TO: MICHAEL S. LEBRUN MSL
GENERAL MANAGER

FROM: PETER V. SEVCIK P.V.S.
DISTRICT ENGINEER

DATE: JULY 21, 2011

AGENDA ITEM
E-1
JULY 27, 2011

PRESENTATION ON SOUTHLAND WASTEWATER TREATMENT FACILITY GROUNDWATER MODELING

ITEM

Receive presentation on Southland Wastewater Treatment Facility Groundwater Modeling by Fugro Consultants, Inc. [RECOMMEND RECEIVE PRESENTATION AND PROVIDE DIRECTION TO STAFF].

BACKGROUND

In 2008, Fugro Consultants, Inc. (Fugro) performed an evaluation of the District's existing infiltration basins at the Southland Wastewater Treatment Facility (WWTF) and determined that an aquitard beneath the WWTF site was limiting the downward migration of effluent. Modeling work performed by Fugro at the time indicated that the District could continue to dispose of effluent at a rate of approximately .57 million gallons per day (MGD) without causing the effluent mound that had formed to increase significantly. The District then began to explore several off-site disposal options but has not yet identified a preferred option.

In March 2011, the Board authorized the update of the groundwater model previously developed for the WWTF to allow the District to assess the potential impacts and possible positive benefits of expanding the infiltration basin facilities as part of the Southland WWTF Phase 1 Upgrade Project that is currently in the final design stage. Expansion of the existing infiltration basin facilities is an interim solution to maximize on-site disposal capability while the District continues to explore off-site disposal options that will be required in the future. Attached is Fugro's report that summarizes the modeling work.

The modeling results suggest that the District will need to develop off-site disposal facilities in the future as flow to the WWTF increases. The timing of the increased flow will depend on the increase in flow to the plant that results from new sewer connections. Staff can work with AECOM, the District's design engineer for the WWTF, and Fugro to develop a program-level schedule for the development of a long-term off-site disposal strategy that would be based on flow to the WWTF.

In addition, staff can work with Fugro to develop new monitoring wells that are outside of the influence of the effluent mound as recommended by Fugro. These monitoring wells will likely be required by the Central Coast Regional Water Quality Control Board as part of the Waste Discharge Order update required for the upgrade of the WWTF.

FISCAL IMPACT

Funding for the modeling work was previously authorized by the Board.

STRATEGIC PLAN

Strategic Plan Goal 2.2 – Upgrade and Maintain Collection and Treatment Works
Strategic Plan Goal 2.3 – Select Disposal Solution for Southland Effluent and Implement

RECOMMENDATION

Staff recommends that the Board receive the presentation from Paul Sorensen, Fugro Consultants, Inc., and ask questions as appropriate.

In addition, staff recommends that the Board direct staff to:

1. Work with AECOM and Fugro to develop a program-level schedule for the development of a long term off-site disposal strategy that would be based on flow to the WWTF.
2. Work with Fugro to develop additional groundwater monitoring wells to measure groundwater levels and water quality impacts up gradient and down gradient of the infiltration system.

ATTACHMENT

Fugro Consultants, Inc. report dated May 27, 2011

FUGRO CONSULTANTS, INC.

660 Clarion Court, Suite A
San Luis Obispo, California 93401
Tel: (805) 542-0797
Fax: (805) 542-9311

May 27, 2011
Project No. 04.75110005

Nipomo Community Services District
Post Office Box 326
Nipomo, California 93444

Attention: Mr. Peter V. Sevcik, District Engineer

Subject: Data Collection, Analysis, and Groundwater Flow Modeling for the Southland Wastewater Treatment Facility, Nipomo, California

Dear Mr. Sevcik:

In accordance with our proposals dated February 22, 2011 and April 26, 2011, respectively, Fugro has collected data and performed modeling to evaluate groundwater mounding beneath the Nipomo Community Services District Southland Wastewater Treatment Facility (WWTF) percolation ponds. At present, the District operates two sets of percolation ponds with a combined area of about 19 acres (see Sets A and B on Figure 1). The District is considering construction of additional percolation ponds immediately adjacent to and west of the existing two sets of ponds (see Set C on Figure 1). The intention is to expand the existing percolation pond system to accommodate potential future increases in treated wastewater effluent discharges and to maintain mounded groundwater elevations beneath the pond system to within acceptable levels. The work performed in this letter report therefore has two major objectives: 1) to evaluate the recent trend in mounding beneath the site by collection and analysis of recent historical wastewater effluent discharge and groundwater level monitoring data, and 2) to use a numerical groundwater flow model to simulate the differences in mounding for three sets of ponds versus the existing two sets of ponds for different treated wastewater effluent discharge rates.

Three separate studies of the Southland WWTF have been conducted by Fugro for the District. In the first study, an initial assessment of the hydrogeology of the Southland WWTF was performed and documented in a report entitled "Hydrogeologic Characterization Southland Wastewater Treatment Facility, Nipomo, California" dated July 2007. The primary objectives of that assessment were to develop a baseline understanding of the local groundwater conditions, to characterize the shallow and deep aquifers beneath the site, assess the fate of the discharged effluent, and evaluate the effectiveness of the existing monitoring network. The second study assessed the potential for extracting discharge water from beneath the percolation ponds. That study included aquifer testing to estimate the hydraulic properties of the shallow aquifer and the development of a numerical transient groundwater flow model to simulate the discharge of effluent in the ponds and subsequent extraction by wells to manage the mound size. The findings of the second study were documented in a project memorandum entitled "Assessment of the Potential for Extracting Discharge Water from beneath the Southland

Wastewater Treatment Facility, Phase 2 – Hydrogeologic Assessment of the Southland WWTF" dated February 21, 2008. The third study provided an analysis of collected wastewater discharge and groundwater level monitoring data during the years of 1991 through 2007. That study also included the use of the groundwater flow model to estimate a long-term discharge rate that would not cause the mound to grow beyond its then-present level. The findings of the third study were documented in a project memorandum entitled "Supplemental Groundwater Modeling Analysis" dated June 30, 2008.

For this current study, treated wastewater effluent discharge and groundwater level monitoring data since January 2008 were collected and appended to the previous dataset. Analysis of the collected data is performed in this study to answer the following questions:

1. What is the current shape of the mound and has it grown significantly since the previous analysis of data collected from 1991 through 2007?
2. What is the relationship between trends in average daily discharge rates from 2008 through 2010 and changes in associated measured groundwater levels over that period?

The groundwater flow model developed during 2008 simulated mounding beneath the two sets of ponds at the Southland WWTF. In particular, the model was used to estimate an average daily discharge rate that would maintain the shape of the mound observed at the time of the study. That discharge rate was estimated to be 0.57 million gallons per day (mgd). For this study, the model was updated by implementing the average daily discharge rates from January 2008 through December 2010. The updated model was executed and the simulated groundwater levels from January 2008 to March 2011 were compared against the measured levels over approximately the same period. To improve the agreement between measured and modeled groundwater levels, several refinements were made to the model.

The revised model was then used to perform four sets of model runs. In the first set of model runs, the model was used to simulate the long-term impacts on groundwater levels of discharging treated wastewater effluent at a rate of 0.57 mgd in the existing system of two sets of ponds and in a pond system that includes an additional set of percolation ponds (i.e., a total of 3 sets of ponds) (see Figure 1). Simulation of discharge into the existing two sets of ponds and into the planned three sets of ponds was performed to answer the following questions:

1. How will the shape of the mound change when discharging to a system of three sets of ponds in comparison to discharging to the existing system of two sets of ponds?
2. What is the distribution of groundwater elevations for the system of three sets of ponds in comparison to the existing system of two sets of ponds?
3. How do the systems of two sets of ponds and three sets of ponds perform for the long-term discharge rate of 0.57 mgd?

In the second set of model runs, the model was used to simulate the impacts on groundwater levels of discharging treated wastewater effluent at a rate that increased from 0.59 mgd in 2011 to 0.91 mgd in 2030. The increase in the discharge rate from 2011 to 2030 reflects an assumed annual growth rate in the District of 2.3 percent over that period. Simulation of the increasing discharge rate from 2011 to 2030 into the existing two sets of ponds and into the planned three sets of ponds was performed to determine if and when the increasing discharge rate would exceed the operational capacities of these pond systems (i.e., maintenance of a 10-foot separation between the pond bottom elevation of 292 feet (MSL) and the groundwater mound elevation) over the 20-year simulation period. The results of the second set of model runs were used to determine the long-term maximum discharge rates for both the two sets of ponds and the three sets of ponds that would maintain this 10-foot separation.

In the third set of model runs, the model was used to simulate the impacts on groundwater levels of discharging treated wastewater effluent at the long-term maximum discharge rates for both the two sets of pond and the three sets of ponds. These simulations were performed to determine when these maximum discharge rates would be reached for the two sets and three sets of ponds. These simulations also illustrate the long-term stabilization of groundwater levels beneath each set of ponds when discharge is maintained at the respective estimated maximum discharge rate.

In the fourth set of model runs, the model was used to simulate the impacts on groundwater levels of discharging treated wastewater effluent at a rate that increased from 0.59 mgd in 2011 to 0.75 mgd in 2030. The increase in the discharge rate from 2011 to 2030 reflects an assumed annual growth rate in the District of 1.5 percent from 2011 to 2015, 1.2 percent from 2016 to 2025, and 1.3 percent from 2026 to 2030. These annual growth rates are less conservative than the 2.3 percent growth rate assumed in the second set of model runs and reflect more recent actual growth in the District.

The analysis of collected data and the application of the groundwater model to perform the three sets of model runs are described in the following sections. The major conclusions and recommendations of the study are provided in the final section.

Data Collection and Analysis

Data collected for this study consisted of monthly average daily discharge rates of treated wastewater effluent into the two existing sets of ponds and measurements of groundwater levels in the four monitoring wells (see Figure 1 for locations of four monitoring wells). Average daily discharge rates for each month from January 2008 through December 2010 were collected (Table 1) and appended to the average daily discharge rates for each month from January 1991 through December 2007 in the database. Periodic groundwater level measurements (i.e., groundwater elevations and calculated depths to groundwater from the ground surface) starting from July 9, 2008 and ending on March 9, 2011 were appended to measurements that were previously collected for the period from February 26, 2000 to June 15, 2008 (Table 2). The average daily discharge rates for each month from January 2007 through December 2010 and the measured groundwater elevations in the four monitoring wells are displayed on individual plots for each monitoring well on Figure 2.

From 1991 to 2010, average daily discharge for each year increased from 0.18 mgd in 1991 to a maximum of 0.63 mgd in 2005 (Table 1). During 2007 the average daily discharge rate was 0.59 mgd. The average daily discharge rates for 2008, 2009, and 2010 have decreased slightly since 2007 and were 0.58, 0.56, and 0.56 mgd, respectively.

From May 2007 to March 2011, groundwater levels in PZ-1 increased by 2 feet from 274.7 to 276.7 feet (MSL). Groundwater levels in MW-1 and MW-2 both increased by 1 foot from May 2007 to March 2011 while groundwater levels in MW-3 increased by 5 feet over the same period. Note that from May 2007 to July 2010 changes in measured groundwater levels in PZ-1, MW-1, and MW-2 were not measurable while the change in MW-3 was 2 feet. The period from May 2007 to July 2010 corresponded to an average daily discharge rate of 0.57 mgd. The increases in groundwater levels in the four monitoring wells have been most significant from July 2010 to March 2011 and are likely due in part to the high precipitation rates experienced in the area during the late fall and winter months of the 2011 water year.

The findings of this analysis indicate the groundwater mound shape and extent changed insignificantly over the approximate 3-year period from May 2007 to July 2010 when the average daily discharge rate was 0.57 mgd. Overall, these results provide validation that stable groundwater levels are maintained by the estimated average daily discharge rate of 0.57 mgd that was previously determined using the groundwater flow model and reported in the project memorandum dated June 30, 2008.

Refinement of the Groundwater Flow Model

The transient groundwater flow model developed by Fugro and documented in the project memorandums dated February 21, 2008 and June 30, 2008, respectively, was used in this study to simulate the long-term discharge of treated wastewater effluent into both the existing two sets of ponds and into the expanded system of 3 sets of ponds. Prior to performing the four sets of model runs, the model was updated by implementing the average daily discharge stresses from January 2008 to December 2010. The simulated groundwater levels from January 2008 to March 2011 were then compared to the measured groundwater levels in the four monitoring wells covering the same approximate period (see Table 2). Several refinements to the model were then implemented to improve the overall fit between the measured and modeled groundwater levels. These refinements included: 1) modification of the thickness of the Santa Maria River Fault (which apparently acts as a hydraulic barrier to groundwater flow); 2) modification of the boundary conditions that represent the Nipomo Creek to more accurately reflect changes in ground surface elevations along the creek; 3) implementation of temporally varying recharge from precipitation to reflect annual fluctuations in rainfall from 1985 to 2011; and 4) assignment as a simplifying assumption of constant values for groundwater levels along the northern and southern boundary conditions. Measured groundwater levels at PZ-1, MW-1, MW-2, and MW-3 are plotted against the modeled groundwater levels simulated by the revised model at each monitoring locations and are collectively presented on Figure 3. The relatively close match between the measured and modeled groundwater levels on these plots indicates that the revised model reasonably reproduces the observed levels given the different stress inputs to the aquifer system and is suitable for performing the model runs in this study.

Model Runs No. 1: Simulation of Future Constant Discharge of 0.57 MGD

In the first set of model runs, the model was used to simulate groundwater levels in the underlying aquifer for the period from 1985 to 2021 for a discharge rate that increased to 0.6 mgd in 2011 and then was held constant at 0.57 mgd until 2021. Each year in the simulation period was divided into two six-month stress periods (i.e., a stress period defines a length of time over which the aquifer recharge and discharge stresses are assumed to have constant rates). The average daily discharge rates assigned to each stress period are presented in Table 3. An assumed average daily discharge rate of 0.2 mgd was assigned to the years from 1985 to 1990. Historical average daily discharge rates were applied to the stress periods that cover the water years from 1991 through 2010. For the 2011 water year (i.e., October 2010 through September 2011), an assumed daily discharge rate of 0.6 mgd was implemented in the model. From 2012 through 2021, the average daily discharge rate was defined to be 0.57 mgd.

In a first model simulation, the discharge rates in Table 3 were implemented in the existing system that consists of two sets of percolation ponds (Set A and Set B) (see Figure 1). In a second model simulation, the discharge rates in Table 3 were implemented in the expanded system that consists of three sets of percolation ponds (Set A, Set B, and Set C). Plots of the simulated groundwater levels for the two sets of ponds and the three sets of ponds for PZ-1, MW-1, MW-2, and MW-3 are presented collectively on Figure 4. For both simulations, groundwater levels at all four monitoring locations achieved stable groundwater levels over the future simulation period of 2012 to 2021 for the average daily discharge rate of 0.57 mgd.

The redistribution of discharge over the system consisting of three sets of ponds resulted in a decrease in groundwater levels of 3.4, 1.5, and 1.6 feet at PZ-1, MW-1, and MW-2, respectively, and an increase in the groundwater level of 4.8 feet at MW-3 in comparison to those simulated for the existing two sets of ponds (Figure 4). In particular, long-term discharge in the two sets of ponds resulted in groundwater levels which fluctuated annually around an average of 273.5 feet (MSL) at PZ-1 whereas groundwater level fluctuations at PZ-1 for the three sets of ponds fluctuated around an average of 270.3 feet (MSL). Overall, the absolute maximum simulated groundwater level for the three sets of ponds was 271.2 feet (MSL) whereas the absolute maximum simulated groundwater level for the two sets of ponds was 274.5 feet (MSL) (i.e., a decrease in the absolute maximum mound height of 3.3 feet).

