

Technical Memorandum								
To:	Ground-Level Monitoring Committee							
From:	Watermaster Engineer – Wildermuth Environmental Inc. (WEI)							
Date:	February 19, 2018							
Subject:	Recommended Scope and Budget of the Ground-Level Monitoring							
	Committee for FY 2018/19 (Draft 1)							

Background and Purpose

Pursuant to the Optimum Basin Management Program (OBMP) Implementation Plan and the Peace Agreement, the Chino Basin Watermaster (Watermaster) implements a Subsidence Management Plan (SMP) for the Chino Basin to minimize or abate the occurrence of land subsidence and ground fissuring. The SMP outlines a program of monitoring, data analysis, and annual reporting. A key element of the SMP is its adaptive nature—Watermaster can adjust the SMP as warranted by the data.¹

The Watermaster Engineer, under the supervision of the Ground-Level Monitoring Committee (GLMC), prepares the annual reports which include the results of the monitoring program, interpretations of the data, recommendations for the Ground-Level Monitoring Program (GLMP) for the following fiscal year, and recommendations for adjustments to the SMP, if any.

This memorandum describes the Watermaster Engineer's recommended activities for the GLMP for FY 2017/18 in the form of a proposed scope-of-work and budget.

Members of the GLMC are asked to:

- 1. Review this memorandum by March 1, 2018.
- 2. Attend a meeting of the GLMC at 9:00 am on March 1, 2018 at Watermaster to discuss the proposed scope-of-work and budget for FY 2018/19.
- 3. Submit comments and suggested revisions on the proposed scope-of-work and budget for FY 2018/19 to the Watermaster by March 15, 2018.
- 4. Attend a meeting of the GLMC at 9:00 am on March 29, 2018 at Watermaster to discuss comments and revisions to the proposed scope-of-work and budget for FY 2018/19.

¹ The Court approved the SMP and ordered its implementation in November 2007. The SMP was updated in 2015, and can be downloaded or viewed at this link.

The final scope-of-work and budget that is recommended by the GLMC will run through Watermaster's budgeting process for revisions, if needed, and approval. The final scope-of-work, budget, and schedule for FY 2018/19 will be included in Section 4 of the 2017/18 Annual Report of the Ground-Level Monitoring Committee.

Recommended Scope of Work and Budget - FY 2018/19

A proposed scope-of-work for the GLMP for FY 2018/19 is shown in Table 1 as a line-item cost estimate. The proposed scope-of-work is summarized below:

Task 1—Setup and Maintenance of the Monitoring Network

The extensometers are the key monitoring facilities for the GLMP. They require regular and asneeded maintenance and calibration to remain in good working order and to ensure the recording of accurate measurements.

Task 1.1—Maintain Extensometer Facilities. This subtask includes performing monthly visits to the Ayala Park, Chino Creek, and Pomona Extensometer facilities to ensure functionality and calibration of the monitoring equipment and data loggers.

Task 1.2—Annual Lease Fees for CCX Extensometer Site.

Task 1.3—Identify a Site and Install a Horizontal Extensometer in the Managed Area.

This sub-task involves siting a new horizontal extensometer in the Managed Area to replace the Daniels Horizontal Extensometer, performing CEQA, and procuring permits and easements. Pursuant to the recommendation in the *2016 Annual Report of the GLMC*, the installation of a new horizontal extensometer is not recommended at this time.

Task 2—Aquifer-System Monitoring and Testing

This task involves the collection and compilation of hydraulic head and aquifer-system deformation data from the Ayala Park, Chino Creek, and Pomona Extensometer facilities.

Task 2.1—Conduct Quarterly Data Collection from Extensometers; Data Checking and Management. This subtask involves the routine quarterly collection and checking of data from the extensometer facilities. Quarterly data collection is necessary (i) to ensure that the monitoring equipment is in good working order and (ii) to minimize the risk of losing data because of equipment malfunction. For 2018/19, this task now includes collection and compilation of data from the newly-installed Pomona Extensometer facility.

