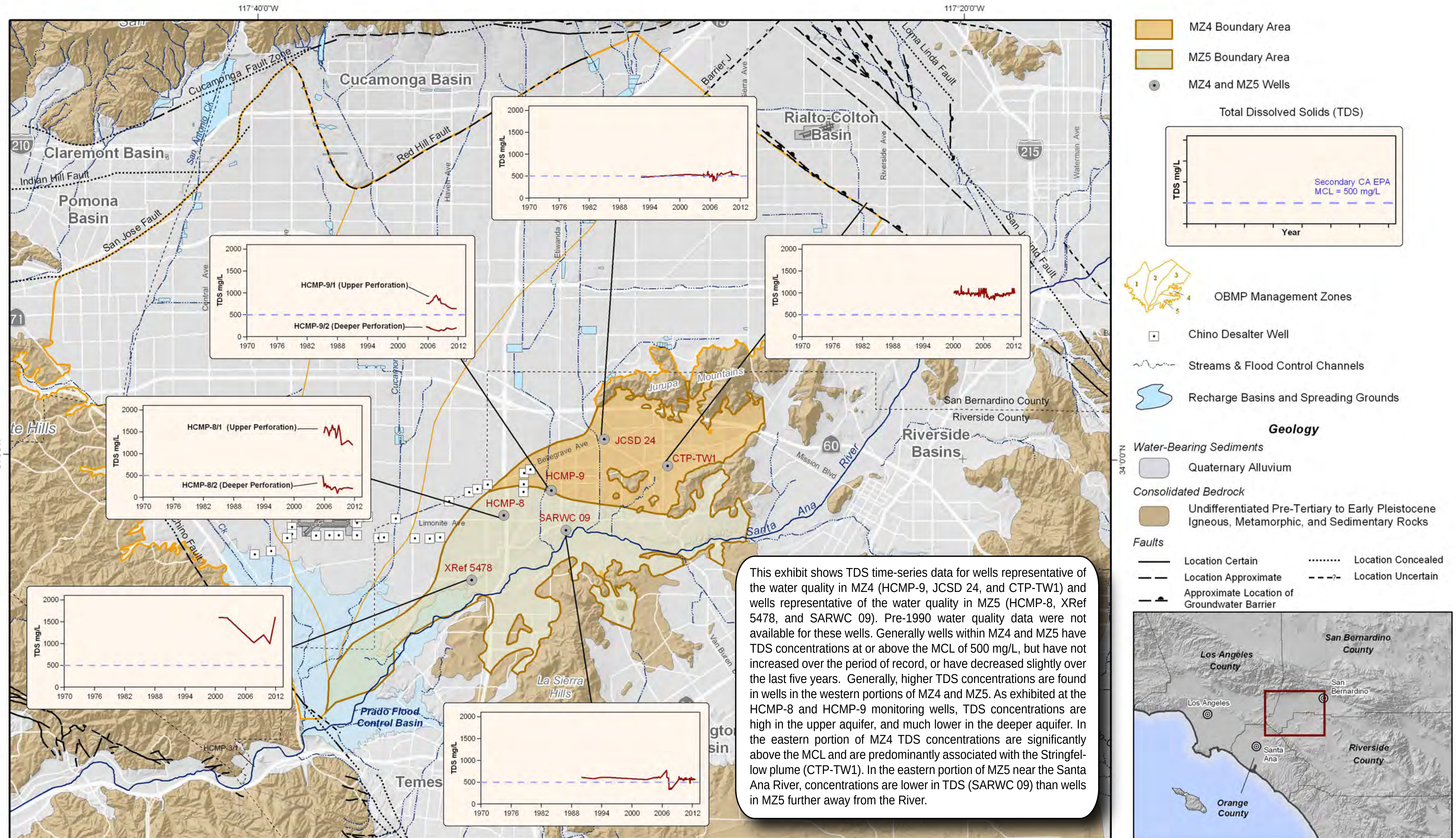
0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Chino Basin Management Zone 3

Trends in Nitrate as Nitrogen Concentrations

Exhibit 55



This exhibit shows TDS time-series data for wells representative of the water quality in MZ4 (HCMP-9, JCSD 24, and CTP-TW1) and wells representative of the water quality in MZ5 (HCMP-8, XRef 5478, and SARWC 09). Pre-1990 water quality data were not available for these wells. Generally wells within MZ4 and MZ5 have TDS concentrations at or above the MCL of 500 mg/L, but have not increased over the period of record, or have decreased slightly over the last five years. Generally, higher TDS concentrations are found in wells in the western portions of MZ4 and MZ5. As exhibited at the HCMP-8 and HCMP-9 monitoring wells, TDS concentrations are high in the upper aquifer, and much lower in the deeper aquifer. In the eastern portion of MZ4 TDS concentrations are significantly above the MCL and are predominantly associated with the Stringfellow plume (CTP-TW1). In the eastern portion of MZ5 near the Santa Ana River, concentrations are lower in TDS (SARWC 09) than wells in MZ5 further away from the River.