Contours of simulated groundwater elevations for discharge into two sets of ponds and for discharge into the three sets of ponds can be seen on Figures 5 and 6, respectively. The spatial distribution of differences in groundwater levels between the two simulations can be seen as well on Figure 6. In general, redistribution of discharge among the three sets of ponds resulted in a flattening of the mound beneath the pond system. In other words, the mound expanded outward but the overall maximum height of 271.2 feet (MSL) for the three sets of ponds was actually 3.3 feet lower in comparison to the overall maximum height of 274.5 feet (MSL) for the two sets of ponds. Overall, the simulation results for both the existing two sets of ponds and expanded system of three sets of ponds demonstrate that a long-term average daily discharge rate of 0.57 mgd produces stabilized groundwater levels at each of the four monitoring wells.

For long-term discharge in the two sets of ponds, approximately 65 percent of the total recharge in the model domain (i.e., treated wastewater effluent discharge plus recharge from precipitation) exited the aquifer as subsurface outflow through the northern, southern, and western boundaries. The remaining 35 percent of total recharge left the aquifer as outflow to the Nipomo Creek corridor. Losses of groundwater through evaporation and evapotranspiration along the creek corridor were not accounted for by the model. A large area of vegetation (i.e., approximately 45 acres) along the creek to the east and southeast of the pond system could account for significant consumption of groundwater that is otherwise modeled as outflow to the creek. Groundwater pumping from local agricultural wells was also not accounted for by the model. Capture of percolated discharge by these agricultural wells therefore represents another potential groundwater consumption mechanism. Long-term discharge in the three sets of ponds similarly resulted in about 67 percent of the total recharge in the model domain exiting the aquifer as subsurface outflow through the northern, southern, and western boundaries and the remaining 33 percent leaving as outflow to the Nipomo Creek corridor.

Model Runs No. 2: Simulation of Future Discharge for a 2.3 Percent Annual Growth Rate

In the second set of model runs, the model was used to simulate groundwater levels in the underlying aquifer for the period from 1985 to 2030 for a discharge rate that increased to 0.91 mgd by 2030. The average daily discharge rates from 1985 to 2030 assigned to each stress period are presented in Table 4. Average daily discharge rates from 1985 to 2010 are identical to those of the first set of model runs. The average daily discharge rates from 2011 to 2030 were computed assuming an annual growth rate in the District of 2.3 percent during this period (Table 4). Plots of the simulated groundwater levels for the two sets of ponds and the three sets of ponds for PZ-1, MW-1, MW-2, and MW-3 are presented collectively on Figure 7. Simulated groundwater levels at the mound apexes (i.e., maximum groundwater levels) for the two sets and three sets of ponds are both plotted on Figure 8. By 2030, simulated groundwater levels rose to exceed the 10-foot separation between the mound apex and the pond bottom elevation of 292 feet (MSL) for both the two sets and three sets of ponds (Figure 8). For the two sets of ponds, the 10-foot separation was exceeded during late 2018 at a discharge rate of 0.69 mgd (Figure 8). For the three sets of ponds, the 10-foot separation was exceeded during early 2023 at a discharge rate of 0.78 mgd. Simulated groundwater levels at PZ-1, MW-1, MW-2, and MW-3 for both the two sets and three sets of ponds remained 10 feet or greater below the pond bottom elevation of 292 feet (MSL) over the entire simulation period (Figure 7). The results from these model runs were used to determine a long-term maximum discharge rate for the two sets of ponds of 0.68 mgd and for the three sets of ponds of 0.76 mgd. Implementation of these maximum discharge rates in the model should result in groundwater levels that are 10 feet or greater below the pond bottom elevation of 292 feet (MSL). Simulation of groundwater levels using these long-term maximum discharge rates are performed in the next section.

Model Runs No. 3: Simulation of Estimated Long-term Maximum Discharge Rates

In the third set of model runs, the model was used to simulate groundwater levels in the underlying aquifer for the period from 1985 to 2030 for the long-term maximum discharge rates of 0.68 mgd for the two sets of ponds and 0.76 mgd for the three sets of ponds. The average daily discharge rates from 1985 to 2030 assigned to each stress period for the two sets of ponds and the three sets of ponds are presented in Table 5. Simulated groundwater levels at the mound apexes for the two sets and three sets of ponds at their respective long-term maximum discharge rates are both plotted on Figure 9. In general, stabilized groundwater levels at the mound apexes were established by implementing the discharge rate of 0.68 mgd in the two sets of ponds during 2017 and the discharge rate of 0.76 mgd in the three sets of ponds during 2020.

Contours of groundwater elevations for the two sets of ponds and three sets of ponds during 2030 are also displayed on Figures 10 and 11, respectively. These contour maps illustrate the similar shapes of the mounds that result from the implementation of different long-term maximum discharge rates for the two sets and three sets of ponds. In particular, for the two sets of ponds the absolute maximum simulated groundwater level (i.e., mound apex) was 280.2 feet (MSL) whereas the groundwater levels at PZ-1, MW-1, MW-2, and MW-3 were 277.9, 265.8, 264.4, and 265.4 feet (MSL), respectively. For the three sets of ponds, the absolute maximum simulated groundwater level was 280.5 feet (MSL) whereas the groundwater levels at PZ-1, MW-1, MW-2, and MW-3 were 277.8, 266.9, 265.4, and 274.5 feet (MSL), respectively.

Model Runs No. 4: Simulation of Future Discharge for 1.2 to 1.5 Percent Annual Growth Rate

In the fourth set of model runs, the model was used to simulate groundwater levels in the underlying aquifer for the period from 1985 to 2030 for a discharge rate that increased to 0.75 mgd by 2030. The average daily discharge rates from 1985 to 2030 assigned to each stress period are presented in Table 6. Average daily discharge rates from 1985 to 2010 are identical to those of the first set of model runs. The average daily discharge rates from 2011 to 2030 reflect assumed annual growth rates in the District of 1.5 percent from 2011 to 2015, 1.2 percent from 2016 to 2025, and 1.3 percent from 2026 to 2030. These annual growth rates are less conservative than the 2.3 percent growth rate assumed in the second set of model runs and reflect more recent actual growth in the District. Plots of the simulated groundwater levels for the two sets of ponds and the three sets of ponds for PZ-1, MW-1, MW-2, and MW-3 are presented collectively on Figure 12. Simulated groundwater levels at the mound apexes for the two sets and three sets of ponds are both plotted on Figure 13. For the two sets of ponds, simulated groundwater levels rose to exceed the 10-foot separation between the mound apex and the pond bottom elevation of 292 feet (MSL) during late 2023 at a discharge rate of 0.69 mgd (Figure 12). For the three sets of ponds, simulated groundwater levels at the mound apex remained 10 feet or greater below the pond bottom elevation of 292 feet (MSL) over the entire simulation period (Figure 13).

Contours of simulated groundwater elevations during 2030 for discharge into the three sets of ponds can be seen on Figure 14. The spatial distribution of differences in groundwater levels during 2030 between the two sets of ponds and the three sets of ponds can be seen also on Figure 14. For the three sets of ponds, the absolute maximum simulated groundwater level by 2030 was 279.9 feet (MSL) whereas the groundwater levels at PZ-1, MW-1, MW-2, and MW-3 were 277.3, 266.4, 265, and 273.9 feet (MSL), respectively. For the two sets of ponds, the absolute maximum simulated groundwater level by 2030 was 283.8 feet (MSL) (i.e., 8.2 feet below the pond bottom elevation) whereas the groundwater levels at PZ-1, MW-1, MW-2, and

MW-3 were 281.4, 268.3, 266.9, and 268.1 feet (MSL), respectively. In general, redistribution of discharge among the three sets of ponds resulted in maintaining groundwater levels 10 feet or greater below the pond bottom elevation of 292 feet (MSL).

Conclusions and Recommendations

The major conclusions of the analysis of collected treated wastewater effluent discharge and groundwater level monitoring data since 2007 are the following:

1. Average daily discharge rates decreased from 0.58 mgd in 2008 to 0.56 in 2010. From May 2007 to July 2010, the mound height changed insignificantly at PZ-1, MW-1, and MW-2 whereas the mound height in MW-3 increased by 2 feet. The results suggest that groundwater levels beneath the pond system were relatively stable for average daily discharge rates between 0.56 and 0.58 mgd.

2. From July 2010 to March 2011, the mound height increased by 2 feet at PZ-1. The mound height east of the two sets of ponds over this period was observed in MW-1 and MW-2 to have increased by 1 foot while the mound height west of the two sets of ponds was observed in MW-3 to have increased by 3 feet. The groundwater level increases from July 2010 to March 2011 are likely due to the high precipitation rates experienced in the area during the late fall and winter months.

3. Overall, analysis of collected data since 2007 indicates that groundwater levels beneath the pond system are relatively stable for an average daily discharge rate between 0.56 and 0.58 mgd. These results confirm the earlier findings documented in the June 30, 2008 report that a long-term average daily discharge rate of 0.57 mgd produces stabilized groundwater levels at each of the four monitoring wells. However, the 0.57 mgd discharge rate does not represent the maximum operational discharge rate in the pond system that will maintain the separation between the pond bottom elevation and the mound elevation to within acceptable levels.

The major conclusions of the groundwater flow model simulations are the following:

1. The major finding of the four sets of model runs is that the expansion of the existing two sets of percolation ponds by the development of a third set of ponds results in an increase in the overall operational capacity of the pond system. In other words, a three pond system can accommodate a higher treated wastewater discharge rate than the existing two pond system while maintaining groundwater levels beneath the pond system within acceptable levels.

2. For the first set of model runs, the redistribution of the average daily discharge of 0.57 mgd over a percolation pond system consisting of three sets of ponds would result in a decrease in groundwater levels of 3.4, 1.5, and 1.6 feet at PZ-1, MW-1, and MW-2, respectively, and an increase in the groundwater level of 4.8 feet at

MW-3 in comparison to those simulated for the existing two sets of ponds. For the two sets of ponds, groundwater levels fluctuated annually about an average of 273.5 feet (MSL) at PZ-1. Groundwater level fluctuations at PZ-1 for the three sets of ponds fluctuated about an average of 270.3 feet (MSL). Overall, the absolute maximum simulated groundwater level for the three sets of ponds was 271.2 feet (MSL) whereas the absolute maximum simulated groundwater level for the two sets of ponds was 274.5 feet (MSL) (i.e., a decrease in the absolute maximum mound height of 3.3 feet).

3. Redistribution of 0.57 mgd of discharge among three sets of ponds will result in a flattening of the mound beneath the pond system. In other words, the mound will expand outward but the maximum height as observed in PZ-1 will decrease by approximately 3.4 feet in comparison to discharge in the existing two sets of ponds. Overall, the simulation results for both the existing two sets of ponds and expanded system of three sets of ponds demonstrate that a long-term average daily discharge rate of 0.57 mgd produces stabilized groundwater levels that were 17.5 and 20.8 feet below the pond bottom elevation (i.e., 292 feet (MSL)), respectively. Although the 0.57 mgd discharge rate produces stabilized groundwater levels, it does not represent the maximum operational discharge rate in the pond system that will maintain the separation between the pond bottom elevation and the mound elevation to within acceptable levels.

4. For the second set of model runs, increasing the daily discharge rate to 0.91 mgd by 2030 resulted in simulated groundwater levels at the mound apexes (i.e., maximum groundwater levels) for the two sets of ponds and the three sets of ponds to both exceed the 10-foot separation between the mound apex and the pond bottom elevation of 292 feet (MSL). The increasing discharge rate from 2011 to 2030 reflects an assumed annual growth rate in the District of 2.3 percent. For the two sets of ponds, the 10-foot separation was exceeded during late 2018 at a discharge rate of 0.69 mgd and for the three sets of ponds the 10-foot separation was exceeded during early 2023 at a discharge rate of 0.78 mgd. The results from these model runs were used to determine a long-term maximum discharge rate for the two sets of ponds of 0.68 mgd and for the three sets of ponds of 0.76 mgd.

5. For the third set of model runs, the long-term maximum discharge rates for the two sets of ponds and the three sets of ponds were implemented in the model. Stabilized groundwater levels at the mound apexes were established by implementing the discharge rate of 0.68 mgd in the two sets of ponds during 2017 and the discharge rate of 0.76 mgd in the three sets of ponds during 2020. Both long-term maximum discharge rates generated groundwater mounds with similar shapes (i.e., similar groundwater elevations at the monitoring locations).

6. For the fourth set of model runs, the daily discharge rate was increased to 0.75 mgd by 2030 for both the two sets and three sets of ponds. The average daily discharge rates from 2011 to 2030 reflect an assumed annual growth rate in the

District of 1.5 percent from 2011 to 2015, 1.2 percent from 2016 to 2025, and 1.3 percent from 2026 to 2030. For the two sets of ponds, simulated groundwater levels rose to exceed the 10-foot separation between the mound apex and the pond bottom elevation of 292 feet (MSL) during late 2023 at a discharge rate of 0.69 mgd. For the three sets of ponds, simulated groundwater levels at the mound apex remained 10 feet or greater below the pond bottom elevation of 292 feet (MSL) over the entire simulation period.

7. Over all four model runs, between 59 to 65 percent of the total recharge exited the aquifer as subsurface outflow through the northern, southern, and western boundaries. Conversely, between 34 to 37 percent of the total recharge left the aquifer as outflow eastward to the Nipomo Creek corridor. Losses of shallow groundwater through evaporation and evapotranspiration along the creek corridor were not accounted for by the model. A large area of vegetation (i.e., approximately 45 acres) along the creek to the east and southeast of the pond system could account for significant consumption of groundwater that is otherwise modeled as outflow to the creek. Groundwater pumping from local agricultural wells was also not accounted for by the model. Capture of percolated discharge by these agricultural wells therefore represents another potential groundwater consumption mechanism.

The major recommendations based on the findings of this study are the following:

1. Additional groundwater monitoring wells should be considered to measure groundwater levels and water quality impacts of the discharged treated wastewater on background groundwater concentrations both upgradient and downgradient of the pond system. Preliminary results from the model simulations suggest that the locations of the upgradient and downgradient monitoring wells should be more or less 2,000 feet northwest and 2,000 feet southeast of the pond system, respectively. Collection of additional groundwater level data from existing wells in the area surrounding the WWTF pond system is necessary, however, to refine these recommended locations of the additional monitoring wells prior to their construction.

2. Measurements of groundwater levels from existing and future monitoring wells should be consistently conducted (e.g., on a monthly basis) to avoid significant gaps in collected data and for the purpose of evaluating discharge impacts on the mound for shorter and more regular time intervals. Pressure transducers could be installed in the monitoring wells to automate collection of groundwater level data.

If you have any questions, please do not hesitate to call us.

Sincerely,

FUGRO CONSULTANTS, INC.