Task 2.2—Conduct Long-Term Pumping Test in the Managed Area. This sub-task involves the work to implement the Long-Term Pumping Test in the Managed Area to test

the appropriateness of the current Guidance Level. The work includes: (i) coordination with the City of Chino Hills on the start and duration of the pumping test; (ii) downloading and checking data from the Ayala Park Extensometer, and uploading the data to the database; (iii) preparing stress-strain diagrams of the PA-7 piezometer and deep extensometer data, and distributing the diagrams to the GLMC; and (iv) terminating the test once the stress-strain diagrams indicate the first indication of possible permanent compaction. The results of the test will be documented in the 2018/19 Annual Report of the GLMC, which is prepared in FY 2019/20. This sub-task only necessary if the City of Chino Hills indicates that it wants to proceed with the test in FY 2018/19.

Task 2.3—Conduct Pilot Injection Test in the Managed Area. This sub-task involves the work to implement a Pilot Injection Test in the Managed Area at City of Chino Hills well CH-16 to test the effectiveness of injection as a tool to manage hydraulic head and land subsidence in the Managed Area. The work involved in this task includes coordinating the injection test with the City of Chino Hills, and collecting and compiling the injection/production data at CH-16 (e.g. timing of injection, injection rates, water levels at CH-16, etc.). The results of the test will be documented in the 2018/19 Annual Report of the GLMC, which is prepared in FY 2019/20. This sub-task only necessary if the City of Chino Hills indicates that it wants to proceed with the test in FY 2018/19.

Task 3—Basin-Wide Ground-Level Monitoring Program

This task involves the annual collection and analysis of Synthetic Aperture Radar (SAR) scenes to estimate the vertical ground motion that occurred across the western portion of Chino Basin from March 2018 to March 2019.

Task 3.1—Acquire SAR Data from German Aerospace Center and Prepare Interferograms for 2018/19. In this sub-task, six SAR scenes that were acquired by the TerraSAR-X satellite from March 2018 to March 2019 are purchased from the German Aerospace Center. Neva Ridge Technologies of Boulder, CO uses the SAR scenes to prepare 12 interferograms that describe the incremental and cumulative vertical ground motion that occurred from March 2018 to March 2019 and since 2011.

Task 3.2—Convert Interferograms to GIS Layers; Check and Upload to GIS Database. In this sub-task, the Watermaster Engineer converts the interferograms into GIS layers and performs checks for reasonableness and accuracy.

Task 4—Perform Ground-Level Surveys

This task involves conducting elevation surveys at benchmark monuments across defined areas of western Chino Basin to estimate the vertical ground motion that occurred since the prior

survey. Electronic distance measurements (EDM surveys) are performed between benchmark monuments to estimate horizontal ground motion in areas where ground fissuring due to differential land subsidence is a concern. The surveys for consideration in FY 2018/19 include:

Task 4.1—Conduct Spring-2019 Elevation and EDM surveys in the Northwest MZ-1 Area. In this subtask, the surveyor conducts elevation and EDM surveys at the established benchmarks in Northwest MZ-1 in early 2019. The elevation survey begins at the new Pomona Extensometer Facility, and includes benchmarks across Northwest MZ-1 shown on Figure 1. The elevation survey will be referenced to a newly-established elevation datum at the Pomona Extensometer. The EDM survey is performed across the San Jose Array of benchmark monuments shown on Figure 1. These surveys are recommended in FY 2018/19 because of the ongoing subsidence that is occurring in Northwest MZ-1, and will support the development of a subsidence management plan in Northwest MZ-1.

Task 4.2—Conduct Spring-2019 Elevation Survey in the Northeast Area. In this subtask, the surveyor conducts an elevation survey at the established benchmarks in the Northeast Area in early 2019. The elevation survey begins at the Ayala Park Extensometer or at the new Pomona Extensometer Facility, and includes benchmarks across the Northeast Area shown on Figure 1. The starting point for the elevation survey will be recommended by the surveyor. Elevation surveys in the Northeast Area were recommended by the GLMC as part of the FY 2017/18 budget because InSAR indicated up to 0.14 feet of subsidence between Euclid and Bon View Avenues since 2011, and because InSAR is largely incoherent south and southwest of the Ontario Airport. Because Spring-2018 was the initial elevation survey in this area, and because this area is experiencing ongoing subsidence, an elevation survey is recommended for Spring 2019.

