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Th7.5a

Prepared February 7, 2012 (for February 9, 2012 hearing)

To: Commissioners and Interested Persons

From: Madeline Cavalieri, District Manager
Ruby Pap, Coastal Planner

Subject: STAFF REPORT ADDENDUM for Th7.5a
NOID SMC-NOID-2-10 (Montara Water and Sanitary District Alta Vista Wells)

The purpose of this addendum is to modify the staff recommendation for the above-referenced item to clarify the required hydrologic and vegetation monitoring requirements. As described in the staff report, the Montara Water and Sanitary District (MWSD) Phase 1 Public Works Plan (PWP) requires three years of hydrologic and vegetation monitoring for a project such as that proposed in Notice of Impending Development (NOID) 2-10 (see discussion beginning on staff report page 12). Based on this PWP requirement, Special Condition 3 indicates that such monitoring is required through 2015. However, as is also described in the NOID, MWSD's request for Commission concurrence on the NOID is after-the-fact, and the wells have actually been in use and subject to certain monitoring activities since approximately 2007/2008. Based on the materials provided, MWSD has completed more than three years of hydrologic monitoring and two years of vegetation monitoring pursuant to the standards identified in the PWP. Thus, to meet PWP requirements, one more year of vegetation monitoring is required. Because such vegetation monitoring is dependent on and directly related to the required hydrologic monitoring, that means that one more year of hydrologic monitoring is also necessary. And although current monitoring data has not identified any significant problems to date, there is the possibility that problems are identified in the remaining year of monitoring, for which the PWP would require a mitigation plan. To address these issues, the staff report is modified as shown below (where applicable, text in underline format indicates text to be added, and text in ~~strikethrough~~ format indicates text to be deleted):

1. Revise the paragraph beginning on the bottom of staff report page 12 as follows:

In terms of hydrologic monitoring, ~~the proposed project is inconsistent with the PWP because it does not explicitly require such monitoring to occur according to the PWP approved plans for a period of next three years. While the actual NOID itself (see Exhibit B) states that the hydrologic monitoring of the well will continue according to the specified plans, the "Conditions and Mitigation Measures" table states that this task is "complete." (See Exhibit C). The NOID Project Report (see Exhibit C) included a well completion report and pumping test results, but it did not include the actual monitoring plans.~~ MWSD has submitted monitoring data covering more than three years (i.e., because the request is after-the-fact, the wells have been in use since 2007 and hydrologic monitoring has been ongoing since approximately 2008). Although the three years of hydrologic monitoring meets the PWP's 3-year requirement, the hydrologic monitoring must also be understood in relation to the PWP's required

resource monitoring (see also discussion below) and required private well monitoring parameters. In regards to the former, hydrologic monitoring must occur at the same time as vegetation monitoring, and MWSD has only monitored for two years in terms of vegetation. Thus, both types of monitoring must be continued for another year to meet PWP requirements. In addition, although current monitoring data has not identified any significant problems to date, there is the possibility that problems are identified in the remaining year of monitoring. To meet PWP requirements on this point, if the monitoring identifies any negative impacts, then MWSD must submit a mitigation plan. In regards to hydrologic monitoring of neighboring private wells, the District has submitted evidence that it contacted all neighbors potentially affected by the Alta Vista wells, via letter, to solicit permission to allow the District to monitor their wells. To date, the District indicates that it has not received any requests/permissions for such monitoring.

2. Revise the Special Condition 3 beginning on the bottom of staff report page 14 as follows:

Hydrologic and Resource Monitoring. Hydrologic and resource monitoring shall continue for a period of ~~three years~~ one year (through February 9, ~~2015~~ 2013) according to the parameters identified in the "Hydrologic and Vegetation Monitoring Schedule Alta Vista Well" (Hydrologic Monitoring Schedule) and the "Hydrologic and Vegetation Monitoring Plan Alta Vista Well" (Hydrologic Monitoring Plan) documents (dated September 5, 2008, and dated received in the Coastal Commission's North Central Coast District Office on September 8, 2008), ~~with the exception~~ except that: (1) the vegetation monitoring identified shall be superseded and replaced by the parameters identified in the "Montara Water and Sanitary District Public Works Plan – Revised Alta Vista Test Well Vegetation Monitoring Plan" (Vegetation Monitoring Plan) document (dated December 7, 2009, and dated received in the Coastal Commission's North Central Coast District Office with the Project Report on August 30, 2010)~~.~~; (2) ~~In addition,~~ if requested and/or granted permission by individual property owners, the District shall also conduct hydrologic monitoring of individual private wells on Alta Vista Road~~.~~; and (3) if the results of the hydrologic monitoring show (a) significant drawdown effects to the overlying weathered granitic aquifers from which domestic wells draw water, (b) significant drawdown effects to the shallow alluvial aquifer supporting riparian woodland along upper Montara Creek, or (c) significant effects to the stream flow in Montara Creek and Daffodil Canyon as stated on page 1 of the Hydrologic Monitoring Plan; or if the results of the vegetation monitoring show that plant species composition and/or cover significantly changes in response to a decrease in the groundwater table as stated on page 1 of the Vegetation Monitoring Plan, then MWSD shall submit a monitoring and mitigation plan as stated on page 1 of the Hydrologic Monitoring Schedule and on page 5 of the Vegetation Monitoring Plan. All annual and final monitoring reports identified in the above documents shall be submitted according to the timeframes identified in such documents to the Executive Director for review and approval.

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Th7.5a

Prepared January 26, 2012 (for February 9, 2012 hearing)

To: Coastal Commissioners and Interested Persons

From: Madeline Cavalieri, District Manager
Ruby Pap, Senior Coastal Planner

Subject: Montara Water and Sanitary District Phase I Public Works Plan Notice of Impending Development Number SMC-NOID-2-10 (Alta Vista Wells).

A.Staff Recommendation

1. Summary of Staff Recommendation

The Montara Water and Sanitary District (MWSD) Phase I Public Works Plan (PWP) was certified by the Coastal Commission on May 7, 2009. MWSD is now pursuing its second project pursuant to the PWP, and has submitted the above-referenced notice of impending development (NOID) for that second project to the Commission and is requesting that the Commission concur that the proposed project is consistent with the certified PWP.

The objective of the PWP is to improve specific portions of the District's water system to ensure an adequate and reliable supply of water for its existing customers for domestic and fire protection uses. The PWP identifies several areas of the District's water system that require improvement in order to achieve this objective. Specific projects identified in the PWP for this purpose include: (1) additional storage facilities; (2) new supply sources; and (3) a new treatment system for the existing Airport Wells Facility.

In this case, the proposed project that is the subject of the NOID is intended to initiate new water supply production at the District's Alta Vista site. The project includes converting existing Alta Vista Well Number 1 from a test well to a production well, and converting existing Alta Vista Well Number 2 from a test well to a monitoring well. Well Number 1 would be pumped at a rate of 150 gallons per minute (gpm). In addition, the project also includes construction of related facilities, including concrete pads, fencing, and installation of underground electrical conduits at the well sites, and construction of a pipeline to a nearby storage facility. Because the District has already completed the project without a NOID under the PWP (and without a coastal development permit (CDP) otherwise), the proposed project is for after-the-fact recognition of such development under the PWP.

While the proposed project is generally consistent with the project described in the PWP, certain PWP terms, conditions and standards are not adequately reflected in the project or the project approval documents. Specifically, the proposed project lacks provisions to ensure that the water

produced is only used for existing customers, and not new connections; that it be used only to address fire suppression and drought for existing connections, and not for any type of expanded service; that the rate of pumping be maintained at 150 gpm on average; and that the required monitoring be applied for three years according to the specified plan in the PWP. In this respect, the submitted NOID and its associated project report do not adequately reflect and/or do not match the requirements of the PWP. Therefore, Staff recommends that the Commission adopt three special conditions to ensure the project will be carried out in the manner described in the certified PWP as approved by the Commission. Special Condition 1 ensures that the new water supply would serve existing customers/connections for fire suppression and drought purposes only, and clarifies that new connections, extensions in service, or other deviations from the PWP's water use parameters are prohibited. Special Condition 2 ensures that the well will only be pumped up to the allowed PWP rate of 150 gpm averaged over a 24-hour period. And finally, Special Condition 3 ensures that hydrologic and vegetation monitoring be conducted for three years according to the monitoring plan requirements specified in the PWP. These conditions are necessary to bring the proposed development project into conformity with the PWP.

As conditioned, the Staff recommends that the Commission find that the proposed project is consistent with the PWP. The motion to carry out this recommendation can be found on page 3.

2. Procedural Issues

Coastal Act Sections 30605 and 30606, California Code of Regulations (CCR) Title 14, Sections 13357(a)(5), 13359, and 13353-54 , and PWP Section 5.1.3 govern the Coastal Commission's review of subsequent development under the certified PWP. When MSWD intends to undertake a development project identified in the PWP, MSWD is required to send a NOID identifying such development project to the Commission for consideration. CCR Section 13354 and PWP Section 5.1.3(A) require the Commission's Executive Director to review the NOID within five working days of receipt and determine whether it provides sufficient information to determine if the proposed development is consistent with the certified PWP. The notice is deemed filed when all necessary supporting information has been received.

Pursuant to CCR Section 13359 and PWP Section 5.1.3(A)(2), within thirty working days of a NOID being deemed filed, the Executive Director is required to report the proposed project and NOID to the Commission and make a recommendation regarding the consistency of the proposed project with the certified PWP. After public hearing, by a majority of its members present, the Commission then determines whether the development project is consistent with the certified PWP, including whether conditions are required to bring the development into conformance with the PWP. No construction may commence until after the Commission determines that the proposed development project is consistent with the certified PWP, either with conditions or without.

3. Staff Recommendation on PWP Consistency

Staff recommends that the Commission, after public hearing, find the proposed development project, as conditioned, is consistent with the certified PWP.

Motion. I move that the Commission determine that the development project described in Montara Water and Sanitary District Notice of Impending Development SMC-NOID-2-10, as conditioned, is consistent with the certified MWSD Phase I Public Works Plan. **Staff Recommendation.** Staff recommends a YES vote. Passage of this motion will result in a determination that the development project described in Notice of Impending Development SMC-NOID-2-10, as conditioned, is consistent with the certified MWSD Phase I Public Works Plan, and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Determine Development is Consistent with PWP. The Commission hereby determines that the development project described in Notice of Impending Development SMC-NOID-2-10, as conditioned, is consistent with the certified MWSD Phase I Public Works Plan for the reasons discussed in the findings herein.

Report Contents

B.Findings and Declarations

The Commission finds and declares as follows:

1. MWSD Phase I Public Works Plan (PWP)

A. General PWP Background

As an alternative to project-by-project coastal permit review, Coastal Act Section 30605 allows public agencies to develop public works plans for Coastal Commission certification. Once certified, the public agency is the primary entity responsible for ensuring that future development for the affected area is consistent with the certified public works plan, subject to ongoing Commission oversight.

B. Montara Water and Sanitary District

MWSD provides water, sanitary sewer, and solid waste disposal services to the coastal communities of Montara, Moss Beach, and adjacent areas located north of Half Moon Bay and south of Pacifica, in San Mateo County. The District provides water to approximately 1,650 connections, about 90% of which are single-family and multi-family residential users. The MWSD system includes a surface water source (Montara Creek), a water treatment plant, ten groundwater wells that withdraw water from the Montara and Denniston Creek groundwater basins (eight active and two standby wells), five potable water storage tanks, and over 150,000 feet of distribution pipelines.

C. MWSD's Phase I PWP

MWSD's Phase I PWP (PWP Number 2-06-006) was certified by the Coastal Commission on May 7, 2009. The primary objective of the PWP is to improve specific portions of the District's water system to ensure an adequate and reliable water supply for existing domestic and fire protection uses. The improvements identified in the PWP are not intended to accommodate expanded existing connections or new connections to the system.

The PWP identifies several areas of the District's water system that require improvement to address the lack of adequate fire suppression capabilities and the lack of adequate supply to serve existing customers during times of drought. First, it calls for additional storage facilities, including construction of a new water storage tank at the Alta Vista site, and either one or two new storage tanks at the Schoolhouse site. Second, it calls for new water well production, including initiation of water production (at 150 gpm) from Alta Vista Well Number 1 (and initiation of monitoring from Alta Vista Well Number 2) and construction of a new pipeline and electrical conduit, extending from the production well and monitoring well to the existing Alta Vista water storage tank. Finally, the PWP calls for a new treatment system for the Airport Wells Facility, which has documented high levels of nitrates, 1,2,3-trichloropropane (TCP), corrosives, and manganese. The locations of these PWP-identified projects are depicted on Exhibit A and D.

According to the certified PWP, the above projects are needed to achieve its goal of providing adequate fire suppression capabilities, and adequate service to its existing customers during times of drought. MWSD has completed one project under the PWP; namely one of the

Schoolhouse tanks was built in 2011, pursuant to the first project (and first NOID) under the certified PWP.[1] The current project addresses that portion of the PWP geared toward new water sources.

D. Alta Vista Wells

As discussed above, the PWP calls for new water production at the District's Alta Vista site. The Alta Vista site is located inland of Highway 1 and the ocean at the end of Alta Vista Road in Montara. The project site is located along a ridgeline divide separating the watersheds of the north fork of Montara Creek and Daffodil Canyon. There are a few informal hiking trails in the vicinity that lead to Montara Mountain and beyond. On the valley floor below the ridge are the following water features:

- Montara Creek
- North Fork Montara Creek Headwater Springs (above the District's raw-water diversion)
- North Fork Montara Creek Wetland
- Wetland Spring
- Daffodil Canyon
- Kanoff Creek

A test well, referred to as Alta Vista Well Number 1,[2] was installed at the Alta Vista site in 2004 to assess the potential for increasing the District's available domestic water supply through additional groundwater extraction to address its lack of adequate supply for fire suppression and to serve demand from its existing customers during times of drought. A second test well, referred to as Alta Vista Well Number 2[3] was installed concurrently for monitoring purposes. These Alta Vista Wells are located approximately 840 feet and 1,250 feet, respectively, northeast (upslope) of the District's existing 462,000-gallon Alta Vista water storage tank. Both wells are located along the unpaved extension of Alta Vista Road on District property (see Exhibit A). Both test wells were installed pursuant to a coastal development permit (CDP) issued by the San Mateo County on May 19, 2004.[4] The County's CDP authorized construction of the two wells and their use for testing purposes, but it did not authorize their use for new water production or monitoring.

Following a series of tests, the District determined that Alta Vista Well Number 1 had the capability of producing a sustainable volume of water suitable for the District's existing needs. According to MSWD, the well draws water from open joints in the granitic formations located approximately 780 feet below the ground surface, and initial tests of the well's production capabilities suggest that it can produce up to 300 gpm over a 120-hour duration.

In addition, the District's water quality testing indicates that groundwater extracted from Alta Vista Well Number 1 currently meets drinking water standards. If water quality changes in the

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1 NOID SMC-NOID-1-10. The second tank will include either the utilization of the existing Schoolhouse tank or demolition of the existing tank and construction of a new 100,000 gallon water storage tank in its place.

2 Also referred to as well BH-9b or 2004-4 during MWSD hydrological investigations.

3 Also referred to as well BH-9 or 2004-3 during MWSD hydrological investigations.

4 County CDP PLN 2002-00306.

future, the District indicates that it would treat the water with sodium hypochlorite (liquid chlorine) prior to conveyance to District customers. The chlorine would be stored at the wellhead.

Further information on well construction, specifications, and associated improvements including power supply and conduits can be found in the PWP (Exhibit D).

2. Notices of Impending Development

Under a certified PWP, development of specific projects contained in the PWP can proceed without a coastal permit provided the District sends a Notice of Impending Development (or a "NOID") to the Commission prior to undertaking development, and either the Commission deems the identified development project consistent with the PWP (with or without conditions to make it so) or does not respond in a timely manner to the NOID. Pursuant to Coastal Act Sections 30605 and 30606, the Commission may impose conditions on such development project proposals only if it finds them inconsistent with the certified PWP.

MWSD NOID Number SMC-NOID-2-10 was filed as complete on January 9, 2012, and the 30-working day action deadline is February 21, 2012. Thus, unless the MWSD General Manager waives MWSD's right to a hearing within thirty working days (as provided for by the certified PWP), and agrees to an extension to a date certain, no more than three months from the action deadline, the Commission has until February 21, 2012 to act upon this NOID or it will be deemed consistent with the PWP.

3. PWP Consistency Analysis

A. Applicable PWP Provisions

The PWP includes multiple provisions regarding the conversion of the Alta Vista Well from a test well to a production well. These provisions protect wetland, riparian, visual, and public access resources, and serve to avoid inducing growth that is inconsistent with the LCP, consistent with San Mateo County LCP requirements.

Growth Inducement

PWP Page 3 of 33: *The objective of the District's Public Works Plan Phase I (the proposed project) is to improve specific portions of the District's water system to ensure an adequate and reliable supply of water for its existing customers for domestic and fire protection uses. The proposed improvements are not intended to, nor would they accommodate, expanded existing connections or new connections to the system. New water supply, storage, and transmission facilities authorized by and pursuant to PWP 2-06-006 is limited to those areas served by the District as of 11/12/08 and shall not be used for any new water connections, or for the extension of water mains into rural areas, including rural areas designated Open Space or Agriculture within the urban/rural boundary, for any purpose, including for the purpose of private fire protection. Proposals for any future water facility development connected to or using water system components or infrastructure authorized pursuant to PWP 2-06-006 shall require an amendment of*

the PWP as described above, except for repair and maintenance activities as defined by Coastal Act Section 30610(d), which shall require coastal authorization from San Mateo County, either in the form of a coastal development permit or a coastal development permit exemption as determined by Section 6328.5(d) of the certified San Mateo County zoning regulations.

Page 2 of 33 Amendments to Public Works Plan: *Any increase in water supply or distribution capacity, to provide additional service connections in excess of the limitations of this Public Works Plan Phase I, including any increase in the Alta Vista well pumping rate, any augmentation or reallocation of existing water supplies, or changes to the District service area shall require an amendment to this PWP. The application for such amendment shall include information concerning phasing of infrastructure capacity in conformity with the requirements of the San Mateo County LCP. The information provided shall be sufficiently detailed and complete to enable the Commission to evaluate whether the proposed increase in water supply and/or distribution capacity is in phase with the existing or probable future capacity of other area infrastructure, including but not limited to the need for an adequate level of service for Highways 1 and 92 as required by the local coastal program.*

Public Access

PWP Page 11 of 33: *There will be no obstruction of existing hiking trails to Montara Mountain on the Alta Vista ridge property due to design, construction, and operation of the facilities authorized pursuant to PWP 2- 06-006. If it is necessary to block the trail temporarily, alternative means of access to Montara Mountain on the Alta Vista ridge property shall be provided.*

PWP Page 9 of 33:*…The District shall assure that safe and reliable access for construction vehicles that does not hinder or jeopardize the safety of regular traffic circulation is provided to each construction site.*

Wetland and Riparian Resources

PWP Page 9 of 33: *The PWP improvements shall be undertaken in accordance with Mitigation Measures listed in the MWSD Public Works Plan Phase I Final Environmental Impact Report (FEIR) SCH # 2004112107 with modifications as certified by the California Coastal Commission…*

EIR Mitigation Measure 3.2-1. *Finalize and implement the Draft Hydrological Monitoring and Mitigation Program*

EIR Mitigation Measure 3.3-1. *A Biological Resources Monitoring and Mitigation Program shall be developed for the creek, wetland, and spring system that may be indirectly impacted by the installation of the new production Alta Vista Well #1. The program shall be approved by the California Coastal Commission prior to initiating pumping of Alta Vista Well #1.*

PWP Page 18 of 33. *Pumping of the Alta Vista Well No.1 shall not exceed 150 gpm*

averaged over a 24-hour period. Any future proposals to increase the pumping rate shall require an amendment to this public works plan, and the District shall comply with any informational requests, including pumping tests, to demonstrate with sufficient evidence that the increased pumping rate will not impact nearby wetlands, riparian areas, and sensitive habitats. The District may not initiate any pumping tests for increased pumping rates without authorization from Commission staff after the PWP amendment application has been submitted. The District shall submit to the Coastal Commission annual water production reports for review and approval by the Executive Director by December 1st of each year that the Alta Vista Well No. 1 is in production. These reports shall demonstrate that the pumping rate of the well does not exceed 150 gpm averaged over any 24-hour period.

***PWP Page 20 of 33**. Hydrologic Monitoring shall continue for a period of three years according to the "Hydrologic and Vegetation Monitoring Schedule Alta Vista Well" and "Hydrologic and Vegetation Monitoring Plan Alta Vista Well," dated September 5, 2008. In addition, if granted permission by individual property owners, the District shall also conduct hydrologic monitoring of individual private wells on Alta Vista Road. Annual and final monitoring reports shall be submitted to the Executive Director. The vegetation monitoring Plan shall be superseded and replaced by the plan described below:*

Concurrent with the submittal of the Notice of Impending Development (NOID) for conversion of the Alta Vista Well No.1 from a test well to production well, a qualified biologist or biometrician shall prepare a revised Vegetation Monitoring Plan for review and approval by the Executive Director, and shall at a minimum include the following:

i. *A baseline assessment, including photographs, of the current physical and ecological condition of the potential impact site and appropriate control sites that are unlikely to be affected by the pumping. All sites shall be sampled using the same methods.*

ii. *A description of the goals of the vegetation monitoring plan, including a description of how the potential impact site will be compared to the control sites and how significant effects will be demonstrated. If statistical tests are to be employed there must be a statistical power analysis before sampling begins to insure that there is sufficient replication to detect biologically meaningful differences between the potential impact area and the control areas.*

iii. *A formal monitoring plan*

iv. *A schedule*

v. *Description of sampling units*

vi. *Sampling design, e.g. how will the sampling units be placed in the field, including description of the random component in the spatial distribution of samples and sample size for the various variables.*

vii. *Detailed description of the variables to be measured and the field methods*

used in their estimation. For continuous variables, estimates of the actual value should be made. Continuous variables should not be converted to categorical variables through the use of thresholds or lumping data into broad categories. Estimates of changes in survivorship, tree height, and condition should be based on repeated observations of at least 30 randomly selected and marked individuals of each species of interest in each sample area.

viii. *A monitoring period of at least three years, beginning with the first sample taken based on the revised sampling plan.*

ix. *Provision for submission of annual reports of monitoring results to the Executive Director for the duration of the required monitoring period for purposes of review for a future Phase II Public Works Plan application. Each report shall be cumulative and shall summarize all previous results. Each report shall document the condition of the sample sites with photographs taken from the same fixed points in the same directions. Each report shall also include an "Impact Evaluation" section where information and results from the monitoring program are used to evaluate whether there is evidence of an effect of the pumping.*

x. *Provision for submission of a final monitoring report to the Executive Director at the end of the final monitoring period for purposes of review for a future Phase II Public Works Plan application. The report must evaluate whether the vegetation near the wells has been negatively affected by the pumping.*

xi. *Provision for possible further action. If the final report indicates that there have been negative impacts, the applicant shall submit within 90 days a mitigation plan to compensate for those impacts. The revised restoration program shall be processed as an amendment to the coastal development permit unless the Executive Director determines that no permit amendment is required.*

Water Quality

EIR Mitigation Measure 3.5-1. *A Spill Prevention and Containment Plan shall be prepared for each site that includes measures such as storing all liquid hazardous materials and petroleum products within secondary containment and ensuring the presence of spill kits and Material Safety Data Sheets in the vicinity of these stored items. If 55 gallons or more of diesel, chlorine or any other hazardous material will be stored more than 6 months on the site, a Hazardous Materials Business Plan (HMBP) must be submitted to, and a Unified Permit must be obtained from, the San Mateo County Environmental Health Department. The measures in the Spill Prevention and Containment Plan and HMBP shall be followed for storage and handling of hazardous materials. Copies of these Plans shall be available at the sites.*

EIR Mitigation Measure 3.5-12. *The diesel tank associated with the back-up generator shall not be stored permanently at the site. The diesel tank shall be stored at an offsite District facility with at least an existing 30-foot radius vegetation clear zone around it*

and brought to the project site only in the event of an electrical power outage.