Nels Ruud, PhD
Project Hydrogeologist

Paul A. Sorensen

Paul A. Sorensen, P.G., C.Hg
Principal Hydrogeologist
California Professional Geologist No. 5154
California Certified Hydrogeologist No. 154

Table 1. Monthly Average Daily Treated Wastewater Effluent Discharge Rate into the Percolation Ponds

Month	**2007 Year Average Daily Discharge (mgd)**	**2008 Year Average Daily Discharge (mgd)**	**2009 Year Average Daily Discharge (mgd)**	**2010 Year Average Daily Discharge (mgd)**
January	0.64	0.58	0.56	0.57
February	0.62	0.59	0.54	0.57
March	0.60	0.57	0.57	0.56
April	0.59	0.58	0.56	0.56
May	0.58	0.57	0.57	0.57
June	0.60	0.61	0.55	0.56
July	0.59	0.58	0.55	0.57
August	0.57	0.57	0.55	0.57
September	0.58	0.57	0.56	0.55
October	0.57	0.56	0.57	0.55
November	0.58	0.57	0.57	0.55
December	0.59	0.55	0.56	0.57
Minimum	0.57	0.55	0.54	0.55
Maximum	0.64	0.61	0.57	0.57
Average	0.59	0.58	0.56	0.56

Table 2. Measured Groundwater Elevations and Depths to Groundwater in Monitoring Wells

Date	PZ-1 Groundwater Elevation (feet, MSL)	PZ-1 Depth to Groundwater (feet)	MW-1 Groundwater Elevation (feet, MSL)	MW-1 Depth to Groundwater (feet)	MW-2 Groundwater Elevation (feet, MSL)	MW-2 Depth to Groundwater (feet)	MW-3 Groundwater Elevation (feet, MSL)	MW-3 Depth to Groundwater (feet)
1/26/2000	262.9	38.8	255.3	44.6	251.6	49.6	232.9	70.8
7/12/2000	264.7	37.0						
1/17/2001	262.7	39.0						
7/18/2001	265.7	36.0						
1/23/2002	269.7	32.0						
7/17/2002	269.7	32.0						
7/7/2004			259.9	40.0	257.2	44.0	256.7	47.0
1/25/2005	274.7	27.0	256.9	43.0	256.2	45.0	257.7	46.0
5/9/2005	270.7	31.0	262.9	37.0	262.2	39.0	258.7	45.0
7/7/2005	271.7	30.0	259.9	40.0	260.2	41.0	259.7	44.0
2/27/2006	269.7	32.0	262.9	37.0	261.2	40.0	260.7	43.0
5/14/2007	274.7	27.0	261.9	38.0	260.2	41.0	260.7	43.0
6/14/2007	281.7	20.0	261.9	38.0	260.2	41.0	260.7	43.0
7/15/2007	271.5	30.2	262	37.9	260.3	40.9	259.5	44.2
3/13/2008	274.7	27.0	261.9	38.0	260.2	41.0	261.7	42.0
4/11/2008	272.7	29.0	260.9	39.0	258.2	43.0	262.7	41.0
6/15/2008	273.5	28.2	262.3	37.6	260.4	40.8	261.3	42.4
7/9/2008			262.9	37.0	261.2	40.0	273.7	30.0
1/14/2009			260.9	39.0	257.2	44.0	258.7	45.0
7/8/2009			260.9	39.0	257.2	44.0	262.7	41.0
3/4/2010	276.7	25.0	254.9	45.0	247.2	54.0	257.7	46.0
7/7/2010	274.7	27.0	261.9	38.0	260.2	41.0	262.7	41.0
1/5/2011	275.7	26.0	263.9	36.0	261.2	40.0	265.7	38.0
2/7/2011	276.7	25.0	263.9	36.0	260.2	41.0	265.7	38.0
3/9/2011	276.7	25.0	262.9	37.0	261.2	40.0	265.7	38.0
Minimum	262.7	20.0	254.9	36.0	247.2	39.0	232.9	30.0
Maximum	281.7	39.0	263.9	45.0	262.2	54.0	273.7	70.8
Average	272.0	29.7	261.0	38.9	258.7	42.5	260.3	43.4

Table 3. Treated Wastewater Effluent Discharge Rate Inputs to the Groundwater Flow Model for Model Runs No. 1

Water Year	Model Stress Period	Wastewate Effluent Discharge Rate (mgd)
1985-1990	1-12	0.20
1991	13/14	0.18
1992	15/16	0.23
1993	17/18	0.23
1994	19/20	0.27
1995	21/22	0.31
1996	23/24	0.33
1997	25/26	0.38
1998	27/28	0.43
1999	29/30	0.36
2000	31/32	0.40
2001	33/34	0.42
2002	35/36	0.40
2003	37/38	0.42
2004	39/40	0.47
2005	41/42	0.63
2006	43/44	0.59
2007	45/46	0.59
2008	47/48	0.58
2009	49/50	0.56
2010	51/52	0.56
2011	53/54	0.60
2012-2021	55-74	0.57

Note: Average Daily Discharge from April thru September of 2011 assumed to be equal to rate from October 2010 thru March 2011

Table 4. Treated Wastewater Effluent Discharge Rate Inputs to the Groundwater Flow Modelfor Model Runs No. 2

Water Year	Model Stress Period	Wastewate Effluent Discharge Rate (mgd)
1985-1990	1-12	0.20
1991	13/14	0.18
1992	15/16	0.23
1993	17/18	0.23
1994	19/20	0.27
1995	21/22	0.31
1996	23/24	0.33
1997	25/26	0.38
1998	27/28	0.43
1999	29/30	0.36
2000	31/32	0.40
2001	33/34	0.42
2002	35/36	0.40
2003	37/38	0.42
2004	39/40	0.47
2005	41/42	0.63
2006	43/44	0.59
2007	45/46	0.59
2008	47/48	0.58
2009	49/50	0.56
2010	51/52	0.56
2011	53/54	0.59
2012	55/56	0.60
2013	57/58	0.62
2014	59/60	0.63
2015	61/62	0.65
2016	63/64	0.66
2017	65/66	0.68
2018	67/68	0.69
2019	69/70	0.71
2020	71/72	0.72
2021	73/74	0.74
2022	75/76	0.76
2023	77/78	0.78
2024	79/80	0.79
2025	81/82	0.81
2026	83/84	0.83
2027	85/86	0.85
2028	87/88	0.87
2029	89/90	0.89
2030	91/92	0.91

Table 5. Treated Wastewater Effluent Discharge Rate Inputs to the Groundwater Flow Model for Model Runs No. 3

Water Year	Model Stress Period	Two Sets of Ponds Wastewate Effluent Discharge Rate (mgd)	Three Sets of Ponds Wastewate Effluent Discharge Rate (mgd)
1985-1990	1-12	0.20	0.20
1991	13/14	0.18	0.18
1992	15/16	0.23	0.23
1993	17/18	0.23	0.23
1994	19/20	0.27	0.27
1995	21/22	0.31	0.31
1996	23/24	0.33	0.33
1997	25/26	0.38	0.38
1998	27/28	0.43	0.43
1999	29/30	0.36	0.36
2000	31/32	0.40	0.40
2001	33/34	0.42	0.42
2002	35/36	0.40	0.40
2003	37/38	0.42	0.42
2004	39/40	0.47	0.47
2005	41/42	0.63	0.63
2006	43/44	0.59	0.59
2007	45/46	0.59	0.59
2008	47/48	0.58	0.58
2009	49/50	0.56	0.56
2010	51/52	0.56	0.56
2011	53/54	0.59	0.59
2012	55/56	0.60	0.60
2013	57/58	0.62	0.62
2014	59/60	0.63	0.63
2015	61/62	0.65	0.65
2016	63/64	0.66	0.66
2017	65/66	0.68	0.68
2018	67/68	0.68	0.69
2019	69/70	0.68	0.71
2020	71/72	0.68	0.72
2021	73/74	0.68	0.74
2022	75/76	0.68	0.76
2023	77/78	0.68	0.76
2024	79/80	0.68	0.76
2025	81/82	0.68	0.76
2026	83/84	0.68	0.76
2027	85/86	0.68	0.76
2028	87/88	0.68	0.76
2029	89/90	0.68	0.76
2030	91/92	0.68	0.76

Table 6. Treated Wastewater Effluent Discharge Rate Inputs to the Groundwater Flow Model for Model Runs No. 4

Water Year	Model Stress Period	Wastewate Effluent Discharge Rate (mgd)
1985-1990	1-12	0.20
1991	13/14	0.18
1992	15/16	0.23
1993	17/18	0.23
1994	19/20	0.27
1995	21/22	0.31
1996	23/24	0.33
1997	25/26	0.38
1998	27/28	0.43
1999	29/30	0.36
2000	31/32	0.40
2001	33/34	0.42
2002	35/36	0.40
2003	37/38	0.42
2004	39/40	0.47
2005	41/42	0.63
2006	43/44	0.59
2007	45/46	0.59
2008	47/48	0.58
2009	49/50	0.56
2010	51/52	0.56
2011	53/54	0.59
2012	55/56	0.60
2013	57/58	0.61
2014	59/60	0.62
2015	61/62	0.63
2016	63/64	0.63
2017	65/66	0.64
2018	67/68	0.65
2019	69/70	0.66
2020	71/72	0.66
2021	73/74	0.67
2022	75/76	0.68
2023	77/78	0.69
2024	79/80	0.70
2025	81/82	0.71
2026	83/84	0.71
2027	85/86	0.72
2028	87/88	0.73
2029	89/90	0.74
2030	91/92	0.75

Figure 1. Map of Existing Two Sets of Percolation Ponds (Sets A and B) and Proposed Third Set of Ponds (Set C) at the Southland Wastewater Treatment Facility

Figure 2. Monthly Average Daily Discharge Rates of Treated Wastewater Effluent in the Percolation Ponds and Measured Groundwater Levels in the Monitoring Wells

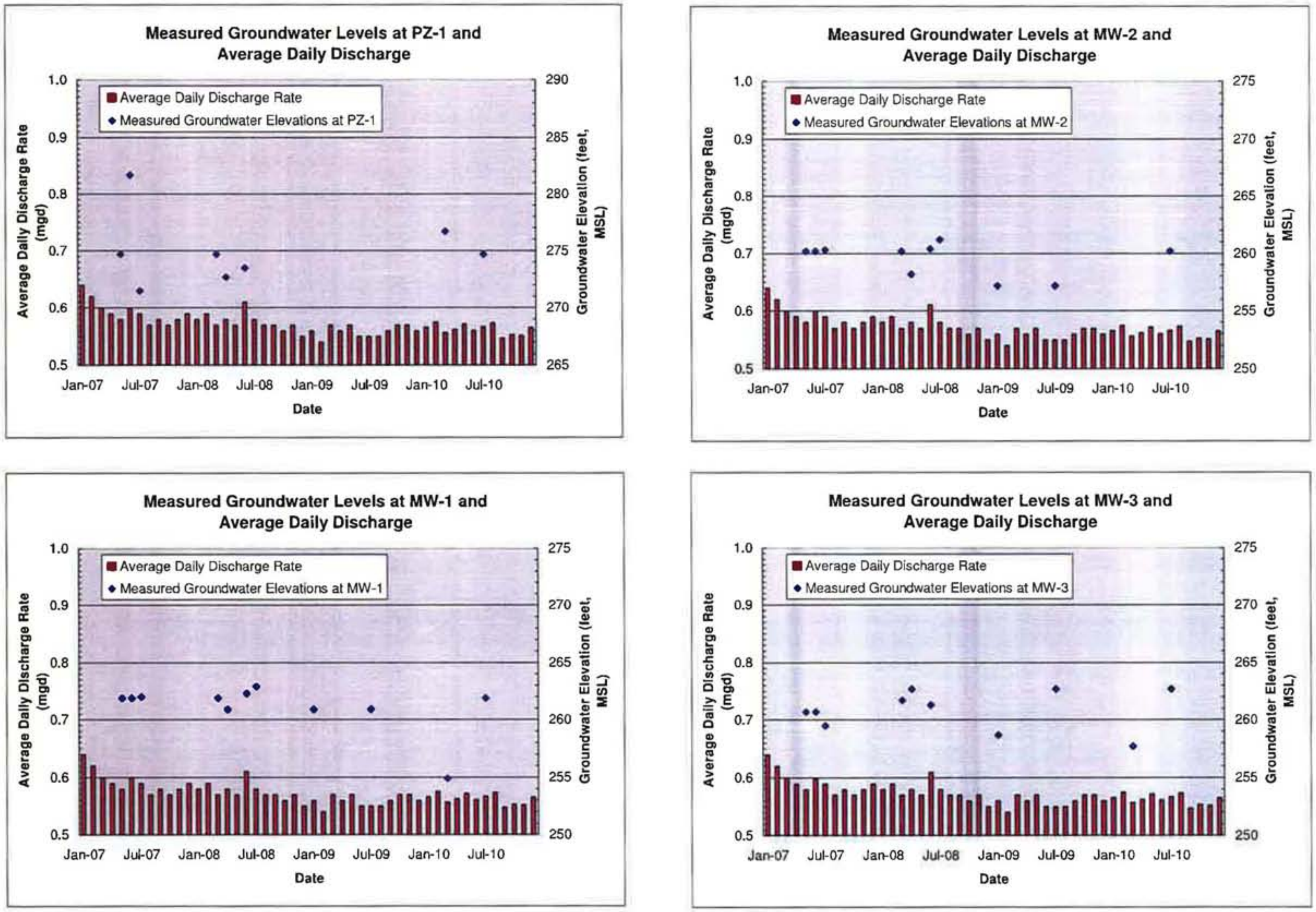
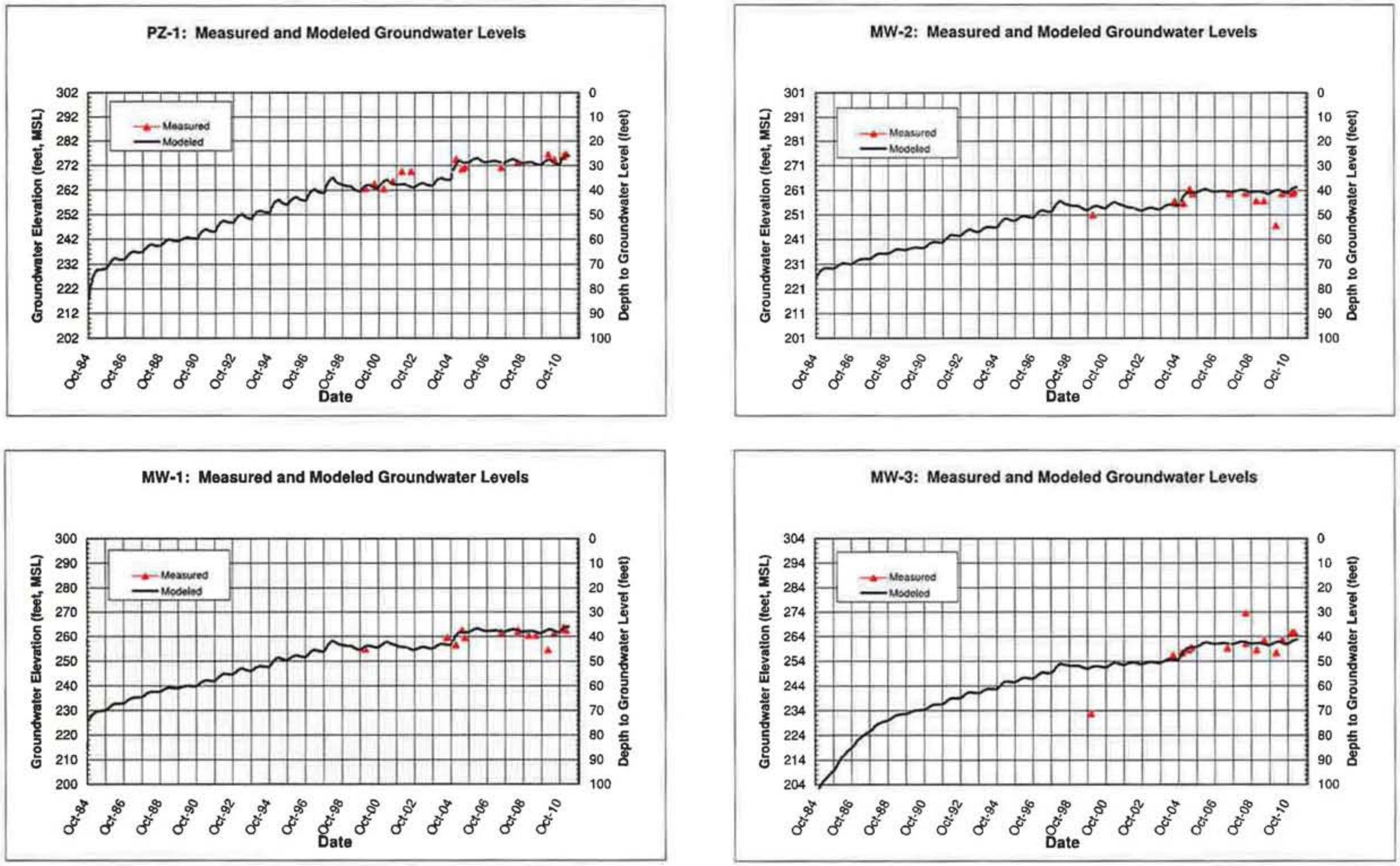