Task 4.3—Conduct Spring-2019 Elevation Survey in the Southeast Area. In this subtask, the surveyor conducts an elevation survey at the established benchmarks in the Southeast Area in early 2019. The elevation survey begins at the Ayala Park Extensometer and includes benchmarks across the Southeast Area shown on Figure 1. The elevation survey data is referenced to the Ayala Park elevation datum. This survey is not recommended for FY 2018/19 because over the past several years hydraulic heads have been relatively stable, and recent ground motion as measured by InSAR, ground-level surveys, and the Chino Creek Extensometer, has been minor in the Southeast Area.

Task 4.4—Install Closely-Spaced Benchmarks along Edison and Eucalyptus (for Long-Term Pumping Test). In this sub-task, closely-spaced benchmarks are installed by the surveyor across the historic fissure zone in the Managed Area along Edison and Eucalyptus Avenues to facilitate future the EDM surveys. This task was a recommendation in the 2016 Annual Report of the GLMC, if the Long-Term Pumping Test is conducted in the

future to test the Guidance Level. *Implementation of this task in 2018/19 is not recommended unless the Long-Term Pumping Test is planned for execution in the near future.*

Task 4.5—Conduct Two Elevation and EDM Surveys in the Managed Area (for Long-Term Pumping Test). In this sub-task, two elevation and EDM surveys are conducted at benchmarks across the Managed Area as part of the Long-Term Pumping Test. The elevation survey begins at the Ayala Park Extensometer and includes benchmarks across the Managed Area shown on Figure 1. The elevation survey data is referenced to the Ayala Park elevation datum. The EDM surveys are performed between closely-spaced benchmarks located across the historic fissure zone along Chino, Schaefer, Edison, and Eucalyptus Avenues. These surveys are only recommended if the Long-Term Pumping Test is executed in the Managed Area. Otherwise, these surveys are not recommended because little to no permanent subsidence is occurring in the Managed Area.

If the Long-Term Pumping Test is planned for 2018/19, then the elevation/EDM survey scheduled for spring-2018 should be re-scheduled for the time of "full recovery" of hydraulic head in the Managed Area, which should occur in late Spring or Summer 2018. The two elevation/EDM surveys in this sub-task should occur at the times of maximum drawdown and full recovery of hydraulic head associated with the Long-Term Pumping Test.

Task 4.6—Replace Destroyed Benchmarks (if needed). In this sub-task, the surveyor replaces benchmark monuments that have been destroyed since the last survey, if any.

Task 4.7—Process, Check, and Update Database. In this sub-task, the Watermaster Engineer receives and catalogs the survey results provided by the surveyor, converts the data into GIS layers, and performs checks for reasonableness and accuracy.

Task 4.7—Select New Surveyor and Support Transition. The long-time surveyor for the GLMP (Jim Elliott of WSP USA) has informed the Watermaster that WSP USA is eliminating its field surveying division, and that the Spring-2018 surveys will be the last conducted by WSP USA. A new surveyor needs to be selected for FY 2018/19. This effort will require: (i) locating, selecting, and contracting with the new surveyor and (ii) working with the new surveyor to educate them on the objectives of the GLMP, the documentation of historical ground-level surveys, the location of all existing benchmarks, the surveying methods, the protocols for data processing, and the data deliverables. Jim Elliott has agreed to assist with the transition, as well as helping to review the 2019 ground-level survey data completed by the new surveyor.

Task 5—Data Analysis and Reporting

Task 5.1—Prepare Draft 2017/18 Annual Report of the Ground-Level Monitoring Committee. Prepare the text, tables, and figures for a draft 2017/18 Annual Report of the GLMC and submit it to the GLMC by September 18, 2018 for review and comment.

Task 5.2—Prepare Final 2017/18 Annual Report of the Ground-Level Monitoring Committee. Update the text, tables, and figures based on the comments received from the GLMC, and prepare a final 2017/18 Annual Report of the GLMC by November 1, 2018. Responses to comments will be included as an appendix to the final report. The report will be included in the agenda packet for the November Watermaster meetings for approval.