Visual Resources

EIR Mitigation Measure 3.9-5. *The exterior finish of all metalwork or reflective surfaces on the Alta Vista Wells, including but not limited to filtration vessels, cabinets, fencing material, and hardware, shall be finished in a non-reflective, non-glare finish. This may include paint, textured finishes, vinyl coating, or other similar finishes. There shall be no exposed bare metal surfaces, including cabinet hardware.*

Mitigation Measure 3.9-6: *All chain link fence material, including supporting poles, shall be vinyl- coated. The District shall inspect all fencing at least once annually and replace and/or repair any fence material from which the vinyl-coating has been removed due to use or accident.*

B. Proposed Project

The proposed project would initiate new water production at the Alta Vista wells. The project includes converting existing Alta Vista Well Number 1 from a test well to a production well, and converting existing Alta Vista Well Number 2 from a test well to a monitoring well. Well Number 1 would be pumped at a rate of 150 gpm. To convert Well Number 1 to a production well, the PWP also calls for the construction of related facilities that are part of the proposed development project, including:

- Construction of a 25-foot by 6-foot concrete pad around Well Number 1;
- Installation of a 7-foot high chain-link fence around the perimeter of the concrete pad;
- Placement of two 7-foot tall fiberglass enclosures adjacent to the well and within the fenced enclosure to house telemetry equipment for remote monitoring and operation and an electrical pump;
- Temporary placement of a portable diesel-powered generator on the concrete pad within the fenced enclosure during power outages;
- Installation of an approximately 790-foot long, 6-inch diameter underground pipeline along the unpaved road to convey water from the well to the existing Alta Vista water storage tank; and
- Installation of a buried electrical conduit along the unpaved road extending from the well to the existing Alta Vista water storage tank.

In addition, to convert Well Number 2 to a monitoring well, the PWP calls for construction of related facilities that are also part of the proposed development project, including:

- Construction of a 4-foot by 4-foot concrete pad around the Well Number 2;
- Installation of a 4-foot high chain-link fence around the perimeter of the concrete pad;

- Installation of an approximately 1,200-foot-long underground electrical conduit along the unpaved road, connecting with Alta Vista Well Number 1 and continuing on to the existing Alta Vista water storage tank.

Although it is not described in their NOID submittal materials, the District has informed the Commission that the proposed project, including all of the related facilities described above, has been completed, and the wells have been in use (for the production of additional water supplies and for monitoring, respectively), all without CDP or PWP authorization since approximately 2007. Therefore, the proposed project constitutes unpermitted development in violation of the Coastal Act's CDP/PWP requirements, and the proposed project before the Commission is thus to recognize such development after the fact.

Although development has taken place prior to submission of this NOID, consideration of the application by the Commission has been based solely upon the policies of the Public Works Plan. Approval of the NOID does not constitute a waiver of any legal action with regard to the alleged violation, nor does it constitute an admission as to the legality of any development undertaken on the site without a NOID.

C. Consistency Analysis

The District's certified PWP allows for the production of additional water at the Alta Vista site subject to certain criteria, including measures to protect key coastal resources, including sensitive habitats, public access, water quality and visual resources. In addition, the PWP limits the quantity of additional water that can be produced, and prohibits the District from using the additional water supplies to expand existing connections or for any new water connections.

New Water Supply Well Use Limitations. Page 3 of the certified PWP states that the use of new water supplied from improved facilities, including from conversion of the Alta Vista test well to a production well, is limited to those District service connections existing as of November 12, 2008, and such water is not allowed to be used for any new water connections, nor for the extension of water mains into rural areas, including rural areas designated Open Space or Agriculture within the urban/rural boundary, for any reason, including for the purpose of private fire protection. In addition, the PWP states that such new water supply production is solely to be used to address fire suppression and drought for existing connections, and it cannot be used for any type of expanded service for existing connections. As proposed, the project is inconsistent with the PWP on these points because the NOID Project Report conditions (Section (c)) do not limit the use and distribution of the water supply in this way. These restrictions against new connections and expanded service to existing connections were and are important components of the certified PWP as approved by the Commission, including ensuring that the PWP and its projects did not induce inappropriate growth. Therefore, the Commission adopts **Special Condition 1**, which makes clear that the use of water from the new production water well is limited to the District's service area boundaries and connections as of November 12, 2008 that it can only be used to address fire suppression and drought for existing connections (and it is not allowed to be used for any type of expanded service), and that it may not be used for any new water connections, including no extension into rural areas. Special Condition 1 also expresses the PWP requirement that any different use of such water must be preceded by a Commission-certified amendment to allow for different use parameters. As conditioned, the Commission finds that the project is consistent with the certified PWP with regards to the limitations on the

use of such water.

Pumping Rate. Page 18 of the certified PWP requires that pumping of Alta Vista Well Number 1 not exceed 150 gpm as a calculated average over a 24-hour period. The proposed project is inconsistent with this standard because the NOID Project Report states that the well would be pumped at a rate of 150 gpm continuously and does not specify the time period that it would be averaged over. The PWP allows for the 24-hour average to allow for temporary increases to the rate during times of peak demand, and then lowering the rate during times of lower demand. This rate was carefully selected, based on pumping tests, to avoid impacts to nearby streams and wetlands. If the District were to average this rate over some larger time period, such as 6 months or 1 year, there could be longer periods of pumping at a higher rate, and potential impacts to nearby wetlands and streams. Therefore, the Commission adopts **Special Condition 2**, which limits the pumping rate to 150 gpm averaged over a 24-hour period, and requires annual monitoring reports to be submitted to the Executive Director. As conditioned, the Commission finds that the proposed project is consistent with the certified PWP with regards to the well pumping rate.

Public Access. Page 9 and page 11 of the certified PWP require that construction vehicles not hinder regular traffic circulation and that hiking trails to Montara Mountain not be obstructed. As proposed, minimal construction is associated with the conversion of the wells, and access impacts would be negligible. Therefore, with regards to these public access issues, the proposed project is consistent with the certified PWP.

Monitoring of Hydrology, Vegetation, and Neighboring Well Impacts. The certified PWP includes a series of monitoring requirements associated with measuring and addressing potential impacts of the new wells on nearby creeks, wetlands, and springs, and on nearby private wells. PWP EIR Mitigation Measures 3.2-1 and 3.3-1, both incorporated by reference into the certified PWP, and page 20 of the PWP require that such impact monitoring be conducted for a period of three years once Well Number 1 is converted to a production well. Alta Vista Well Number 2 would be converted to a monitoring well to facilitate such monitoring. Page 20 of the certified PWP more specifically requires that such well monitoring continue for a period of three years per PWP standards.[5] In addition, if granted permission by other property owners, the District is also required to conduct hydrologic monitoring of the impact of the Alta Vista well production on individual private wells on Alta Vista Road. In addition, page 20 of the certified PWP requires a qualified biologist or biometrician to prepare a revised vegetation monitoring plan as part of the NOID process, and that the vegetation monitoring occur for three years, once approved by the Executive Director. The PWP also required that the Plan include a restoration component if the final report component of the vegetation monitoring plan indicates that there have been negative impacts to nearby creek, wetland, or spring resources.

In terms of hydrologic monitoring, the proposed project is inconsistent with the PWP because it does not explicitly require such monitoring to occur according to the PWP approved plans for a period of next three years.[5] While the actual NOID itself (see Exhibit B) states that the hydrologic monitoring of the well will continue according to the specified plans, the "Conditions and Mitigation Measures" table states that this task is "complete." (See Exhibit C). The NOID

[5] As identified in PWP documents titled "Hydrologic and Vegetation Monitoring Schedule Alta Vista Well" and "Hydrologic and Vegetation Monitoring Schedule Alta Vista Well", both dated September 5, 2008.

Project Report (see Exhibit C) included a well completion report and pumping test results,[6] but it did not include the actual monitoring plans.[5] In regards to hydrologic monitoring of neighboring private wells, the District has submitted evidence that it contacted all neighbors potentially affected by the Alta Vista wells, via letter, to solicit permission to allow the District to monitor their wells. To date, the District indicates that it has not received any requests/permissions for such monitoring.

Therefore, the Commission adopts Special Condition 3 to make the required hydrologic monitoring a part of the development project. Since the certified PWP does not specify a cut-off time for pursuing private well monitoring, other than the 3-year time frame specified on page 20, Special Condition 3 also provides a requirement that if a neighbor requests that their well be monitored, the District will provide this service.

In terms of the nearby wetland and riparian resource monitoring, the NOID included a vegetation monitoring plan.[7] This plan was reviewed by the Commission's Senior Staff Ecologist, Dr. John Dixon, and it was determined that it contained all of the required components outlined on page 20 of the certified PWP (above), including goals, vegetation sampling locations, provisions for baseline sampling, sampling methods, a schedule, control sites, statistical analysis, reporting, and provision for possible further action, such as restoration. While the plan was submitted to the Commission as part of the NOID Project Report, a requirement to follow the plan was not included in the "Project Conditions and Mitigation Section." Therefore, the Commission adopts Special Condition 3 to make this required monitoring a part of the development project in addition to the hydrological monitoring requirements described above.

As conditioned, the Commission finds that the project is consistent with the certified PWP with regards to hydrologic and vegetation monitoring.

Water Quality

To protect water quality, PWP EIR Mitigation Measure 3.5-1, which is incorporated into the certified PWP, requires that a Spill Prevention and Containment Plan be prepared for the site that includes measures such as storing all liquid hazardous materials and petroleum products within secondary containment system, and ensuring that spill kits and Material Safety Data Sheets (MSDS) are kept in the vicinity of stored items. The District has submitted a Spill Prevention and Containment Plan for the Alta Vista wells. A maximum of eight 1-gallon bottles of Sodium Hypochlorite would be stored on site. A secondary containment structure would be erected on the site to store the chemicals. This structure would also house spill kits, the MSDSs, and a copy of the Plan. The submitted Spill Prevention and Containment Plan complies with the mitigation measure, and is therefore consistent with the PWP. In addition, PWP EIR Mitigation Measures 3.5.12, 3.9-5, and 3.9-6 require that the District store the diesel tank offsite to avoid fire hazards, and the District has incorporated this requirement into the conditions of the Project Report. Therefore, the proposed project is consistent with the water quality requirements of the PWP.

Visual Resources. The PWP also requires measures to protect visual resources. It requires that

[6] By Balance Hydrologics inc., and dated July 2005 and February 21, 2008, respectively.

[7] By ESA Biological Resources, dated December 7, 2009, and titled: "Montara Water and Sanitary District Public Works Plan – Revised Alta Vista Test Well Vegetation Monitoring Plan".

all finished metalwork or reflective surfaces be non-reflective, non-glare finish, and that chain-link fence materials be vinyl-coated. The Project Report's mitigations and conditions section requires these measures to be implemented, and includes compliance measurements and methods of verification. As sited and designed, the proposed project should not have a significant impact on public views, including because the actual physical development is small, located well inland from the coast, and is not visible from Highway 1. Therefore, the proposed project is consistent with the visual resource protection measures of the certified PWP.

Conclusion. As described above, as conditioned, the proposed project is consistent with the certified PWP.

D. Special Conditions

1. **Water Supply Use Limitations.**

   A. Water from the Alta Vista Wells shall only be used: (1) to serve those District service connections existing as of November 12, 2008and shall not be used for any other water connections and/or for extension of water mains into rural areas, including rural areas designated Open Space or Agriculture within the urban/rural boundary, for any purpose, including for the purpose of private fire protection; and (2) to address fire suppression and drought for District service connections existing as of November 12, 2008, and not for any type of expanded service for such existing connections.

   B. A PWP amendment shall be required prior to any of the following occurring: (1) any increase in water supply or distribution capacity designed to change District service connections from those existing as of November 12, 2008, including any increase in the Alta Vista well pumping rate or any augmentation or reallocation of existing water supplies; (2) any changes to the District service area; (3) any use of increased water supplies for other than fire suppression or drought for District service connections existing as of November 12, 2008.

2. **Pumping Rate.** Pumping of Alta Vista Well Number 1 shall not exceed a maximum of 150 gpm averaged over any 24-hour period. Any proposals to increase such maximum pumping rate shall require an amendment to the PWP, and for any such amendment the District shall comply with any informational requests, including pumping tests, to demonstrate with sufficient evidence that the increased pumping rate will not impact nearby creeks, wetlands, riparian areas, springs, and/or sensitive habitats. The District may not initiate any pumping tests to support any proposal for increased pumping rates without authorization from the Executive Director. The District shall submit annual water production reports for review and approval by the Executive Director by December 1st of each year that Alta Vista Well Number 1 is in production demonstrating that the pumping rate of the well does not exceed a maximum of 150 gpm averaged over any 24-hour period.

3. **Hydrologic and Resource Monitoring.** Hydrologic and resource monitoring shall continue for a period of three years (through February 9, 2015) according to the parameters identified in the "Hydrologic and Vegetation Monitoring Schedule Alta Vista Well" and the "Hydrologic and Vegetation Monitoring Plan Alta Vista Well" documents (dated September 5, 2008, and dated received in the Coastal Commission's North Central Coast District Office

on September 8, 2008), with the exception that the vegetation monitoring identified shall be superseded and replaced by the parameters identified in the "Montara Water and Sanitary District Public Works Plan – Revised Alta Vista Test Well Vegetation Monitoring Plan" document (dated December 7, 2009, and dated received in the Coastal Commission's North Central Coast District Office with the Project Report on August 30, 2010). In addition, if requested and/or granted permission by individual property owners, the District shall also conduct hydrologic monitoring of individual private wells on Alta Vista Road. All annual and final monitoring reports identified in the above documents shall be submitted according to the timeframes identified in such documents to the Executive Director for review and approval.

E. California Environmental Quality Act (CEQA)

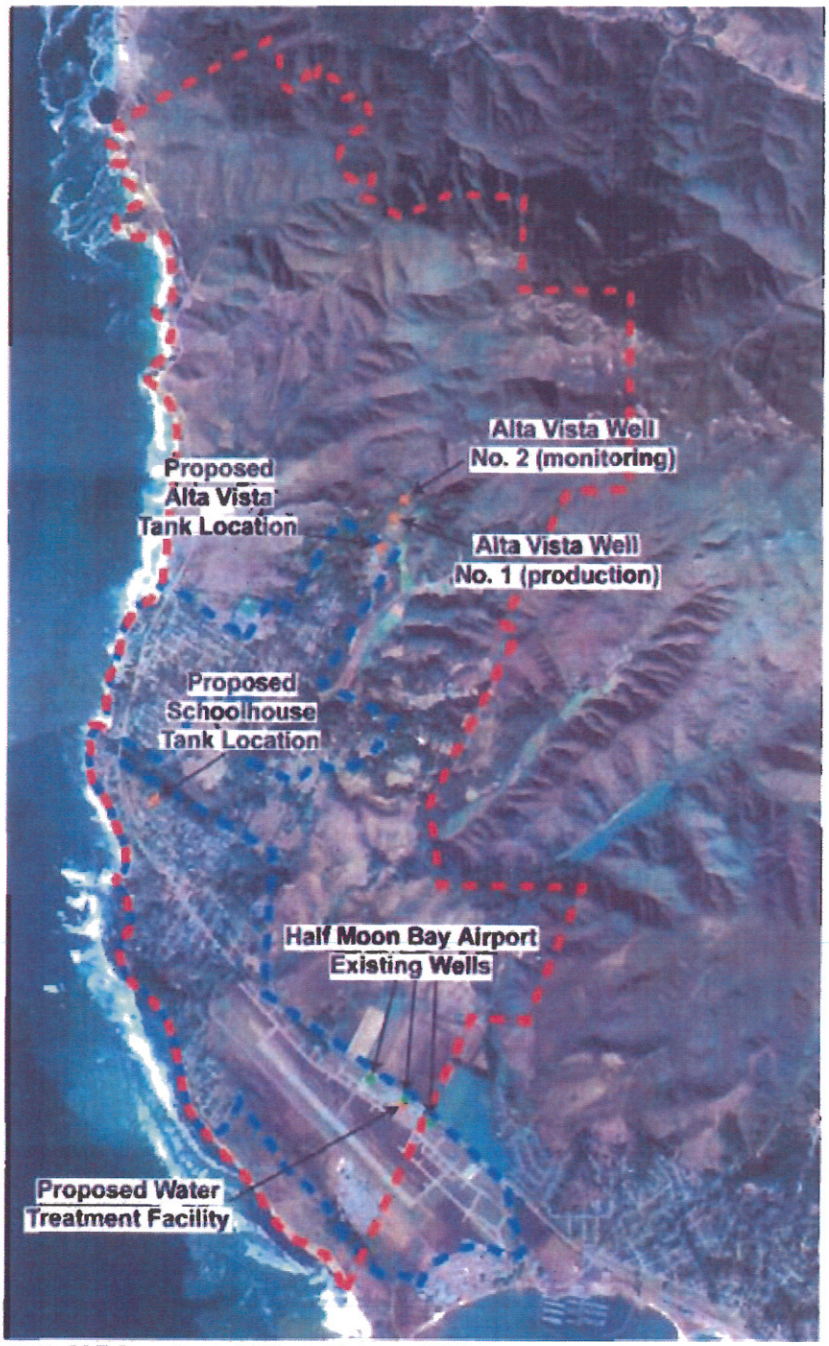
CCR Section 13096 requires the Commission to make a specific finding that a permit application is consistent with any applicable requirements of CEQA. This requirement also applies to the Commission's review of NOIDs, based on CCR Section 13550(d). CEQA Section 21080.5(d)(2)(A) prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Montara Water and Sanitary District, as the lead agency under CEQA, certified a Final EIR (FEIR) for the PWP in March 2006. This FEIR identified a series of mitigation measures, all of which were incorporated as enforceable components of the PWP, including several designed to be tied to individual development projects as they came online. In this case, FEIR mitigation measures 3.2-1, 3.3-3, 3.5-1, 3.5-12, and 3.9-5 were included as part of the proposed project pursuant to the terms of the certified PWP.

The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Natural Resources as being the functional equivalent of environmental review under CEQA. The Commission has reviewed the relevant coastal resource issues raised by the proposed project, including its incorporated mitigation measures, and has determined that the proposed project, as conditioned, will not have adverse impacts on coastal resources. All public comments received to date have been addressed in the findings above. All above findings are incorporated herein in their entirety by reference.

The Commission finds that the proposed project, as conditioned, will avoid significant adverse effects on the environment, within the meaning of CEQA. As such, there are no additional feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse environmental effects that approval of the proposed project would have on the environment within the meaning of CEQA. The proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).

Figure 3.1: Location of Proposed Water System Upgrades



SOURCE: MHA 2005, SRT Consultants 2005, and Balance 2005

LEGEND

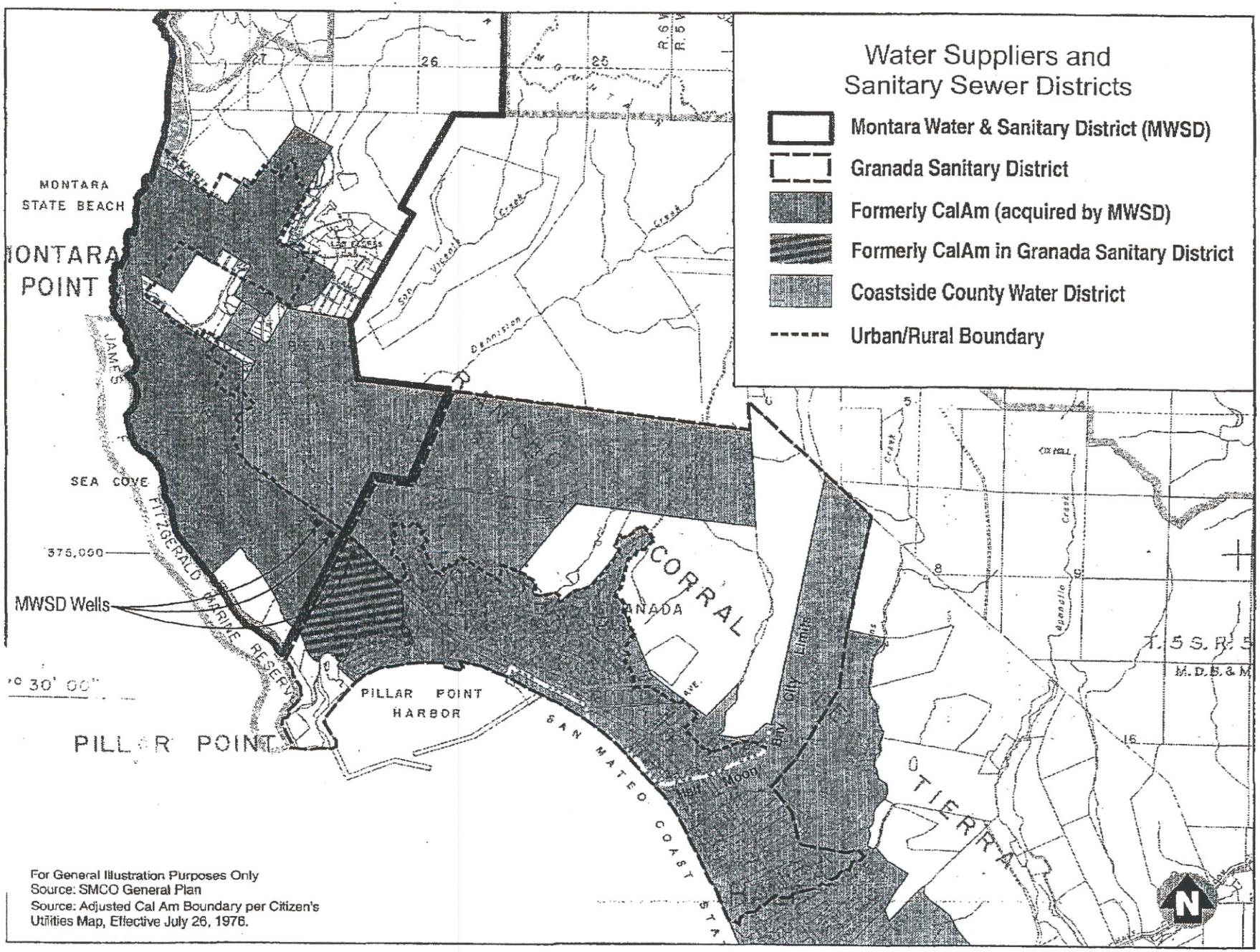
Montara Sanitary Service Boundary

Montara Water Service Boundary

SCALE

0 1 Miles

NORTH



HMB Sanitary & Water Dist.cdr rev 3-23-05 ss

Exhibit 1
Application No. 2-06-006 (MWSD PWP)
Map of Service Area
Page 1 of 1

Exhibit A
Montara Water & Sanitary Dist.
No. SMC-NOID-2-10
Location Maps
Page 2 of 2

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NOTICE OF IMPENDING DEVELOPMENT

MONTARA WATER AND SANITARY DISTRICT

1 Project Description

The Montara Water and Sanitary District (MWSD) plans for the:

- Conversion of an existing test well to a production well (Alta Vista Well No.1) northeast of the existing Alta Vista water storage tank.
  - Construction of a 25-foot by 6-foot concrete pad around wellhead No.1
  - Installation of a 7-foot high chain-link fence around the perimeter of the concrete pad
  - Placement of two 7-foot tall fiberglass enclosures adjacent to the wellhead and within the fenced enclosure, which would house telemetry equipment for remote monitoring and operation and an electrical pump
  - Placement of a portable diesel-powered generator on the concrete pad and within the fenced enclosure
  - Installation of an approximately 790-foot long, 6-inch diameter underground pipeline along the unpaved road to convey water from the well to the existing Alta Vista water storage tank
  - Installation of a buried electrical conduit along the unpaved road extending from the existing Alta Vista Tank to the well
- Conversion of an existing test well to a monitoring well (Alta Vista Well No.2) northeast of the existing Alta Vista water storage tank.
  - Construction of a 4-foot by 4-foot concrete pad around wellhead No.2
  - Installation of a 4-foot high chain-link fence around the perimeter of the concrete pad
  - Installation of an approximately 1,200-foot long underground electrical conduit along the unpaved road, connecting with Alta Vista Well No.1, and continuing on to the existing Alta Vista water storage tank

The existing test wells were installed in accordance with a Coastal Development Permit issued by the San Mateo County Environmental Services Agency on May 19, 2004. Conversion of the wells will require no physical construction on site as each test well was properly constructed to protect public health, safety, and the environment, in accordance with the requirements stipulated by the California Department of Public Health and the California Coastal Commission.

The proposed monitoring well (Alta Vista Well No. 2) will continue to be utilized as a hydrologic monitoring well. Water quality tests conducted on the proposed production well (Alta Vista Well No. 1) indicate that the groundwater currently meets drinking water standards, therefore, no re-boring or re-configuration of the well casings will be required and the proposed well can be utilized for drinking water production. Pumping of the well will not exceed 150 gallons per minute averaged over a 24-hour period. Hydrologic monitoring at the well will continue according to the "Hydrologic and Vegetation Monitoring Plan Alta Vista Well" dated September 5, 2008. The vegetation monitoring portion of this plan shall be superseded and replaced by the "Revised Alta Vista Test Well Vegetation Monitoring Plan" dated December 7, 2009.