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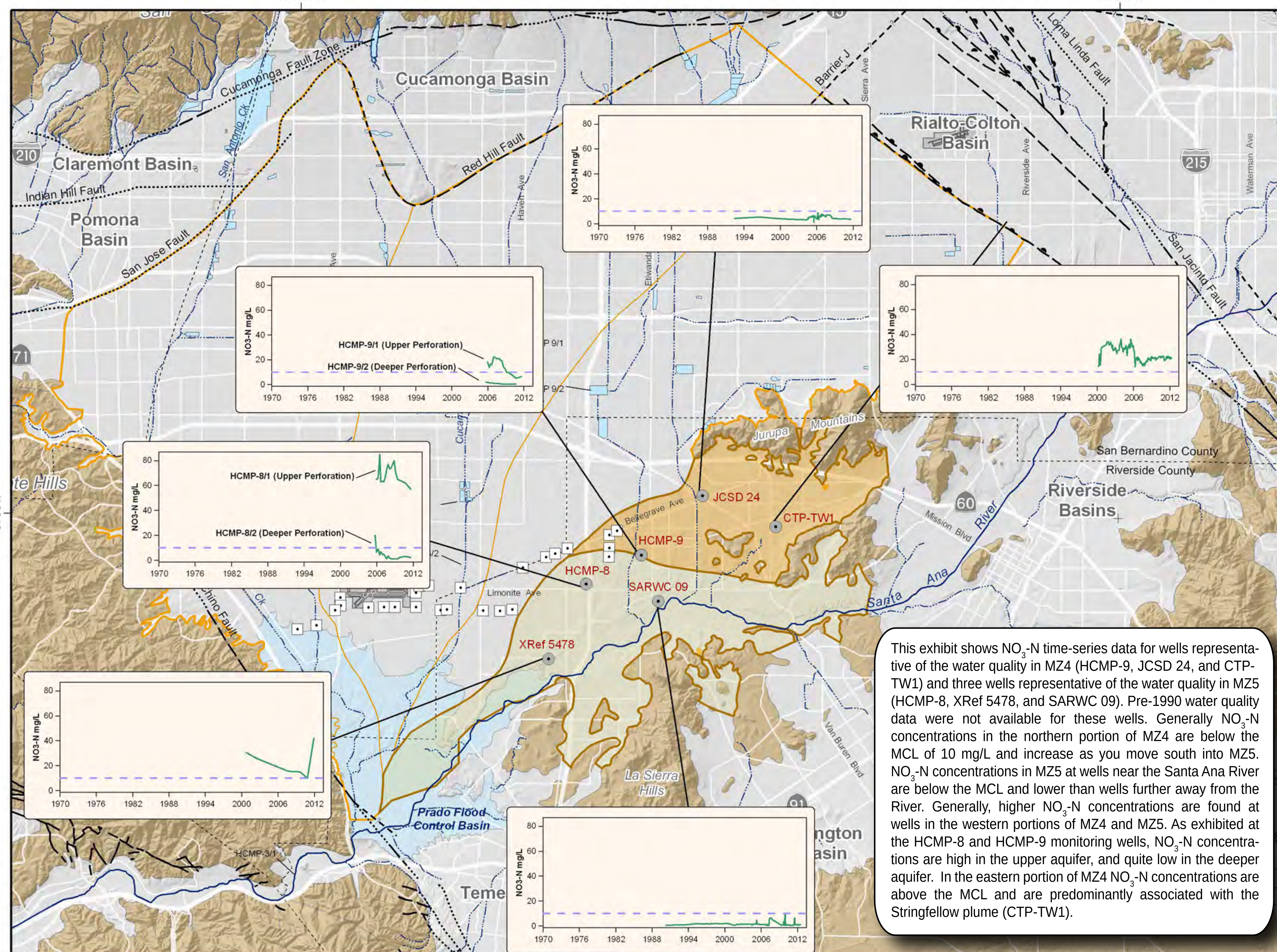
0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Chino Basin Management Zone 4 and Zone 5

Trends in Total Dissolved Solids Concentrations

Exhibit 56



This exhibit shows NO_3-N time-series data for wells representative of the water quality in MZ4 (HCMP-9, JCSD 24, and CTP-TW1) and three wells representative of the water quality in MZ5 (HCMP-8, XRef 5478, and SARWC 09). Pre-1990 water quality data were not available for these wells. Generally NO_3-N concentrations in the northern portion of MZ4 are below the MCL of 10 mg/L and increase as you move south into MZ5. NO_3-N concentrations in MZ5 at wells near the Santa Ana River are below the MCL and lower than wells further away from the River. Generally, higher NO_3-N concentrations are found at wells in the western portions of MZ4 and MZ5. As exhibited at the HCMP-8 and HCMP-9 monitoring wells, NO_3-N concentrations are high in the upper aquifer, and quite low in the deeper aquifer. In the eastern portion of MZ4 NO_3-N concentrations are above the MCL and are predominantly associated with the Stringfellow plume (CTP-TW1).

MZ4 Boundary Area

MZ5 Boundary Area

MZ4 and MZ5 Wells

Nitrate as Nitrogen (NO3-N)

NO3-N mg/L

Primary US/CA EPA MCL = 10 mg/L

Year

OBMP Management Zones

Chino Desalter Well

Streams & Flood Control Channels

Recharge Basins and Spreading Grounds

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

Location Certain

Location Approximate

Approximate Location of Groundwater Barrier

Location Concealed

Location Uncertain

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0 1 2 3 4 5 Miles
0 2 4 6 8 KM

2012 State of the Basin
Groundwater Quality

Chino Basin Management Zone 4 and Zone 5

Trends in Nitrate as Nitrogen Concentrations

Exhibit 57