Task 5.3—Compile and Analyze Data from the 2018/19 Ground-Level Monitoring Program. In this task, monitoring data generated from the Ground-Level Monitoring Program during 2018/19 is checked, mapped, charted, and analyzed as the first step in the preparation of the subsequent annual report. Some of the maps, charts, and tables are shared with the GLMC at its meetings in early 2019 during the development of a recommended scope and budget for 2019/20.

Task 6—Develop a Subsidence-Management Plan for the Northwest MZ-1 Area

The development of the subsidence management plan for the Northwest MZ-1 Area is a multiyear effort. The conceptual framework for this effort is described in the *Work Plan to Develop a Subsidence-Management Plan for the Northwest MZ-1 Area*.² Several tasks outlined in the Work Plan are recommended for implementation in FY 2018/19:

Task 6.1—Implement the Monitoring Program and Conduct Passive Monitoring. The monitoring of water levels and production at wells in Northwest MZ-1 will continue to be implemented through various techniques, including: (i) the SCADA-based monitoring by Monte Vista Water District and the City of Pomona; (ii) monitoring of water levels via sonar³; (iii) monitoring of water levels via pressure transducers; (iv) manual measurements of water levels; and (iv) monitoring of water levels and aquifer-system deformation at the newly-installed Pomona Extensometer facility. This subtask includes one-year of passive monitoring. Analysis of these data will improve the understanding of

³ The use of sonar technology to measure piezometric levels in wells in currently being tested in both the City of Pomona (P-27) and Monte Vista Water District (MVWD-28) wells.

² http://www.cbwm.org/docs/engdocs/Land%20Subsidence/20150724%20-%20Chino%20Basin%20Subsidence%20Management%20Plan%202015/FINAL_CBSMP_Appendix_B.pdf

the hydrogeology in Northwest MZ-1 and provide the basis for designing controlled pumping tests in the future, if deemed necessary by the GLMC.

- Task 6.2—Install the Pomona Extensometer Facility. By June 30, 2018, the Pomona Extensometer facility is expected to be constructed. No additional budget is recommended for this subtask in FY 2018/19.
- Task 6.3—Install and Test Monitoring Equipment at the Pomona Extensometer. During
 the first quarter of FY 2018-19, all monitoring equipment at the PX will be installed and
 tested, including: pressure transducers, cable extensometers, data loggers, and
 telemetry. Data collection will commence as described in Task 2. This sub-task was
 expected to have been completed in FY 2017/18. The budget will be carried over to FY
 2018/19.
- Task 6.4—Prepare Completion Report for the Pomona Extensometer Facility. A completion report will be prepared to document drilling, well construction, equipping, testing, and well head completion for the Pomona Extensometer Facility by the end of the 2018. This sub-task was expected to have been completed in FY 2017/18. The budget will be carried over to FY 2018/19.

Task 7—Meetings and Administration

Task 7.1—Prepare for and Conduct Four Meetings of the Ground-Level Monitoring Committee. This sub-task includes preparing for and conducting four meetings of the GLMC:

- July 26, 2018 Implementation meeting for the GLMP for FY 2018-19.
- September 27, 2018 Review the draft 2017/18 Annual Report of the Ground-Level Monitoring Committee.
- March 2019 Review the draft recommended scope and budget for FY 2019/20.
- April 2019 Review the final recommended scope and budget for FY 2019/20.

Task 7.2—Prepare for and Conduct One As-Requested Ad-Hoc Meetings. This sub-task includes preparing for and conducting one ad-hoc meeting of the GLMC, as requested by the GLMC or Watermaster staff.