The Test Well Conversion Report and monitoring plans are available upon request at the MWSD offices.

2 MWSD Board Approval

The MWSD Board approved the Project on July 2, 2009. Verification of approval is available upon request at the MWSD offices.

3 Conversion Commencement

Conversion of the test well to a production well will occur on or after *September 1, 2010.*

4 Project Contact Information

For more information, or to request the supporting documentation, please contact:

Tanya Yurovsky, Project Manager
Montara Water and Sanitary District
Registered Professional Engineer
California, No. CO51955
Phone: (415) 776-5800
Email: tanya@srtconsultants.com

Clemens Heldmaier, General Manager
Montara Water and Sanitary District
Physical Address:
8888 Cabrillo Hwy, Montara, CA 94037
Phone: (650) 728-3545
Email: mwsd@coastside.net

5 CCC Review Process for PWP Consistency

The Project will undergo the following review process by the CCC to ensure its consistency with the PWP (per MWSD PWP SECTION 5.1.3 C):

The Executive Director shall report in writing to the Commission regarding any pending proposed project(s). The Coastal Commission shall review the proposed project(s) at a scheduled public hearing prior to the Hearing Deadline.

The Executive Director's report to the Commission shall include a description sufficient to allow the Commission to understand the location, nature, and extent of the project(s), and a recommendation regarding the consistency of the proposed project(s) with the certified PWP. On or before the Hearing Deadline the Commission shall make one of the following determinations:

1. Determine that the proposed project(s) is/are consistent with the certified PWP, or
2. Determine that conditions are required to render the proposed project(s) consistent with the certified PWP, including identification of the required conditions.

Following the Commission's determination, the Executive Director shall inform the General Manager of the Commission's determination and shall forward any conditions associated with it. If the Commission has identified conditions required to render the project(s) consistent with the PWP, construction shall not be undertaken until the conditions have been incorporated into the project(s).

Coastal Commission review of a proposed project(s) shall be deemed complete on the date of a Commission determination that the project(s) is/are consistent with the PWP with or without conditions.

Upon completion of Commission review, MWSD may undertake construction or acquisition of the project(s) provided, that any conditions imposed by the Commission to render the project(s) consistent with the PWP have been incorporated into the project(s).

For more information regarding the CCC review process or additional related questions, contact:

Ruby Pap, California Coastal Commission: (415) 904-5260, rpap@coastal.ca.gov

6 List of NOID Recipients

The following interested agencies, parties, and persons are recipients of this NOID:

Sewer Authority Mid-Coastside, City of Half Moon Bay, Coastal Watershed Council, Environmental Services Agency, San Mateo County Public Works Department, Coastside County Water District, San Mateo County Resource Conservation District, San Mateo County Farm Bureau, Mid-Peninsula Regional Open Space District, Cabrillo Unified School District, Granada Sanitary District, Midcoast Community Council, California Department of Fish and Game, Half Moon Bay Fire Protection District, County of San Mateo Community Development Department, Local Agency Formation Commission, Point Montara Fire Protection District, Santa Cruz Unit of the California Dept of Forestry & Fire Protection, California Department of Transportation, California State Clearinghouse and Planning Unit, all owners or persons residing on properties located within 100 feet of the proposed Project, and persons that are known to be interested in the proposed Project (4 residents total).

PUBLIC WORKS PLAN
NOID Supporting Information

TEST WELL CONVERSION PROJECT

(a) PROJECT REPORT

PUBLIC WORKS PLAN
PROJECT REPORT

TEST WELL CONVERSION PROJECT

Table of Contents

(a) PROJECT DESCRIPTION

(a) Project Description

A test well, also known as BH-9b or 2004-4 during hydrological investigations and testing, was installed in 2004 to assess the potential for increasing the Montara Water and Sanitary District's (MWSD or District) available domestic water supply through additional groundwater extraction. A second well, known as BH-9 or 2004-3, was installed concurrently for monitoring purposes. Both wells were installed in accordance with a Coastal Development Permit (CDP) issued by the San Mateo County Environmental Services Agency on May 19, 2004 to the District.

Following a series of tests, the District determined that the 2004-4 test well now named Alta Vista No.1, has the capability of producing a sustainable volume of water suitable for the District's existing needs without any negative environmental impacts. The existing test well 2004-4 draws water from open joints in the granitic formations located approximately 780 feet below the ground surface. Initial tests of the well 2004-04 production capabilities suggested that it could produce up to 300 gallons per minute (GPM) of water over 120-hour duration. The District has proposed to pump the well at 150 GPM continuously. The Alta Vista Well No.1 and No. 2 (formerly 2004-4 and 2004-3, respectively) are located approximately 840 feet and 1,250 feet, respectively, northeast (upslope) of the District's existing 462,000-gallon Alta Vista water storage tank, and approximately 590 feet and 1,000 feet respectively from the proposed new Alta Vista water storage tank. Both wells are located along the unpaved extension of Alta Vista Road on District property. Conversion of the Alta Vista Well No.1 to a production well would include no physical construction on site as the test well had to be properly constructed to protect public health, safety, and the environment, in accordance with the requirements stipulated by the California Department of Public Health (Department or DPH) and the Coastal Commission.

Water quality testing indicates that groundwater extracted from Alta Vista Well No.1 undergoing the conversion from a test well to a production well currently meets drinking water standards. No re-boring or re-configuration of the well casings would be required for the Alta Vista Wells No.1 conversion.

(b) FINAL AUTHORIZATION DOCUMENTS

RESOLUTION NO. 1456

RESOLUTION OF THE MONTARA WATER AND SANITARY DISTRICT APPROVING PROJECT REPORT FOR THE CONVERSION OF ALTA VISTA WELL NO. 1 FROM A TEST WELL TO A PRODUCTION WELL AND AUTHORIZING AND DIRECTING THE GENERAL MANAGER TO TRANSMIT A NOTICE OF INTENT TO THE EXECUTIVE DIRECTOR OF THE CALIFORNIA COASTAL COMMISSION REGARDING ISSUANCE OF A NOTICE OF IMPENDING DEVELOPMENT FOR THE PROJECT

WHEREAS, on May 7, 2009 the California Coastal Commission ("Commission") certified the Montara Water and Sanitary District Public Works Plan Phase 1 ("PWP"); and

WHEREAS, one of the PWP development components consists of the conversion of a test well, designated in the PWP both as DH-9B4 and 2004-4 and subsequently redesignated Alta Vista Well No. 1, to a production well ("Project"); and

WHEREAS, the General Manager has caused to be prepared, under his direction and with his consultation, a project report for the Project entitled, "Public Works Plan Project Report - Test Well Conversion Project" ("Report"); and

WHEREAS, the Report has been submitted to and reviewed by this Board; and

WHEREAS, this Board desires to approve the Report and authorize implementation of the Project;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF THE MONTARA WATER AND SANITARY DISTRICT AS FOLLOWS:

1. Findings. This Board hereby finds and declares as follows:

a. The foregoing recitals are hereby incorporated as true statements of fact.

b. The Project, i.e., conversion of Alta Vista Well No. 1 from a test well to a production well, entails no new construction because it was necessarily constructed in compliance with pertinent regulations and conditions of the California Department of Public Health and the Commission in furtherance of the public health, safety and environment.

c. Implementation of mitigation and monitoring measures for Alta Vista Well No. 1 carried out continuously since its construction as a test well demonstrates that its conversion from a test well to a production well will have no significant environmental impact.

RESOLUTION OF THE MONTARA WATER AND SANITARY DISTRICT APPROVING PROJECT REPORT FOR THE CONVERSION OF ALTA VISTA WELL NO. 1 FROM A TEST WELL TO A PRODUCTION WELL AND AUTHORIZING AND DIRECTING THE GENERAL MANAGER TO TRANSMIT A NOTICE OF INTENT TO THE EXECUTIVE DIRECTOR OF THE CALIFORNIA COASTAL COMMISSION REGARDING ISSUANCE OF A NOTICE OF IMPENDING DEVELOPMENT FOR THE PROJECT

d. This Board reviewed the Report at a regular meeting thereof held on July 2, 2009 at which all members of the public present were offered the opportunity to comment on the question of approval of the Report and on the authorization of implementation of the Project and this Board has considered all such comments.

e. The Report contains all of the information specified in Subsection 5.1.1 D 2 of the certified PWP.

f. The Project has been reviewed in compliance with the California Environmental Quality Act (CEQA) and/or the National Environmental Policy Act (NEPA), this Board has completed all related CEQA and/or NEPA documents and all conditions and/or mitigation measures identified in those documents have been incorporated as part of the Project.

g. Revisions incorporated in the proposed Project advance the specific project objectives of the PWP.

h. The Project, as modified by conditions and/or mitigation measures incorporated as part of the Project, is contained in and consistent with the certified PWP.

i. The decision of this Board to authorize the Project is based on the information contained in the Project Report and other information in the record including, without limitation, public and Commission input.

j. In consideration of the foregoing findings, this Board concludes and declares that the Report should be approved and the General Manager should be authorized and directed to submit a Notice of Intent to issue a Notice of Impending Development for the Project pursuant to Section 5.1.2 A. of the PWP.

2. Report Approval; Authorization of Project. The Report is hereby approved and the Project is hereby authorized pursuant to the provisions of Section 5.1.1 D 5. of

RESOLUTION OF THE MONTARA WATER AND SANITARY DISTRICT APPROVING PROJECT REPORT FOR THE CONVERSION OF ALTA VISTA WELL NO. 1 FROM A TEST WELL TO A PRODUCTION WELL AND AUTHORIZING AND DIRECTING THE GENERAL MANAGER TO TRANSMIT A NOTICE OF INTENT TO THE EXECUTIVE DIRECTOR OF THE CALIFORNIA COASTAL COMMISSION REGARDING ISSUANCE OF A NOTICE OF IMPENDING DEVELOPMENT FOR THE PROJECT

the PWP; the General Manager is hereby authorized and directed to transmit to the Executive Director of the Commission a Notice of Intent to issue a Notice of Impending Development for the Project pursuant to Section 5.1.2 A. of the PWP.

3. Official Record. The Secretary of the District is hereby authorized and directed to transmit a certified copy of this resolution to the Commission for inclusion in the official record of proceedings for the PWP.

Paul Perkovic

President, Montara Water and Sanitary District
Paul Perkovic

COUNTERSIGNED:

Scott Boyd

Secretary, Montara Water and Sanitary District
Scott Boyd

* * * *

I HEREBY CERTIFY that the foregoing Resolution No. 1456 was duly and regularly adopted and passed by the Board of the Montara Water and Sanitary District, San Mateo County, California, at a Regular Meeting thereof held on the 2nd day of July, 2009, by the following vote:

AYES, Directors: Boyd, Harvey, Perkovic, Slater-Carter & Ptacek

NOES, Directors: None

ABSENT, Directors: None

Scott Boyd

Secretary, Montara Water and Sanitary District

(c) PROJECT CONDITIONS AND MITIGATIONS

Impact	Mitigation Measure	Implementing Action	Compliance Measurement	Method of Verification	Timing of Implementation
Potential Impact 3.2-2: Would the proposed project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in the volume of water stored in the aquifer or a lowering of the local groundwater leaves in a manner which would result in substantial effects to existing groundwater users (e.g., a significant effect to an existing wetland or riparian vegetation, or the production rate of pre-existing nearby wells would drop to levels which would not support existing land uses or planned uses for which permits have been granted)?	**Mitigation Measure 3.2-1:** Finalize and implement the Draft Hydrological Monitoring and Mitigation Program. *Project Location:* Near Alta Vista Well #1 and as specified in the Hydrological Monitoring and Mitigation Program *Implemented By:* District, and qualified personnel as specified in the Hydrological Monitoring and Mitigation Program *Schedule:* Prior to initiating pumping from Alta Vista Well #1 and as specified in the Hydrological Monitoring and Mitigation Program *This item also satisfies PWP California Coastal Commission's Suggested Modifications 2-h.*	District to finalize and implement the Hydrological Monitoring and Mitigation Program (HMMP)	District retained a hydrologist to implement the HMMP titled "Hydrologic and Vegetation Monitoring Plan Alta Vista Well". Hydrologic Monitoring shall continue for three years according to the "Hydrologic and Vegetation Monitoring Schedule Alta Vista Well" and "Hydrologic and Vegetation Monitoring Plan Alta Vista Well," dated September 5, 2008. The vegetation monitoring portion of this plan shall be superseded and replaced by the plan described in Mitigation Measure 3.3-3.	Annual and final monitoring reports, including proposed changes to the monitoring and mitigation plan, shall be submitted to the Executive Director District Engineer prepared a compliance report and submitted the report to the District Manager	Complete
Potential Impact 3.3-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	**Mitigation Measure 3.3-3:** A Biological Resources Monitoring and Mitigation Program shall be developed for the creek, wetland, and spring system that may be indirectly impacted by the installation of the new production Alta Vista Well #1. The Program shall be approved by the California Coastal Commission prior to initiating pumping of Alta Vista Well #1. *This item also satisfies PWP California Coastal Commission's Suggested Modifications 2-i (i thru xi).*	District to prepare a Biological Resources Monitoring and Mitigation Plan (BRMMP).	District retained a biologist to prepare the BRMMP memorandum titled "Public Works Plan Phase I, Vegetation Monitoring Report – 2010". Biological Monitoring shall continue for three years according to the "Public Works Plan Phase I, Vegetation Monitoring Report – 2010," dated December 1, 2010.	Annual and final monitoring reports, including proposed changes to the monitoring and mitigation plan, shall be submitted to the Executive Director District Engineer to prepare a compliance report and submit the report to the District Manager.	Monitoring ongoing.
Potential Impact 3.5-1: Would the proposed project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous Materials?	**Mitigation Measure 3.5-1:** A Spill Prevention and Containment Plan shall be prepared for each site that includes measures such as storing all liquid hazardous materials and petroleum products within secondary containment and ensuring the presence of spill kits and Material Safety Data Sheets in the vicinity of these stored items. If 55 gallons or more of diesel, chlorine or any other hazardous material will be stored more than 6 months on the site, a Hazardous Materials Business Plan (HMBP) must be submitted to, and a Unified Permit must be obtained from, the San Mateo County Environmental Health Department. The measures in the Spill Prevention and Containment Plan and HMBP shall be followed for storage and handling of hazardous materials. Copies of these Plans shall be available at the sites. *Project Location:* Alta Vista Wells and Alta Vista Water Treatment Facility *Implemented By:* District *Schedule:* Prior to storage of diesel, chlorine, or any hazardous materials at the site *This item also satisfies PWP California Coastal Commission's Suggested Modifications 2-m.*	District to prepare a Spill Prevention and Containment Plan (SPCP) for each site that includes measures such as storing all liquid hazardous materials and petroleum products within secondary containment and ensuring the presence of spill kits and Material Safety Data Sheets in the vicinity of these stored items.	A SPCP was completed on January 18, 2010 detailing proper methods for storage and containment of liquid hazardous materials. The MSDS was included as an attachment to the SPCP. A copy of the SPCP was submitted to CCC in response to the North Central Coast District Supervisor's letter dated September 29, 2010.	District Engineer to prepare a compliance report and submit the report to the District Manager	Complete

Impact	Mitigation Measure	Implementing Action	Compliance Measurement	Method of Verification	Timing of Implementation
Potential Impact 3.5-7: Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	**Mitigation Measure 3.5-12:** The diesel tank associated with the back-up generator shall not be stored permanently at the site. The diesel tank shall be stored at an offsite District facility with at least an existing 30-foot radius vegetation clear zone around it and brought to the project site only in the event of an electrical power outage. *Project Location:* Alta Vista Well #1 *Implemented By:* District *Schedule:* Ongoing	District to store the diesel tank associated with the back-up generator at an offsite District facility with at least an existing 30-foot radius vegetation clear zone.	Diesel tank is currently stored at an offsite District facility with 30-foot radius free of vegetation. Visual observation by District staff.	District Engineer to prepare a compliance report and submit the report to the District Manager.	Complete
Potential Impact 3.9-3: Would the proposed project substantially degrade the existing visual character or quality of the site and its surroundings?	**Mitigation Measure 3.9-5:** The exterior finish of all metalwork or reflective surfaces on the Alta Vista Wells, including but not limited to filtration vessels, cabinets, fencing material, and hardware, shall be finished in a non-reflective, non-glare finish. This may include paint, textured finishes, vinyl coating, or other similar finishes. There shall be no exposed bare metal surfaces, including cabinet hardware. *Project Location:* Alta Vista Wells #1 and #2 *Implemented By:* District *Schedule:* Immediately following installation of proposed improvements	District to finish all metalwork or reflective surfaces on the Alta Vista Wells utilizing a non-reflective, non-glare finish.	All reflective surfaces have been finished using non-reflective, non-glare finish. Visual observation by District staff.	District Engineer to prepare a compliance report and submit the report to the District Manager	Complete
	Mitigation Measure 3.9-6: All chain link fence material, including supporting poles, shall be vinyl- oated. The District shall inspect all fencing at least once annually and replace and/or repair any fence material from which the vinyl-coating has been removed due to use or accident. *Project Location:* Alta Vista Wells #1 and #2 *Implemented By:* District *Schedule:* Immediately following installation of fence; inspections to occur annually; replace vinyl coating as needed	District to install only chain link fence material, including supporting poles, that is vinyl-coated. The District shall inspect all fencing at least once annually and replace and/or repair any fence material from which the vinyl-coating has been removed due to use or accident.	Installation of vinyl-coated fence material is complete. Annual inspection is completed by staff.	District Engineer to prepare an annual compliance report and submit the report to the District Manager.	Complete

Public Works Plan Condition		Implementing Action	Compliance Measurement	Method of Verification	Timing of Implementation
PWP California Coastal Commission's Suggested Modifications	**H)** Hydrologic Monitoring shall continue for a period of three years according to the "Hydrologic and Vegetation Monitoring Schedule Alta Vista Well" and "Hydrologic and Vegetation Monitoring Plan Alta Vista Well," dated September 5, 2008. In addition, if granted permission by individual property owners, the District shall also conduct hydrologic monitoring of individual private wells on Alta Vista Road. Annual and final monitoring reports, including proposed changes to the monitoring and mitigation plan, shall be submitted to the Executive Director. The vegetation monitoring portion of this plan shall be superseded and replaced by the plan described in Modification No. 2(i). Project Location: AV Well No. 1 Implemented By: District Schedule: Ongoing	See Page 1 – Potential Impact 3.2-2/Mitigation Measure 3.2-1			
	N) New water supply, storage, and transmission facilities authorized by and pursuant to PWP 2-06-006 is limited to those areas served by the District as of 11/12/08 and shall not be used for any new water connections, or for the extension of water mains into rural areas, including rural areas designated Open Space or Agriculture within the urban/rural boundary, for any purpose, including for the purpose of private fire protection. Proposals for any future water facility development connected to or using water system components or infrastructure authorized pursuant to PWP 2-06-006 shall require an amendment of the PWP as described in (p) except for repair and maintenance activities as defined by Coastal Act Section 30610(d), which shall require coastal authorization from San Mateo County, either in the form of a coastal development permit or a coastal development permit exemption as determined by Section 6328.5(d) of the certified San Mateo County zoning regulations. Project Location: AV Well No. 1 Implemented By: District Schedule: Ongoing	No action required for this project.	No action required for this project.	Either in the form of a coastal development permit or a coastal development permit exemption as determined by Section 6328.5(d) of the certified San Mateo County zoning regulations.	Unknown at this time
	O) Pumping of the Alta Vista Well No. 1 shall not exceed 150 gallons per minute averaged over a 24-hour period. Any future proposals to increase the pumping rate shall require an amendment to this public works plan, and the District shall comply with any informational requests, including pumping tests, to demonstrate with sufficient evidence that the increased pumping rate will not impact nearby wetlands, riparian areas, and sensitive habitats.	No action required for this project.	The District shall submit to the Coastal Commission annual water production reports for review and approval by the Executive Director by December 1st of each year the Alta Vista Well No. 1 is in production. These reports shall demonstrate that the pumping rate of the well does not exceed 150 gallons per minute averaged over any 24-hour period.	The District may not initiate any pumping tests for increased pumping rates without authorization from Commission staff after the PWP amendment application has been submitted.	Ongoing

Public Works Plan Condition		Implementing Action	Compliance Measurement	Method of Verification	Timing of Implementation
	P) Any increase in water supply or distribution capacity, to provide additional service connections in excess of the limitations of this Public Works Plan Phase I, including any increase in the Alta Vista well pumping rate, any augmentation or reallocation of existing water supplies, or changes to the District service area shall require an amendment to this PWP. The application for such amendment shall include information concerning phasing of infrastructure capacity in conformity with the requirements of the San Mateo County LCP. The information provided shall be sufficiently detailed and complete to enable the Commission to evaluate whether the proposed increase in water supply and/or distribution capacity is in phase with the existing or probable future capacity of other area infrastructure, including but not limited to the need for an adequate level of service for Highways 1 and 92 as required by the local coastal program.	No action required for this project.	No action required for this project.	No action required for this project.	Unknown at this time
	R) The District shall assure that safe and reliable access for construction vehicles that does not hinder or jeopardize the safety of regular traffic circulation is provided to each construction site.	The District shall maintain safe and reliable access to construction site.	District maintained Alta Vista Road as a passable and usable road during all phases of Construction.	District Engineer to prepare a compliance report and submit the report to the District Manager	Complete
	S) The obstruction of existing hiking trails to Montara Mountain on the Alta Vista ridge property is prohibited at all times.	The District shall maintain access to Montara Mountain via the Alta Vista ridge property.	District maintained access to Montara Mountain via the Alta Vista ridge property during all phases of Construction.	District Engineer to prepare a compliance report and submit the report to the District Manager	Complete

(ii) HYDROLOGICAL MONITORING

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February 21, 2008

Mr. George Irving
Montara Water and Sanitary District
8888 Cabrillo Highway
Montara, California 94037
(650) 728-3545

RE: Alta Vista Water Supply Well Pumping Test

Dear Mr. Irving:

The Montara Water and Sanitary District (MWSD) conducted a 60-day pumping test at the Alta Vista Well from November 11, 2007 to January 11, 2008. It was the largest pumping test to date. The total volume of water pumped during this test (3.5 million gallons) exceeded previous pumping tests by over 60 percent. In addition, as recommended by the California Coastal Commission (CCC), the District has installed two shallow monitoring wells near prominent riparian areas on Montara Creek to evaluate ground-water drawdown effects as a result of the pumping of the Alta Vista Well.

As outlined in the test protocol memorandum dated November 7, 2007 to Ruby Pap of CCC prior to the start of the test, drawdown in the Alta Vista well was monitored both by the installed Supervisory Control and Data Acquisition (SCADA) system, as well as manually by District staff using an electronic sounder.[1] Potential drawdown effects were monitored in five monitoring wells, and streamflows were monitored on three creeks.[2] The monitoring stations are shown in the attached Figure 1.

This letter reports our interpretations of the monitoring results, and provides ground-water management recommendations for the near term. Vegetation monitoring was conducted by Loran May of May & Associates, and those findings appear in a separate report.

[1] SCADA water level data was referenced to manual readings to check the accuracy of the pressure transducer installed in the well.
[2] Balance Hydrologics' staff collected the monitoring well and streamflow data using dataloggers and regular manual measurements.

Summary of the Well and Aquifer

MWSD completed and tested five wells during 2004, with one of the test wells (well 2004-4, a.k.a. Alta Vista Well) proving to be high yielding. The Alta Vista well is located on APN 036-180-030 about 900 feet northeast from the MWSD water treatment facility and storage tanks on Alta Vista Road. The site is on a ridge that extends down from Peak Mountain (and North Peak), on a divide separating the watersheds of the north fork of Montara Creek and Daffodil Canyon. On October 29, 2007, MWSD obtained permission from the California Department of Health Services to pump water from the well to their distribution system. The other four wells completed in 2004 currently serve as monitoring wells.

The Alta Vista water supply well was drilled to 743 feet below ground surface (bgs). Weathered granitic rock was found to a depth of 235 feet bgs, with the uppermost 15 feet being heavily weathered. Unweathered, fractured granitic rock was encountered from 235 feet to the final depth of 743 feet. During drilling, the first sustained water was encountered at a depth of 233 feet, just above the transition from weathered granitics to granitic rock. Below this depth, a considerable amount of uniform, almost unfractured granitic rock was encountered, yielding very little water. High yielding open joints and fractures were intersected below 714 feet bgs. These deep open joints are the source of ground water to the well. The well was completed with solid 12-inch steel (conductor) casing from the surface to competent bedrock at 370 feet bgs, tremied with neat cement and sealing off the weathered granitic aquifer. An uncased 9-inch diameter borehole extends from 370 feet to the deep water-yielding joints and bottom of the well.