Figure 3. Measured and Modeled Groundwater Levels in Monitoring Wells PZ-1, MW-1, MW-2, and MW-3



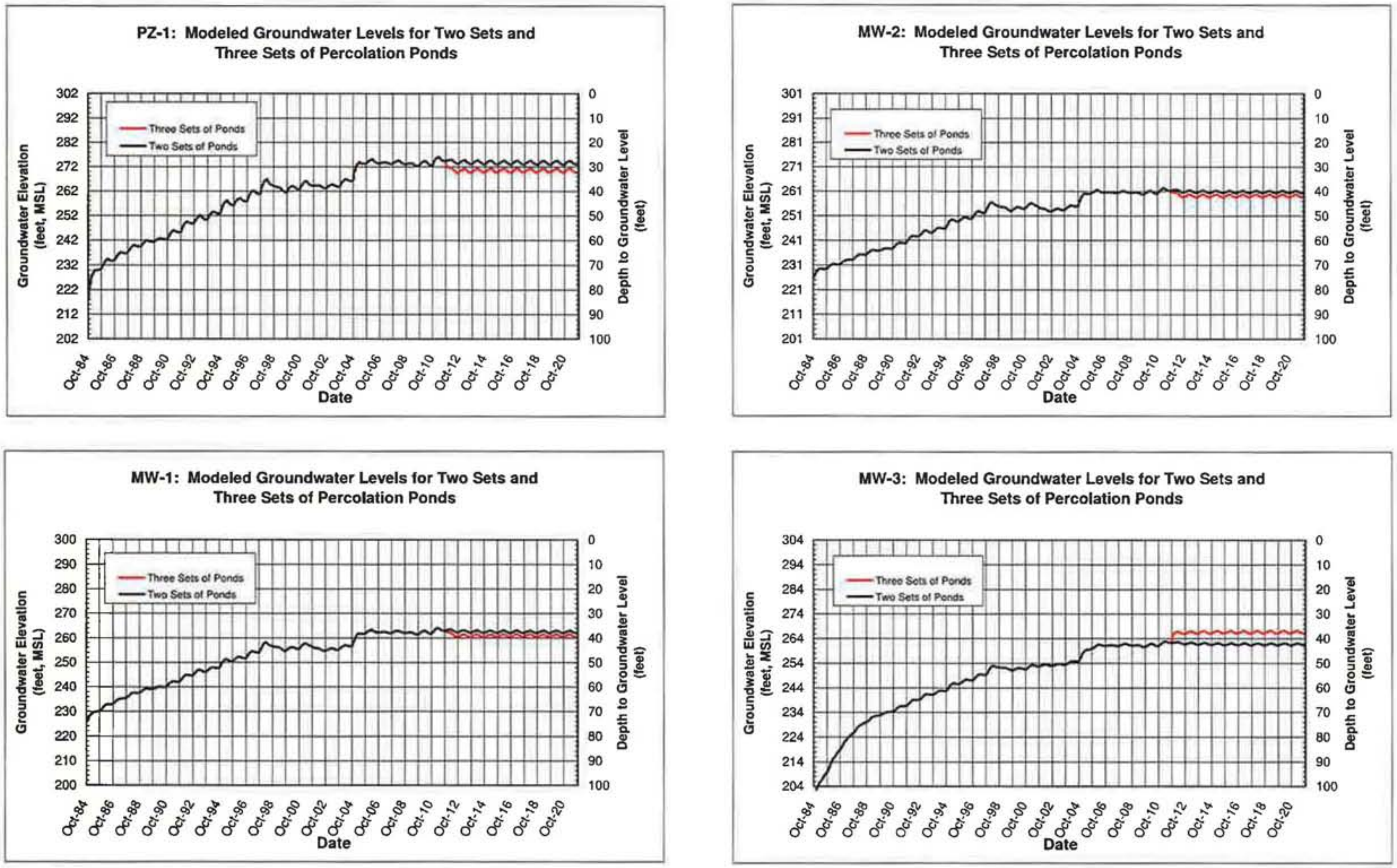
PZ-1: Measured and Modeled Groundwater Levels

MW-2: Measured and Modeled Groundwater Levels

MW-1: Measured and Modeled Groundwater Levels

MW-3: Measured and Modeled Groundwater Levels

Figure 4. Modeled Groundwater Levels in Monitoring Wells PZ-1, MW-1, MW-2, and MW-3 for Two Sets and Three Sets of Percolation Ponds for a Discharge Rate Increasing to 0.57 MGD



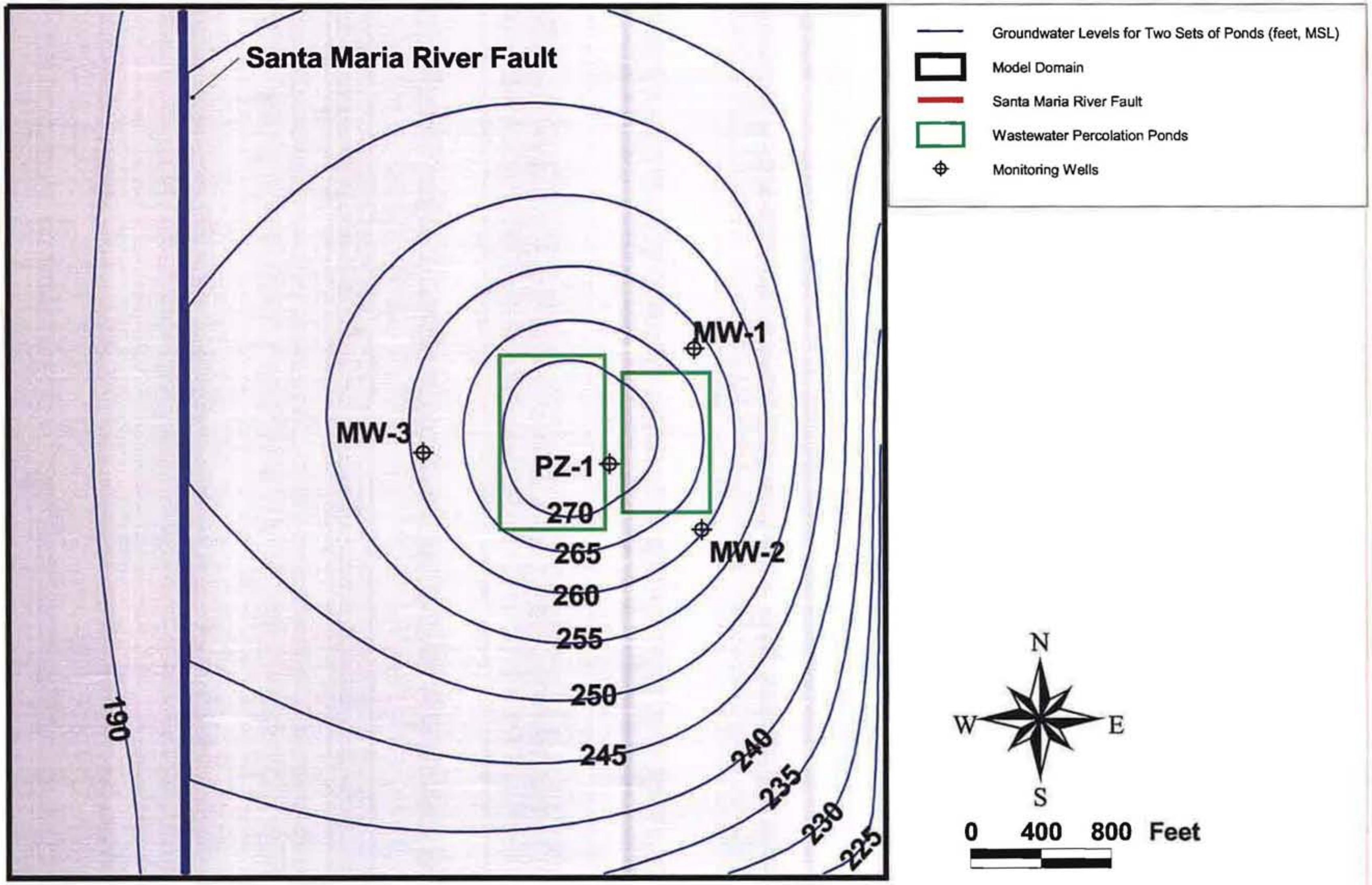


Figure 5. Modeled Groundwater Elevation Contours for Two Sets of Ponds for a Discharge Rate Increasing to 0.57 MGD

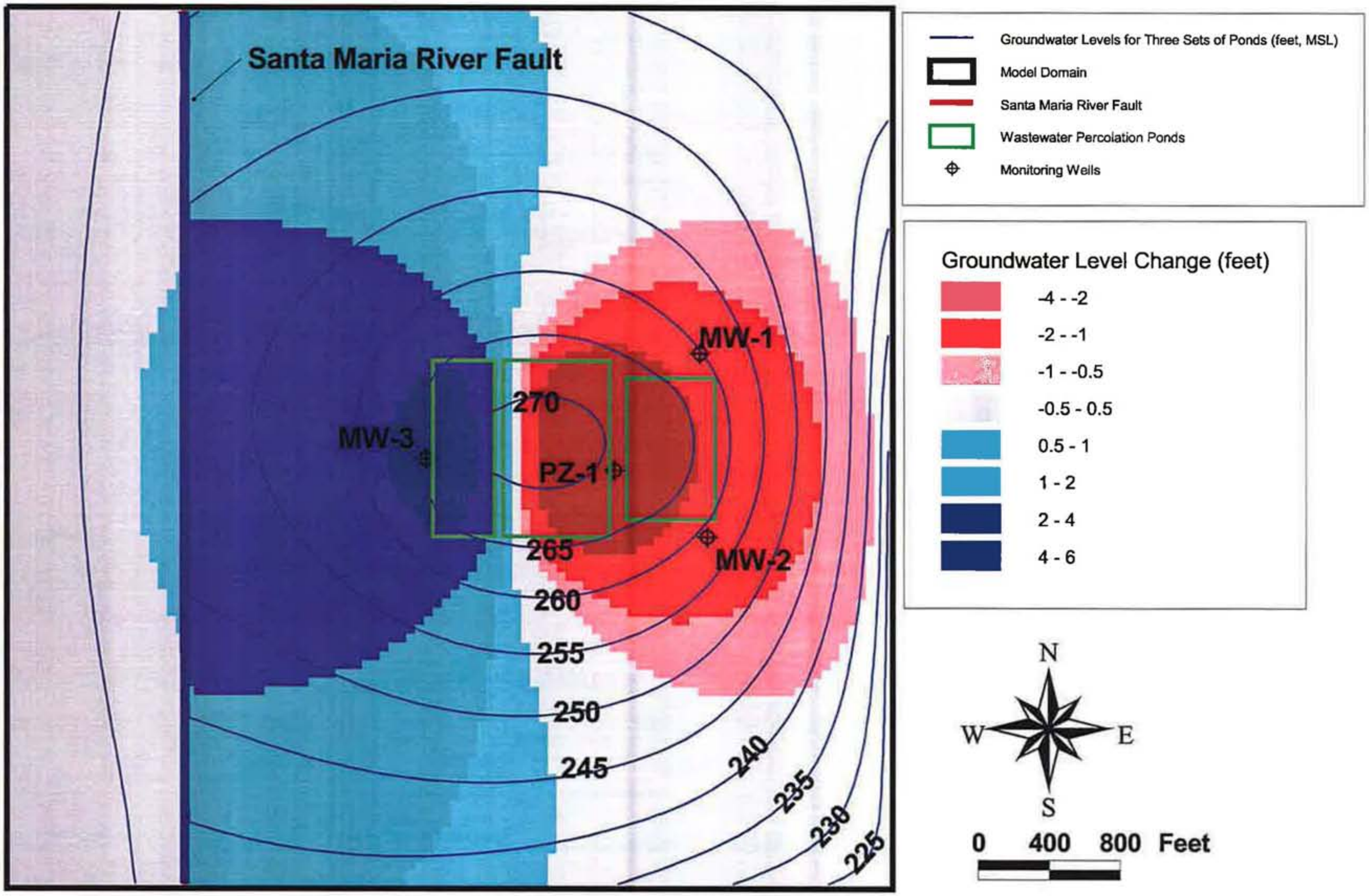


Figure 6. Modeled Groundwater Elevation Contours for Three Sets of Ponds and Changes in Groundwater Levels from Two to Three Sets of Ponds for a Discharge Rate Increasing to 0.57 MGD

Figure 7. Modeled Groundwater Levels in Monitoring Wells PZ-1, MW-1, MW-2, and MW-3 for Two Sets and Three Sets of Percolation Ponds for a Discharge Rate Increasing to 0.91 MGD

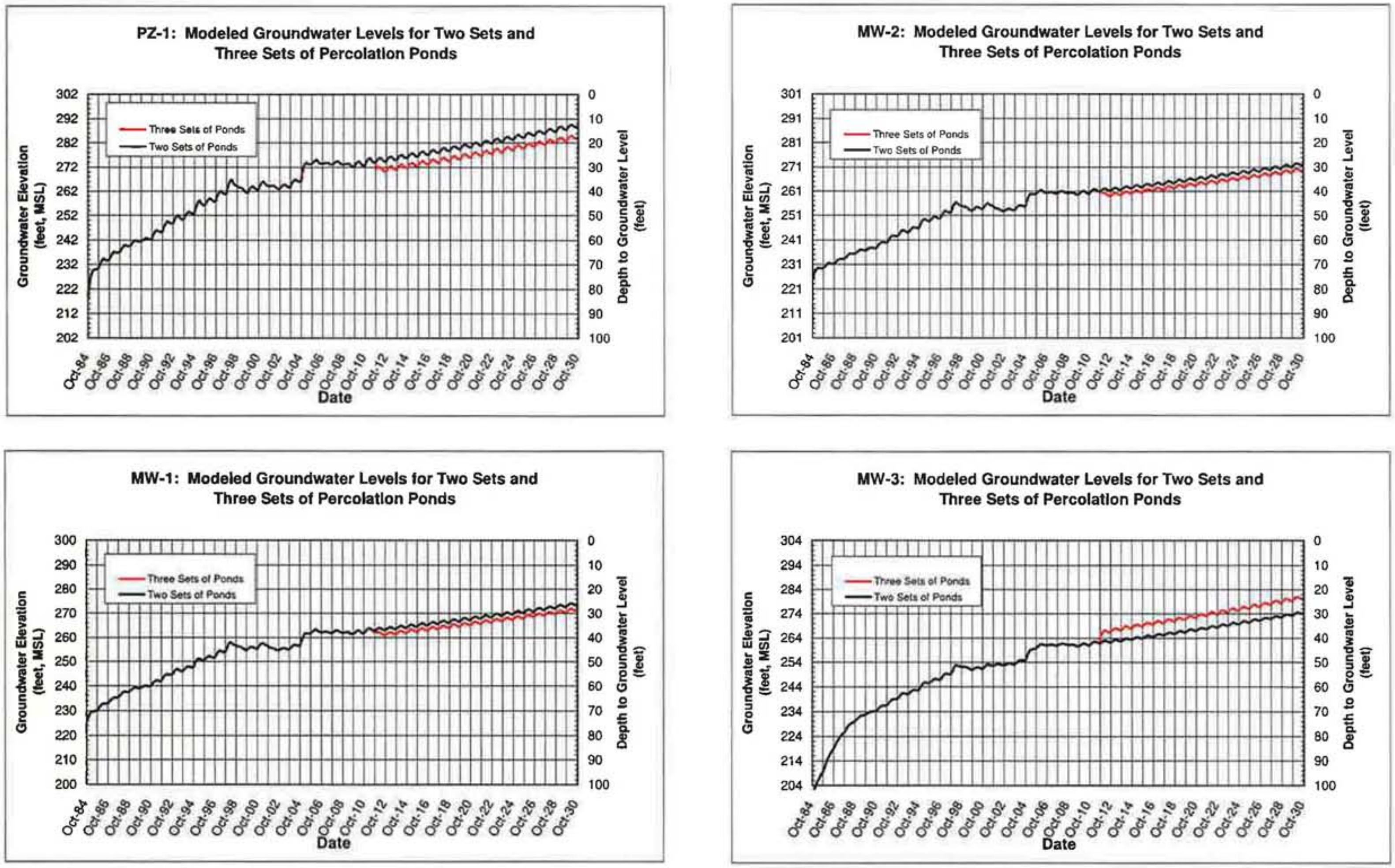


Figure 8. Maximum Groundwater Levels at Mound Apexes and Depths to Groundwater Below Pond Bottom Elevation of 292 feet (MSL) for a Discharge Rate Increasing to 0.91 MGD