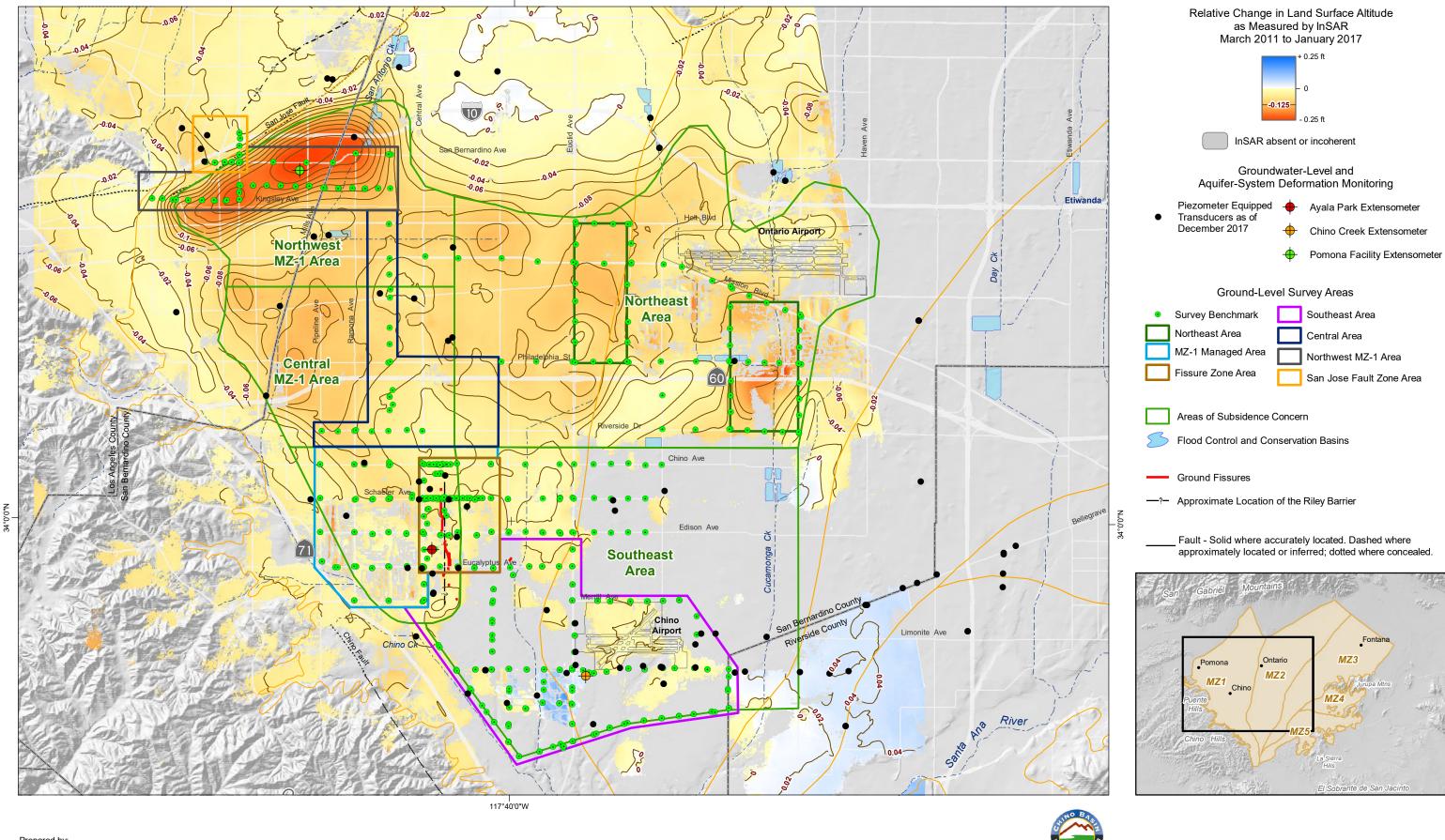
Task 7.3—Perform Monthly Project Management. This sub-task includes monthly project administration and management, including: staffing, financial and schedule reporting to Watermaster, and sub-contractor coordination.

Task 7.4—Prepare a Recommended Scope and Budget for the GLMC for FY 2019/20. This sub-task includes preparing a draft and final recommended scope and budget for FY 2019/20 for the GLMC to support the Watermaster's budgeting process.