Sealing off the well from the overlying weathered granitic aquifer (perched on bedrock) not only stabilized the upper portion of the well but also ensures that the well draws water exclusively from the unweathered fractured bedrock, foremost, from the deep open joints. Sealing the well this deep provides a safety factor for potential cross aquifer contaminant movement through the well bore, and minimizes potential effects to the overlying weathered granitic aquifer, from which domestic wells draw water. It also minimizes potential effects to surface waters. Consequently, no effects were observed to the weathered granitic aquifer or the surface waters during pumping tests conducted following well completion, only drawdown in the upgradient fractured bedrock monitoring wells (Woyshner and others, 2005).

Following well completion in 2004, the District conducted several pumping tests; the most robust test was a 5-day constant-rate pumping test at 300 gallons per minute (gpm). The tests indicated that the well was suitable for water supply, both in yield and water quality. Several independent lines of evidence indicate that well appears to draw on a large body and/or interconnected sources of ground water within the mountain. Nearly all of the contributing area has little or no potential sources of contamination. For specific technical information about the well specifications and test results, consult the well completion report (Woyshner and others, 2005).

Monitoring Stations

Five monitoring wells served to monitor ground-water drawdown effects from pumping the Alta Vista water supply well, as described below. Locations of the monitoring well are shown in the attached Figure 1.

- Well 2004-3 is a deep bedrock monitoring well located upgradient and northeast of the Alta Vista well, and well 2004-5 is a shallow bedrock monitoring well located south of the Alta Vista well. Both of these wells monitor the same fractured system as the pumping well, and both wells showed some drawdown during the high-yield pumping tests during 2004.
- After concluding the pumping tests during 2004, two shallow 2-inch diameter monitoring wells were installed in the valley alluvium to monitor water levels near the riparian habitat on Montara Creek, closest to the Alta Vista well. MW-1 was located upgradient of a spring and riparian woodland on the valley bottom, and MW-2 was located downgradient of the woodland. These wells monitor water levels and gradients in the shallow alluvial aquifer, considered separate from the deep fractured granitic aquifer from which the Alta Vista draws water.
- Finally, well 2004-2 is a deep monitoring well, located at the mouth of Daffodil Canyon, influenced by ground water in alluvium and fractured bedrock, and potentially affected by faulting. This well is downgradient of the Alta Vista well and was unaffected by pumping tests during 2004. Also drilled in 2004, well 2004-1 is located at Highway 1, west of well 2004-2. Because of its distance from the Alta Vista well (well beyond well 2004-2), it was not considered a primary monitoring well for this test and not shown on Figure 1.

In addition to monitoring ground-water levels, streamflow was monitored at four stations (Figure 1):

- MWSD operates a diversion[3] at headwater springs on Montara Creek that flows by gravity to a tank at the treatment plant on Alta Vista ridge. Flow at the diversion is monitored by MWSD staff.
- For regional runoff interests, a stream gage was established on Martini Creek in 2004. It is maintained by Balance Hydrologics staff and funded by MWSD.
- For purposes related to this pumping test, flow was monitored: a) in Montara Creek at Riviera Road, just upstream of the confluence with the main stem Montara Creek, and b) at the mouth of Daffodil Canyon at Old San Pedro Road.

Rainfall was monitored at the Alta Vista water treatment plant, as well as at two stations in the Martini Creek watershed, at Old San Pedro Road and at the watershed divide.

Discussion of Findings

After conducting some pretest pumping of the well and allowing the water level to recover, the 60-day constant-rate pumping test began on November 10, 2007 and concluded on January 10, 2008 (Figure 2). The target average pumping rate was 40 gallons per minute (gpm). There were two brief interruptions during the test: a) the pumping rate was briefly increased to 80 gpm to mitigate a system pressure failure on December 16th; and, b) a power outage during the January 4th storm when pumping briefly stopped. The short changes in pumping rate did not affect the ability to test for the proposed objectives.

[3] MWSD has pre-1914 water rights to flow in and beneath Montara Creek, pre-dating SWRCB jurisdiction.

The pump was controlled by holding the revolutions per minute (rpm) of the well constant. As a result, the pumping rate (or flow from the well) decreased as drawdown lowered the water level in the well and more power was needed to lift water to the ground surface (Figure 2). After a day of pumping the well, the average pumping rate stabilized to a gradual slope, decreasing from 49 gpm after one day to 40 gpm at the end of the 60-day test. Drawdown in the Alta Vista well corresponded with the pumping rate and stabilized to a similar slope and reached steady state, varying only with pumping rate. No permeability boundaries (or limits) to the aquifer were observed in the drawdown data.

At the end of the test, total drawdown in the Alta Vista well was 37 feet, and specific capacity of the well (Cs) was 1.1 gpm per foot of drawdown. Pumping related drawdown in the two bedrock monitoring wells was 3.7 feet in well 2004-3 and 2.3 feet in well 2004-5. Results were consistent with observed drawdown in these wells during the 2004 pump test.

Prior to starting the pumping test it had rained 3.8 inches at the well site since the start of the water year on October 1, 2007. By the end of the test, it rained a total of 12 inches. Water levels in the shallow alluvial monitoring wells showed significant recharge from the precipitation, indicating that the pumping rates are negligible relative to recharge and suggesting that the shallow alluvial aquifer is independent of drawdown in the fractured bedrock (Figure 4). Similar findings were also observed at the surface water monitoring stations (Figures 5, 6, and 7), where flow increased from rainfall.

The bedrock monitoring wells (2004-3 and 2004-5) showed only the slightest response to precipitation (Figure 2). More than 12 inches of seasonal rainfall is required for significant recharge to the fractured bedrock, as noted by comparing recharge during wet-season 2006 (a wet year) with wet-season 2007 (a dry year) in Figure 2. Significantly lower levels of baseflows (both summer baseflows and winter baseflows) were also recorded in Martini Creek (Figure 5) and Martini Creek (Figure 6) during 2007, owing to reduced recharge.

Conclusions and Recommendations

Hydrologic monitoring during the 60-day pumping test showed similar responses as was observed during previous pumping tests conducted in 2004, and corroborates the early findings. Results showed ground-water drawdown in the fractured bedrock aquifer but no drawdown effect to the overlying weathered granitic aquifers from which domestic wells draw water, and no effect to streamflow in Montara Creek and Daffodil Canyon. In addition, limits to the fractured bedrock aquifer (a.k.a. permeability boundaries) were not encountered during the test.

The shallow monitoring wells (MW-1 and MW-2) near Montara Creek riparian habitat were not installed when previous pumping tests were conducted. During this 60-day test, these wells showed significant recharge to the alluvial aquifer from rainfall and no effect from pumping the Alta Vista well.

Given that aquifer boundaries were not observed, and given the apparent independence of the shallow aquifers and streamflows to pumping the well, we recommend that the District continue

pumping the well. We understand that the District also intends to continue with the monitoring program as implemented.

Sincerely,

BALANCE HYDROLOGICS, Inc.

Mark Woyshner
Principal Hydrogeologist/Hydrologist

Jason Parke
Hydrologist/Geologist

Enclosures: Figures 1 through 8

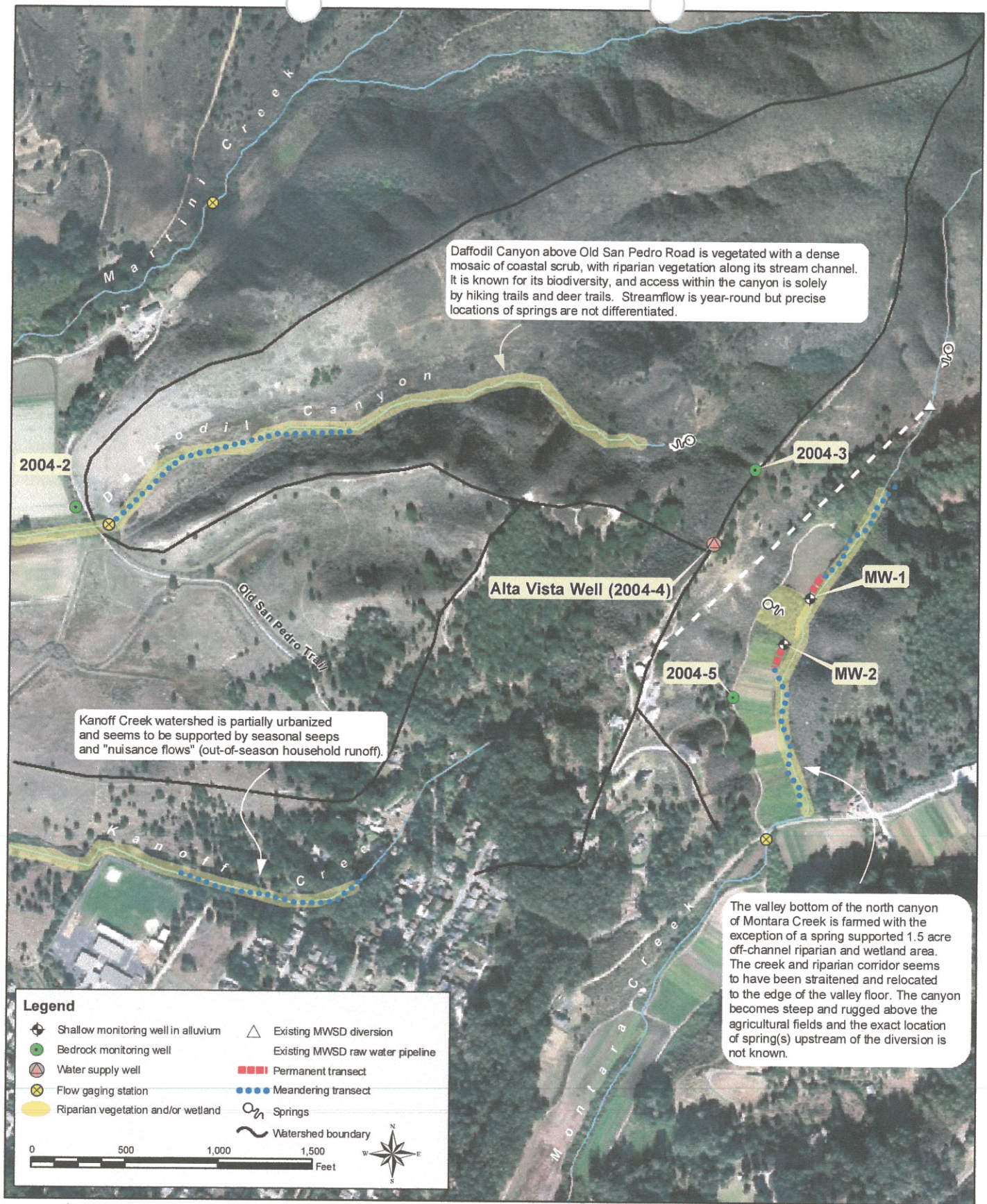
cc: Tanya Yurovsky and Winola Cheong, SRT Consultants
Loran May, May & Associates

References

McNiesh, C.M., 1986, Effects of production well pumping on plant water stress in the riparian corridor of the lower Carmel River -- volume 1, presentation of findings and conclusions, and volume 2, figures: Charles M. McNiesh, Consulting Agronomist, report to the Monterey Peninsula Water Management District. 86 p. and 85 p.

Woyshner, M., Parke, J., Hecht, B., and Porras, G., 2005, Drilling and testing of Montara Water and Sanitary District's Well 2004-4, APN 036-180-030 - well completion report, San Mateo County, California: Balance Hydrologics, Inc, Consulting report prepared for Montara Water and Sanitary District, 92 p., 3 tables, 15 figs., and 4 appendices

FIGURES



Source: Aerial photo from USGS, captured 2/27/2004.

Balance Hydrologics, Inc.

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Figure 1. Hydrologic monitoring and vegetation transects for Alta Vista well pumping, Montara Water and Sanitary District, San Mateo County, California.

Most recharge to well 2004-4 comes from areas north and east of the well and especially from areas nearest the well (Woyshner and others, 2005).

(ii) VEGETATION MONITORING PLAN

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Draft Memorandum

date December 7, 2009

to Tanya Yurovsky, SRT Consultants for Montara Water and Sanitary District; John Dixon, California Coastal Commission

from Chris Rogers, Asavari Devadiga (ESA)

subject Montara Water and Sanitary District Public Works Plan - Revised Alta Vista Test Well Vegetation Monitoring Plan

This memo outlines the final proposed Alta Vista Test Well Vegetation Monitoring Plan prepared for the Montara Water and Sanitary District's (MWSD) Public Works Plan (PWP) Phase I. The methods described here are based on a discussion between ESA and John Dixon of the California Coastal Commission (CCC) on December 2, 2009, during which a methodology acceptable to the CCC was decided upon. This plan supersedes the plan submitted for consideration in a memo from ESA dated November 3, 2009, and also replaces the earlier plan dated September 2008. These revisions respond to the CCC's Adopted Findings for the MWSD PWP Phase I dated November 12, 2008 for conversion of the Alta Vista Well No. 1 from a test well to a water production well.

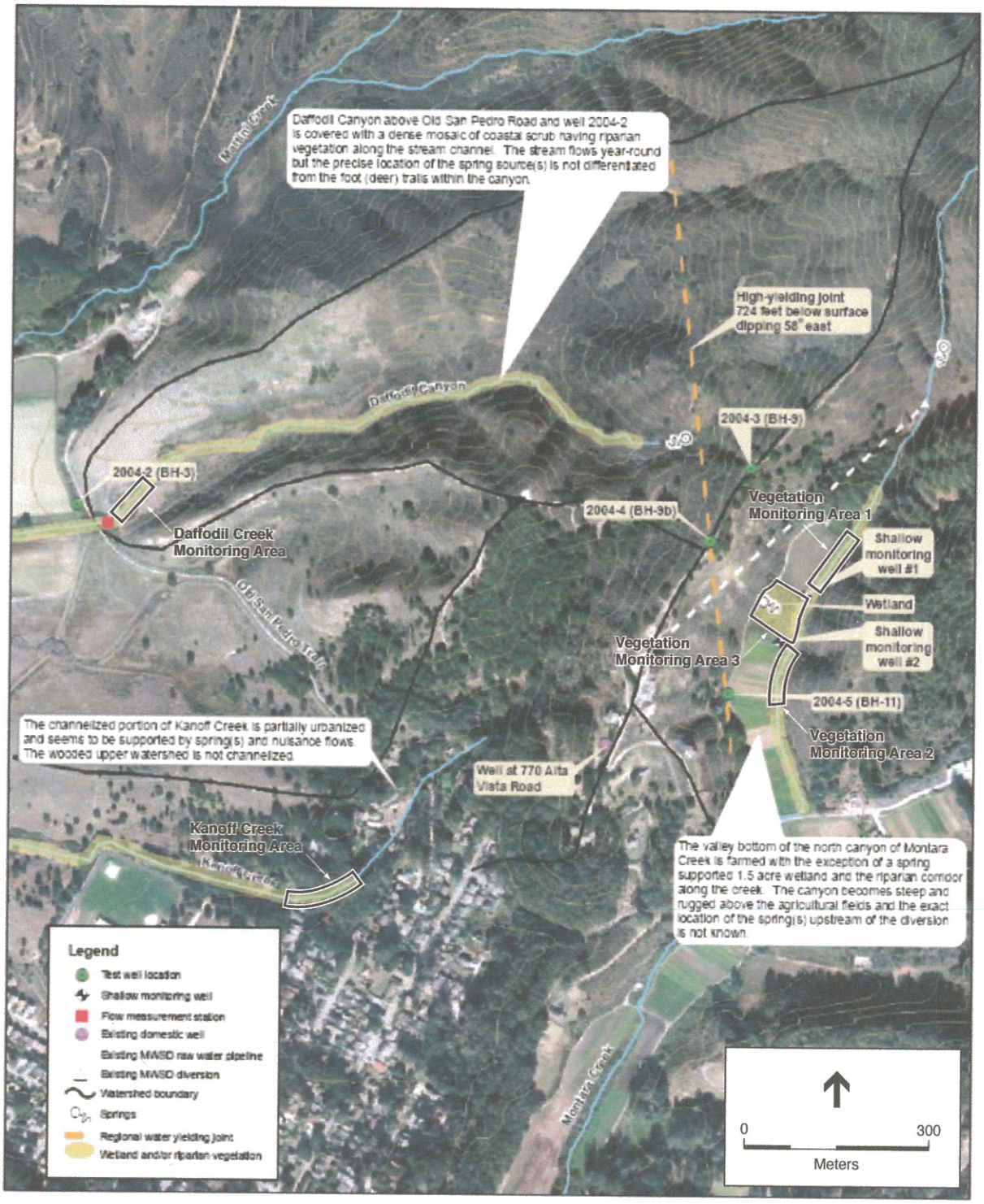
Goals of the Vegetation Monitoring Plan

The purpose of the vegetation monitoring plan is to monitor the vegetation within the vicinity of two shallow monitoring wells along Montara Creek for the indirect effects of groundwater withdrawal at the Alta Vista test well. The vegetation monitoring would supplement the ongoing hydrologic monitoring of the Alta Vista well and the two shallow monitoring wells conducted by Balance Hydrologics. This plan supersedes the previous monitoring plan established by May & Associates, Inc., and incorporates revisions requested by the CCC on the PWP.

The fundamental questions that need to be addressed by conducting vegetation monitoring are: If the hydrologic monitoring demonstrates lowering of groundwater as a result of the operation of the Alta Vista well, would the plant species composition and/or cover significantly change in response to a decrease in the groundwater table? To address this question, ESA plans to implement simple random sampling using a spherical densiometer (an optical tree canopy sampling device; see photo on last page) coupled with a permanent quadrat sampling method (for understory vegetation), and observations of leaf condition. These methods will facilitate rapid gathering of meaningful vegetation data that can be analyzed statistically to assess vegetation changes, and that may be correlated to changes in groundwater levels.

Vegetation Sampling Locations

During the initial well testing, May & Associates, Inc. established two permanent monitoring transects placed in areas that would most likely exhibit the effects of groundwater pumping, named Transect 1 and Transect 2 (see Figure 1). These permanent transects were located in dense willow riparian vegetation immediately adjacent to the shallow groundwater monitoring sites and were intended to encompass the full range of topographic, vegetative, and hydrologic differences observed at riparian and creek habitats near the test well sites.



Montara Water and Sanitary District Public Works Plan - Alta Vista Test Well Vegetation Monitoring Plan . 209509

SOURCE: Balance Hydrologics, Inc. and ESA

Figure 1
Montara Creek Vegetation Monitoring Locations

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Under the revised vegetation monitoring plan, ESA proposes to conduct sampling in three areas around the shallow monitoring wells. One area is a 0.2-hectare (or 2,000-square meter (m^2)) study area upstream of shallow monitoring well #1 (similar to the area used for Transect 1); the second area is downstream of shallow monitoring well #2 (similar to the area used for Transect 2); and the third area is a 0.54-hectare (or 5,463 m^2) willow grove that lies between the two shallow monitoring wells and perpendicular to Montara Creek.

ESA will use GIS to randomize a total of 15 sample locations in each of the three study areas. Locations may be rejected on the basis of being too close to the center of the creek centerline (and therefore less sensitive to the effects of groundwater drawdown) or too close to the edge, which is subject to periodic vegetation trimming and removal by the resident flower grower. A number of alternate quadrat locations also will be randomly chosen to be used in areas where the proposed quadrat location is unusable because it cannot physically or safely be accessed, or it overlaps with adjacent quadrats. Additional alternate quadrats may be randomly selected as needed per the first monitoring visit.

During the baseline sampling event in Fall 2010 all sample locations will be located using the "Go To" function of GPS to find the randomly chosen locations. ESA will log all the locations using GPS and will record notes that may help with finding the locations during subsequent monitoring events. A map will be prepared showing all sample locations used for monitoring as part of the annual report. Photographs will be taken during the baseline data collection.

At each sample location, a 1 m^2-quadrat for estimating cover of understory vegetation will be permanently marked using rebar and PVC posts at two corners.

Vegetation Sampling Methods

At each sample location, a spherical densiometer will be used to visually estimate tree canopy cover. Observations will be made at a consistent location relative to the permanent quadrat markers, such as the southwest corner. Consistent with the recommendations for use of the device, four observations will be made at each location facing in the cardinal directions, and the results for each location will be averaged.

Within each quadrat, ESA will identify every plant species (excluding canopy trees) and estimate the absolute percent cover for each species to the nearest 5%, generating a nearly continuous variable. In addition, the life form and phenology of each species will be identified using the codes for these characteristics for subsequent, non-statistical comparison (see Table 1). Phenological characteristics will be expressed as a percentage using the cover values and will serve as a surrogate of vigor. ESA will also photograph each quadrat within the subset and compile a list of the plant species observed.

TABLE 1
ASSIGNED CODES FOR PHENOLOGY AND LIFE FORM

Phenology	Life Form
DD = dead	B = broadleaf evergreen
DY = dying and/or stressed	D = broadleaf deciduous
FL = flowering	G = grass
SD = seedling	H = forb/herbaceous non-grass
VG = vegetative	C = climber
FR = fruiting	

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At each sample location, a representative branch will be selected from a canopy willow tree, and marked with an aluminum tree tag and identified with a unique code. These branches will be observed during each monitoring event, and the percentage of leaves above the tag (i.e., toward the terminal branch end) that are fully green, partially green/yellow, and fully yellow will be documented. These observations will provide a direct estimate of the level of drought stress experienced by the willow population. Estimates in changes in survivorship, tree height will be based on these repeated observations.

Control Sites

The same control sites selected by May & Associates, Inc., in consultation with Balance Hydrologics, will be used in the revised vegetation monitoring plan. The control sites are located at Kanoff Creek and Daffodil Creek, which are sites that are not hydrologically connected to Montara Creek and therefore would unlikely be affected by the Alta Vista well pumping. Using the same methods as the monitoring site 15 sample point locations will be located in each 0.08-hectare (or 800 m^2) control sites. These quadrats will be randomly selected and monitored identically to the Montara Creek sites. The number of samples may be increased or decreased, as indicated by statistical analysis.

Statistical Analysis

The method would produce a reliable assessment of quantifiable changes over time in the sense that the quadrats are objectively chosen, but include visual estimations. Results would include a non-statistical analysis of plant cover and species composition. Following the first monitoring period (September 2010), a power analysis will be conducted to determine the replication necessary to provide 90% power at an $\alpha = 0.10$ to detect a biologically meaningful difference in cover. Depending on the outcome of this analysis, sampling of additional quadrats may be required, or it may be determined that the statistical power is achieved with fewer than the primary set of quadrats. During subsequent monitoring years, a T-Test will be used to detect significant changes between the means cover estimates of the control group results and of the permanent monitoring site results. The significance level will be set at $\alpha = 0.10$.

Although ESA understands that establishing a study to statistically validate its conclusions may be important, ultimately, it will be the careful observation and professional judgment of the trained ecologist that will likely provide early detection of meaningful changes; the data collection method, including the photodocumentation that ESA proposes will support those observations with simple, efficient, and repeatable field methods.

Reporting

Following the fall monitoring period, ESA will prepare a full detailed report of all monitoring visits by December 31. One round of review, by all appropriate agencies is assumed; thus, only one electronic draft memorandum and a final memorandum will be produced. The final report each year will be submitted to the CCC Executive Director. Each report shall be cumulative in nature and shall summarize the previous results. Each report shall document the condition of the sample sites with photographs taken from the same fixed points in the same directions. Each report shall also include an "Impact Evaluation" section where information and results from the monitoring program are used to evaluate whether there is evidence of an effect of the pumping. At the end of the final monitoring period, the report will evaluate whether the vegetation near the shallow monitoring wells has been negatively affected by the pumping of the Alta Vista well.

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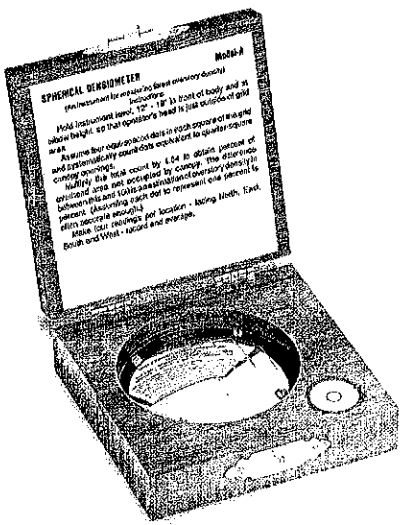
Schedule

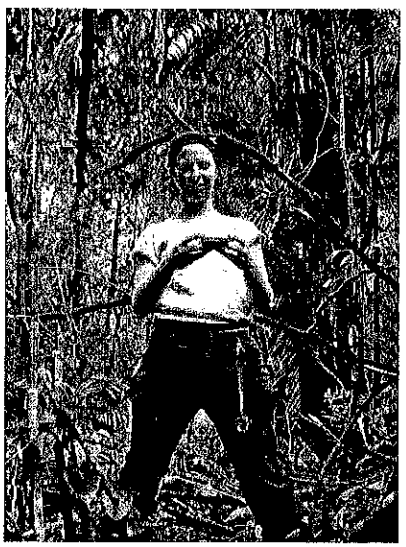
Vegetation will be monitored once in September prior to the rainy season. ESA assumes a monitoring commitment of one to three days for each monitoring visit and a monitoring period of at least three years, beginning with the baseline data taken based on this revised plan.