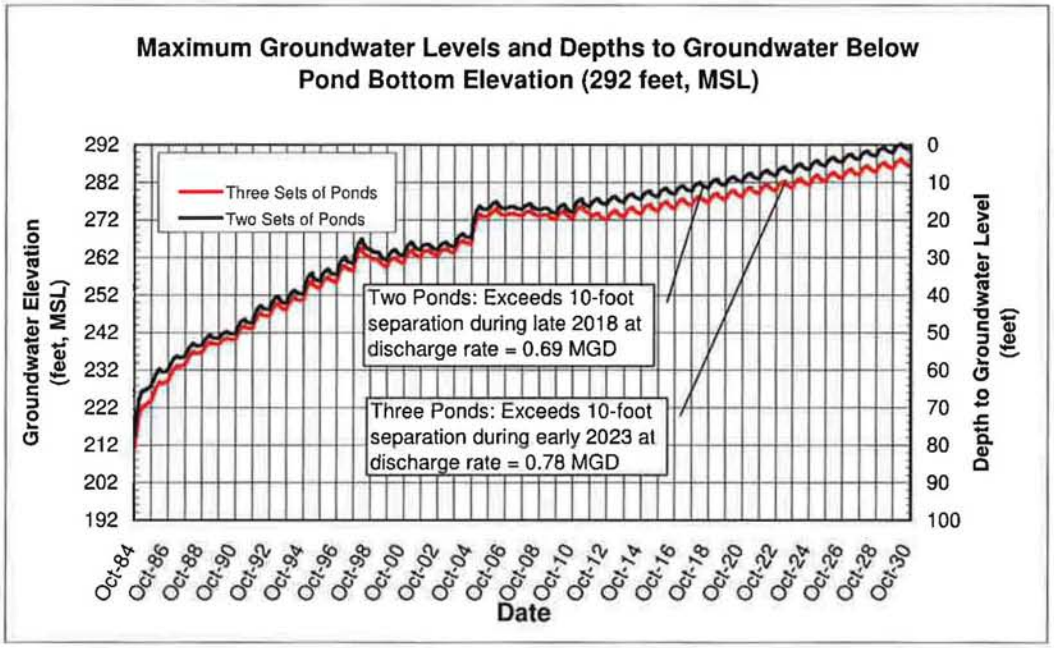
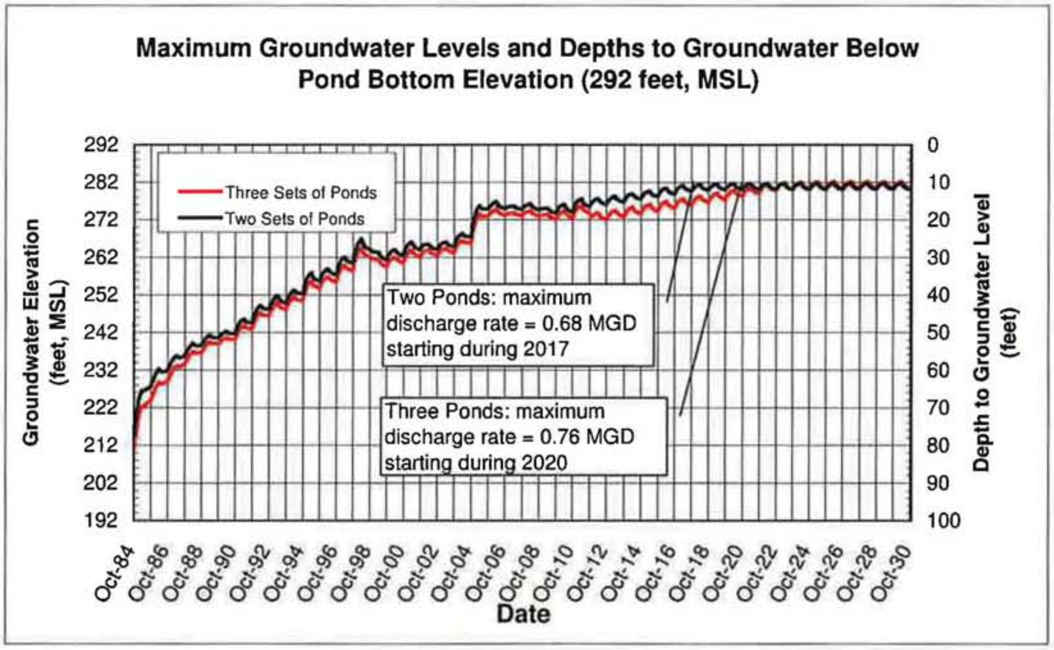


Figure 9. Maximum Groundwater Levels at Mound Apexes and Depths to Groundwater Below Pond Bottom Elevation of 292 feet (MSL) for Estimated Long-term Maximum Discharge Rates



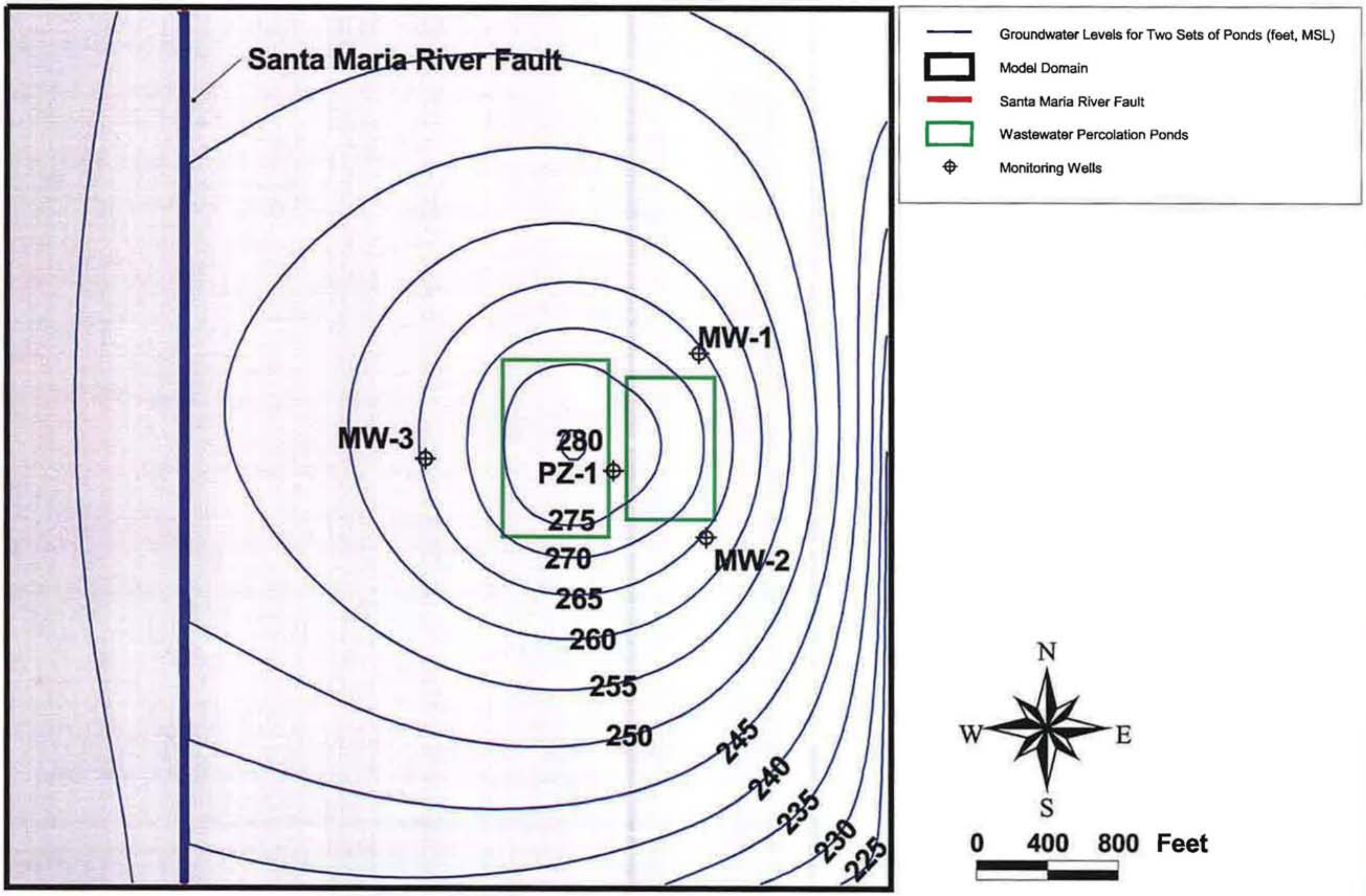


Figure 10. Modeled Groundwater Elevation Contours for Two Sets of Ponds at the Estimated Long-term Maximum Discharge Rate of 0.68 MGD

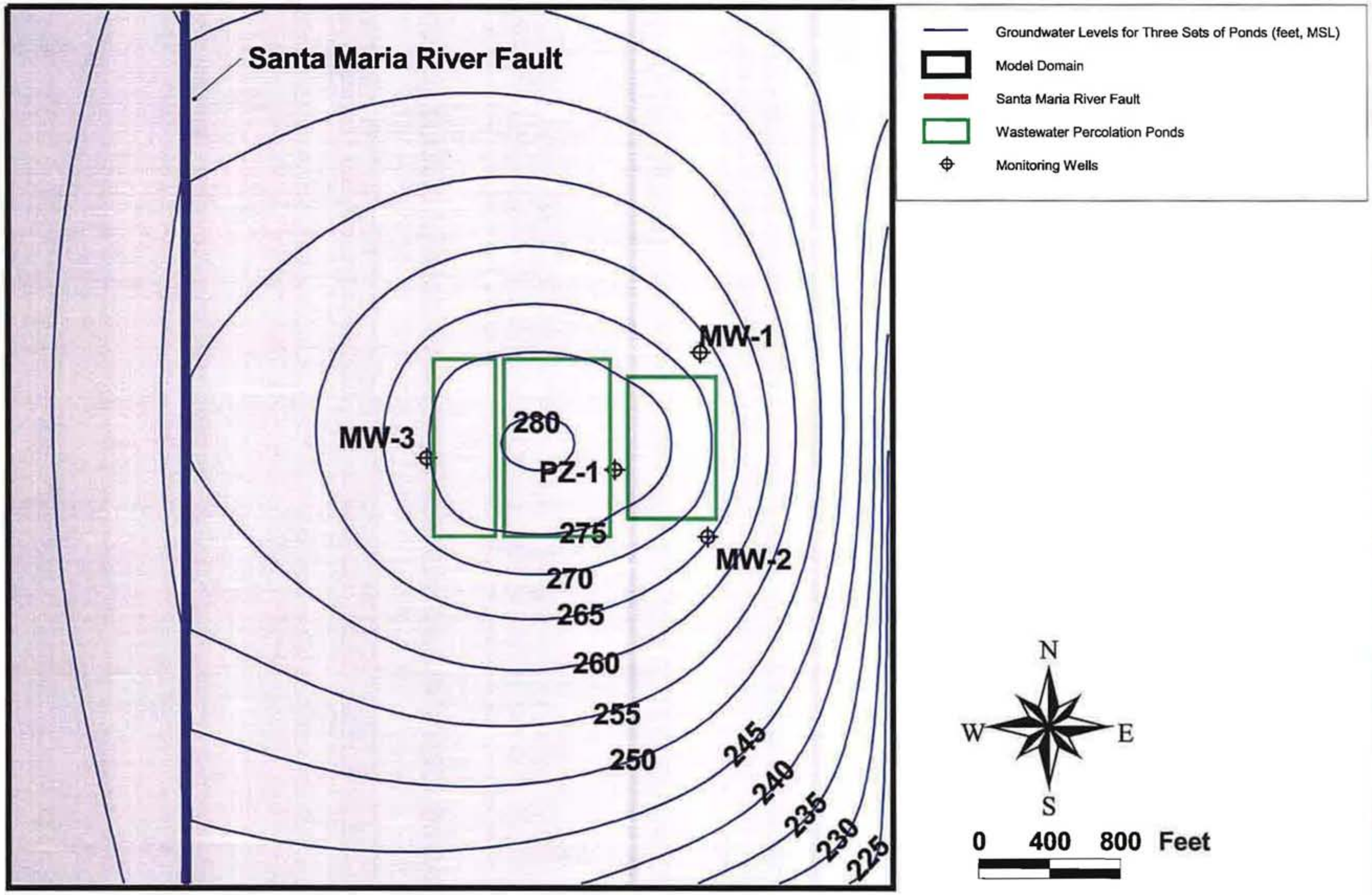


Figure 11. Modeled Groundwater Elevation Contours for Three Sets of Ponds at the Estimated Long-term Maximum Discharge Rate of 0.76 MGD

Figure 12. Modeled Groundwater Levels in Monitoring Wells PZ-1, MW-1, MW-2, and MW-3 for Two Sets and Three Sets of Percolation Ponds for a Discharge Rate Increasing to 0.75 MGD