Table 1 Work Breakdown Structure and Cost Estimates Ground-Level Monitoring Program: FY 2018/19

	L	abor	Other Direct Costs								Totals					
Task Description		Total	Travel	New Equip.	Equip. Rental	Outside Pro	Lab	Repro	Misc.	Total	Totals by Task	Recommended Budget 2018-19	Budget 2017-18	Net Change 2017-18 to 2018-19	Potential Carry-Over 2018-19	Budget with Carry-Over 2018-19
												а	b	a - b	С	a - c
Task 1 Setup and Maintenance of the Monitoring Network 1.1 Maintain Extensometer Facilities		\$26,816								\$8,537	\$35,353	\$35,353	\$66,274	-\$30,921	\$0	\$35,353
Routine maintenance of Ayala Park, Chino Creek, and Pomona extensometer facilities	16	\$21,120	. ,							\$1,541	\$22,661	\$22,661	\$12,443	¥ · · ·) = · · ·	\$0	\$22,661
Replacement/repair of equipment at extensometer facilities	4	\$5,696	\$362	\$3,000	\$38	\$2,000			A / 500	\$5,400	\$11,096	\$11,096	\$10,727		\$0	\$11,096
1.2 Annual Lease Fees for CCX Extensometer Site 1.3 Identify a Site and Install a Horizontal Extensometer in the Managed Area	_								\$1,596	\$1,596	\$1,596	\$1,596	\$1,596 \$0		\$0	\$1,596
Coordinate with the City of Chino	0	\$0	\$0							\$0	\$0	\$0	\$10.954		\$0	\$0
Prepare for and attend a meeting of the GLMC to discuss and approve potential sites	0	\$0	\$0							\$0	\$0	\$0	\$3,582	-\$3,582	\$0	\$0
Perform CEQA for the potential new sites and procure permits and easements	0	\$0				\$0				\$0	\$0	\$0	\$26,972	-\$26,972	\$0	\$0
Task 2 MZ-1: Aquifer-System Monitoring and Testing		\$48,304								\$5,303	\$53,607	\$25,486	\$22,774	\$2,712	\$0	\$25,486
2.1 Conduct Quarterly Data Collection from Extensometers; Data Checking and Management		#0.400	0.75		#70					#054	#0.700	#0.700	Φ0.000	0444	* 0	#0.70
Download data from the Ayala Park Extensometer facility Download data from the Chino Creek Extensometer facility	2	\$2,432 \$2,432	\$275 \$42		\$76 \$76					\$351 \$118	\$2,783 \$2,550	\$2,783 \$2,550	\$2,339 \$1,139		\$0 \$0	\$2,783 \$2,550
Download data from the Chilifo Creek Extensionleter facility Download data from Pomona Extensioneter facility	4	\$4,864	\$269		\$76					\$345	\$5,209	\$5,209	\$1,336	, ,	\$0 \$0	\$5,209
Process, check, and upload data to database	11	\$14,944	\$200		ψ. σ					\$0	\$14,944	\$14,944	\$17,960		\$0	\$14,944
2.2 Conduct Long-Term Pumping Test in the Managed Area												, ,	, ,		·	
Coordinate testing with pumpers	1	\$1,632								\$0	\$1,632	\$0	\$0		\$0	\$0
Equip CH-15B and CH-17 with high-frequency water-level monitoring devices	3	\$4,064	\$138	\$2,000	\$38					\$2,176	\$6,240	\$0	\$0	1 -	\$0	\$0
Collect data; process, check, and upload to database Prepare, analyze, and distribute stress-strain diagrams to GLMC; terminate test	2 4	\$2,432 \$7,168								\$0 \$0	\$2,432 \$7,168	\$0 \$0	\$0 \$0		\$0 \$0	\$C \$C
Adjust extensometer hardware, as necessary	2	\$2,848	\$138							\$138	\$2,986	\$0	\$0	7.7	\$0 \$0	\$0
2.3 Conduct Pilot Injection Test in the Managed Area		72,010	7.00							7	+-,		**	,,,	7.0	