Provision for Possible Further Action

If the final report indicates that there have been negative impacts, the applicant shall submit a mitigation plan within 90 days to compensate for those impacts. The revised restoration program will be processed as an amendment to the coastal development permit unless the Executive Director determines that no permit amendment is required.



Spherical Densiometer



Spherical Densiometer in use.

PUBLIC WORKS PLAN PHASE I

1. Introduction and Overview

The Montara Water and Sanitary District (District) provides water, sanitary sewer, and solid waste disposal services to the coastal communities of Montara, Moss Beach, and adjacent areas located north of Half Moon Bay and south of Pacifica, in San Mateo County, California (Figures 1-1 and 1-2). The District owns and operates water storage, treatment, and distribution facilities that provide domestic water to approximately 1,650 domestic water connections, most of which (approximately 90%) are single family and multi-family residential connections. The system currently includes a surface water source, a water treatment plant, ten groundwater wells (eight active and two standbys), three potable water storage tanks, and over 150,000 feet of distribution pipelines.

The 2004 Montara Water and Sanitary District Master Plan identified several areas of the District's water system that require immediate improvement. Several previous and concurrent studies and system valuation reports (performed during the District's acquisition of the water system in 2003) documented poor conditions of the existing facilities.

The District must address three major categories of immediate improvements required for the water system:

- Additional storage facilities
- New sources of supply
- New treatment system for the Airport Wells Facility

The Public Works Plan Phase I encompasses several components recommended in the 2004 Master Plan, including the following:

1) **Water Storage Facilities.** Construction of a new water storage tank at the Alta Vista site and at the Schoolhouse site and demolition of the old tank at the Schoolhouse site
2) **New Water Well Production.** Initiation of water production (150 gallons per minute) from the Alta Vista Well No.1 and construction of a new pipeline and electrical conduit
3) **Water Treatment Facility.** Construction of a water treatment facility to address water quality issues at the airport wells

Amendments to Public Works Plan

Any increase in water supply or distribution capacity, to provide additional service connections in excess of the limitations of this Public Works Plan Phase I, including any increase in the Alta Vista well pumping rate, any augmentation or reallocation of existing water supplies, or changes to the District service area shall require an amendment to this PWP. The application for such amendment shall include information concerning phasing of infrastructure capacity in conformity with the requirements of the San Mateo County LCP. The information provided shall be sufficiently detailed and complete to enable the Commission to evaluate whether the proposed increase in water supply and/or distribution capacity is in phase with the existing or probable future capacity of other area infrastructure, including but not limited to the need for an adequate level of service for Highways 1 and 92 as required by the local coastal program.

2. Project Objective

The objective of the District's Public Works Plan Phase I (the proposed project) is to improve specific portions of the District's water system to ensure an adequate and reliable supply of water for its existing customers for domestic and fire protection uses. The proposed improvements are not intended to, nor would they accommodate, expanded existing connections or new connections to the system. New water supply, storage, and transmission facilities authorized by and pursuant to PWP 2-06-006 is limited to those areas served by the District as of 11/12/08 and shall not be used for any new water connections, or for the extension of water mains into rural areas, including rural areas designated Open Space or Agriculture within the urban/rural boundary, for any purpose, including for the purpose of private fire protection. Proposals for any future water facility development connected to or using water system components or infrastructure authorized pursuant to PWP 2-06-006 shall require an amendment of the PWP as described above, except for repair and maintenance activities as defined by Coastal Act Section 30610(d), which shall require coastal authorization from San Mateo County, either in the form of a coastal development permit or a coastal development permit exemption as determined by Section 6328.5(d) of the certified San Mateo County zoning regulations. The improvements would not enable the District to ease or lift the existing moratorium on new water service connections.

To achieve the project objective, the District has proposed adding water supply and storage capacity, as well as improving treatment of groundwater. SRT Consultants prepared a Fire Flow Deficiencies Project Draft Alternatives Analysis Technical Memorandum in January 2005. The Technical Memorandum provides background information on the District's immediate needs, which are summarized below.

Existing Storage Facilities

The District maintains three existing treated water storage tanks with a combined capacity of 662,000 gallons (Table 2-1).

Table 2-1: Existing Treated Water Storage Tanks

Storage Tank Location	Tank Material	Storage Capacity (Gallons)	Year Built
Portola Estates	Wood	100,000	1981
Alta Vista	Steel	462,000	1976
Schoolhouse	Concrete	100,000	1959

The three existing treated water storage tanks have been evaluated in the past for compliance with current codes, including the 2000 Uniform Building Code (UBC), their physical condition, and their remaining service life. All three tanks require various improvements to extend their service life and to ensure operational and seismic reliability. The required improvements are:

- **Alta Vista and Portola Estates Tanks.** Structural strengthening to ensure seismic reliability
- **Alta Vista Tank.** Internal and external coating
- **Schoolhouse Tank.** Replacement; this tank has reached the end of its service life

The Schoolhouse Tank replacement is incorporated within the Public Works Plan Phase I (proposed project). Currently, the District has no ability to take any of the storage tanks out of service for any period of time for maintenance and/or repair due to the absence of any system-wide storage redundancy. Removing a tank from service would not allow the District to meet its current water demands. In addition, the District requires increased storage to satisfy the District's operational and emergency response needs.

Current Storage Requirements. The District's current storage requirements are comprised of three elements:

- Operations
- Emergencies
- Fire suppression

Operational Storage. Customer water demands vary over the 24-hour period, with higher demands occurring in the morning and evening hours, and decline to a nominal baseline during the day. Operational storage is the storage volume required to meet the daily demand variations. It is typical in the water industry that water supply sources such as treatment plants and groundwater wells operate at a constant rate during the 24-hour period. The constant water production rate is augmented by flow from storage tanks during peak demand periods, lowering the storage volume. The storage tanks are then refilled when the demand drops below the constant production rate. In the United States, storage tanks are customary designed to hold a reserve of about 50 percent of the water used during maximum day demand for equalization purposes. With the District's current demand of 423 gallons per minute (gpm), this amounts to an Operational Storage requirement of 306,000 gallons.

Emergency Storage. A reserve of potable water is required to meet demands during emergency outage periods when normal supply may be interrupted due to a natural disaster (e.g., seismic event, flood), power failure, loss of supply, loss of treatment, or a scheduled outage for repair and maintenance. The industry standard recommended by the American Water Works Association (AWWA) and other leading authorities in disaster preparedness and readiness is the storage volume equivalent to a two maximum day demand. This storage volume amounts to 1,224,000 gallons.

Fire Storage. Fire fighting storage requirements are identified by the National Fire Code (NFC), the Insurance Service Office guidelines, and by the local Fire Department. The fire storage requirements are based on the fire flow requirements and the anticipated fire duration. The fire requirement for the District's service area includes fire flows of 2,000 gpm for a two-hour duration, equating to a storage volume requirement of 240,000 gallons.

The District's total storage requirement under three these criteria amounts to 1,770,000. With the existing storage of 662,000 gallons, an additional volume of 1,108,000 gallons is required, as summarized in Table 2-2 on the following page.

Table 2-2: Current Storage Requirements	
Category	**Storage Volume (Gallons)**
Required Equalization (Operational) Storage	306,000
Required Emergency Storage	1,224,000
Required Fire Storage	240,000
Required Total Storage	1,770,000
Existing Storage	662,000
Storage Deficit	**1,108,000**

Existing Water Supply

The District currently withdraws water from one surface source and several groundwater wells, as discuss further below.

Surface Water. The District's surface water source is Montara Creek. The District diverts water from the Creek at a diversion point northeast of Montara. The water is conveyed from the diversion point to the Alta Vista water treatment plant, co-located with the existing Alta Vista Tank. The District's maximum diversion is limited to 70 gpm, which is the rated capacity of the Alta Vista water treatment plant in accordance with the permit for the plant issued by the California Department of Health Services (DHS).

Groundwater. Groundwater is currently extracted at the following locations:

- The Airport Well Facility, including the North Airport Well, South Airport Well, and Airport Well 3 (wells are located within 800 feet of each other on the Half Moon Bay Airport property)
- Drake Well, Portola Estates Wells I, III, and IV, and Wagner Well

Park and Portola Estates II wells are also existing groundwater wells, but have been out-of-service due to higher-than-acceptable iron and manganese levels and have not contributed to system production in the last six years. The Park and Portola Estates II wells are permitted as standby by California DHS.

Capacity. Table 2-3 presents a summary of the existing District water supply capacity and presents a calculation of the reliable capacity.

Table 2-3: Current Supply Capacity	
Supply Source	**Capacity (gpm)**
Montara Creek	70
Airport Wells Water Treatment Facility	225
Five other groundwater wells	171
Total Production Capacity1	**466**
Total Reliable Capacity with the Largest Single Source Out of Service2	**241**

[1] With all sources at maximum production capacity
[2] In accordance with the California DHS guidelines, the reliable capacity of a water system is calculated based on the largest source out of service. This calculation is based on the three existing Airport wells (collectively considered one single water supply source) being offline.

Airport Wells Facility. Water from the three Airport Wells has demonstrated elevated levels of nitrate, corrosivity, manganese, and 1,2,3-trichloropropane (TCP). Currently, the District utilizes a water blending operation to ensure that the water delivered to customers complies with safe drinking water standards. However, due to rising levels of nitrate in the last two years and promulgation of more stringent drinking water regulations, it has become apparent that blending may soon prove inadequate. The increased likelihood of the shutdown of all Airport Wells for water quality reasons requires development of immediate alternate solutions, including but not limited to developing new water sources to replace the 225 gpm production of the Airport Wells or installation of a treatment facility to address all water quality issues and to ensure water supply reliability for the District.

Water System Needs. The California Code of Regulations Title 22, Chapter 16, Article 2 outlines water supply requirements for the state and specifies that the District must deliver sufficient quantities of water to satisfy maximum day demand. Table 2-4 presents a summary of the District's water demand to comply with current AWWA and other industry standards.

During periods of water supply shortages, various water use restrictions have been instituted in the District. The District has employed some form of a progressively tiered program since 1985 to manage customer water demand in response to water supply availability. The levels progress from basic public education on water conserving practices to mandatory measures. The specific demand management level is triggered by the availability of water supply and the ability to maintain fire fighting and emergency reserves in distribution system storage tanks. For example, Stage 1 of the program requests customers to voluntarily water early in the day or late in the evening; Stage 5 prohibits irrigation at any time.

Table 2-4: Current Production Demand[1]	
Demand by Category	**Water Use (gpm)**
Average Daily (2000 - 2004)	271
Maximum Daily	423
Maximum Hourly	700
Maximum Fire Flow (2 hours)	2,000
Total Reliable Capacity with the Largest Single Source Out of Service	**241**
Production Deficit (Existing Reliable Supply - Maximum Daily Demand)	182

[1] Based on daily production data presented in the Montara Water and Sanitary District 2004 Water System Master Plan.

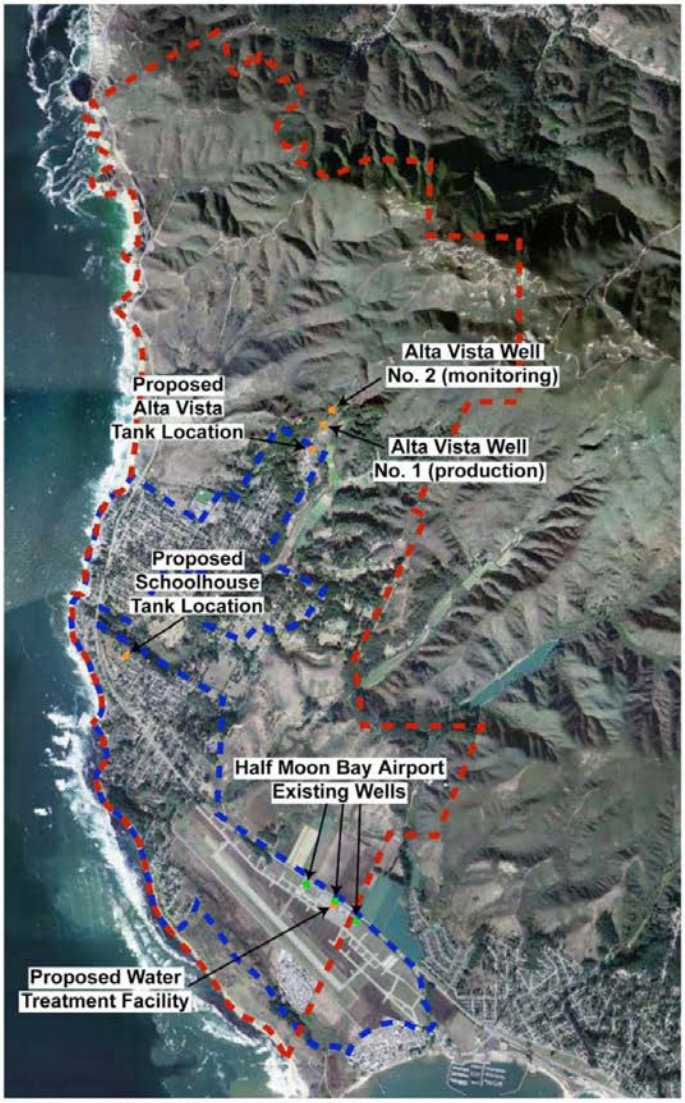
3 Project Location

PROJECT LOCATION

The proposed improvements would be constructed at several locations throughout the District, as depicted on Figure 3-1. The general locations of the facilities are:

- **Alta Vista Tank and Wells.** Northeast end of Alta Vista Road
- **Schoolhouse Tank.** West end of Buena Vista Street
- **Airport Wells Water Treatment Facility.** Cabrillo Highway (State Highway 1) at Half Moon Bay Airport

Figure 3.1: Location of Proposed Water System Upgrades



SOURCE: MHA 2005, SRT Consultants 2005, and Balance 2005

LEGEND
Montara Sanitary Service Boundary
Montara Water Service Boundary

SCALE
0 1
Miles

NORTH

4 Project Description

The proposed water system improvements include:

- Construction of a new water storage tank (Alta Vista Tank) northeast of the existing Alta Vista water storage tank.
- Conversion of an existing test well to a production well (Alta Vista Well No.1) northeast of the existing Alta Vista water storage tank.
- Conversion of an existing test well to a monitoring well (Alta Vista Well No.2) northeast of the existing Alta Vista water storage tank.
- Installation of an underground water conveyance pipeline and electrical conduit extending from the production well and monitoring well, respectively, to the existing Alta Vista water storage tank.
- Repair and maintenance of Alta Vista Road that does not result in an addition to, enlargement, or expansion of the road.
- Placement of a security fence on Alta Vista Road, northeast of the existing Alta Vista water treatment facility.
- Construction of one or two new water storage tank(s) (Schoolhouse Tank(s)) adjacent to and in place of (if two are built) the existing Schoolhouse water storage tank. If a two-tank option is chosen, the existing Schoolhouse Tank may be repaired for use as one of the two tanks, if an inspection report signed by a licensed structural engineer that is reviewed and approved by the Executive Director shows that the repaired tank would be seismically sound.
- Demolition of the existing Schoolhouse water storage tank.
- Installation of a water treatment facility (Airport Wells Water Treatment Facility) at the Half Moon Bay Airport to treat groundwater pumped from three existing water production wells for nitrates, TCP, corrosivity, and manganese.
- Installation of an underground water conveyance pipeline to convey pumped groundwater from the existing Airport wells to the Airport Wells Water Treatment Facility.
- Construction of a road leading to the southernmost Airport well.
- Potential installation of solar panels at the Half Moon Bay Airport and on the roofs of the existing and proposed Alta Vista water tanks.

The District shall assure that safe and reliable access for construction vehicles that does not hinder or jeopardize the safety of regular traffic circulation is provided to each construction site. The improvements are described further below.

The PWP improvements shall be undertaken in accordance with Mitigation Measures listed in the MWSD Public Works Plan Phase I Final Environmental Impact Report (FEIR) SCH# 2004112107 with modifications as certified by the California Coastal Commission. Attached, as Exhibit A, is the Mitigation Monitoring and Reporting Plan (MMRP) section, found in the FEIR, with applicable revisions as per CCC request.

STORAGE TANKS

The proposed project includes the construction of two new water storage tanks in the vicinity of the District's existing Alta Vista and Schoolhouse water storage tanks. Specifically, the proposed tanks are described in Table 4-1.

Alta Vista Tank

The existing 462,000-gallon Alta Vista Tank is located along an unpaved extension of Alta Vista Road. The existing tank is constructed of steel and is approximately 52 feet in diameter and 28 feet tall. A 100,000-gallon settling tank and associated water treatment facility are located directly north of the existing Alta Vista Tank. The settling tank and adjacent facility store and treat water diverted from Montara Creek before it is introduced into the District's storage and distribution system.

Table 4-1: Existing and Proposed Storage Tank Capacities

Location	Existing Storage Tank Capacity (gallons)	Proposed Storage Tank Capacity (gallons)	Comment
Portola Estate	100,000	100,000	No Change
Schoolhouse Tank	100,000	0	Demolished or Repaired
Alta Vista Tank	462,000	462,000	No Change
New Schoolhouse Tank	-	200,000	New
New Alta Vista Tank	-	1,000,000	New
Totals	**662,000**	**1,762,000**	

The proposed new 1,000,000-gallon Alta Vista Tank would be constructed with an overall diameter of about 80 feet and height of about 30 feet (Figure 4-1). The elevation of the proposed tank's floor is set at 488 feet above sea level (asl) allowing 12 feet of the tank's side to be concealed below grade, thus fulfilling the Coastal Commission's line-of-site requirement. The existing 462,000-gallon Alta Vista Tank is located at 470 feet asl. Pumps and pressure vessels may be required to maintain adequate levels in both the existing and new tank. The proposed tank site is situated on the center of the ridge line at an elevation of 502 feet asl. Because the new tank must be "dug" into the site (Figure 4-1), installation would require construction of retaining walls of up to 12 feet in height on either side of the ridge line. The retaining walls would be constructed 10 to 12 feet from the tank to maintain space for an access road.

The installation of the tank would require movement of approximately 7,000 cubic yards of soil and weathered granitics. The cut and fill would be as balanced as possible at the site but approximately 6,000 cubic yards would be taken off site. The excavated material would likely be hauled to Ox Mountain Sanitary Landfill just east of Half Moon Bay. The general area of the reconstruction is shown on Figure 4-2; however the exact boundaries of excavation and fill cannot be determined until bedrock presence is confirmed during grading activities. The tank will be constructed in its entirety on the property owned by the District. The material out of which the tank will be constructed has not been established, but poured in place or cast in place concrete will not be used.

There will be no obstruction of existing hiking trails to Montara Mountain on the Alta Vista ridge property due to design, construction, and operation of the facilities authorized pursuant to PWP 2-06-006. If it is necessary to block the trail temporarily, alternative means of access to Montara Mountain on the Alta Vista ridge property shall be provided.

Pipeline and Power. The new tank would be connected to the existing Alta Vista Tank and associated treatment facilities via an 8-inch, approximately 250-foot long buried pipeline. The pipeline would be installed within the existing unpaved extension of Alta Vista Road.

The Alta Vista Tank would also include the installation of telemetry and remote operating devices to simplify the tank's operation and to minimize the need for on-site operation of the tank. Electrical power to supply the tank's telemetry and remote operating devices would be via a buried electrical supply line or solar panels installed on the roof of the new and existing tanks.

Access Road. 16-foot wide access road, also requiring some landform recontouring, would be constructed leading to the tank site as depicted on Figures 4-1 and Figure 4-2.

Figure 4-1: Proposed Alta Vista Tank Site Plan and Cross-Section

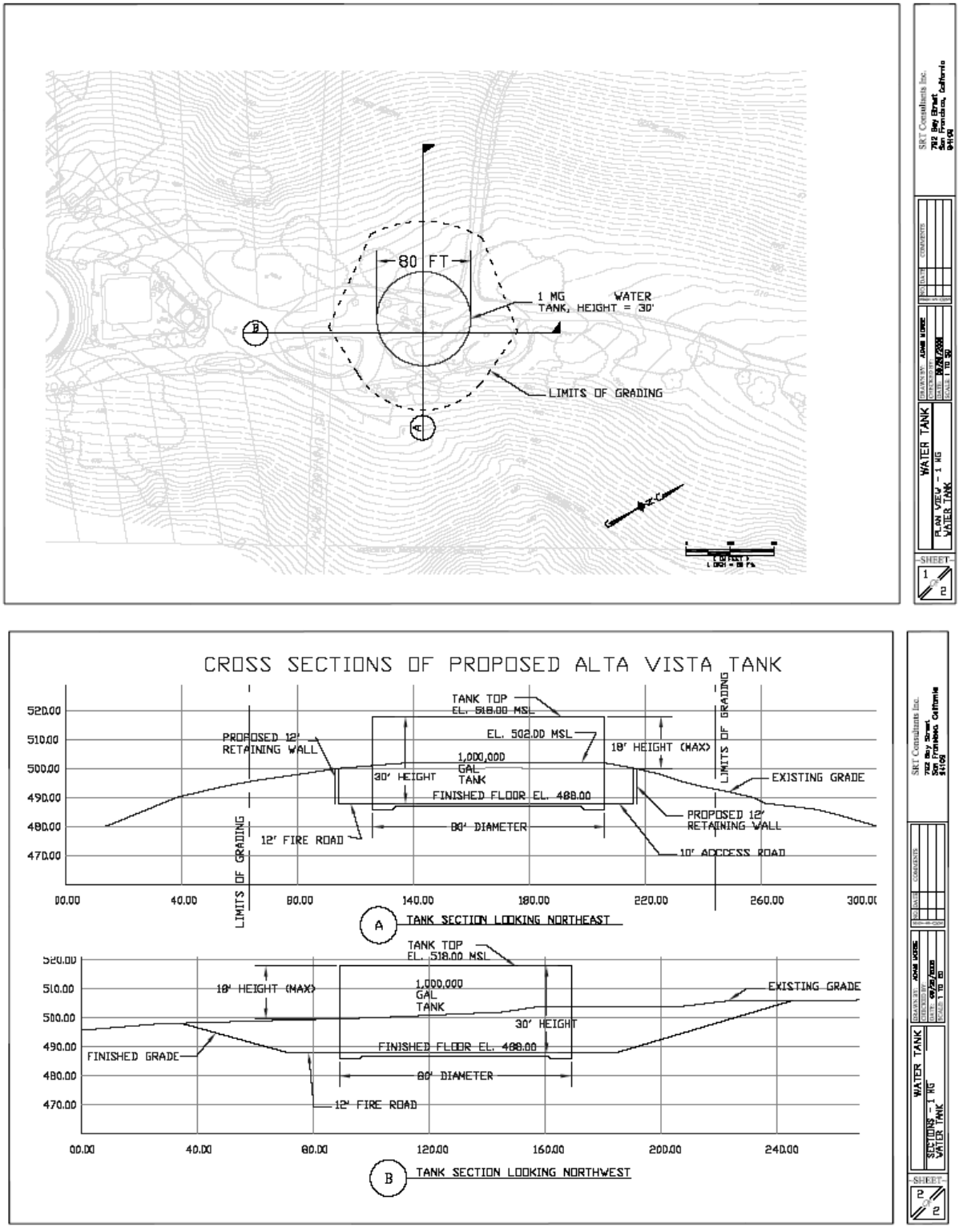


Figure 4-2: Aerial Depiction of Proposed Alta Vista Tank

Solar Panels. Solar panels would be installed on top of the existing and proposed Alta Vista Tanks to provide at least a portion of the electrical power required for the Alta Vista Well No.1 and other electrically powered equipment at the site. The panels would have a non-reflective finish and would be angled up from the roofs of the tanks toward the south to optimize solar exposure. Conduit from the solar panels would be run down the side of the tanks to ground mounted equipment necessary to distribute the electrical power to the equipment, as well as to deliver excess electrical power into the Pacific Gas and Electric Company power grid.