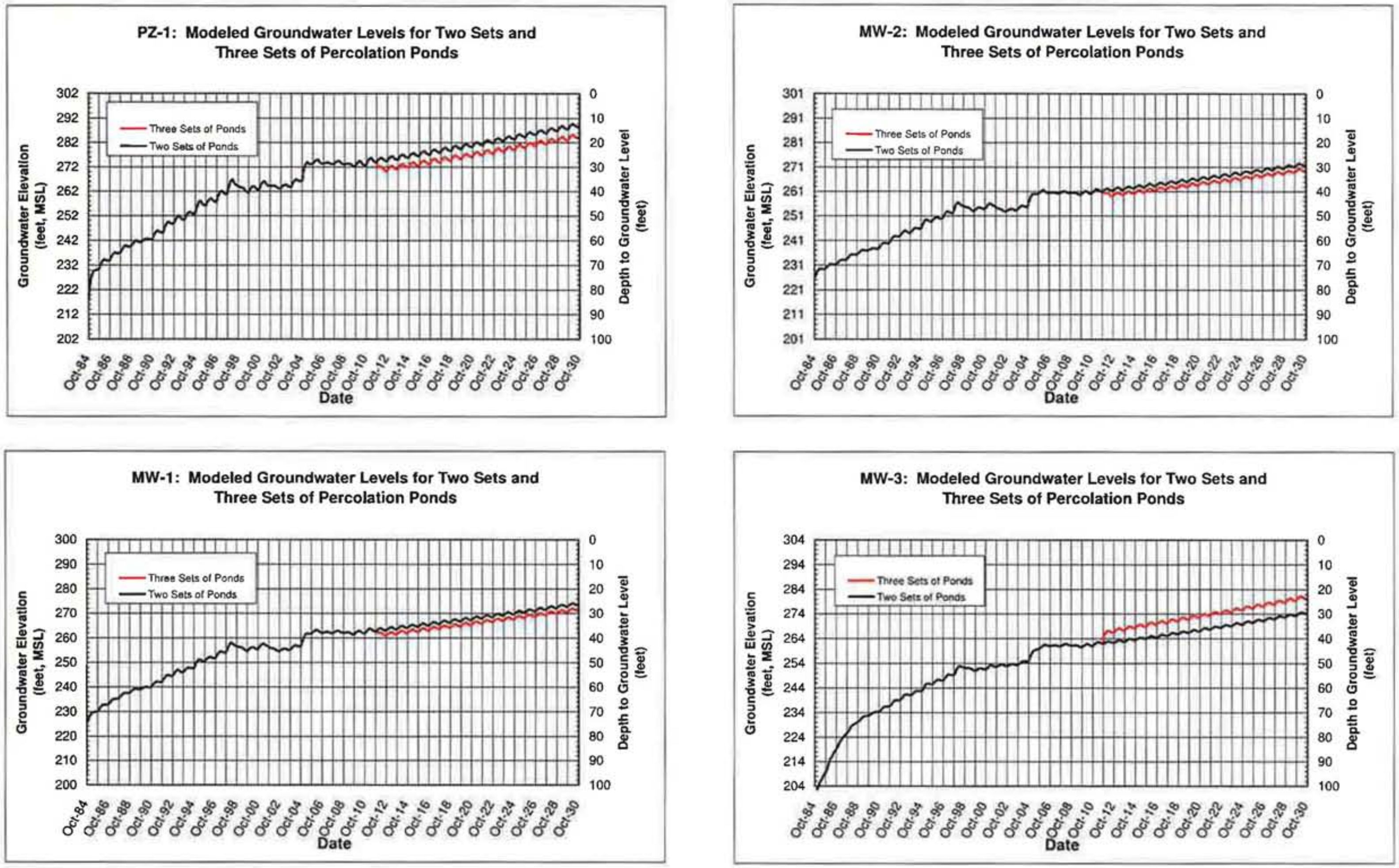
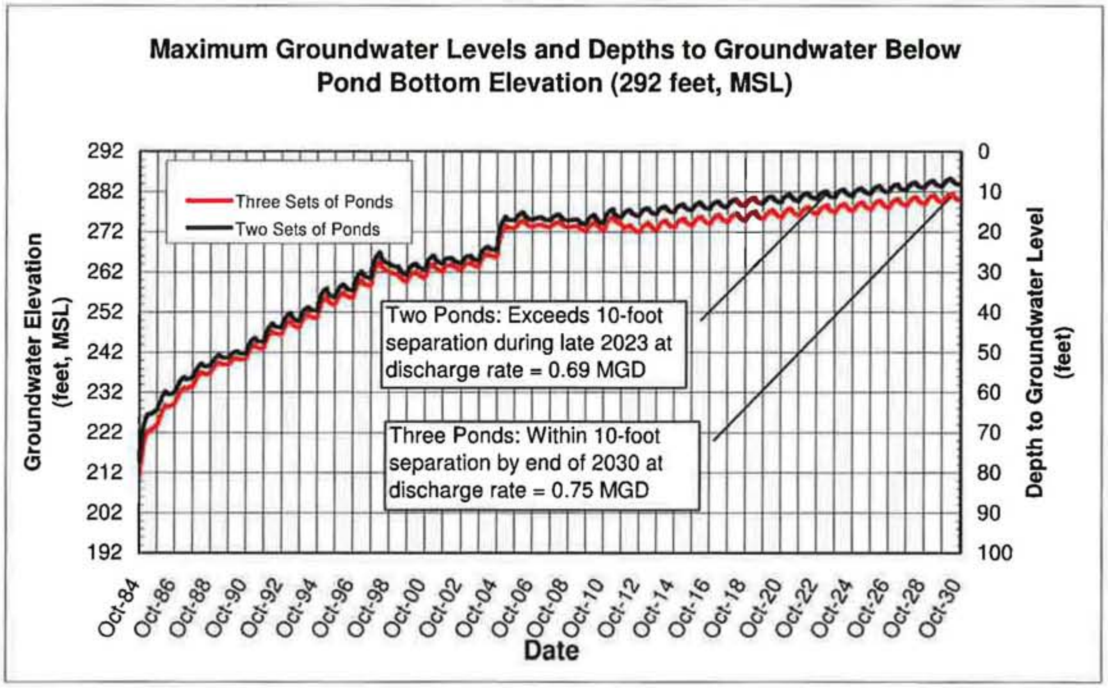


Figure 13. Maximum Groundwater Levels at Mound Apexes and Depths to Groundwater Below Pond Bottom Elevation of 292 feet (MSL) for a Discharge Rate Increasing to 0.75 MGD



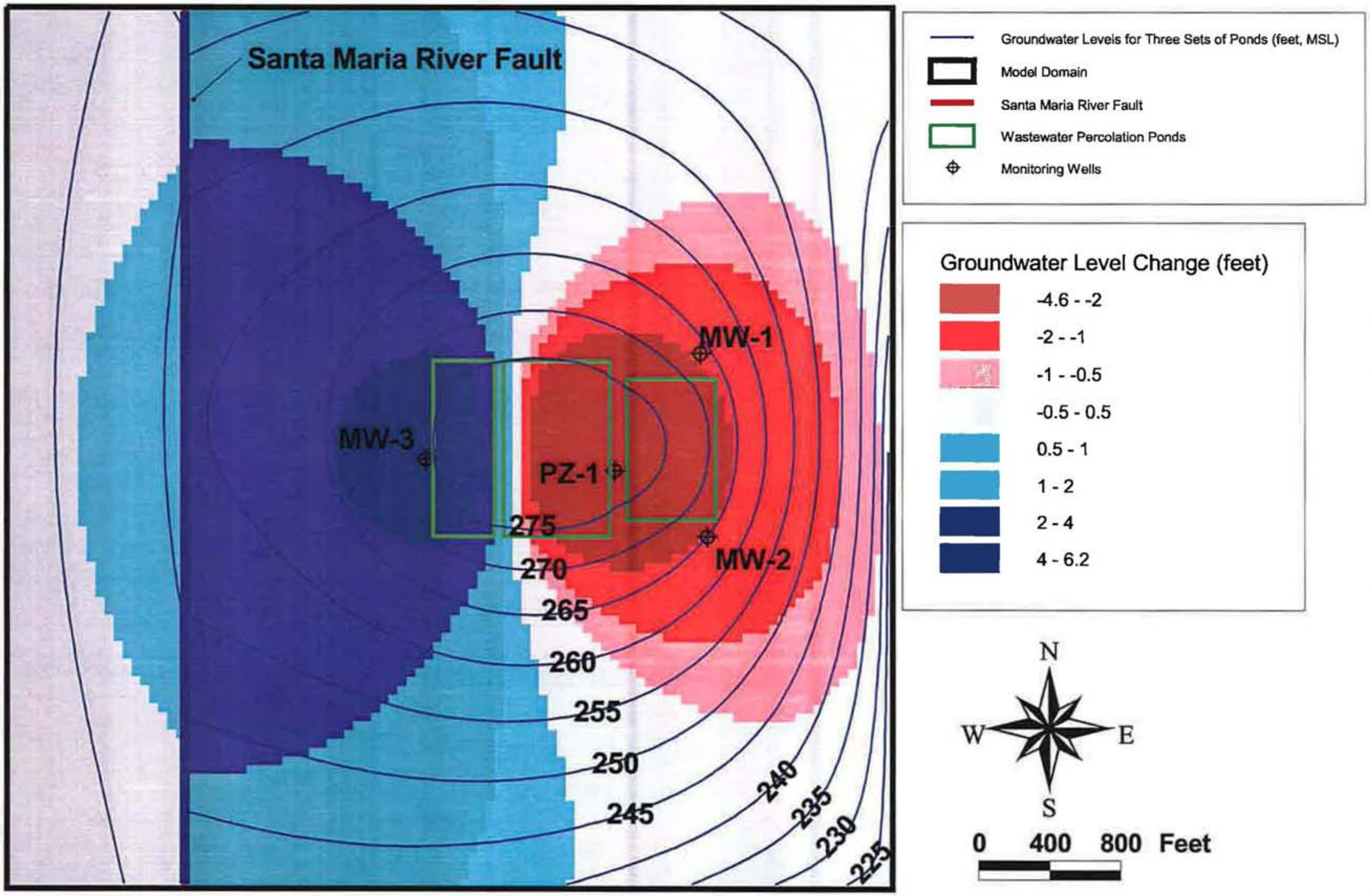


Figure 14. Modeled Groundwater Elevation Contours for Three Sets of Ponds and Changes in Groundwater Levels from Two to Three Sets of Ponds for a Discharge Rate Increasing to 0.75 MGD

AGENDA ITEM
E-2
JULY 27, 2011

TO: MICHAEL S. LEBRUN MSL
GENERAL MANAGER

FROM: PETER V. SEVCIK P.V.S.
DISTRICT ENGINEER

DATE: JULY 21, 2011

AECOM SCOPE AMENDMENT # 5 FOR THE SOUTHLAND WASTEWATER TREATMENT FACILITY PHASE 1 UPGRADE PROJECT

ITEM

Consider approval of Scope Amendment #5 with AECOM for engineering services in the amount of $58,281 for design of Southland Wastewater Facility Phase 1 Upgrade Project [RECOMMEND BY MOTION AND ROLL CALL VOTE TO APPROVE SCOPE AMENDMENT #5 WITH AECOM IN THE AMOUNT OF $58,281 AND AUTHORIZE STAFF TO EXECUTE TASK ORDER].

BACKGROUND

The Board selected AECOM to provide final engineering design services for Phase 1 of the Southland Wastewater Treatment Facility (WWTF) Improvement Project. The project is based on the January 2009 Southland WWTF Master Plan and August 2010 Southland WWTF Master Plan Amendment #1. The project, as currently envisioned, involves maintaining the current capacity of 0.9 MGD and includes a influent lift station, influent screening system, grit removal system, Biolac® cell in Pond 1, a clarifier, gravity belt thickener, two concrete lined sludge drying beds, controls & blower building, and a non-potable plant water system. The Phase 1 project also includes an alternate additive bid item for a second clarifier and an alternate additive bid item for additional disposal facilities.

The project is now at the 95% design level and is being reviewed by the peer review team as well as District staff. AECOM and District staff identified a number of issues that need to be addressed as part of the design effort that are not within the current approved scope of the work and/or contract amount. The additional work tasks and their associated costs required to complete the design of the project are outlined in the attached AECOM Scope Amendment #5. As set forth in the attached proposal, AECOM is willing to perform this work on a time-and-materials basis with a not-to-exceed expenditure limit of $58,281.

There may be future amendments to the design agreement given the nature of the project and the time and materials basis of the design agreement. While the design is almost complete, the EIR has not been completed, and a scope amendment related to the bid phase and construction phase will likely be required since the project has changed significantly since the Facility Master Plan that was the basis of the initial design proposal that was approved by the Board. Current overall design cost, with the proposed amendment, is approximately 10.3% of the overall project cost of $11,995,000.

FISCAL IMPACT

As of July 1, 2011, AECOM has billed the District for $961,910.23 for design services for the project. Execution of the proposed amendment would increase the not-to-exceed expenditure limit from $1,178,957 to $1,237,238. With the proposed amendment, the remaining contract amount to be billed will be $275,328. The FY 11-12 Budget includes $4,400,000 in Town Sewer Capacity Charges Fund (Fund #710) for the project. Thus, sufficient funding is available in the current fiscal year.

STRATEGIC PLAN

Strategic Plan Goal 2.2 – Upgrade and Maintain Collection and Treatment Works
Strategic Plan Goal 2.3 – Select Disposal Solution for Southland Effluent and Implement

RECOMMENDATION

Staff recommends that the Board, by motion and roll call vote, approve Scope Amendment #5 with AECOM in the amount of $58,821 and authorize the General Manager to execute Task Order.

ATTACHMENT

AECOM Budget Revision Request Dated July 20, 2011

T:\BOARD MATTERS\BOARD MEETINGS\BOARD LETTER\2011\110727 SOUTHLAND WWTF AECOM CONTRACT AMENDMENT.docx

AECOM

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805 542 9840 tel
805 542 9990 fax

July 20, 2011

Mr. Michael LeBrun, PE
General Manager
Nipomo Community Services District
P.O. Box 326
Nipomo, CA 93444

Dear Mr. LeBrun,

Southland WWTF Improvements Project, Phase 1: Scope Amendment 5 – 95% Design Items

This scope amendment addresses additional work identified or requested between the Concept Design Report (30% submittal) and the 95% submittal. We have received and reviewed comments from the District's peer review team, and have no major design changes resulting from review of the 60% design documents. Comments on the 95% design are pending, but will be addressed in coordination with District staff. The tasks described herein fall into two basic categories: additional design work (Task Group 2), and additional project management services (Task Group 3). This work has either been requested by District staff or is recommended to complete the project. Details regarding specific tasks are summarized below and the detailed budget is attached.

<u>Task Group 2 – Construction Documents</u>

- Fiber Optic and Telephone Conduit: The need for new conduit between the yard and the plant site was identified. The conduit is required for fiber optic cable and a telephone line. The fiber optic cable will provide a hard-wire connection for the SCADA system and telephone line will be utilized for the fire alarm system in the blower and electrical building. This item, totalling $2,387, covers the effort to design the conduit between the plant and the yard. To reduce trenching and mobilization costs during construction, this length of conduit was added to the South Frontage Road Trunk Sewer Replacement Project plans, where the conduit shares the trench with the new sewer trunk main.

- Restroom at Plant: With additional mechanical equipment and more stringent plant control and monitoring requirements, it is anticipated that operators will be spending more time at the plant site than is currently required. Accordingly, District staff requested that a restroom be added to the design. Working with District staff, AECOM developed the construction documents including plans and specifications, and adjusted the opinion of probable construction cost. Approximately 12 sheets required revisions. This effort was completed for $6,199.

- Consolidate additional review comments: At each submittal stage (30%, 60%, and 95%), AECOM submitted design documents for review and comment. District staff performs a detailed review, along with the District's project peer review team, three local engineering and construction management firms. This results in a minimum of four sets of comments that need to be consolidated in order to address effectively. Our original scope assumed one set of consolidated comments after each submittal. As done for the 60% review comments, AECOM will consolidate comments on the 95% submittal, review each, and discuss responses with District staff. We will provide a letter to summarize the comments and responses and will incorporate comments into the design as appropriate. This amendment includes $2,471 for consolidation of comments on the 60% and 95% submittals.