Coordinate testing with pumpers	1	\$1,424								\$0	\$1,424	\$0	\$0	7 .	\$0	\$0
Equip CH-15B and CH-17 with high-frequency water-level monitoring devices	3	\$4,064	\$138	\$2,000	\$38					\$2,176	\$6,240	\$0	\$0	\$0	\$0	\$0
Task 3 Basin Wide: InSAR		\$5,064								\$85,000	\$90,064	\$90,064	\$89,292		\$0	\$90,064
3.1 Acquire SAR Data from German Aerospace Center and Prepare Interferograms for 2018/19	1	\$1,632				\$85,000				\$85,000	\$86,632	\$86,632	\$86,608		\$0	\$86,632
3.2 Convert Interferograms to GIS Layers; Check and Upload to GIS Database	2.5	\$3,432								\$0	\$3,432	\$3,432	\$2,684	\$748	\$0	\$3,432
Task 4 Ground-Level Surveys		\$17,722				400.000				\$190,600	\$208,322		\$127,058		\$0	\$84,046
4.1 Conduct Spring-2019 Elevation and EDM surveys in the Northwest MZ-1 Area 4.2 Conduct Spring-2019 Elevation Survey in the Northeast Area	0.5 0.5	\$816 \$816				\$23,000 \$32,500				\$23,000 \$32,500	\$23,816 \$33,316	\$23,816 \$33,316	\$22,507 \$57,818	\$1,309 -\$24.502	\$0 \$0	\$23,816 \$33,316
4.3 Conduct Spring-2019 Elevation Survey in the Northeast Area	0.5	\$816				\$30,000				\$30,000	\$30,816	\$33,310	\$29,871	-\$29,871	\$0 \$0	\$33,310
4.4. Install Closely-Spaced Renchmarks along Edison and Eucalyntus (for Long-Term Pumping Test)	1.75	\$2,728				\$12,200				\$12,200	\$14,928	\$0	\$0		\$0	\$0
4.5 Conduct Two Elevation and EDM Surveys in the Managed Area/Fissure Zone Area (for Long-Term Pumping Test)	1	\$1,632				\$76,900				\$76,900	\$78,532	\$0	¢0	\$0	\$0	\$0
	'	. ,											φυ	**	* -	
4.6 Replace Destroyed Benchmarks (if needed)	0	\$0				\$6,000				\$6,000	\$6,000	\$6,000	\$5,963		\$0	\$6,000
4.7 Process, Check, and Update Database 4.8 Select New Surveyor and Support Transition	4.25	\$5,768								\$0	\$5,768	\$5,768	\$10,900	-\$5,132	\$0	\$5,768
Identify and Selecting a New Surveyor	1	\$1,810				\$2.500				\$2,500	\$4,310	\$4.310	\$0	\$4.310	\$0	\$4.310
Support the Transition of Work from Prior Surveyor to New Surveyor	2.25	\$3,336				\$7,500				\$7,500	\$10,836	\$10,836	\$0	7 .,	\$0 \$0	\$10,836
Task 5 Data Analysis and Reports		\$60,476								\$10,000	\$70,476	\$70,476	\$79,644	-\$9,168	\$0	\$70,476
5.1 Prepare Draft 2017/18 Annual Report of the Ground-Level Monitoring Committee	23	\$33,384								\$0	\$33,384	\$33,384	\$32,920		\$0	\$33,384
5.2 Prepare Final 2017/18 Annual Report of the Ground-Level Monitoring Committee	5.5	\$8,148								\$0	\$8,148	\$8,148	\$8,036	\$112	\$0	\$8,148
5.3 Compile and Analyze Data from the 2018/19 Ground-Level Monitoring Program																
Production/recharge/piezometric/extensometer	4	\$5,280				\$10,000				\$10,000	\$15,280	\$15,280	\$25,208		\$0	\$15,280
Ground-level survey and Northwest MZ-1 Area EDM data InSAR data	4	\$5,648 \$5,280								\$0 \$0	\$5,648 \$5,280	\$5,648 \$5,280	\$5,572 \$5,208		\$0 \$0	\$5,648 \$5,280
Tectonic data	0.25	\$304								\$0	\$3,200	\$3,200	\$3,200		\$0 \$0	\$3,200
Recycled water reuse data	2	\$2,432								\$0	\$2,432	\$2,432	\$2,400		\$0	\$2,432