Security Fence. The District has proposed the installation of a chain link fence across the unpaved extension of Alta Vista Road access road. The fence would be installed just northeast of the existing Alta Vista water treatment facility for the purpose of discouraging access to, and vandalism of, the new tank and the proposed production and monitoring wells (Figure 4-2). The fence would be 6 feet in height and approximately 30 feet in length. A gate would be installed at the point where the fence crosses the unpaved extension of Alta Vista Road to provide District staff access to the new storage tank and wells.

Construction. Construction of the Alta Vista Tank shall conform to the specifications and recommendations contained in the Geotechnical Investigation Report for Proposed Alta Vista Tank Site, Montara, California prepared by Terrasearch, Inc. dated August 14, 2008. Prior to commencement of construction, all development subject to PWP-2-06-006 shall obtain all other agency approvals and property owner approvals, as necessary. This includes certification by the San Mateo County engineer that direct damage or indirect threats to public health and safety as a results of construction of the Alta Vista Tank would be unlikely in the event of a fire or geologic hazard.

Tree removal and all other activities associated with tank construction shall be performed between September 1 and January 30 to prevent disturbance to bird nests. If tree clearing and all other

activities associated with tank construction is desired outside of this period, a pre-construction survey for nesting birds shall be conducted prior to clearing of trees and all other activities associated with tank construction. The survey will be conducted by a qualified biologist no more than 30 days prior to initiation or clearing or construction. The survey shall include any areas proposed for any activities such as earthmoving. If occupied migratory bird nests are found within 250 feet of the construction zone, clearing shall not begin until after the nests are protected by an adequate setback (in general, 50 feet for passerines and 250 feet for raptors) defined by a qualified biologist.

All development subject to PWP-2-06-006 shall avoid impacts to the San Francisco Dusky-Footed Woodrat (DFWR) and American badger. Prior to commencement of construction of the Alta Vista water tank, including grading or placement of equipment, a minimum 25-foot buffer shall be established around the active stick nests or burrows adjacent to the project site. A qualified biological monitor shall be present at the site during all grading and construction activities to ensure that the San Francisco DFWR and American Badger are not harmed. Deconstruction of the DFWR nests or relocating the American Badgers or DFWRs is prohibited.

Concurrent with the Notice of Impending Development (NOID) for the Alta Vista Tank, the District shall submit to the Executive Director for review and approval a detailed erosion control plan and landscape plan to revegetate the area around the Alta Vista Tank to control erosion and screen views, in accordance with Mitigation Measures No. 3.1-4 and 3.1-6 of the FEIR, respectively.

Schoolhouse Tank

The existing 100,000-gallon Schoolhouse Tank is located along an unpaved roadway at the end of Buena Vista Street. The tank is constructed of concrete and is 34 feet in diameter and 16 feet tall. A booster pump station is housed in a small structure adjacent to the tank (Figure 4-3).

The proposed new 200,000-gallon Schoolhouse Tank would be constructed with an overall diameter of 48 feet and height of 16 feet (Figure 4-3). The elevation of the proposed tank's floor and water level would be identical to that of the existing tank to allow for balancing the tanks and maintaining consistent pressure throughout the District's system.

The existing tank is located at 174 feet asl. The proposed tank site is situated on a gently sloping hillside ranging in elevation from 176 to 179 feet asl. Installation of the Schoolhouse Tank would require cutting a portion of the hillside and the final tank bottom would be at 174 feet asl (Figure 4-4). A retaining wall up to 6-feet in height would be constructed along a section of the tank site to retain areas that would be excavated to accommodate the new tank (Figure 4-5).

The installation of the tank would require movement of at least 150 cubic yards of soil and weathered granitic rocks based on the geotechnical recommendations (Terrasearch 2005). The cut and fill would be as balanced as possible at the site but approximately 100 cubic yards would be taken off site. The excavated material would likely be hauled to the Ox Mountain disposal site in Half Moon Bay.

An alternative design would place two new 100,000 gallon tanks at the Schoolhouse Tank site. One tank would replace the existing tank, while the other would be placed adjacent to the existing pump station on its southeast side (Figure 4-6). Both tanks would be constructed with a diameter of 34 feet and a height of 16 feet. The new tanks would both sit at the existing tank's current elevation. The material out of which the tank(s) will be constructed has not been established, but poured in place or cast in place concrete will not be used.

Figure 4-3: Proposed Schoolhouse Tank Site Plan

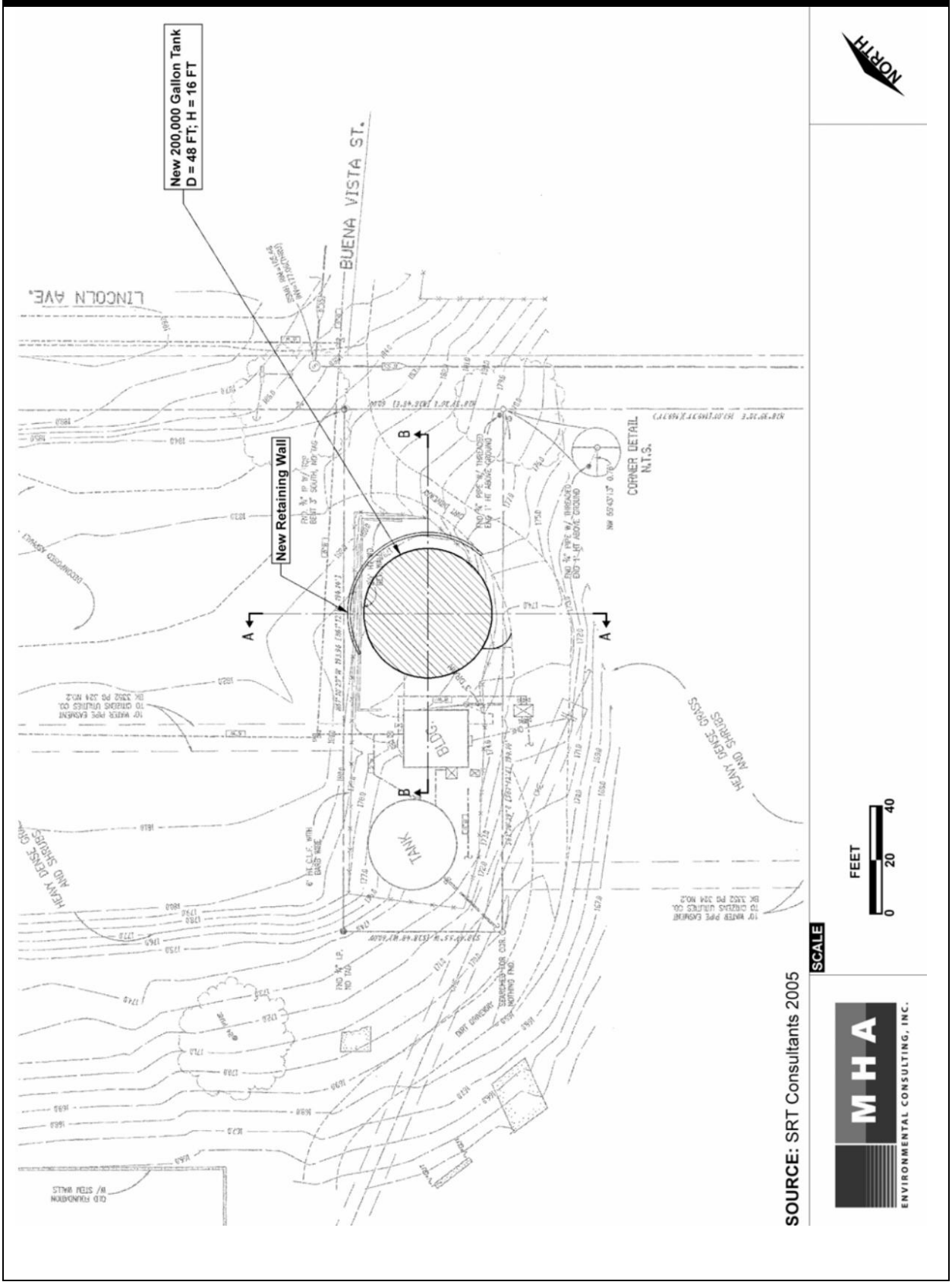


Figure 4-4: Proposed Schoolhouse Tank Site Plan

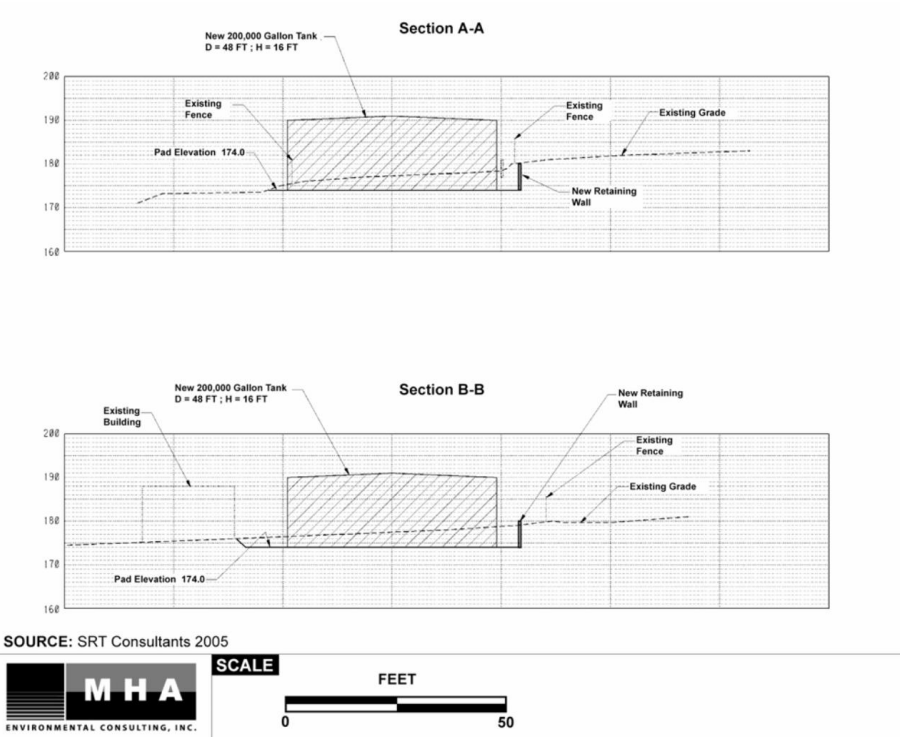


Figure 4-5: Aerial Depiction of Proposed Schoolhouse Tank

Figure 4-6: Proposed Schoolhouse Tank Site Plan

Pipeline and Power. The new tank would be connected to the existing pump house via an 8-inch diameter, less than 20-foot long buried pipeline. The Schoolhouse Tank would also include the installation of telemetry and remote operating devices to simplify the tank's operation and to

minimize the need for on-site operation of the tank. Electrical power to supply the tank's telemetry and remote operating devices would be via a buried electrical supply line.

Solar Panels. Solar panels would be installed on top of the proposed Schoolhouse Tank to provide at least a portion of the electrical power required for equipment at the site. The panels would have a non-reflective finish and would be angled up from the roof of the tank toward the south to optimize solar exposure. Conduit from the solar panels would be run down the side of the tank to ground mounted equipment necessary to distribute the electrical power to the site's electrically power equipment, as well as to deliver excess electrical power into the Pacific Gas and Electric Company power grid.

Existing Schoolhouse Tank Demolition. Following installation of the new Schoolhouse Tank, the existing 100,000-gallon Schoolhouse Tank would be decommissioned and removed from the site. This area would then be paved and used by the District as a maintenance yard, consistent with the current use of the proposed tank location.

Construction. Construction of the Schoolhouse Tank(s) shall conform to the specifications and recommendations contained in the Geotechnical Investigation Report for Proposed Schoolhouse and Alta Vista Tank Sites, Montara, California prepared by Terrasearch, Inc. dated August 4, 2005. If a two-tank option is chosen, the existing Schoolhouse Tank may be repaired for use as one of the two tanks, if an inspection report signed by a licensed structural engineer that is reviewed and approved by the Executive Director shows that the repaired tank would be seismically sound.

Prior to commencement of construction, all development subject to PWP-2-06-006 shall obtain all other agency approvals and property owner approvals, as necessary. This includes certification by the San Mateo County engineer that direct damage or indirect threats to public health and safety as a results of construction of the Schoolhouse Tank(s) would be unlikely in the event of a fire or geologic hazard.

Tree removal and all other activities associated with tank construction shall be performed between September 1 and January 30 to prevent disturbance to bird nests. If tree clearing and all other activities associated with tank construction is desired outside of this period, a pre-construction survey for nesting birds shall be conducted prior to clearing of trees and all other activities associated with tank construction. The survey will be conducted by a qualified biologist no more than 30 days prior to initiation or clearing or construction. The survey shall include any areas proposed for any activities such as earthmoving. If occupied migratory bird nests are found within 250 feet of the construction zone, clearing shall not begin until after the nests are protected by an adequate setback (in general, 50 feet for passerines and 250 feet for raptors) defined by a qualified biologist.

All development subject to PWP-2-06-006 shall avoid impacts to the San Francisco Dusky-Footed Woodrat (DFWR) and American badger. Prior to commencement of construction of the Alta Vista water tank, including grading or placement of equipment, a minimum 25-foot buffer shall be established around the active stick nests or burrows adjacent to the project site. A qualified biological monitor shall be present at the site during all grading and construction activities to ensure that the San Francisco DFWR and American Badger are not harmed. Deconstruction of the DFWR nests or relocating the American Badgers or DFWRs is prohibited.

Concurrent with the Notice of Impending Development (NOID) for the Schoolhouse Tank(s), the District shall submit to the Executive Director for review and approval a detailed erosion control plan in accordance with Mitigation Measures No. 3.1-4 of the FEIR.

PRODUCTION AND MONITORING WELLS

A test well, referred to as Alta Vista Well No.1 (also known as BH-9b or 2004-4 during hydrological investigations), was installed in 2004 to assess the potential for increasing the District's available domestic water supply through additional groundwater extraction. A second well, referred to as Alta Vista Well No.2 (also known as BH-9 or 2004-3), was installed concurrently for monitoring purposes. Both wells were installed in accordance with a Coastal Development Permit (CDP) issued by the San Mateo County Environmental Services Agency on May 19, 2004.

Following a series of tests, the District determined that the test well Alta Vista No.1 has the capability of producing a sustainable volume of water suitable for the District's existing needs. The existing test well draws water from open joints in the granitic formations located approximately 780 feet below the ground surface. Initial tests of the well's production capabilities suggest that it can produce up to 300 gallons of water per minute over a 120-hour duration. The District has proposed to pump the well at 150 gallons per minute continuously. At no time would the increased pumping rate exceed the District's current demand. Further, the District would only increase the well's pumping rate if it could be conclusively determined that there would be no adverse biological or hydrological impacts associated with the increased rate. Pumping of the Alta Vista Well No.1 shall not exceed 150 gpm averaged over a 24-hour period. Any future proposals to increase the pumping rate shall require an amendment to this public works plan, and the District shall comply with any informational requests, including pumping tests, to demonstrate with sufficient evidence that the increased pumping rate will not impact nearby wetlands, riparian areas, and sensitive habitats. The District may not initiate any pumping tests for increased pumping rates without authorization from Commission staff after the PWP amendment application has been submitted. The District shall submit to the Coastal Commission annual water production reports for review

and approval by the Executive Director by December 1st of each year that the Alta Vista Well No. 1 is in production. These reports shall demonstrate that the pumping rate of the well does not exceed 150 gpm averaged over any
24-hours period.

The Alta Vista Wells No.1 and No.2 are located approximately 840 feet and 1,250 feet, respectively, northeast (upslope) of the District's existing 462,000-gallon Alta Vista water storage tank, and approximately 590 feet and 1,000 feet respectively from the proposed new Alta Vista water storage tank. Both wells are located along the unpaved extension of Alta Vista Road on District property.

Conversion of the Alta Vista Well No.1 to a production well would include (Figure 4-7):

- Construction of a 25-foot by 6-foot concrete pad around wellhead No.1
- Installation of a 7-foot high chain-link fence around the perimeter of the concrete pad
- Placement of two 7-foot tall fiberglass enclosures adjacent to the wellhead and within the fenced enclosure, which would house telemetry equipment for remote monitoring and operation and an electrical pump
- Placement of a portable diesel-powered generator on the concrete pad and within the fenced enclosure
- Installation of an approximately 790-foot long, 6-inch diameter underground pipeline along the unpaved road to convey water from the well to the existing Alta Vista water storage tank
- Installation of a buried electrical conduit along the unpaved road extending from the existing Alta Vista Tank to the well

Water quality testing indicates that groundwater extracted from Alta Vista Well No.1 currently meets drinking water standards. If water quality changes in the future, the District would treat the water with sodium hypochlorite (liquid chlorine) prior to conveyance to District customers. The chlorine would be stored at the wellhead.

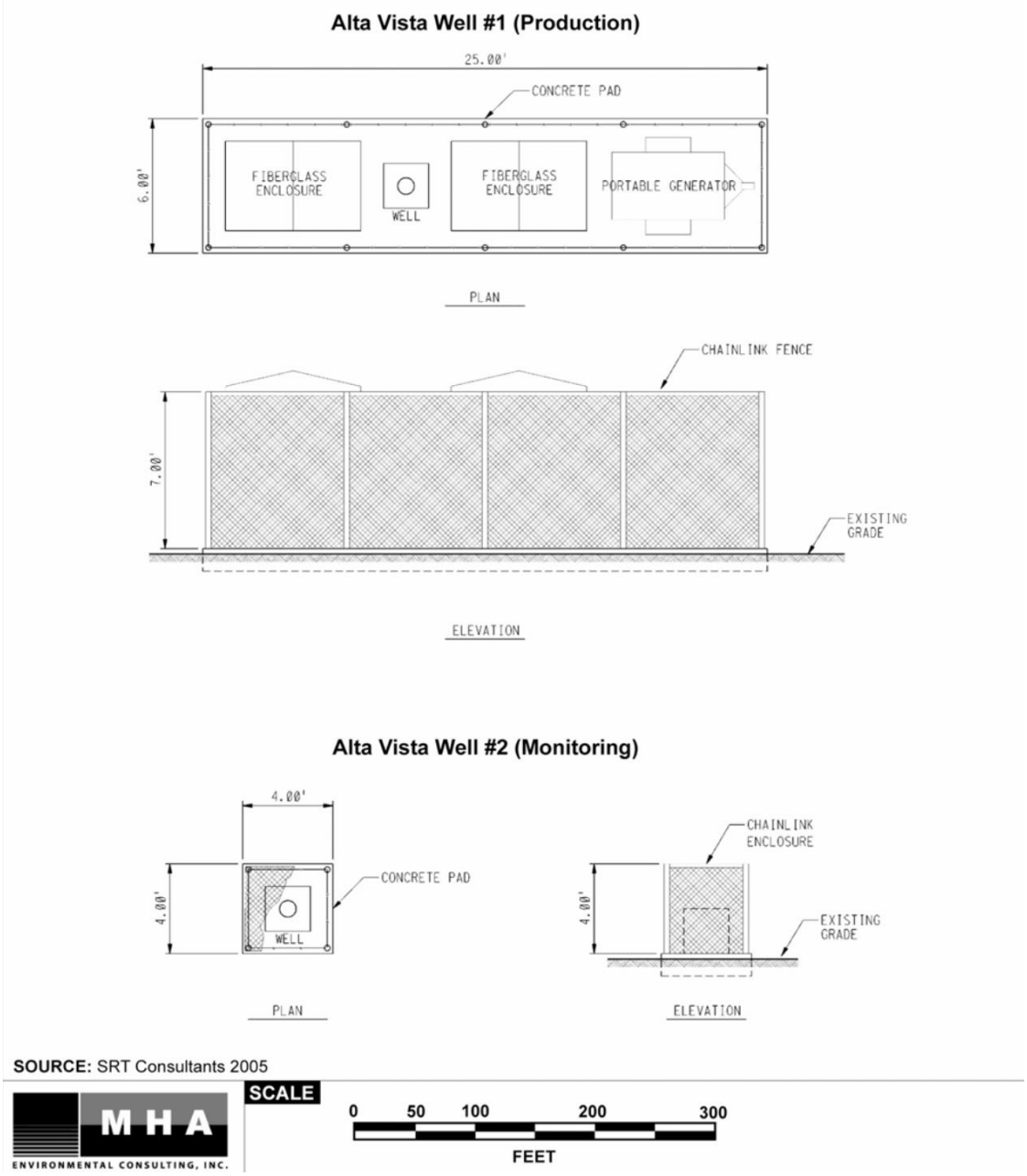
The project also includes enclosing and securing the existing Alta Vista Well No.2, located approximately 400 feet north of Alta Vista Well No.1, for use as a monitoring well to provide a method for monitoring the aquifer's condition (level and quality). The Alta Vista Well No.2 project improvements would include (Figure 4-7):

- Construction of a 4-foot by 4-foot concrete pad around wellhead No.2
- Installation of a 4-foot high chain-link fence around the perimeter of the concrete pad
- Installation of an approximately 1,200-foot long underground electrical conduit along the unpaved road, connecting with Alta Vista Well No.1, and continuing on to the existing Alta Vista water storage tank

Concurrent with the Notice of Impending Development (NOID) for construction of the Alta Vista production well and water tank, the District shall submit to the Executive Director for review and approval a Spill Prevention and Containment Plan in accordance with Mitigation Measure 3.5-1 of the FEIR.

No re-boring or re-configuration of the well casings would be required at Alta Vista Wells No.1 or No.2.

Figure 4-7: Alta Vista Production and Monitoring Wells Proposed Improvements



Monitoring. Hydrologic Monitoring shall continue for a period of three years according to the "Hydrologic and Vegetation Monitoring Schedule Alta Vista Well" and "Hydrologic and Vegetation Monitoring Plan Alta Vista Well," dated September 5, 2008. In addition, if granted permission by individual property owners, the District shall also conduct hydrologic monitoring of individual private wells on Alta Vista Road. Annual and final monitoring reports shall be submitted to the Executive Director. The vegetation monitoring portion of the aforementioned Alta Vista Monitoring Plan shall be superseded and replaced by the plan described below.

Concurrent with the submittal of the Notice of Impending Development (NOID) for conversion of the Alta Vista Well No.1 from a test well to production well, a qualified biologist or biometrician shall prepare a revised Vegetation Monitoring Plan for review and approval by the Executive Director, and shall at a minimum include the following:

(i) A baseline assessment, including photographs, of the current physical and ecological condition of the potential impact site and appropriate control sites that are unlikely to be affected by the pumping. All sites shall be sampled using the same methods.

(ii) A description of the goals of the vegetation monitoring plan, including a description of how the potential impact site will be compared to the control sites and how significant effects will be demonstrated. If statistical tests are to be employed there must be a statistical power analysis before sampling begins to insure that there is sufficient replication to detect biologically meaningful differences between the potential impact area and the control areas.

(iii) A formal monitoring plan

(iv) A schedule

(v) Description of sampling units

(vi) Sampling design, e.g. how will the sampling units be placed in the field, including description of the random component in the spatial distribution of samples and sample size for the various variables.

(vii) Detailed description of the variables to be measured and the field methods used in their estimation. For continuous variables, estimates of the actual value should be made. Continuous variables should not be converted to categorical variables through the use of thresholds or lumping data into broad categories. Estimates of changes in survivorship, tree height, and condition should be based on repeated observations of at least 30 randomly selected and marked individuals of each species of interest in each sample area.

(viii) A monitoring period of at least three years, beginning with the first sample taken based on the revised sampling plan.

(ix) Provision for submission of annual reports of monitoring results to the Executive Director for the duration of the required monitoring period for purposes of review for a future Phase II Public Works Plan application. Each report shall be cumulative and shall summarize all previous results. Each report shall document the condition of the sample sites with photographs taken from the same fixed points in the same directions. Each report shall also include an “Impact Evaluation” section where information and results from the monitoring program are used to evaluate whether there is evidence of an effect of the pumping.

(x) Provision for submission of a final monitoring report to the Executive Director at the end of the final monitoring period for purposes of review for a future Phase II Public Works Plan application. The report must evaluate whether the vegetation near the wells has been negatively affected by the pumping.

(xi) Provision for possible further action. If the final report indicates that there have been negative impacts, the applicant shall submit within 90 days a mitigation plan to compensate

for those impacts. The revised restoration program shall be processed as an amendment to the coastal development permit unless the Executive Director determines that no permit amendment is required.