- Redesign headworks bypass channel: Between the 60% and 95% design submittals, AECOM was requested to revise the design of the headworks bypass channel to reduce the potential for standing water. Several configurations were evaluated. The final design eliminates two stop plates (reducing leakage potential) and incorporates a sloped floor to improve drainage. Estimated savings during construction is $4,000 – $5,000. This redesign was completed for $1,987.

- Relocate RAS piping: During review of the 60% plans and specifications, it was recommended that the discharge point for the Return Activated Sludge (returning mature microorganisms from the clarifiers to the aeration basins) be relocated upstream to promote mixing of the RAS with the influent wastewater and improve distribution to the aeration basins for future phases. AECOM evaluated potential locations, made a recommendation to District staff, and implemented the revisions in the 95% design. This work was performed for $767.

- Move emergency holding basin: The 60% design included construction of an emergency holding basin in existing Pond 4 (consisting of an earthen berm, plastic liner, and piping) to hold wastewater should the secondary clarifier need to be taken offline. During the review, District staff proposed relocation of the emergency holding basin to the future Aeration Basin #2. (This basin will be constructed during Phase 1, but would not lined or utilized until Phase 2). Relocating the emergency holding basin eliminates the need to construct a berm in Pond 4. During Phase 2, a second clarifier will be constructed to provide redundancy and the emergency holding basin will no longer be necessary. The space will be available for Aeration Basin #2. AECOM reviewed the proposed revisions and implemented the change for the 95% submittal. The potential construction cost savings of the redesign is estimated to be $25,000. The additional design effort included changes to piping, grading, notes, and details, totaling $2,668.

- Add passive overflows to infiltration basins: To reduce the risk of overflows and increase operational automation, AECOM recommended passive overflows at various infiltration basins. These overflows will allow treated effluent to flow into an adjacent infiltration basin if the active basin reaches the high water level. AECOM worked with District staff to select three infiltration basins for these overflows. The three were chosen based on the operational schedule to maximize the likelihood that at least one will be available to accept overflowing treated effluent. The effort for this task totaled $1,663.

- Additional effort associated with site grading, piping plan, and demolition plans: Additional effort was required for the site grading, piping, and demolition plans than was originially anticipated. These plans provide a comprehensive overview of the grading and surfacing work, installation of all the site piping, and demolition, protection, abandonment and removal of existing facilities. Four additional sheets were required and completed for $3,521.

- Additional architectural plans (3 sheets): Three architectural sheets were added to the design for the blower and electrical building to provide detail on the building materials, including doors, block, roof, and finishes. The cost for the additional sheets total $6,372.

- Additional instrumentation coordination: Instrumentation design requires close coordination between the instrumentation, civil and electrical engineers, and equipment manufacturers. Additional effort was required to design the instrumentation controls for the sludge thickening system and provide future operational flexibility for the aeration system. The additional work was performed for $3,586.

- Alternate grading plan for excess material from percolation ponds (3 sheets): The new percolation ponds, or infiltration basins, are included in the Project as a bid alternate. Once constructed, the new infiltration basins will allow the District to reduce the height of the perched mound of treated effluent underneath the site and will provide additional operational flexibility. Work to complete the infiltration basin design,construction documents, and cost opinion was added under Scope Amendment #4. Subsequently, preliminary design efforts identified that excavation of these basins and the surrounding access road results in over 100,000 cubic yards of excess material. To reduce hauling costs, AECOM has been working diligently with District staff to develop a solution utilizing the material onsite by filling abandoned ponds and creating berms as visual barriers along property boundaries. This work will result in an estimated 2 to 3 additional grading sheets. The budget for this effort is $4,860.

- Characterize material from perc pond excavation and add to construction documents: Anticipating the excess material from the new infiltration basins may be suitable for various types of fill, District staff requested a proposal for characterization of the material. Fugro West, AECOM's subconsultant, will take samples from the area, perform characterization tests, and provide a letter report summarizing the results. AECOM will coordinate the effort and work with District staff to determine the strategy for integration into the contract documents. If the contractor is able to utilize or sell the material for fill offsite, a credit to the District may be possible. This work is budgeted at $6,590.

- Addition of vacuum truck discharge and washdown area: District staff has requested a proposed budget to integrate the design of a discharge and washdown area for vacuum trucks, used to clean lift stations and sewers. The concept is low tech and consists of a concrete paved area with a sump to drain liquids for treatment and an area to dry the solids for disposal. AECOM will work with District staff to refine the concept design before integration into the Phase 1 improvements plans. The budget for this effort is estimated at $4,428.

The total budget for additional work under Task Group 2, Construction Documents, is $47,498. This work will facilitiate completion of the contract documents (100% plans, specifications, and cost opinion).

Task Group 3 – Project Management

The additional project management services requested as part of this Scope Amendment include review and comment on the District's revised front end documents and assist with revisions, and additional status reports and meetings as a result of schedule delays. The amount of time budgeted is based on review of time spent for the tasks to date and projecting the budget for the additional time. These services are estimated at $10,783.

It is important to note that this scope amendment does not include services associated with the bid or construction phases. As you may recall, the design has changed since the original contract, when the efforts for design, bid phase, and construction phase services were estimated. Similarly, the scope and budget for construction phase services will need to be updated to reflect the revised design, since the additional facilities and equipment (such as the control building, blower building, non-potable water system, and sludge thickening system) will require additional submittals from the contractor and general engineering support during construction. However, we recommend waiting until the final design submittal to revisit the scope and budget for bid and construction phase services.

Schedule

We do not anticipate an impact to the design schedule from this work.

Budget

AECOM will perform this work on a Time and Materials basis, with a budget not to exceed $58,281 unless prior authorization is granted in writing by the District. See the attached spreadsheet for a breakdown of fees.

If you have questions or comments, please contact me to discuss. We look forward to continuing work with you and completing the design of this important project.

Sincerely,

Michael K. Nunley, PE
Project Manager

Attachments:
Fee Summary
Fugro West Proposal

Project Budget

Southland WWTF Improvements - Phase 1
Scope Amendment #5 - 95% Design Items

Nipomo Community Services District

Task Description	Personnel Hours						Budget			
	Principal	Sr Engineer II	Associate Engineer	Design CADD Operator	Administrative	Total Hours	Labor	Subconsultants	Non-Labor Fees	Total
Task Group 2 - Construction Documents										
Design conduit from yard to plant site (built with Frontage Rd Sewer)	1		6	12		19	$ 2,210		$ 177	$ 2,387
Add restroom at plant (12 sheet revisions)	1	4	14	30		49	$ 5,740		$ 459	$ 6,199
Consolidate review comments (60% and 95%)			16		4	20	$ 2,288		$ 183	$ 2,471
Redesign headworks bypass channel			8	8		16	$ 1,840		$ 147	$ 1,987
Relocate RAS piping			4	2		6	$ 710		$ 57	$ 767
Move emergency holding basin			8	14		22	$ 2,470		$ 198	$ 2,668
Add passive overflows to infiltration basins		1	6	6		13	$ 1,540		$ 123	$ 1,663
Site Grading, Piping Plan, and Demolition Plans		1	8	20		29	$ 3,260		$ 261	$ 3,521
Additional architectural Plans (3 sheets)	4		24	20		48	$ 5,900		$ 472	$ 6,372
Additional instrumentation coordination	2	12	8			22	$ 3,320		$ 266	$ 3,586
Alternate grading plan for excess material from perc ponds (3 sheets)	2		16	20		38	$ 4,500		$ 360	$ 4,860
Characterize material from perc pond excavation & add to con docs			4			4	$ 500	$ 6,050	$ 40	$ 6,590
Vacuum truck discharge and washdown area	1	4	16	12		33	$ 4,100		$ 328	$ 4,428
Subtotal	**11**	**22**	**138**	**144**	**4**	**319**	**$ 38,378**	**$ 6,050**	**$ 3,070**	**$ 47,498**
Task Group 3 - Project Management										
Review and comment on draft NCSD General Conditions	2	3	12			17	$ 2,380		$ 190	$ 2,570
Assist in revisions to General Conditions and Supplementary GCs	4		12		3	19	$ 2,516		$ 201	$ 2,717
Task 302. Monthly Progress Reports	2		4		4	10	$ 1,188		$ 95	$ 1,283
Task 305A. Monthly Wastewater Committee Meetings	8		8			16	$ 2,600		$ 208	$ 2,808
Task 305B. Monthly Board Meetings	4		4			8	$ 1,300		$ 104	$ 1,404
Subtotal	**20**	**3**	**40**	**-**	**7**	**70**	**$ 9,984**	**$ -**	**$ 799**	**$ 10,783**
Total	**31**	**25**	**178**	**144**	**11**	**389**	**$ 48,362**	**$ 6,050**	**$ 3,869**	**$ 58,281**

Personnel Category	$/HR
Principal	$200.00
Senior Engineer II	$160.00
Associate Engineer	$125.00
Design CADD Operator	$105.00
Administrative	$72.00

FUGRO CONSULTANTS, INC.

FUGRO

660 Clarion Court, Suite A
San Luis Obispo, California 93401
Tel: (805) 542-0797
Fax: (805) 542-9311

June 20, 2011
Proposal No. 2011.0428

AECOM
Pacific Street, Suite 204
San Luis Obispo, CA 93401

Attention: Ms. Eileen Shields

Subject: Proposal for Geotechnical Services, Testing for Infiltration Basin Excavation, Nipomo Community Services District, San Luis Obispo County, California

Dear Ms. Shields:

Fugro is pleased to submit this proposal to provide geotechnical services for the planned infiltration basin excavation at the Nipomo Community Services District's Southland Wastewater Treatment Plant site. We understand that the District has requested that Fugro sample the soils in the area of the proposed basins and perform grain size testing of the samples to help classify the soil types that may be encountered in the excavation and exported from the site. We understand from AECOM that the ponds will be approximately 8 to 10 feet deep. We understand that the District will provide a backhoe and operator for the sampling.

We anticipate that our services will generally consist of coordinating a field exploration and sampling program with the District and AECOM, visiting the site to select and mark locations for utility clearance by the District and Underground Services Alert (USA), preparing a health and safety plan for the work, performing 5 backhoe pits at the site with the District to obtain soil samples from the infiltration basin area, performing laboratory tests for sieve analyses for up to 2 samples from each pit and a sand equivalent (SE) for one sample from each pit, and provide a letter report with the supporting laboratory data, logs of the test pits, and a map showing the location of where the pits were excavated.

We will provide our services on a time and expense basis per fee schedule rates. We suggest a budget of $5,500 for these services. We expect that the results can be submitted approximately 4 weeks after completion of the field work. Please contact the undersigned if you have questions or we can be of further assistance.

Sincerely,
FUGRO CONSULTANTS, INC.
Jonathan Blanchard
Jonathan D. Blanchard, G.E., P.E.
Principal Geotechnical Engineer

Copies Submitted: 1 – addressee (email)

Fee Schedule (2011cc)

FUGRO CONSULTANTS, INC.

660 Clarion Court, Suite A
San Luis Obispo, California 93401
Tel: (805) 542-0797
Fax: (805) 542-9311

CENTRAL COAST 2011 FEE SCHEDULE FOR ONSHORE GEOTECHNICAL SERVICES

PROFESSIONAL STAFF	HOURLY RATE
Staff Professional	$ 80
Senior Staff Professional	95
Project Professional	105
Senior Project Professional	115
Senior Professional	125
Associate	140
Principal	175
Senior Principal	195

TECHNICAL AND OFFICE STAFF

Field Technician/Inspector - Non-Prevailing Wage, Straight Time	80
Field Technician/Inspector - Prevailing Wage, Straight Time	100
Construction Inspector	100
Construction Services Manager	120
Engineering Assistant	75
Office Assistant	45
Word Processor/ Clerical	60
Laboratory Technician	65
GIS Technician/CADD Operator	95
HSE Manager	140

Overtime Rates for Technical and Office Staff:

a. Saturday or over 8 hours/day during weekdays	1.3 x straight time
b. Sundays/holidays	1.5 x straight time
c. Swing or graveyard shift premium	1.3 x straight time

Fees for expert witness preparation, testimony, court appearances, or depositions will be billed at the rate of $325 per hour.

OTHER DIRECT CHARGES

Subcontracted Services	Cost Plus 15%
Outside Reproduction	Cost Plus 15%
Outside Laboratory	Cost Plus 15%
Out-of-Pocket Expenses	Cost Plus 15%
Travel and Subsistence	Cost Plus 15%
Field Vehicle and Basic Sampling Equipment	$100/day

Report reproduction and data reporting costs per staff hourly rates
Fee schedule is subject to revision periodically
LABORATORY AND FIELD SOIL TESTING FEES .... attached

JANUARY 2011cc

ISO9001 WCS   OHSAS 18001 WCS

LABORATORY AND FIELD SOIL TESTING FEES

CLASSIFICATION TESTS

Moisture Content and Visual Classification (ASTM D2216 / D2488)	$	15
Total and Dry Densities (With Moisture Content ASTM D2937)	$	25
Add for Shelby Tube with above Tests	$	20
Plastic and Liquid (Atterberg) Limits (ASTM D4318)	$	115
Specific Gravity (AASHTO T100)	$	95
Organic Content (ASTM D2974)	$	95
Sand Equivalent (ASTM D2419)	$	95
Sieve Analysis (ASTM D422)	$	80
Less Than 200 grams of Fine-Grained Soil		
Sieve Analysis (ASTM C136, Cal 202)		
Coarse Fraction	$	60
Fine Fraction with Wash	$	110
Percent Passing #200 Sieve (ASTM D1140)	$	50
Particle Size Analysis -		
Sieve & Hydrometer (ASTM D422)	$	175
Quick Hydrometer Analysis	$	90

VOLUME CHANGE TESTS

Incremental Consolidation (ASTM D2435)	$	325
Additional Load Increment or Time Rate	$	60
Quick Cons., max 8 Loads (16 ksf max)	$	260
Constant Rate of Strain Consolidation,		
- To 16 ksf max (ASTM D4186)	$	425
- With Intermediate Rebound and Reload	$	500
Expansion Index (ASTM D4828; UBC 29-1)	$	175
Percent Swell (ASTM D2435)	$	115
Swell Pressure and Percent Swell (ASTM D4546)	$	260

STATIC STRENGTH TESTS

Hand Penetrometer	$	15
Torvane	$	25
Miniature Vane (ASTM D4648)	$	50
Miniature Vane, with Residual	$	55
Core Compression Test (Excl Stress-Strain)	$	80
Unconfined Compression, Soil (ASTM D2166)	$	100
Unconfined, Rock (ASTM D2938)	$	130
Triaxial Unconsolidated Undrained (ASTM D2850)	$	125
Triaxial Consolidated Drained		
Single-Stage	$	650
Multi-Stage	$	Quote
Triaxial Consolidated Undrained (w/Pore Pressure)		
Single-Stage (ASTM D4767)	$	440
Multi-Stage	$	Quote
Direct Shear, 3 points (ASTM D3080)	$	315
Consolidated Undrained, 3 points	$	345
Add for Residual Strength, per Point	$	50
Point Load Index, rock (ASTM D5731)	$	60

HYDRAULIC CONDUCTIVITY AND OTHER TESTS

Soil Chemistry for Corrosion (pH, chloride, sulfate, resistivity)	$	250
pH (soil)		Quote
pH (water)	$	30
Permeability - CH up to 4" Diameter	$	300
Permeability - CH 6" Diameter	$	350
Permeability – Flexible Wall (ASTM D5084)	$	360