Task 6 Work Plan to Develop a Subsidence-Management Plan for the Northwest MZ-1 Area		\$118,320								\$54,818	\$173,138	\$173,138	\$1,582,576	-\$1,409,438	\$136,732	\$36,406
	19	\$24,672			\$76	\$10,000				\$10,548		\$35,220	\$84,918	-\$49,698	\$0	\$35,220
6.1 Implement the Monitoring Program and Conduct Passive Monitoring	0	\$0	\$0			\$0				\$0	\$0	\$0	\$1,360,926		\$0	\$0
6.2 Install the Pomona Extensometer Facility				\$18,300	1	\$24,000				\$44,220	\$107,352	\$107,352	\$106,532	\$820	\$106,532	\$820 \$366
6.2 Install the Pomona Extensometer Facility 6.3 Install and Test Monitoring Equipment at the Pomona Extensometer	48	\$63,132	\$1,920	\$10,300		Ψ2 1,000		MEA		Φ Γ^	# 00 F00	#00 F00	#00 ccc	# 000	#00.000	
6.2 Install the Pomona Extensometer Facility 6.3 Install and Test Monitoring Equipment at the Pomona Extensometer 6.4 Prepare Completion Report for the Pomona Extensometer Facility		\$30,516		\$10,300		ΨΞ 1,000		\$50		\$50	\$30,566	\$30,566	\$30,200		\$30,200	
6.2 Install the Pomona Extensometer Facility 6.3 Install and Test Monitoring Equipment at the Pomona Extensometer 6.4 Prepare Completion Report for the Pomona Extensometer Facility Task 7 Meetings and Administration	48 20	\$30,516 \$44,016				42 1,000		\$50		\$418	\$44,434	\$44,434	\$43,646	\$788	\$0	\$44,434
6.2 Install the Pomona Extensometer Facility 6.3 Install and Test Monitoring Equipment at the Pomona Extensometer 6.4 Prepare Completion Report for the Pomona Extensometer Facility Task 7 Meetings and Administration 7.1 Prepare for and Conduct Four Meetings of the Ground-Level Monitoring Committee	48 20 12	\$30,516 \$44,016 \$20,864	\$334			V 2 1,000		\$50		\$418 \$334	\$44,434 \$21,198	\$44,434 \$21,198	\$43,646 \$20,770	\$ 788 \$428	\$0	\$44,43 4 \$21,198
6.2 Install the Pomona Extensometer Facility 6.3 Install and Test Monitoring Equipment at the Pomona Extensometer 6.4 Prepare Completion Report for the Pomona Extensometer Facility Task 7 Meetings and Administration 7.1 Prepare for and Conduct Four Meetings of the Ground-Level Monitoring Committee 7.2 Prepare for and Conduct One As-Requested Ad-Hoc Meetings	48 20 12 3	\$30,516 \$44,016 \$20,864 \$5,216	\$334 \$84			V = 1,000		\$50		\$418 \$334 \$84	\$44,434 \$21,198 \$5,300	\$44,434 \$21,198 \$5,300	\$43,646 \$20,770 \$5,192	\$788 \$428 \$107	\$0 \$0 \$0	\$44,43 4 \$21,198 \$5,300
6.2 Install the Pomona Extensometer Facility 6.3 Install and Test Monitoring Equipment at the Pomona Extensometer 6.4 Prepare Completion Report for the Pomona Extensometer Facility Task 7 Meetings and Administration 7.1 Prepare for and Conduct Four Meetings of the Ground-Level Monitoring Committee	48 20 12	\$30,516 \$44,016 \$20,864	\$334 \$84			V =1,000		\$50		\$418 \$334	\$44,434 \$21,198	\$44,434 \$21,198	\$43,646 \$20,770	\$788 \$428 \$107 \$180	\$0	\$44,434 \$21,198 \$5,300 \$12,720 \$5,216





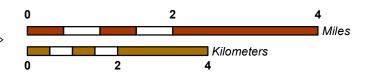
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Ground-Level Monitoring Committee Ground-Level Monitoring Program

Ground-Level Monitoring Program Fiscal Year 2018-19