AIRPORT WELLS WATER TREATMENT FACILITY

The District currently operates three production wells at the Half Moon Bay Airport, each of which includes wellhead water treatment facilities. Based on elevated levels of nitrates, TCP, corrosion, and manganese in the water extracted from these wells, the District has determined that an additional treatment system is required prior to the well water's introduction into the District's distribution system. The proposed new treatment system would be centrally located and serve all three wells (Figure 4-8). Water extracted from the three wells would first be blended to treat for manganese and then conveyed through the Airport Wells Water Treatment Facility's following components:

1) Two granulated activated carbon (GAC) tanks for TCP removal
2) Four ion exchange vessels for nitrate removal
3) Two air stripping towers for pH adjustment to treat for corrosion potential

Air stripping would also potentially be accomplished by (1) diffused aeration, (2) utilization of a spray nozzle and tray aerator, or (3) aeration by piping a diffuser down the wells and adding air directly into the groundwater. A flow diagram of the treatment process is depicted in Figure 4-9.

The Airport Wells Water Treatment Facility would also include two fiberglass buildings that would house Supervisory Control and Data Acquisition (SCADA), controls, power systems, and a chlorination system.

The centralized treatment facility components would be installed on a 40-foot by 15-foot concrete pad and enclosed by a 7-foot tall chain link fence. The facility would be sited at the east side of the Half Moon Bay Airport, just northwest of the fence line surrounding the existing Half Moon Bay Airport Administration Building, and southwest of the Airport's frontage road. A new access road would be constructed off the Airport's frontage road (Figure 4-9).

The centralized treatment facility would be connected with the three existing wells and the District's distribution system via existing and new buried pipelines. Electrical power supply to the Facility would be through buried electrical conduits or solar panels. Solar panels would be placed on an undeveloped area directly northwest of the proposed Airport Wells Water Treatment Facility (Figure 4-8).

A 380-foot long and 12-foot wide unpaved access road would be constructed leading to the southernmost Airport well. The components of the proposed project at the Half Moon Bay Airport would be located on property not currently owned by the District.

Concurrent with the Notice of Impending Development (NOID) for the Airport Wells Water Treatment Facility, the District shall submit to the Executive Director for review and approval a detailed erosion control plan, drainage plan, and landscape plan to generally screen the Treatment Facility equipment and solar panel array from Highway 1 views in accordance with Mitigation Measures No. 3.1-4, 3.2-2, and 3.9-3 of the FEIR, respectively.

Solar Panels

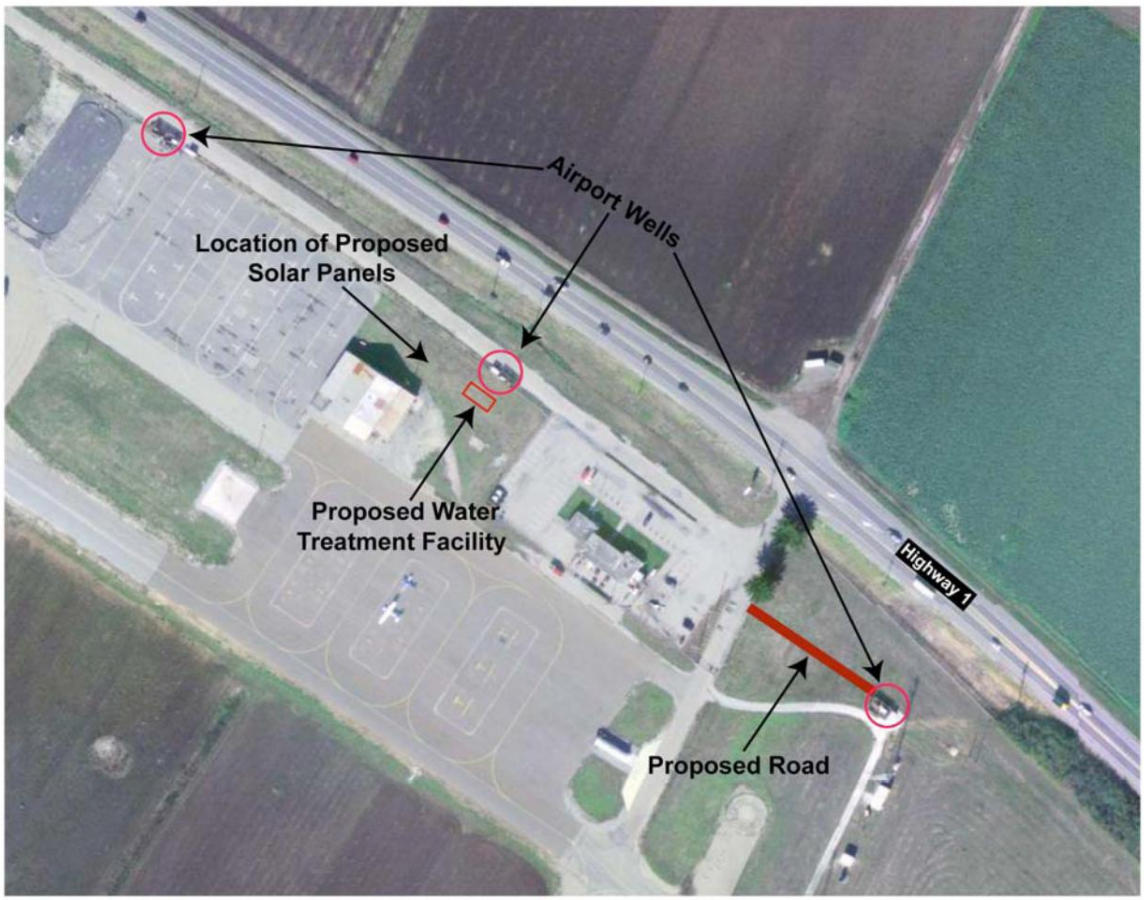
Approximately 2,500 square feet of solar panels would be installed just northwest of the proposed Airport Wells Water Treatment Facility. The panels would have a non-reflective finish, mounted on a structural system raised off the ground, and angled up toward the south to optimize solar

exposure. Conduit from the solar panels would be run in buried conduit to ground-mounted equipment necessary to distribute the electrical power to the site's equipment, as well as to deliver excess electrical power into the Pacific Gas and Electric Company power grid. The panels would be screened from view by low lying landscape around the installation's perimeter.

Existing Airport Wells Treatment Facilities

The existing individual wellhead treatment facilities would be decommissioned and removed from the site following installation of the new central treatment facility.

Figure 4-8: Aerial Depiction of Proposed Airport Wells Water Treatment Facility



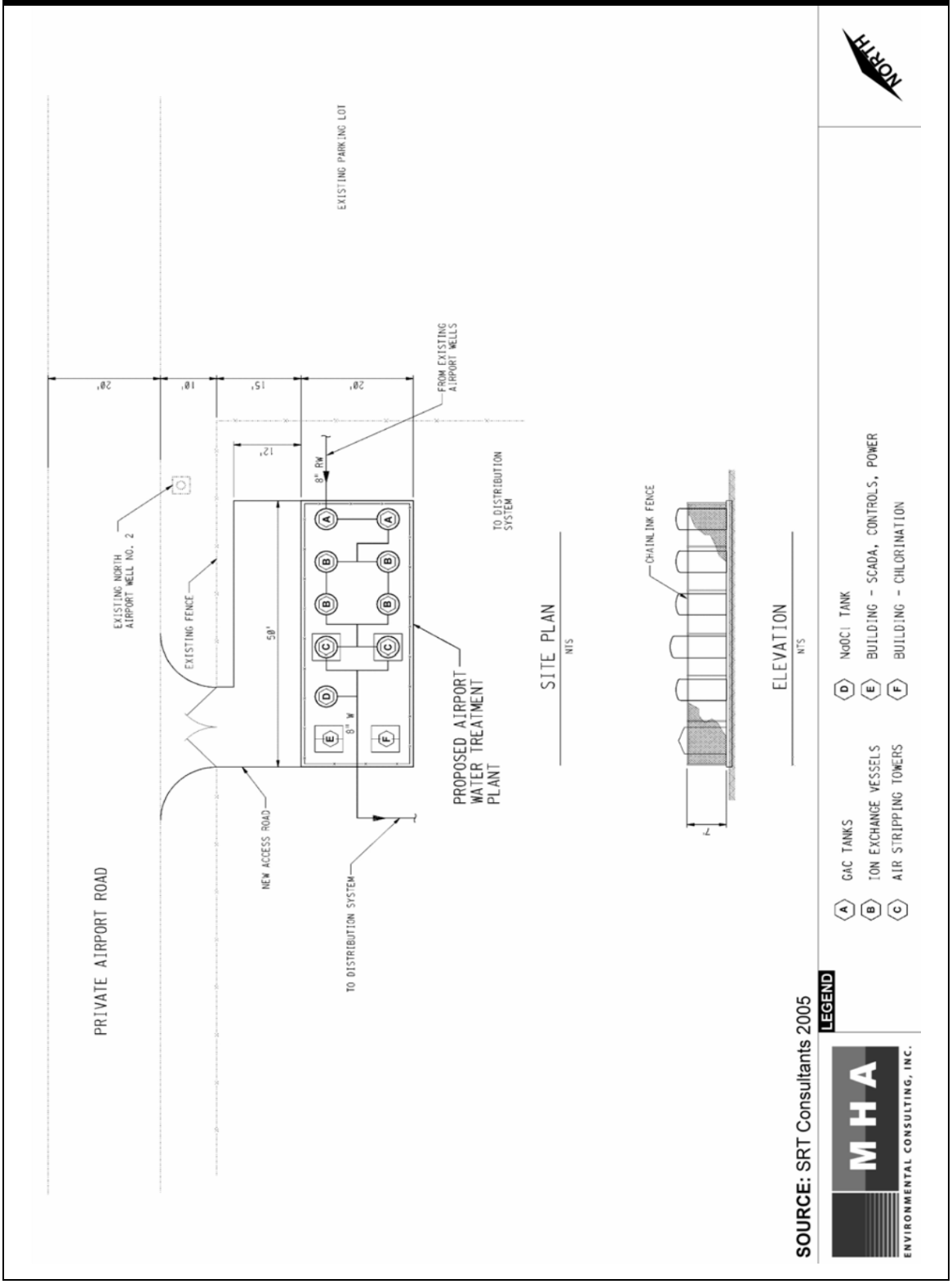
SOURCE: MHA 2005

MHA ENVIRONMENTAL CONSULTING, INC.

SCALE 0 1/4 MILE

NORTH

Figure 4-9: Airport Wells Proposed Water Treatment Plant Site Plan and Cross Section



5 Permits and Approvals

The proposed system improvements included in the first phase of the Public Works Plan will require the approval of permits by a number of public agencies, including:

- Approval by the California Coastal Commission pursuant to Section 30605 of the California Coastal Act
- Coverage under the Construction General Permit obtained from the Regional Water Quality Control Board (Alta Vista Tank and possibly Airport Wells Water Treatment Facility)
- Domestic Water Supply Permit Amendment issued by the California Department of Health Services Drinking Water Program (Airport Wells Water Treatment Facility)
- Drinking Water Supply Permit issued by the California Department of Health Services Drinking Water Program (Alta Vista Well No.1)

5.1 Public Works Plan Project Procedures

The purpose of this chapter is to set forth procedures for reviewing and authorizing projects contained in the Montara Water and Sanitary District ("MWSD") Public Works Plan Phase I ("PWP") for MWSD's water facilities improvements. This chapter is divided into six sections. The first section sets forth definitions, general provisions and procedures for supplemental reports. The second section sets forth public notice requirements. The third section sets forth the Coastal Commission's areas of responsibility with regard to the PWP project review process. The fourth section sets forth the procedure for determining the effective and expiration dates of PWP project authorizations and provisions for extension of authorizations. The fifth section sets forth a post-construction authorization monitoring program. The sixth section sets forth procedures for the enforcement of the PWP. All development subject to PWP-2-06-006 shall adhere to the project procedures outlined in this Section.

5.1.1. Definitions, General Provisions and Supplemental Reports

A. Definitions

"California Coastal Commission" and "Coastal Commission" and "Commission" mean the California Coastal Commission.

"Contract Documents" means the plans, specifications, general and specific conditions, agreement and other documents prepared by or for MWSD for the construction or acquisition of a specific project contained in the PWP.

"Development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code) and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes.

"District General Manager" means MWSD's General Manager or her/his designee.

"Components of the PWP" means, collectively, the eleven projects comprising the PWP, such as the Alta Vista Well, the AltaVista Water Storage Tank, the Schoolhouse Water Storage Tank and the Airport Wells Water Treatment Facility. "Component" means any one of the projects.

"Executive Director of the Commission" or "Executive Director" mean the Executive Director of the California Coastal Commission or his/her designee.

"MWSD" means the Montara Water and Sanitary District.

"MWSD Board" or "Board," means MWSD's Board, the governing body of MWSD.

"Notice of Impending Development" means a notice of MWSD's intention to construct one or more of the projects contained in the PWP, which notice shall be provided by MWSD's General Manager to the Coastal Commission and to interested persons, organizations, and governmental agencies, and which also shall be posted conspicuously at the same locations within MWSD's boundaries that MWSD's official notices are posted and at the site of the impending construction of a project of the PWP.

"Project" means a development component specifically included in the PWP.

"Project Report" means the report on the PWP dated November 12, 2008, including the certified FEIR, submitted with MWSD's application for certification of its PWP and any supplements thereto and containing all of the information specified in subsection 5.1.1 D2.

"Public works" means (a) all production, storage, transmission, and recovery facilities for water, sewerage, telephone, and other similar utilities owned or operated by any public agency or by any utility subject to the jurisdiction of the Public Utilities Commission, except for energy facilities; (b) all public transportation facilities, including streets, roads, highways, public parking lots and structures, ports, harbors, airports, railroads, and mass transit facilities and stations, bridges, trolley wires, and other related facilities and (c) all publicly financed recreational facilities, all projects of the State Coastal Conservancy, and any Development by a special district.

B. Computation of time

The time in which any act under this PWP is to be done shall be computed by excluding the first day and including the last, unless the last day is a weekend or state holiday, which is also excluded.

C. MWSD's General Manager

MWSD's General Manager shall be the responsible person for contact regarding inquiries concerning PWP authorizations and implementation.

D. Procedures for Project Review and Authorization

1. Preparation of PWP Project Reports

MWSD's General Manager shall review all proposed projects pursued under the PWP and prepare a Project Report for each proposed project.

2. Contents of a PWP Project Report

A Project Report shall include the information that MWSD's Board deemed necessary to satisfy the standards for the PWP. A Project Report shall include:

(a) A description of the proposed project(s), including a narrative description of the size, kind, intensity and location, of each proposed development and including the supporting site plans and elevations thereof;

(b) Environmental documentation for the Project(s) including information prepared pursuant to the California Environmental Quality Act and an analysis of alternative locations for each proposed development activity;

(c) All technical reports associated with the Project(s) (i.e., biological reports, geotechnical reports, traffic analyses, etc.), including all reports and plans required by the PWP;

(d) The results of consultation with parties interested in, with jurisdiction over, and/or affected by the Project(s), including consultations with concerned public entities and agencies.

(e) All implementing mechanisms associated with the Project(s) (including but not limited to CEQA mitigation monitoring reports, legal documents, etc.);

(f) All correspondence received regarding the Project(s);

(g) Identification of the person responsible for ensuring that the proposed Project(s) shall be constructed in accordance with authorized specifications and that all terms and conditions of the authorization are met (Project Manager).

3. Early Coordination with the Coastal Commission

(a) MWSD shall consult with the Executive Director as early as possible regarding proposed Project(s) with the object of identifying issues of possible concern to the Coastal Commission.

(b) Project Descriptions shall be provided to the Executive Director concurrently with submittal thereof to the Board of Directors

(c) MWSD shall provide the Executive Director with all public notices and documentation circulated to the public pursuant to the Board's required PWP review process, including the process for that portion of the public which expressly requested to be noticed.

(d) All required coordination/consultation with the Executive Director shall be initiated through and facilitated by planning staff of the Coastal Commission's North Central Coast District Office, 45 Fremont Street, Suite 2000 San Francisco, CA 94105.

4. Distribution of Project Reports to the Board

The General Manager shall submit a Project Report containing all of the information specified in subsection 5.1.1 D2 above as well as an action recommendation to MWSD's Board for each proposed Project pursued under the PWP.

5. Board Authorization of PWP Revisions

The Board may authorize a Project based on information contained in the Project Report and any other information in the record provided that:

(a) The proposed project has been reviewed in compliance with the California Environmental Quality Act (CEQA) and/or the National Environmental Policy Act (NEPA), the Board has completed all related CEQA and/or NEPA documents and all conditions and/or mitigation

measures identified in those CEQA and/or NEPA documents have been incorporated as part of the project;

(b) The Board finds that the proposed revision advances the specific project objectives of the PWP;

(c) The proposed project, as modified by any conditions and/or mitigation measures incorporated as part of the project, is contained in and consistent with the certified PWP.

6. Project Authorization Required

No Project contained in the PWP shall be undertaken without prior authorization in accordance with this chapter. Any development not contained in the PWP requires coastal development permit authorization by either the Coastal Commission in its retained jurisdiction (e.g. below the mean high tide, on public trust lands), or San Mateo County pursuant to its certified LCP.

7. Coastal Commission's Retained Jurisdiction

After certification of the PWP, the Coastal Commission continues to retain permit jurisdiction over Development on tidelands, submerged lands, and public trust lands, whether filled or unfilled, within MWSD's service area (see "Coastal Commission Retained Jurisdiction Area" in Figure _.1). Under the Federal Coastal Zone Management Act, the Commission also retains federal consistency review authority over federal activities and federally permitted activities on or adjacent to the sites.

The Commission also retains permit jurisdiction outside of the retained jurisdiction area over Development that was authorized by Commission action before the date of PWP certification. Projects neither contained in the PWP nor located in the Commission's retained permit jurisdiction shall be reviewed by the County of San Mateo for consistency with its certified LCP.

5.1.2 Notice of Impending Development

A. Provision of Advance Notice and Information to Coastal Commission

The General Manager shall give the Executive Director written notice of MWSD's intent to submit a Notice of Impending Development pertaining to the construction of a project or projects contained in the PWP at least 30 calendar days prior to submittal of the Notice of Impending Development.

B. Recipients of Notice of Impending Development

After approval by the Board of the Contract Documents for a project or projects to be constructed or acquired, and at least 30 working days prior to issuing a notice to proceed to the contractor for such construction or acquisition, the General Manager shall send via first-class mail a written Notice of Impending Development to the following persons, parties and agencies informing them of the Board's decision:

1. The Executive Director;
2. Owners of record of each property within 100 feet (excluding road rights-of-way) of the proposed project(s);
3. Persons residing on properties located within 100 feet (excluding road rights-of-way) of the proposed project(s);
4. All other persons, parties, and agencies who have requested in writing to receive such notice, either for the project(s) that is the subject of the notice or for all PWP projects;
5. All parties consulted with pursuant to Section 5.1.1.D.2 above; and

6. Persons, parties, and agencies that are known by MWSD to be interested in the specific project(s) that is the subject of the notice (e.g., persons, parties, and agencies that submitted testimony or other comments during the CEQA/NEPA process for the PWP, etc.).

C. Contents of Notice of Impending Development

The Notice of Impending Development shall be clearly titled as such and shall, at a minimum, include the following information regarding the PWP authorization:

1. The description of the proposed project(s), including a narrative description of the size, kind, intensity and location of each proposed development as well as an identification of the existence of the PWP Project Report and information regarding where and when it is available for public review;
2. The Board's approval of the Contract Documents for the project(s);
3. The anticipated date of commencement of construction of the project(s);
4. The appropriate MWSD contact person(s) or designated Project Manager and her/his contact information;
5. The process for Coastal Commission review of the project(s) (including contact information for Commission staff); and
6. A list of recipients of the Notice of Impending Development.

D. Posting Requirements for Notice of Impending Development

The General Manager shall post the Notice of Impending Development in conspicuous locations at the proposed project(s) site(s) no later than the date that the Notice of Impending Development is sent pursuant to Section 5.1.2.B, and at least 30 working days prior to the commencement of construction. The Notices shall comply with the following requirements:

1. Notices that are posted shall be clearly visible and printed with black text/graphics on a brightly hued background (e.g., golden-rod yellow) using card-stock weight (at the least) paper or functional equivalent (e.g., wood, cardboard, corrugated plastic (or "coroplast"), plastic, vinyl, metal, etc.). Notices shall be laminated or otherwise weatherproofed so as to be legible at all times, and shall be at least 8½ inches by 11 inches in size, and no greater than 4 feet by 8 feet in size.
2. Notices shall be posted against a solid background at least as large as the notice itself (e.g., posting a card-stock notice on an 8½ inch by 11-inch piece of plywood attached to a stake) or shall be printed onto an integral solid background (e.g., coroplast), and shall be posted at a readable height (i.e., approximately three to six feet).
3. Notices shall be posted at locations on the perimeter (and/or within the perimeter as appropriate) of the proposed project site where the site intersects public use areas (streets, paths, parking lots, etc.). Notices shall also be posted at MWSD office and post offices in Montara and Moss Beach.
4. Notices that do not meet the criteria listed above, that otherwise become illegible, or that otherwise are not visible to pedestrians or disappear (for whatever reason) shall immediately be replaced. All notices shall remain posted until the effective date of authorized commencement of construction (in accordance with Section _.4.C).

E. Supporting Information for the Notice of Impending Development

Supporting information sufficient to allow the reviewer to determine whether the proposed project is consistent with the certified PWP shall accompany the Notice of Impending Development mailed to the Executive Director and to persons, parties, and/or agencies requesting such information. At a minimum, the supporting information shall include:

1. The Project Report (including all of the information identified in subsection 5.1.1.D2), updated to include any changes or additions made in the course of review by MWSD; provided, that copies of lengthy and/or oversized studies, reports, and technical materials included as part of the Project Report shall be provided only to the Executive Director and to interested persons, parties, and agencies that specifically request these materials;
2. Any final authorization documents from the Board (e.g., resolutions, minute orders, certifications, etc.) not included in the Project Report;
3. A separate document that identifies all Project conditions and mitigations and explains how compliance will be achieved and measured for each;
4. Copies of all correspondence received regarding the proposed PWP Project; and
5. For the Executive Director only:
   (a) A mailing list with names and addresses for each of the persons, parties, and agencies listed in Section 5.1.2.B above, where the list is labeled and organized by each of the categories listed;
   (b) One set of plain (i.e., unadorned with no return address) regular business size (9½ inches by 4⅛ inches) envelopes stamped with first class postage (metered postage is not acceptable) addressed to each of the listed addressees from Section 5.1.2.B, above, for each Commission hearing (if applicable) on the matter (i.e., if there are multiple Commission hearings on the matter, then multiple such envelop sets shall be provided as directed by the Executive Director); and,
   (c) Evidence that the Notice of Impending Development has been posted pursuant to the parameters of Section 5.1.2.D, above, (e.g., a site plan with the notice locations noted and/or photos of the notice locations attached).

5.1.3 Coastal Commission Review of PWP Components

The Coastal Commission shall review project(s) authorized for construction by MWSD for consistency with the PWP in accordance with the procedures of this Section.

A. Filing the Notice of Impending Development

Consistent with 14 CCR sections 13357(a)(5), 13359(a), and 13553-13554, unless there are unusual circumstances, within five working days of receipt of the Notice of Impending Development and all applicable supporting information (as described in Section 5.1.2 above) for construction of the project(s), the Executive Director shall review the submittal and shall determine whether additional information is necessary to determine if the proposed project(s) is/are consistent with the PWP, and if additional information is deemed necessary, shall request such information from the General Manager.

1. The Notice of Impending Development shall only be deemed filed if the Executive Director determines that the information supplied is consistent with the information requirements of 14 CCR sections 13357(a)(5), 13359(a) and 13353 and is sufficient to allow the Commission to determine whether the proposed project is consistent with the certified PWP.

2. If the Executive Director has requested additional supporting information needed to determine consistency with the PWP, then the Notice shall be deemed filed when the Executive Director determines that all necessary supporting information has been received.

B. Coastal Commission Hearing Deadline

Consistent with 14 CCR sections 13357(a)(5) and 13359, the thirtieth working day following the day the Notice of Impending Development is deemed filed is the Hearing Deadline. The Hearing Deadline may be extended if, on or before the Hearing Deadline, the General Manager waives MWSD's right to a hearing within thirty working days, and agrees to an extension to a date certain, no more than three months from the Hearing Deadline, to allow for Commission review of the proposed project(s) at a later hearing.

C. Coastal Commission Review and Determination of Consistency with PWP

The Executive Director shall report in writing to the Commission regarding any pending proposed project(s). The Coastal Commission shall review the proposed project(s) at a scheduled public hearing prior to the Hearing Deadline.