EARTHWORK TESTS

Standard Proctor, 4 point (ASTM D698)		
- 4-inch mold	$	200
- 6-inch mold	$	240
Modified Proctor, 4 point (ASTM D1557)		
- 4-inch mold	$	200
- 6-inch mold	$	275
California Impact Compaction (Cal 216)	$	250
Moisture - Density Check Point		
- 4-inch mold	$	75
- 6-inch mold	$	100
Rock Correction for above	$	90
Soil Cement - Moisture/Dens. (ASTM D558)	$	275
Index Density and Unit Weight (ASTM D4253)		
Maximum	$	315
Minimum	$	135
R-Value (ASTM D2844: Cal 301)	$	275
Treated Soil	$	325
Aggregate Base	$	335
Base with admixture	$	350
CBR (One Point) (ASTM D1883)	$	340
Proctor Compaction w/above CBR		Extra
Surcharge for Addition of Admixture	$	50

AGGREGATE TESTS

Percent passing #200 Sieve for Aggregate (ASTM C117)	$	85
Unit Weight and Voids in Aggregate (ASTM C29, Cal 212)	$	95
Organic Impurities of Concrete Aggregates (ASTM C40)	$	55
Sieve Analysis of Coarse Aggregate (ASTM C136, Cal 202)	$	60
Additional Test Increment of 10 kg	$	30
Sieve Analysis of Fine Aggregate (ASTM C136, Cal 202)	$	110
Specific Gravity & Absorption - Coarse (ASTM C127, Cal 206)	$	80
Specific Gravity & Absorption - Fine (ASTM C128, Cal 207)	$	125
Cleanness Value (ASTM C142, Cal 227)	$	140
Durability Index - Coarse or Fine (ASTM C3744, Cal 229)	$	140
Sand Equivalent of Graded Aggregate (ASTM D2419, Cal 217)	$	95
Percentage of Crushed Particles (ASTM D5821, Cal 205)	$	100
Moisture Content of Aggregate (ASTM C566)	$	60

AGGREGATE TESTS (cont'd)

Sulfate Soundness – per sieve fraction (ASTM C88, Cal 214)	$	125
L.A. Abrasion – at 500 revolutions (ASTM C131, Cal 211)	$	225

ASPHALT CONCRETE TESTS

Stabilometer Value (ASTM D1560, Cal 366)	$	160
Lab Compacted Unit Weight - Paraffin Coated Each Briquette (ASTM D1188, Cal 308A)	$	110
Surcharge for Rubberized AC for Above	$	20
Unit Weight of Asphalt Cores or Slabs	$	85
Theoretical Maximum Specific Gravity and Density of Asphalt Mixtures (ASTM D2041)	$	150
Extraction and Sieve Analysis of Asphalt Mixtures (ASTM D2172 & D5444)	$	315
Asphalt Content by Ignition (ASTM D6307, CT382)	$	150
Calibration Curve for Ignition Test	$	300

CONCRETE, MASONRY, and STEEL TESTS

Concrete Compression		
Each 6 x 12 Cylinder (ASTM C39)	$	30
Hold or Additional Test	$	30
Light Weight Concrete (CTM 548)	$	40
Cylinder Molds with Lids	$	8
Compression of Cored Concrete or Masonry Specimen Including End Preparation (ASTM C42)	$	90
Soil-Cement Compression (ASTM D1633)	$	40
Shrinkage of Mortar and Concrete 3 Bars; Site Delivery & Pick Up Extra (ASTM C157)	$	440
Unit Weight of Concrete Cylinders - Air Dry	$	30
Unit Weight of Concrete Cylinders - Oven Dry	$	40
Shotcrete Panel - Lab Coring & Compression - 3 cores (ASTM C42)	$	375
Grout Prism Compression - each (ASTM C39)	$	45
Mortar Cylinder Compression - each (ASTM C39)	$	35
Composite Prism Compression (ASTM E447)		
- 8x8		Quote
- 8x12		Quote
- 8x16		Quote
CMU/Concrete Block Compression (ASTM C140)		Quote
Site Pick up - Concrete Specimens - each	$	13
Site Pick up - Masonry Specimens - each	$	13
Site Pick up - Shotcrete Panels - each	$	60
Site Pick up - Composite Prism - each	$	25
Absorption & Moisture of CMU/Concrete Blocks	$	95
Concrete Moisture Emission Test Kit - each [Technician Time Extra]	$	60
Rebar - Tensile and Bend (ASTM A-370)		Quote

MISCELLANEOUS LABORATORY TESTS AND CHARGES

Sample Remold Surcharge	$	85
Special Processing		Hourly Rates
Extrude Tube Sample and Visual Classification	$	70
Sample Tube Cutting, each cut	$	25
Sample Preparation - Non-Routine	$	100
Steel Drum - 55 Gallon with Lid	$	80
Gas Powered Generator	$	80
Shelby Tube with Caps	$	45
Addition of Soil Admixtures and Curing	$	95
Capping of Strength Test	$	40
Weight Analysis of Roofing Materials (ASTM D2829)	$	50
Density of Sprayed on Fireproofing Materials	$	60
Asphalt Slurry Seal Wet Track Abrasion (ASTM D3910)	$	70
Static Friction Test - Per Surface Location (ASTM C1028)	$	375
FerroScan Rebar Locator - per half day	$	120
Coring Equip/Bit Charge - per half day	$	85
Bit Charge - Difficult Materials - per half day	$	100
Specimen End Prep		
- Less than 4" Diameter - per cut	$	12
- 4" to 8" Diameter - per cut	$	18
Special Capping of Specimen	$	40
Patch or Grout Core Hole	$	35
Photograph of Sample	$	50
Additional Copies of Photographs		Cost + 15%
Local Site Pick up of Bulk or AC Sample - within 30-mile radius, per sample	$	60

NOTES:

1. Rates for other tests and test variations can be furnished on request.
2. Rates for Asphalt Concrete, Lime/Cement Admixture, and Portland Cement Concrete mix designs and testing can be furnished upon request.
3. The following are included at NO CHARGE: visual classification with all strength and volume change tests, natural water content and density with all triaxial compression and volume change tests.
4. Rush assignments are subject to a 25% surcharge.
5. Weekend or Holiday test assignments are subject to a 50% overtime surcharge
6. Testing for contaminated samples (EPA Level C & D) will be invoiced at 1.5 times listed rates.
7. Sample shipment or other outside costs at Cost + 15%.

FIELD INSTRUMENTATION/EQUIPMENT

Inclinometer Probe and Readout Device	$ 185/day
Rotary Hammer	$ 40/day
Portable Photoionization Detector (PID)	$ 100/day
Gas Tech	$ 25/day
Portable Flame Ionization Detector (FID)	$ 150/day
Field Computer	$ 30/day
Manometer	$ 55/day
Dynamic or Stainless Steel Penetrometer	$ 50/day
Brass or Stainless Steel Sample Sleeves	$ 8/each
Well Bailer - Disposable	$ 15/each
Keyed-Alike Locks	$ 8/each
55-gallon Drum	$ 80/each
Field Filter	$ 25/unit
Nuclear Gauge	$ 50/day
Stainless Steel Hand-Auger Sampler	$ 50/day
Teflon Tape - 4" roll	$ 35/roll
Liquinox	$ 20/bottle
Tyvek	$ 5/each
Respirator Cartridges	$ 10/set
Bulk Sample Bags	$ 4/each
Water Level Indicator	$ 20/day
Kernlevel	$ 20/day
Well Cap 2"	$ 20/each
12 Channel Seismograph	$ 150/day
2-inch Diameter Water Meter	$ 20/day
4-inch Diameter Water Meter	$ 40/day
Asphalt Patch	Cost +15%

Baroid Drilling Fluid Test Kit	$ 30/day
Conductivity Probe (in situ)	$ 55/day
CPN Corp. Hydroprobe	$ 75/day
Double-Ring Infiltrometer	$ 75/day
Downhole Soil Samplers (2½-inch California liner, SPT)	$ 75/day
Fisher TW-6 Metal Detector	$ 50/day
Gas Powered Generator	$ 80/day
Groundwater Modeling Software	$ 25/day
Hermit 1000C and Transducer	$ 135/day
ISCO Peristaltic Air Pump	$ 25/day
Positive Displacement Pump	$ 25/day
Temperature-pH-Conductivity Meter	$ 25/day
Transducer (in situ)	$ 75/day
Water Level Recorder	$ 20/day
Water Sampling Pump (Bladder Pump or Electric Submersible)	$ 200/day
Water Sampling Pump (Well Wizard)	$ 200/day
Well Bailer - Standard	$ 25/day
Disposable Camera	$ 15/each
Digital Camera	$ 25/day

TO: BOARD OF DIRECTORS

FROM: MICHAEL S. LEBRUN MSL
GENERAL MANAGER

DATE: JULY 22, 2011

AGENDA ITEM
E-3
JULY 27, 2011

CONSIDER EARLY PAY OFF OF 1978 WATER REVENUE

ITEM

Consider early pay off of 1978 Water Revenue Bond [Recommend setting Public Hearing]

BACKGROUND

In 1978, the District adopted Resolution 137 titled "A Resolution Providing for the Issuance of Water Revenue Bonds, Fixing the Form of Bonds and Providing Covenants for Their Protection". The District issued bonds in the amount of $270,000, payable over 40 years at 5% interest. The bonds were issued to develop the Eureka Well.

As of June 30, 2011, the principal balance of the bond issue is $76,000 and is scheduled to be paid in full on July 1, 2018.

The District has its reserve funds invested in LAIF. Due to the economic decline, interest rates on earnings have declined below 5%. Based on the fiscal analysis below, it would be prudent for the District to pay off the bonds early, assuming the interest rates do not rise above 5% in the next seven years.

Staff has contacted the bondholder, Berkadia Commercial Mortgage, and they have stated there will be no early redemption fee.

FISCAL IMPACT

Interest Expense July 1, 2011 – July 1, 2018 at 5% interest	$13,950
Interest Earned July 1, 2011 – July 1, 2018 (assume interest earnings of 0.50% interest per year)	$700
NET SAVINGS TO DISTRICT	$13,250

The only cost of redemption will be the cost to publish the required notice in the San Francisco Chronicle, as required by the Bond covenants.

The District would use Water Fund #125 reserves to pay off the bonds.

RECOMMENDATION

Staff recommends your Board consider the information and by motion and roll call vote direct staff to schedule a public hearing on August 10, 2011 to adopt Resolution 2011-xxx approving pay off of 1978 Revenue Bonds.

ATTACHMENT

- Draft Resolution

T:\BOARD MATTERS\BOARD MEETINGS\BOARD LETTER\2011\110727 bond redembption.DOC

NIPOMO COMMUNITY SERVICES DISTRICT
RESOLUTION NO. 2011-xxx

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE NIPOMO COMMUNITY SERVICES DISTRICT ESTABLISHING A REDEMPTION ACCOUNT AND AUTHORIZING THE REDEMPTION OF THE 1978 WATER REVENUE BONDS

WHEREAS, on June 21, 1978 the Nipomo Community Services District (District) adopted Resolution 137 titled "A Resolution Providing for the Issuance of Water Revenue Bonds, Fixing the Form of Bonds and Providing Covenants for Their Protection" (herein "Resolution 137"); and

WHEREAS, Resolution 137 authorized the sale of approximately TWO HUNDRED SEVENTY THOUSAND DOLLARS ($270,000) in bonds, whereby the District agreed to pay the debt together with interest on the unpaid balance from the issuance date at the rate of 5% per annum, payable on July 1, 1979, and semi annual thereafter on January 1 and July 1 in each year until the principal amount is paid in full.; and

WHEREAS, as of June 30, 2011, there remains a principal balance of SEVENTY SIX THOUSAND DOLLARS ($76,000) owing on the 1978 Water Revenue Bonds; and

WHEREAS, article IV paragraph 4.01 of Resolution 137 provides in relevant part "Bonds maturing on or after July 1, 1990 shall be subject to call and redemption, at the option of the Entity [The District], as a whole or in part, in inverse number numerical order; on July 1 in any year after their issuance and prior to the maturity date(s) at the principal amount thereof and accrued interest thereon to the date of redemption"; and;

WHEREAS, Resolution 137 paragraph 4.02 states in relevant part "Notice of Redemption shall be published once not less than thirty (30) days prior to the date of call in a financial newspaper published in San Francisco, California. Such notice shall also be mailed by registered or certified mail not less than thirty (30) days prior to the date of call to the last known holder of any Bearer Bond so called and to the registered owner of any Registered Bond so called, as shown on the records of the Treasurer; and

WHEREAS, article IV paragraph 4.02 of Resolution 137 provides in relevant part "Prior to giving Notice of Redemption there must be set aside in said Redemption Fund monies available for the purpose and sufficient to redeem the Bonds designated in such Notice of Redemption"; and

WHEREAS, it is the Districts desire to call the 1978 Revenue Bonds authorized by Resolution 137; and

WHEREAS, on August 10, 2011, the District, the District conducted a public hearing and considered public comment regarding the call and redemption of said 1978 Water Revenue Bonds.

NIPOMO COMMUNITY SERVICES DISTRICT
RESOLUTION NO. 2011-xxx

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE NIPOMO COMMUNITY SERVICES DISTRICT ESTABLISHING A REDEMPTION ACCOUNT AND AUTHORIZING THE REDEMPTION OF THE 1978 WATER REVENUE BONDS

NOW, THEREFORE, BE IT RESOLVED, DETERMINED AND ORDERED by the Board of Directors of the Nipomo Community Services District, as follows:

1. The District Treasurer is authorized to set aside sufficient funds (approximately $76,000) in a separate fund designated "The Nipomo Community Services District 1978 Water Revenue Bond Redemption Fund (herein "Redemption Fund") for the purpose of redeeming the principal balance of the 1978 Water Revenue Bonds ;and

2. Upon establishing the Redemption Fund, the General Manager, is authorized to provide notice pursuant to article IV of Resolution 137; and

3. Upon confirmation that said notice has been properly given, The District Treasurer shall request the Bond holder surrender the remaining Bonds and to make payment thereon.

Upon motion by Director__________, seconded by Director_________________, on the following roll call vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

the foregoing resolution is hereby passed and adopted this ___ day of _______, 2011.

____
JAMES HARRISON,
President of the Board of Directors

ATTEST:

APPROVED:

____
Michael LeBrun General Manager and
Secretary to the Board

____
JON S. SEITZ
District Legal Counsel

TO: BOARD OF DIRECTORS

FROM: MICHAEL S. LEBRUN MSL
GENERAL MANAGER

DATE: JULY 21, 2011

AGENDA ITEM
E-4
JULY 27, 2011

SUPPLEMENTAL WATER PROJECT OUTREACH MAILER #2

ITEM

Review Draft Outreach Mailer #2 [REVIEW DRAFT OUTREACH MATERIALS PROVIDE COMMENT AND BY MOTION AND ROLL CALL VOTE APPROVE MAILER AND DIRECT STAFF TO MAIL TO PROPERTY OWNERS]

BACKGROUND

At the April 27, 2011 Regular Meeting, your Board appointed an Ad-Hoc committee (Chairperson Director Eby and Member Director Winn) to work with staff and the Outreach Consultant team to develop a message platform and materials and to return to your Board for review and approval.

At the June 8, 2011 Regular meeting, your Board approved Mailer #1. The Ad-Hoc committee has met with the Outreach Consultant on numerous occasions and continues its work to develop materials that will convey the need for supplemental water to District customers and area landowners who will be asked to support the project.

Draft materials were not available at Agenda posting and will be forwarded under separate cover and/or provided at the meeting.

FISCAL IMPACT

The Outreach Contract not to exceed value is $150,879. The District has spent in excess of $3.1 million evaluating the need for supplemental water as well as for designing and planning a supplemental water project. These costs are paid for by supplemental water charges and Certificates of Participation.

RECOMMENDATION

Staff recommends that the Board review the materials, provide comment, and by motion and roll call vote approve the mailer and direct staff to publish and mail to property owners.

ATTACHMENTS

- None