The Executive Director's report to the Commission shall include a description sufficient to allow the Commission to understand the location, nature, and extent of the project(s), and a recommendation regarding the consistency of the proposed project(s) with the certified PWP. On or before the Hearing Deadline the Commission shall make one of the following determinations:

1. Determine that the proposed project(s) is/are consistent with the certified PWP, or
2. Determine that conditions are required to render the proposed project(s) consistent with the certified PWP, including identification of the required conditions.

Following the Commission's determination, the Executive Director shall inform the General Manager of the Commission's determination and shall forward any conditions associated with it. If the Commission has identified conditions required to render the project(s) consistent with the PWP, construction shall not be undertaken until the conditions have been incorporated into the project(s).

Coastal Commission review of a proposed project(s) shall be deemed complete on the date of a Commission determination that the project(s) is/are consistent with the PWP with or without conditions.

Upon completion of Commission review, MWSD may undertake construction or acquisition of the project(s) provided, that any conditions imposed by the Commission to render the project(s) consistent with the PWP have been incorporated into the project(s).

5.1.4 Effective Date and Expiration Date of PWP Authorizations; Extension of Authorizations

A. Effective Date of PWP Project Authorizations

Unless expressly stated otherwise in the approval documents, the effective date of a Project authorization shall be the date the Coastal Commission's review of the proposed Project is deemed complete pursuant to Section 5.1.3 C.

B. Expiration Date of Project Authorizations

Unless expressly stated otherwise in the approval documents, the expiration date of a Project authorization pursuant to this PWP shall be three years following its effective date. Thereafter, construction of the Project may not commence unless the authorization has been extended as provided herein, or a new authorization and review by the Commission has been completed in accordance with PWP provisions for initial review of a proposed Project.

C. Extension of Component Authorizations

The expiration date of a Project authorization may be extended for a period not to exceed one year if the General Manager determines that there are no changed circumstances that may affect the Project's consistency with the PWP. In such a case, before the expiration of the authorization, the General Manager shall submit to the Executive Director a notice of intent to extend authorization of the Project together with supporting information sufficient for the Executive Director to determine whether there are changed circumstances that may affect the Project's consistency with the PWP including, at a minimum, any modified and/or new materials comprising the supporting information described in Section 5.1.2.E above. The submittal shall stay the expiration of the authorization and the start of construction.

If the Executive Director determines that the extension is consistent with the PWP, MWSD shall post notice of the determination at the project site consistent with the posting requirements in Section 5.1.2.D, above, and the Executive Director shall mail the notice to all persons, parties, and agencies on the original mailing list for the project and to all persons, parties, and agencies known by the Executive Director to be interested in the proposed extension. The notice shall include a summary of the extension approval process and information on contacting MWSD and the Coastal Commission concerning the proposed extension. If no written objection is received at the Commission office within 10 working days of posting and mailing notice, the determination of consistency shall be conclusive.

If the Executive Director determines that, due to changed circumstances, the Project may not be consistent with the PWP, the proposed extension shall be reported to the Commission at a noticed public hearing. The report shall include any pertinent changes in circumstances relating to the proposed extension. If three or more commissioners object to the extension on grounds the Project may not be consistent with the PWP, the matter shall be set for hearing in the same manner as a new Notice of Impending Development, including posting of notice by MWSD. The General Manager shall provide the Executive Director with supporting information in the manner prescribed for new proposed projects.

Successive extensions of an authorization may not exceed one year each.

5.1.5 Monitoring PWP Project and Components

The Board shall be responsible for ensuring that all terms, conditions, and mitigations associated with an authorized Project, including but not limited to mitigation measures and CEQA/NEPA requirements, are fulfilled. Project managers and other District personnel assigned responsibility to implement and/or monitor authorized Projects shall contact the General Manager annually by the end of each calendar year to provide information regarding compliance with the terms and conditions of authorization for that year and continuing obligations from authorizations in previous years. The General Manager shall verify that all terms and conditions have been timely fulfilled and shall update each Project's list of conditions and mitigations with compliance information on at least a yearly basis. The General Manager shall also review as-built Project plans and verify that the construction is consistent with them, including affixing written documentation to that effect to the as-built plans. The General Manager shall maintain the updated copies of the required

approval documents and shall maintain the verified as-built plans, which shall be made available for public review.

The General Manager shall provide an annual written PWP monitoring report that includes a cumulative and calendar year summary of: (i) PWP-authorized Project compliance; (ii) enforcement undertaken pursuant to Section 5.1.6.; (iii) PWP-required annual monitoring reports (e.g., water quality reports, etc.); (iv) status of PWP-required improvements and other District commitments; and (v) any comments received on PWP implementation. The General Manager shall maintain a record of the annual written summary reports in the General Manager's office, which shall be made available for public review. The General Manager shall submit a copy of each annual report to the Executive Director within ten days of its completion.

5.1.6 Enforcement

In addition to all other available remedies, the provisions of the PWP and the Coastal Act shall be enforceable pursuant to Chapter 9 of California Public Resources Code Division 20. Any person who performs or undertakes Development on MWSD's property that is (a) in violation of the PWP, (b) inconsistent with any pre-PWP certification Coastal Commission authorization (including coastal development permit approval), or (c) inconsistent with any PWP authorization may, in addition to any other penalties or remedies, be civilly liable in accordance with the provisions of Public Resources Code Sections 30820, 30821.6 and 30822.

The Board shall ensure that Development is consistent with the PWP and with the terms and conditions of authorizations pursuant to the PWP. The General Manager shall investigate in a reasonable time allegations regarding Development being undertaken inconsistent with the provisions of the PWP or PWP authorizations, and shall attempt to resolve any such inconsistencies discovered. The Executive Director or Coastal Commission may also enforce the terms of the PWP and the Coastal Act.

Hydrologic and Vegetation Monitoring Schedule

Alta Vista Well

Montara Water and Sanitary District
Public Works Plan Phase I

Proposed Hydrologic Monitoring

Hydrologic Monitoring Schedule: The District proposes to continue monitoring existing wells and surface water monitoring stations through water-year 2010.

- ✓ Manual measurements of depth to water in each of the five monitoring wells are proposed for March and September of 2008, 2009, and 2010.
- ✓ Monitoring stream flow at three stations
- ✓ Manual measurements of stream flow at each station are proposed in March and September of 2008, 2009, and 2010.
- ✓ Rainfall is monitored at the Alta Vista water treatment plant with a tipping-bucket rain gauge.
- ✓ The District will continue monthly groundwater level monitoring of the Alta Vista Well.

Hydrologic Monitoring Report: Following water-year 2010, MWSD will submit a three-year monitoring report, potentially with proposed changes to the monitoring and mitigation plan, based on monitoring findings.

Proposed Riparian Vegetation Monitoring

Vegetation Monitoring Schedule: Two types of vegetation monitoring are proposed, permanent transect monitoring at selected locations near test well sites, and random transects along creek systems in the project area.

- ✓ Vegetation monitoring will be conducted once per year in September when plants are likely to exhibit the most water-related stress.
- ✓ Vegetation monitoring will continue for 3 years (2008, 2009, and 2010), in 2010.

If after three years there are no noticeable changes to riparian vegetation, the vegetation monitoring program will be discontinued.

Vegetation Monitoring Report: An annual vegetation monitoring report will be prepared by December 31 of each monitoring year, and submitted to the California Coastal Commission to meet environmental reporting requirements.

Hydrologic and Vegetation Monitoring Plan

Alta Vista Well

Montara Water and Sanitary District
Public Works Plan Phase I

Summary of Hydrologic Conditions

The Montara Water and Sanitary District (MWSD or District) conducted a 60-day pumping test at the Alta Vista Well from November 11, 2007 to January 11, 2008. Results were presented in a February 21, 2008 letter report to MWSD (Woyshner and Park, 2008). Hydrologic monitoring during the 60-day pumping test showed similar responses as was observed during previous pumping tests conducted in 2004, and corroborated the early findings (Woyshner and others, 2005). Results from these tests showed groundwater drawdown in the fractured bedrock aquifer with:

1. No drawdown effect to the overlying weathered granitic aquifers from which domestic wells draw water,
2. No drawdown effect to the shallow alluvial aquifer supporting riparian woodland along upper Montara Creek, and
3. No effect to stream flow in Montara Creek and Daffodil Canyon.

In addition, limits to the fractured bedrock aquifer (a.k.a. permeability boundaries) were not encountered.

Since the 60-day pumping, the District has continued test pumping of the Alta Vista well and the well has continued to draw water from the fractured granitic aquifer while not affecting shallow ground water (see attached Figures 1 and 2). Since the start of pumping on November 11, 2007, water levels in the fractured bedrock monitoring wells, wells 2004-3 and 2004-5, has dropped 9 feet from 2005 levels and 13 feet after 2006 (wet year) recharge of 4 feet. Precipitation during dry periods of 2007 and 2008 did not provide much recharge to the bedrock; however, it did recharge shallow ground water observed in MW-1 and MW-2.

The storms of 2008 provided substantial recharge to shallow ground water, and by July 9, 2008, summer base flow levels were at or above pre-pumping 2007 base flow levels. This indicates no pumping effect to shallow ground water at the riparian woodland along Montara Creek. Base flows in Montara Creek, Daffodil Canyon, and Martini Creek were similar to pre-pumping base flow levels, which also indicates no pumping effect. In summary, shallow ground water appears independent of the deep fractures from which the new Alta Vista well draws water, and no drawdown effects from pumping the new Alta Vista well have been demonstrated during the test period.

Proposed Hydrologic Monitoring

The District proposes to continue monitoring existing wells and surface water monitoring stations through water-year 2010, upon which MWSD will submit a three-year monitoring report, potentially with proposed changes to the monitoring and mitigation plan, based on monitoring findings. MWSD currently measures groundwater levels in five monitoring wells (shown in Figure 1), as follows:

- ✓ Well 2004-3 is a deep bedrock monitoring well located upgradient and northeast of the Alta Vista well, and Well 2004-5 is a shallow bedrock monitoring well located south of the Alta Vista well. Both of these wells monitor the same fractured system as the pumping well, and both wells showed some drawdown during the high-yield pumping tests during 2004.
- ✓ Two shallow monitoring wells are located in the valley alluvium to monitor water levels near the riparian habitat on Montara Creek, closest to the Alta Vista well. MW-1 was located upgradient of a spring and riparian woodland on the valley bottom, and MW-2 was located downgradient of the woodland. These wells monitor water levels and gradients in the shallow alluvial aquifer.
- ✓ Well 2004-2 is a deep monitoring well located at the mouth of Daffodil Canyon and downgradient of the Alta Vista well. It has been unaffected by all pumping to date.

Manual measurements of depth to water in each well are proposed for March and September of 2008, 2009, and 2010. In addition, the District will continue monthly groundwater level monitoring of the Alta Vista Well.

In addition to monitoring groundwater levels, stream flow is monitored at three stations:

- ✓ At the headwater springs diversion on Montara Creek;
- ✓ Montara Creek at Riviera Road, just upstream of the confluence with the main stem Montara Creek; and
- ✓ At the mouth of Daffodil Canyon at Old San Pedro Road.

Manual measurements of stream flow at each station are proposed in March and September of 2008, 2009, and 2010.

Rainfall is monitored at the Alta Vista water treatment plant with a tipping-bucket rain gauge.

Proposed Riparian Vegetation Monitoring

Two types of vegetation monitoring are proposed, permanent transect monitoring at selected locations near test well sites, and random transects along creek systems in the project area. Vegetation monitoring proposed for the Alta Vista Well follows vegetation monitoring procedures that were conducted in 2007-2008 (May & Associates Inc., 2008).

During the initial well testing, two permanent monitoring transects were placed in areas that would most likely exhibit the effects of groundwater pumping, named Transect 1 and Transect 2 (see Figure 1). These permanent transects are located immediately adjacent to shallow groundwater monitoring sites, and are intended to encompass the full range of topographic, vegetative, and hydrologic differences observed at riparian and creek habitats near the test well sites. These permanent sampling transects are 100 feet (approximately 30 meters) in length. Vegetation monitoring at the permanent transects will be conducted both parallel to the creek channel (for the entire 100 foot transect), and perpendicular across the creek channel, low flow channel, bank and the adjacent riparian woodland (every 30 feet along the 100-foot long permanent transects).

In addition to detailed vegetation monitoring conducted at the permanent transect locations, random walking transects were established during the initial well testing at the following locations:

- Kanoff Creek;
- Daffodil Creek;
- Upper Montara Creek (above permanent Transect 1); and
- Lower Montara Creek (below permanent Transect 2).

Random walking transects will be continued during the vegetation monitoring program, and are intended to characterize the general vegetation conditions along the selected individual creek corridors. Refer to Figure 1 for the locations of the random walking transects.

Vegetation Monitoring Techniques. The following monitoring techniques are proposed to rapidly assess vegetation changes in response to changes in groundwater levels. The proposed monitoring techniques are a modification of similar methods used for the Carmel River riparian monitoring program (Monterey Peninsula Water District, 1993, Monterey Peninsula Water District, 2004, McNeish 1988a 1988b, Scott 1997). The proposed rating system is adapted from rapid vegetation health assessments developed for forested areas (Grimes, 1987, Lay and Meissner 1985).

The vegetation monitoring program will assess the following vegetation parameters and assign a numerical rating of 0-5 as follows:

1. Plant Survivorship

Plant survivorship of dominant perennial plant species (mostly trees, shrubs, and long-lived herbs) was measured in the permanent sampling transects. Dead plants and live plants within a meter square sampling plot will be counted during the baseline survey, and average percent survivorship will be calculated for each species present as follows:

0= Dead

5=Alive

with the number of dead plants divided by the total number of plants present within the sampling transect.

2. Plant Health and Vigor

Plant health and vigor was evaluated and rated for each dominant species along the sampling transects. Parameters such as herbivory, physical damage, drought stress, disease, new growth and reproduction will be assessed. Cumulative symptoms to be evaluated include yellowing leaves and leaf drop; stunted leaf growth; leaf wilting and water stress; percentage of physical damage and/or herbivory; and evidence of plant growth and reproduction (presence of new leaves/shoots; branches, flowers, seeds/cones/fruit and new seedlings and/or saplings.

Each vegetation layer was rated according to the following scale.

0 = Dead
1 = Very Poor health (greater than 75% of the plants affected by cumulated symptoms)
2 = Poor health (50%-75% of the plants affected by negative symptoms)
3 = Fair health (25-50% of the plants affected by negative symptoms)
4 = Good health (10-25% of the plants affected by negative symptoms)
5 = Excellent (less than 10% of the plants affected by negative symptoms)

3. Canopy Cover of Riparian Woodlands

Canopy cover was assessed for the riparian woodland areas only. Canopy cover was measured from ocular estimates in 2007, but may be determined in the future using ocular estimates combined with aerial photographs and/or from GPS data collected each year by measuring the canopy dripline of the riparian woodlands. Change in canopy cover was assessed as follows:

0= decrease in canopy cover,
1= no change in canopy cover
2= slight change in canopy cover (1-5% increase)
3= minimal change in canopy cover (5-10% increase)
4= moderate change in canopy cover (10-25% increase)
5= greater than 25% increase in canopy cover

4. Percent Vegetative Cover

Absolute vegetative cover was determined for each species within the sampling transect. Because riparian systems in the project area are very dense, absolute vegetative cover can exceed 100% due to density of vegetation layering.

For this project, vegetative cover was separated by vegetation layer into the following categories:

- trees
- woody shrubs
- wet meadow grasses and rushes
- understory grass and forb species

The percent cover of each vegetative layer will then be calculated for each transect, and the cumulate average calculated for all transects.

5. Plant Height was recorded by plant guild based on ocular field estimates. The intent of the plant height is to look for typical rates of growth in the riparian woodlands over time. Change in plant height was assessed as follows:

1=no change
5= change greater than 10% annually

6. Species Richness and Composition. Species richness and composition was recorded based on field sampling of species richness and abundance at permanent transects. Change in richness and composition were assessed as follows:

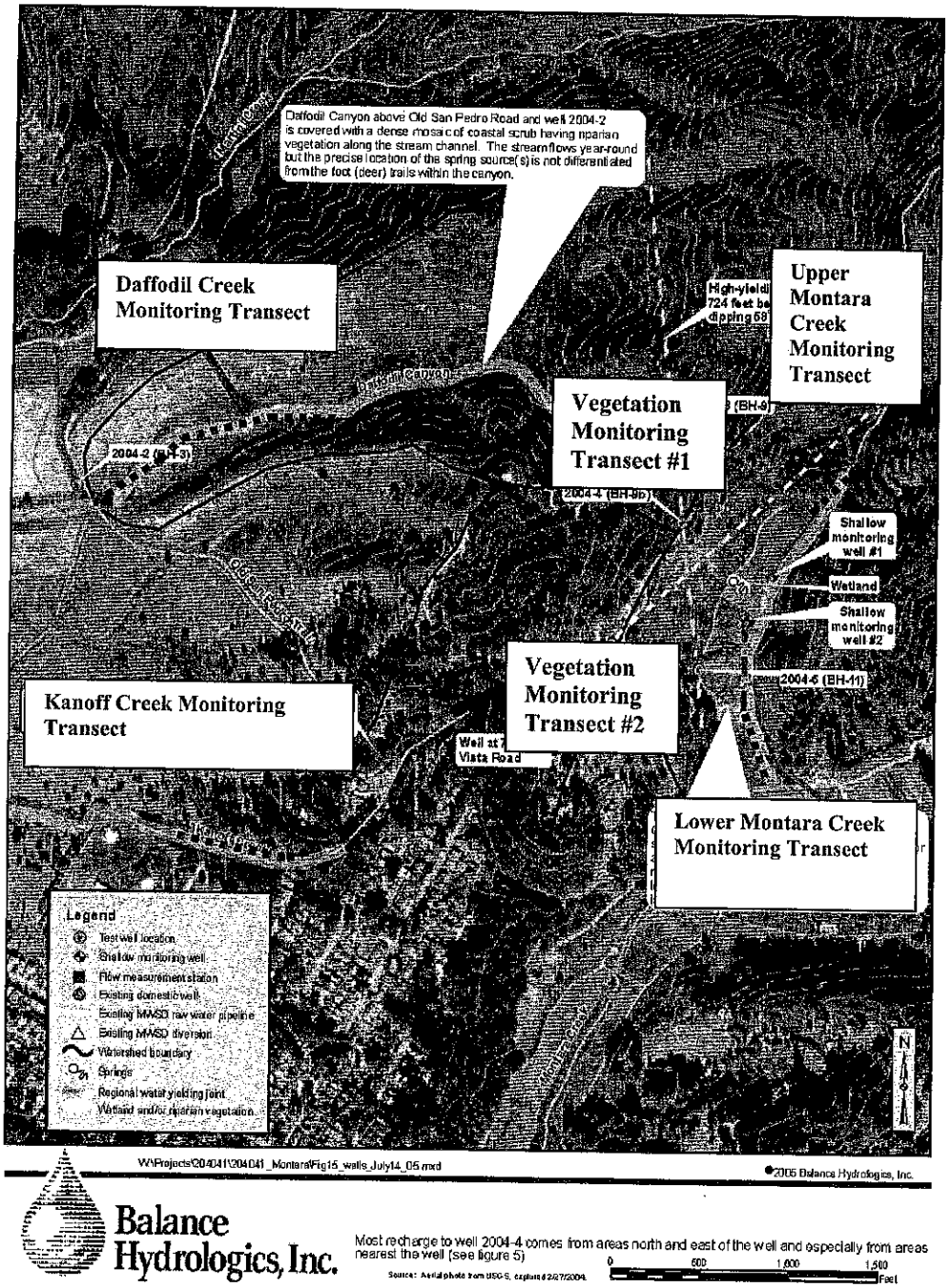
0= Increase in non-native species
1= no change in species number
3= Moderate increase of 10% or more increase in native species and overall number of species.
5= Greater than 25% increase in native species and overall number of species.

Photo-documentation. Permanent photo-point locations will be established at each end of the two permanent transects, and at numerous sites along the creek corridors. All photographs will be taken using a high quality digital camera. In addition, random site conditions will be documented at sampling locations along the transect to help document the qualitative changes in the project site over time.

Vegetation Monitoring Schedule. Vegetation monitoring will be conducted once per year in September when plants are likely to exhibit the most water-related stress. Vegetation monitoring will continue for another 3 years (2008, 2009, and 2010), and will be re-assessed at the end of the five year program in 2010. If after three years there are no noticeable changes to riparian vegetation, the vegetation monitoring program will be discontinued.

Reporting. An annual vegetation monitoring report will be prepared by December 31 of each monitoring year, and submitted to the California Coastal Commission to meet environmental reporting requirements.

Figure 1. Location of Monitoring Wells and Vegetation Transects, 2007 Monitoring Test Sites.



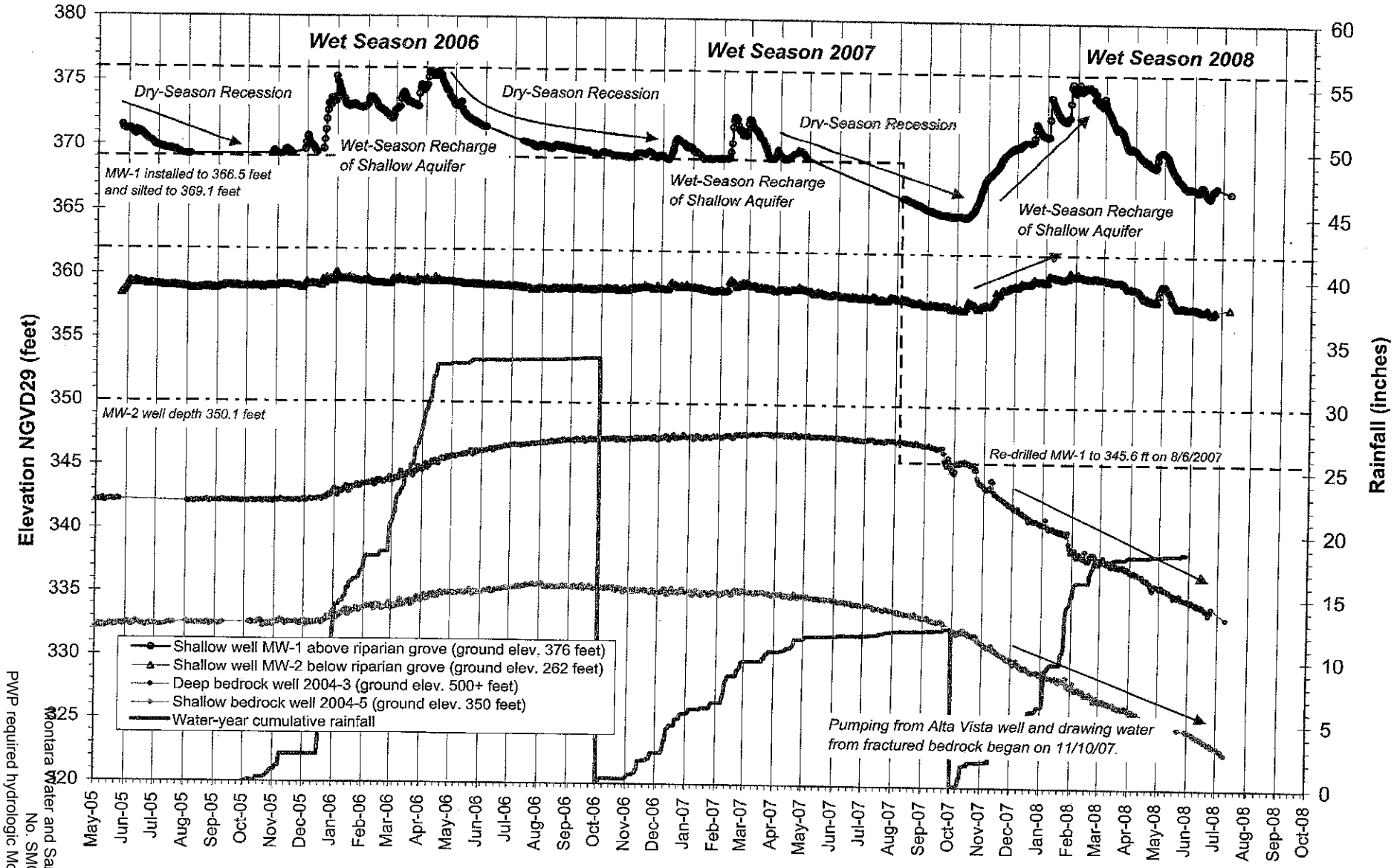


Figure 2. Daily mean water-level elevations in Montara Water and Sanitary District's monitoring wells for the Alta Vista water supply well, and cumulative water-year rainfall totals, May 2005 to 2008, San Mateo County, California.

Balance Hydrologics, Inc.

206130_dailydatasince1-1-05_7-9-08.xls, monitoring wells with rainfall, 9/3/2008

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